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| :--- | :--- |
| PROJECT TITLE/SITE NAME: | Castle Campbell |
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| PARISH: | Dollar |
| NAME OF CONTRIBUTOR: | Paul Fox |
| NAME OF ORGANISATION: | Kirkdale Archaeology |
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| MAIN (NARRATIVE) <br> DESCRIPTION: <br> (May include information from other <br> fields) | A standing building survey was carried out comprising the production of an annotated <br> measured drawing and feature descriptions of the various components of the external <br> east elevation of the castle ahead of remedial works to prevent water ingress. <br> The opportunity to examine the features of the east elevation was a welcome one; this <br> elevation is not directly accessible and thus can only be examined from a raking angle at <br> the top of a steep slope. The survey was most instructive in learning more about the <br> development and phasing of Castle Campbell. Of particular interest was the discovery <br> that there is an earlier tower partially fossilised within the current one, and that the <br> historical record may allow us to ascertain an accurate date of the earlier tower's <br> destruction. |
| ARCHIVE LOCATION <br> (intended/deposited) | H, Western Terrace, Edinburgh, EH12 5QF |
| PROPOSED FUTURE WORK: | Historic Environment Scotland |
| CAPTION(S) FOR ILLUSTRS: | ADDRESS OF MAIN |
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# HISTORIC SCOTLAND PROPERTIES IN CARE MINOR ARCHAEOLOGICAL WORKS 2015/2016 

Castle Campbell • Standing Building Recording • 2010-2016

HS PIC Index Number: 90063
PART1/2
SITE: Castle Campbell, near Dollar, Clackmannanshire.
N.G.R.: ..... NS 961993
DESCRIPTION: Standing building survey comprising the production of an annotated measured drawing and feature descriptions of the various components of the external east elevation of the castle ahead of remedial works to prevent water ingress.
PROJECT CODE: HSCO-90063-2016-01
CONTENTS: 1.0 Introduction ..... 1
2.0 General Observations ..... 5
3.0 Standing Building Recording ..... 12
4.0 Conclusions ..... 27

## KIRKDALE

### 1.0 INTRODUCTION

Under the terms of its PIC call-off contract with Historic Scotland, Kirkdale Archaeology was asked to carry out a Standing building survey (SBR) at Castle Campbell, Clackmannanshire while scaffold was emplaced for remedial works, allowing access to a normally inaccessible portion of the castle (Fig. 1.1).

During spells of heavy rain, water was finding its way into parts of the east range, although the source of this water ingress had not been identified. This problem required both external and internal inspection where the source (or possibly sources) of water ingress could be identified and remedied.


Figure 1.1: Castle Campbell.
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The external east elevation of the castle is made up of the E-facing façades of the tower, east range, south range and the north-east stair tower (Fig. 1.2). Together, they sit over the steeply sloping sides of a deep ravine running down into Dollar Glen. Visual inspection from the ground is difficult, with some portions of the elevation being hidden from view. A large scaffold (in several tiers) was erected to allow access to all levels of the east elevation. This allowed access:

- To create annotated measured drawings and an archaeological baseline written record of the features of the various components of the east elevation;
- To allow engineers to inspect the elevation to determine the source of the water ingress and to implement a solution to the problem; and,
- The replacement of eroded mortar within the various masonry builds of the elevation. This work was undertaken by Historic Scotland staff and required the raking out of old mortar and its replacement, making the build more structurally sound and less susceptible to water ingress

The elevation was divided into eight components prefixed with 'CCE' denoting 'Castle Campbell Exterior':

| No. | Description |
| :--- | :--- |
| CCE1 | The east elevation of the south range. |
| CCE2 | The east elevation of the east range. |
| CCE3 | The east elevation of the tower |
| CCE4 | The north elevation of the east range. |
| CCE5 | The north elevation of the projecting garderobe suite of the east range. |
| CCE6 | The south elevation of the projecting garderobe suite of the east range. |
| CCE7 | The east elevation of the projecting garderobe suite of the east range. |
| CCE8 ${ }^{1}$ | The east elevation of the north-east stair tower. |

Table 1.1: The eight components of the east elevation of the castle.

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Figure 1.3: The position of the eight components of the east elevation of the castle.

In addition to the recording of the castle's external east elevation, the internal east elevations of the $1^{\text {st }}, 2^{\text {nd }}$ and 3 rd floors of the east range (used as additional office space and a residence) were subject to a baseline survey (see Appendix X) as part of a wider program of maintenance and upgrade.

During the work it was discovered that the source of the water ingress was a structural crack over a $2^{\text {nd }}$ floor window of the east range (CCE2.040 in the external survey). The original fieldwork took place in 2010, with concluding observations made in 2016.

### 2.0 GENERALOBSERVATIONS

### 2.1 The Tower

The tower itself is a massy oblong with its long axis oriented $\mathrm{E} / \mathrm{W}$. It is generally considered to have been built in the late- $15^{\text {th }}$ century. This occupies the north-east portion of the site. Whether the tower was protected by a barmkin wall is unclear as no vestiges remain. The tower comprises vaulted ground, $1^{\text {st }}$ and $3^{\text {rd }}$ floors with an enigmatic strangely corbelled $2^{\text {nd }}$ floor. The current garret is a $20^{\text {th }}$ century addition. The original access to the various floors of the tower was via an intra-mural stair in the west wall and thereafter via a turnpike stair in the south-west angle. There were entrance doorways at ground floor level in the west wall and at $1^{\text {st }}$ floor level in the south wall. The uppermost floor had its vault replaced in the late $16^{\text {th }}$ century when the east range was added. The replacement contained ribbed vaults and carved masks.

### 2.2 The East Range

The current east range was built in the late- $16^{\text {th }}$ century on the site of an earlier structure. This appears to have been almost completely destroyed as the new Renaissance range required rib-vaulted cellars. An arched loggia provided entry from the courtyard into a new turnpike stair (the NE stair tower) which now became the main access to the tower and the east range with its galleries to the west and suites of rooms with projecting garderobe to the E. The old turnpike in the south-west angle of the tower was stripped out at this time to provide additional rooms at $2^{\text {nd }}$ and $3^{\text {rd }}$ floor levels. The gun-looped courtyard wall, guardroom and entrance passage to the north-west were probably added around this time. It would appear that the east range was in place by 1595 when it was described in the Castle Campbell Inventory as the 'new work'. The castle was burned by Montrose in 1645 on his march to the Battle of Kilsyth. It lay ruinous until the late-19th century.

### 2.3 The South Range

The south range forms the south side of the courtyard and although largely ruinous can be seen to have contained a range of basement cellars with a hall and kitchen range (to the west) and private chambers to the east. There are vestiges of angle rounds, stair towers and a wall-walk which served this range. It is generally considered to post-date the tower, originating at some point in the late- $15^{\text {th }}$ or early- $16^{\text {th }}$ century.

### 2.4 The Castle Campbell Inventory

The Castle Campbell Inventory ${ }^{2}$ details the contents of each room within the castle, sometimes referring to rooms in relation to each other e.g. the bigh chamber above the green chamber or the wardrobe above the hall.

[^1]This allows us to build up a picture of the location of the rooms and how they relate to each other (Fig. 2.1).

Some rooms are not described in relation to each other but their location is inferred through their function, e.g. the flesh landing is clearly part of the kitchen suite of the south range. While this model may not be perfect, it provides a plausible picture of the layout of the rooms in the late-16 ${ }^{\text {th }}$ century, and allows the attribution of names to individual spaces.

While the east range in its current configuration can be attributed to a point immediately pre-1595, it is clearly the predecessor of a structure in the same position. The tower occupies a broadly E/W orientation, and the north and south walls of the south range can be seen to mirror this orientation, however the east wall is clearly not at right angles but rather splays out slightly to the north-east. This strongly suggests that the south range was built at the same time as a structure which occupied the space between it and the tower. If this structure had simply been a barmkin wall then it would have connected directly to the south-east corner of the tower, but the splaying of the east wall of the south range is deliberate and has likely been done to allow a building contemporary with the south range to be added along the east side of the newly-formed courtyard - a building which still had to allow access to the 1 st floor entrance (via a fore stair) in the south wall of the tower. In order to fit a building here, the east wall had to splay back to allow space for the building without blocking a previously-established point of access. Evidence of this can be seen on the exterior east elevation and will be discussed later.


Figure 2.1: The relationship of the rooms of the castle in 1595 as inferred from the Castle Campbell Inventory. In the east range, the "Low Gallery in the New Work" would have been carried on the open loggia at ground floor level.


Plate 2.1: The external north wall with room limits and floors imposed. The red build is original, the brown build was added, and the yellow build represents the insertion of the new $3^{\text {rd }}$ floor vault along with upper wall courses and parapet. At ground level it can be seen that internally the vault could have been preserved while externally portions of the original masonry were lost.

Close examination of the tower shows that there is a raggled break in build running up the external north and south walls. Internally, the ground floor cellar vault seems intact but there is a break in build running up the internal south and north walls and across the vault at $1^{\text {st }}$ floor level. At $2^{\text {nd }}$ floor level, the same break in build can be seen and defines the difference between the close-set corbels and their widelyspaced counterparts. At $3^{\text {rd }}$ floor level, the walls still retain much render obscuring the walls and it is already clear that the vault is a late $-16^{\text {th }}$ century replacement. On the external south wall at $3^{\text {rd }}$ floor level, the margins of a blocked window aperture can be seen - this has been truncated in its upper portion, suggesting that internally there must be the remains of earlier walls. Externally, the upper three courses and the string course and parapet they carry are therefore later additions, likely to date to the replacement of the $3^{\text {rd }}$ floor tower vault in the late- $16^{\text {th }}$ century. This suggests that the tower is in fact a composite of two builds. To the west are the upstanding remains of a tower which suffered a major destructive episode. The ground floor cellar and vault survived intact although the external wall faces to the north-east and the east wall face were also destroyed. At $1^{\text {st }}$ floor level, less of the west portion of the south wall survived than the west portion of the north wall - this would have left a splayed portion of the vault intact. A similar situation occurred at $2^{\text {nd }}$ floor level as there are less closely-spaced corbels extant to the south than to the north. The original floor would therefore have comprised only closely spaced corbels. There has clearly been a catastrophic collapse/destruction episode in which the intact upstanding remains were repaired with new masonry to the east. The replacement floor at $2^{\text {nd }}$ floor level used widely spaced corbels
to carry the joists; instead of removing any of the closely-spaced corbels they simply did not use them all in the new floor configuration. This shows that the closely-spaced corbels must be earlier otherwise they would stretch all the way across the room.


Plate 2.2: The external south wall. The red build is original, the brown build was added and the yellow build represents the insertion of the new $3^{\text {rd }}$ floor vault along with upper wall courses and parapet and the blocking of a window aperture. The north-east stair tower on the right was added at the same time as the $3^{\text {rd }}$ floor vault.

Clearly a tower 'in two halves' affects our understanding of the dating, development and phasing of the site. One well-known event may provide a clue as to this sequence. The earliest known reference to the castle appears in a papal bull of 1466 wherein Walter Stewart of Lorne was ordered to be punished by the church for the destruction of, 'a certain manor with a tower of the place of Glowm situated in the territory of Dollar'. Gloom or Gloume is the old name for Castle Campbell, the new name being granted by James II in 1488-90. If this sequence of events could be confirmed, then a new sequence for the tower would comprise:

1. The erection of a tower at some point prior to 1466 ;
2. The destruction of much of the east portion of that tower $c .1466$; and,
3. The repair of the remaining upstanding masonry of the tower at some point subsequent to 1466.


Plate 2.3: The undisturbed masonry of the ground floor cellar vault.


Plate 2.4: The break in build on the north wall and vault on the $1^{\text {st }}$ floor.


Plate 2.5: The break in build in the vault on the $1^{\text {st }}$ floor.


Plate 2.6: The break in build on the south wall and vault on the $1^{\text {st }}$ floor.


Plate 2.7: The break in build on the north wall on the $2^{\text {nd }}$ floor.


Plate 2.8: The break in build on the south wall on the $2^{\text {nd }}$ floor.

## 3.0 STANDINGBUILDING RECORDING

### 3.1 Component CCE1: The east elevation of the south range

This portion of the south range originally had a basement cellar internally carrying a suite of private rooms on three floors with a garret above, the whole surrounded by a parapet carried on corbels with rounds at the angles and a wall-walk behind. Externally, the elevation is relatively plain but holds clues as to its relationship to the original east range. The main build CCE1.001 comprises a mixed random rubble masonry build consisting of various sizes of roughly cut pieces of (mainly) sub-angular sandstone and dolerite bonded in a light yellowish-grey lime mortar. A structural arch at its base CCE1.002 is constructed from variously-sized pieces of sub-angular un-dressed light grey/pinkish grey sandstone forming the springers and voussoirs of the arch. This arch may have helped to provide stability for the $1^{\text {st }}$ floor internal fireplace in the east wall of the south range as the fireplace aperture is wide and the arch would have provided stability beneath this void. The quoins forming the SE angle of the range are graduated in three stages. The lower base course CCE1.003 consists of three courses of light grey/pinkish grey sandstone ashlar with a chamfered cope course. Stepped back from this is CCE1.005, the upper base course consisting of six courses of light grey/pinkish grey sandstone ashlar with a chamfered cope course formed from a re-used architectural fragment CCE1.004 which has a chamfered moulding on the east face which suggests that it originally formed the lintel or sill of an aperture. The SE quoins proper CCE1.006 consist of twenty-three courses of light grey/pinkish grey sandstone ashlar in an in-build/out-build configuration running up to the base of the SE angle round of the south range. There is a single window CCE1.007 within masonry build CCE. 001 consisting of a vertical-rectangular aperture with south (CCE1.008) and north (CCE1.009) margins, sill CCE1.010 and lintel CCE1.011. The margins and lintel are formed from sandstone ashlar with a 9 cm wide chamfer to the opening. Internally there is a 10 mm wide glazing groove on the reveal and two square holes on the underside of the lintel and upper portion of the sill showing that the window was barred internally. The lintel of the aperture is protected by a relieving arch CCE1.012 formed from five split sandstone blocks. Masonry build CCE1.001 carries the bases of the SE (CCE1.013) and NE (CCE1.014) angle rounds which formed part of the south range parapet. These are both made of dressed buff-coloured sandstone ashlar in the form of a continuous corbel $c .160 \mathrm{~mm}$ high. The SE angle round base protrudes from the face of masonry build CCE1.001 by 200 mm . It is at least $1 \mathrm{~m} \mathrm{~N} / \mathrm{S}$ with the north end returning to be flush with the wall face. The NE angle round base CCE1.014 originally protruded like CCE1.013 but was clawed back to be flush with the wall face when the current east range was added in $1585-95$. The NE angle round base is carried on the remains of the NE quoins CCE1.015 of the south range formed from three vertically-stacked (in-build/out-build) ashlar blocks. The clawed-back angle round and these fossilised quoins tell us something about the form of the original form of the east range. Remnants of harling over the quoins suggest that this area was not meant to be seen (when the late $16^{\text {th }}$ century east range was added) which explains why these quoins were left in situ when the angle round base CCE1.014 was clawed back and the NE angle
round of the south range was removed. These quoins seem to have terminated at the position where we note them now i.e. they did not run all the way to the ground. This means that there was a build contemporary with the south range which continued on to the north prior to the insertion of the current east range in the late $16^{\text {th }}$ century. As this build had its apex at the base of quoins CCE1.015 (and since there was an over-hanging parapet and angle round at the NE corner of the south range) this means that the build continuing north comprised either a barmkin wall or a two-storey wall with a lean-to building on the interior (the internal structure could not have been gabled due to the overhanging masonry). The NE angle round of the south range would preclude there being a barmkin, suggesting a lean-to structure - this is backed up by the orientation of the east wall of the south range suggesting that the lean-to was set back from the east façade of the large tower to the north (as the east range is today) perhaps to continue to allow access to the $1^{\text {st }}$ floor of the tower via the door in its south façade. As the east wall of the south range is purposely splayed to allow this orientation, this suggests that the original east range lean-to was contemporary with the building of the south range.

The remodelled east range was inserted via a raggled cut through the north side of the south range located directly below the remaining north quoins CCE1.015. The builders left a risband joint along the north side of the quoins when they added the build of CCE2. The cut runs down to the ground north of arch CCE1.002. To the north, the interface between the cut and the inserted east range masonry is filled by small angular pieces of sandstone and dolerite CCE1.045. The remains of buff-coloured lime mortar harling CCE1.047 over the north edge quoins CCE1.015 of the south range and the inserted build of the east range shows that it was used to disguise the join between the south range and the inserted east range in the late- $16^{\text {th }}$ century.

The SE angle round base CCE1.013 carries corbels $\mathbf{0 1 6}$ - 018 while masonry build CCE1.001 carries corbels 019 - 027. The corbels are all in sandstone and project in two stages. These carried the masonry of the parapet and angle rounds which only survives as four blocks of sandstone ashlar CCE1.039 which formed part of the parapet at the SE angle round. The loss of the parapet has exposed some of the internal sandstone wall-walk slabs CCE1.028 - 037 which would normally be hidden from view. A further one of these wall-walk slabs CCE1.038 was re-used and re-set in the late $16^{\text {th }}$ century as part of the masonry build of the east range. The angled slab was used to collect water run-off from the area between the south gable of the east range and the north portion of the south range, where it drained from another re-set wall-walk slab CCE1.043, pushing it onto the east wall-walk of the south range where it would have drained through the spouts of the parapet.

The loss of the parapet has also exposed some masonry build on the west side of the parapet walk.
CCE1.040 comprises the sandstone ashlar edge quoin (with 9 cm wide chamfered SE angle) and remaining rubble build of the south side of the east attic wall of the south range. The quoin was
chamfered to avoid sharp edges at the SE angle round. To the north are the remains of chimney
CCE1.041 which was set on the east attic wall of the south range. The chimney serviced three flues from the internal fireplaces. The build is a mixture of angular sandstone and dolerite in a light yellowish-grey lime mortar. To the north, the chimney is bolstered by an angular mixed rubble masonry build CCE1.042 representing the remains of the north side of the east attic wall of the south range. This build carries the possible remains of a crow-stepped gable (or possible a masonry support for chimney CCE1.041) represented by three sandstone blocks in a stepped pattern over build CCE1.042. This would tend to suggest either that the original $c .1500$ roof of the east end of the west range which ran $\mathrm{N} / \mathrm{S}$ was reconfigured to run $\mathrm{E} / \mathrm{W}$ when the east range was added in the late $16^{\text {th }}$ century or that this build is purely a structural support for the chimney. It can therefore be seen that the majority of the south range features date to the late- $15^{\text {th }}$ century with some remodelling carried out when the new east range was imposed in the late- $16^{\text {th }}$ century.

### 3.2 Component CCE2: The east elevation of the east range

When looking generally at the east elevation of the castle through tower, east range and south range, it can be seen that the floor levels graduate downwards in height from north to south. The same is true of the east range itself where the portion to the north steps down to the portion to the south at ground, $1^{\text {st }}$ and $2^{\text {nd }}$ floor levels. This can be quickly perceived when looking at the relative heights of the windows to the north and south. The south portion of the east range is bedded directly over, and is partially cut into, the north wall of the south range. This required the removal of the NE parapet round of the south range and the termination of the south range wall-walk at this point. There is also evidence that the south range garret roof had to have its axis changed from $\mathrm{N} / \mathrm{S}$ to $\mathrm{E} / \mathrm{W}$ as a result. Internally, the east range has a vaulted basement with three floors above. To the west in the courtyard, an arched loggia carried a suite of galleries above and an inserted turnpike stair became the main access in the re-entrant angle between the tower and the east range. Centrally, the external east elevation carries a projecting garderobe suite with three elevations, CCE5 - CCE7. The north elevation of the east range where it meets the tower is CCE4. The east range in its current form was in place by 1595 when it was called the 'New Work'. Its destruction in 1645 by Montrose saw it going out of effective use until its east portion was re-roofed (the west galleries were not included) and made habitable once again. The 1950s also saw a major refurbishment.

The main masonry build CCE2.001 of the east range is predominantly in sub-angular sandstone with occasional pieces of dolerite and smaller angular pinnings throughout. It is bonded in a very compact buff-coloured mortar with sub-rounded inclusions larger than those found in CCE1.001. In general the masonry of the south range is far more subject to deterioration and voiding. The masonry build contains two window apertures at ground floor level - CCE2.002 (south) and CCE2.013 (north), two at first floor level - CCE2.021 (south) and CCE2.031 (north) and two at $2^{\text {nd }}$ floor level - CCE2.040 (south) and CCE2.047 (north), all flanking the central projecting garderobe suite. There are a further two dormer
windows - CCE2.053 (south) and CCE2.060 (north) serving the $3^{\text {rd }}$ floor. Some of the windows have been subject to alteration and all carry later window furniture. Several carry the scars of protective yetts while there are scars on some of the reveals related to earlier forms of window furniture.

Window CCE2.002 has a vertical rectangular aperture and retains original elements comprising south margins CCE2.003, north margins CCE2.004 and lintel CCE2.006. The margins have been clawed back (via cut CCE2.007) removing the 9 mm wide roll moulding which framed the aperture. The lower blocks of the north and south margins CCE2.008 are later $19^{\text {th }}$ century alterations to heighten the window. The sill CCE2.005 is a later addition and carries a mason's mark CCE2.009. The original surround is in finegrained yellow sandstone. The original window was protected by a yett on the exterior shown by yett scars CCE2.011 which have a later filling CCE2.012 (probably late-19th century) of dark grey mortar with small sub-rounded inclusions. Contains a $19^{\text {th }} / 20^{\text {th }}$ century sash and case window CCE2.010.

Window CCE2.013 has a vertical rectangular aperture composed of south margins CCE2.014, north margins CCE2.015, sill CCE2.016 and lintel CCE2.017. The original surround is in fine-grained yellow sandstone which carried a 9 mm wide roll moulding to the aperture. The original window was protected by a yett on the exterior - shown by yett scars CCE2.019 which have a later filling CCE2.020 (probably late-19th century) of dark grey mortar with small sub-rounded inclusions. Largely un-altered except for the insertion of a $19^{\text {th }} / 20^{\text {th }}$ century sash and case window CCE2.018.

Window CCE2.021 has a vertical rectangular aperture composed of south margins CCE2.022, north margins CCE2.023 and lintel CCE2.025. The sill survives partially as CCE2.024 (which carries an area of damage CCE2.026); replacement sill CCE2.027 is a later (probably late-19th century) addition as is sash and case window CCE2.030. The original surround is in fine-grained yellow sandstone which carried a 9 mm wide roll moulding to the aperture, now heavily eroded. The original window was protected by a yett on the exterior shown by yett scars CCE2.028 which have a later filling CCE2.020 (probably late$19^{\text {th }}$ century) of dark grey mortar with small sub-rounded inclusions.

Window CCE2.031 has a vertical rectangular aperture composed of south margins CCE2.032, north margins CCE2.033 and lintel CCE2.035 (which carries a glazing groove on its underside). The sill survives partially as CCE2.034; replacement sill CCE2.036 is a later (probably late-19th century) addition as is sash and case window CCE2.039. The original surround is in fine-grained yellow sandstone which carried a 9 mm wide roll moulding to the aperture. The original window was protected by a yett on the exterior shown by yett scars CCE2.037 which have a later filling CCE2.038 (probably late-19 th century) of dark grey mortar with small sub-rounded inclusions.

Window CCE2.040 has a vertical rectangular aperture composed of south margins CCE2.041, north margins CCE2.042, sill CCE2.043, lintel CCE2.044 and a relieving arch CCE2.046, perhaps due to the shallowness of the lintel. The sash and case window was removed prior to recording. The original surround is in fine-grained yellow sandstone - the margins were roll moulded ( 9 mm wide) while the arris of the lintel was chamfered. It is likely that this lintel was not intended for this window but was carved and available and saved carving another block with a roll mould. Its position and height also meant that it was unlikely to be seen. There is a $19^{\text {th }}$ century repair CCE 2.045 on the south margins of the window.

Window CCE2.047 has a vertical rectangular aperture composed of south margins CCE2.048, north margins CCE2.049, sill CCE2.050 and lintel CCE2.051. The sash and case window CCE2.052 is a later (probably late-19th century) addition. The original surround is in fine-grained yellow sandstone - the margins were roll moulded ( 9 mm wide) while the reveals were barred internally.

The south dormer window CCE2.053 has a vertical rectangular aperture composed of south margins CCE2.054, north margins CCE2.055, sill CCE2.056 and lintel CCE2.057. The sash and case window CCE2.058 (removed at time of recording) is a later addition. The original surround is in fine-grained yellow sandstone but carries no decorative moulding, just slightly rounded edges. There is a mid-20 ${ }^{\text {th }}$ century gutter and drain pipe CCE2.059 surrounding the window. The reveals carry a glazing groove.

The north dormer window CCE2.060 has a vertical rectangular aperture composed of south margins CCE2.061, north margins CCE2.062, sill CCE2.063 and lintel CCE2.064. The sash and case window CCE2.065 is a later addition. The original surround is in fine-grained yellow sandstone but carries no decorative moulding except for slightly rounded edges. The reveals carry a glazing groove.

The main build CCE1.001 has quoins at its SE and NE angles. The SE quoins CCE2.066 are composed of four blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. The quoins are used here because the build at this height is clear of the upper part of the south range - the build below beds on and over the original north wall of the south range. The NE quoins CCE2.068 are formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. These run from ground to eaves level.

The NE quoins carry a sub-circular hole CCE 2.07380 mm across by 50 mm high and an iron ring and staple CCE2.074 (below CCE2.073). The ring is 50 mm in diameter x 10 mm thick. The staple attaching it to the wall is 10 mm thick with a void 30 mm wide. The ring sits 3.2 m above the sloping ground level. The function and date of this feature is unclear, as is its relationship with $\mathbf{0 7 3}$. Possibly a tethering point which may have had a rope or chain attached. Both sets of quoins are part of the late-16 ${ }^{\text {th }}$ century remodelling of the east range. The NE quoins carry a set of crow steps CCE2.076 on the east side of the north gable
of the east range running up to meet the east wall of the tower. These are composed of eleven sandstone blocks set back 250 mm - 300 mm from each other - the lowest is a moulded skew putt. The upper crow step is a $19^{\text {th }}$ century addition/replacement. The SE quoins CCE2.066 carry crow steps CCE2.067 these sit on the east side of the south gable of the east range running up to chimney 087 . Composed of six sandstone blocks, they are set back $250 \mathrm{~mm}-300 \mathrm{~mm}$ from each other - the lowest is a moulded skew putt. The fact that the gable sits flush with the south side of the south wall of the east range shows that when the east range was added, the roof over the east portion of the south range had to change it's axis from $N / S$ to $\mathrm{E} / \mathrm{W}$.

There are three repairs CCE2.069 - $\mathbf{0 7 1}$ within the wall fabric which are likely to date to the late-19th century works on the east range and contain sandstone and dolerite pieces and pan tile fragments bonded in a light grey mortar. The pan tile fragments have their own generic number CCE2.072.

The east wall of the east range carries a large chimney CCE2.075 built from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. It is 4.10 m wide $\mathrm{E} / \mathrm{W} \times 3.40 \mathrm{~m}$ high in its current configuration. Above the moulded string course CCE2.082 there was originally a high chamfered crown which has been removed but is shown on Billings' illustration of 1847. The string course CCE2.082 is 120 mm high and protrudes from the wall face by 100 mm . It is formed from sandstone ashlar with chamfered upper and lower faces separated by a flat horizontal fillet. The chimney has a blocked spout CCE2.080 piercing it (via cut CCE2.079) which drained the roof. As this cuts through a late $16^{\text {th }}$ century build and as it was blocked in the $19^{\text {th }}$ century, the assumption must be that the cut was made sometime after the construction of the chimney and the abandonment of the castle in the 1640s. The spout is constructed from yellow sandstone - it protrudes out from build CCE2.075 by 130 mm and has a ushaped opening to the east and a central water channel. The aperture was blocked by dark grey mortar with small sub-rounded inclusions in the late-19th century. The chimney sits on a late- $16^{\text {th }}$ century moulded eaves course CCE2.078, 140 mm high, which protrudes from the wall face by 130 mm . It is built in sandstone ashlar with chamfered upper and lower faces separated by a flat horizontal fillet. It is truncated in several places to allow drain pipe and roof insertion. There is a small $19^{\text {th }}$ century patch repair CCE 2.081 on the chimney. The chimney is crowned by four late $1^{\text {th }}$-century ceramic chimney pots CCE2.083 - 086. The grey-slated roof CCE2.077 is part of the late-19th century refurbishment of the east range.

There is another chimney set on the south gable wall of the east range. It is constructed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. The top portion of this build was added in the $19^{\text {th }}$ century to heighten the chimney. The original version is shown in Billings' illustration of 1847. It is topped by a moulded string course CCE2.088 some 120 mm high which protrudes from the wall face by 100 mm . It is formed from sandstone ashlar with chamfered upper and
lower faces separated by a flat horizontal fillet. This originally sat over the lower portion of build CCE2.087 and carried a high chamfered crown (as shown on Billings' illustration of the east elevation in 1847) but was reconfigured and became the crown, sitting over an added build in the late $19^{\text {th }}$ century. It carries a squat ceramic chimney pot CCE2.089 which has been moved from its original position.


Figure 3.1: Robert Billing's 1847 illustration of the east elevation shows a much squatter chimney crowning the south gable of the east range - this was altered in the late-19 ${ }^{\text {th }}$ century. The chimney on the east wall has a large chamfered crown which has been removed.

When the south and east ranges were conjoined, the raggled scar CCE1.015 was disguised using lime harling CCE2.090 - this is visible over a large area of CCE2.

Mid-late $20^{\text {th }}$ century activity can be seen in the form of a large raggled cut CCE2.091 through the main wall build CCE2.001, filled with cement and masonry pieces CCE2.092 around a small pipe CCE2.093.

### 3.3 Component CCE3: The east elevation of the tower

As discussed earlier, the tower can now be understood to be a composite structure with the ground floor cellar vault surviving a catastrophic event (minus portions of its exterior wall to the north and NE, possibly to the south and SE, and entirely to the east) along with portions of the $1^{\text {st }}$ and $2^{\text {nd }}$ floors to the west. As it is likely that the older surviving of the tower pre-dates 1466 , it holds that the rebuilt portion of the tower to the east post-dates 1466 . In addition, the insertion of the ribbed $3^{\text {rd }}$ floor vault in the late $16^{\text {th }}$ century required the replacement of the top three masonry wall courses and the coped parapet with its corbels and string course.

The masonry build CCE3.001 of the east elevation of the tower is composed of horizontal-rectangular cubical yellowish-grey mid-fine grained sandstone ashlar in undulating courses. Bonded in a yellowish-
brown lime mortar with small $<5 \mathrm{~mm}$ pebble inclusions. Blocks vary in size from 150 mm high x 200 mm wide to 300 mm high $\times 400 \mathrm{~mm}$ wide in the smaller range, up to 350 mm high $\times 600 \mathrm{~mm}$ wide. The courses also contain vertical and horizontal angular pinnings between the blocks of the build. The upper three courses were replaced in the late- $16^{\text {th }}$ century when the internal $3^{\text {rd }}$ floor vault was added. The NE edge of the tower is formed by quoins CCE3.020 which contain the same masonry as found in build CCE3.001 but set in an in-build/out-build pattern - these run the full height of the tower. There are two replacement quoins CCE3.019 within the NE quoins CCE3.020 formed from yellowish-grey sandstone ashlar with some small angular packing stones above. They are bonded in a light brown lime mortar with small $<2-3 \mathrm{~mm}$ pebble inclusions. These two blocks protrude out from the rest of the quoins by $10 \mathrm{~mm}-$ 15 mm and are clearly replacements. The SE edge of the tower is formed by quoins CCE 3.049 which again contain the same masonry as found in build CCE3.001 but set in an in-build/out-build pattern. They are largely obscured by the north wall of the east range.

There are several window apertures (CCE3.002, CCE3.004, CCE3.009, CCE3.022, CCE3.027, CCE3.036, and CCE3.042) within the main wall build, taking different forms from simple slit windows to larger expanded apertures.

CCE3.002 is a very small slit window/vent aperture within build CCE3.001 serving the pit prison internally. The aperture is vertical rectangular 310 mm high $\times 70 \mathrm{~mm}$ wide $\mathrm{N} / \mathrm{S}$ and is formed by a gap in the horizontal masonry course. The upper and lower portions of the window have been carved out of the courses above and below respectively. The generic number for the masonry surround is CCE3.003. It is unclear whether this is a proper window or an air vent or a combination of the two.

CCE 3.004 is a small slit window within build CCE3.001 serving the $1^{\text {st }}$ floor lobby leading to the pit prison internally. The aperture is vertical rectangular 570 mm high $\times 130 \mathrm{~mm}$ wide $\mathrm{N} / \mathrm{S}$ and has a chamfered exterior. It is formed from south margins CCE3.005, north margins CCE3.006, sill CCE. 007 and lintel CCE3.008, all in blocks of yellowish-grey mid-fine grained sandstone ashlar. There is an 8 cm wide chamfer to the aperture.

CCE3.009 is a window within build CCE3.001 serving the east end of the $1^{\text {st }}$ floor hall internally. The aperture is vertical rectangular 660 mm high $\times 400 \mathrm{~mm}$ wide $\mathrm{N} / \mathrm{S}$ and has a damaged chamfered exterior with evidence of exterior window bars. It is formed from south margins CCE3.010, north margins CCE3.011, sill CCE3.012 and lintel CCE3.013, all in blocks of yellowish-grey mid-fine grained sandstone ashlar. The moulding to the aperture is missing due to damage incurred by an exterior cross-shaped window bar, the scars CCE3.015-018 of which can be seen on the masonry window surround. A 20 mm wide glazing groove can be seen on the reveal. Above the window is a relieving arch CCE3.014 formed from three blocks of yellowish-grey mid-fine grained sandstone, the central of which has upwardly
outwardly splaying sides with the 2 blocks to the south and north acting as springers. The aperture contains a $19^{\text {th }} / 20^{\text {th }}$ century window and case in the form of a single vertical-horizontal window with six lights (in a two-over-three configuration).

CCE3.022 is a window aperture within build CCE3.001 serving the garderobe in the NE corner of the $2^{\text {nd }}$ floor room of the tower internally. The aperture is vertical rectangular 590 mm high $\times 115 \mathrm{~mm}$ wide $\mathrm{N} / \mathrm{S}$. It is formed from south margins CCE3.023, north margins CCE3.024, sill CCE3.025 and lintel CCE3.026, all in blocks of yellowish-grey mid-fine grained sandstone ashlar which are un-moulded to the aperture. Windows CCE3.002, CCE.004, CCE3.009 and CCE3.022 are all contemporary with masonry build CCE3.001.

CCE3.027 is a window aperture within build CCE3.001 serving the mural lobby leading to the garderobe in the SE corner of the $2^{\text {nd }}$ floor room of the tower internally. The aperture is vertical rectangular 1.07 m high x 570 mm wide $\mathrm{N} / \mathrm{S}$. It is formed from south margins CCE3.030, north margins CCE3.031, sill CCE3.032 and lintel CCE3.033. It is set within a large cut CCE3.028. The window was fashioned through masonry build CCE3.001 in the late $16^{\text {th }}$ century when the addition of the staircase at the reentrant angle between the tower and the east range required the SE portion of the $2^{\text {nd }}$ floor of the tower to be re-configured. The gap between the original wall masonry and the window contains a masonry and mortar fill CCE3.029 of sub-angular sandstone and dolerite pieces 40 mm high x 20 mm wide to 180 mm high x 210 mm wide bonded in a very compact buff-coloured mortar with sub-rounded inclusions. The surround is formed from blocks of yellowish-grey mid-fine grained sandstone ashlar moulded with a 100 mm wide chamfer to the aperture bonded in a very compact buff-coloured mortar with sub-rounded inclusions. The lowest block CCE3.088 on the south margin is a late-20th century replacement and is set in lime mortar. The reveal of the margins carries a 20 mm wide glazing groove and four holes for a set of internal window bars. The window is protected by a relieving arch CCE3.035 which has been formed by truncating part of masonry build CCE3.001 and inserting some crudely shaped sandstone pieces in order to direct the weight of the build above down the margins of the window below. The relieving arch is separated from the lintel by a single masonry course. The aperture contains an inserted late $19^{\text {th }} /$ early $2^{\text {th }}$ century sash and case window CCE3.034 with upper and lower sashes with six lights in each (in a three-over-two configuration).

CCE3.036 is a window aperture within build CCE3.001 serving the garderobe in the NE corner of the 3rd floor room of the tower internally. The aperture is vertical rectangular 590 mm high x 120 mm wide $\mathrm{N} / \mathrm{S}$. It is formed from south margins CCE3.037, north margins CCE3.038, sill CCE3.039 and lintel CCE3.040, all in blocks of yellowish-grey mid-fine grained sandstone ashlar which are un-moulded to the aperture. It is contemporary with masonry build CCE3.001.

CCE3.042 is a window aperture within build CCE3.001 serving an original mural chamber in the SE corner internally of the $3^{\text {rd }}$ floor of the tower. The aperture is vertical rectangular 1.27 m high $\times 870 \mathrm{~mm}$ wide N/S. It is formed from south margins CCE3.043, north margins CCE3.044, sill CCE3.045 and lintel CCE3.046. The surround is formed from blocks of yellowish-grey mid-fine grained sandstone ashlar moulded with a 100 mm wide chamfer to the aperture bonded in a very compact buff-coloured mortar with sub-rounded inclusions. The reveals carry a 20 mm wide glazing groove and holes for a set of internal window bars. The window is set within a large late-16th century cut CCE3.041. The richly decorated $3^{\text {rd }}$ floor vault was inserted at this time. Perhaps the original late $15^{\text {th }}$ century window had a smaller aperture which was expanded to allow more light in. The aperture contains an inserted late$19^{\mathrm{th}} / 20^{\mathrm{th}}$ century sash and case window, CCE3.047, this has overlapping upper and lower sashes with twelve lights in each (in a four-over-four configuration). There is masonry and mortar fill (around window elements CCE3.043 - 046) within cut CCE3.041 comprising sub-angular sandstone pieces 50 mm high x 30 mm wide to 100 mm high x 220 mm wide bonded in a very compact buff-coloured mortar with subrounded inclusions.

The insertion of the top three masonry courses in the late $16^{\text {th }}$ century (when the $3^{\text {rd }}$ floor ribbed vault was inserted internally) also required the insertion of a corbel table and parapet with angle rounds. The corbels CCE3.050 - 070 are lipped and form part of the corbel table of the tower. They are made from yellowish-grey mid-fine grained sandstone, generally 200 mm high x 210 mm wide. These carry the parapet string course CCE3.073 above - this runs over the SE and NE angle rounds and carries the central parapet wall. The course is fashioned in yellowish-grey mid-fine grained sandstone blocks 240 mm high. Individual blocks range from $760 \mathrm{~mm}-1.80 \mathrm{~m}$ wide and project from the parapet masonry above by 150 mm . Despite being illustrated (mostly $i n$-situ) by Billings and MacGibbon \& Ross, it is generally considered that the parapet is a late- $19^{\text {th }}$ or $20^{\text {th }}$ century rebuild. The masonry is too sharply cut to be of any great age. The parapet angle rounds CCE3.071 - 072 are carried on lipped long horizontal corbels forming the base of the NE angle round supporting part of the corbel course of the tower. These carry the angle round away from the main wall build CCE3.001. They are formed in yellowish-grey mid-fine grained sandstone blocks 170 mm high.

The parapet masonry CCE3.076 of the tower is built in a mixture of coursed buff-coloured mid-fine grained sandstone blocks 240 mm high x 270 mm wide up to 250 mm high x 680 mm wide and smaller dressed sandstone blocks set in more irregular courses. The fact that the majority of the build sits over a sheet of bitumen CCE3.089 shows that the parapet was rebuilt in the $19^{\text {th }}$ or $20^{\text {th }}$ century. This build also contains two wall-walk spouts CCE3.074 and $\mathbf{0 7 5}$ formed from buff-coloured mid-fine grained sandstone blocks 180 mm high x 200 mm wide These project by 160 mm and have an 80 mm wide semicircular water channel on their upper portion. The stone is quite worn and deteriorating but is likely to belong to a $19^{\text {th }}$ or $20^{\text {th }}$ century rebuild. The parapet masonry is crowned by a cope-course CCE3.077
built in buff-coloured mid-fine grained sandstone blocks 200 mm high $\times 0.79 \mathrm{~m}-1.10 \mathrm{~m}$ wide. The upper portion of the course splays to the east and west.

The garret occupying the tower was built in the mid-late $20^{\text {th }}$ century. Its crow-stepped east gable is formed from masonry CCE3.080 and 081, with a central chimney CCE3.078 with a chamfered crown CCE3.079 - all built in buff-coloured mid-fine grained sandstone blocks. There is a further masonry chimney constructed on the north side of the tower garret. It is built in a mixture of buff-coloured midfine grained sandstone blocks and re-used original yellowish-grey sandstone ranging from 110 mm high x 150 mm wide up to 310 mm high $\times 570 \mathrm{~mm}$ wide. It carries a chamfered crown CCE3.085. Although shown in-situ by Billings and MacGibbon \& Ross it is likely that it was taken down and reconstructed in the $19^{\text {th }}$ or $20^{\text {th }}$ century due to its condition.

There is garderobe chute aperture at the base of wall build CCE3.001. It has vertical margins with an arched top CCE3.083 constructed in yellowish-grey mid-fine grained sandstone blocks with five voussoirs and springers to south and north. The chute is constructed in yellowish-grey mid-fine grained sandstone and has an aperture 500 mm high $\times 700 \mathrm{~mm}$ wide. There is a cut CCE3.086 through the main wall build CCE3.001 above the garderobe aperture. It is a raggled cut 650 mm high $\times 750 \mathrm{~mm}$ wide $\mathrm{N} / \mathrm{S}$ and it exposes the garderobe chute CCE3.087 within the wall. Internally the chute measures $520 \mathrm{~mm} \mathrm{E} / \mathrm{W}$. The purpose of the cut is unclear. The chute is part of the late $15^{\text {th }}$ century masonry build of the tower.

### 3.4 Component CCE4: The north elevation of the east range

The north elevation of the East range, like the central projecting garderobe suite, is completely clad out in ashlar. The use of ashlar shows that these two elements were supposed to be seen, unlike the main build which was harled. Although it is different in fabric from the main build of the east range, the two are contemporary. The north elevation returns to the west to meet the SE angle of the tower against its east face.

The main build CCE4.001 of the N -facing portion of the east range is the same as the north quoins CCE2.068 of the east range - formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. This late $16^{\text {th }}$ century build was not designed to take harling. Within this build are two small window apertures. CCE4.002 is the lower vertical-rectangular window aperture formed from a gap in the blocks of sandstone ashlar forming build CCE4.001. The aperture is 640 mm high $\times 150 \mathrm{~mm}$ wide and contains a $19^{\text {th }} / 20^{\text {th }}$ century two light (one-over-one) window CCE4.003. There is a 20 mm wide glazing groove internally on the reveal set 110 mm back from the wall face. The sill slopes towards the exterior. CCE4.004 is the upper vertical rectangular window aperture formed from a gap in the blocks of sandstone ashlar forming build 001 . The aperture is 520 mm high $\times 290 \mathrm{~mm}$ wide and contains a $19^{\text {th }} / 20^{\text {th }}$
century single light window CCE4.005. There is a 20 mm wide glazing groove internally on the reveal set 80 mm back from the wall face. The sill slopes towards the exterior.

At the top of build CCE4.001 is a moulded eaves course CCE4.006 separating lower build CCE4.001 from gable masonry CCE4.009. The course is 140 mm high and protrudes from the wall face by 130 mm . It is built in sandstone ashlar with chamfered upper and lower faces separated by a flat horizontal fillet. Above the string course is the masonry build CCE4.009 of the north gable of the east range formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. These in turn carry a set of crow steps CCE4.008 running up to meet the east wall of the tower. Composed of eleven sandstone blocks set back $250 \mathrm{~mm}-300 \mathrm{~mm}$ from each other - the lowest is a moulded skew putt CCE4.007. The upper crow step CCE4.010 is a $19^{\text {th }}$ century addition/replacement

### 3.5 Component CCE5: The north elevation of the projecting garderobe suite of the east range

The main wall build CCE5.001 is the same as CCE4.001 - formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. This late $16^{\text {th }}$ century build was not designed to take harling. Within this build are three small window apertures. CCE5.002 is the lower square window aperture 310 mm high $\times 310 \mathrm{~mm}$ wide. It is formed from a gap in the blocks of sandstone ashlar forming build CCE5.001 and contains a 19 th $/ 20^{\text {th }}$ century single light window frame CCE5.003 which in turn contains a late $20^{\text {th }}$ century extractor fan CCE5.004. Within main build CCE5.001 is a cut CCE5.005 220 mm high x 290 mm wide. This is a possible scaffolding anchor point and is filled by sandstone pieces set in grey mortar CCE5.006, suggesting that it may have been used during the $19^{\text {th }}$ century refurbishment of the East range. CCE5.007 is the middle vertical rectangular window aperture 430 mm high x 140 mm wide. It is formed from a gap in the blocks of sandstone ashlar forming build CCE5.001. It has a 20 mm wide glazing groove around the reveal internally and has a chamfered aperture to north and south. The aperture contains a $19^{\text {th }} / 20^{\text {th }}$ century single light window CCE5.008.

CCE5.009 is the upper vertical rectangular window aperture 460 mm high $\times 190 \mathrm{~mm}$ wide. The window has a slightly arched top and is formed from a gap in the blocks of sandstone ashlar forming build CCE5.001. It contains a modern single light window CCE5.010.

Masonry build CCE5.001 carries a moulded string course CCE5.011 with upper and lower hollow chamfers separated by a fillet with a half-roll basally. It is formed from blocks of sandstone ashlar. This in turn carries the masonry forming the north gable CCE5.012 of the projecting garderobe suite of the east range. It is formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. Above this sits a moulded string course CCE5.013 formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. It is 140 mm high and has upper and lower
chamfered faces. In the angle between the garderobe suite and the east range east wall is a $20^{\text {th }}$ century cast iron drainpipe and downpipes CCE5.014 serving the east range.

### 3.6 Component CCE6: The south elevation of the projecting garderobe suite of the east range

The main wall build CCE6.001 is the same as CCE4.001 - formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. This late $16^{\text {th }}$ century build was not designed to take harling. Within this build are three small window apertures. CCE6.002 is the lower vertical rectangular aperture 490 mm high x 130 mm wide. It has a chamfered east margin CCE6.004 to allow maximum light in and is clawed away on its lintel. It contains a $19^{\text {th }} / 20^{\text {th }}$ century single light window frame CCE6.003. CCE6.005 is the middle vertical rectangular window aperture 430 mm high $\times 200 \mathrm{~mm}$ wide. It is formed from a gap in the blocks of sandstone ashlar forming build CCE6.001. It has a chamfered aperture to north and south. The aperture contains a $19^{\text {th }} / 20^{\text {th }}$ century single light window CCE6.006. The main wall build contains a $20^{\text {th }}$ century service cut CCE6.007 containing a modern pipe CCE6.008.

CCE5.009 is the upper vertical rectangular window aperture 500 mm high $\times 380 \mathrm{~mm}$ wide. The window is formed from a gap in the blocks of sandstone ashlar forming build CCE6.001 and has an 80 mm wide chamfered surround. It contains a modern single light window CCE6.010.

Masonry build CCE6.011 carries a moulded string course with upper and lower hollow chamfers separated by a fillet with a half-roll basally. It is 250 mm high and is formed from blocks of sandstone ashlar. This in turn carries the masonry forming the north gable CCE5.012 of the projecting garderobe suite of the east range. It is formed from blocks of sandstone ashlar tightly bonded in a compact buffcoloured mortar. This carries a concrete bed CCE5.013 for the (removed flagged roof CCE5.015 of the suite).

Above this sits a moulded string course CCE5.014 formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. It is 140 mm high and has upper and lower chamfered faces.

### 3.7 Component CCE7: The east elevation of the projecting garderobe suite of the east range

 The main wall build CCE7.001 is the same as CCE4.001 - formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. This late $16^{\text {th }}$ century build was not designed to take harling. Within the main build are two filled cuts. CCE7.002 is cut through the main build and measures 150 mm high x 140 mm wide. It is filled by masonry and mortar CCE7.003 and is likely to represent a $19^{\text {th }}$ century scaffold anchor point. CCE7.004 is cut through the main build and measures110 mm high x 260 mm wide. It is filled by masonry and mortar CCE7.005 and is likely to have served the same function. The main build also carries a clawed back area CCE7.006, 240 mm high $\times 140 \mathrm{~mm}$ wide x 50 mm deep whose function is unclear. The main build carries a late- $16^{\text {th }}$ century string course CCE7.007 with upper and lower hollow chamfers separated by a fillet with a half-roll basally. It is formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar and is $c .250 \mathrm{~mm}$ high. Above this sits a moulded string course CCE7.008 formed from blocks of sandstone ashlar tightly bonded in a very compact buff-coloured mortar. It is 140 mm high and has upper and lower chamfered faces. CCE7.009 is a generic number for removed flagged roof of the suite.

### 3.8 Component CCE8: The east elevation of the north-east stair tower

This elevation was illustrated only partially, as it is partly hidden behind the roof of the east range. The main masonry build CCE8.004 is formed from blocks of mid to fine grained yellowish-grey sandstone ashlar tightly bonded in a very compact buff-coloured mortar. The build contains a blocked door aperture CCE8.005 1.48 m high $\times 600 \mathrm{~mm}$ wide. It is framed by a $c .50 \mathrm{~mm}$ wide chamfer and is rebated around the opening to carry a door frame and door which would have opened out the way either to the north or south. The lintel CCE8.006 of the door is framed by a $c .50 \mathrm{~mm}$ wide chamfer and is rebated on its underside to carry a door frame and door. It is formed from a single block of mid-to-fine grained yellowish-grey sandstone ashlar tightly bonded in a very compact buff-coloured mortar. The door appears to be contemporary with masonry of the stair tower. Its function is unclear but it is possible that there was some inter-connection between stair tower and the upper floor of the east range. There are no clear indications of how this could have been achieved. It is also possible that this provided access onto the east range roof to allow maintenance works to be carried out. It is blocked by masonry CCE8.007 formed from large sandstone blocks with horizontal tool marks on their surfaces. This represents mid$20^{\text {th }}$ century blocking of a late $16^{\text {th }}$ century doorway. It was probably blocked when the crow-stepped gable was reinstated by the Ministry of Works. The door is shown open in the guide book of 1953, although Billings shows the stair tower roofed, as it is now, with south and north crow-stepped gables. This configuration was only re-introduced in the 1950's. Prior to this, the stair tower had been given a roof with a single pitch and concrete sides.


Plate 3.1: View from the south-east showing the roof of the south-east stair tower in the mid-20 ${ }^{\text {th }}$ century. Canmore image SCO1202596. ©NLS.

As this detracted greatly from the look of the building, the crow steps were re-instated by the Ministry of Works. The south CCE8.001 and north CCE8.002 crow-stepped gables of the stair tower are formed from greyish sandstone ashlar. There are ten crow steps in each including the projecting skew putt at the base. These carry a grey slate roof CCE8.003.

### 4.0 C O N CLUSIONS

The opportunity to examine the features of the east elevation was a welcome one; this elevation is not directly accessible and thus can only be examined from a raking angle at the top of a steep slope.

The present work has been most instructive in learning more about the development and phasing of Castle Campbell. Of particular interest is the discovery that there is an earlier tower partially fossilised within the current one, and that the historical record may allow us to closely date the time of the earlier one's destruction.

Further work on the other elevations of the castle may help to yield further information which could better help our understanding of this historically important site.

## INVENTORY

The inventory of the furnishings and gear found $\&$ sighted in the place
Of Campbell the $21^{\text {st }}$ day of February 1595 by going years Alexander in Blairhill, Mr James Kirk notaries, William Menteith of Pow Mouth Mill, John Paton of Hillfoot, William Cunningham in the......John paton of Middleton. Alexander Kirk in Blairhill, William Newton in Mains of Dollar, John Smith in Dollar, Duncan Drysdale, Thomas Alexander.

First sighted in the wardrobe above the hall $\underline{3}$ fourteen feather beds and sixteen feather bolsters (long pillows).

Item one coffer there contained 10 highland cadders (coins/money).
Item seven woven Scots coverings old \& new.
Item eight old coverings of arras work (richly sewn tapestry).
Item one great Scots chest unlocked therein 6 pairs of old thick blankets and 6 pairs of new thick blankets Item therein nine pairs of white highland plaids.

Item one coffer not locked (wae?) and keys therein.
Five pairs of old linen sheets and two pairs of sheets of twill. Further item, a pair of Dutch linen sheets.
Item therein 3 tablecloths of linen of which one is old
Item therein two dark tablecloths. Item five damask sheets whole.
Item one hande ( = small?) tablecloth.
Item one coffer with a lock without a key.
Item a bed of rasor work (meshed needlework) bearing three piece of curtains, three pairs with roof and head ( 4 poster bed with tapestry surrounds?)
Item a linen bed banded with rasor work (meshed needlework).
Item three piece of linen curtains banded with rasor work (meshed needlework).
Item two pairs of arras work (richly sewn tapestry).
Item three piece of curtains of blue mccaij (?)
Item three pairs of green damask. Item three pieces of curtains of patterned serge.
Item three long pairs of light green damask.
Item two pieces of curtains of green serge.
Item one long pair of red fleming broudent (bordered) with black and yellow.
Item two pieces of curtains of worsted red and white checks. Item a long pair of red cryp (crepe?).

[^2]Item R....red grew-grane (grey-grain?) curtains and an old roof yrte (iron?)
Item one long pair of figured crip (crepe?) red and white.
Item two piece of curtains chanxit (patterned?) red and white.
Item two pairs of black taffeta funzeit (?) with black silk.
Item one green plaid-cloth canopy.
Item one old red worsted canopy.
Item one old brown canopy of plaid-cloth.
Item one green serge canopy till a redill (for a curtain).
Item two old roofs of beds of red worsted.
Item a fine Cramoise velvet mass cloth bordered with gold.
Item three old green counter cloths for chambers.
Item in the wardrobe one tablecloth for the high table woven upon the thread.
Item three old tablecloths for chambers woven upon the thread.
Item one tablecloth of arras work for the table in the lottar (?) chamber.
Item one great cloth woven upon the thread. Item six todds (?) without covers.
Item seven cushions of black gowgrany (?).
Item one tablecloth woven upon the frame.
Item one dozen of old cushions of old cryp (crepe?).
Item two old sewed cushions.
Item one chair covered with red Cramoise velvet.
Item one folding chair covered with white damask.
Item one other folding chair covered with Irish work.
Item three folding chairs banded with leather.
Item three folding stools sewed with worsted.
Item two beech stools covered with dene (dark?) velvet.
Item three pieces of old mass cloth.
Item one corselet of pruiff (leather?) with head piece, 3 gauntlets and pertinents.
Item three bed rods of iron.
Item one glass plattones (platter?) covered with wands.
Item five water pots of tin.
Item one large brass pot. Item fyes (?) five pairs.
Item one brass water vat.
Item two tin quart ...
Item three tin platters without heads.
Item two tin chandeliers.
Item two old chandeliers of white iron.
Item eight tin little plates.

Item ten tin ...
Item two dozen and two of small tin saucers.
Item three old little pots of iron.
Item one other tin ...
Item the timber of one great standard bed.
Item the timber of one little Canopy bed all of worsted.
Item two pieces of whale bone.
Item two large bredds of vindoks (window shutters).
Item the back of a cupboard.
Item three planked tops upon tressles.
Item one tapestry of arras work.
Item in the little gallery in the head of the new work therein nothing, closed with a key is a small
casement.
Item the high chamber above the green chamber one door with a portal (secondary door) And two beds standing, one door with bands and sneck.
Item the common chamber above my lord's outer chamber with lock and door therein six beds with three rods of iron.

Item one table of cypress one with a counting cloth thrown woven upon the frame.
Item one chair. Item one gowind (going = working?) iron chimney (fireplace).
Item the low gallery in the new work one door with key, lock and bands.
Item therein one standard bed.
Item the gallery in the end of the pantry with door lock and key and one dilapidated bed.
Item in my lord's inner cabinet with one door and one cupboard aumbry and long settil (settle $=$ wooden bench?) affixed thereto.

Item in my lord's inner bedchamber six pieces of hanging tapestry.
Item one standard bed with one palne (?) lying thereinto \& three rods of Iron.
Item one dilapidated bed. Item one table two furmes (seats/benches) one iron Fireplace.
Item in my lord's outer chamber four pieces of hanging tapestry. One folding counting table with two
long furmes (benches?)
One great seat at the head of the table.
Item one chair.
Item one short Bench.
Item one sconce. One cupboard.
Item one iron fireplace.
Item in the hall one high table with one for service, three side tables with fixed side benches and two loose head benches.

Item one great fine fireplace.

Item one...
Item one cupboard with doors, postell (?), bands and snecks.
Item the uppermost kitchen chamber with two beds without bedrooms.
Item the chamber above the kitchen with two standard beds one bench, one door with lock and key Item the pantry with one table and one aumbry.

Item the gairdre in amiss (wardrobe? guardroom?) two tables one door one lock and key therein.
Item the kitchen with two tables, two standard racks, one mash vat, with door and lock without key.
Item the flesh landing one door one lock without key.
Item One table.
Item six stands broken and whole with cleiks (hooks) of iron.
Item the old cellar with door, lock without key, two planked tops upon tressles, the Steps of an old masking vat.

Item two lairdnor (lardener $=$ meat stores/larders) locked with vaults.
Item in the long traviss one dressing table and eleven barrels, one vat, one gyll (measure?). (Traviss may relate to a space created by partitions or a stable).
Item in the little cellar under the kitchen, with door, lock and key, three puncheons, one barrel (Punzeon may be a pointed dagger-like weapon, a burin or a tool for impressing metal plate).

Item the vault in the head of the tower a butter croyce (press?), doors and windows.
Item the inner chamber in the head of the new work one leaking camp bed.
Item the outer chamber of the tower one brew land (brew leid?=lead brewing vessel), one table, one stray chair.

Item two stone weights of lead, one Irish weight, the other iron?
Item four small weights with rings.
Item one pair of wey (?) books.
Item One chest with certain account books therein. Item one pair of great irons with seven shackles.
Item one damaged bed.
Item one....tting table (counting table).
Item one old iron fireplace.
Item cheese shelf.
Item one brewing spult (?) spout?
Item in the inner high tile chamber in the gallery thereof one standard bed.
Item in the inner tile chamber one standard bed with one paleiss (some form of bedding?) therein, three iron rods, one fireplace, one table, one bench.

Item two glass in the windows.
Item the outer high aisled chamber two standard beds one iron chimney, one bench, one great lock without a key.

Item the outer low tile chamber two standard beds, one table, two benches, one chair with an iron fireplace.

Item the inner low tile chamber one standard bed, one table.
Item one great Flanders chest of oak fast locked and banded.
Item one great lettron (latrine?lectern?) of oak, locked, banded and fast.
Item one coffer banded and locked one iron fireplace and three rods of iron.
Item the low vault in the ground of the new work two standard beds, one iron fireplace, one table.
Item in the tower hall two standard beds, one great grain chest, one table, two benches, one fine (or iron)
fireplace, one cupboard.
Item the (girnell) grain house one large grain chest, one pair of cart wheels and stocks.
Item one iron yett upon the tower and the lock of the irons upon the iron yett in the passage to the yard.

## X. 0 APPENDIX X: LIST OF DIGITAL PHOTOGRAPHS

| No. | Elevation | Description | Facing |
| :---: | :---: | :---: | :---: |
| 1 | T01.2 | North end of wall. | E |
| 2 | T01.2 | North end of wall. | E |
| 3 | T01.2 | Middle portion of wall. | E |
| 4 | T01.2 | South end of wall. | SE |
| 5 | T01.2 | Wall to south of fireplace 017. | E |
| 6 | T01.2 | Window aperture 006 (lower). | E |
| 7 | T01.2 | Window aperture 006 (upper). | E |
| 8 | T01.2 | Scar 063 behind beam 060. | E |
| 9 | T01.2 | Scar 063 behind beam 060. | NE |
| 10 | T01.2 | Corbel 061. | E |
| 11 | T01.2 | Corbel 061. | NE |
| 12 | T01.2 | Fireplace 017 (detail of base). | E |
| 13 | T01.2 | Fireplace 017 (detail of top). | E |
| 14 | T01.2 | Fireplace 017 original margin 018. | E |
| 15 | T01.7 | Wall 001. | N |
| 16 | T01.7 | Window margin 004. | NE |
| 17 | T01.8 | Wall 001. | SE |
| 18 | T01.8 | Window margin 003. | SE |
| 19 | T04.2 | North end of wall. | E |
| 20 | T04.2 | Window aperture 002 (lower). | E |
| 21 | T04.2 | Window aperture 002 (upper). | E |
| 22 | T04.2 | South end of wall. | S |
| 23 | T04.3 | East wall. | S |
| 24 | T04.3 | Crow step 003. | S |
| 25 | T04.3 | Added build 002 and build 001. | S |
| 26 | T04.3 | West wall. | SE |
| 27 | T04.3 | Aperture 006. | S |
| 28 | T04.3 | Aperture east margin 011. | SE |
| 29 | T04.3 | Aperture west margin 012. | SW |
| 30 | T04.4 | South wall. | W |
| 31 | T04.4 | South wall. | NW |
| 32 | T04.4 | North wall. | NW |
| 33 | T04.4 | North wall. | W |
| 34 | T04.4 | Aperture 002. | W |
| 35 | T04.11 | Masonry build 001. | S |
| 36 | T04.11 | Margin with 003 and 004. | S |
| 37 | T04.12 | General shot. | NW |
| 38 | T04.12 | Masonry build 001. | NW |
| 39 | S02.2 | North portion of wall. | E |
| 40 | S02.2 | North portion of wall. | E |
| 41 | S02.2 | Middle portion of wall. | E |
| 42 | S02.2 | South portion of wall. | SE |
| 43 | S02.2 | Aperture 040 and fireplace 012. | N/A |
| 44 | S02.2 | Aperture 040, $002-005$ and 022-024. | E |
| 45 | S02.2 | Margin 014 and void 025. | E |
| 46 | S02.2 | Margin 015 and repair 039. | SE |
| 47 | S02.7 | Panelling 004. | NE |
| 48 | S02.7 | Upper portion of elevation. | NE |
| 49 | S02.7 | Upper portion of elevation. | NE |
| 50 | S02.8 | General shot. | SE |
| 51 | S02.8 | Upper portion of elevation. | SE |
| 52 | S06.2 | General shot. | E |
| 53 | S06.1 | General shot. | NE |
| 54 | S06.3 | General shot. | SE |
| 55 | S05.1 | General shot. | S |


| No. | Elevation | Description | Facing |
| :---: | :---: | :---: | :---: |
| 56 | S05.2 | General shot. | W |
| 57 | S05.3 | General shot. | NW |
| 58 | S08.2 | General shot north side. | E |
| 59 | S08.2 | General shot north side. | E |
| 60 | S08.2 | General shot south side. | SE |
| 61 | S08.2 | General shot south side. | SE |
| 62 | S08.2 | Door aperture 004. | NE |
| 63 | S08.2 | Lintel 009 and repair 010. | E |
| 64 | S08.7 | General shot. | NE |
| 65 | S08.7 | Margin and dooks. | NE |
| 66 | S08.8 | General shot. | SE |
| 67 | S08.8 | General shot. | SE |
| 68 | S08.8 | Margin and dooks. | SE |
| 69 | S07.1 | General shot. | NE |
| 70 | S07.2 | General shot. | E |
| 71 | S07.3 | General shot. | NE |
| 72 | S07.5 | General shot. | N/A |
| 73 | S07.6 | General shot. | N/A |
| 74 | S07.6 | Detail through to extension slab roof | N/A |
| 75 | S08.4 | South wall. | SW |
| 76 | S08.4 | North wall. | W |
| 77 | S08.4 | Aperture 002. | W |
| 78 | S08.4 | Lintel 003 and 012. | W |
| 79 | S08.9 | General shot. | SW |
| 80 | S08.9 | General shot. | SW |
| 81 | S08.9 | Detail of 001 and 002. | SW |
| 82 | S08.10 | General shot. | NW |
| 83 | S08.10 | General shot. | NW |
| 84 | S08.10 | Detail of 001, 002, 005 and 006. | NW |
| 85 | F10.2 | North portion of wall. | NE |
| 86 | F10.2 | Middle portion of wall. | SE |
| 87 | F10.2 | South portion of wall. | E |
| 88 | F10.2 | Base of 002 and 028. | E |
| 89 | F10.2 | Top of 002 with 028 and 029. | E |
| 90 | F10.2 | Window aperture 007. | E |
| 91 | F10.2 | North margin 014 and 017-019. | NE |
| 92 | F10.2 | North margin 014 and 017-019. | NE |
| 93 | F10.2 | South margin 015 (top). | SE |
| 94 | F10.2 | South margin 015 (bottom). | SE |
| 95 | T04.7 | General shot. | NE |
| 96 | T04.7 | General shot. | NE |
| 97 | T04.8 | General shot. | SE |
| 98 | T04.8 | General shot. | SE |
| 99 | F13.2 | Door 001. | E |
| 100 | F13.2 | North side (lower). | E |
| 101 | F13.2 | North side (upper). | E |
| 102 | F13.2 | South side (lower). | SE |
| 103 | F13.2 | Window 005 and surround. | E |
| 104 | F13.2 | Graffiti 031 on 019. | SE |
| 105 | F13.2 | Graffiti 026 on 025. | NE |
| 106 | F13.2 | Paint scheme 023-025. | NE |
| 107 | F13.2 | General shot of framing and beams. | E |
| 108 | F14.1 | General shot (upper). | NE |
| 109 | F14.1 | General shot (lower). | NE |
| 110 | F14.2 | General shot (upper). | E |
| 111 | F14.2 | General shot (lower). | E |
| 112 | F14.5 | General shot of floor. | E |
| 113 | F07 | General shot of flat entrance. | E |


| No. | Elevation | Description | Facing |
| :---: | :---: | :--- | :---: |
| 114 | F07 | General shot of blocked doorway. | SE |
| 115 | S01 | General shot of blocked doorway. | S |
| 116 | S01 | General shot of blocked doorway. | SE |
| 117 | S15 | General interior shot of blocked doorway. | E |
| 118 | T10 | General interior shot of blocked doorway. | E |
| 119 | T10 | General exterior shot of blocked doorway. | SW |
| 120 | S01 | General exterior shot of blocked doorway. | N |


[^0]:    ${ }^{1}$ CCE8 (the east elevation of the north-east stair tower) is set back from the east elevation proper and sits in the re-entrant angle between the tower and the east range. It was added to the survey as it forms a major visual component of the east elevation and its omission would have left the survey incomplete.

[^1]:    ${ }^{2}$ Campbell, N.D. (1913): The Castle Campbell Inventory, The Scottish Historical Review Vol. 10, No. 39 (Apr., 1913), pp. 299-305, Edinburgh University Press.

[^2]:    ${ }^{3}$ Underlining indicates areas of the castle that are of particular interest to the present work

