

*Ryedale Archaeology Services Ltd*

**Archaeological Report on  
St Helen's Church South Wheatley**

Survey work and report undertaken by  
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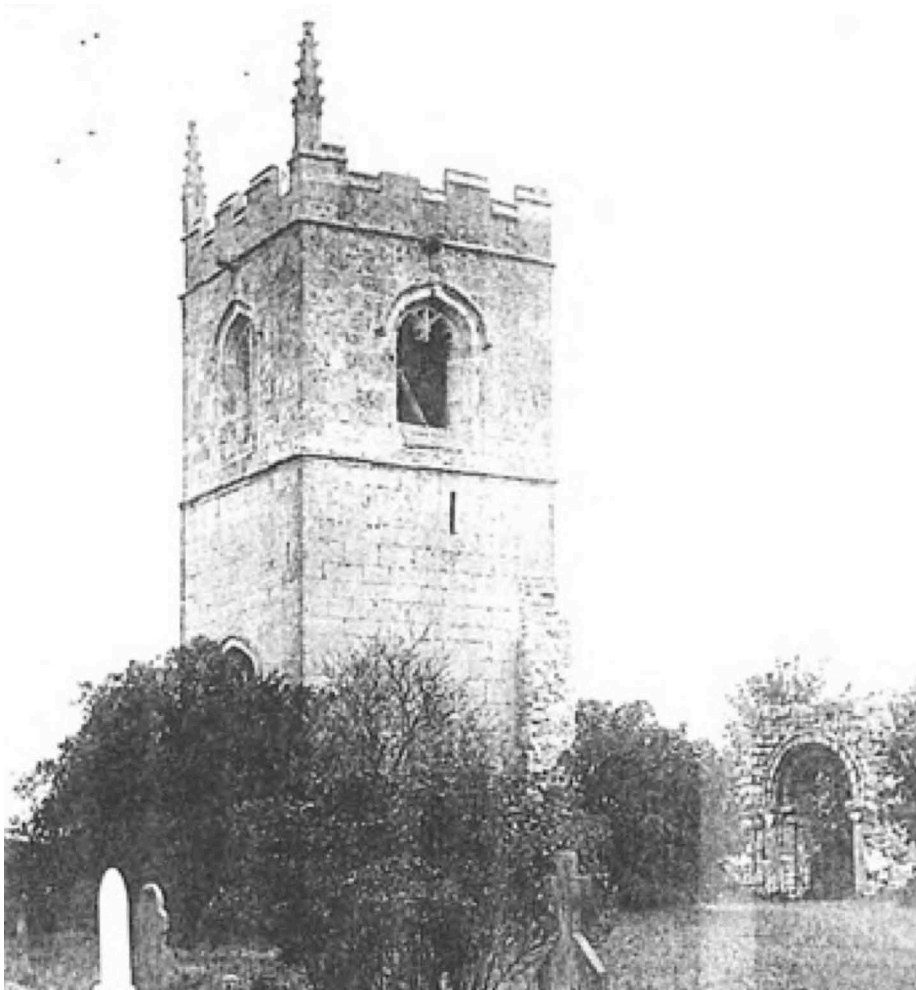
## Historical Outline

The church of St Helen at South Wheatley is a typical parish church of the region. It was relatively small and the surviving architectural details indicate an organic growth pattern over the years. It seems likely that it conformed originally to a two cell format with a small chancel, perhaps with an apse originally, and a nave. This seems to have expanded with the addition of a north aisle, and perhaps a slightly larger chancel of rectangular plan. The chancel had a lancet window in the south wall indicating 13<sup>th</sup>-century date, though the plain priest's chancel door appears to have been round-headed. The nave had a square-headed tracery window in the south wall of three lights of perpendicular style. This was probably an insertion into earlier fabric. At the west end a large tower was built with a belfry stage, most likely in the 15<sup>th</sup> century. This has a twin-light perpendicular style tracery window in the upper part of each wall standing on a stringcourse. There was the usual south nave doorway covered by a small porch.



Above the church around 1870

In the late 19<sup>th</sup> century the church was redundant and it was decided to reduce the building to a ruin. The chancel and nave were demolished leaving only the chancel arch, one pier of the north arcade and the west tower standing. The chancel arch is Romanesque in style with unusual edge-set monolithic shafts on the west side. It retains the jamb of a window extending east into the lost chancel north wall area. The arch is round-headed and quite simple in form with roll mouldings on the soffit and outer order. The pier of the north arcade was relatively low in overall height and octagonal in form. The capital was plain and simply moulded as a chalice style design. The details suggest a mid to late 12<sup>th</sup> century date of construction for the arcade and lost north aisle.



Above the church around 1910- two pinnacles & mullion lost

The west tower has a large pointed eastern arch that was closed up with brickwork and rendered. At the time of its ruination the tower retained all its four upper belfry windows intact, with their tracery and the corner pinnacles and crenelated battlemented parapets. Another photo c.1910 taken after ruination indicates that the two eastern pinnacles and a window mullion may already have been lost quite early. The tower was built without buttresses and relied on upper stringcourses and belfry windows of two tracery lights to relieve the plain elevations. This is typical of parish church towers in the region and that at North Wheatley is broadly similar in aspect.

I understand that the original lead roof was removed in the 1960s letting in the weather to the tower interior.

### **State of Ruin Spring 2013**

The ruin had become dilapidated through neglect and the growth of ivy. Most of the tower was engulfed by huge amounts of ivy to the extent that little masonry was visible. It had lost all trace of the parapets, which had either collapsed or more likely had been pushed off the top over the years. Similarly the window mullions had gone leaving the tracery they supported hanging in space. The idea that masonry was deliberately pushed off the tower is supported by the fact that two of the windowsills had also gone. It seems most unlikely that these would have simply fallen out as a natural part of the decay process. A spiral staircase in the south-west corner formed the original access to the upper parts and roof of the tower. Locals visiting during work at the site told how when they were children they had been able to climb to the top of the tower and play in the stair turret. This shows clearly that access to the upper parts of the tower had been easily available in the past.

The north arcade pier had also disappeared except for its base which is much decayed. The chancel arch was also covered in ivy and on the verge of collapse. Both the chancel arch and the tower had lost the pointing in the mortar joints which was letting in water and advancing the decay process. The mason had to dismantle and reset some blocks of the upper parts of the tower forced out of alignment by the action of ivy roots, water seepage and freezing conditions.



Above the tower covered with ivy growth

The magnesian limestone from which the building is largely constructed had also weathered considerably but this is an aspect that is only to be expected in a structure of this age. The tower retained some badly decayed timbers from the bellframe and floor in its upper part. The north and south ends of the tower east wall were ragged stumps in the area where the nave had been demolished.



Around the base of the tower and chancel arch were piles of masonry from the fallen parapets and other features. The archeological brief was to sort out this material with a view to recovering stone that could be reused during the conservation works to the upper parts of the tower. Much grass, ivy, shrubs and other vegetation had grown up around these piles of stone and it was uncertain how much material actually survived, though some very large blocks could be seen.



Above heavily overgrown piles of stone set against the tower base

### **Methodology**

The methodology adopted to sort the material was to remove the vegetation and release each block of stone from the pile. Each one was then moved away from the tower but keeping it on the particular tower side of the location where it was found. This enabled four discrete assemblages to be established. In practice it rapidly became apparent that stones were stacked on each other in a careful fashion and were not where they had fallen from the tower. All stones

were laid out individually in rows. Presumably having been pushed or fallen from the parapet they were scattered where they had fallen across the churchyard and eventually a tidying up operation had taken place. Moving the stones had to be accomplished first, as a priority, in order to clear the tower base area so that Ivy and other vegetation could be removed and the scaffolding could be erected.

Against the north side of the tower stone fragments were encountered that did not relate to the fallen tower parapets. This included the capital and considerable sections of the octagonal pier from the north arcade. Notably there was also a single large keeled shaft from another pier or respond of late 12<sup>th</sup>-century date and a single chamfered voussoir with glazing groove. In keeping material in context to the side of the tower from which it was recovered it was hoped that it could then be related to the upper part of the tower from which it had fallen. In practice it eventually became apparent that the tidying up operation had in fact migrated certain pieces away from their original areas.

Having the material laid out helped to quantify what remained and to measure it. It was then possible to work out, with the aid of old photographs, how the material could be reassembled in an accurate manner. Drawings were prepared showing where each piece fitted as a guide to their reinstatement (see below).

### **The Upper Part of the Tower**

With the scaffold in place it was possible to inspect the upper part of the tower. The parapet base was marked by a horizontal stringcourse extending around the whole tower. Much of this stringcourse was eroded from weathering on its upper face and this is typical of Magnesian Limestone decay mechanisms. All that remained from the parapets was one single course of plain stone on the west and east sides with an L-shaped block set at each corner. Evidence of

earlier repairs was observed in the form of hard cement pointing and making up. This was apparent in the middle of the south face where packing stones had been inserted to fill a void in the coursing that had formerly contained a projecting carved waterspout support. Examples of these remained in situ on the west and north sides- the east side did not have such a projecting support. Fortunately the missing example from the south wall, covered with worn carved foliage, had already been identified amongst the loose stone and it proved possible to reinstate it during the conservation work. It had broken from its tailstone in the wall core and fallen off. Earlier repairs had patched the hole where it had been located.



Above foliate waterspout support fallen from south side of the tower parapet stringcourse

### **The Surviving Loose Stonework**

The bulk of the recovered stonework consisted of fallen parts of the tower parapets. This was examined in detail to recover the design and also determine how much could be re-erected. The initial architect's drawings showed only a



single course to be made good above the stringcourse but it soon became apparent that much more could be reinstated. The parapet design consisted of two plain base courses with L-shaped blocks at the corners, set on the stringcourse top. A third taller course, also had plain L-shaped blocks at the corners. On this was set moulded L-shaped corner blocks with crenellations and above that a squared base seating block for the pinnacles.



Above typical L-shaped corner block with long and short arms

The L-shaped blocks were so designed to form overlap joints of the coursing below it for strength of construction. This was achieved by having a short and long arm to the L-shaped block that alternated in direction with each course.



Above south-west corner assemblage showing taller corner L-shaped block, moulded upper section for crenellations and corner base block for pinnacle. Note holes for face cramps.

The crenellations consisted of short moulded parapet sections that were set on the second course of stone alternating with wider tall plain blocks on which were also set moulded parapet sections. Notably, though the short low crenellation parapet blocks were similar in size the upper crenellated parapet blocks varied considerably in length. This is a feature that can be observed in the old photographs of the parapet in situ. It appears to have been partly due to the different lengths of side of the tower and also the masons basically making it up as they built the parapet. Many of the recovered parapet copings and the upper corner blocks had suffered severe weather erosion to their upper surfaces. Despite this weathering they were serviceable and suitable for reuse. It also became apparent, through local knowledge, that some material had been removed from the site in the past. Following an appeal some pieces were



returned, including sections of parapet coping and these were incorporated into the assemblages.

At the upper corners there were cubical plain blocks forming the base for the pinnacles and set on top of those the tall moulded and decorated pinnacles.



Above the collected pieces of the pinnacles

Sockets in the corner blocks showed that iron face cramps had been leaded into the blocks. These were set vertically or at a slight angle and spanned the horizontal joints, rather like large staples. Some remained attached to the stones but most were lost. They are likely to have been a later, possibly 18<sup>th</sup> or 19<sup>th</sup>-century addition, to reinforce the structure, rather than an original feature.



Left L-shaped corner block with iron cramp in situ

A medieval mason would be more likely have incorporated iron, slate or wooden dowels in the bed joints than face cramps. Notably no evidence of such dowels was observed in the bed joints and it appears the tower parapets were originally built without any such reinforcement. Some of the added cramps were applied internally to the lower stone coursing and some externally to the pinnacles and their cubical base blocks. On some corners because of the overlap in coursing of the upper block the cramps were bedded into a lower L-shaped plain block and an additional straight block. Most of these were located and matched in place with their partner corner L-shaped blocks.

The surviving stones showed a considerably variety in completeness. Whilst some were completely intact others had lost sections through falling from the tower. In some cases the blocks had broken into several pieces but through careful observation it proved possible to reunite many broken pieces so that they could be reused.



Left three broken stones re-assembled from upper corner parapet section

Here it should be noted that some broken pieces were found in different sections of the four discrete assemblages of recovered material and had to be moved together for assembly. This showed how some of the stones had become widely separated from each other, presumably when they were initially broken or more likely when they were stacked against the tower. Some very large corner blocks had also migrated away from their origin and had to be moved to their relevant areas. Despite these stray pieces the bulk of the corner assemblages were relatively close to each other. This gave confidence in allocating each corner assemblage back to the relevant area of the tower.

The need to move around some very large pieces and sort the material thoroughly became apparent as study of the fallen material progressed. Eventually a whole day was spent simply rationalizing the material and bringing the corner assemblies together. In this process the evidence of the face cramp sockets proved of immense value because it was possible to align blocks correctly guided by their cramp sockets. The result was four discrete stone assemblies – one for each corner that could then be correctly re-erected on the tower. These corner assemblages were partly stacked up in their correct relationship to each other as a guide to reinstatement on the tower parapet.

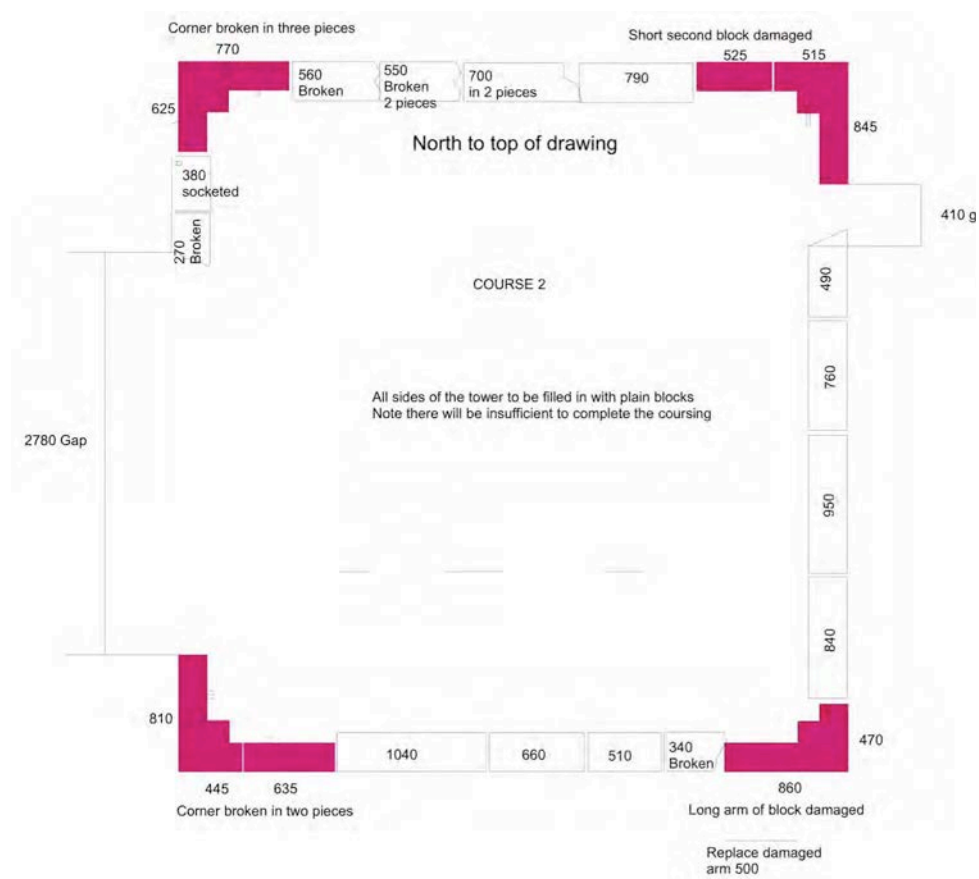
The upper parts of the tower were carefully measured and worked into a CAD plan. The lengths of plain coursework and corner assemblages were carefully measured and drawn into the plan. This gave an indication of how much coursing had been lost- in fact remarkably little new stonework was required. Based on these calculations a colour-coded drawing of each face of the tower and course was prepared as a guide to reinstatement.

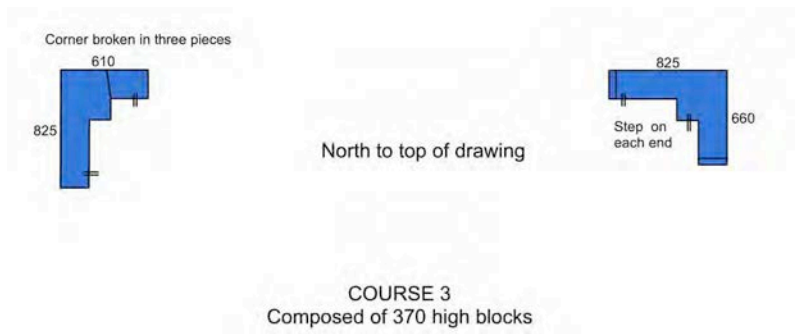




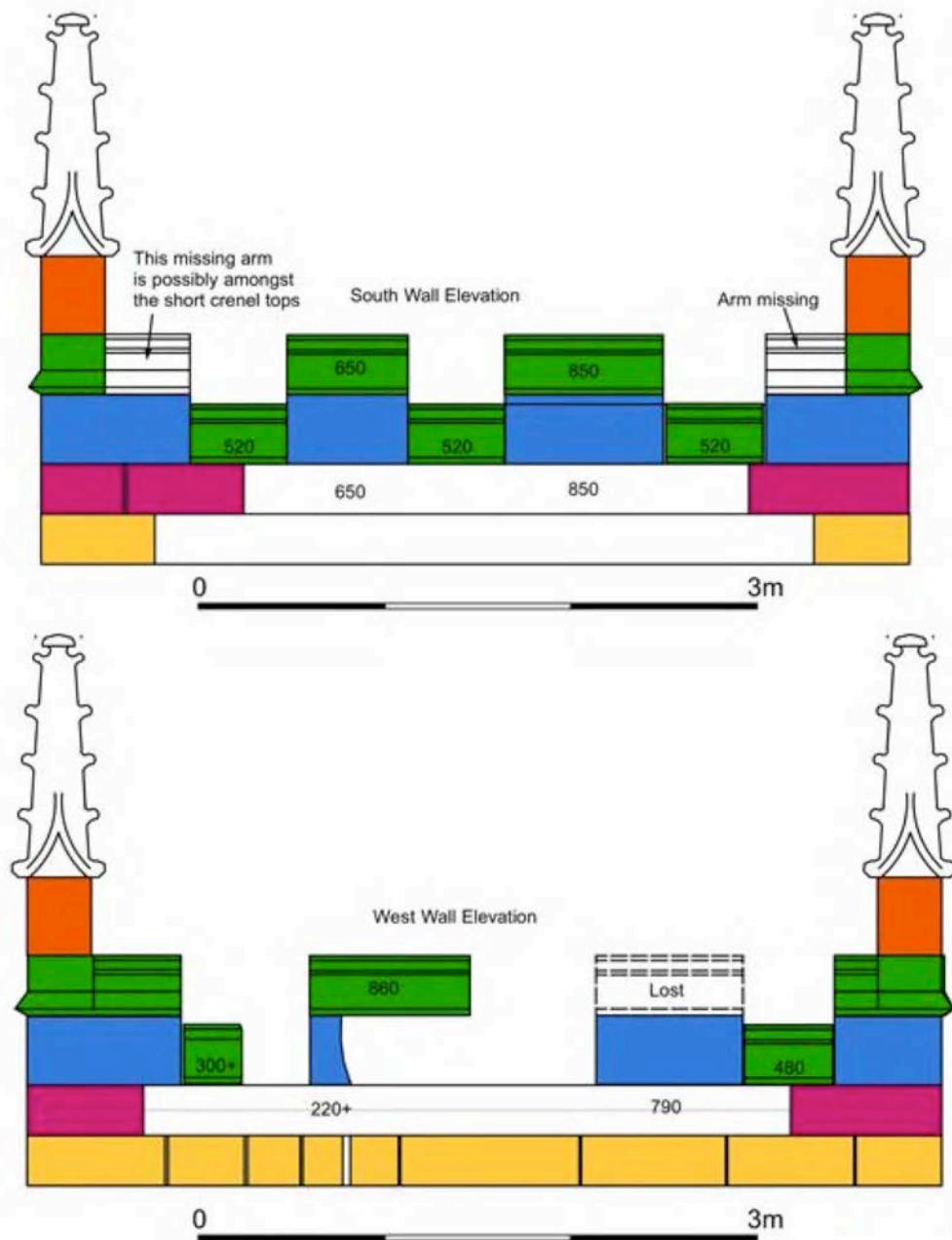
Above first course plan

Below second course plan

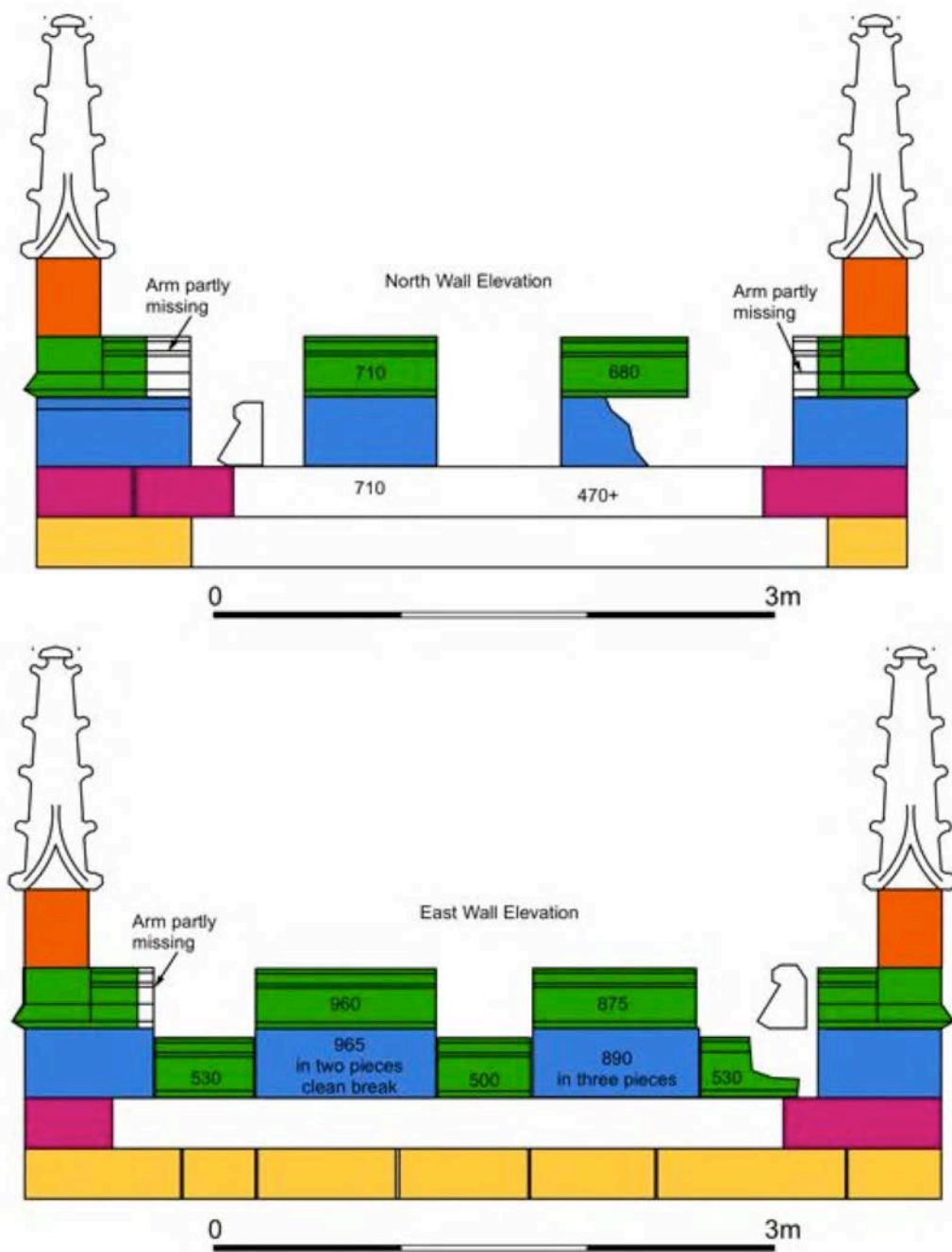




Above third course corner plan



Above reconstructed elevations of south and west wall parapets



Above reconstructed elements of north and east wall parapets

The upper stringcourses of the tower were very weathered and in many places the top face was badly eroded. A moulding was taken off the stringcourse to record its form. Similarly the moulded upper parts of the parapets were also badly weathered. These were noted to be of two slightly different profiles with an upper angled chamfered back from those from the upper crenellations and a more solid squared back profile to the lower crenellations.

### **WindowSills**

In addition to the tower parapets two of the windows had lost their windowsills. These were formed of two sections of stone, a sloping base sill and an upper chamfered sill with a central mullion seating. One window had only lost the latter stone but in the other both sections had been lost. Careful searching of the material enabled all three lost stones to be relocated, though some pieces were broken into several sections. These were successfully reinstated and new timber mullions provide to support the tracery. Amongst the loose stone one fragmentary mullion had been identified but this was too damaged and too short to be reused.

Below lower section of windowsill







Above upper section of windowsill with mullion seating

### **Reinstatement of the Masonry**

The reinstatement of the masonry was undertaken by the contractors following the guidance given in the reconstruction drawings of the parapets and the relevant assemblages of material on the ground. Though all four pinnacles survived and a fifth in a different stone that may be a replacement, they were too damaged to be replaced on the tower without substantial reinforcement.

The end result has seen the reinstatement of far more masonry than was originally envisaged. It proved possible to re-erect virtually the whole of the crenelated parapets minus the corner pinnacles. This gives the tower considerably more architectural effect in the landscape and though lacking its pinnacles is considerably better than a simple level-coursed top. Moreover this was achieved with minimal new stone. The result is a compromise but achieved through sound systematic archaeological analysis of the fallen masonry.

The remaining fragments that have not been reinstated and those from the demolished arcade pier etc. are to be stored within the tower basement and will remain there for future archaeological reference.

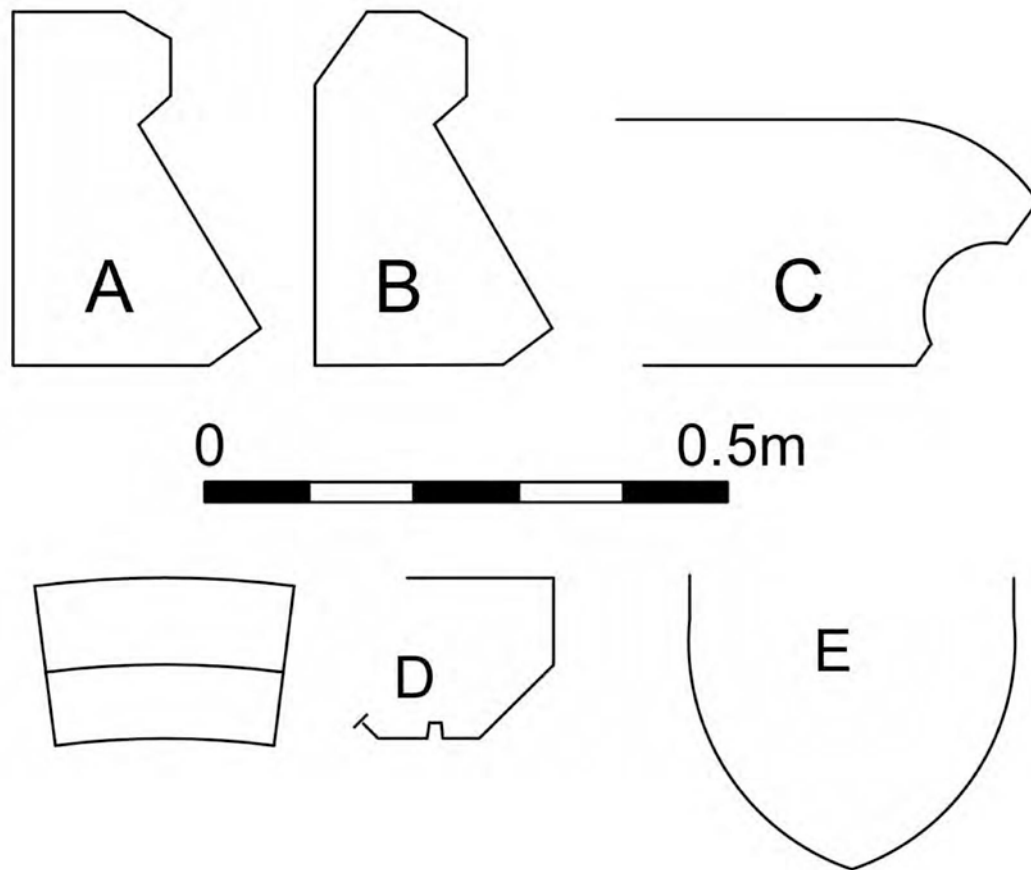


Above keeled shaft of 12<sup>th</sup>-century date  
Below single window voussoir with glazing groove





## Moulding profiles



Above moulding profiles –

- A Lower moulded parapet
- B Upper moulded parapet
- C Stringcourses on upper part of tower
- D Voussoir with glazing groove
- E Keeled shaft