

SNY	473
ENY	15/175
CNY	1683
Parish	1092
Rec'd	11/08/2000

The barbican at Richmond Castle, North Yorkshire

*Archaeological excavations, November 1999 - January
2000: results of a watching brief, January - June 2000*

by:
Archaeological Services
University of Durham

on behalf of:
English Heritage Yorkshire Region

**ASUD Report 663
August 2000**

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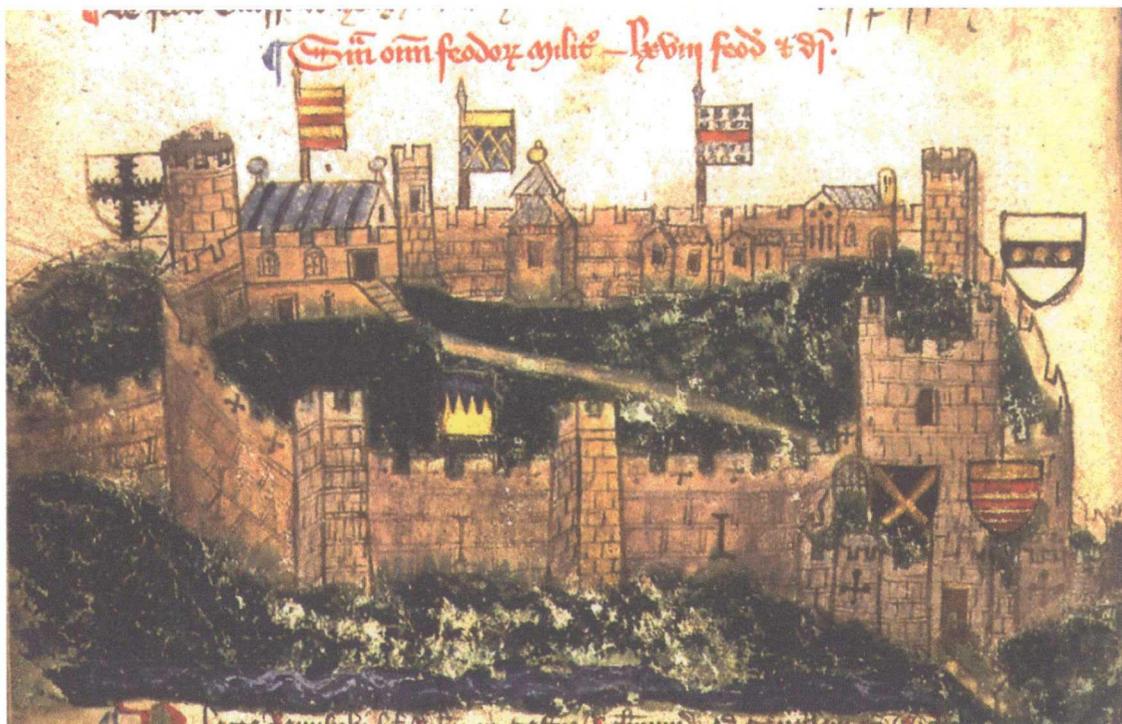
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Archaeological Services University of Durham
on behalf of

English Heritage Yorkshire Region, 37 Tanner Row, York, YO1 6WP

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A View of Richmond Castle in 1538
(British Library Cotton MS)

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1. Summary

A series of excavations was carried out in November and December 1999 to evaluate the archaeological deposits around the entrance to Richmond Castle. The excavations were within the circuit of the former barbican, in the south range of No. 2 Tower Street, and in the present castle drive.

Within the barbican, no evidence of earlier activity was found.

The medieval curtain wall was found under the full length of the south range of No. 2 Tower Street. No significant deposits of medieval material were associated with the wall; however, a marked lean to the north observed in the surviving courses of the wall almost certainly indicates the presence of the moat outside the barbican. Following significant robbing of the masonry of the curtain wall, a small stable was erected to the west of the present entrance in the later eighteenth century. This building was demolished in the nineteenth century and the present larger building was erected on its north and south foundations.

Part of the west side of the gatehouse was found under the drive, together with a large block of masonry that supported the inner end of the drawbridge. The structural evidence from the excavation shows that a fifteenth-century view of the castle is probably correct in showing the gate as a small structure without attached towers.

Evidence of remedial work following subsidence in the fifteenth century was also found. A large dump of domestic rubbish of the same date was recovered from the passage; this represents tipping to raise the road level after alterations to the gate. Disturbed anaerobic deposits were found under this dump of material, near the lip of the moat.

It is recommended that the important early post-medieval assemblages from the gate passage area should be fully examined and analysed, and reports on the structural evidence and the finds assemblages should be taken to publication.

2. Project background

2.1 Client

English Heritage Yorkshire Region, 37 Tanner Row, York, YO1 6WP

2.2 Location (Figure 1)

The barbican is a roughly semi-circular area between the keep and the recent buildings of Tower Square. The present entrance to the castle is here, and the buildings attached to No. 2 Tower Street stand to the west of the castle gates.

2.3 Dates

Work began on November 22nd and was completed on January 7th 2000. A watching brief was maintained during underpinning, alteration and drainage works between February and June. This report was prepared in January - February 2000, with later additions as required by the results of the watching brief.

2.4 Personnel

The project was supervised by Richard Annis, and site and post-excavation work was carried out by Jane Gosling, David Graham, and Daniel Still. The watching brief work was carried out by Richard Annis, who also wrote the project report. The illustrations were prepared by Linda Bosveld and Barry Taylor; specialist reports were provided by Jacqui Cotton, Dr Chris Cumberpatch, Louisa Gidney, and Dr Hugh Wilmott. Jacqui Huntley provided advice on environmental and sampling work during the excavation.

2.5 Archive

The site code is RCB99, for Richmond Castle Barbican. The archive has been passed to English Heritage, and a copy of the report has been deposited at the National Monuments Record.

2.6 The project

The project was the result of a plan for the conversion of the buildings to the west of the castle gate and drive. This group of buildings, No. 2 Tower Street, is arranged around a small courtyard; there is an occupied house at the north-east corner, and an electricity sub-station at the middle of the east side, but the remaining buildings were unused at the time of the work. English Heritage propose to turn the unused buildings into a new visitor entrance, display area and shop.

The project was carried out in accordance with a brief received from English Heritage, a copy of which is presented as Appendix 1. The aims and objectives of the project, as set out in the brief, were as follows:

- 2.1 to confirm the results of the geophysical survey, and to test the nature and extent of the features associated with the geophysical anomalies;
- 2.2 to identify any archaeological features or deposits in the three areas of excavation, including environmental aspects;
- 2.3 to determine the nature, depth, stratigraphic complexity and date of any archaeological features or deposits in the three areas of excavation;

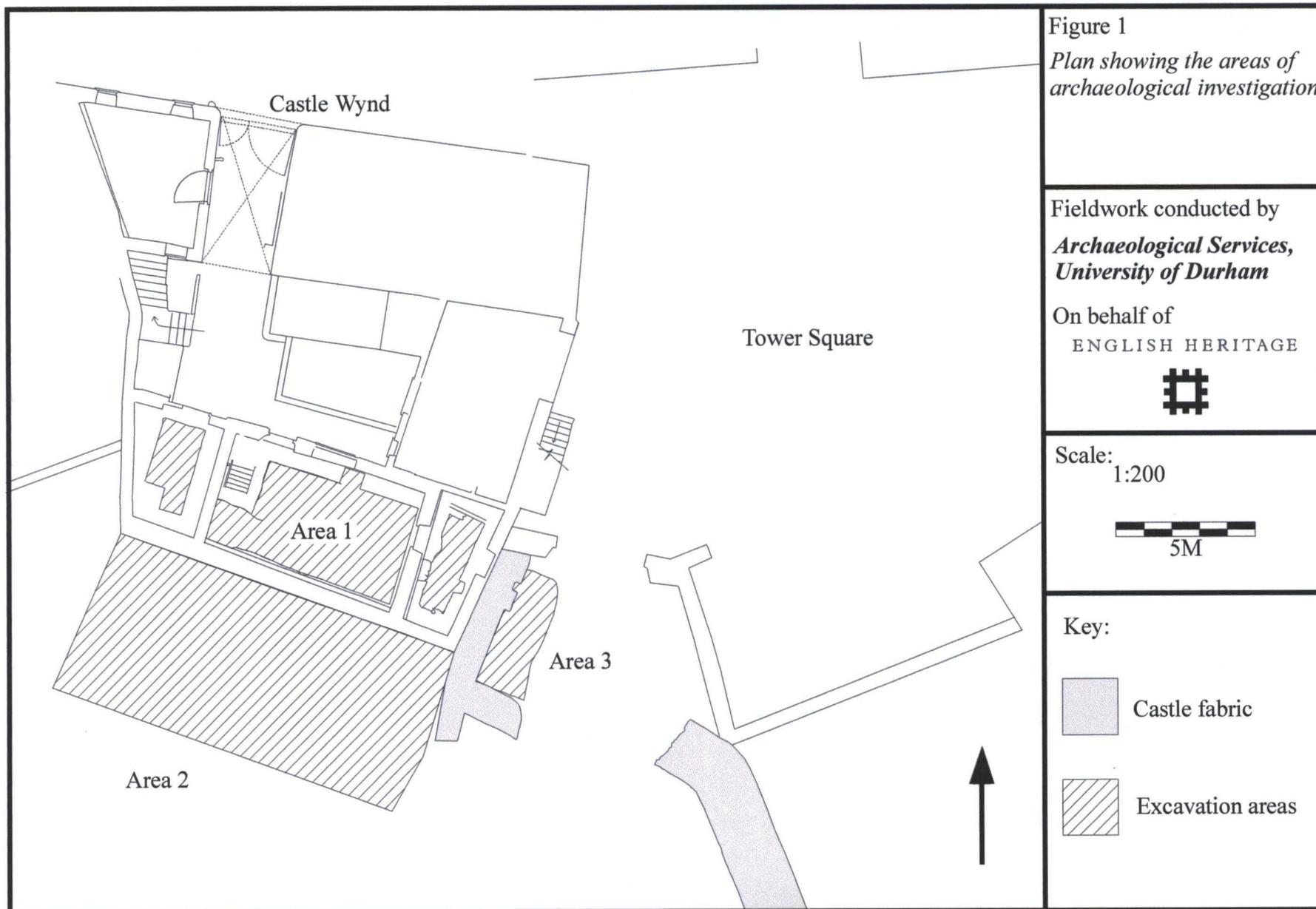


Figure 1
 Plan showing the areas of
 archaeological investigation

Fieldwork conducted by
**Archaeological Services,
 University of Durham**

On behalf of
 ENGLISH HERITAGE



Scale:
 1:200



- Key:
-  Castle fabric
 -  Excavation areas

- 2.4 to provide an assessment of the potential and significance of any identified archaeological features or deposits in the three areas of excavation, including environmental aspects;
- 2.5 to provide an assessment of the impact of the proposed development on the archaeological features or deposits identified in the three areas of excavation;
- 2.6 to assess the likely scope and duration of any further evaluation that may be necessary to mitigate the effects of the proposed development;
- 2.7 to provide a mitigation strategy for the proposed development.

A variation was agreed concerning Area 3, which was reduced from the full width of the drive to the western half. This was done to ensure access for visitors to the monument, and because of the presence of main services in this part of the drive.

3. Historical background

The area affected by the works is within the area of the barbican of Richmond Castle. The castle is important because of its early features, which include the greater part of the eleventh-century stone defences, and one of the oldest stone halls in the country. The proposed works are to be carried out in the barbican. This is an addition on the town side of the defensive circuit: it is believed to have been built during the time of Earl Conan, who held the castle from the middle of the twelfth century. In later times encroachment by the buildings of the town masked the form of the barbican, and parts of it, including the outer gatehouse, were demolished.

The moat and drawbridge of this gate were apparently seen in an excavation in 1732, but no first-hand record of this work survives. Further evidence was uncovered in 1931, when trenching work by the electricity board revealed what were believed to be masonry piers which acted as stops for the outer end of the drawbridge. There is no detailed account of these discoveries, but it is assumed that the finds were made close to the present sub-station. In 1989, three evaluation trenches were dug by Judith Roebuck, Inspector of Ancient Monuments, inside the south range of the courtyard building. These revealed the remains of a stone building beneath the present one; unfortunately, as with the excavations of 1732 and 1931, there are no records of this work. More recently, a geophysical survey has been carried out within the barbican area (GeoQuest Associates 1999). The results are not particularly clear, but they suggest that there may be an east-west ditch running across the area. No evidence of buildings or a road from the early gatehouse, now within the keep, was found.

4. Description of the works

4.1 Area 1: inside the courtyard building (Fig. 2)

The south range of the courtyard building had been in use as a temporary store, and had formerly been a stable and sheds, with storage space on the first floor. It is unequally divided into two rooms, and there is a lean-to extension at the east end. On the ground floor there is only one window, looking into the court from the large central room. The building is made of rubblestone and has no dressed stone or other architecturally-distinguished features. Excavation was carried out in all three rooms, which are described below as Area 1 west, centre and east, or Area 1W, C and E. The

maximum depth of excavation was set in the project brief at 1m below the existing surfaces; this limit was later extended slightly in Area 1C.

Each room had a concrete floor, which was broken up and removed at the start of work. Holes dug by Judith Roebuck were open in the centre and west rooms, and a small pit dug for cable ducts was open at the south-west corner of the eastern room. The pit in Area 1W showed nothing in the way of earlier structures, but revealed the shallow depth of the foundations of this building; these consisted of two courses of rubblestone on a row of slightly projecting slabs. There were two pits in Area 1C; the larger was near the centre of the north wall, and revealed a substantial north-south wall built of rubblestone. At the south-east corner of the room a smaller area showed a wall directly under the existing foundations of the south wall, and a small area of cobbles. The small pit in Area 1E revealed no structural features.

4.1.1 Area 1 west

This small room is 4.1m long, 3.1m wide at the north end and 2.2m wide at the south. In the north wall there is a large door under a rough timber lintel. The door has been reduced in size by the insertion of wooden panels at either side of the frame. Under the concrete floor and its aggregate sub-base was a recent deposit of greyish debris **33**, which was confined to the north end of the room. The whole of the rest of the area was covered with a thick deposit of sandy material **35**. Both of these deposits were cut by a pair of square postholes, which form a line along the centre of the room. Each contained decayed wood; a small iron fitting was found in the larger, towards the door in the north wall. This was 0.28m square, while the smaller was only 0.07m square. These are undoubtedly the remains of a wooden screen that divided the room into two stalls.

The consistency of the sandy dump **35** varied from very clean, free-running sand to a semi-plastic clayey sand. Small lenses of clean clay were found within the deposit. Comparison with the soil profile in Area 2 shows that this material is derived from the natural subsoil, but has been redeposited.

Below the sandy material a short line of faced masonry could be seen under a mass of jumbled stone in a gritty matrix **36**. The line of facing stones proved to be the south face of a wall **39**, which was 2m thick and crossed the full width of the excavation on a roughly east-west line. The masking deposit **36** is interpreted as waste and discard from the process of demolition and stone reclamation. The wall itself was made of rubblestone set in material hardly different from the surrounding slightly clayey sand; only occasional patches and flecks of lime mortar could be found in the core and face. The upper surface of the wall sloped down to the north; the upper stones were 0.35m below the floor at the south face, and 0.85m below at the north. This slope was not the result of movement of the fabric, but represented different degrees of stone-robbing. At the maximum depth of excavation, the south face of the wall stood 0.65m high: it leaned slightly to the north, while two visible courses of the north face were more or less vertical.

A grey gritty material **37** had accumulated against the north face of the wall, and the south face was covered by a clayey sand **38** similar to the general deposit **35** that appeared over the rest of the wall. Neither of these deposits contained any significant

quantity of finds. Most of the material collected from the excavation of Area 1W was post-medieval pot and glass, with many pieces of clay pipe.

4.1.2 Area 1 centre

This room measures 7.05m long and between 2.6 and 2.35m wide. An area under the foot of the wooden stair at the north-west corner was left unexcavated. The concrete floor was marked with herring-bone drainage grooves and channels that showed its past use as a stable. The larger gutters had been filled in with cement. Along the south wall was a small bench or offset made of concrete and rough stone, and there was a later concrete pad at the south-east corner of the room: this was fitted with threaded steel studs for mounting some piece of machinery.

The wall revealed in the 1989 trench (**F12**) was found to cross the full width of the room from north to south. It returns to the east under the footing of the present south wall, and probably underlies the north wall as well. This could not be checked as it was necessary to leave a block of fill to support the bottom of the walls all round the excavation.

Below the modern floor at the east end of the room there was a layer of clean sand, probably laid as blinding. Below this was a large dump, **4**, of loosely-packed building stone, mixed with quantities of domestic rubbish. This included willow-pattern and other recent wares, together with a lot of glass from eighteenth-century wine bottles. This deposit was only found on the east side of the wall **F12**; to the west there was a late deposit of dark grey soil **3**, over a yellow-grey gritty material, **2**, filled with small stone and mortar flecks. The finds from this large dump **3** included local and imported pottery spanning the period from the sixteenth to the eighteenth centuries. A group of rectangular postholes was cut into the surface formed by **2** and **3**. These lie in pairs, forming lines running up to the south wall of the room, and they contained pieces of decayed wood (**F6**, **F14**, **F16**, **F18**). These are undoubtedly the remains of wooden stalls, similar to those formed by the posts in Area 1W.

The stony dump to the east of wall **F12** was removed to reveal a cobbled floor **F29**. The lowest layer of the dump was made almost entirely of broken stone roof tiles, with pegs made from sheep metapodials. The floor had a marked slope down from the south wall, which levelled out near the north edge of the excavation. The floor was clearly bounded by the walls **F12** to the west and **F13** to the south. The former stood up to 0.75m high after clearance.

Outside the cobbled building, to the west, the dump of gritty mixed material **2** was removed. A band of sandy yellow-grey material that had been seen along the surface at the south side of the room was found to form a steep face **F42**, roughly along the axis of the building. At the foot of this face was a roughly level deposit of compacted soil and large stones **44**. This deposit lay in the line of the wall seen in Area 1W, and was first thought to be a foundation deposit. As **44** lay at the specified maximum excavation depth it was not removed until after a visit from English Heritage staff. Further excavation revealed a section of wall **F60**, similar in size and construction to that in Area 1W, under the stony deposit **44** (Figure 2). Unlike the western section, this piece of the wall had a level upper surface, and had been robbed to a depth of 1.2m below the modern floor.

The same wall was found under the cobbled floor of the early building. Floor **F29** was removed to reveal another cobble surface **F33**, rather roughly-laid and bounded on the south side by an alignment of stones. The intervening thin clay deposit **43** contained pieces of hand-made brick and iron nails. The lower cobbles were laid directly on the upper stones of a 2m-thick wall **F47**, which was the continuation of **F60** to the west and **F39** in Area 1W.



Figure 2 Area 1C, looking south-east. The wall of the eighteenth-century stable crosses the room, and overlies the two-metre-thick medieval curtain wall. At top right is one of the postholes from the stalls of the late stable building.

Finds from the deposits outside the western wall of the early building were few, and most were post-medieval in date.

4.1.3 Area 1 east

This small room is in a lean-to extension attached to the gable end of the building. It measures 5m from north to south; the south end is 1.75m wide and the north 2.4m wide. Because of the need to leave a baulk of spoil against the walls only a relatively narrow area was available for excavation here. The modern floor was thinner than that in the other two rooms, and was laid on a base of crushed brick. The underlying deposit **25** was a dump of stone, roof tile and domestic rubbish exactly similar to **4** in the central room. Below this was a cobbled surface **F27**, the continuation of floor **F29** in Area 1C. A longer stretch of the floor was visible here, because the northern wall foundations were strongly made in concrete and did not need additional support. The level area at the north end of the floor was seen to a width of 1.1m. The east wall of the early building could not be seen, but it must have been within 0.5m of the easternmost exposure of the floor, as there is an intact medieval wall just outside the present building (see Area 3, below).

The east gable wall of the present building stands on the stony dump **25** that covers this floor; there are no signs of a foundation deeper than the shallow slab seen in the west end. Concerns about the foundations of both east and west walls of this room prevented any excavation below the cobbles, but it is highly likely that the broad medieval wall seen to the west continues its course below this floor in this room.

4.1.4 Conclusions

The present south range of the courtyard building stands directly on the levelled remains of a small squarish building. No information about the access to this was revealed in the excavation, but the arrangement of the cobbled floor suggests that it was a stable, with animals being tethered along the south wall. The level area along the north wall would have provided access and drainage for the stalled or loose-housed animals. It is probable, given this arrangement, that the door was under the present door to Area 1C, or in the west end of the building.

The stable was built of re-used medieval masonry taken from the curtain wall of the barbican. Stone robbing has not removed all of this wall, and much less has been taken from the western room, only a few metres from the stable. This implies that the surviving medieval fabric was substantial enough to provide the materials needed for its construction without the need for digging.

The curtain wall runs for almost the full length of the present building, and follows a slight curve to the south as it proceeds westwards. It is the same width as the surviving fragment that stands on the east side of the castle drive. There is no evidence of a tower or any other medieval structure within the central room. While it is possible that the lower courses of other structures survive under the cobbles at the east end of the old stable, the lack of evidence from the wall outside suggests otherwise.

4.2 Area 2; inside the barbican (Figure 3)

The area between the courtyard building and the keep was grassed, with a block-paved path crossing from the west end of the building to a flight of stone steps just inside the castle gate. This area is level, but this is clearly the result of recent landscaping, and the east end of the lawn is retained by a twentieth-century wall that connects the courtyard building with the north-east corner

The turf and the path surface were stripped from a 6m-wide area alongside the courtyard building. This material was removed with the ditching blade of a mechanical excavator, under archaeological supervision, and the surface was cleaned. A small amount of nineteenth- and twentieth-century pottery and other rubbish was collected from the spoil. The subsoil here is a fairly uniform yellow-brown clayey sand **54**; a face was exposed at the east end, where the stone steps were removed, and the deposit appeared to be uniform over the 0.8m-high section. The only features seen in its surface were a large machine trench **51**, that carries cable ducts away from the pit in Area 1E; a narrow band of dark soil at the east end, associated with landscaping of the bank; and a line of fill along the face of the building. Towards the west end of the area was a small oval feature that contained the remains of a middle-sized dog.

The sandy subsoil was an unexpected find here, and there was some speculation that it might have been imported to the site in the construction of a motte, perhaps built in 1068-69 by William the Conqueror in his northern campaign. There was also a degree of concern about the pressure of soil against the outside of the wall of the building, as the ground surface there was 1.55m above the floor level within. For both these reasons, the subsoil was removed from a 1.3m-wide strip along the full length of the wall. This excavation was taken to a depth of 1.5m below ground level, and widened out at the west end to encompass the whole of the width of the excavation. The sandy deposit **54** proved to be uniform throughout this depth. This soil is very like the redeposited material seen in Area 1C and Area 1W, where it is numbered **5** and **38** respectively. Though consistent in overall appearance, it is quite a variable deposit; in



Figure 3 View of the soils in Area 2, looking west.

general it consists of clayey sand with a few small stones, but in places there are large patches of clean running sand, or broad thin lenses of clean red and blue-grey clays. The material must be glacially-deposited.

More of this mixed material was exposed during the start of the main contract works. A trench was cut to house the re-laid cable ducts from the pit in Area 1E: this was deeper than the rest of the excavations in Area 2. The same soils were seen along the whole length of this cut.

No features were seen in the excavation of the large area at the west end of the site. Very few pieces of pottery were recovered from this area of the site, and all but one of these was of modern date. There were few other finds; a small number of clay pipe and bottle glass fragments were recovered from the topsoil, together with some pieces of butchered bone.

4.3 Area 3; the castle gate (Figs. 4-6)

The area of excavation here was the western half of the drive, between the edge of the guardianship area and the present steel railings. The inner or southern end of this area is occupied by a 1m-thick piece of wall **64**, standing about 0.2m above the level of the block-paved drive; this runs across the driveway. The west side of the area was defined by a piece of medieval masonry **65**, up to 1.2m high, and running parallel with the drive. The lower north end of this wall had been flagged to form a step into Area 1E. A small excavation area was also opened at the foot of the former steps, at the easternmost end of Area 2.

The small wedge-shaped area between the east-west wall and the railings, and the area at the foot of the steps, proved too small for excavation to be practicable, especially as the latter contained a surface drain catch-pit and was crossed by three service trenches. Attention was focused on the main area and the wall that separates it from the east end of the building at Area 1E.

The surface layer of block paving overlay a number of service trenches, pipes and cables. Two of these features were removed: a small stone drain pit **48**, near the north end of the trench, and a large glazed drain **59** that crossed the south-east corner of the area. The drain trench **59** masked an earlier cut (**61/67**) running along the east-west wall **64**. This is the construction trench for wall **64**, a late addition to the masonry features here. The wall is 1m thick and stands 1.3m high above two offset foundation courses; it runs from the east face of the earlier wall **65** into the centre of the drive.

These features were cut into a very mixed dump of ashy material **46**. This deposit was up to 0.8m thick at the north end of the trench, and filled the entire excavation area. Much of it was loose-textured, and parts were soft and sticky. Clearly defined patches of charcoal and ashes, with occasional discrete reddish areas of burnt material, together with a very large quantity of animal bones, suggest that this is a dump made up of many loads of domestic rubbish. The animal bone assemblage ranged from a complete cow horn to fish vertebrae. A mixture of medieval and post-medieval pottery was recovered, including a number of pieces of Cistercian ware. Much of the deposit was stone-free, but there were a few large irregular pieces at the south end of the area. The whole deposit represents a short episode of deliberate filling of this area of the castle entrance, presumably to raise the level of the approach road.

The surface on which **46** was dumped slopes down to the north end of the trench. Presumably this slope is the inner edge of a berm or the edge of the moat. Underlying the dump was a highly-organic anaerobic layer, **57**, which was filled with wood and other organic materials. Finds from this layer included textile fragments and a piece of leather. The deposit is rather mixed, and the more richly organic parts of the layer are interleaved with deposits of yellow and brown clays and occasional areas of mortar. It is likely that this is a mixture of wet deposits derived from the edge of the moat, and clay and construction debris from a lower layer, **74** (below).

At the north-eastern corner of the trench there was a small area of sticky silt, **70**, which appeared to be a water-laid deposit. Other than here, the mixed organic-rich deposit **57** lay over a yellow-brown silt **71** which followed the same general form as the upper layers, being lowest at the northern end of the area and rising up as it approached the wall **64** at the south end.

The west and south sides of the excavation area were defined by three distinct sections of masonry. The earliest of these features is a stretch of wall that still stands above ground level to the south of the door into the building (Figure 4). This wall, **65**, is a 2.32m-long section, made of rubblestone with dressed quoins at its north-east angle. It was not bottomed in the excavation; the surviving section is 2.15m high immediately south of the door to Area 1. The width of the wall is visible in the above-ground section immediately south of the building, where it measures 1.2m at its



Figure 4 Area 3, looking north-west. The early wall **65** is behind the ranging rod and the later shoring block **66**, with its beam slots, is below the door to Area 1. The late wall **64** is in the left foreground.

thickest point. Some of the lower quoins are damaged by scores across the angle, and there is a large crudely-cut curved hollow in the face at the lowest part. The north face is somewhat out of plumb, and the rubblestone masonry has gaping joints, suggesting that the structure has subsided to the north, in the direction of the moat. The position and size of this feature, and the quoins at its corner, show that it is the northern end of the west side of the gate passage. The lowest course exposed in the excavation trench is only 0.25m below the present road surface outside the electricity substation in Tower Square, which is said to be the spot where the outside of the moat was exposed in 1931.

The floor of the gate passage was not found in the excavation, despite the depth of the trench. Instead, the lowest feature uncovered was a separate masonry structure, **73**, which measured 2.13m to the face of the later wall **64** and 1.2m wide (Figure 5). Unlike the adjoining wall of the gate passage, this block of masonry has dressed faces on the three visible sides; on the north face there was a chamfered offset course. The



Figure 5 Area 3, looking south, showing the thrust-block 73 and the late wall 64 in the background. Note the projection of the shoring block 66, at the right-hand side

block continues for at least 0.2m below the bottom of this feature. The block is 0.44m from the face of the wall 65, and the gap between the two was initially interpreted as a slot for a large baulk of timber supporting a roadway or part of a drawbridge mechanism. The slot was filled with a clayey silt deposit 72, which was only partly excavated, but probing with a steel pin found no bottom at depths of up to 0.7m below the highest point of the block, so it appears that this structure is entirely separate from the gatehouse wall. Its shape and position suggest that it acted as a pier or thrust-block which provided resistance against the stresses imposed by the drawbridge during raising and lowering. The gaps on either side of the block would also have acted as a drains, carrying water below the road surface towards the lip of the moat.

In order for the passage to be wide enough for vehicles, it is likely that there would have been a second block of similar proportions alongside the excavated one; the roadway would presumably have been carried on a timber deck over the piers. Allowing a similar gap between the blocks and the east wall of the gate passage as was seen against the face of wall 65, the overall width of the gateway would be a little

over 4m. If there was only a single block in the centre of the gate, the width of the passage would be a rather narrow 2.5m.

Abutting the north face of the gate passage is a cruder mass of masonry **66**, which projects slightly to the east of the side of the gate passage wall **65** (Figure 6). This block measures at least 2.4m from north to south, and extends beyond the northern limit of the excavation; it is up to 1.45m high. In the east face are two large beam-slots for a raking shore that was erected to support the north face of the gate. These slots are rectangular in profile, and measure 0.3-0.35m wide by 0.2-0.23m deep; both run the full height of this section of wall. The southern slot is vertical, and abuts the angle of the wall, while the northern is at an angle of about 20° to the vertical; inside it a mass of mortar preserves the shape of the corner of the timber that stood in it. The whole of this feature functioned as a crude buttress against the north face of the gate, and the timbers supported the lintel or the head of the opening: when projected, the line of these two timbers meet at a point at least 3m above the present drive surface. It is interesting that this timber shore was placed so close to the side wall of the gate passage, and yet was intended to support the upper part of the building. This may imply that the gate passage was still use at the time of the repair, and that the roadway had to be kept clear. The dump deposit **46** was laid down against the face of this late addition to the face of the gate.

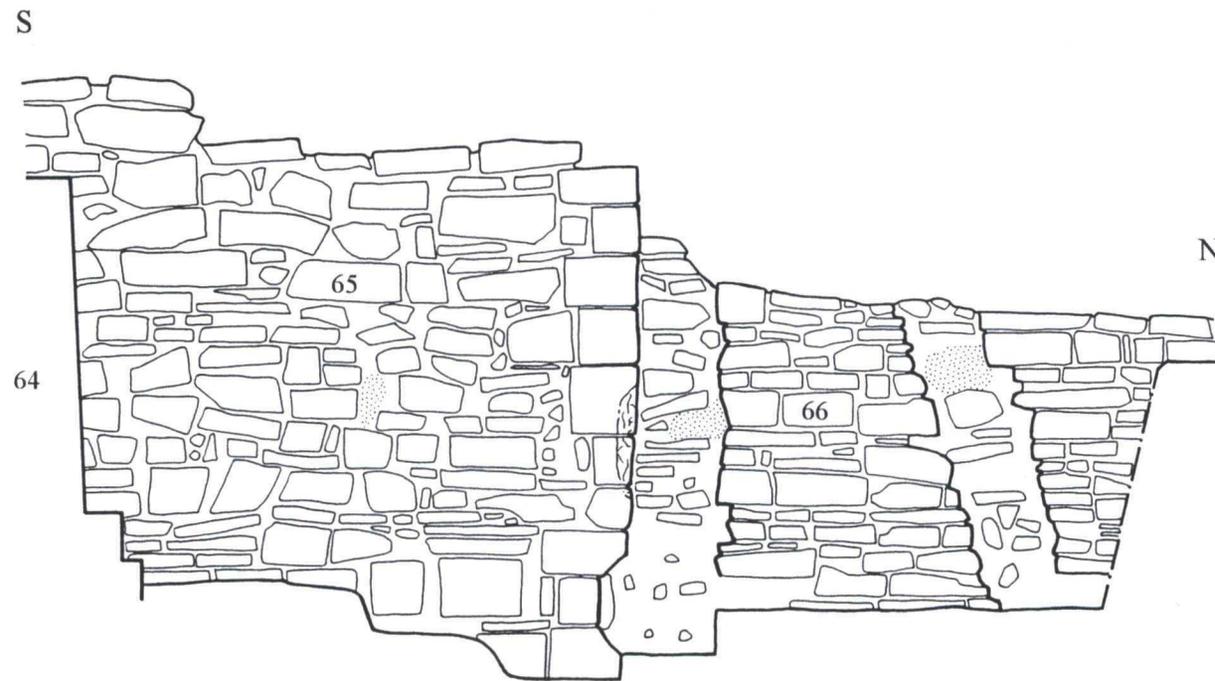
The latest of the three walls (**64**) is a well-made structure of coursed rubblestone, the uppermost course of which was visible in the drive before excavation. The wall is 1m thick, and, including its two offset foundation courses, is 1.7m high. It runs at a right-angle to the early wall **65**, and its foundation trench was cut through the large dump **46**. This wall would have completely blocked the gate passage; its function is unknown, as there is no other practicable entrance to the castle.

5. Observations during the watching brief

During the main contract works, a number of areas of wall were undercut for the insertion of new concrete foundations. This underpinning work was monitored, but no features were seen that might add to the information gathered from the excavations in Area 1. A short stretch of trench at the south-east corner of the rooms to the west of the passage showed a similar soil profile on the outer edge of the presumed moat as was seen inside. No medieval deposits were disturbed, though a pungently-organic dark material was seen at the bottom of the excavation. The foundations of this part of the building are deeper than those of the south range, and are comparable with those of the earlier stable. It is quite likely that this building is a remnant of the earlier building that is shown on the plan of 1773.

During the underpinning work, the inner (south) face of the medieval curtain wall, running below the west end of the building, was pointed and re-buried as a part of the wall footings. While the underpinning was in progress, a part of the north wall of the south range collapsed. The remainder of the wall was badly cracked as a result of this subsidence, and as a result had to be dismantled. The removal of this wall revealed the south range to be an addition butted up against the party wall at the west side of the yard: only a single through stone formed a key between the two.

*Photo
Recorded?*



Key:



Mortar

0 metres 2

Figure 6: *West face of Area 3, showing the gatehouse wall 65, the shoring block 66, and the later blocking wall 64*

Excavation and landscaping work at the east end of Area 2 revealed the remaining part of the west wall of the gatehouse (F65). This is under a modern section of garden wall, but stands to a maximum height of 1.15m above the intended ground level at this point. The south end is slightly curved but this seems to be as a result of damage rather than design, and so the full length of the feature is still unknown, but the gate passage wall is shown to be at least 4.9m long. The lack of any features in the west face or to the west side of this wall confirms that there was never a tower here.

Further excavation across the width of the drive revealed the upper layers of a dumped material very similar in appearance to context 46 in Area 3. Like that deposit, this soil was filled with domestic rubbish and pieces of pottery. There was no evidence of the east side of the gate passage at the shallow depth to which the excavations were cut. At the extreme east side of the drive, just outside the surviving section of the curtain wall, the back of an adjoining property was found. This had probably been at least partly built against the Castle wall.

6. The finds

6.1 *Medieval and later pottery by Dr. C.G. Cumberpatch*

6.1.1 *Catalogue*

- Area 1 Context 15: 16th century green glazed utilitarian ware
- Area 3 Context 57: Cistercian ware (C16th), Rhenish stoneware (?Raeren) and local late medieval / post-medieval green glazed earthenwares (local)
- Context 31: C14th – early C15th Sandy wares
- Area 1 Context 3: A mixed group containing material spanning the 16th to 18th centuries, including Cistercian ware, 16th century green glazed earthenwares (local), Tin Glazed earthenware, White Salt Glazed Stoneware, Creamware, English stoneware and utilitarian wares (including C18th redware), and Rhenish stonewares.
- Area 3 Context 46: A large group consisting of Cistercian wares (including complete profiles: Figure 7), German stoneware (Raeren) and local green glazed reduced earthenwares (utilitarian wares and a cistern). Unusual vessels include an unidentified object with perforated walls and a handled vessel with a perforated wall.
- Area 3 Context 71: A small group of medieval (C14th – C15th) Sandy wares
- Area 1 Context 5: A very small group of medieval (C12th – C13th/C14th) Gritty wares
- Area 3 Context 70: A small group of medieval Sandy wares
- Area 3 Context 23: A mixed group including later medieval to post-medieval green glazed earthenwares and a piece of unidentified stoneware
- Area 1 Context 32: A mixed group including medieval and post-medieval/early modern wares
- Area 1 Context 25: A large group, predominantly later 17th and 18th century in date, including White Salt Glazed Stoneware, Westerwald stoneware, painted Tin Glazed earthenware, Slipware, blue and white printed wares, colour glazed wares and utilitarian wares
- Area 1 Context 4: A large group consisting of White Salt Glazed Stoneware, plain and painted Tin Glazed Earthenware, Creamware, Yellow ware, Westerwald

stoneware, Rhenish stonewares, English stoneware and a variety of local utilitarian wares (post-medieval green glazed ware and post-medieval redwares).

6.1.2 Assessment

Although not large in terms of the number of sherds, the group is of particular interest because of its date and diversity. In regional terms it makes a useful contrast with assemblages from Darlington and Hartlepool and is one of the few substantial groups of later medieval and early modern date to have been excavated in North Yorkshire.

The co-occurrence of utilitarian wares and well-dated tablewares is of particular significance, as it will provide a body of evidence of great value in the understanding of smaller and less well-stratified assemblages from elsewhere in the area.

The value of the material in local terms is enhanced by the presence of significant groups of animal bones and glass. Taken together, these will provide complementary information about patterns of artefact use and consumption in the early modern period which has hitherto been lacking in this area.

The presence of imported wares (European and southern English) is of interest for comparative purposes, both with material from the later phases of sites in Darlington and Hartlepool (Cumberpatch unpublished, Wrathmell 1987, 1990), as well as with castles in the southern part of Yorkshire, notably Pontefract and Sandal (Cumberpatch in prep., Brears 1983, Moorhouse 1983).

6.2 Vessel Glass by Dr. Hugh Willmott

Numerous fragments of glass, all dating to the eighteenth century, were recovered from Richmond Castle; the minimum vessel numbers are summarised below.

The vast majority of fragments were from wine bottles, which can be divided into two forms. The earliest are two examples of onion or mallet bottles, a form that was quite common in the first third of the eighteenth century. The remaining bottles are all later cylindrical forms that can be dated from the mid- to late-eighteenth century. It is not unusual to find some earlier examples associated with later forms, as at this time wine bottles functioned as decanters to be filled from barrels and could have a long life span. A single example of a cylindrical bottle has a stamped seal attached to its side (Figure 8). This is of a simple form consisting of the owner's initials, JC, and the date 1764.

Fragments from three further vessels were also recovered, all of a lead glass metal. The first is a small fragment of thick rim, almost certainly from a wine or cordial glass. The second is also a drinking vessel. The fragment is a complete base from a slightly concave-sided cylindrical beaker, decorated with optic-blown vertical ribbing and a distinct pontil mark. The final vessel is of less certain form. There are five fragments from the lower side of an apparently cylindrical container. It is most likely to be a decanter, although it is too fragmentary to be certain.

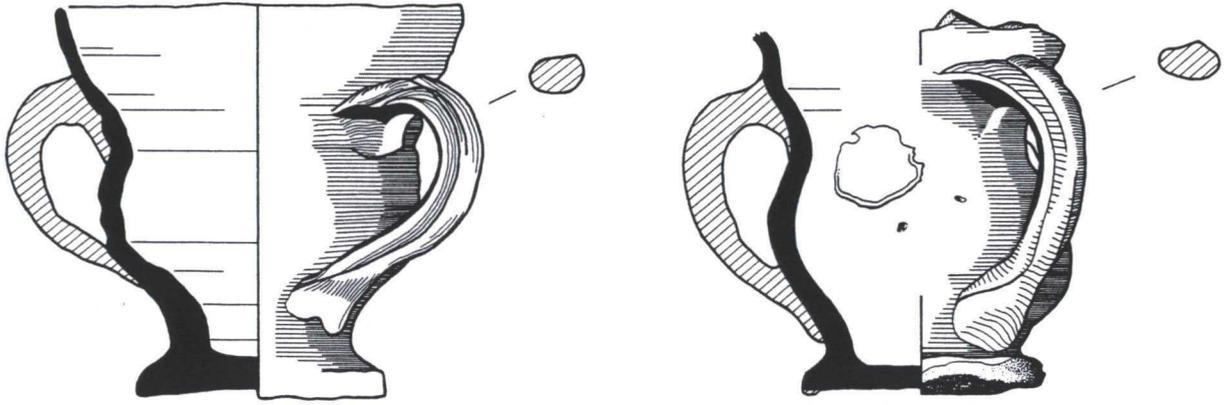


Figure 7: *Two Cistercian ware cups from context 46, the dump in the gate passage*

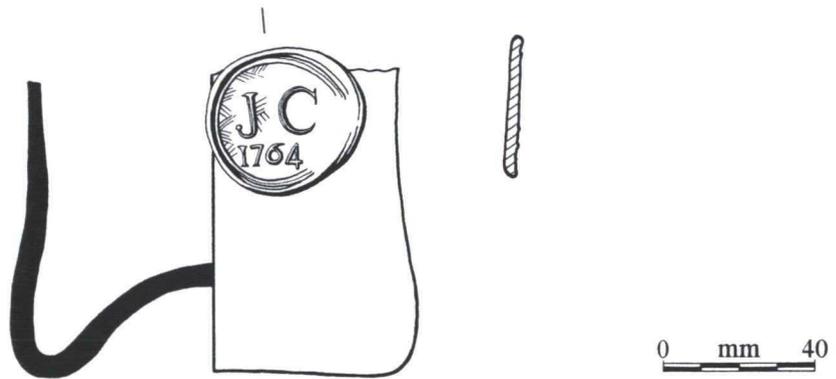


Figure 8: *Base of cylindrical wine bottle with stamped seal from the demolition rubble of early stable building. Area 1C, context 4*

Table 1: the vessel glass

<i>Context</i>	<i>Onion/Mallet Bottles</i>	<i>Cylindrical Bottles</i>	<i>Lead Glass</i>
Area 1 C, 4		8	
Area 1 C, 15		1	
Area 1 C, 3		4-6	1 wine glass rim
Area 1 C, 4	2	11*	1 vertically ribbed beaker base
Area 1 E, 25		4-6	Decanter? base fragments
Area 1 W, 32		2	
Total	2	30-34	

*One with attached seal

6.3 The plant macrofossils by Jacqui Cotton

6.3.1 Introduction

Samples were extracted for environmental analysis from two contexts situated in the gate passage of the barbican. The first sample was extracted from context **46**, thought to be a former household rubbish dump. The rubbish contained a rich array of both animal bones and pottery. Plant macrofossil analysis has been undertaken to evaluate the preservation of botanical remains, specifically charred cereal remains within the sample. As the context has already proved rich in artefactual material, macrofossil data may also reveal significant information regarding the type of food stuffs consumed at the time, and therefore may provide an indication of the nature of agricultural practices.

The second sample was extracted from context **57**, located directly beneath context **46**, which contained lenses of peaty sediment, overlying a yellow clay. The location of the context may potentially be on the periphery of the former castle moat. Plant macrofossil analysis has been undertaken to assess the potential of the sample to provide information regarding the former vegetation communities at the site. The composition of the biota will indicate the environmental conditions at the context and therefore its proximity to a moat.

6.3.2 Methodology

The two samples were manually floated and sieved through a 500µ mesh. The residue was retained and the >10mm fraction scanned for artefactual material and bones. The remaining flots were dried slowly, and scanned, using a binocular microscope, at up to x40 magnification. The contents of the flots and all preserved waterlogged seeds found within it were noted on an abundance scale of 1 (rare) to 5 (dominant). Charred remains were extracted and the total counts noted. Identifications of both waterlogged and charred remains were confirmed by comparison with modern reference collections held in the Archaeological Services Environmental Laboratory.

6.3.3 Results and Discussion

Context 46, Sample 3

Vol. processed: 5000ml Vol. of flot: 500ml

The sample, described as a dark brown-grey silty clay loam, produced a residue containing large amounts of mammal bone and pottery, with smaller amounts of mortar and iron. The large flot was dominated by cinder and clinker, with a couple of small mammal and fish bones, and the occasional charcoal fragment. The flot contained a small number of waterlogged botanical remains including bramble (*Rubus fruticosus*), sorrel (*Rumex acetosa*), elder (*Sambucus nigra*), and dandelion (*Taraxacum officinale*). Charred remains in the flot included a hazel nut fragment (*Corylus spp*) and an unidentifiable degraded cereal grain. The flot also contained a cone from an alder (*Alnus glutinosa*) tree.

The waterlogged seeds in the flot are all in low numbers and all originate from species which produce durable seeds. The context therefore has been subject to aerobic (dry) conditions which has prevented the preservation of waterlogged botanical remains. The contents of the flot indicates that the household waste, from which the sample was extracted, contained the remnants of a coal fire. However only two charred remains are evident. This may be due to preservation conditions within the context or the size of the sample processed.

As the sample is extracted from household waste, which includes remnants of a fire, it is likely that the deposit will contain charred botanical remains. These, however, may be in low quantities as indicated by the presence of just one charred cereal grain. Therefore more material may need to be processed in order to provide significant quantities of botanical remains and enhance data provided by the artefactual material.

RCB99 Context 57, Sample 3

Vol. processed: 5000ml Vol. of flot: >1000ml Vol. assessed: 500ml

The organic deposit within context 57 provided a black loamy peaty sample whose residue contained mammal bone, mortar, iron, and wood. The flot was dominated by coarse organic/peaty material, with frequent wood fragments, and occasional Bryophyte (moss) fragments, insects remains, coal, coarse sand and fish bone. As well as woody fragments the flot contained large numbers of buds and bud scales from deciduous species. Two charred seeds were found in the flot, both peas (*Vicia spp*). A large number of waterlogged seeds were present in the flot, these are tabulated below.

The sample had a 'woody' smell to it, indicative of humification (the degradation of organic matter). This indicates that the material was subject to a degree of drying which promoted biodegradation but the organic inclusions within the sample prove the sample to be mostly preserved under anaerobic conditions. The waterlogged conditions are also evident from the large number of seeds preserved. From a qualitative assessment of the waterlogged species identified, many are found in wetland habitats, and many are adapted to withstand standing water. Therefore the environmental conditions at the location may have comprised permanent or seasonal standing water, with a continuously high water table level. From the woody remains and presence of bud scales, there may have been some tree cover at the site or a wooded area nearby.

Table 2: RCB99 Context 57, Sample 3: waterlogged remains

Common Name	Botanical Name	Abundance	Common Name	Botanical Name	Abundance
Fools Parsley	<i>Aethusa spp</i>	1	Self Heal	<i>Prunella vulgaris</i>	1
Orache	<i>Atriplex spp</i>	2	Water Buttercup	<i>Ranunculus repens</i>	3
Sedge	<i>Carex spp</i>	2	Sorrel	<i>Rumex acetosa</i>	1
Heather	<i>cf Calluna spp</i>	1	Elder	<i>Sambucus nigra</i>	1
Thistle	<i>Carduus spp</i>	1	Chickweed	<i>Stellaria media</i>	1
Thistle	<i>Centaurea cf nigra</i>	1	Hedge Parsley	<i>Torilis cf arvensis</i>	1
Waterpepper	<i>Polygonum hydropiper</i>	1	Clover	<i>Trifolium spp</i>	1
Persicaria	<i>Polygonum persicaria</i>	1	Nettle	<i>Urtica dioica</i>	2
Common Tormentil	<i>Potentilla erecta</i>	2	Pea	<i>Vicia spp</i>	1
Marsh Cinquefoil	<i>Potentilla palustre</i>	1			

The two charred seeds are both peas, which have also been recorded as cultivated species during the medieval period from botanical remains extracted from Richmond Market Place (Huntley & Stallibrass 1995). There are not enough charred remains for the evaluation of agriculture around Richmond Castle.

The sample produced a large flot, of which approximately a third was assessed. Full analysis of the remaining flot would provide a more information about the species present in the vicinity of the context. Subsequent quantitative analysis of this data would provide enough information to fully ascertain the environmental conditions at the site and thus the possibility of the deposit lying proximal to the former location of Richmond Castle moat.

6.3.4 Conclusions and recommendations.

Context 46, sample 3, produced a large flot, containing the waste from a coal fire. A small number of waterlogged seeds indicated poor preservation conditions at the site. Although a limited number of charred remains were present, it is recommended that larger amounts of material are processed for further evaluation. This will increase the possibility of finding botanical remains at the site which will enhance the rich artefactual material extracted from context 46.

Context 57, sample 3, produced an extremely large volume of flot whose organic content reflected the former waterlogged and peaty conditions at the site. Anaerobic

conditions are also reflected by the number of waterlogged species preserved. Initial assessment of the species composition is indicative of a wetland environment. Full analysis of the remaining flots is recommended in order to obtain enough palaeoecological information to fully determine former environmental conditions, and the potential proximity of the context to the former castle moat.

6.4 *The animal bones* by Louisa Gidney

6.4.1 *The assemblage*

Three areas of excavation were opened which revealed evidence of the medieval curtain wall and gatehouse. Animal bones were recovered only from Areas 1 and 3. Those from Area 1 are associated with eighteenth- and nineteenth-century structures while those from Area 3 were earlier post-medieval, provisionally dated to the sixteenth century.

Preservation in all contexts was exceptionally good, with context **46** being particularly outstanding and the underlying context **57** having some beautifully preserved dark brown patinated bones which appear to have been waterlogged. The early post-medieval assemblage from contexts **46**, **57**, and **70** is by far the larger, filling three-and-a-half of the six boxes of bones provided for assessment.

The majority of the bones are of cattle and sheep, with plenty of data to be gathered on age at death from tooth wear, epiphysial fusion and metrical data. For example, besides adult cattle, there are also bones from veal calves. There are some very small, gracile cattle metapodials, probably all from one animal. Without being in any way abnormal, they bear a striking resemblance to some Dexter specimens in the writer's reference collection, including a known carrier of achondroplasia. Further comparison will be a useful indicator of how achondroplasia may have been passed on by "invisible" carriers. There is an interesting absence of bones of large cattle. Large post-medieval cattle are generally associated with later eighteenth-century "improvements", however part of the ancestry of the improved Shorthorn was the Teeswater type, reputed to be "big, rough coarse cattle" (Proud 1985, 23). This may suggest that the Teeswater type was not prevalent in Swaledale, or was itself a later development. Despite some interesting points for further study among the cattle, sheep bones appear more abundant than those of cattle, while pig bones are sparse in comparison. This pattern is regularly encountered in early post-medieval assemblages. The basic beef and mutton diet appears to have been augmented by fish, poultry and game, with some suggestion of carrion being dumped in a deposit primarily composed of domestic household waste. The hand recovered fish bones were, as to be expected, of large specimens. The birds present are domestic goose and fowl, woodcock and at least one other small game bird. The goose bones include one sternum carved according to Murrell's precepts, with three conjoining fragments indicating that the portions from one meal were deposited together. These warrant a photograph and comparison with some experimental specimens that the writer is presently working on. Large game are indicated by bones of red and roe deer and possible carrion by bones of horse, dog and cat. One fragment of dog bone from context **70** is considerably larger than the reference specimen with an estimated withers height of 70cm. The poultry and game bones indicate that at least one establishment of some status contributed to this deposit. The excellent condition of the bones means that

butchery and gnawing marks are still clear. The incidence of gnawing marks does not appear to be high, suggesting dogs only had access to the bones prior to deposition. Both context 46 and context 57 were sampled but only 5 litres of each deposit were processed for this assessment. There does not appear to be any fresh data to add to the hand recovered data for mammal and bird species present but, as was to be expected, there is further evidence for the presence of smaller varieties of fish. It is therefore strongly recommended that any further whole earth sample from contexts 46 and 57 should be processed for the recovery of faunal remains, in particular fish bones.

The later post-medieval assemblage from Area 1 is much smaller. Among the sheep bones, metapodials predominate and all have the distal articulation removed. Such bones were commonly used to peg stone roof slabs and the excavator reports that many of these finds were still *in situ* in the roof slabs found in the demolition debris. Sheep horn cores are also present which were not seen in the earlier group. Food debris is certainly indicated by the cattle, pig, poultry and fish bones found but the general impression gained was of a lower status assemblage with a higher non food debris component. Interestingly, this later group only produced one fragment of cattle from an unequivocally large "improved" animal. Again the presence of dog is chiefly indicated by the gnawing marks seen.

Table 3: Animal bone, summary table

F= fused bone present U = unfused bones present T = teeth present
 Z = bones with zones present J = lower jaw present M = measurable bone present
 LAR = large ungulate SAR = small ungulate

Preservation: E = excellent G = good A = average P = poor M = mixed

Ctxt	Cattle & LAR	Sheep/goat & SAR	Pig	Other species	Pres	Comments
46	ZJFUM	ZFUJMT	ZUJ	Goose, red deer, fowl, woodcock, bird sp., horse, roe deer, dog, fish	E	Butchery Gnawing
4	ZFUJ	ZFTJ	ZFJ	Goose, fowl, bird sp.	G	Lots of sheep/goat metapodials Gnawing Butchery
57	ZFMTU	ZFJMUT	ZJ	Horse, cat, fowl	G	Gnawing Butchery
31	ZF	ZFM		Fowl	G	
23	ZUT	ZF	Z	Fish	G	Gnawing
32		ZF	T	Fowl	G	Gnawing
37		Z			G	
71	ZU	ZF			E	
3	ZF	ZFT	ZT	Goose, fallow? deer, bird sp.	G	
70	ZF	ZFMJT			G	
25	JZUF	Z	JZ		G	
61				Indet.		
41				Indet.		