

# Excavations at Caergwrle Castle, Clwyd, North Wales: 1988–1990

By JOHN MANLEY

*with contributions by*

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and WILLIAM JONES

*THE REMAINS of Caergwrle castle in E. Clwyd stand on a hill dominating the modern village of Caergwrle, which lies immediately to the N. (Fig. 1). The castle is situated about half-way between Mold and Wrexham in NE. Clwyd at SJ.306572 (Fig. 2; Pl. viii). The castle is very much a border fortification; it stands at an altitude of 135 m OD just to the E. of Hope Mountain. Any defender on the wall-walk of the castle's E. curtain enjoyed extensive views NE. towards Chester, S. to Wrexham and beyond, and N. to Halkyn Mountain.*

The excavations that are the subject of this report were undertaken in three seasons each of eight weeks duration, during the summers of 1988, 1989 and 1990. They were carried out as part of a long-term development programme at the site designed to research, preserve, manage and present to the public the historical and ecological aspects of the castle and the hill upon which it stands. The excavations concentrated on the investigation of all the post-medieval and medieval deposits within the masonry walls of the castle, and those within its three surviving towers. A limited investigation was conducted on the defences of the castle, and on a potentially defensive outer embankment which encloses most of the hill-top (Fig. 3).

## THE GENERAL HISTORICAL CONTEXT

The chronological context of Caergwrle castle lies in the closing decades of the 13th century, during the wars waged by the English Crown against the Welsh in an attempt to find a durable solution to controlling the Principality. The fortunes of Caergwrle castle were determined by the ambitions of two very different men: Edward I of England and Dafydd ap Gruffudd of Wales. The fate of Dafydd ap Gruffudd was largely decided by the actions of his brother, Llywelyn ap Gruffudd, recognized as Prince of Wales by Henry III in 1267. Welsh law allowed each male heir an equal portion of an inheritance, and this Llywelyn had flouted, imprisoning his elder brother, Owain, and denying his youngest brother, Dafydd, his rightful

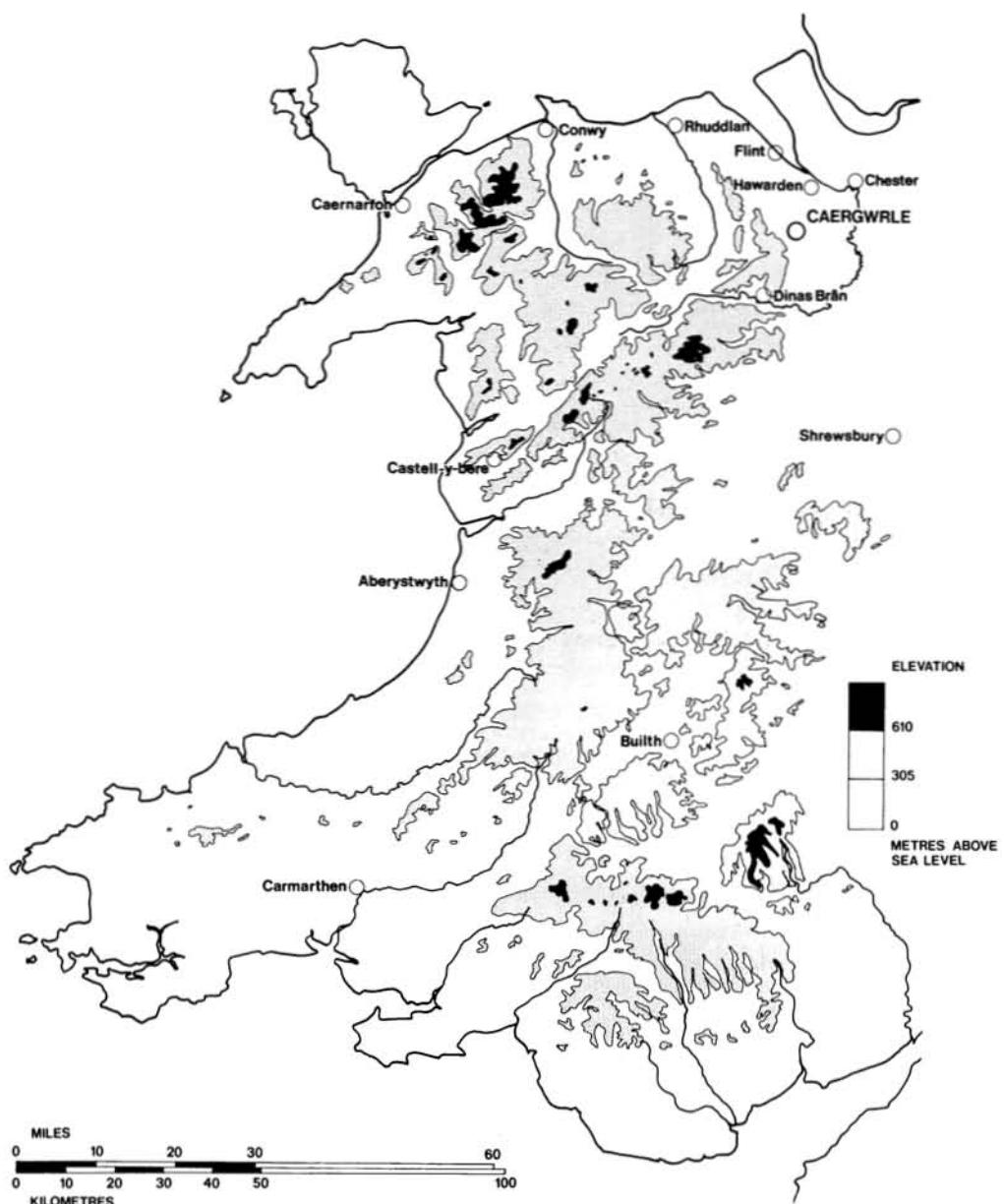


FIG. 1  
Location of Caergwrle in Wales

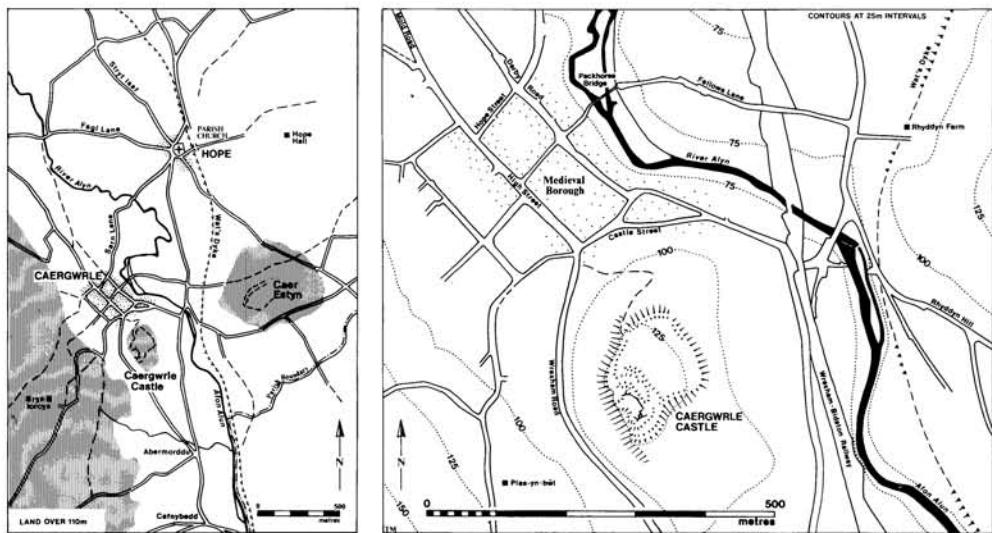


FIG. 2  
Detailed location map

share. As a direct result Dafydd rose against his brother in 1255, joined with Henry III against him in 1263 and was implicated in an attempted assassination upon him in 1274.<sup>1</sup>

When Edward I received and sheltered both Dafydd and his fellow conspirator, Gruffydd ap Gwenwynwyn of Powys, Llywelyn refused homage to the new king while continuing the construction of his new castle of Dolforwyn, only 8 km from English held Montgomery. Vigorous, militant and enormously energetic, Edward proclaimed Llywelyn a rebel and disturber of the king's peace on 17 November 1276<sup>2</sup> and only twelve months later had partly succeeded, by war, in imposing upon Llywelyn the division of his inheritance required by Welsh law. The Treaty of Aberconwy required Llywelyn to free and reinstate his political enemies, principally Dafydd and Gruffydd ap Gwenwynwyn, (but also Owain Coch, after twenty year's imprisonment at Dolbadarn). Dafydd also received from Edward the cantrefi of Rhwponiog and Dyffryn Clwyd and the lordship of Hopedale, lying outside the Vale of Clwyd on the very border with England. One further clause affected Llywelyn and Dafydd. Llywelyn was allowed to hold Dafydd's rightful share of Gwynedd, including Anglesey, for life and the issue was to be reopened on the death of either brother.<sup>3</sup> This was hardly designed to restore mutual trust, and was doubtless intended to impair any future co-operation.

Edward now controlled areas of Wales previously under Llywelyn's administration. He quickly developed his gains by beginning to build castles and lay out towns to be stocked by English settlers. Flint and Rhuddlan, both with attendant towns were planted as royal properties, and Hawarden castle was begun by Roger de Clifford, 'of the King's closest circle'. Ruthin may have been held by Dafydd himself as tenant in chief.<sup>4</sup> Dafydd, however, was clearly not appeased by the terms of the

Treaty of Aberconwy and early in 1282 revolted against his English overlords. Dafydd's rebellion was clearly well prepared and drew on well founded resentment against officious and overbearing behaviour by the English authorities in Wales and the Marches.<sup>5</sup> The attacks were skilfully aimed at the uncompleted castles of Hawarden (which was destroyed and its garrison killed), Flint and Rhuddlan and timed for the very beginning of the building season.<sup>6</sup>

Llywelyn had little choice but to join his brother or resign totally his leadership of Gwynedd. Whether this had been Dafydd's intention it is impossible to say, but on 11 December 1282, while attempting to open a S. front, Llywelyn was killed in a minor skirmish near the castle of Builth. Roger L'Estrange informed Edward 'Lewelu le finz Griffin est mort et se gent descomfit et tote la flour de se gent morz'.<sup>7</sup> It is to be noted that Edward for one did not consider Llywelyn's death to be decisive, and indeed, Dafydd conducted an extremely capable resistance against overwhelming odds until June 1283. Dafydd, now styling himself Prince of Wales and Lord of Snowdon, was betrayed to Edward and summarily tried and executed at Shrewsbury. This effectively ended Welsh resistance. The native dynasty was extinguished; Llywelyn had left no male heir, while Dafydd's two sons by his marriage to Elizabeth Ferrar were confined in Bristol castle for the remainder of their lives.<sup>8</sup>

#### DOCUMENTARY EVIDENCE FOR CAERGWRL CASTLE

The first reference to Caergwrle castle is contained in a Royal Wardrobe Roll<sup>9</sup> recording gifts made by King Edward I during the year 20 November 1277 to 20 November 1278. It reads as follows:

'Saturday 12th November, 1278. David filio Griffine, ad construendum castrum suum de Kaiervill, de dono Regis, Lxvj.li.xijj.s.iiij.d.'

This records a donation of 100 marks by Edward I to Dafydd ap Gruffydd 'for the construction of his castle at Caergwrle'. This reference supplements the king's grant of the lordship of Hopedale to Dafydd in August 1277,<sup>10</sup> and shows that it carried with it the right to construct a castle. Such a gift at this time of year is likely to represent a contribution towards the cost of work executed during the building season then drawing to a close. Whether Dafydd was building *de novo* in 1278, or repairing or rebuilding an existing fortification is a debatable point. Some authors<sup>11</sup> clearly suggest the possibility of a castle at Caergwrle earlier in the 13th century. Taylor<sup>12</sup> compares Edward's gift to Dafydd with his gift of £100 some 20 years later to Sir Richard Siward 'towards his maintenance and the charges and expenses to which he will be put in repairing his castle of Tibbers'.<sup>13</sup> Indeed the objective of the gifts is the same: to assist with the expenses of a castle constructed by a subject. Yet the original wording implies a distinction, which argues that the foundation of Caergwrle castle was indeed in 1278 or conceivably 1277. For Dafydd's gift is '*ad construendum*', while Siward's is '*reparando*'. Certainly there is no hint from the excavation results of an earlier 13th century castle at Caergwrle.

For four years from 1278 an increasingly frustrated Dafydd laboured at Caergwrle until, despairing of ever claiming his rightful inheritance in Gwynedd, he

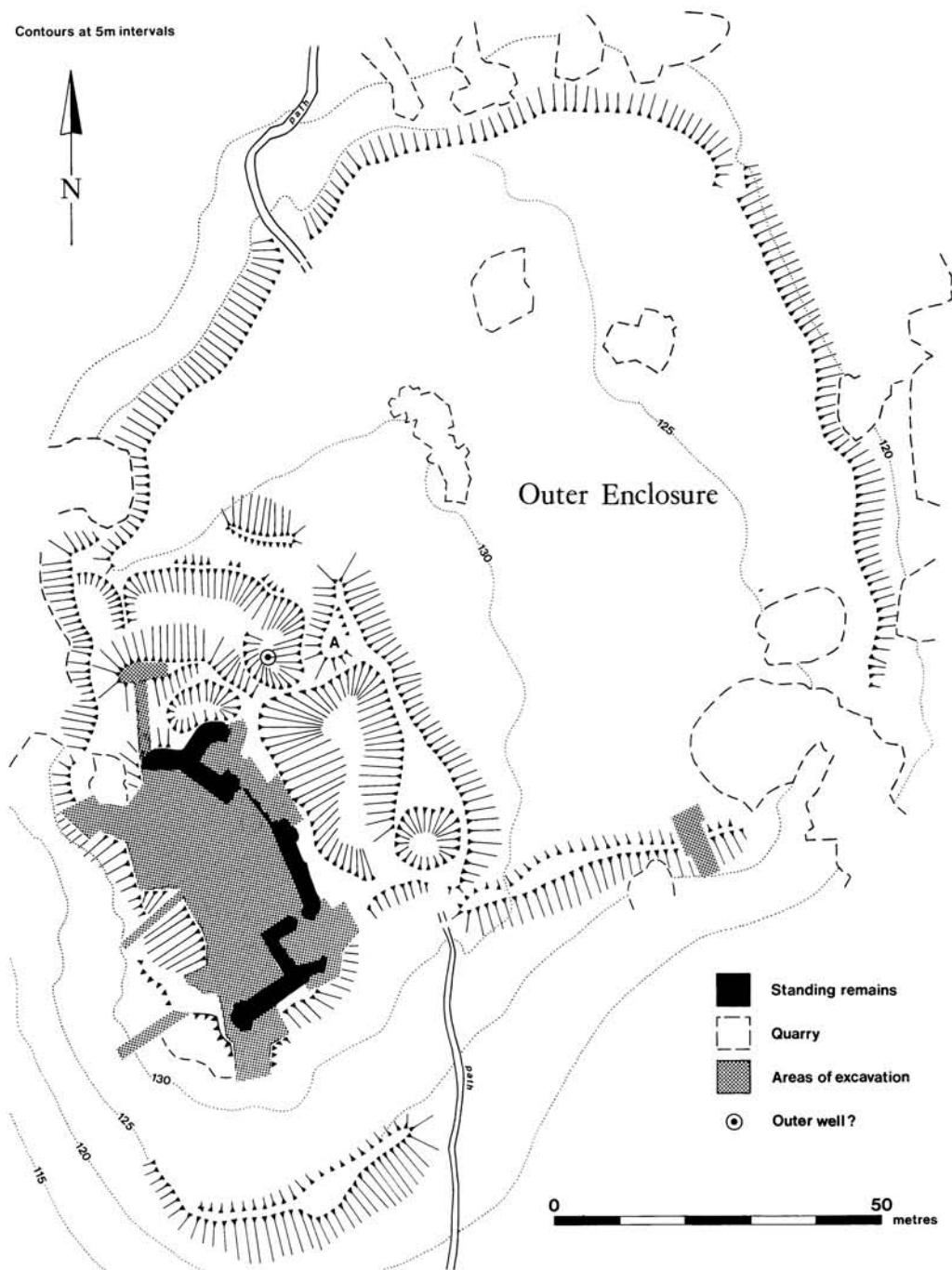


FIG. 3

Excavated areas 1988-90, based on a survey by David Browne and David Percival (R.C.A.H.M.(W.))

launched an attack against the English, probably from Caergwrle, in spring 1282. Edward I's reaction to Dafydd's rebellion was one of outrage and determination. He summoned a huge force to Chester, comprising both military personnel and workmen. Edward decided on a massive and final retaliation which would eventually result in the emasculation of Gwynedd through the construction of castles at Conwy, Harlech, Caernarfon and, 10 years later, at Beaumaris. Almost immediately however, Reginald de Grey's forces were despatched to Caergwrle where they took possession of a deserted castle on 16 June 1282. They initiated a period of 19 weeks of repair of the partially dismantled fortification.

The meticulous account of John of Lincoln of the receipts and expenses paid out at Hope castle (ie. Caergwrle) when the English re-possessed the fortification in the summer of 1282 is of great value.<sup>14</sup> The period covered by the tabulated expenses is from Tuesday 16 June until Sunday 1 November 1282. The total expenditure recorded by John of Lincoln amounted to £1466 4s. 5½d., although the majority of this was paid out to armed forces which were stationed in the vicinity. The most likely location for the camp was at Swardswood, a few kilometres to the N. of Caergwrle castle and midway between Mold and Kinnerton. Shortly after the English arrived, and certainly prior to 6 July, it is quite likely that Edward I was present at the castle for a few days, giving instructions to his principal architect, James of St George, about how he wanted to repair and re-fortify Caergwrle castle.

The total of expenditure of £1466 4s. 5½d can be divided into the following categories:

|   | £   | s. | d.  |
|---|-----|----|-----|
| Wages of Knights and Squires                  | 246 | 8  | 0   |
| Wages of Carpenters and Masons                | 154 | 1  | 7½  |
| Necessaries                                   | 9   | 3  | 11½ |
| Payments to Officials, Workmen and Messengers | 85  | 5  | 2½  |
| Payments to Archers                           | 851 | 1  | 4   |
| Payments to Diggers                           | 48  | 5  | 5   |
| Payments to Crossbowmen                       | 71  | 18 | 11  |

It therefore seems that a little under £300 was spent on the refurbishment of the castle. The bulk of the expenditure was on wages and payments to knights, squires, archers and crossbowmen, most of whom were stationed elsewhere. The wages of workmen at the castle paid for some 340 carpenters, over 600 diggers and on average, 30 to 35 masons per week. Only the numbers of masons remained relatively constant throughout the nineteen week period. The carpenters had declined in numbers to single figures by mid-July 1282, while the diggers were mostly employed at the castle from late June to early July.

The document makes passing reference to some of the buildings and features within the castle in 1282. There is mention of an old keep, which was pulled down by Henry of Turvey. There are references to the clearing out of the well which the Welsh had blocked up. There are also references to an entrance gate, a little gate and to internal buildings, presumably of timber, which included a chapel, a chamber for the pay clerks, another chamber, a chamber over the gate and a bakehouse. How far the English got in their refurbishment of the castle in the summer and autumn of

1282 is a moot point. The indications are that some of the walls were covered up at the end of the building season, implying that the building works may have been continued by Queen Eleanor when she was granted the castle on 24 February 1283. A planned town was also laid out at the foot of the castle hill (Fig. 2). Three parallel streets ran N.-S. with connecting streets running E.-W. Hopes for this new town must have been high for on 25 June 1283 Queen Eleanor was granted a charter which allowed her to have a market on Tuesday weekly, and a fair there for four days annually on the feast of St Peter of Vincula. Land would have been allotted to those willing to become burgesses and, as with all such boroughs, residence would have been restricted to English settlers, indigenous Welsh being expelled to make way for the immigrants.<sup>15</sup> On 27 August 1283 the castle was damaged by an accidental fire; the king and queen were at Hope at the time and apparently in danger.

The castle was subsequently conferred on Edward of Caernarfon as Prince of Wales and Earl of Chester,<sup>16</sup> but there is no evidence that he repaired it. After his accession it was granted to John of Cromwell for life on the understanding he would restore it at his own expense.<sup>17</sup> Whether Cromwell did so may be doubted, for when he died in or around 1335 the castle passed to Edward the Black Prince, whose surveyors reported that they found there 'Only a place called the castle of Hope, whose walls and towers are largely thrown down and there is no housing there'.<sup>18</sup>

#### GEOLOGICAL CONSIDERATIONS *By JOHN MANLEY AND DR WILLIAM JONES*

The geological and lithological aspects of Caergwrlé castle have been studied by Dr W. B. Jones and the results fully published elsewhere.<sup>19</sup> Only the broad conclusions will be presented here.

Caergwrlé castle stands on a hill comprised of rocks of the Cefn y Fedw sandstone which is equivalent to the millstone grit of N. England. There are two principal rock types, therefore, sandstone and grit, with the former overlying the latter and being the most plentiful. The rocks dip northwards so that the oldest and highest beds of gritstone are exposed at the SW. corner of the hill. It was on this high vantage point that the castle was constructed. Thin sections of some stone samples from the castle, and close inspection of the surviving masonry, suggest that all of the monument is constructed of stone quarried from Caergwrlé hill. Some features however, do show a marked preference for one type of stone. The foundations of the N. face of the S. Tower, for instance, contain a high percentage of gritstone.

Six styles of building can be seen in the walls of the castle. Their names, principal characteristics and where they occur in the castle are given in Table 1 and illustrated in Fig. 4.

The distribution of the masonry styles can probably be accounted for by two synchronic factors: (a) the need to have the most prestigious masonry in the towers where the principal living accommodation was, and (b) the requirement to have better masonry on the external faces of towers and curtain walls. Internal walls were, of course, likely to be plastered, obscuring the masonry. The £300 that was spent by the English at Caergwrlé during the nineteen week period in 1282 seems to have paid for a large number of carpenters and diggers, and relatively few masons. The

TABLE I  
DESCRIPTIONS OF THE SIX MASONRY STYLES AT CAERGWRL CASTLE AND  
THEIR PRINCIPAL LOCATIONS

| <i>Masonry Style</i>       | <i>Description</i>  | <i>Principal Location</i>  |
|----------------------------|---|--|
| Large Regular Block [LRB]  | Finely dressed, rectangular sandstone blocks of standard heights. When laid in horizontal courses there is no need for the insertion of flags to achieve a level platform for the next course. The blocks, on average measure 0.4 m wide by 0.25–0.3 m high.  | E. Tower<br>N. Tower   |
| Large Block and Flag [LBF] | A mixture of large, rectangular blocks and smaller, thinner flags, both of sandstone. The flags are used as levellers. The average block size is 0.5 m wide by 0.35 m high; the average flag size is 0.09 m to 0.55 m in thickness, but prone to shattering.  | S. Tower<br>(S. face)<br>N. Tower<br>Oven  |
| Small Regular Block [SMB]  | Almost entirely composed of small to medium sized rectangular blocks of sandstone, with very few flags. The average larger block measures 0.35 m wide by 0.25 m high, while the smaller is on average 0.25 m wide by 0.10 m high.   | E. curtain<br>(external)<br>S. curtain<br>(external)<br>N. Tower                   |
| Small Block and Flag [SBF] | A mixture of small sandstone blocks and flags. The general appearance is irregular but the masonry is well coursed. The flags are used singly, both to level up, and superimposed in two's and three's, perhaps indicating a shortage of blocks. The average block size is 0.35 m wide by 0.15 to 0.30 m high; the flags are 0.15 to 0.25 m wide and 0.03 to 0.08 m high. | E. curtain<br>(internal)<br>S. curtain<br>(internal)<br>N. curtain<br>(both faces) |
| Flags [F]                  | Occurs on a discrete section of the internal face of the E. curtain and is comprised of 80% sandstone flags. Average size of flags is 0.20–0.25 m wide by 0.06 m high.  | E. curtain<br>(internal)   |
| Grit Block and Flag        | Surviving two/three courses of 90% gritstone and 10% sandstone blocks. The average block size is 0.35 m wide by 0.25 m high. Sandstone flags and small rectangular stones are used between the blocks. The average flag size is 0.20 m wide by 0.06 m high.   | S. Tower<br>(N. face)  |

implication is that most of the surviving masonry at Caergwle was built following the directions of Dafydd between 1278 and 1281.

Examination of all the quarries on Caergwle hill suggest that the most likely source of building stone for the castle was a large quarry just NW. of the castle. Here a line of SW. facing rock begins immediately adjacent to the castle and runs NW. down the hillside. The sandstone in the quarry looks a suitable match for the building stone of the castle.

During the last glaciation the castle hill was buried by the Irish Sea icesheet. The hill protruded into the ice so it would have been scoured clean, but some boulder clay was deposited in a depression between the gritstone ridge upon which the S. and

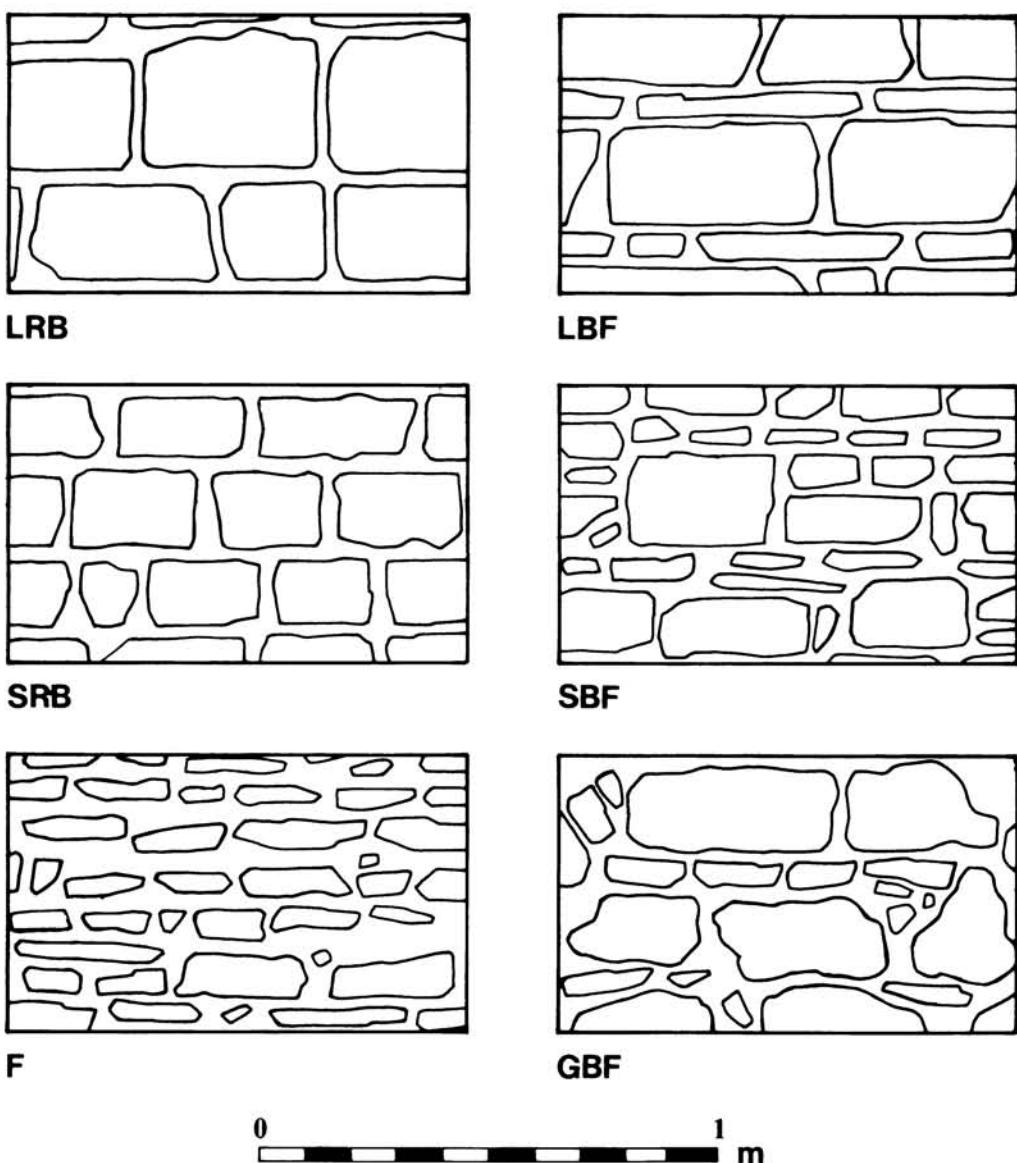


FIG. 4  
Six masonry styles at Caergwrl castle. For descriptions see Table 1

E. Towers were constructed and the sandstone ridge which supports the N. Tower. The pre-castle surface of the SW. corner of the hill was therefore much more uneven than is apparent today, resembling more a small vegetation-covered saddle between two rocky outcrops.

A major difficulty in understanding the present physical appearance of Caergwrl castle is the complete absence of a W. curtain wall, and the disappearance

of more than three-quarters of the S. Tower. If the circular trace of the tower is extrapolated, half or more of its circumference would be beyond the edge of the crag on which it stands. Part of this crag must have therefore been destroyed, either by erosion or by being quarried away. Only limited erosion has taken place on the western side of the hill, but there is considerable evidence for quarrying activity on the W. side of the castle. The vertical rock faces under the S. Tower display natural joints which can be seen continuing into the gritstone at the corners; quarrymen would undoubtedly have used these to prize the rock apart. The rock surface below the two main faces makes an embayment in the crag which is near horizontal, as though it were a working floor, and this characteristic makes it quite different in appearance from the other quarries on the hill. There are at least two almost complete millstones on the W. hillside, one close to the S. Tower, so quarrying for millstone production did occur and is probably responsible for the grit boulder scree on the W. slopes of the hill.

John Leland's *Itinerary*, first published in the 18th century but compiled as a result of a journey taken in the 1530s, refers to the castle hill 'where be digged good millstones of a blew girth'.<sup>20</sup> Such activity must have continued for a long time, since the Star Chamber proceedings of 1622 and 1626 refer to a dispute between George Hope, the tenant of the castle hill and Lewis Yonge of Bryn Iorcyn, a house on the E. slopes of Hope Mountain facing Caergwrle hill. Hope accused Yonge of interfering in the quarrying of millstones on the castle hill. It appears that Yonge was also engaged in quarrying millstones N. of Bryn Iorcyn and was anxious to break Hope's monopoly. Examples of these stones may still be seen; some of them on the Bryn Iorcyn estate, two at least as noted above, on the castle hill, and two which were built into the S. wall of nearby Hope Church in 1884. The stones are extremely cherty in appearance but were favoured in the milling of barley.

The surviving walls were robbed after the castle was abandoned, and two distinct styles of stone robbing can be identified. First there was the robbing of squared facing stones up to head-height, presumably carried out on a small-scale basis. Areas where this has occurred are most obvious on the outer face of the N. Tower and along the bottom of the outer face of the E. curtain wall. Some clumsy repair to the facing has been undertaken, perhaps during the later 19th/earlier 20th centuries, on the latter wall. Second was the total quarrying of complete walls and their foundations, presumably carried out on an almost industrial scale. The partial survivals of the E. and N. Towers, where entire lengths or sides have disappeared, are good examples of this practice. Good building stone would seem to have been the objective of the quarrymen, although both the period and duration of both these episodes of stone robbing are uncertain.

Clearance of the NW. corner of the interior of the castle during 1989 revealed a quarry in the sandstone. The back wall of this quarry truncates the W. end of the N. curtain wall and so the end of the wall and any tower that may have stood at the NW. corner have therefore been removed by quarrying activity. A trench at the W. end of this quarry exposed two horizons of boulders. The lower one has blocks up to 0.5 m across with remnants of mortar while the upper layer has blocks up to 0.2 m across with no mortar. The lower horizon (279) may be associated with an early phase of

destruction of the castle while the upper horizon (277) could have formed during the digging of the quarry.

Immediately N. of the S. Tower, in the centre of the castle, a quarry has been excavated in the sandstone immediately above the grit. If cutting stone in this area of the castle was worthwhile, then removing the ready dressed stone in the W. wall would have been an even more attractive proposition. The W. side of the castle would be a more favourable prospect for robbing stone than elsewhere because of the steep slope and the ease with which stones could be rolled down to the road. It is therefore likely that most of the S. Tower and the entire length of a putative W. curtain wall, would have been destroyed by quarrying in the post-castle period.

## EXCAVATION RESULTS

The visible remains of Caergwrlé castle before excavation consisted of three large, but unconnected, blocks of masonry; the N. Tower and N. curtain; the E. curtain; the E. Tower and S. curtain (Fig. 5). These remains were described by King<sup>21</sup> though he saw no sign of any quarrying<sup>22</sup> on the W. side of the castle that could account for the destruction of the entire masonry wall.

### *Foundations*

Two small excavations were made, against the E. curtain and the N. Tower, to examine the foundations of the castle. Both excavations suggested a similar sequence of deposits. The foundations of the N. Tower were dug into a compact boulder clay (332 and 308) on top of which were remnants of an old soil profile comprised of bands of silty sand (331 and 330). This sequence of deposits was cut by a construction trench for the N. Tower wall. The mortared foundations of the wall apparently rested on boulder clay, although safety considerations precluded a complete excavation of the construction trench. The foundations were covered by a projecting mortar skim and the construction trench was then filled by three deposits of orange sandy clay and small rounded stones (333, 307 and 327).

Excavation against the E. curtain revealed that the original ground surface (297) was capped by levelling deposits (210) subsequent to the construction of the wall. A construction trench for the wall-footings was dug through the original ground surface. Again the foundation trench was not completely excavated, so it is uncertain whether the inside face of the E. curtain was built upon remnant boulder clay or bedrock. Observations on the exterior foundations and on the truncated W. end of the N. curtain however, suggest that bedrock was the preferred base. Infilling the construction trench was a layer of charcoal and carbonized fragments of timber (305), perhaps deriving from the initial scrub and woodland clearance of the site. Sealing this was a fill of loose rubble and soil (293), completing the levelling of the foundation trench; the actual wall-foundations were capped by a mortar skim (294). Subsequently, and after the finished wall of the E. curtain had been raised a little, the interior of the castle was heightened with deposits of redeposited boulder clay and lenses of sand (210). It is clear that such redeposited material was spread over large part of the castle interior, only giving way to the rising gritstone outcrop at the S. The same sequence of boulder clay capped by old ground surface and sealed, in turn, by redeposited material was observed in the centre of the castle and in the sides of the well-pit (Fig. 9). This redeposited material constituted a reasonably level surface for the internal features and buildings of the castle.

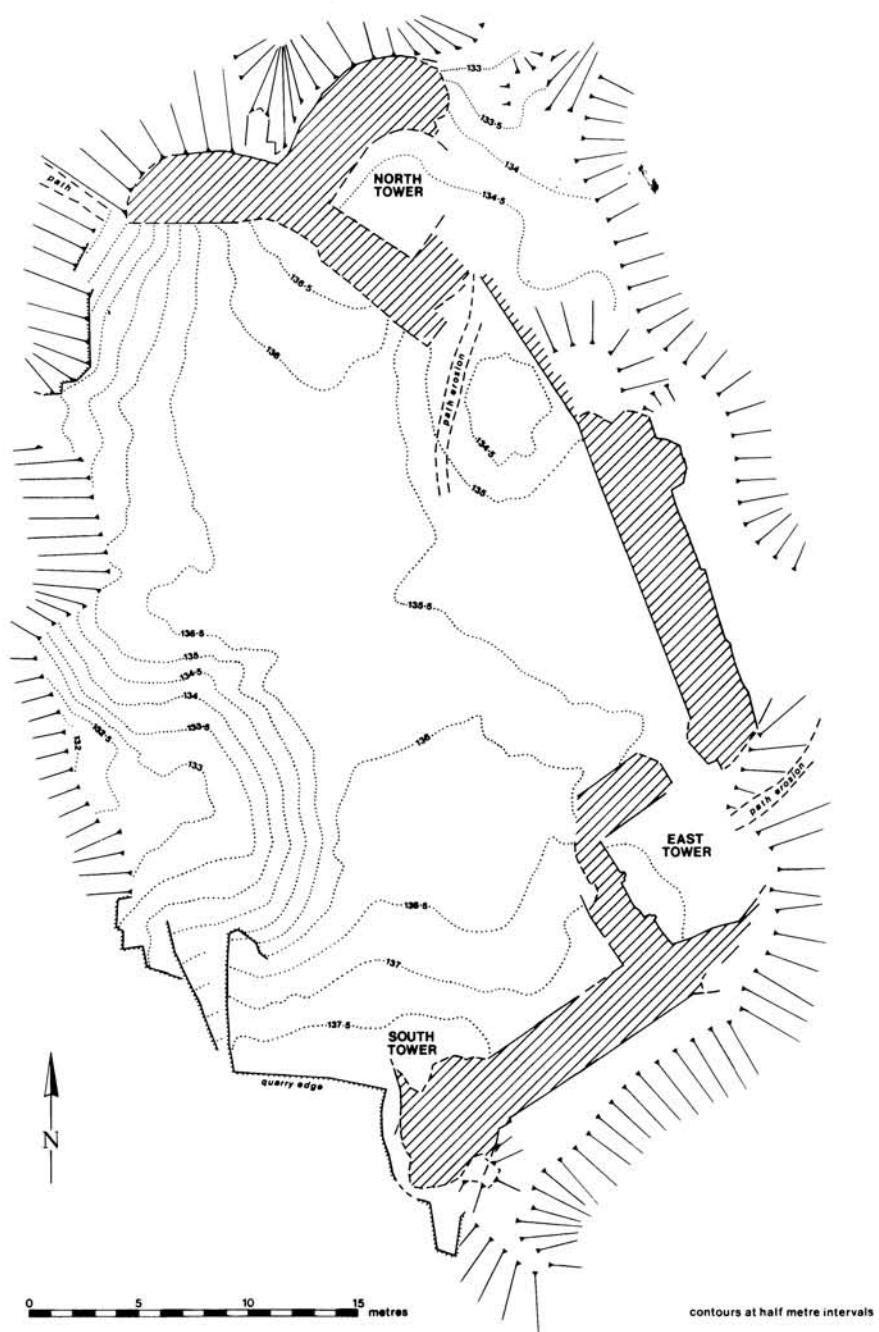


FIG. 5  
Pre-excavation plan, simplified version of a plan by R.C.A.H.M.(W.)

*South Curtain and South Tower*

The S. curtain survives to an impressive but not full height. It ends in large lumps of core-masonry that spill out onto the gritstone outcrop that is the highest point of Caergwrl hill. King<sup>23</sup> was able to discern the incomplete foundations of a large, round S. Tower which, according to his calculations, must have been at least 18 metres in external diameter, assuming of course that it was completed. Realising that such a tower would extend beyond the present rock-outcrop, King suggested that the S. arc of the tower lay below the outcrop. He thus envisaged a rock-sided angular pit as a basement for the tower.

Less than 25% of the circumference of outer facing survived and this only stood to a maximum of two courses (Pl. x, b). The style of masonry consisted of a facing of gritstone and flags, this being the only occasion where this material was used by the medieval masons in such a fashion. The S. Tower lay on the line of the S. curtain. It is noteworthy that where slight remains of the S. Tower project S. of the curtain wall, the masonry style utilized was one of the most impressive, i.e. large block and flag. Inside the castle the gritstone facing of the S. Tower lay on bedrock and circumscribed layered core-work of largely flat sandstone flags embedded in mortar. Closer to the S. curtain the broken core-work rises up to join the principal S. wall. The surviving core-work suggests that the wall thickness of the S. Tower was at least 3.5 m. The extant gritstone outcrop rises to the S. beyond the limits of the truncated core-work, so the presumably wooden ground floor of the tower must have been somewhat higher than the surviving remains. The exterior diameter of the tower must have been c. 17–18 m, assuming that the tower was completed. A curious feature of the tower concerns its relationship with the S. curtain. The outer facing of the tower indents by c. 0.6 m just before it joins the curtain wall. The facing stones of the indentation do not bond with the curtain wall, giving no hint as to whether the tower or the curtain wall were primary. Assuming a near-contemporary build of the two structures, the gap in the facing may have housed a wooden post supporting a timber staircase which gave access to a door in the S. Tower at ground or first-floor level.

*East Tower*

The E. curtain is broken off abruptly, presumably by quarrying, at its S. end. A ragged piece of stonework, with a flat masonry face, projects out from the main wall, possibly indicating the presence of a wall-passage or chamber. Situated at the corner of the E. Tower this almost certainly infers the presence of a latrine. Springing from the internal face of the E. curtain are the remains of an arch which gave access from the castle courtyard into the E. Tower. In plan the latter was the usual 13th-century type; half-round externally with a rectangular back. The surviving remains of the E. Tower are much slighter than the N. Tower. The E. face of the E. Tower has entirely disappeared, presumably through stone-robbing and quarrying, although enough survives to show it was round-fronted externally and polygonal internally. In the N. wall of the tower is a large recess, which was probably a window. The W. side of the tower incorporates, at its N. end, the fragmentary traces of a newel-stair, and a substantial fireplace at ground level. Nowhere in the E. Tower does enough masonry survive to indicate the position of a first floor.

Excavations both inside and outside the E. Tower shed light on its construction (Pl. x, a). The only architectural feature noted to supplement the pre-excavation survey was a rectangular window recess situated in the S. wall. Removal of disturbed deposits and loose rubble from the area to the E. of the tower indicated a concave outline of truncated bedrock with isolated clusters of redeposited castle masonry and mortar (791; 829) at its foot. Extrapolation of the curving exterior of the E. Tower to the E. clearly demonstrated that not all of the tower would have been sited on the extant bedrock, proving that quarrying must have destroyed the rest.

From within the interior of the tower c. 0.6 m. of heavily disturbed deposits were removed to reveal an uneven bedrock surface (792). Depressions in the bedrock close to the walls of the tower were infilled with dark brown silty sand (746) and the more familiar orange

sandy clay (746) to produce a horizontal level for the floor. In places adjacent to the walls a mortar skim (742; 751; 752) still survived which must have provided a seating for presumably a flagged floor, none of which remained. Three small rectangular slots (758; 759; 760) were identified in the bedrock. Their depths ranged from 0.07 m to 0.16 m, with some sides vertical and others sloping inward to produce a smaller aperture at their bases. In the absence of any medieval stratigraphy in the tower it is impossible to decide whether these represent scaffolding holes associated with construction activity, or whether they relate to a post-castle phase of quarrying.

The removal of disturbed deposits from the doorway between the E. Tower and the courtyard revealed the foundation arrangements for the E. curtain. Here the bedrock (792) lay at greater depth and deposits of silty clay and rubble (784), orange sandy clay (757), mortar and rubble (756) and massive gritstone blocks (824) were used to provide a platform for the curtain wall. To the S. of the E. Tower the lower level of surviving bedrock had to be similarly capped to provide a building platform for the S. wall of the tower. Massive blocks of gritstone and sandstone, covered by a mortar bed, supported a horizontal course of rectangular sandstone flags (733) which projected out from underneath an arc of finely dressed and chamfered sandstone blocks (718). Inset from the latter was the vertical wall of the tower. At the junction of the S. wall of the E. Tower and the S. curtain layers of orange sand and silty sand were dumped up against the deeper foundations of the E. Tower. Into the top of them was excavated a foundation at (716) into which was laid the much shallower stone foundations of the S. curtain, indicating that the curtain wall was constructed after the tower foundations had been laid. After the castle had been abandoned deposits of mortar (705) and rubble (715) spread S. and down the slope away from the masonry, presumably at some point during the collapse and robbing of the monument.

#### *North Curtain and North Tower (Fig. 6)*

There is a surviving length of curtain wall that runs for c. 7 m W. from the N. Tower. It has been vertically truncated by quarrying, the foundations of the wall resting on the underlying bedrock. On the exterior face, especially evident where it joins the tower, there is a bevelled stone course which projects downwards and outwards indicating that the external lower courses of the wall were offset from those above. A newel staircase, and a chamber which contained two latrines, all contained within the thickness of the curtain wall are suggested by the surviving remains. A small window high on the N. curtain provided light for the staircase, which did not descend to ground level but was probably accessed by a wall-passage across the rear of the N. Tower.

The plan of this tower is rather unusual, but nevertheless approximates to the common English half-round plan. Its internal measurements are c. 4.5 by 5 m. The basement seems well below the interior ground-level of the castle, and although the walls are very thick indeed (c. 3 m), an internal offset to carry the first floor considerably reduces their width. There are no signs of openings in the surviving walls and the basement has the appearance of a storeroom or dungeon. In the walls of the first-floor room are the remains of a substantial fireplace. A remarkable feature of the fireplace is that where stone corbels supporting its chimney-breast might be expected to be, there are two large rectangular holes c. 0.4 m wide. These holes pass completely through the thickness of the tower wall. Large timbers originally passed through these holes; both had squared upper edges whereas the lower were left in the round. Only one fragment of a window or loop survives, high up on the internal rear-face of the tower.<sup>24</sup>

Removal of c. 0.9 m of disturbed deposits within the tower revealed a familiar layer of orange sandy clay (217), presumably material dumped to form a level seating for a flagged floor (Fig. 6, Pl. ix, d). Small areas of mortar projecting out from underneath the walls of the tower indicated that such flags were laid on a mortar platform. The tower floor was considerably lower than the courtyard level within the castle; the absence of windows and the fireplace at first floor level within the tower suggests that the ground floor room functioned as

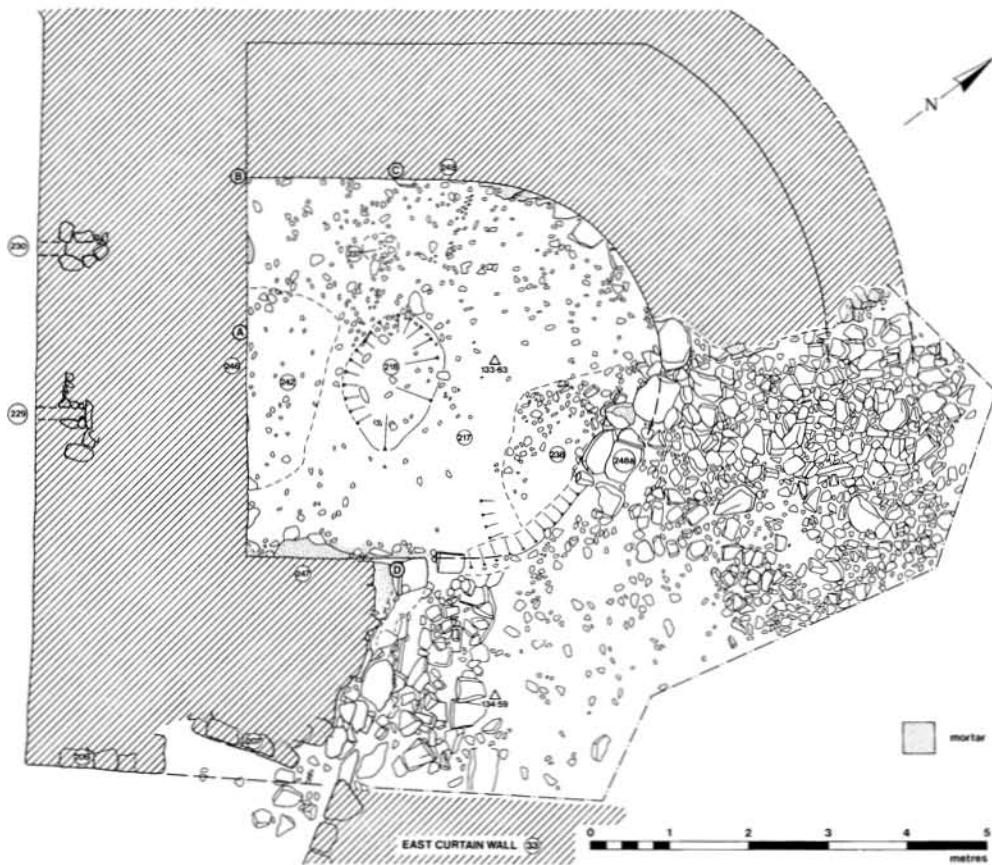


FIG. 6  
The excavated North Tower

a basement, storeroom or dungeon. The bedrock beneath the N. Tower was not reached by the excavations. A sondage in the NW. corner of the tower demonstrated that the masonry walls were founded on beds of mortar laid over a mixture of the orange sandy clay (217) and large sandstone blocks. Detailed examination of the external junction between the N. Tower and the N. curtain indicates that the tower was constructed first.<sup>25</sup> Quarrying and stone-robbing had entirely removed the SE. end of the tower; the masonry walls were abruptly truncated and no foundations were discovered. After the castle had been abandoned stone robbing of the floor and walls took place and soil and rubble (211; 212) gradually accumulated within the tower. Robber or treasure-hunter pits were excavated into this rubble in the centre (218; 219), against the rear internal face (242), and against the front internal face (238). At some point in the 19th or early 20th centuries attempts were made at some minor repair and reconstruction of the tower. A crudely-built wall (248a), c. 2 m in length, was constructed to continue the line of the front internal face of the tower. In addition, where stone-robbing had removed part of the external SE. wall of the tower, a group of five rectangular sandstone blocks (207) were laid to simulate wall-face, but on a mistaken alignment. Such cosmetic repair work in this part of the castle might be associated with the construction of some roughly-built stone steps (Pl. IX, B) that led from the surviving top of the

E. curtain down to the perimeter of the well, situated immediately to the S. of the N. Tower. Indeed, the line of irregular stones capping the internal face of the E. curtain (33) were probably placed at this time to form a threshold for the descent to the well. The construction of these steps necessitated the excavation of a pit adjacent to the external S. corner of the tower. This revealed that the surviving SE. external face of the tower was vertical to foundation level, and then splayed outward in less finely-laid horizontal masonry for a depth of over 1 metre. The bottom of the foundations were not reached nor was bedrock observed.

### Oven (Fig. 7)

Remains of a substantial bread-oven (Pl. x, b) were located in the castle courtyard in the angle formed by the E. Tower and the S. curtain (Fig. 7).<sup>26</sup> The oven measured c. 4 m square externally and survived to a height of c. 1 m.

Local Cefn y Fedw sandstone of a reddish-brown hue was used in the construction of the oven, which consisted of two distinct elements. The base of the oven was formed by a rectangular platform of stone. On the W. side the wall had been widened to accommodate the slightly larger than anticipated circular superstructure. This was not an addition, however, since partial dismantling of the structure during reconsolidation works showed that the projection was of one build with the rectangular platform. The latter was not solid but enclosed an almost square hollow, c. 2 m on each side and 0.6 m deep. Bedrock was found at the bottom of the pit, and no doubt the base of the entire oven rests on bedrock. The second

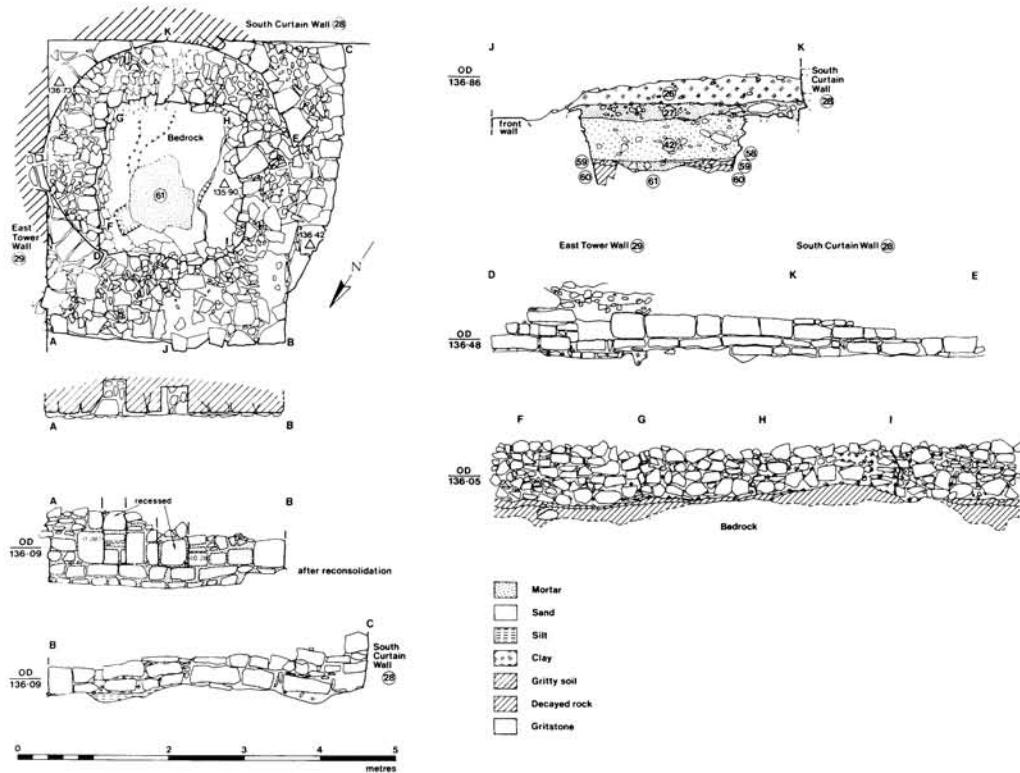


FIG. 7  
Plan, elevations and sections of the oven

major element consisted of a semi-circle of relatively flat foundation stones which presumably supported the superstructure of the oven; up to three courses survived. Sections of facing stones in the E. Tower and S. curtain had been either originally omitted or subsequently removed to allow the curving superstructure to bond with the main walls of the castle. This also ensured a greater internal diameter of just over 3 m. for the oven. No traces of mortar were observed between the building stones, which were apparently held in place by a matrix of mud and their own weight.

When the central square pit in the platform was excavated, an uneven surface of bedrock was revealed on which rested the remains of an oval-shaped bowl of mortar (61) This was presumably a mortar-mixing bowl which was used during the construction of, or repairs to, the principal walls of the castle and was fortuitously preserved when the oven buried it. Excavation of the square pit demonstrated that it had been filled by two main deposits, the lower one (42) a mixture of crushed mortar and yellow sand, and the upper one (27) a fairly homogeneous band of yellow mortar and sandstone fragments, possibly the foundation bed for the flagstone floor of the oven, though none of it survived. The sides of the pit (Fig. 7, F-G-H-I) were formed by large irregularly shaped blocks of stone and showed no signs of being faced.

The only accessible straight side of the oven was on the N. edge, and it was assumed that this was the front of the structure. Two recesses were located in this face (Fig. 7, A-B), each c. 0.3 m wide and 0.4 m deep. They were not intended as flues, and both terminated in squared sandstone blocks. Only the one to the E. showed much trace of being subjected to concentrated heat. A considerable amount of spread charcoal was located in the corner between the front of the oven and the wall of the E. Tower, and the lower façade of the structure in this area had been subjected to heat. In front of the oven a roughly rectangular deposit of level mortar, stained with charcoal, was uncovered (Fig. 10). It seems likely that this deposit represents the floor of the bakehouse in front of the oven. The finds from the oven suggest that some occupation was underway before it was constructed. Incorporated in context 27 (Fig. 7) were two adjoining body sherds from a medieval vessel, a lump of melted lead waste and three iron nails. A smithing hearth-bottom was found in the rubble core of the oven. It weighs c. 1.67 kg and suggests that smithing was already occurring on the site prior to the construction of the oven.

Bread-ovens were a common feature of medieval architecture, both military and domestic. A full description of medieval kitchens and ovens has been published by Kenyon.<sup>27</sup> In castles they could be either incorporated into the core-work of towers as at Conwy<sup>28</sup> or constructed against curtain walls as at Aberystwyth<sup>29</sup> or be contained within courtyard buildings as at Kidwelly.<sup>30</sup> Characteristic of such ovens are raised flagged floors, usually between 2 and 3 m in diameter and ranging from 0.7 to 1.3 m in height. When oven roofs survive, as in the towers of castles, they are domed in shape and constructed of stone.

The bread-oven floor at Caergwrle, with an internal diameter of slightly over 3 m, was larger than most contemporary examples. Although it can be securely dated to the late 13th century due to the short history of the castle, it cannot be assigned, on archaeological evidence alone, to either the work of Dafydd or Edward. It seems likely, however, that the period when most men were stationed at Caergwrle was during the Edwardian refurbishment in the summer and autumn of 1282. Apart from the military contingent there were over 600 diggers, 340 carpenters and over 30 masons working at various times during those months. It was perhaps during this period that the bread-oven was most needed.

The documentary evidence, however, suggests the erection of a timber structure over a pre-existing oven in 1282, given the small amount paid for the work.<sup>31</sup> The possibility remains, therefore, that the oven and bakehouse were the works of Dafydd, and that the covering structure was demolished during the slighting of 1282, prior to the arrival of the English, leaving the latter the task of rebuilding the bakehouse. There is little to choose between the attribution of the oven to either Edward's or Dafydd's workforce.

Two of the closest parallels to the oven at Caergwrle are represented by the extant 14th-century oven at Montgomery castle, Powys and the oven described at the contemporary

castle of Newport, Gwent. The latter was recorded as being a circular, stone oven, c. 4 m in diameter, set into a square, masonry platform.<sup>32</sup>

Two other features of the oven are worthy of comment. The two recesses at the front of the structure remain difficult to interpret. They do not connect in any way with the interior of the oven, although given the partial survival of the structure, it cannot be ascertained whether they did so at a higher level. The E. one was subjected to heat, most likely from ashes and charcoal raked out from the interior of the oven. Given the oven's large internal diameter, the recesses may have been steps to allow the cooks closer access to the oven interior. More speculatively, they might have been seats for supports to carry a hood or roof over the front of the oven, or for horizontal timbers that supported a timber floor of the bakehouse.

The square pit in the centre of the oven filled with soil and crushed mortar and beneath the floor of the structure appears to have been deliberately constructed. It may have been more efficient in retaining heat than the voided rubble which surrounded it, and it may thus have been an energy-saving device.

#### *East Building (Fig. 8; Pl. ix, c)*

Prior to excavation it was anticipated that an internal building might have been constructed up against the inner face of the E. curtain (Fig. 8, 33). Here was a large, level area, bounded conveniently on one side by the vertical face of the E. wall of the castle (still standing over 7 m in height), and flanked by an entrance from the E. Tower (30) and, to the N. by the well-pit. In addition, two rectangular recesses (measuring c. 0.35 by 0.33 m, and 0.5 by 0.36 m) on the inner face of the curtain wall, c. 2.7 m above the level of the castle courtyard, may have originally held timbers supporting the roof structure of such a building.

Traces of the E. building (Pl. ix, c) survived as a line of rough stone foundations on the N. (44) and W. (45) sides (Fig. 8). To the S. the impression of the structure was identified by contrasting the relatively stone-free interior with a stony area between the building and the arched entrance into the E. Tower. The medium-sized sandstone blocks used in the foundations were irregularly laid to a depth of between 0.1 and 0.2 m. Progressive erosion around the well-pit in later centuries had removed the area beyond the N. wall of the building. The roughness and shallowness of the foundations of the E. Building suggest that they supported a timber superstructure, perhaps of one storey, and with most probably a simple lean-to roof against the E. curtain. No entrance to the building could be identified with any certainty, apart from an apparent gap in the footings of the long, W. side, adjacent to two areas of grey sandy-clay deposit (108; 109) which were flecked with occasional fragments of charcoal. The level interior of the building comprised a surface of orange sandy-clay largely formed by contexts 65, 104, 106 and 107. Such deposits were part of the general levelling layer of orange sandy-clay spread over most of the interior of the castle, rather than a foundation for a floor within the building. No real indication of the original nature of the floor was obtained, though isolated patches of burnt soil and charcoal were identified (110; 112). An internal division of the structure was hinted at by the separation of 107 and 106 from 65, although no slots, post or stake-holes were located to substantiate this possibility. Outside and S. of the building was an irregular area of fine, sandy clay (41), discoloured red by fire and associated with a carbonized length of timber. It is uncertain how or whether this deposit relates to the building.

#### *Well (Fig. 9; Pl. ix, b)*

The well lay immediately W. of the E. curtain and N. of the E. building. The well was only excavated to a depth of c. 2 m in order to define the diameter of the pit (Fig. 9). The well was c. 3 m in diameter and faced with large sandstone blocks (4) for most of its circumference. Such stones were absent on the N. side of the pit. The break in the perimeter here was caused by the introduction of crudely built steps, leading down from the E. curtain, constructed at some point during the late 19th or 20th centuries (Plate 10). However, a limited but deeper

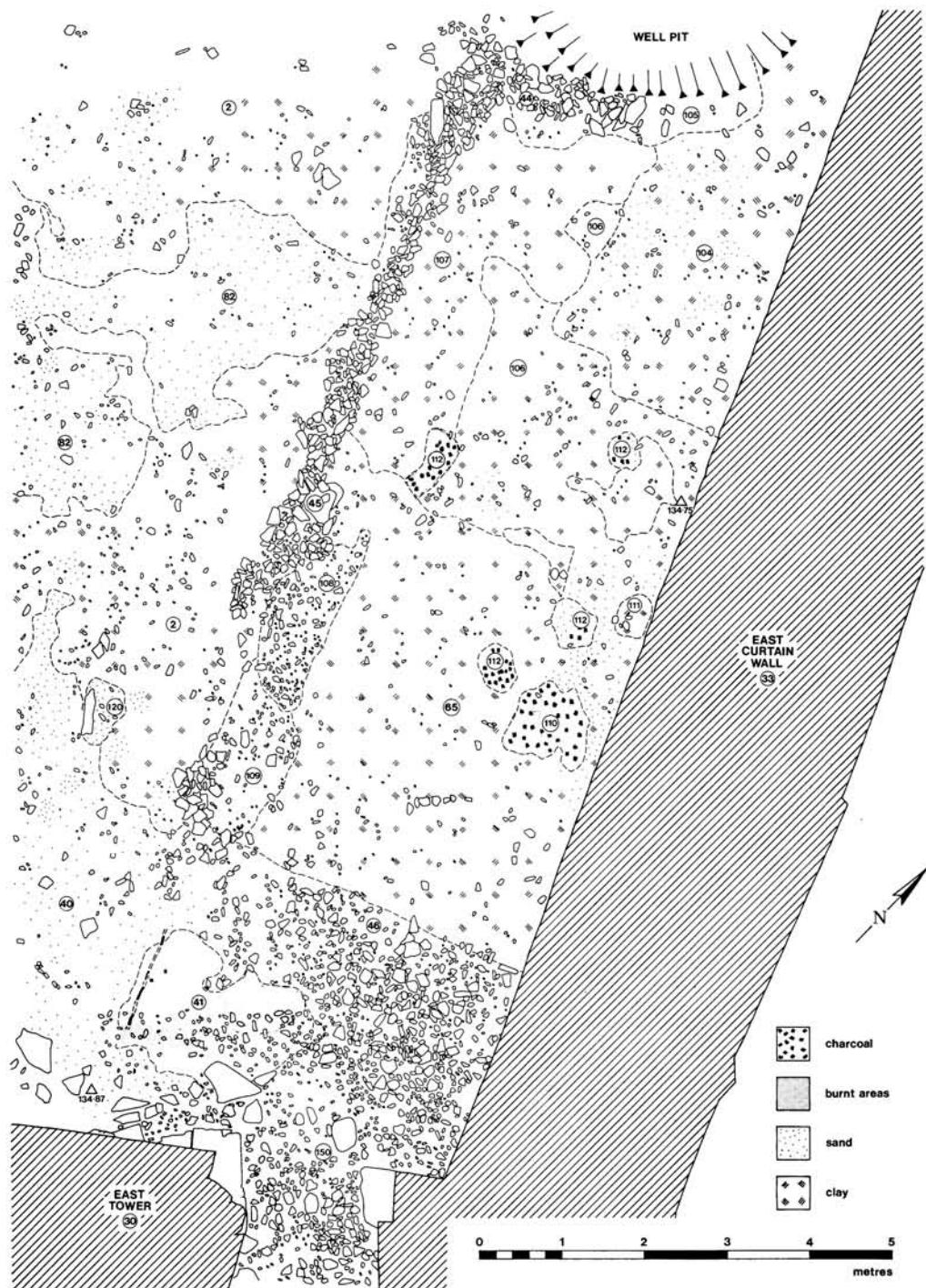


FIG. 8  
The East Building

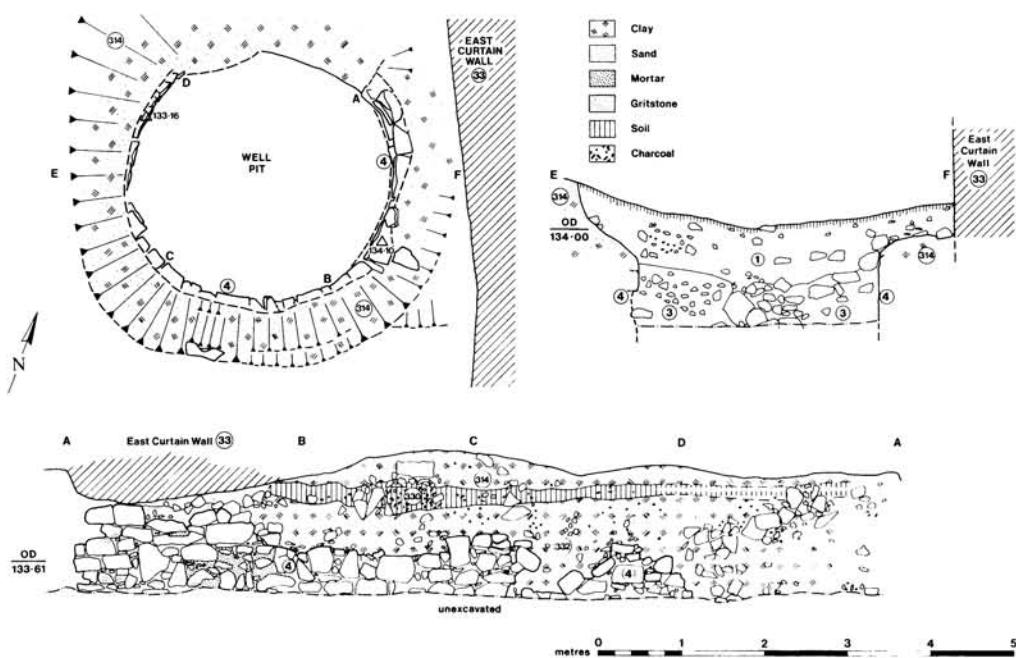


FIG. 9  
Plan, elevation and section of the well

excavation of the area immediately below the steps (Fig. 9 A to D) revealed that the line of sandstone blocks was complete around the well at greater depth. At no point was bedrock observed on the well perimeter, although presumably at greater depth the need for a built stone circumference would disappear and the well would be continued down through bedrock. The excavated infill of the top of the well pit comprised two deposits (1 and 3) of dark silty soil and rubble which have accumulated in the recent past.

The sandstones forming the hill have a good porosity. They are therefore capable of storing large quantities of water. Porous sandstones with quartz overgrowths are also very permeable. A plentiful supply of water to a well which intersected the water table can therefore be anticipated. However, the castle is situated at the crest of the hill and there is a particularly steep slope on the W. side. The water table may therefore be a long way below the surface, particularly in summer.

The well at Caergwrle castle is situated in the best possible position within the walls. It is as far as it can be from the steep W. slope and it is in a low topographical position between the grit ridge on which the S. and E. Towers stand and the sandstone ridge carrying the N. Tower. It is also probably very deep since it took two months to clear out the well in 1282 after the Welsh had filled it in.<sup>33</sup> It is appropriate at this juncture, however, to point out that the well inside the castle may not be the only well on the site. There is a depression surrounded by large but disturbed masonry in the defensive ditch outside the castle which may be a second well. If this is so the supply of water from the internal well may not have always been reliable.

#### *Internal Structure (Fig. 10)*

The partial remains of an internal structure were located in the N. half of the castle (Fig. 10). The evidence consisted of primarily a line of burnt clay or daub, running c. E.-W. for 3 m, with, just to the N., a parallel piece of timber indicated by a fragmentary line of

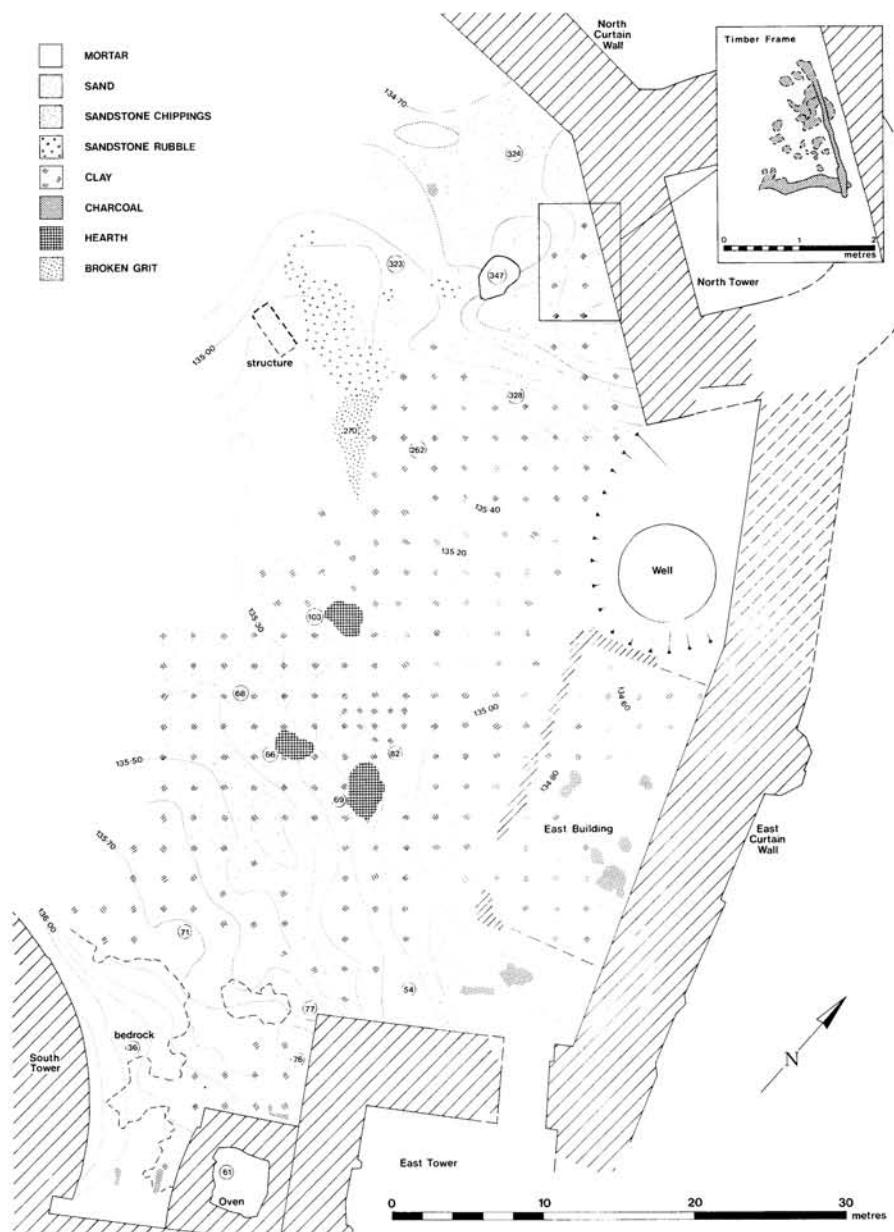


FIG. 10  
Simplified plan of deposits within the castle

charcoal. The burnt daub continued around the N. end of the structure, the interior of which was marked by a number of large, angular stones and small, rounded stones in a brown, sandy loam. Some 112 fragments of animal bone, some of them burnt, were associated with the structure, and 43 iron nails were also found. A timber structure with minimum dimensions of 3 by 2 metres is indicated, but its function is uncertain. However, it does lie just S. of an area where there was considerable activity associated with the building of the castle, such as mortar-mixing, dressing of sandstone blocks and the breaking up of gritstone for aggregate so it may have been related to these activities.

#### *Castle Interior (Fig. 10)*

The deposits that covered much of the surviving internal area of the castle are indicated on Fig. 10. It is noticeable that bedrock within the castle was exposed during the medieval period at both its S. end between the S. tower and the oven (36), and at the N. end in the shape of a large sandstone rock (347); the latter is clearly the same stone as the sandstone bedrock under the N. curtain, and, if this stone was moved by the medieval builders it was probably not moved very far. The saddle between these exposed areas of bedrock was covered by redeposited orange sandy clay (262), presumably dug out from the ditched defences of the castle. The purpose of this redeposition was to provide a reasonably level interior for the castle. It is noteworthy that this effect was not completely achieved in the area to the immediate W. of the well. A roughly oval mound of orange clay was apparent which may have been the remains of a dump of spoil that had been excavated from the well during its construction.

In the centre of the interior were the remains of three smithing hearths (66, 69 & 103), marked by irregular areas of greyish soil containing considerable quantities of iron slag, charcoal and medium-sized angular sandstone fragments. The deposits had no formal structure and were contained in shallow depressions, between 0.1 and 0.15 metres in depth. Samples from the hearths were collected for analysis.<sup>34</sup>

Several different deposits lay in the area between the internal structure and the rear wall of the N. Tower. This part of the castle interior had clearly been used for mixing mortar for masons working on the N. Tower and N. curtain. Such evidence compares with the well-preserved mortar-mixing bowl (61) found underneath the oven adjacent to the S. curtain. Quite close to the N. Tower an irregular deposit of angular sandstone chippings (328) was located. The stones in this deposit appeared to be of a consistent length (*c.* 0.1 to 0.15 m) and thickness (30 to 50 mm) and displayed unweathered breaks. There was very little soil between the stones and the deposit measured *c.* 0.4 m in depth. The most likely explanation for this deposit is that stone-masons were dressing stone in this area. The dressed stones were presumably handed up to masons who were laying courses on the N. Tower and curtain. To the E. of the internal structure an irregular deposit of broken grit (270) appears to have originated through masons bringing lumps of gritstone onto the site and smashing the stone to extract grit for use as aggregate in the mortar preparation.

Adjacent to the rear of the N. Tower was a burnt timber frame (Fig. 10) which is probably connected with an early phase of destruction or demolition in this area of the castle. The frame (251) was in a fragmentary condition and was formed by two pieces making a rough L shape; it had probably been burnt on top of a deposit of loose sandy soil (235) which showed evidence of having been scorched, since it contained burnt stones and patches of charcoal. Context 235, and the deposits underlying it, were comparatively rich in finds. From 235 were recovered a number of iron nails, which presumably came from the timber frame, some fragments of animal bone, and a copper-alloy finger ring (Fig. 15, Catalogue No. 15). Beneath 235 was a layer of decayed whitish mortar (223) containing slag, medieval pottery and animal bone, and underlying this was a dump of sandstone rubble and broken lumps of yellowish mortar, again containing medieval pottery, animal bones and slag. At the bottom of this sequence, overlying the orange sandy clay (262) was a deposit of washed-out mortar and gritstone rubble (270), which likewise incorporated slag, one iron nail and some

fragments of animal bone. This small stratigraphic sequence, c. 0.9 m deep, appears to contain deposits that were largely produced during the construction and occupation of the castle, with only the uppermost contexts, 251 and 235, relating to demolition. The burnt timber frame could possibly be the remains of a timber staircase that gave access from the castle interior into the N. Tower at the level of the first floor. The timber frame was sealed by overlying demolition deposits (202, 204, 232) which contained finds including medieval pottery, iron nails, animal bone and slag. It is noteworthy that an iron claw-hammer was recovered from 202 (Fig. 15, Catalogue No. 9).

#### *North West Corner*

The amount and significance of quarrying on the W. side of the castle has already been discussed. There is clear surface evidence to suggest the probability of a quarry at the NW. corner of the castle, where the N. curtain is abruptly truncated, and vertical, quarried rock faces are visible. An excavation in this area explored the deposits at the W. lip of the putative quarry, and a little way down the slope of the hill to the W. in the hope of finding any remnant masonry connected with the possible W. curtain wall of the castle.

No medieval stonework was left *in situ* in this area, but three major deposits were located. The lowest (279) consisted of very large angular stones, clearly lying in a tumbled and voided condition, and was overlain by a sloping deposit of decayed and washed-out mortar (278), which was relatively stone-free. The sequence was capped by another layer (277) of large, angular but undressed stones. It was noteworthy that all the stonework appeared to be displaced and the result of either destruction or quarrying; 279 may have been the result of initial collapse and abandonment of the castle, with 277 the residue from the quarrying activity that took place on the platform immediately above the excavated section. The layer of mortar (278) is likely to have washed out from the overlying stones and settled as a broad band beneath them.

#### *East Curtain*

The surviving E. curtain is c. 3 m in width. Its impressive height suggests that it is an almost finished piece of construction; its horizontal top must be close to the original wall-walk. Vertical openings high on the outside face of the wall may be the remains of latrines. Extensive quarrying has removed an entire section of curtain between its N. end and the N. Tower. King noted the fallen masonry in this area and surmised that the original gate for the castle must have been in this vicinity.<sup>35</sup> On the internal face of the curtain are a couple of rough holes (now blocked by 20th-century repairs) for horizontal beams, presumably to support a low-level roof of a building. On the external face of the curtain, masking a slight angle change in the alignment of the wall, is a shallow semi-hexagonal buttress.

One area of particular interest for an understanding of how the castle functioned was the length of E. curtain between the buttress and the N. Tower (Figs. 3, 5), where the major gateway into the fortification had been suggested. Before excavation began at Caergwrl this was also the usual way for visitors to approach the monument across a slight earthwork causeway in the ditch and into the castle.

The excavation revealed that only some of the inner face of the E. curtain was intact between the buttress and the N. Tower. The surviving stretch of E. curtain was composed of very large stones and horizontally laid core work formed by layers of mortared medium to large, flattish stones. The intact length of wall was on average c. 1 m in width, and was clearly bonded in with the masonry of the N. Tower. However, it was apparent that a considerable amount of the wall in the central section of the inner face of the E. curtain had been rebuilt, presumably in the relatively recent period. The walling style on the inside face of the E. curtain, where medieval walling was still surviving, was of the small block and flag style. At the N. end of the *in situ* E. curtain, were several very large undressed stones, capping the internal face of the wall. They were very different in character from the regularly coursed stones beneath them and it is probable that they were placed in position in the late 19th or

early 20th centuries; this was the period when some crudely constructed steps were laid to lead visitors across these threshold stones and down to the lip of the well inside the castle.

Immediately to the E. of the surviving E. curtain was a linear deposit (764) of loose medium and large angular stones, and broken mortar. This formed a sandwich between the wall (762) and a large section of mortared masonry that had clearly fallen from somewhere higher up the E. curtain. The fallen masonry (763) incorporated originally horizontally coursed core-work and two sections of facing stones, all now lying at an angle that slightly inclined to the N. Although the masonry had fallen as one piece, it had broken its back once it came into contact with the ground. The walling style of the facing blocks is that of small regular block style and correlates with walling of the same style that appears in the upper half of the standing E. curtain. The number of surviving courses of fallen facing varies, but the average height of the fallen facing is c. 1 m.

About mid-way along the front face of 763, and just above the top of the surviving facework, is a large, rectangular aperture. This opening is c. 0.4 m long and 0.28 high and penetrates into the core-work for 1.4 m. A similarly sized aperture was discovered at the N.

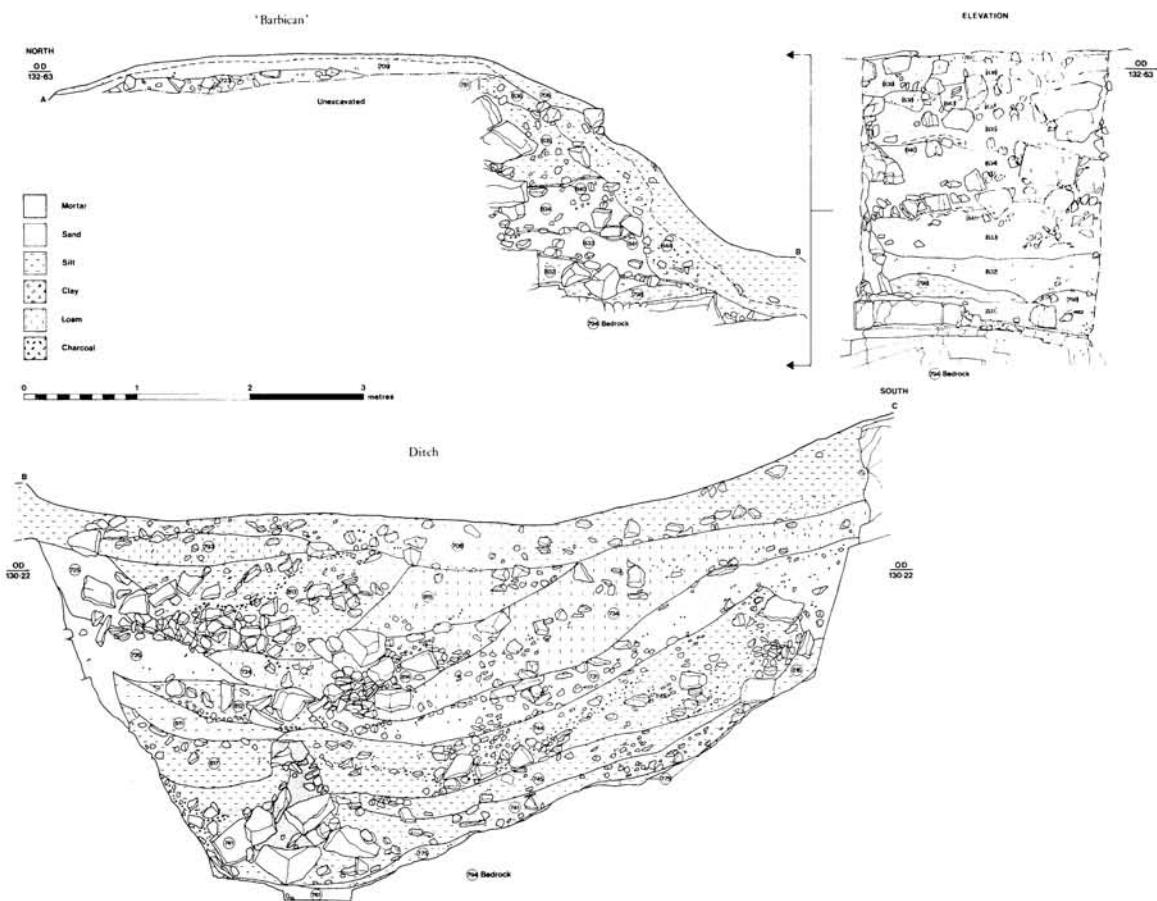


FIG. 11  
Sections through part of the 'Barbican' mound and ditch

end of 763 during the process of reconsolidation of the masonry, although curiously this one was entirely contained within the core of the wall and did not seem to open through the facing stones. The function of such large holes is problematical, although they might have been putlog holes. Certainly they verify that the stretch of fallen masonry came from the top third of the E. curtain, since in the adjacent standing section of wall two similarly sized rectangular apertures appear in the upper courses.

The sequence of activities represented by deposits 762, 763 and 764 relates to the period of large-scale quarrying of the castle for building stone, probably in the 16th and 17th centuries. Presumably the quarrymen were stripping, to head-height, the N. end of the E. curtain, and undermined the upper section of facing to such an extent that at some point half of the thickness of the upper E. curtain collapsed and fell as 763. They then demolished the higher courses of what was left of the inner half of the E. curtain, before moving on to tackle the N. Tower. In the voided rubble of 764 were located 8 pieces of large, dressed masonry (Fig. 20) that seem to have once formed the surrounds of a door. These architectural fragments were so shaped that it rendered them useless for incorporation into standard walls, and so they were discarded and thrown into the gap between the *in situ* E. curtain and the fallen masonry. The origin of 764, therefore, post-dates the fall of the masonry section and represents rubble thrown away by the quarrymen. The discarded door jambs in 764 may have come from the suggested doorway in the rear of the N. Tower.

A small area of ground was excavated to the E. of the fallen masonry, and across to the lip of the surviving ditch on the E. side of the castle. Limited excavations at the base of the fallen facing (252) indicated that the facing stones went at least 1 m below the level at which excavation terminated. There was no indication of any surviving bedrock at that depth suggesting that the foundations for the front face of the E. curtain may lie at a considerable depth if they are based on bedrock. The deposits excavated in front of the fallen masonry suggested there were two major periods of collapse and robbing. The earlier phase was marked by very large rubble associated with decayed gritstone and mortar (255). At some point the surface of the rubble stabilized, stone-robbing ceased, and a ground surface indicated by a layer of relatively stone-free silty loam (234) was allowed to form. This was then buried by a further episode of quarrying and collapse marked by the large rubble and eroded mortar of 215, which in turn was sealed by the present topsoil (214).

#### *South Tower Quarry*

An area to the immediate S. of the S. Tower, outside of the castle, was excavated to ascertain whether any further remains of the tower existed. The surviving courses of the tower projecting out from the S. curtain were composed of fine masonry in the large regular block style, but only remained to a height of c. 0.85 m. They were laid directly on the gritstone bedrock (36). In contrast, mortared foundation courses for the S. curtain consisted of a line of sandstone flags (83) which projected out from the wall face by c. 0.3 m and were of a similar dimension in depth. These also rested on the gritstone bedrock.

The area to the S. of the medieval masonry was excavated to reveal descending platforms of gritstone (36), apparently quarried along existing fault lines within the bedrock. Some of the gritstone platforms and blocks had a marked rectangularity which seemed to suggest they had been fashioned as quarry platforms to assist the working and extraction of the stone. At the S. end of the excavation, before the ground began dropping away rapidly to the S., a roughly-built gritstone and mortared wall (85) was located, with a suggestion of a right-angled return. No finds were located in association with this wall, or with the platforms, but they may represent the surviving remains of the quarrymen's hut. This particular gritstone quarry, with its small platforms, is entirely different in character from the rest of the quarries on the hill, which are all sandstone quarries. It is this quarry which almost certainly supplied millstones for some of the mills in the surrounding region.

*The Defensive Ditch and 'Barbican' (Figs. 11, 12)*

Immediately outside of the remaining N. curtain a two-metre wide section was excavated across the defensive ditch and continued onto the top of an oval mound, standing in the apparent centre of the ditch (Fig. 3 for general location). A formidable rock-cut ditch was revealed c. 8 m wide and over 3 m deep. The oval mound rested on un-quarried bedrock (794), and two parallel defensive ditches therefore flanked the N. side of the castle. The pre-castle ground surface in this area must have been a gentle slope to the N. (Fig. 12). The medieval ditch-diggers excavated the two parallel defensive ditches here, leaving the oval mound in the centre of these defensive arrangements.

The sequence of deposits filling the inner ditch is outlined in Fig. 11. Most of the fills in the ditch have originated in destruction, quarrying or collapse from the castle itself. In the very bottom of the ditch was a deposit of friable, brown sand which contained some small, sub-angular fragments of sandstone. This was sealed by a destruction deposit (741) indicated by a very loose layer of silty, coarse sand and mortar, incorporating, at its N. end, some very large dressed sandstone blocks, several of which had clearly once formed part of the surrounds of windows in the castle (Figs. 21, 22). It is likely that such windows collapsed as substantially complete architectural features and layers 744 and 745 (mostly comprising brown silty, coarse sand, decayed mortar, and sandstone fragments) built up against them. These initial destruction deposits were in turn sealed by 731 (brown loamy sand, with decayed mortar patches and charcoal flecks) and 734, which was essentially the same in character apart from a concentration of sandstone fragments at its deepest point. There was evidence of two further depressions dug into the top of the N. end of the ditch fills which may relate to later periods of stone-robbing at the castle. All of the ditch fills were capped by a layer of black, sandy silt which contained much root material (706).

The top of the oval mound was excavated. It was found to consist of a compacted layer of fine, silty sand, incorporating some occasional flecks of charcoal. The N. half of the mound was covered with a layer of medium to large angular sandstones, while the S. half was more stone-free. Some sandstone boulders and very large sandstones were located, but neither these nor the smaller stones formed any coherent pattern. The mound may have been an integral feature of the castle and its defences and it is possible that it acted as a barbican. A system of wooden bridges or drawbridges could have led across from the N. to the barbican from which further bridges and drawbridges gave access to the interior of the castle through a putative gate in the NW. corner of the fortification. Since this corner of the castle has been destroyed by quarrying, and since excavations on top of the barbican produced no evidence for bridge or drawbridge supports, the suggestion remains unproven. An alternative theory, equally unproven, is that the ditched defences were unfinished in this area and the mound is

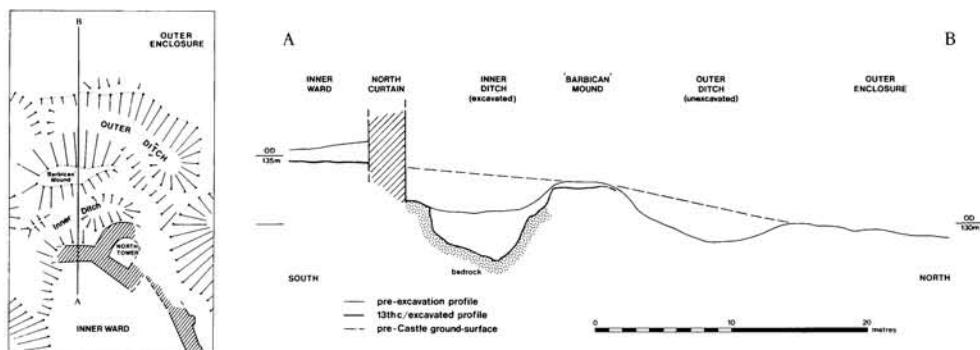


FIG. 12  
Profile across the North curtain, 'Barbican' mound and defensive ditches

evidence for their incompleteness. If true, this would negate the barbican hypothesis. The location of the principal gate into the castle would remain unknown.

### THE OUTER BANK

Apart from the castle and its ditched defences the other major archaeological feature on top of Caergwrle hill is represented by a grass-covered bank that encircles the relatively flat summit of the hill to the E. of the castle. It is best preserved on the



FIG. 13  
Sections through the outer bank. For location of trench see Fig. 3

S. side, where it merges with the earthwork defences of the castle. A less substantial and more typical section was that excavated in 1988 (Figs. 3, 13), where the pre-excavation bank was c. 3 m wide and 0.6 m high. The bank was separated by a narrow flat berm from the continuing downward slopes of the hill, with no sign of a ditch. No original entrance through the bank can be discerned although breaks of unknown date have been noted. The excavation has been fully reported elsewhere<sup>36</sup> and only a summary is presented here.

#### EXCAVATION

Excavation has revealed that the bank was originally faced with dry-stone walls, front and rear, separated by about 1.5 m, the interval between them being filled with loose, sandy silt and medium to small stones. The original height of the barrier is unknown, but its location at the break of slope suggests that it could have functioned in a defensive capacity. The lack of mortar in the walling and the undressed nature of the stones, however, stand in marked contrast to the dressed and mortared walls of the castle.

Pollen analysis suggests the bank was constructed through an area of mature oak woodland. The clearance of such woodland, perhaps partly by burning, could account for the charcoal beneath the bank. There are, of course, plenty of historical parallels in Wales for the rapid fortification of a hilltop by a labour force about to start work on the construction of a masonry castle (cf Builth, Aberystwyth, Flint, Conwy, Caernarfon, Beaumaris<sup>37</sup>). Superficially, such an explanation might seem the most appropriate for the Caergwrle bank. The radiocarbon evidence, however, suggests an earlier construction date.<sup>38</sup> The bank around the top of Caergwrle hill might then find a historical context in the native occupation or re-occupation of hilltops during the late Roman period in Wales or conceivably in the much less well documented group of Dark Age fortifications.

#### THE FINDS

##### MEDIEVAL POTTERY *By PAUL COURTNEY*

The excavations at Caergwrle produced 227 sherds of medieval pottery weighing approximately 3.5 kg (excluding the German Proto-stoneware). The assemblage was quantified by sherd number and weight but individual vessels were also reconstructed for purely taphonomic purposes. The assemblage is small and does not suggest prolonged large-scale occupation of the castle, though the un-excavated ditches might be more productive. Close dating is not possible though the assemblage is typical of the 13th century (Fig. 14).

The bulk of the assemblage comprised sandy fabrics typical of the Cheshire Plain and adjacent areas of Wales. The material closely parallels 13th-century pottery from Beeston castle, only 22 km to the E., in both forms and fabric, and may originate from a common source.<sup>39</sup> The Caergwrle fabrics contain abundant rounded quartz and occasional sandstone fragments. Thin-sectioning of Beeston

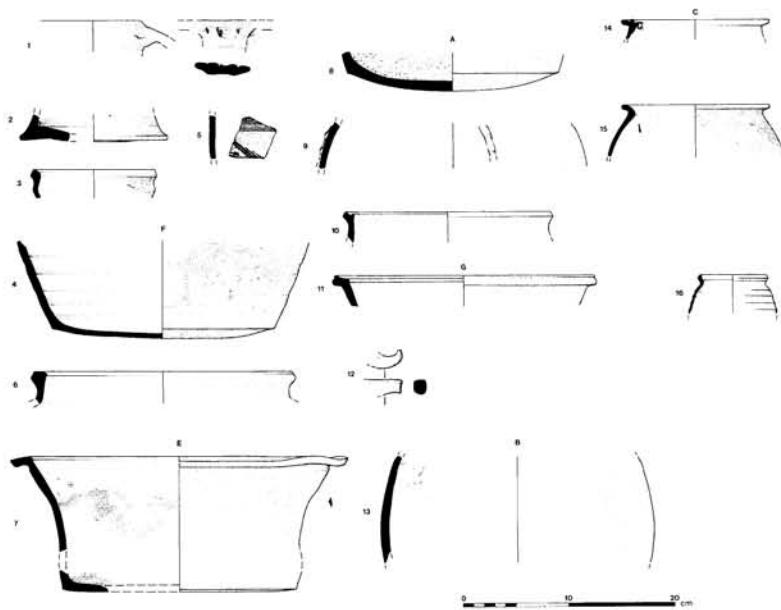


FIG. 14  
Medieval pottery. Scale 1:4

sherds also showed the occasional presence of grains of plagioclase felspar; the finer matrix contained fine angular quartz and muscovite. The Caergwle fabrics range from reduced to oxidized, but most have reduced cores and oxidized outer faces. Glazes are splashed and pitted, and mostly dull green to yellow in colour. Forms at Caergwle include jugs and small, externally glazed jars. There are also cooking pots, or related forms, with external sooting. Some of these pots possessed internal glazing in the lower part of their profile, possibly acting as a 'non-stick' surface. A single handle (No. 12) suggests that at least some of these vessels were pipkins rather than cooking pots. Conically shaped vessels (Nos. 7 and 11) are probably bowls. Calcareous residues resulting from the heating of liquids were found on the inside of one vessel (No. 13).

No evidence of wheel-throwing was found in any of the Cheshire-type fabrics and the larger fragments had the uneven, ridged profiles typical of coil-made pots. This parallels the bulk of the poorly stratified Beeston castle assemblage dating from c. 1230 onwards. The Caergwle pots are important in suggesting that the local transition to wheel-throwing post-dates the castle's construction in the 1270s. In addition to the Cheshire-type fabrics, two sherds (weighing 12 g) from different jugs (both context 223) in white Coal Measures fabrics were also recovered. Both had abundant rounded quartz filler and bright green glazes, possibly coloured with copper. One sherd had incised decoration (No. 5) and both vessels appear to be wheel-thrown. Similar wheel-thrown vessels were also found from construction deposits, presumably of the 13th century, at Beeston castle, as a minor element alongside the local hand-made wares.<sup>40</sup> The published description of a jug, of

uncertain date, from the Dominican Friary at Chester also sounds similar; and Rutter notes parallels for its incised decoration at Nuneaton and Coventry.<sup>41</sup> Petrologically a source (or sources) in either the Coal Measures of Flintshire or the W. Midlands is possible for these white-wares, though the latter seems more likely on present knowledge. From much further afield come two joining sherds of German Proto-stoneware part of a drinking beaker (No.16). The apparent scarcity of Proto-stoneware at Chester and in Wales in the 13th century argues against its appearance as a result of local trade, and it may have arrived at Caergwrle in baggage associated with the Edwardian reconquest. These two sherds have been fully reported elsewhere.<sup>42</sup>

Catalogue (Fig. 14)

1. Unstratified. Jug handle with splashes of glaze.
2. Jug base with splashed glaze. Context 201.
3. Jug rim with splashes of glaze. Context 202.
4. Jug base with splashed glaze. Contexts 035, 05 and 057.
5. Jug in white sandy fabric with bright-green mottled glaze and incised decoration, wheel-thrown. Context 223.
6. Cooking pot rim with exterior sootting. Context 204.
7. Bowl with splashed internal glaze. Context 257.
8. Internally glazed cooking pot with exterior sootting. Context 204, 256 and 257.
9. Unglazed cooking pot sherd with applied and thumbed, vertical strip. Context 001.
10. Unglazed cooking pot rim. Context 257.
11. Unglazed rim with traces of external sootting, probably a bowl. Context 202/204.
12. Pipkin handle. Context 201.
13. Body of internally glazed cooking pot with exterior sootting and calcareous water scale residues on interior. Contexts 204, 256 and 257.
14. Small jar with splashed exterior glaze. Contexts 256 and 257.
15. Small jar with splashed exterior glaze. Context 001.
16. Two joining sherds of German Proto-stoneware from a drinking beaker. Context 021.

METAL OBJECTS *By PAUL COURTNEY.*

*Iron Objects*

A small number of significant iron objects was located.

Catalogue (Figure 15)

1. Horseshoe, broken. One arm with three countersunk nail holes and wavy edge and calkin (raised terminal). This type of horseshoe was used with fiddlekey nails and is typical of the Norman and Angevin periods. Clark suggests this type continued into the mid-13th century which seems to be supported by the Caergwrle find.<sup>43</sup> Context 009; SF 33.
2. Barrel padlock key, 105 mm in length; medieval. Context 014; SF 47.
3. Iron barrel padlock key, 70 mm in length; medieval. Context 024; SF 237.
4. Iron projectile point with 3 barbs. The light weight suggests it is an arrowhead but it could be from a cross-bow bolt; medieval. Context 052; SF 290.
5. Barbed arrowhead; medieval. Context 052; SF 209.
6. Iron arrowhead with two barbs, and Ae rivet to attach it to a shaft; medieval. Context 076; SF 295.
7. Iron fiddlekey horseshoe nail, 13th century or earlier. Context 076; SF 296. Other examples were recovered from contexts 202 and 203.
8. Barbed arrowhead; medieval. Context 202; SF 463.
9. Iron claw hammer head with nailed sidestraps and burnt wooden handle remaining in situ as charcoal. This type of hammer has medieval parallels, for instance, at Hen Blas in Clwyd.<sup>44</sup> Context 202; SF 474.
10. Bodkin-type arrowhead. This type of arrowhead was designed for piercing armour; medieval. Context 210; SF 570.

*Nails*

Of the nails recovered from the excavations, 545 were sufficiently preserved to be classified. They are of two types: Type A, square shank with rounded head and the smaller

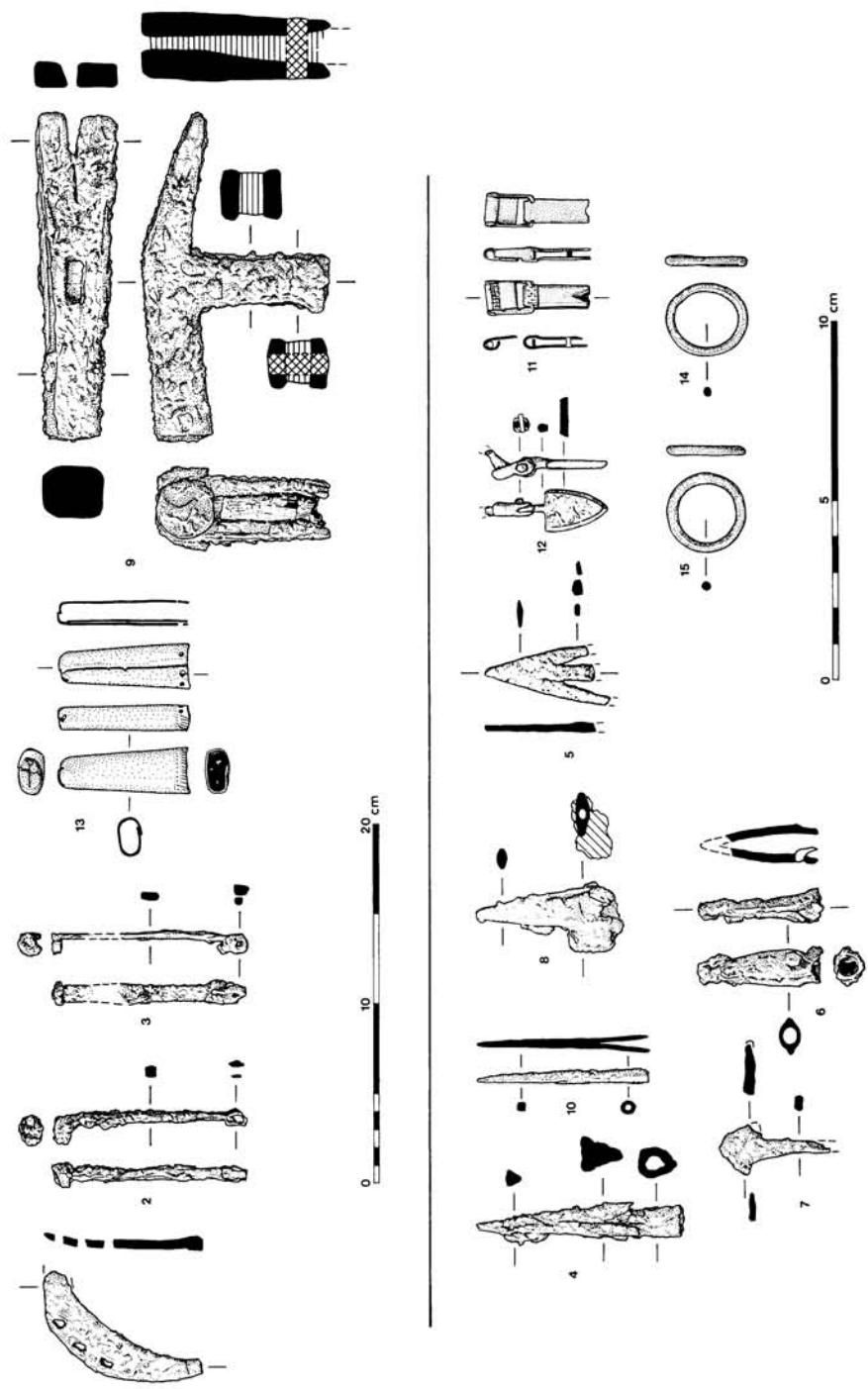


FIG. 15  
Metalwork

Type B, tapering rectangular shank with pinched head. Both types occur in undoubtedly medieval contexts and some were probably made on the site during construction of the castle. A total of 166 nails (30%) were of Type A and 379 (70%) were of Type B.

#### SLAGS *By PAUL COURTNEY*

Three pieces of haematite ore weighing 39 g were recovered from the site (contexts 215 and 232) but these are probably glacial erratics. The preponderance of small hearth bottoms and the excavation of three smithing-type hearths argues that all the Caergwrle slags are the result of smithing. There are close similarities between the range of slags and those associated with medieval smithing at nearby Beeston castle.<sup>45</sup>

Fuel Ash Slag and Slagged Lining comprises light glassy slags formed from reaction between phosphates in the fuel and silicates in the flux and hearth lining. It forms amorphous lumps, often small in size, as well as coating fragments of hearth lining.<sup>46</sup> The amount of fuel ash slag from Caergwrle was substantially increased by sieving. Fragments of burnt clay and semifused sand and gravel probably represent Hearth Lining although like the fuel ash slags could result from non-industrial activity.

Sieving of contexts 069 and 103 produced a few fragments of sub-microscopic slag residues indicative of smithing.<sup>47</sup> These comprised: Air Chilled Spatter, generally spherical and hollow and solidified in air; Surface Chilled Spatter, more irregular and only solidified on hitting the ground leaving a moulded lower surface; and Bloom Scale, flat scales of slag combining moulded and free surfaces which formed during hammering. The large size of the residues (the air chilled spatter is up to 6 mm in diameter) is suggestive of bloom purification although the sample is small and smaller residues were possibly lost in sieving (magnetic extraction from bulk soil samples is the preferred method of recovery). Contact Scale which is striated and formed in the instant of hammer contact was absent but is a relatively rare find.

The slag remains from Caergwrle castle are consistent with smithing. The quantity of slag formed suggests this involved both purification of blooms (the initial product of smelting) and the manufacture of iron artifacts. Most slag was recovered from residual contexts especially 001, 002, 019, 021, 022 and 103, though a hearth bottom was recovered from the core of the oven. The likely context for this smithing activity is during major constructional work on the castle in the late 13th century, almost certainly for the production of nails and other structural ironwork such as hinges, locks and keys.

Overall quantities of slag recovered to the nearest kilogram are as follows: hearth bottoms 44 kg; slag lumps 31 kg; fuel ash slag/slagged lining 11 kg.

#### COPPER ALLOY OBJECTS *By PAUL COURTNEY*

*Catalogue Fig. 15*

11. Strap end with rivet; medieval or later. Context 018; SF 192.
12. Heraldic pendant from medieval horse harness with an iron pin connecting the two halves. There are traces of discoloured enamel on the shield, which displays three passant lions, the English royal arms from 1195-1340. Context 052; SF 200.
13. Chape from scabbard, made from a sheet, with engraved decoration; possibly medieval. Context 052; SF 184.
14. Ring, possibly from harness, finished with a file; medieval or later. Context 202; SF 470.
15. Ring, circular cross-section; medieval or later. Context 235; SF 519.

#### COAL CINDER *By PAUL COURTNEY*

3.34 kg of coal cinder were recovered from medieval and later contexts. It seems likely that coal was used as fuel in the castle either for fires and/or in the bread oven.

COINS *By PAUL COURTNEY and EDWARD BESLY*

Five coins and one token were discovered during the excavations. Three of these date to the reign of Edward I and presumably represent casual losses during the principal period of construction and occupation. The later coins and token may be associated with periods of stone robbing and quarrying at the castle, or simply be accidental losses by visitors. It is conceivable that the Edward III and VI coins might have been lost during official visits to the castle, for instance, for the purposes of formally opening a manor court.

Edward I, Irish penny, Waterford Mint. Coinage of c. 1279–84. Slight wear?, but ill-struck and corroded. Silver, 1.19g. Context 210; SF 408.

Edward I, penny, Canterbury Mint. Class IIId, c. 1280–81. Weak striking and slight corrosion make assessment of wear difficult, but this coin seems to have seen little circulation. Silver, 1.32 g. Context 201; SF 573.

Edward I farthing. Class Ii (N. 1052), Jan-May 1280 Obv. EDWARDUS REX (Trifoliate crown with jewels) Rev. LONDONIENSIS (reverses N's) Weight 0.39g (6.1 grains). Die Axis 270° Wear slight. Context 52; SF 275.

Edward III, penny, Durham Mint (?). Worn almost completely flat. Traces of obverse design and possibly DVN on reverse suggest this identification. Silver, 0.76 g. A fifteenth-century loss. Context 201; SF 410.

Edward VI (1547–53), coinage in the name of Henry VIII, 1547–51; Penny, York Mint:H.D.G.ROSA.SIE.SPI/CIVI-TAS-EBO-RAC; 'facing' bust and pellet stops on obverse; N. 1888. A little worn?, but poorly struck. Base silver, 0.53g after cleaning.<sup>48</sup> Context 201; SF 401.

Wicklow halfpenny brass token.<sup>49</sup> Obv. CRONEBANE HALFPENNY (portrait of Bishop) Ref. ASSOCIATED IRISH MINERS ARMS (around shield with date 1789) Edge. PAYABLE AT LOUGHER OR IN DUBLIN. Context 22; SF 141.

A series of late 18th-century tokens was struck by The Associated Irish Mines Company founded in 1787 with an office in Dublin and mines including the Cronebane mine in Wicklow. This series is paralleled by a very similar series bearing the word 'Arms' instead of 'Company', as in this example. Dalton and Hamer suggested the 'Arms' pieces were counterfeits.<sup>50</sup>

## DISTRIBUTION OF FINDS

The distribution of sherds of medieval pottery within and in the immediate vicinity of Caergwrl castle is illustrated in Fig. 16, but this probably relates more to the differing rates of survival of medieval deposits, rather than revealing any patterns that could be ascribed to the use of pottery during the occupation of the monument.

The sherds that were located next to the N. curtain relate to the sequence of contexts associated with the construction, occupation and demolition deposits which lay under and over the burnt and fragmentary timber frame (Fig. 10). The sherds that were located around the oven belong to contexts (e.g. 24, 76, 35, 57) mostly associated with occupation and destruction of the bakehouse. Several sherds were recovered from the ditch excavation to the N. of the N. curtain, but it was noticeable that the ditch deposits were not productive of significant quantities of finds of any material.

The spatial distribution of assemblages of joining sherds was mapped, but nothing remarkable could be noted. Sherds of individual vessels seem not to have moved very far from the point of breakage.

The overall pattern of other finds mimics the distribution of pottery sherds and once again largely relates to the relative preservation of deposits. However, some of the concentrations of nails may be of some significance (Fig. 17). The area adjacent to the S. curtain between the oven and the S. Tower produced a concentration of Type B and the E. Tower yielded a small but uniform group of Type A.

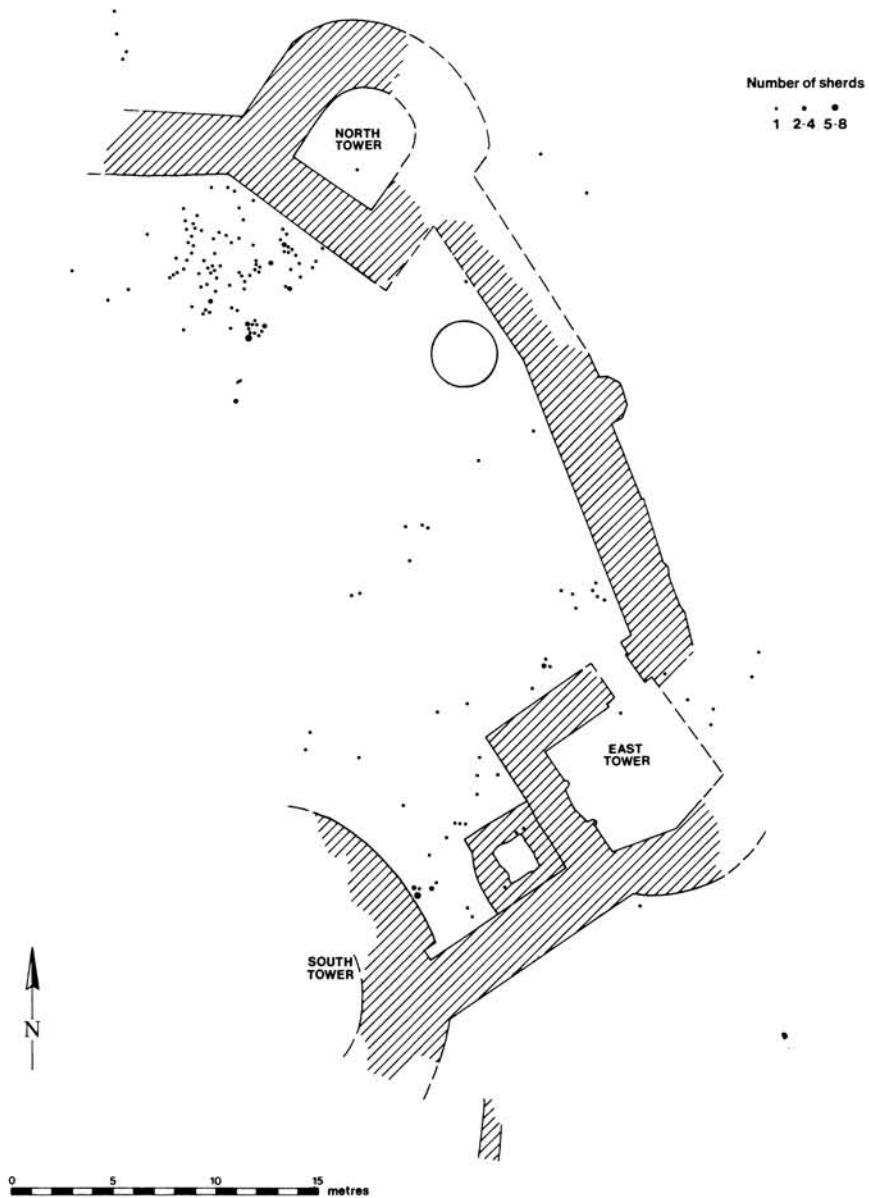


FIG. 16  
The distribution of medieval pottery in and around the castle

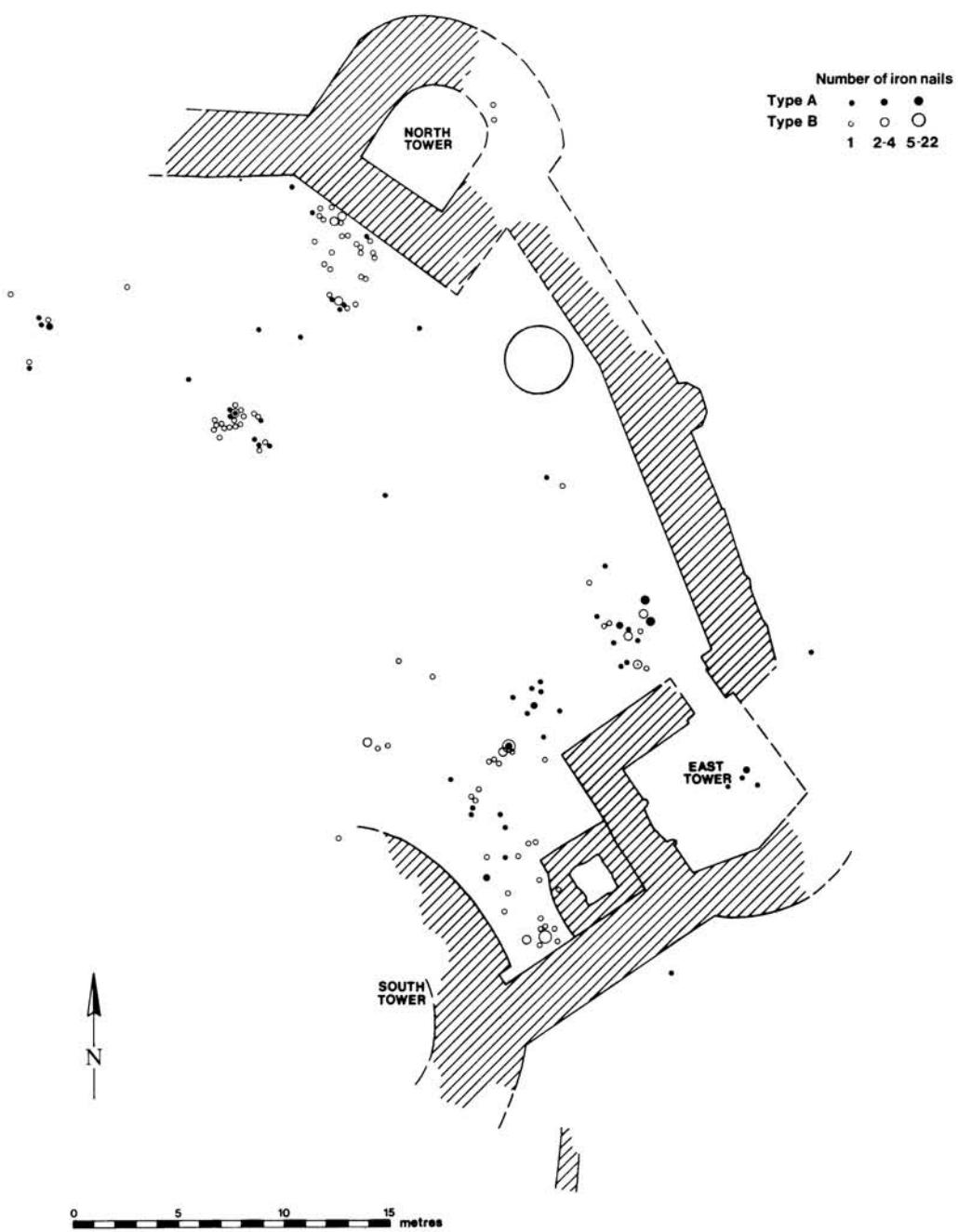


FIG. 17  
The distribution of iron nails within the castle

Most of the nails close to the N. Tower originated in the timber frame that was located in a burnt condition in this area (Fig. 10), while a clutch of nails c. 5 m to the SW. relate to the remains of timber associated with the internal structure (Fig. 10). The nails between the E. Building and the E. Tower are linked with substantial areas of carbonized timber (Fig. 10), while the same can largely be said for the nails lying between the oven and the S. Tower. The lack of nails in the area of the E. Building may indicate that the wooden fittings and furniture were stripped from this building after abandonment and carried from the castle. It must also indicate that the materials in the fires (marked by charcoal patches) within the E. Building may not have included structural timbers from buildings.

#### MEDIEVAL STONEWORK *By STUART HARRISON*

All the worked stones from the castle are dressed blocks that would have formed parts of visible architectural features. They came from three discrete areas during the excavation.

Some nine pieces came from the interior of the castle and the E. Tower, and these are drawn in Figs. 18, 19. Nine blocks came from the area around the fallen section of E. curtain (Fig. 20), mostly from the voided rubble (764) lying between the fallen and the in-situ masonry. The blocks from this context originally came from a doorway surround. Some 10 blocks were located during the excavation of the ditch to the N. of the N. curtain; many of them seem to have come originally from two windows which are reconstructed in Figs 21 and 22.

1. Sandstone whetstone with grooves from sharpening. Outer bank context 502; SF 277. Not illustrated.
2. Possibly the base or more likely the top of a newel stone and marked out for a full newel profile. It could therefore have served as part of a capstone at the top of a newel staircase. Interior, context 11; SF 146.
3. Fragmentary section of the tread from a newel staircase. Interior, context 35; SF 124, 159.
4. This stone has a chamfered angle and a rebate in an unusual position. A partial return on the rebate suggests that it may have formed a channel in the stone, possibly for a portcullis? The stone may have been part of a jamb. Interior, context 19; SF 119.
5. Ashlar block with angled faces such as might be employed in the jamb or rerearch of a window or doorway or in the change of direction in a mural passage or wallface. E. Tower, context 730; SF 788. Not illustrated
6. Small moulded fragment E. Tower, context 727; SF 837.
7. Simple roll moulding greater than a semicircle in section, probably part of a stringcourse. E. Tower, context 732; SF 834.
8. Part of a curved block of stone which appears to be part of a chimney with an internal taper following the line of the flue. Its broken condition makes this identification uncertain and it is possible that it may also have formed part of the internal rerearch of a doorway or window. E. Tower, context 701; SF 701.
9. A fragmentary piece of dogtooth decoration, typical of that used almost universally throughout the thirteenth-century. E. Tower, context 711; SF 767.
10. Block with chamfered corner of a windowsill or doorhead lintel. E. Tower, context 710; SF 779.
11. Fragmentary section of the tread from a newel staircase. Outside E. curtain, context 255; SF 758.
12. Fragmentary piece of moulded shaft or section of a tread from a newel staircase. Outside E. curtain, context 255; SF 769.
13. Vousoir from a doorway with external chamfer on the angle and internal rebate. Rubble in E. curtain, context 764; SF 855.
14. Vousoir with asymmetrical joint beds which show that it formed the apex stone from a pointed arch. The profile is identical to 13 and 15 indicating that it formed the head of the doorway. Rubble in E. curtain, context 764; SF 859.
15. Vousoir similar to 13, but smaller. Not illustrated. Rubble in E. curtain, context 764; SF 857.
16. Vousoir similar to 15, but smaller. Not illustrated. Rubble in E. curtain, context 764; SF 865.
17. The base springer from a doorway arch in which the rebate for the door follows the profile of the archway. Behind this the rerearch is of different shape, either flat lintelled or more likely of segmental curvature. Rubble in E. curtain, context 764; SF 860.
18. Ashlar block with small chamfer worked on the angle. Most likely the internal jamb of a doorway or window. Rubble in E. curtain, context 764; SF 856. Not illustrated.
19. As 18. Not illustrated. Rubble in E. curtain, context 764; SF 858.
20. Fragmentary section of tread from newel staircase. Not illustrated. Ditch, context 725; SF 775.

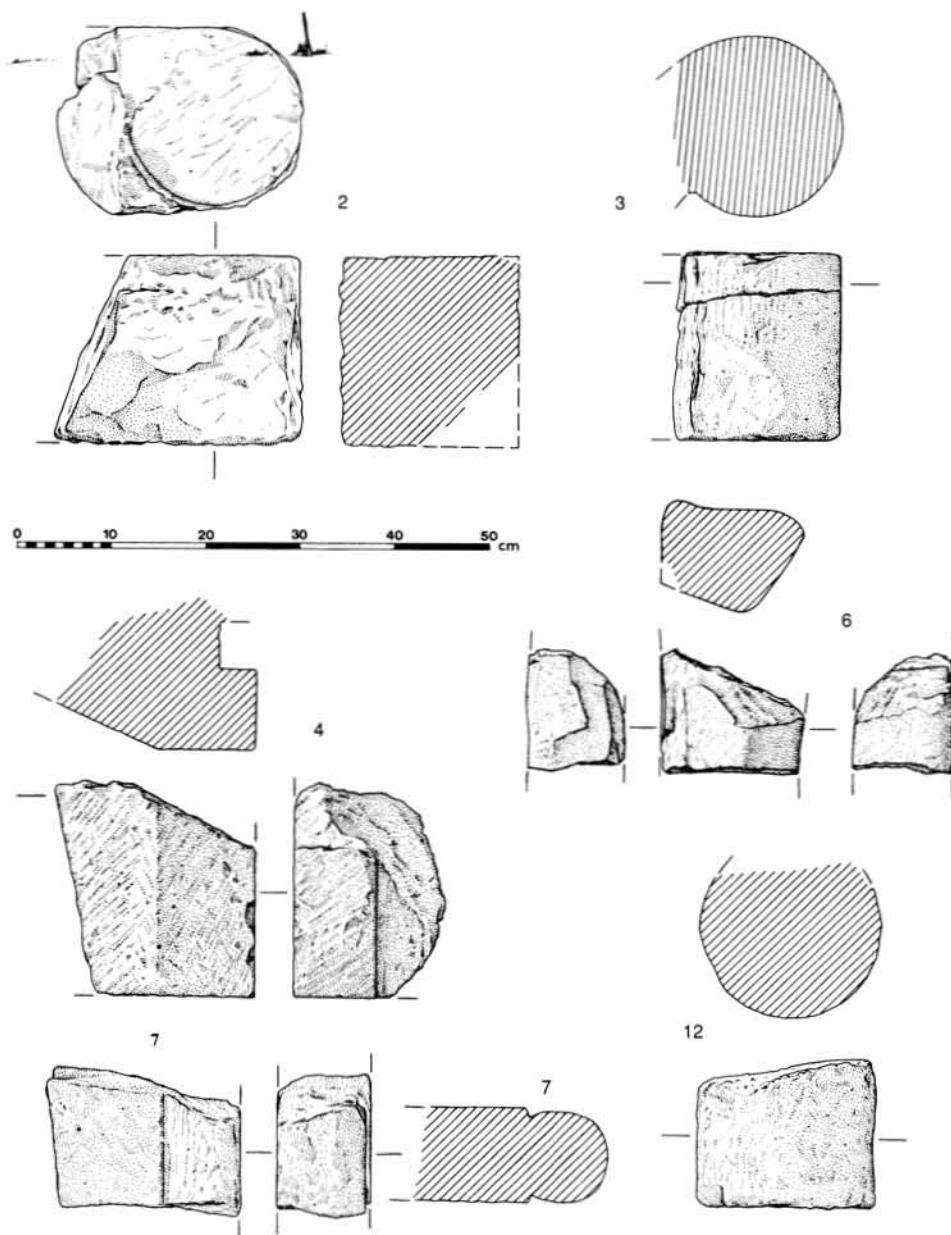


FIG. 18  
Medieval stonework

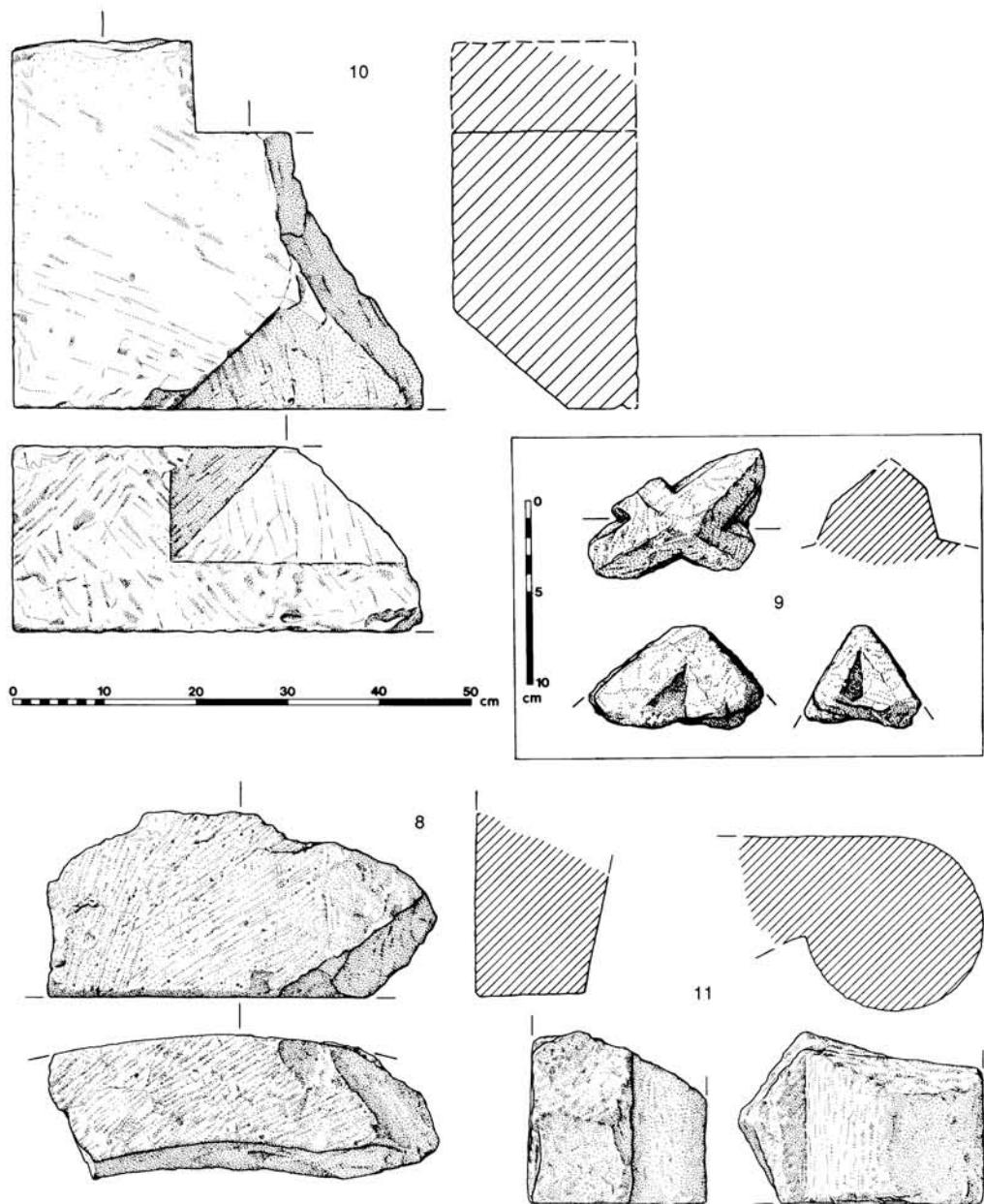


FIG. 19  
Medieval stonework

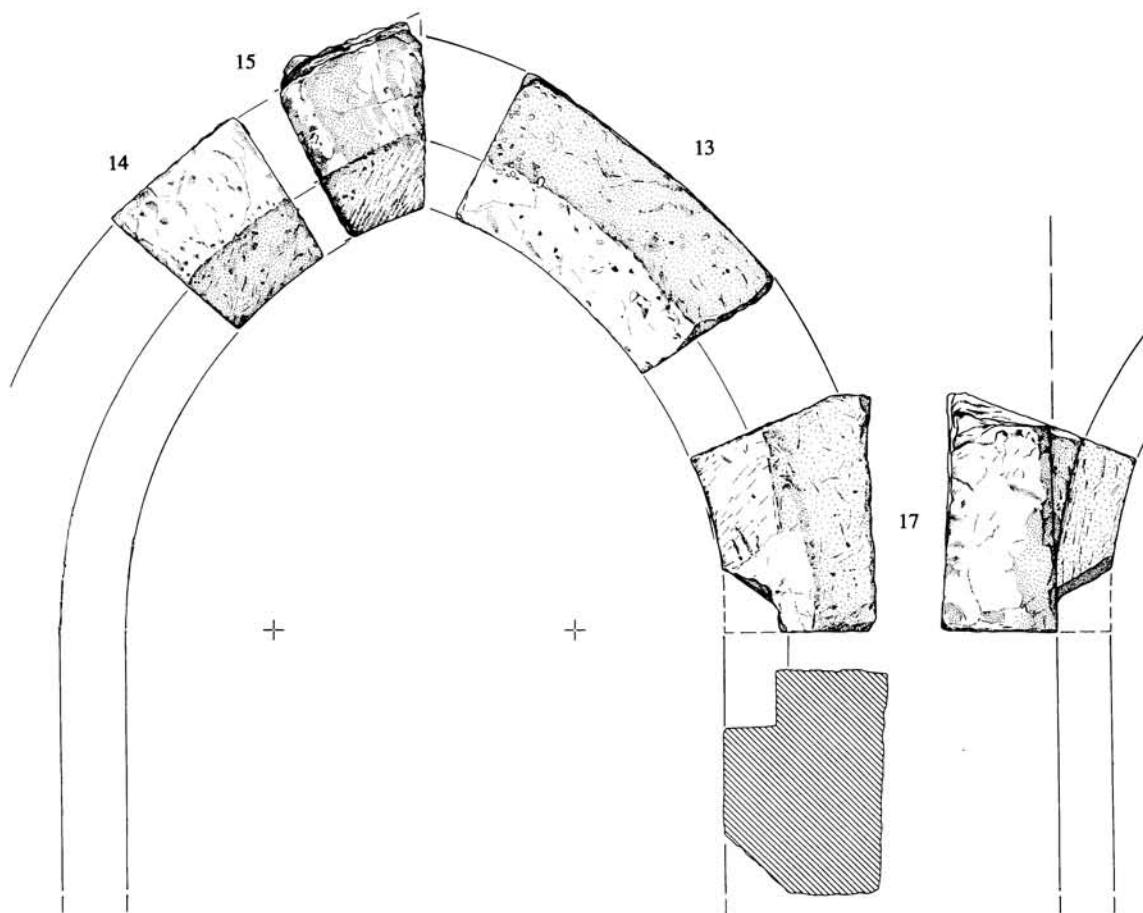


FIG. 20

Suggested reconstruction of a door surround from rubble in the fallen section of the East curtain

21. Octagonal tapered stone which probably formed part of a conical pinnacle capstone, perhaps from the top of a stair turret. Not illustrated. Ditch, context 725; SF 776.
22. Small fragment of moulding with three triple rolls flanked by hollow, possibly a part of a jamb. Not illustrated. Ditch, context 745; SF 818.
23. Small section of roll moulding. Not illustrated. Ditch, context 725; SF 810.
24. Thin stone with hollow chamfer on angle which turns through an internal corner at ninety degrees. Most likely this stone formed part of a stringcourse. Not illustrated. Ditch, context 741; SF 825.
25. Window jamb with chamfer on angle of external face. The internal face has a shutter rebate and splayed jamb. Two sets of regularly spaced sockets for iron cross bars survive, one of which are blocked up. Either the original iron bars were replaced on a different alignment or a mistake was made in the cutting and new holes on a different spacing had to be cut. Ditch, context 741; SF 826.
26. Virtually identical to 25 but with slightly different spacing of the bar holes. Not illustrated. Ditch, context 741; SF 824.
27. Windowsill or head with chamfer on the angle of the external face and an internal shutter rebate and start of internal splay. The angle of the joint on the left side may indicate a change of angle in the wallface. Ditch, context 741; SF 848.
28. The sill or head of a small loop window, deeply splayed and rebate for shutters or glazing. Its narrow aperture suggests it would have served to light a stair turret or mural passage. Ditch, context 741; SF 825.
29. Virtually identical to 25. Not illustrated.
30. Virtually identical to 25. Not illustrated.

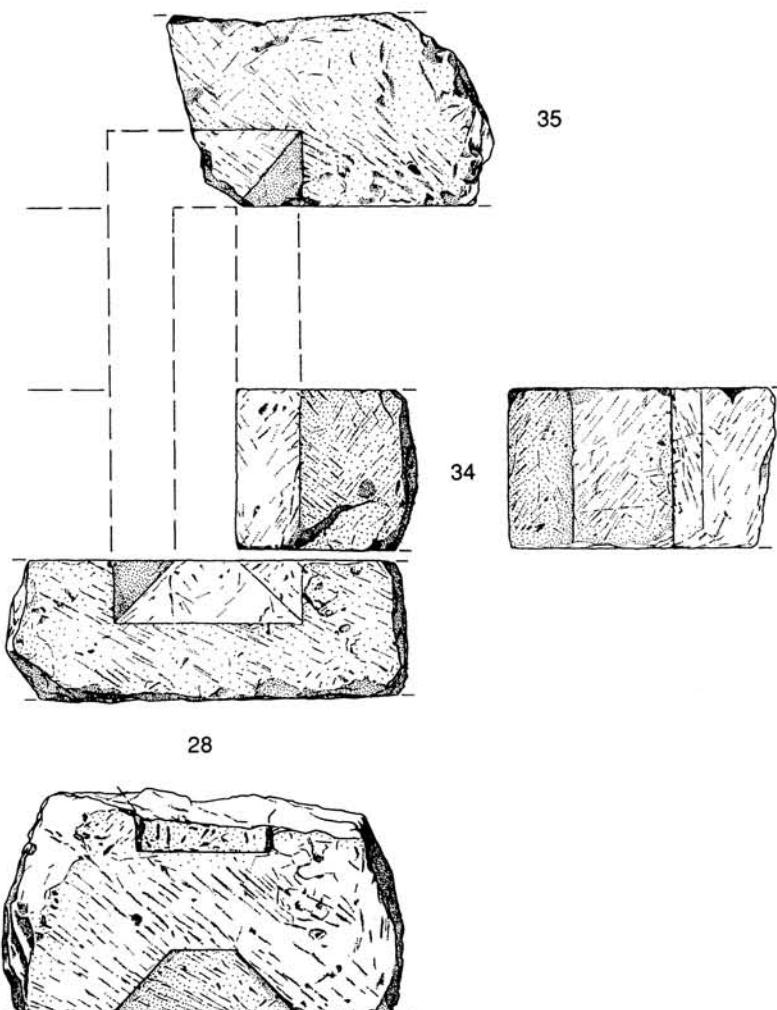


FIG. 21

Suggested reconstruction of a small loop window from blocks recovered from the ditch outside the North curtain

- 31. Recessed flat panel with hollow chamfer framing edge. Unstratified; SF 863. Not illustrated.
- 32. Unusual triple roll worked at an angle which suggests that it may have formed part of an arch or vault springer, employing *tas de charge* jointing. Unstratified; SF 864. Not illustrated.
- 33. Similar to 17 but opposite hand which suggests they form a pair from the same doorway. The rough cut socket at the springing point may have been for the timber centring. Unstratified; SF 868. Not illustrated.
- 34. Jamb with chamfer worked on external angle with an internal rebate for shutter or door and a splayed internal jamb. Unstratified; SF 869. Not illustrated.
- 35. Base of a small loop window. Ditch, context 741; SF 866.

#### *Discussion*

Military architecture by its very nature tends to produce extremely austere structures, particularly when compared with contemporary religious buildings. Indeed the most

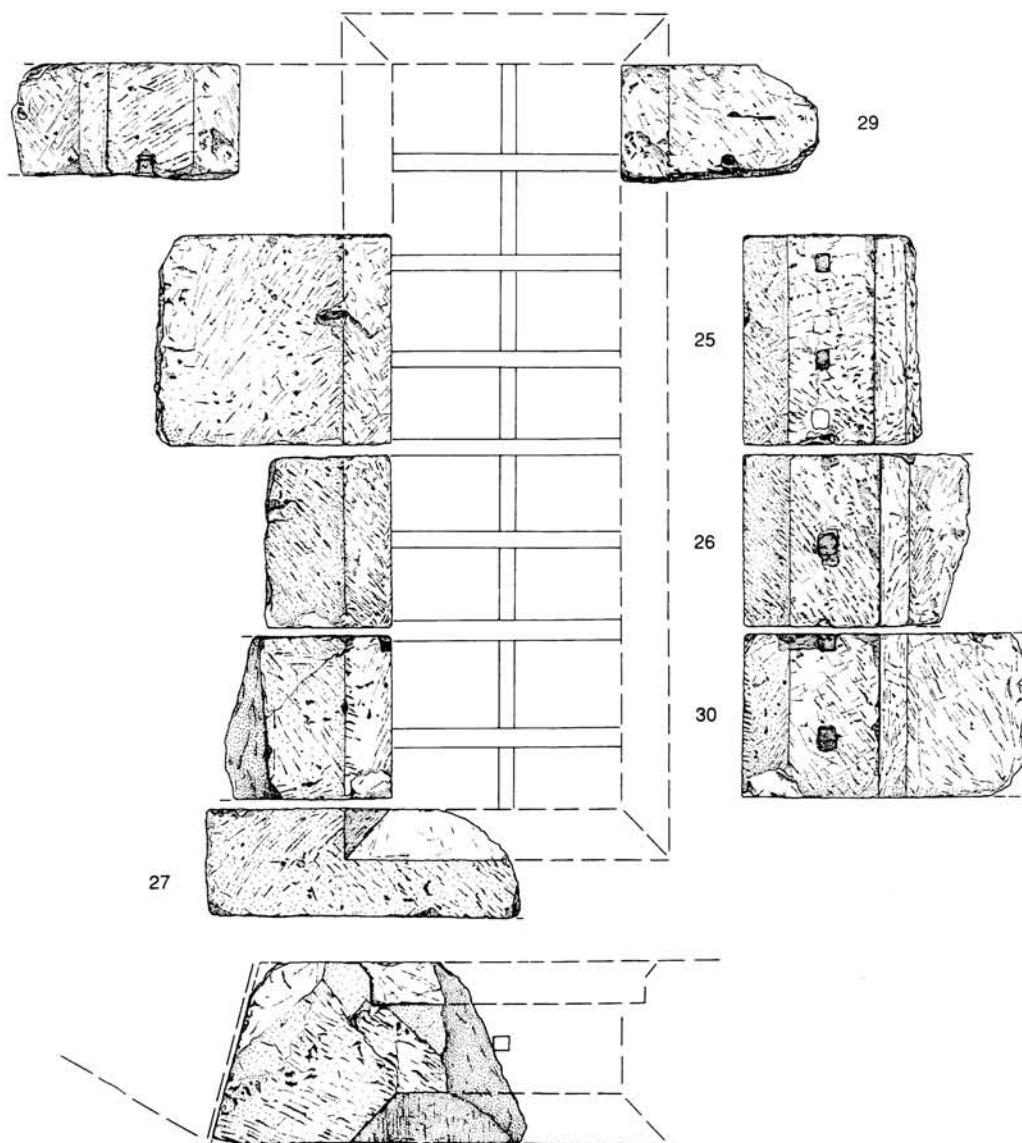


FIG. 22

Suggested reconstruction of a heavily barred window from blocks recovered from the ditch outside the North curtain

elaborate architectural detail in a 12th or 13th-century castle tends to be confined to the chapel with lesser architectural detail on features such as fireplaces and chimneys. The roll moulding and the small piece of dogtooth ornament as quite complex and more elaborate pieces of stonework, are quite likely to have originated in the chapel or from a fireplace assembly. Simple continuous chamfers usually sufficed as decoration without any capitals or imposts for windows and doorways. The stonework at Caergwrle therefore forms a typical collection, with the majority of pieces derived from windows or doorways which have simple chamfered jambs and heads.

Numbers 13–16 form the voussoirs and apex stones of a simple pointed opening, whilst 17 and 33 form the base springers of an arch, presumably a doorway. 18 and 19 are typical stones with small chamfers from the internal jambs of such a doorway.

Numbers 28 and 35 form the base and head of a small loop window with 34 forming part of the jamb. The reconstruction (Fig. 21) shows it as a typical loop window so often employed to light mural or spiral staircases. It is probable that it was used in the latter function as the surviving sections of stair treads amongst the stonework would indicate.

TABLE 2  
ASSEMBLAGE BREAKDOWN

|   | <i>n</i> | %    | <i>n</i> | %    | <i>n</i> | %    |
|---|----------|------|----------|------|----------|------|
| Cattle                                      | 207      | 8.8  | 207      | 41.4 | 207      | 44.7 |
| Sheep/goat                                  | 45       | 1.9  | 45       | 9.0  | 45       | 9.7  |
| Pig   | 211      | 9.0  | 211      | 42.2 | 211      | 45.6 |
| Dog   | 9        | 0.4  | 9        | 1.8  | 463      |      |
| Horse                                       | 2        | 0.1  | 2        | 0.4  |          |      |
| Red deer                                    | 4        | 0.2  | 4        | 0.8  |          |      |
| Roe deer                                    | 6        | 0.3  | 6        | 1.2  |          |      |
| Fallow deer                                 | 12       | 0.5  | 12       | 2.4  |          |      |
| Hare  | 4        | 0.2  | 4        | 0.8  |          |      |
| Bird  | 46       | 2.0  | 500      |      |          |      |
| Fish  | 33       | 1.4  |          |      |          |      |
| Small mammal                                | 20       | 0.9  |          |      |          |      |
| Frog  | 6        | 0.3  |          |      |          |      |
| Deer species                                | 3        | 0.1  |          |      |          |      |
| Dog/fox                                     | 4        | 0.2  |          |      |          |      |
| Cow/horse                                   | 136      | 5.8  |          |      |          |      |
| Pig/deer                                    | 136      | 5.8  |          |      |          |      |
| Sheep/dog                                   | 148      | 6.3  |          |      |          |      |
| Unidentified                                | 1289     | 54.9 |          |      |          |      |
| TOTAL                                       | 2347     |      |          |      |          |      |
| <i>Identified Small Mammals</i>             |          |      |          |      |          |      |
| Common shrew ( <i>Sorex araneus</i> )       |          |      | 5        |      |          |      |
| Wood mouse ( <i>Apondeamus sylvaticus</i> ) |          |      | 6        |      |          |      |
| Field vole ( <i>Microtus arvalis</i> )      |          |      | 8        |      |          |      |
| Black rat ( <i>Rattus rattus</i> )          |          |      | 1        |      |          |      |
| <i>Identified Birds</i>                     |          |      |          |      |          |      |
| Domestic fowl                               |          | 5    |          |      |          |      |
| Duck  |          | 3    |          |      |          |      |
| Goose                                       |          | 2    |          |      |          |      |
| Teal  |          | 2    |          |      |          |      |
| Pigeon                                      |          | 2    |          |      |          |      |

Four window jambs 25, 26, 29 and 30 have identical sections and all feature sockets for iron bars on matching spacings. These can be arranged together with the windowsill 27 to reconstruct a typical window with a square head, which was heavily barred and probably featured at least one vertical stanchion (Fig. 22). Such windows were almost invariably fitted with shutters to keep out the worst of the weather.

#### THE ANIMAL BONES By DAVID BERG

##### *Introduction*

This report is based on a previous interim report by J. Cartledge.<sup>51</sup> The animal bones from Caergwrl castle comprise a small but interesting sample. They suggest that at least some of the castle inhabitants enjoyed a wide-ranging meat diet, supplied not only by traditional farm stock but also by game, fish and birds from the surrounding countryside. The animal bones were recovered entirely during the 1988 and 1989 seasons, as no significant animal bones were located in 1990.

A total of 2347 fragments were examined of which 754 derived from sieved deposits (Tables 2 and 3). Most of the material is from contexts associated with the oven, the collapse of the E. Tower, or from the N. half of the castle interior.

A small number (22.8%) have been identified to both bone type and species. The relatively small percentage of identified fragments is due to the poor condition of the bone. The friability caused by extensive burning and erosion has produced many small, undiagnostic chips broken from other bones within the sample. Erosion has destroyed the surface of much of the bone despite its apparent hardness. In addition to this most of the sieved sample is composed of tiny unidentified fragments.

Only 4% of the total assemblage has evidence of fresh breakage but this proportion is much higher for the bone identified to species. Fresh breaks were observed on 22.7% of cattle bones, 19.9% of pig bones but only 2.2% of sheep/goat bones. Conversely, some 20.8% of the assemblage was burnt compared to 10.1% of cattle, 8.9% of sheep/goat and 5.7% of pig fragments.

TABLE 3  
MATERIAL FROM SIEVED DEPOSITS

| Context                                      | 024  | 099  | 100 | 057 | 069  | 202 | 203 | 204 |
|--|------|------|-----|-----|------|-----|-----|-----|
| Common Shrew<br>( <i>Sorex araneus</i> )     |      |      |     | 5   |      |     |     |     |
| Wood mouse<br>( <i>Apodemus sylvaticus</i> ) |      |      |     | 3   |      |     | 3   |     |
| Field vole<br>( <i>Microtus arvalis</i> )    |      |      |     | 5   |      |     | 3   |     |
| Black rat ( <i>Rattus rattus</i> )           |      |      |     |     |      | 1   |     |     |
| Frog   |      |      |     | 3   |      |     |     |     |
| Fish   |      |      |     | 26  |      |     |     |     |
| Bird   |      |      |     | 3   |      | 1   |     |     |
| Cattle                                       |      |      |     | 2   |      |     |     |     |
| Sheep/goat                                   |      |      |     | 1   |      |     |     |     |
| Pig  | 2    |      |     |     |      |     |     |     |
| Roe deer                                     | 2    |      |     |     |      |     |     |     |
| Unidentified                                 | 155  | 7    | 187 | 273 | 16   | 19  | 12  |     |
| Total  | 159  | 7    | 187 | 343 | 16   | 19  | 2   | 21  |
| % Burnt fragments                            | 97.5 | 26.6 | 100 |     | 68.7 |     |     |     |

TABLE 4  
MINIMUM NUMBER OF INDIVIDUALS

|               | <i>Cattle</i> | <i>%</i> | <i>Sheep/goat</i> | <i>%</i> | <i>Pig</i> | <i>%</i> |
|---------------|---------------|----------|-------------------|----------|------------|----------|
| Fragments     | 207           | 44.7     | 45                | 9.7      | 211        | 45.6     |
| Element Zones | 71            | 43.5     | 21                | 13.0     | 71         | 43.5     |
| MNI           | 4             | 30.8     | 3                 | 23.0     | 6          | 46.2     |

Chewing, possibly by dogs or by pigs, is observable on bones from most contexts, and sheep/goat bones appear to have been particularly vulnerable with 22.2% displaying this form of modification compared to pig, 8.5% and cattle, 7.2%.

#### *Range and relative number of species*

The three major stock species are listed above using three methods of quantification: total fragment counts; number of diagnostic element zones, i.e. excluding small fragments such as long-bone shaft and skull pieces; and minimum number of individuals (MNI). The total minimum number of individuals produced by the sample is small and could, in theory, represent no more than the remains of a single banquet. There is no evidence that the horse, dog or deer species are represented by more than one individual (Table 4).

Slaughter patterns can be suggested for the domesticates. Most pigs were killed between 12 and 30 months. Some cattle were slaughtered at the optimum age for tender beef, and young lambs and older sheep are represented. Presence of all parts of the carcass suggest that animals were butchered in or close to the castle.

## GENERAL INTERPRETATION

*By JOHN MANLEY and JOHN COLE*

The excavations at Caergwrle castle, undertaken between 1988 and 1990, have thrown considerable light on the layout and constructional history of the fortification. The excavation results are particularly significant in view of the full publication of the documents pertaining to the English refurbishment of the castle during the summer of 1282.<sup>52</sup> A study of the excavation results complemented by a study of the documentary evidence provides a detailed insight into the constructional methodologies of late 13th century castle-builders. Moreover, the fact that the castle enjoyed only a short-lived occupation, largely between 1278 and 1283, suggests that most if not all of the small finds from the excavation were being utilized at the castle sometime during this five year period.

Correlation of the documentary evidence for the castle with the excavation evidence has produced some significant hypotheses on how the structure developed during its brief existence. The rudimentary nature of the internal buildings in the castle, and the evidence relating to mortar-mixing and metal-working areas, make it difficult to imagine that the interior of Caergwrle castle looked like anything other than a building site between 1278 and 1283. Little evidence, (unless the burnt timber frame and associated deposits (Fig 10) are taken as such), was found to substantiate the documented fire in August 1283 which heralded the end of the castle as an important fortification.

The salient facts are few and simple, and may be summarized as follows:

Caergwrle castle was founded by Dafydd ap Gruffydd as a lordship castle. Edward I granted £66. 13*s.* 4*d.* (100 marks) towards the cost of its construction on 12 November 1278.

The 'Welsh' programme of building eventually ceased, and an uncertain amount of the existing fabric was destroyed, on Dafydd's instructions, before Grey's arrival at the castle on 16 June 1282.

Repairs and rebuilding carried out by the English between 18 June and November 1282 cost almost exactly £300, no less than 44% of recorded expenditure being on the wages of carpenters and diggers.

After a serious fire on 27 August 1283, further work was abandoned and the castle was left to decay.

Dafydd had, therefore, three complete seasons in which to build his castle at Caergwrle before the 1282 rebellion. A gift of 100 marks constitutes little more than a gesture of goodwill where the expenses of castle building in the late 13th century are concerned. For example total recorded expenditure at Builth was some £1,666. 9*s.* 5*1/4d.* spread over five and a half years,<sup>53</sup> this being the lowest on any of Edward's major Welsh castles.

Obviously the £66. 13*s.* 4*d.* of Edward's gift in 1278 combined with the £67 16*s.* 10*1/2d.* paid to the English masons between June and November 1282, could not have paid for the existing stonework at Caergwrle castle. Surviving accounts for task work elsewhere give some indication of the cost per foot of masonry which might be expected. For instance, John Flaumer, 'Flauonarius' of the Caergwrle account of 1282 built, at Conwy in 1285–86, 48' of wall 10' high and 3' thick, together with a turret and other works, for £14.<sup>54</sup>

In the absence of further recorded expenditure in 1282 or 1283 beyond the £300 already known, it must be assumed that the bulk of the curtain wall, corner towers and S. tower were carried to some height by Dafydd's masons between 1278 and the spring of 1282, but did Dafydd have the resources to fund the work?

As a prince of Gwynedd, Dafydd certainly commanded a following even in exile. During the war of 1276–77, he demanded pay for everyone of his men, and refused to hand over the booty they had taken while forming a part of Edward's forces.<sup>55</sup> When Dafydd took his grievances to the English king, they were genuine grievances of the dispossessed — Llywelyn had flouted Welsh law — and such a course of action would not have reduced the loyalty of his free men or tenants. After 1277 Dafydd was Lord of Rhufoniog and Dyffryn Clwyd, the greater part of the fertile Vale, and as such, his revenues would have been substantial. Davies has pointed to the increasing growth of lordship in 12th and 13th-century Wales: 'placing.. renders and services on a more regular basis... the prince's close colleagues and social peers doubtless followed suit,'<sup>56</sup> and the increased availability of large amounts of money.<sup>57</sup> That Dafydd was able to collect and use this revenue is clear; he could, therefore, pay for skilled, imported, masons. Who, then, did he employ?

These masons may have been drawn from the many recruited for Edward's building operations in N. Wales. Taylor noted that 'the guiding hand of the master of the king's works' was to be seen in the work of castles which began '...in one sense or

another as royal enterprises but destined to be held by tenants in chief'.<sup>58</sup> He also surmised that the labour force involved was equally likely to be transferred from one site to another, serving 'to underline how close a connection there might be between the king's works, properly so called, and similar works carried out by feudatories from the resources of their lordship in the furtherance of royal policy'.<sup>59</sup> In other words, Dafydd, as a loyal ally of Edward, had been duly rewarded with large grants of land and given a royal inducement to establish a castle at Caergwrle, with further assistance and advice readily available.

King's summing up of castle and builder may be considered: '..the general proportions of the castle are Edwardian: compact in plan and very strongly built,' while Dafydd was 'at once un-English and un-Welsh; and it is perhaps not surprising to find his castle showing the same characteristics'.<sup>60</sup>

Caergwrle may thus be considered a lordship castle designed and constructed primarily by the English for a Welsh ally. This combination may explain a number of puzzling features. The great S. Tower, fragmentary though it may be, was obviously intended to be the major strength of the castle. Such a design feature is seen only, in new foundations, at Flint in 1277. The construction of a shell keep or great tower at Builth was due in large part to the prior existence of a dominating and well-compacted motte, and the same may be true of the castle of Hawarden. While the great size of the Caergwrle tower (external diameter of c. 17–18 m) may imply that a similar design was employed, the traditional Welsh round keep, as seen at Dolbadarn in Gwynedd, may have been more to Dafydd's taste. The Great Tower or keep, as well as the apsidal main tower, remain the dominant feature of the native Welsh castle throughout its history.<sup>61</sup>

The massive curtain walls are undoubtedly English in character. A first floor doorway from the Great Tower of Dolbadarn, giving access to the vanished wall-walk on the curtain, opens only 2.5 m above ground level — the total height of the wall can thus have been little more than 4 m. The average thickness of the curtain at Caergwrle is 3 m. The highest parts reach approximately 8 m above the interior, where the E. curtain wall-head is so level that it must indicate the position of the 13th-century wall-walk.

The corner towers, both built before the adjacent curtain walls, are essentially English in character, but their poor projection from the curtain renders them practically useless as shooting positions from which to rake the S. and E. curtains. It may be significant that, while the merest indication of a narrow light, possibly a shooting slit, survives in the fragmentary S. wall of the E. Tower, the better preserved N. Tower is totally devoid of any such feature, and the substantially intact E. curtain does not contain either the low level embrasures used at Flint and Rhuddlan or the higher placed mural gallery so successfully incorporated at Caernarfon and Denbigh. The clear indication must be that Caergwrle was not designed to be defended by crossbow or longbow<sup>62</sup>, although the height of the curtain would have allowed short-bowmen and slingers to operate effectively once attackers were at the edge of the ditch. The principal weapon in N. Wales was the spear, thrust or thrown, and the height of the curtain and great width of ditch on the E. side would seem to have dictated a more passive defence, at least until the enemy

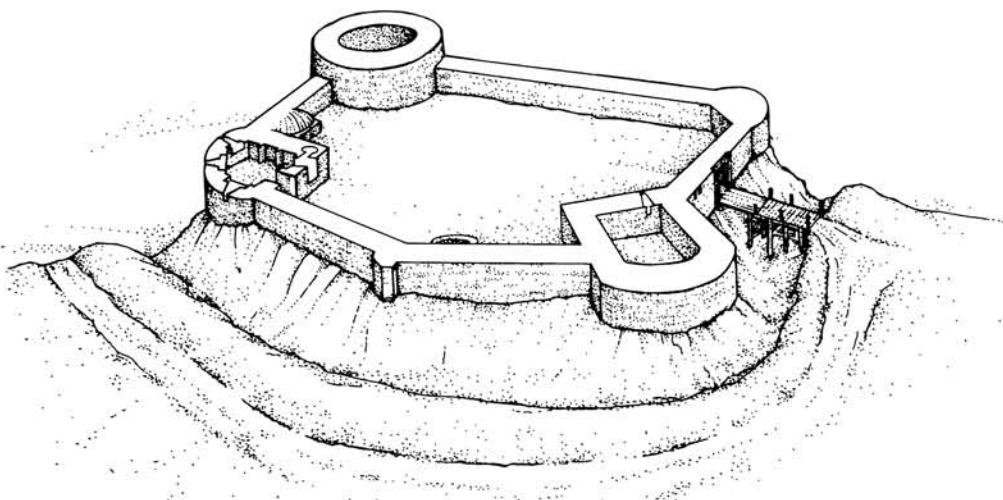


FIG. 23

Reconstruction suggesting the extent of Dafydd's original castle at Caergwrl, erected between 1278 and 1281

was beneath the walls. It could be asked whether this built-in limitation was not of some benefit to Dafydd's royal benefactor; while externally impressive, this was a second rate castle by the standards of Edward's Savoyard engineers.

The great ditch could equally be Welsh or English in design and execution. Welsh castle ditches '...are commonly rock-cut and of formidable character,' states King,<sup>63</sup> and the enormous volumes of earth and rock excavated at such sites as Ewloe and Dinas Bran are eloquent in his support. If the castle ditch at Caergwrl dates from 1278–81, then what did the large number of diggers contribute between 18 June and 4 July 1282? The location of the gateway may be of significance here, and the following hypothesis may be supported by reference to the plan of the earthworks (Fig. 3) and possible reconstructions of the castle (Figs. 23, 24). There are two principal features of interest, one being the isolated platform below the N. curtain, referred to in the excavation report, the other the jutting promontory of high ground running SW. from the counterscarp towards the N. Tower, (marked as A on Fig. 3) above the present causeway across the ditch. It is possible that the original ditched defences were univallate, running outside of the E. curtain from S. to N. before turning quite sharply W., across the face of the N. Tower and past the N. curtain to the cliff (Fig. 23). A line may still be drawn, extending the S. slope of the isolated platform to the projection of unquarried ground in the E. face of the ditch. Such may have been the form of the original Welsh earthwork before the spring of 1282. By far the quickest and most cost-effective way of strengthening any castle was to supplement the existing defences about the entrance. The excavation of a new ditch by the English, removing dead ground outside the N. perimeter while retaining a landing for the timber bridges linking castle and hill-top, would have been entirely

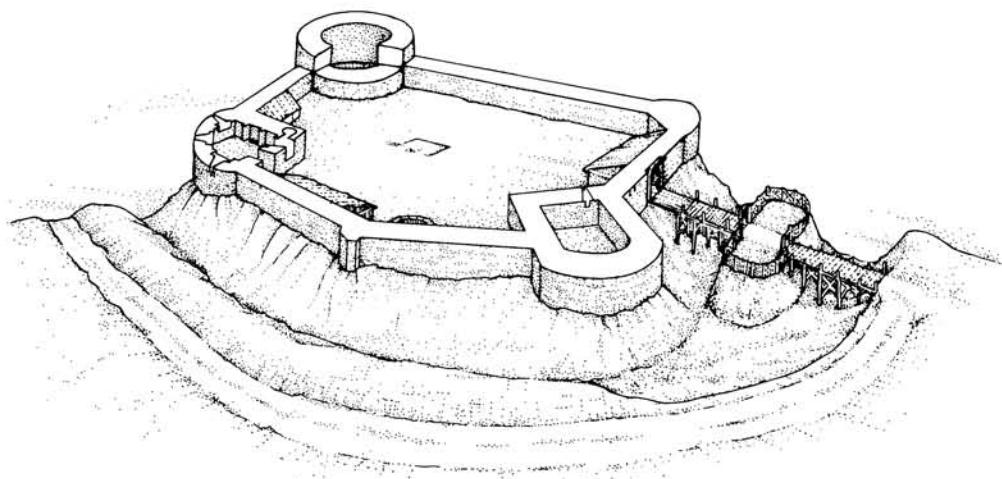


FIG. 24

Reconstruction suggesting the modifications undertaken by the English in the summer of 1282

appropriate in the circumstances (Fig. 24). Such barbicans, in fact, became increasingly common in the later 13th century and into the 14th century.

During a programme of vegetation management and the clearance of under-growth from the Caergwrle ditch in late December 1989, the out-cropping rock at the foot of this projection (A on Fig. 3) was observed to display a line of regular holes, such as might be produced by a chisel or spike used to split the rock during quarrying. Was the new outer ditch to the N. of the castle judged a sufficient addition in July 1282, when the greater number of the diggers were transferred to other sites? Hypothetical and simplified reconstructions of Caergwrle castle are illustrated in Figs. 23 and 24. They indicate the possibility of the modification to the N. defences and the construction of a barbican by the English forces during the summer of 1282. Alternatively, the ditch to the N. of the castle could simply have been enlarged by the English diggers. Such works may not have been completed, leaving the undug central mound as testimony to their incompletion.

What, then, did the masons employed between 18 June and November 1282, construct at Caergwrle? The castle contains no internal buildings in stone; the documented chambers were very probably of timber. They were, therefore, probably engaged in repairing those parts of the castle slighted, rendered 'prostratum' by Dafydd before their arrival. The most serious damage could have been to the gateway and the S. Tower — the latter seems to have been so severely mauled that a portion of it had to be demolished by Henry of Turvey before repairs could be carried out.<sup>64</sup> It is possible that the S. Tower never functioned again as such, but was instead incorporated in the circuit of the defences. Although crude in construction, the slight wall outside the S. curtain may possibly have been thrown up at this time to prevent access to the remains of the tower, which was almost certainly enveloped in scaffolding, and from which a workman fell only a few days after Henry of Turvey's

commission, receiving 12 pence in compensation.<sup>65</sup> However, an alternative explanation sees it as part of a post-castle quarrymen's hut.

Damage done to the gate was evidently repaired by November 1282. Not only the provision of a chamber over the gate, but also of locks for the entrance gate and hinges for the little gate<sup>66</sup> make this clear. Elsewhere, the repairs to the walls were unfinished in late October, when the thatchers moved in to cover the stonework for the winter.

In the time allowed, wages of some £68 are consistent with repair work to the S. Tower, the gateway, and curtain walls. Whether this included the W. side of the enceinte, or whether the carpenters erected a substantial brattice on the W. side, may never be known.<sup>67</sup>

#### ACKNOWLEDGEMENTS

Grateful thanks are extended to the owners of the monument, Hope Community Council, for permission to excavate and to Cadw for granting Scheduled Monument Consent which permitted the excavation. Funds for the undertaking were provided by Clwyd County Council, Alyn and Deeside District Council and Hope Community Council. The staff of the Heritage Group of Clwyd County Council, including the County Heritage officer, Ian Brown, played a major role in the development of the project. John Manley would particularly like to thank all the staff, both volunteer and professional, who worked on the dig. Much of the detailed recording was accomplished by the Supervisors who included John Cole, Carol Jones, Richard Parry, Roland Flook, Nigel and Kirsten Wilson, and Janice Groves. A special vote of thanks is due to Charlie Harston, who campaigned stubbornly for the programme of excavations to be undertaken. This report has also benefited considerably from prolonged discussion with John Cole, and by discussion with members of the Caergwrlé Working Group, including Mary Read, Ken Brassil and County Councillor Selwyn Roberts. Thanks are also owed to the various contributors to this report. Before excavation the monument was surveyed by David Browne and David Percival of RCAHM (Wales). Specialist reports were provided by John Cole, William Jones, Paul Courtney, Edward Besly, Stuart Harrison, David Berg, Phillipa Tomlinson and Jim Innes. Some post-excavation work on the distribution of finds was undertaken by Karen Chambers and the finished artwork was prepared by Tim Morgan. John Manley is grateful to the following for commenting on part or all of the draft excavation report: Lawrence Butler, Harold Mytum, John Kenyon, Pauline Beswick and John Cole; and to Nick Macmillan and Leslie Bognar for conserving the excavated masonry.

*This report is dedicated to the memory of former Hope Community Councillor Vince Hands who provided valuable support throughout the project.*

#### NOTES

<sup>1</sup> R. R. Davies, *History of Wales*, 11, (1987), 314; R. Maud, 'David, the Last Prince of Wales', *Trans. Cymrodorion Soc.*, (1968), 43–62.

<sup>2</sup> Cal. Close Rolls, 1272–79, 359.

<sup>3</sup> Davies, op.cit. in note 1, 335–36.

<sup>4</sup> A. J. Taylor, *History of the King's Works*, 1, (London, 1963), 328.

<sup>5</sup> For Dafydd's local difficulties see D. G. Evans, *The Lordship of Hope*, unpublished MS held by the Clwyd Record Office, (1985), 25–27. Also Maud, op.cit. in note 1, 53–55 for associated events and causes.

<sup>6</sup> Taylor, op.cit. in note 4, 313, 322–23, 32a. It is clear that building materials at Hawarden and Flint were burnt.

<sup>7</sup> J. E. Morris, *The Welsh Wars of Edward I*, (Oxford, 1901), 184.

<sup>8</sup> Maud, op.cit. in note 1, 62 and Taylor, op.cit. in note 4, 361.

<sup>9</sup> *Rotulus donorum regis Edwardi anno regni sui sexto incipiente die Sancti Edmundi Regis anno predicto et terminata dicto die incipiente anno septimo*. This Roll is now in the ownership of the Wellcome Historical Medical Library, where it is now catalogued as Wellcome MS. No.253.

- <sup>10</sup> Cal. Pat. Rolls 1273–81, 227.
- <sup>11</sup> A. J. Taylor, 'The earliest reference to works at Hope castle', *Trans. Flintshire Hist. Soc.*, 22, (1965–66), 76–77. Evans op.cit. in note 5, 20.
- <sup>12</sup> *Ibid.*, 77.
- <sup>13</sup> P.R.O., E 101/9/28.
- <sup>14</sup> P.R.O., Chancery M. Walleneu (C47) 2/3. A.J.Taylor, 'The Hope castle Account of 1282', *Trans. Flintshire Hist. Soc.*, 33 (1992), 21–53.
- <sup>15</sup> *Ibid.*
- <sup>16</sup> H. Johnstone, *Edward of Caernarfon* (Manchester, 1946), 55–57.
- <sup>17</sup> Cal.Pat. Rolls 1307–13, 79.
- <sup>18</sup> SC 12/22/96; Cal. Charter Rolls 1327–41, 300.
- <sup>19</sup> J. Manley and W. Jones, 'From bedrock to battlements: the geology quarrying and construction of Caergwrlle castle, Clwyd', *The N. W. Geologist*, 3,(1993), 11–42.
- <sup>20</sup> Itinerary of John Leland the Antiquary, 9 Volumes (1710).
- <sup>21</sup> D. J. C. King, 'Two castles in northern Powys: Dinas Bran and Caergwrlle', *Archaeol. Cambrensis*, 123, (1974), 113–39.
- <sup>22</sup> *Ibid.*, 133.
- <sup>23</sup> *Ibid.*, 138.
- <sup>24</sup> C. J. Arnold, 'Caergwrlle Castle, Clwyd. Report on a survey of the North Tower', unpubl. 1994.
- <sup>25</sup> *Ibid.*
- <sup>26</sup> J. Manley, A medieval bread-oven from Caergwrlle castle, Clwyd, *Archaeology in Wales*, 30, (1990), 21–5.
- <sup>27</sup> J. R. Kenyon, *Medieval Fortifications* (Leicester University Press, 1990), 138–50.
- <sup>28</sup> A. J. Taylor *Conwy Castle* (Cardiff, 1986).
- <sup>29</sup> C. J. Spurgeon & E. Whatmore, Aberystwyth in Medieval Britain in 1975, *Medieval Archaeol.*, 20, 186.
- <sup>30</sup> J. R. Kenyon, *Kidwelly Castle* (Cardiff, 1986).
- <sup>31</sup> There is a reference to the construction of a bakehouse at Caergwrlle during the English occupation of the site.  
Eodem die Henrico de Bromle facienti pistrinum, pro stipendio per ij dies, iiijd'.  
On the same day Monday 12th October, 1282 to Henry of Bromley, making a bakehouse, for his wages for two days 4d.'
- P.R.O. C47/2/3 mem. 9 and op.cit. in note 10.
- <sup>32</sup> Jeremy Knight, pers. comm.
- <sup>33</sup> A. J. Taylor, *The Welsh Castles of Edward I* (London, 1986), 40.
- <sup>34</sup> See report on slags within the Finds Report, p. 114.
- <sup>35</sup> King, op.cit. in note 21, 135.
- <sup>36</sup> J. Manley, The Outer Enclosure on Caergwrlle Hill, Clwyd. *Trans Flintshire Hist. Soc.*, 33 (1992), 13–20.
- <sup>37</sup> Taylor, op.cit. in note 33.
- <sup>38</sup> Two radiocarbon dates were obtained from a large piece of oak charcoal containing about 35 rings and were as follows:-
- |             |              |
|-------------|--------------|
| GrN — 16520 | 1740 ± 30 BP |
| GrN — 16521 | 1695 ± 30 BP |

Calibration was performed by using Stuiver and Pearson (M. Stuiver and G.W.Pearson, 'High-precision calibration of the radiocarbon timescale, AD 1950–500 BC', in M. Stuiver and R. S. Kra, (eds), International <sup>14</sup>C Conference, 12th Proceedings *:Radiocarbon*, 28, 1986).

At the 1 sigma confidence level the following ranges were produced:  
GrN — 16520 : 246 Cal AD to 266 Cal AD or 280 Cal AD to 336 Cal AD  
GrN — 16521 : 262 Cal AD to 282 Cal AD or 332 Cal AD to 390 Cal AD

At the 2 sigma confidence level the following ranges were produced:-  
GrN 16520 : 230 Cal AD to 352 Cal AD or 354 Cal AD to 380 Cal AD  
GrN 16521 : 252 Cal AD to 298 Cal AD or 318 Cal AD to 412 Cal AD.

The calibrated ranges therefore suggest a date somewhere in the range c. AD 250 to c. AD 400 for the tree-rings in this sample. Given that this sizeable piece of charcoal survived intact on the old ground surface, it may reasonably be argued that it was buried by the bank's construction shortly after deposition (unless, of course, the surface of the old ground surface was removed by the builders of the bank); a construction date in the later part of the Roman period might therefore be suggested.

<sup>39</sup> P. Courtney, 'The Medieval Pottery', in P. Ellis, *Beeston Castle, Cheshire: a report on the excavations 1968–85* by Laurence Keen and Peter Hough.

<sup>40</sup> *Ibid.*

<sup>41</sup> J. A. Rutter, 'Finds from the Dominican Friary — Pottery', in S. W. Ward, *Excavations at Chester: The Lesser Religious Houses*, 1990, 138–63.

<sup>42</sup> M. Redknap, 'A German Import from Caergwrlle Castle, Clwyd', in *Medieval and Later Pottery in Wales*, 10 (1988), 54–59.

<sup>43</sup> J. Clark, *Medieval Horseshoes*, Finds Research Group 700–1700 Datasheet 4, 1986.

<sup>44</sup> G. B. Leach, 'Excavations at Hen Blas, Coleshill Fawr — Second Report', *Trans. Flintshire Hist. Soc.*, 18 (1960), 13–60

- <sup>45</sup> J. Bayley 'Evidence for Smithing', 21–2, in P. R. Hough, 'Excavations at Beeston Castle 1975–77', *J. Chester Archaeol. Soc.*, 61 (1978), 1–24.
- <sup>46</sup> G. McDonnell, 'Tap Slags and Hearth Bottoms or, How to Identify Slags', *Current Archaeology*, 86 (1982), 81–3.
- 'Ore to Artifact — a study of early ironworking technology', 283–94 in E. A. Slater and J. O. Tate, (eds). *Science and Archaeology Glasgow 1987*, British Archaeol. Rep. 196(i) (Oxford, 1988).
- <sup>47</sup> J. R. L. Allen and M. G. Fulford, 'Romano-British Settlement and Industry on the Wetlands of the Severn Estuary' *Antiquaries J.*, 67 (1987), 237–289.
- <sup>48</sup> J. J. North., *English Hammered Coinage*, vol. 2 (London, 1960).
- <sup>49</sup> R. Dalton and S. H. Hamer, *The Provincial Token Coinage of the 18th Century*, 1910–18, See xiii, No. 47, p. 531.
- <sup>50</sup> Ibid, xiii, p. v. Coin numbers 1, 2, 4, 5 were identified by Edward Besly and numbers 3 and 6 by P. Courtney.
- <sup>51</sup> J. Cartledge, 'Animal bone from Caergwrl castle 1988. Interim Report', *W. Yorkshire Archaeology Service* (1990) Unpubl. report. W. Yorkshire Archaeology Service would like to thank Dr Sheila Sutherland for assistance with the identification of the bird bones.
- <sup>52</sup> Taylor, op.cit. in note 14.
- <sup>53</sup> Taylor, op.cit. in note 4, 293–99.
- <sup>54</sup> Ibid, 345.
- <sup>55</sup> Maud, op.cit. in note 1, cites J. C. Davies, *The Welsh Assize Roll, 1277–84*, 1940, 84–5.
- <sup>56</sup> Davies, op.cit. in note 1, 137.
- <sup>57</sup> Ibid, 162.
- <sup>58</sup> Taylor, op.cit. in note 4, 330.
- <sup>59</sup> Ibid, 333–34.
- <sup>60</sup> King, op.cit. in note 21, 139.
- <sup>61</sup> While the tower at Flint is c. 4 m greater in diameter, it comprised a suite of chambers around an open court or light-well, thus providing less grand accommodation than a smaller tower of more orthodox form. See D. J. C. King, *The Castle in England and Wales: An Interpretative History* (London, 1988), 134–35.
- <sup>62</sup> Dafydd appears never to have hired crossbowmen, while a prince of Gwynedd would never have considered recruiting the longbowmen of Gwent.
- <sup>63</sup> King, op.cit. in note 61, 134.
- <sup>64</sup> King points out, quite sensibly, that no-one would contract to pull down such a structure in its entirety for 12 pence. King op.cit. in note 21, 118.
- <sup>65</sup> Taylor op.cit. in note 4, 331.
- <sup>66</sup> It may have been either a postern or simply a small wicket within the main door of the same gate.
- <sup>67</sup> A fuller version of this report, dated 31 December 1992, can be consulted at the offices of the Clwyd Archaeology Service (Mold) and at the Clwyd Record Office (Hawarden), both being departments of Clwyd County Council in N. E. Wales. The report is sub-titled 'First Draft Report' and is in two volumes, one for the text, the other for the figures and plates. The text volume contains additional information, in particular on the principal stratigraphic sequences, expanded versions of the bone and pollen reports, and a detailed index to the site archive. The figures and plates volume contains additional figures and plates not published with this article. The artefact and paper archive is currently held by the Clwyd Archaeology Service.