

CPAT Report No. 1487

Brecon Gaer (Br001)

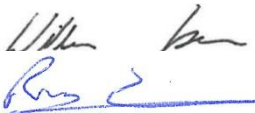


Archaeological investigation and recording



YMDDIRIEDOLAETH ARCHAEOLEGOL CLWYD-POWYS

CLWYD-POWYS ARCHAEOLOGICAL TRUST

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Summary

The Clwyd-Powys Archaeological Trust carried out a programme of archaeological investigation and recording on behalf of Cadw at Brecon Gaer Roman fort (BR001) in January 2017.

Limited excavations were undertaken at the West, South and East Gates in order to remove modern overburden and debris that post-dated the consolidation of the structural remains undertaken by the Ministry of Works from 1959 to 1969.

The main focus of the work consisted of a photogrammetric survey of the upstanding masonry associated with each of the three gates, as well as the north-east turret and the adjacent section of the north wall. The survey was intended to provide a detailed record of the masonry prior to any further reconsolidation, as well as determining the extent to which the exposed structural remains had been altered and rebuilt by the Ministry of Works during the late 1950s, 1960s and early 1970s.

The monthly progress reports produced by the Ministry of Works (MoW) foreman between, covering the period from 1959 to 1970, revealed that much of the exposed masonry on the site had been taken down and rebuilt, especially on the three surviving gates. A comparison between the 1920s excavation photos and the site as it was in January 2017 suggested that this work had been done to a very high standard, with abnormalities within the build, such as slumping and bowing in the wall courses recreated during the renovation.

1 Introduction

- 1.1. The Clwyd-Powys Archaeological Trust (CPAT) was invited Cadw to undertake a programme of archaeological investigation and recording at Brecon Gaer Roman fort (BR001). A brief was prepared in October 2016 by Will Davies, Regional Inspector of Ancient Monuments and Archaeology (North East Wales), detailing a programme of investigation and recording to assist with the conservation and management of the monument.
- 1.2. Brecon Gaer is a large Roman auxiliary fort located around 4.5km to the west of Brecon, on the north side of the River Usk (Fig. 1; SO 00350 29674). In recent years, a fort of 1st-century date has been identified at Cefn Brynich on the opposite side of Brecon, about 7km to the east-south-east, and it is assumed that this was a predecessor to Brecon Gaer.



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Fig. 1: Location of Brecon Gaer

- 1.3. The visible remains comprise a substantial rectangular enclosure with rounded corners of classic Roman military form, defined by a circuit of ramparts fronted by impressive secondary stone walls and gates and partially surviving external ditches. A crude internal revetment along two-thirds of the defensive circuit is undated but is thought to represent either a late Roman refurbishment or post-Roman reuse of the site.
- 1.4. The east, west and south gates, together with the northern and north-eastern stretches of the defensive circuit, including the north-east turret, were taken into state guardianship following Wheeler's excavations, which were only partially backfilled.

- 1.5. The guardianship areas were cleared and consolidated by the Ministry of Works in a piecemeal fashion from 1959-1969, the walling left exposed since Wheeler's day having deteriorated badly. A recent review of Guardianship documentation undertaken by Cadw and Purcell as part of the project design process identified what appeared to be a surprising extent of rebuilding rather than conservation by the Ministry of Works in the 1960s. The monthly site reports submitted by the Ministry of Works foreman suggest that aggressively rooting shrub growth had taken hold within the wall fabric in many places and that complete dismantling and rebuilding work was the only viable course of action to prevent further damage.
- 1.6. Condition surveys by Purcell had identified a range of structural issues and proposed conservation treatments. These included the small scale clearance of accumulated debris and the selective repointing, pinning, repair and capping of all of the upstanding masonry within Cadw's guardianship.
- 1.7. Several elements of this scheme would have a direct physical impact on areas of the monument and the need had been identified for a programme of small-scale archaeological clearance and recording ahead of these works.

2 Historical Background

- 2.1. Recent studies (Hankinson *et al.* 2015) have provided detailed descriptions of the surviving earthworks and the results from excavation and survey, from which the following summary has been derived.
- 2.2. The fort measures 204m by 154m enclosing an area of 3.14ha, making it amongst the largest forts in Wales (Burnham and Davies 2010, fig. 2.7). Opinion from Wheeler's time onwards favoured a composite garrison of both cavalry and infantry. Excavations by Wheeler (1926) and later Casey (1971) defined several phases of construction. The defences of the Flavian fort (*c.* AD 80-100) had a turf-revetted clay rampart set on a cobbled foundation and fronted by two ditches. Both the *principia* and the *praetorium* were of timber, and it is assumed that so too were other buildings such as the granaries.
- 2.3. Brecon Gaer was refurbished during the Antonine period (after AD 140). The rampart, raised to a height of 3m, was faced in stone, there were four corner towers, and it can be assumed that the four gates were all stone-built, though only three are now accessible, the north gate lying beneath a modern farm range. The special treatment afforded the west gate with its projecting twin guard towers, a feature absent on the south and east, should be noted, although all had double carriageways. Probably though not certainly, the *principia* and the *praetorium* were rebuilt in stone at this time. So little of a granary lying to the north of the *principia* survived that it was impossible for Wheeler to attribute a date or phase it; a well had been dug between the two buildings. The street plan within the interior of the fort was clarified by Wheeler in a set of trenches whose depiction in his definitive report was restricted to where his team encountered gravelled road surfaces (1926, fig. 107), creating the unresolved issue as to what features were uncovered in the *insulae* between.

- 2.4. A third phase saw the reinforcement of the defences by a solid revetment behind the rampart, which blocked the south and east gates and cut across the north-east angle tower. Wheeler thought this post-Roman while Casey was rather more ambivalent (Casey and Davies 2010, 201).

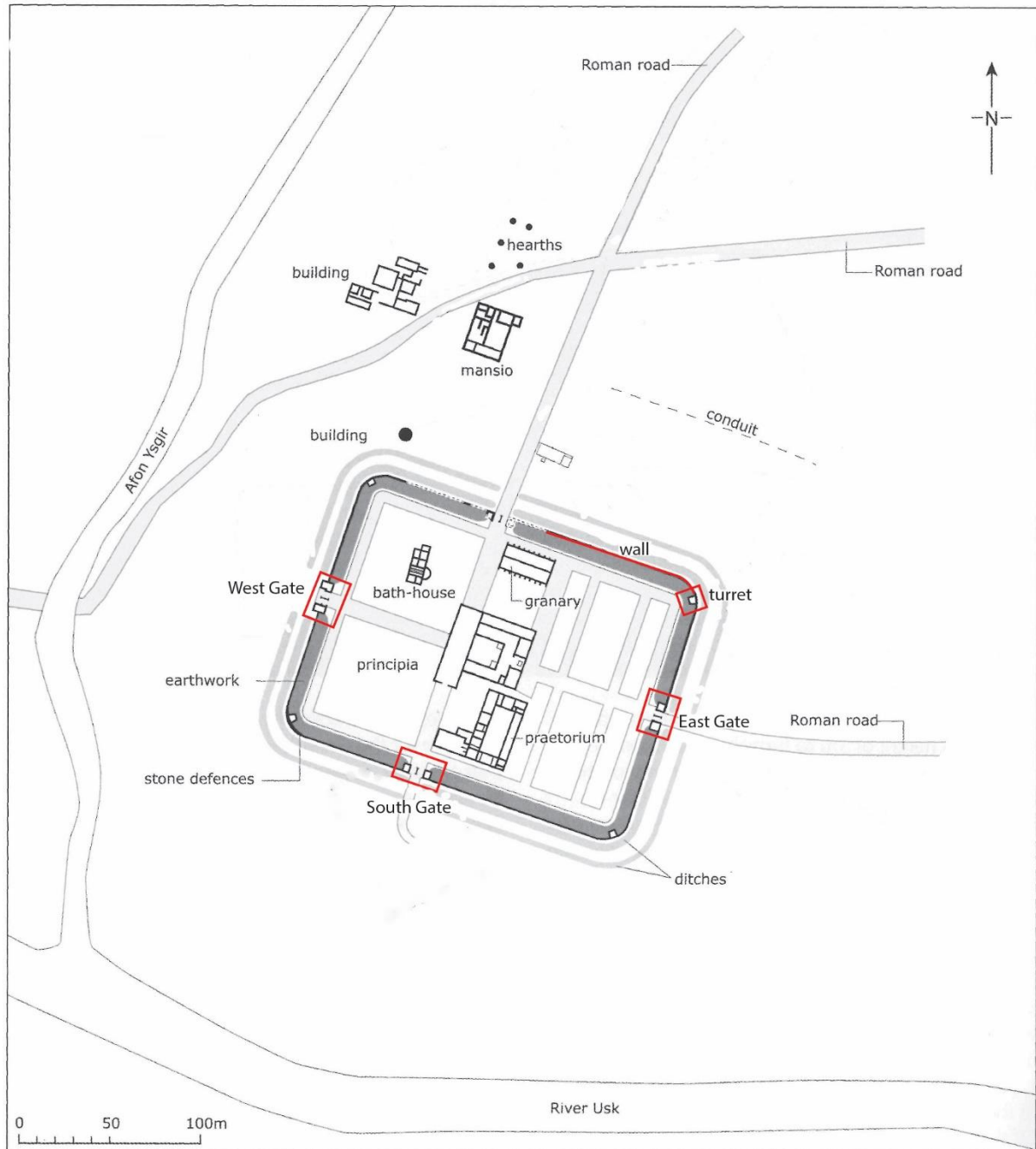


Fig. 2: Plan of Brecon Gaer showing the location of the guardianship areas in which recording was carried out (after Casey and Davies 2010, fig. 7.27)

3 Archaeological Investigation and Recording

- 3.1. The recent investigations, conducted in January 2017, comprised small-scale excavation within the three surviving gateways, together with the recording of upstanding sections of masonry (Fig. 2).
- 3.2. The excavations, which were all conducted by hand, were entirely non-destructive and at no point were *in situ* Roman deposits removed, the intention was rather to clean away debris that post-dated the consolidation of the structural remains undertaken by the Ministry of Works from 1959 to 1969. On completion of the excavations, each trench was covered by a layer of geotextile membrane, placed to identify the extent of the archaeological investigations and protect *in situ* deposits.
- 3.3. The recording of upstanding masonry was carried out by photogrammetric survey in addition to conventional photographic analysis. Photographs taken during the 1920's excavation were analysed in order to help determine where masonry had been altered. Comparative views have been included in this report next to selected views from the 1926 excavation report.
- 3.4. The archaeological works were conducted according to the Chartered Institute for Archaeologists' (CIfA) *Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures* (2014) and *Standard and Guidance for Archaeological Field Evaluation* (2014). The building recording was conducted as a Level 3 building survey as defined by Historic England 2016 *Understanding Historic Buildings: a guide to good recording practice*.
- 3.5. The masonry recording was intended to identify changes in construction, masonry joints, differential coursing, differential mortars, ashlar and putlog holes. However, as fieldwork progressed it became apparent that the 1959 to 1970 reconsolidation works included the thorough raking out and repointing of masonry joints, such that no original mortar was now visible and any changes in build were difficult to identify. Also, the surviving height of the walls was insufficient for any putlogs to be present. Subsequent to the completion of the fieldwork, the original monthly Ministry of Works foreman's reports became available and these clearly stated that almost all sections of the relevant walls had been taken down and rebuilt to allow for the removal of tree roots.

West Gate

Excavation

- 3.6. The ground level within the central part of the west gate was reduced by 100mm to expose more of the structural remains of the gate to facilitate reconsolidation. All of the material which was removed had been placed there by the Ministry of Works and comprised a layer of reddish sandstone gravel, 50mm thick, covering a layer of well-set, pitched sandstone cobbles, up to 0.2m thick. To allow the ground to be reduced by the requisite amount the cobbles were removed and the gravel re-used to provide a level surface. Examination of Wheeler's photographs demonstrated that the ground level following his excavations was roughly equivalent to the level prior to the recent excavations, suggesting that the level had been reduced further by the Ministry of

Works to allow the cobbles and gravel to be laid; it is not known if there was any archaeological oversight of this work, which is recorded in the MoW site report for September 1960.



Fig. 3: Investigations within the West Gate, viewed from the east. Photo CPAT 4291-0034

Building survey

- 3.7. The building survey was inconclusive in determining the extent of rebuilding work, which, according to the MoW site reports had been extensive. All the walls had been repointed during this phase of the work and most exposed upper faces had been capped and sealed in reddish mortar. Comparison of the original 1920s site photography with the site as it appeared in January 2017 suggested that the renovation and rebuilding had been carried out to a very high standard and that only a few superficial changes were discernible to the general appearance of this part of the fort.

South Gate

Excavation

- 3.8. Within the South Gate the excavations were restricted to emptying a stone-lined Roman drain (Figs 4, 14-15) running along the length of the gate passage, which was cleared of debris to enable its conservation. The section of the drain that was exposed measured 4.8m long and up to 0.55m wide. An average thickness of about 0.3m of grey-brown silt was removed down to its base of reddish clay silt and occasional flat stones, indicating an original depth for the drain of about 0.6m.

Building survey

- 3.9. The building survey initially suggested that there had been little dismantling or rebuilding work, although the entire visible structure had been extensively repointed and sealed on the exposed masonry. The east elevation of the west guardroom (Fig. 15) had evidently been rebuilt, possibly having collapsed in the 25 year interval between the original excavation and the Ministry of Works repair programme. The MoW site report for March 1961 refers to this work being carried out, the adjacent fort wall (south elevation) was also rebuilt at this time. A report from July 1966 refers to 'rebuilding walls and foundations continuing' and later in that year to the consolidation of masonry having been completed. Comparative analysis of the 1920s excavation photographs reveals that this rebuilding had been carried out sympathetically and to a high standard.
- 3.10. The central pier of the gate, lying parallel to and between the two roadways, can be clearly seen on the right side of Fig. 4, below. If the modern images are compared with Wheeler's photographs from the 1920s (see Figs 15 and 16) it is evident that the current stonework is a fairly close approximation to the original, including the projecting walls that define a lateral doorway linking the two roadways.
- 3.11. Some discrepancies between the original stonework and the Ministry rebuilding have been identified at the north-west corner of the east guardroom, where the near square stone that forms the third course up from ground level on the 1920s photograph (see Figs 16 and 20, elevation B) appears to have been turned through 90 degrees to rest on what was formerly its side. It is also evidently the case that the Ministry workmen added a course of stone on this part of the north wall of the guardroom to even out its upper surface.



Fig. 4: The excavated drain within the South Gate, viewed from the north. Photo CPAT 4291-0004

East Gate

Excavation

- 3.12. A 2.2m-wide section of the rampart was investigated on the north side of the East Gate's northern guardroom. The excavation trench extended for 6.7m across the rampart, removing a layer of grey-brown silt, up to 0.1m thick, to reveal *in situ* rampart material.
- 3.13. On the top and the west side of the rampart a stone rubble deposit thought by Wheeler to represent post-Roman rebuilding was evident, defined by a simple stone revetment on its west side (Fig. 5). Although this was left in place by the Ministry of Works, it is known that the material had originally covered the guardroom on the north side of the gate and had been removed during Wheeler's excavations in the 1920s; the few stones that were found to overlie the north wall of the guardroom may have been placed there by the Ministry to signify this relationship. The surviving rubble deposit appeared to be relatively thin and capped the earlier earthen rampart, composed of reddish clay silt, which was visible to the east. It appeared that the earlier rampart had been cut back and the north wall of the guardroom built against its edge to act as a revetment when the stone structure of the east gate was built.



Fig. 5: The investigation of the rampart adjacent to the East Gate. Note the stone revetment (arrowed) thought be Wheeler to represent post-Roman rebuilding.

Photo CPAT 4291-0014



Fig. 6: The investigation of the rampart adjacent to the East Gate. 4291-00 15

Building survey

- 3.14. The MoW records for the restoration of the north guardroom of the east gate show that work commenced in July 1969 and was completed by November of that year. The records seem to suggest that the walling was taken down and rebuilt throughout. A slump in the west elevation of the substantial east wall and the bowing out of the west wall are conspicuous features in the 1920s excavation photographs, and it appears that these were replicated in the reconstruction. As elsewhere on the site the reconstruction has been carried out to a high standard, although due to the level of rebuilding and repointing, it was not possible to identify changes in the original construction.
- 3.15. A short section of the outer face of the east wall of the fort is evident to the north of the guardroom (see Fig 27, elevation C), although this has curiously been left in an unfinished state, without pointing. The most probable explanation is that work on the site was closed down for the winter in November 1969, immediately after scrub was cleared from the east wall of the fort; when the team returned in June of the following year they concentrated their attention on the structures forming the north side of the fort. There appears to have been no further consolidation work following the 1970 season.

North-east turret

- 3.16. The turret was located on the north-east corner of the fort with the exposed wall section running for a distance of approximately 75m to the west of it. The turret had been investigated by Wheeler in the 1920s but was further examined by Casey in 1970, who identified that it had been built against the rear of the fort (revetment)

wall, which must therefore be assumed to have been in place before the turret was constructed. The lack of visible structure and coursing to the internal face of the fort wall, as shown on Casey's plate IX, where it forms the north-east side of the turret supports this assertion. This rough appearance seems to have been reproduced in an ad hoc manner by the MoW team in the months following Casey's excavation, though not to the exact pattern that he had revealed.

- 3.17. At first view the fabric of the tower appeared to be basically unaltered, although the MoW recorded comprehensive rebuilding of the north elevation and 50% of the east elevation of the tower in June 1970; they noted that the walls were completed in July. The remaining elevations of the tower had been repointed and the exposed upper faces of the structure sealed to prevent weather damage, which has served to mask the extent of the repaired masonry, but there seems to be no reason to suppose the team altered their usual practice of taking down the walls to remove roots and other vegetation and then rebuilding them to the same overall appearance using new mortar. It does, however, appear that the work here was completed to a slightly less rigorous standard than had previously been the case.



Fig. 7: The north-east turret, viewed from the south-west. Photo CPAT 4291-0029

- 3.18. According to the MoW reports the earth bank adjoining the turret was excavated, presumably to make repairs to the wall core, in summer 1970; localised rebuilding of the wall face in the north-east corner followed the removal of some trees. The north-east corner was dug out and underpinned during this phase of the work. It is worth noting that the Casey (1971, 74-76) showed that the turret had been filled with material as part of the late refortification of the site and a section of the internal revetment wall relating to that phase can still be seen to the east of the turret.

North wall

- 3.19. The MoW reports refer to work carried out on the north wall between August 1967 and November 1970. This work comprised cleaning, consolidating and pointing the masonry and the removal of scrub and trees from the earthen bank overlying the wall. The bank was also regraded. It seems likely that the structure had collapsed in several places, as the MoW reports referred to trial trenching to determine the original line of the wall. In the north-east corner the footings of the wall were underpinned. The exposed core of the wall and the wall top were sealed to prevent any further weather deterioration.



Fig. 8: A section of the north wall adjacent to the north-east turret. Photo CPAT 4291-0028

4 Conclusions

- 4.1. The programme of masonry recording suggests that the work carried out by the Ministry of Works during the period from 1959 to 1970 was very thorough. Most of the visible stonework appeared to have been repointed or thoroughly sealed in a reddish lime/cement mortar though some original mortar can be seen in an unconserved section of the east wall of the fort, to the south of the east gate. This remedial work made it more difficult to identify where changes had been made to the original structure. The mortar does not appear to have caused any subsequent damage to the outer wall facings, which were originally faced with thick, lime mortar (Wheeler 1926, 7).
- 4.2. The friable red marl blockwork included in the construction of the gates has become quite visibly eroded and weathered when compared to Wheeler's photographs from the 1920s. It is much softer than the greyish sandstone used to construct the rest of the guardrooms, corner tower and defences; it was presumably included in the

stonework to provide a pleasing contrast owing to its bright red colour when freshly quarried.

- 4.3. While it is clear from the Ministry of Works foreman's reports that the vast majority of the walls in Cadw's guardianship were taken down and rebuilt, this was clearly done in a sympathetic manner, in line with the original appearance of the masonry. Only a few areas were identified where the masonry had obviously been rebuilt, which was verified by comparison with the original excavation photographs; the most obvious example was the east wall of the west guardroom on the south gate.
- 4.4. The small-scale excavations were restricted to clearance of modern overburden and as such revealed no previously unrecorded detail, except the extent to which the Ministry repair works occasionally exceeded the depths achieved during the 1920s archaeological excavation. This was most clearly revealed in the reduction work on the roads through the west gate prior to their resurfacing with stone and gravel.

5 References

Published Sources

- Burnham, B. C. and Davies, J. L., 2010. *Roman Frontiers in Wales and the Marches*. Aberystwyth: Royal Commission on the Ancient and Historical Monuments of Wales.
- Casey, P. J., 1971. Excavations at Brecon Gaer, 1970, *Archaeologia Cambrensis* 120, 91-101.
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- Wheeler, R. E. M., 1926. *The Roman fort near Brecon*. London: Honourable Society of Cymmrodorion

6 Archive deposition Statement

- 6.1. The project archive has been prepared according to the CPAT Archive Policy and in line with the CIfA *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives guidance* (2014). The archive will be deposited with Cadw and the regional Historic Environment Record, maintained by CPAT in Welshpool.

7 Site Archive

CPAT Event PRN: 140156

CPAT Film 4291, 63 digital photographs

CPAT Film 4298, 31 digital photographs

64 photogrammetric images

Survey drawings in this report (AI and JPEG)

2170_East_Gate_plan

2170_East_Gate_elevations

2170_NE_turret

2170_North_Wall

2170_South_Gate_plan

2170_South_Gate_elevations

2170_West_Gate_plan

2170_West_Gate_elevations



Fig. 9 The West Gate from the south c. 1925 (Wheeler 1926) and 2017 (Photo CPAT 4291-0046)



Fig. 10 West Gate: Plan and photogrammetric section, showing the areas of investigation

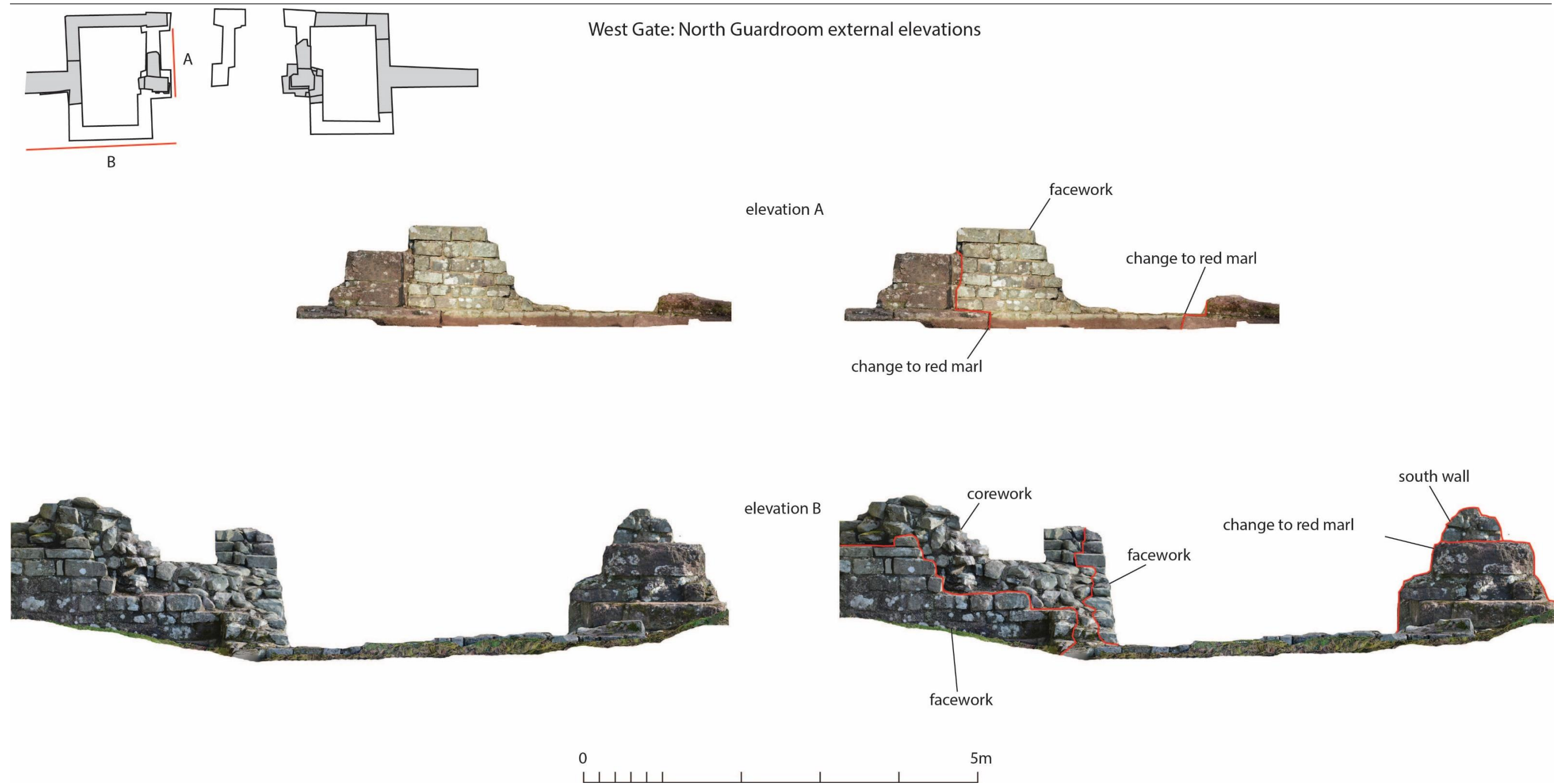
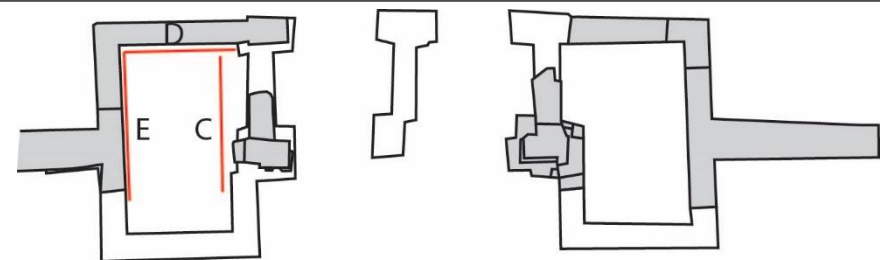
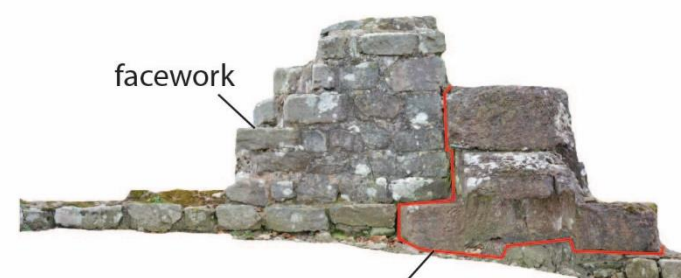


Fig. 11 West Gate: North Guardroom, external photogrammetric elevations



West Gate: North Guardroom internal elevations

elevation C



elevation D



elevation E

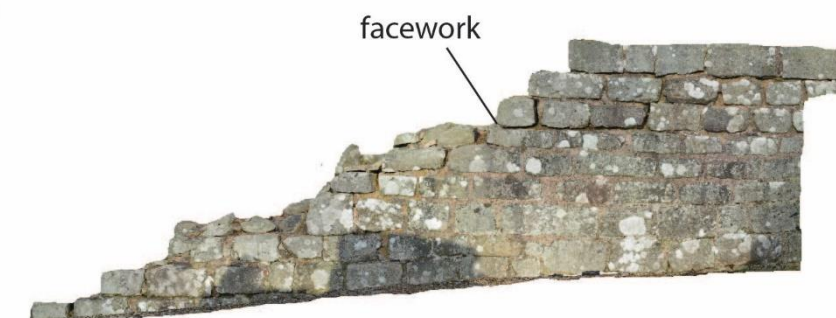


Fig. 12 West Gate: North Guardroom, internal photogrammetric elevations



Fig. 13 West Gate: South Guardroom, external photogrammetric elevations

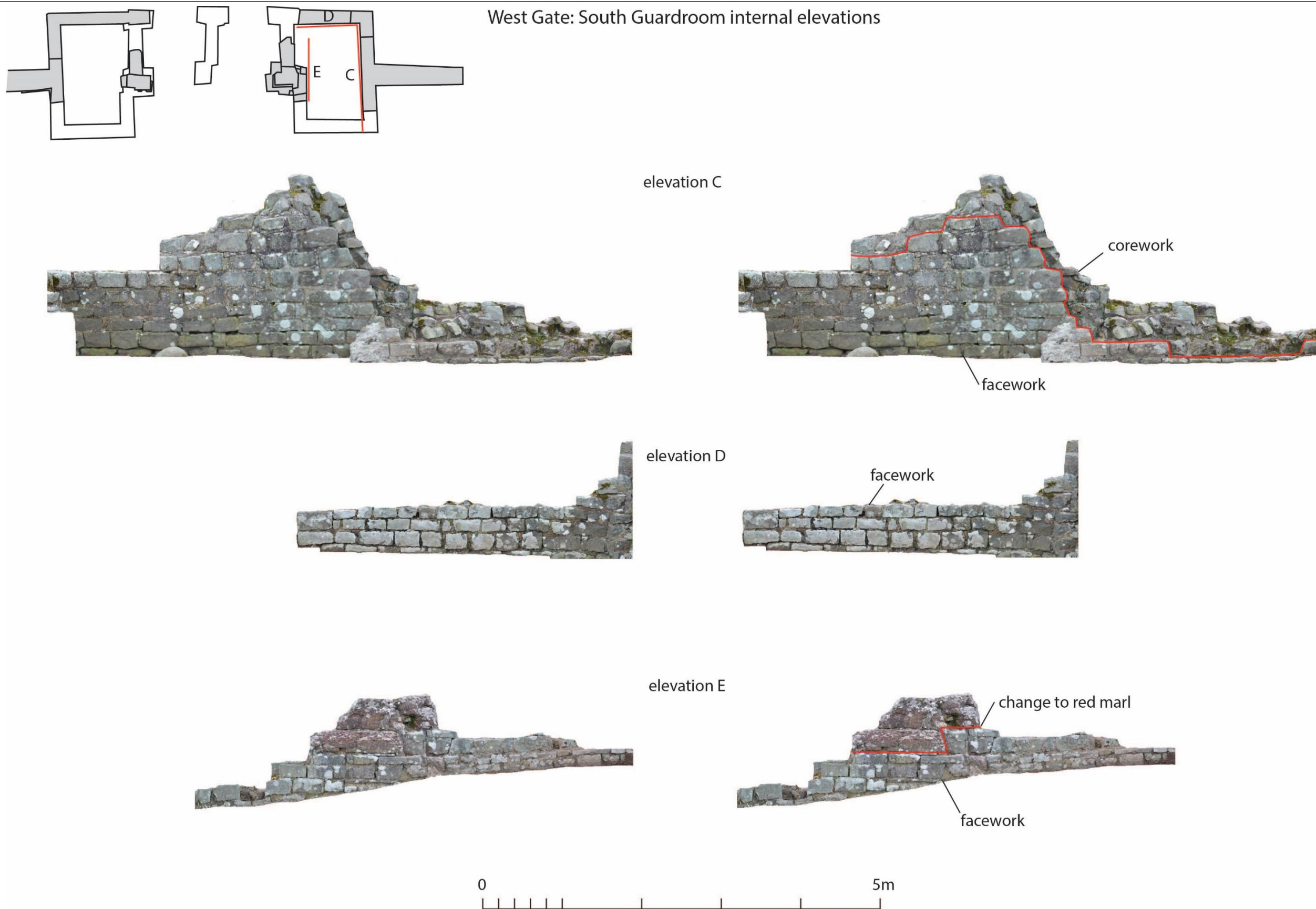


Fig. 14 West Gate: South Guardroom, internal photogrammetric elevations



Fig. 15 South Gate: view from the west c. 1925 (Wheeler 1926) and 2017 (Photo CPAT 4291-0054)



Fig. 16 South Gate: East Guardroom, view from the north-west c. 1925 (Wheeler 1926) and 2017 (Photo CPAT 4291-0056)



Fig. 17 South Gate: Plan and photogrammetric section

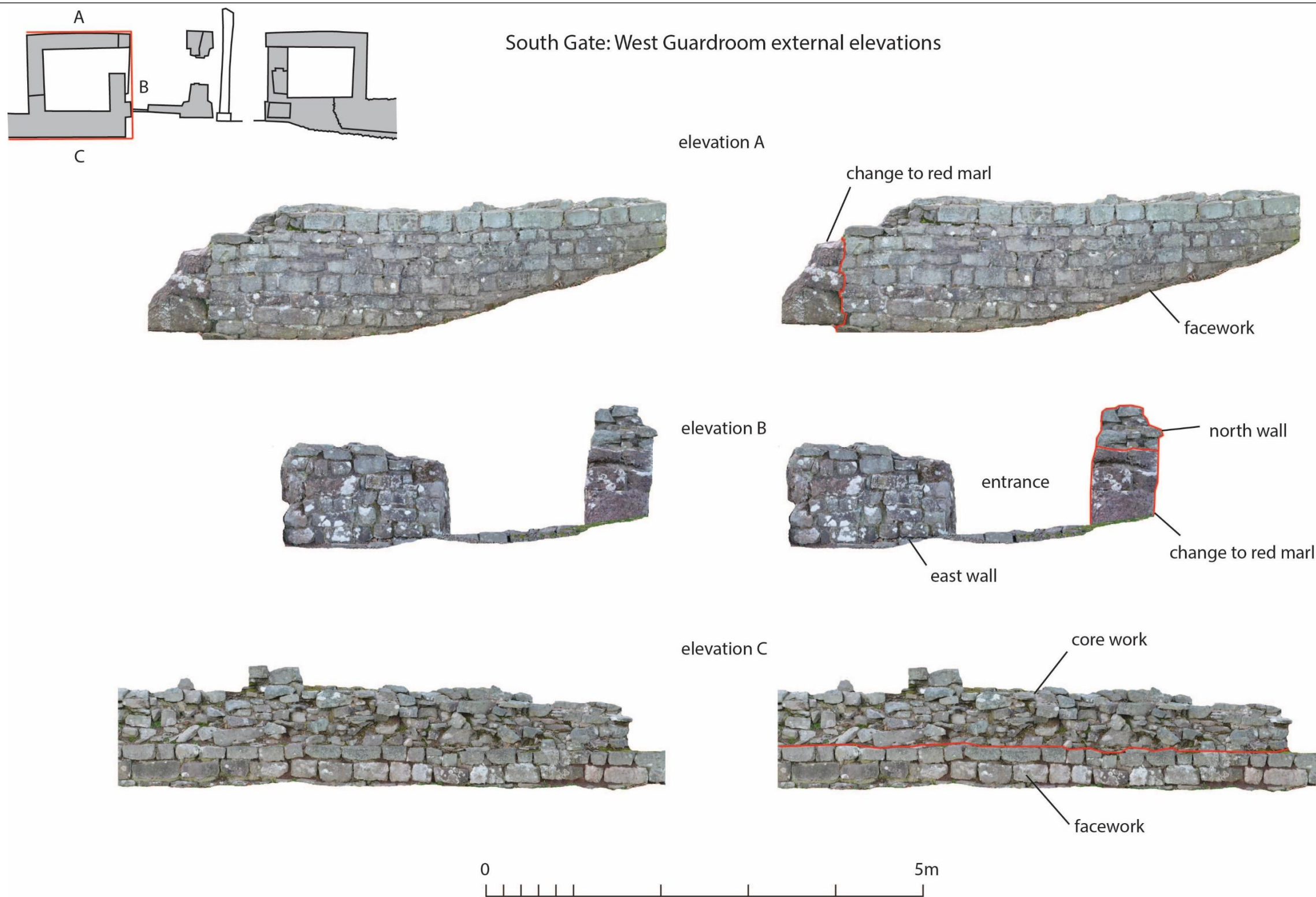


Fig. 18 South Gate: West Guardroom, external photogrammetric elevations

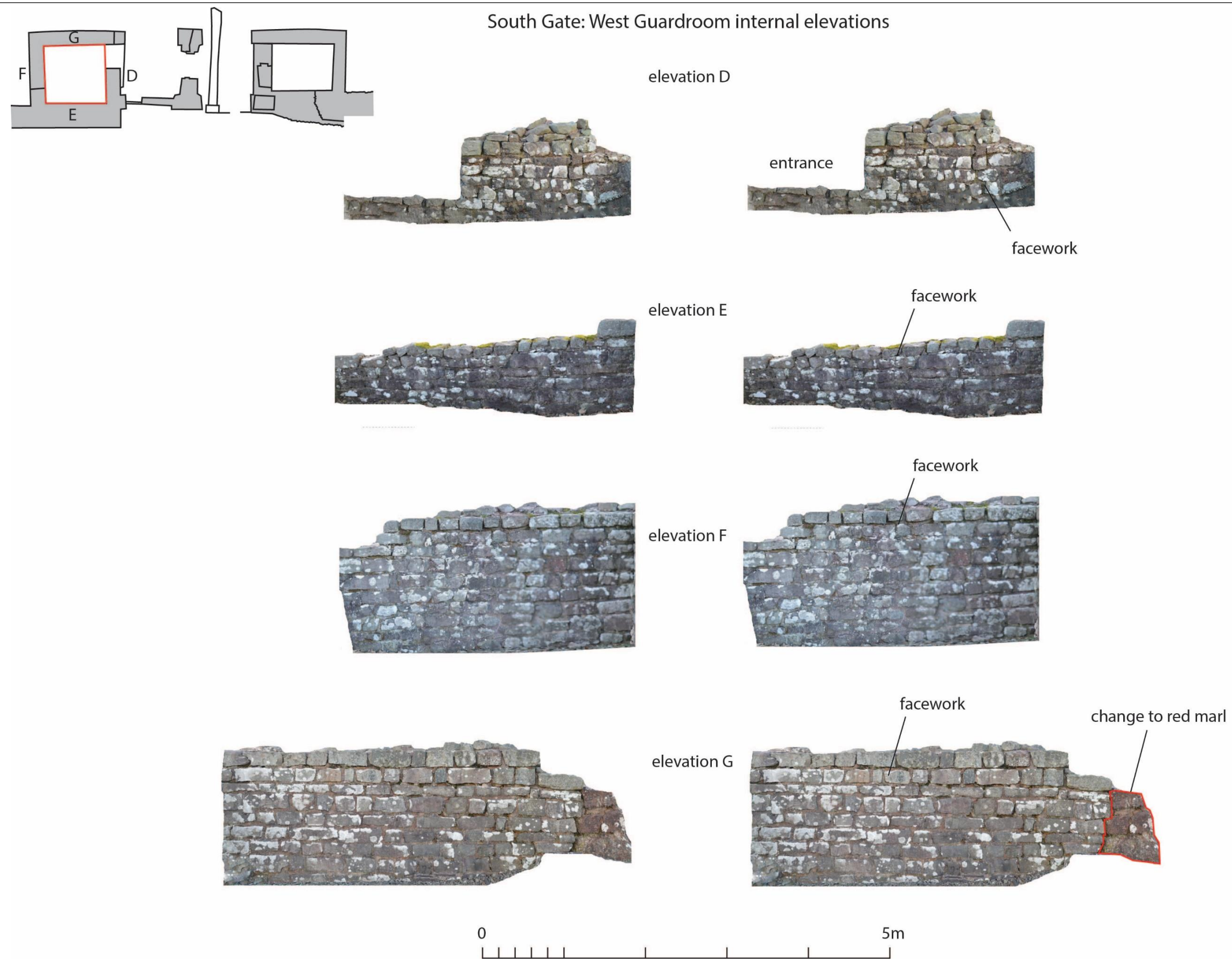


Fig. 19 South Gate: West Guardroom, internal photogrammetric elevations

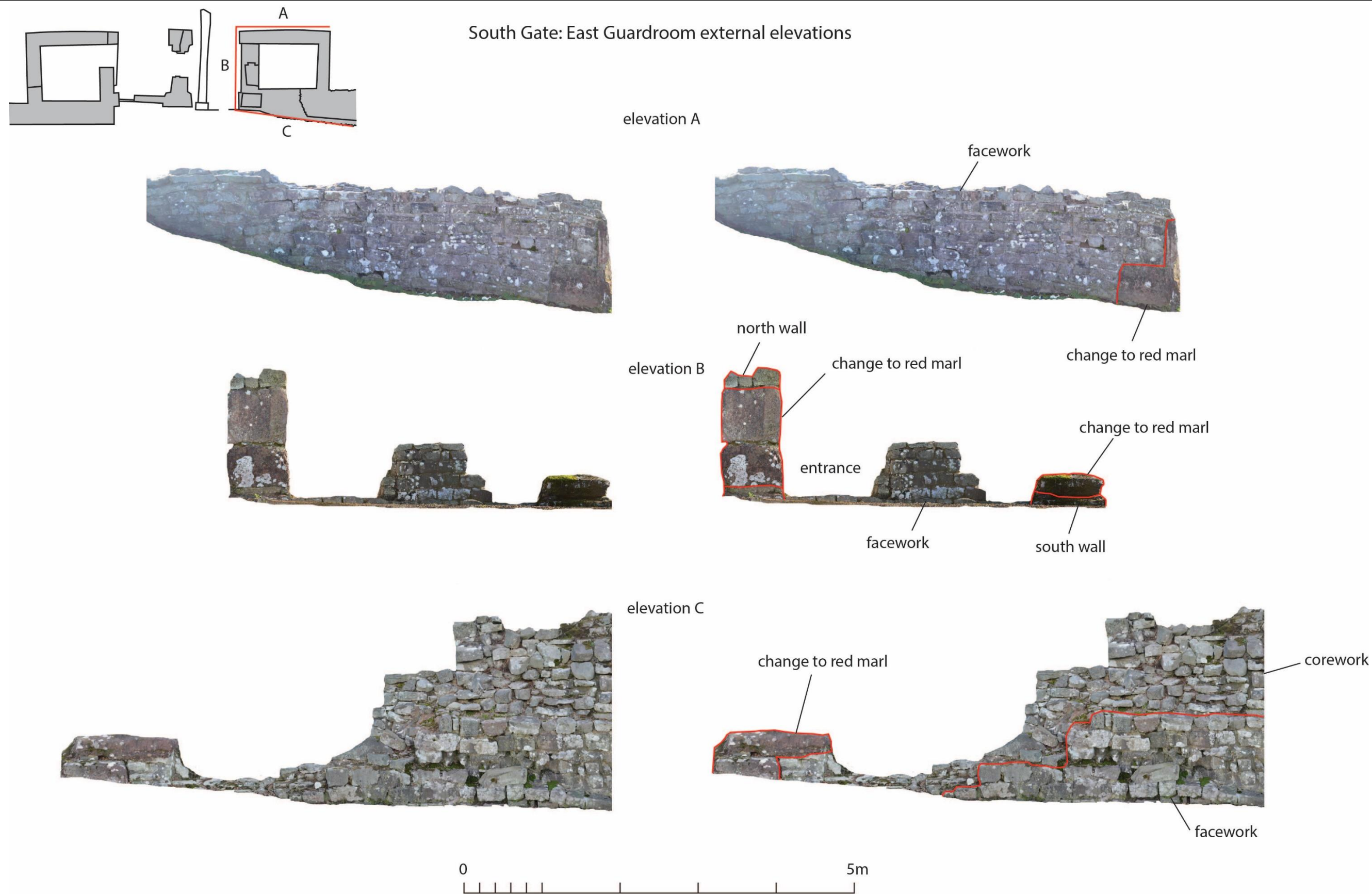


Fig. 20 South Gate: East Guardroom, external photogrammetric elevations

South Gate: East Guardroom internal elevations

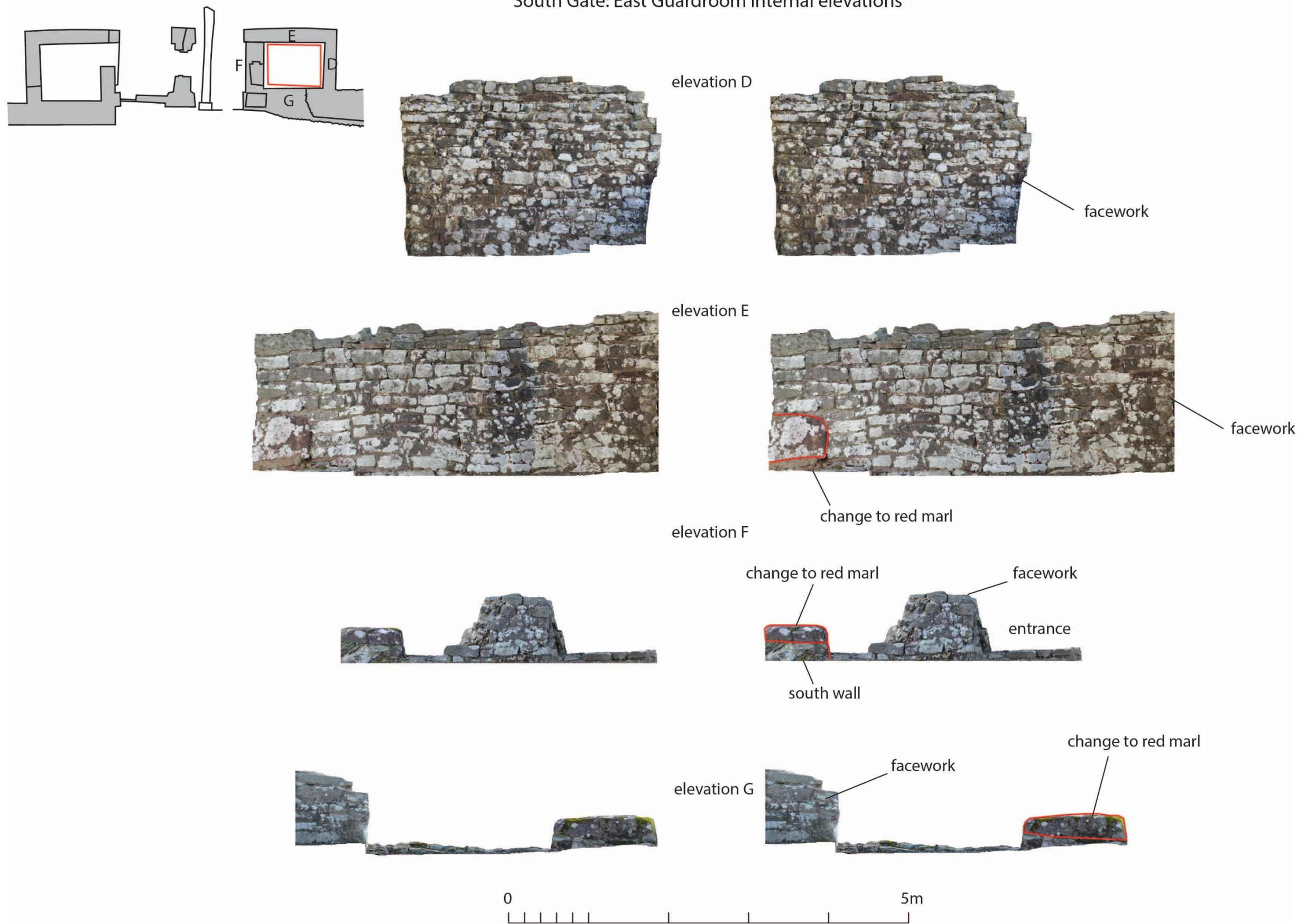


Fig. 21 South Gate: East Guardroom, internal photogrammetric elevations



North section, from west



North section, from north-north-east



North section, from east-south-east



South section, from north-west



South section, from south-south-east



South section, from east

Fig. 22 South Gate: Central pier (not to scale)

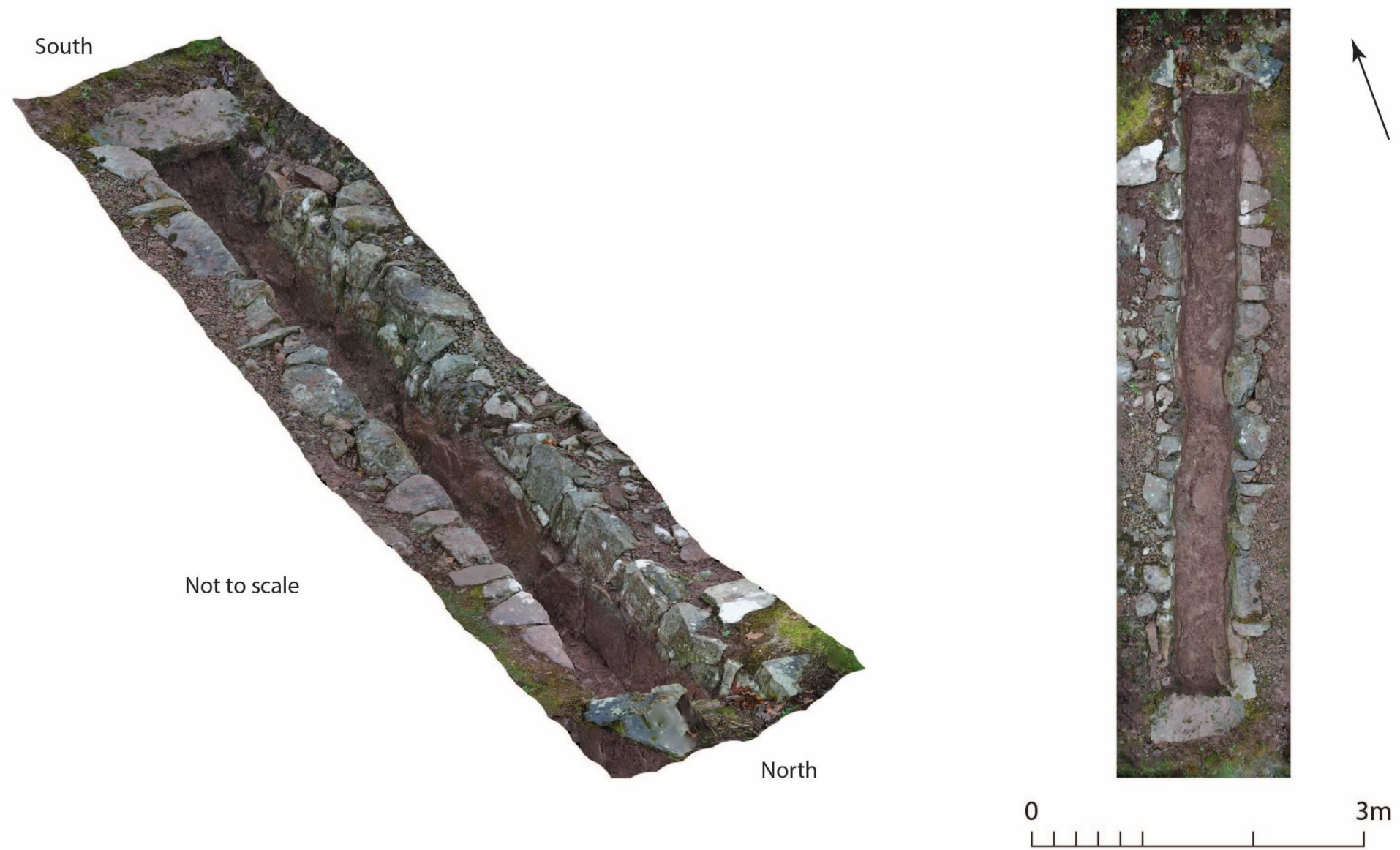


Fig. 23 South Gate: photogrammetric isometric and plan view of drain



Fig. 24 East Gate: North Guardroom, view from the west c. 1925 (Wheeler, 1926) and 2017 (Photo CPAT 4291-0060)

Fig. 25 East Gate: North Guardroom, view from the south-east c. 1925 (Wheeler, 1926) and 2017 (Photo CPAT 4291-0062)

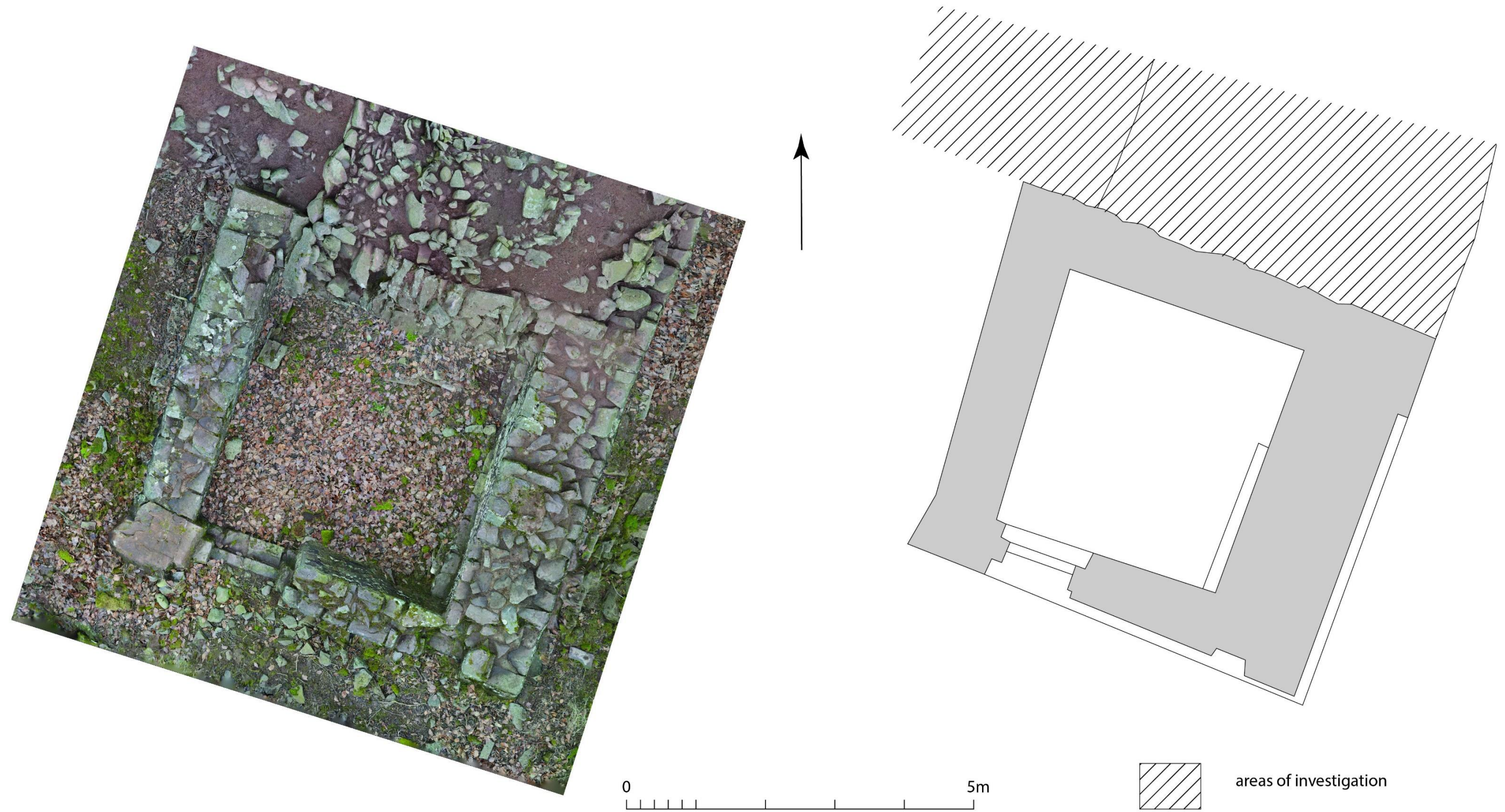


Fig. 26 East Gate: North Guardroom, photogrammetric and surveyed plans

East Gate: North Guardroom external elevations

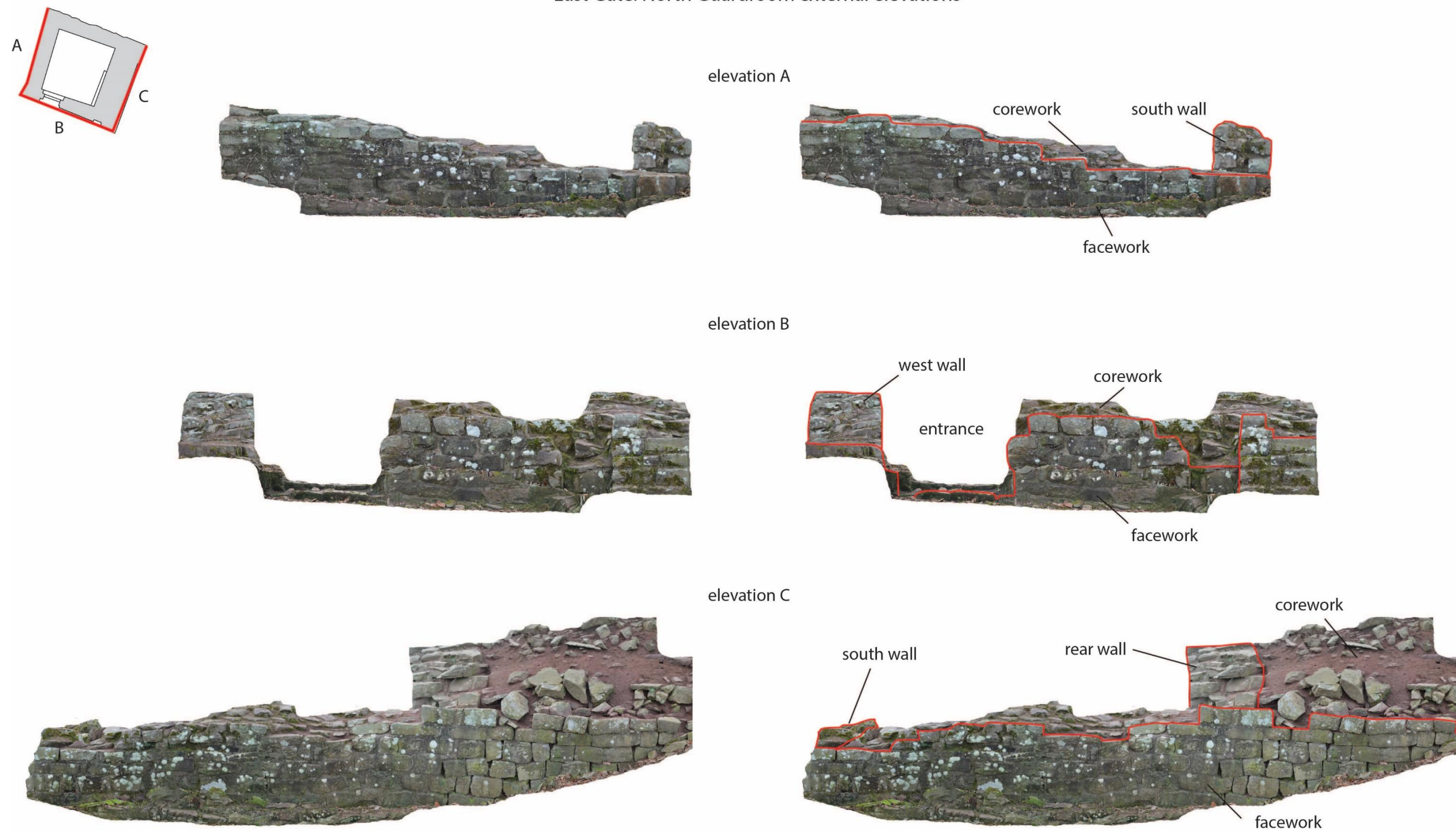


Fig. 27 East Gate: North Guardroom, external photogrammetric elevations

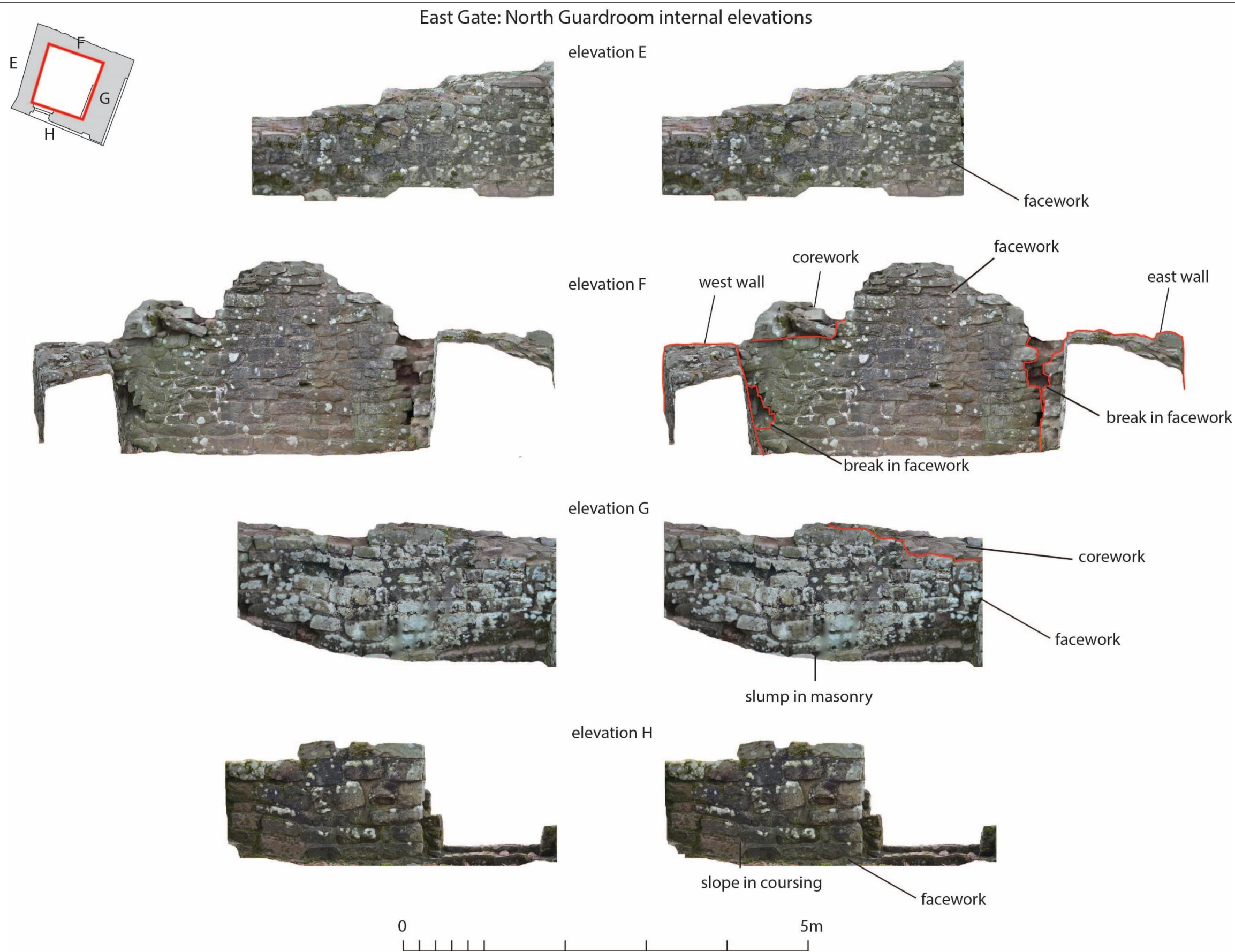


Fig. 28 East Gate: North Guardroom, internal photogrammetric elevations



Fig. 29 North-east turret: photogrammetric plan and west external elevation

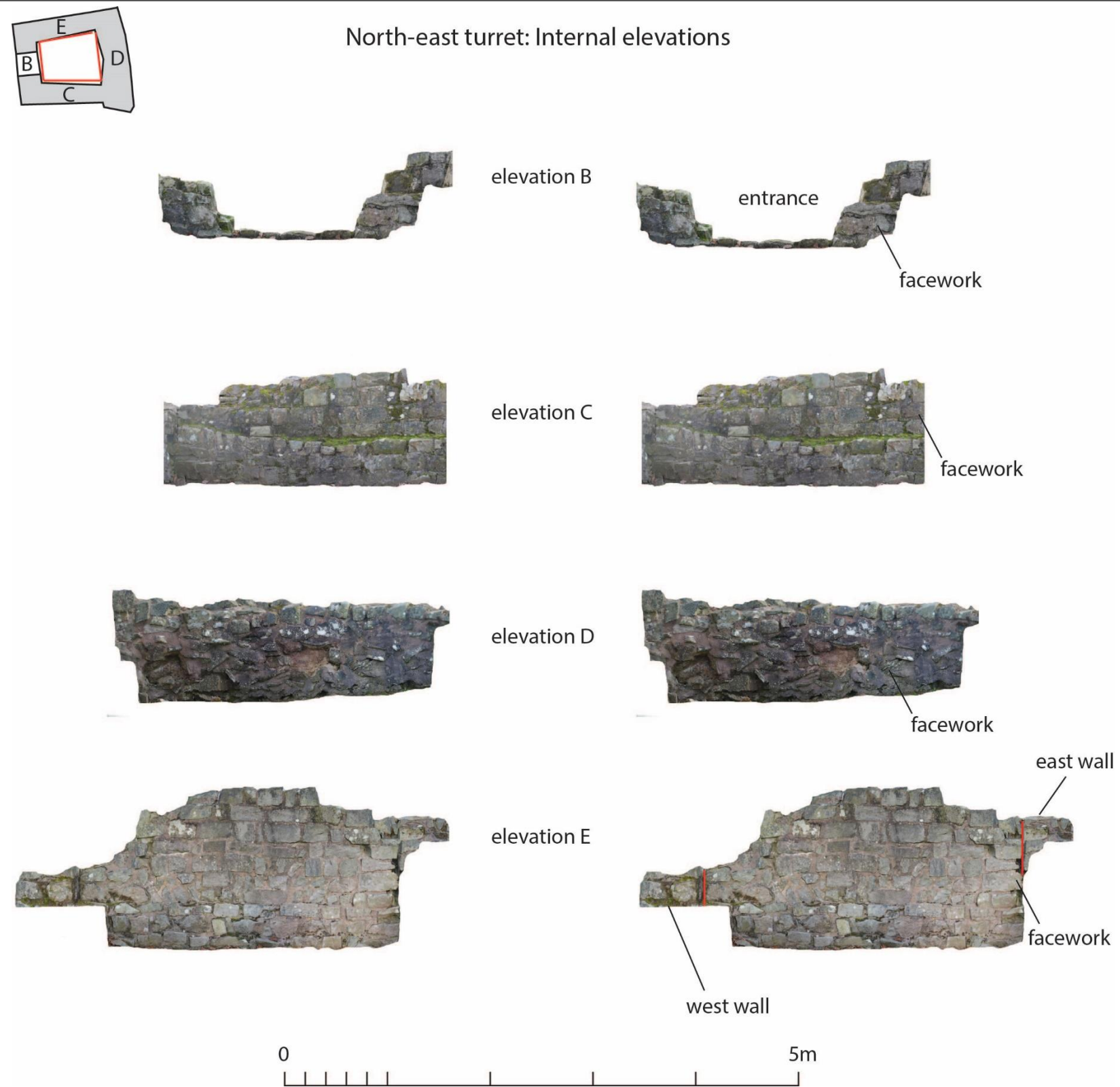


Fig. 30 North-east turret: internal photogrammetric elevations

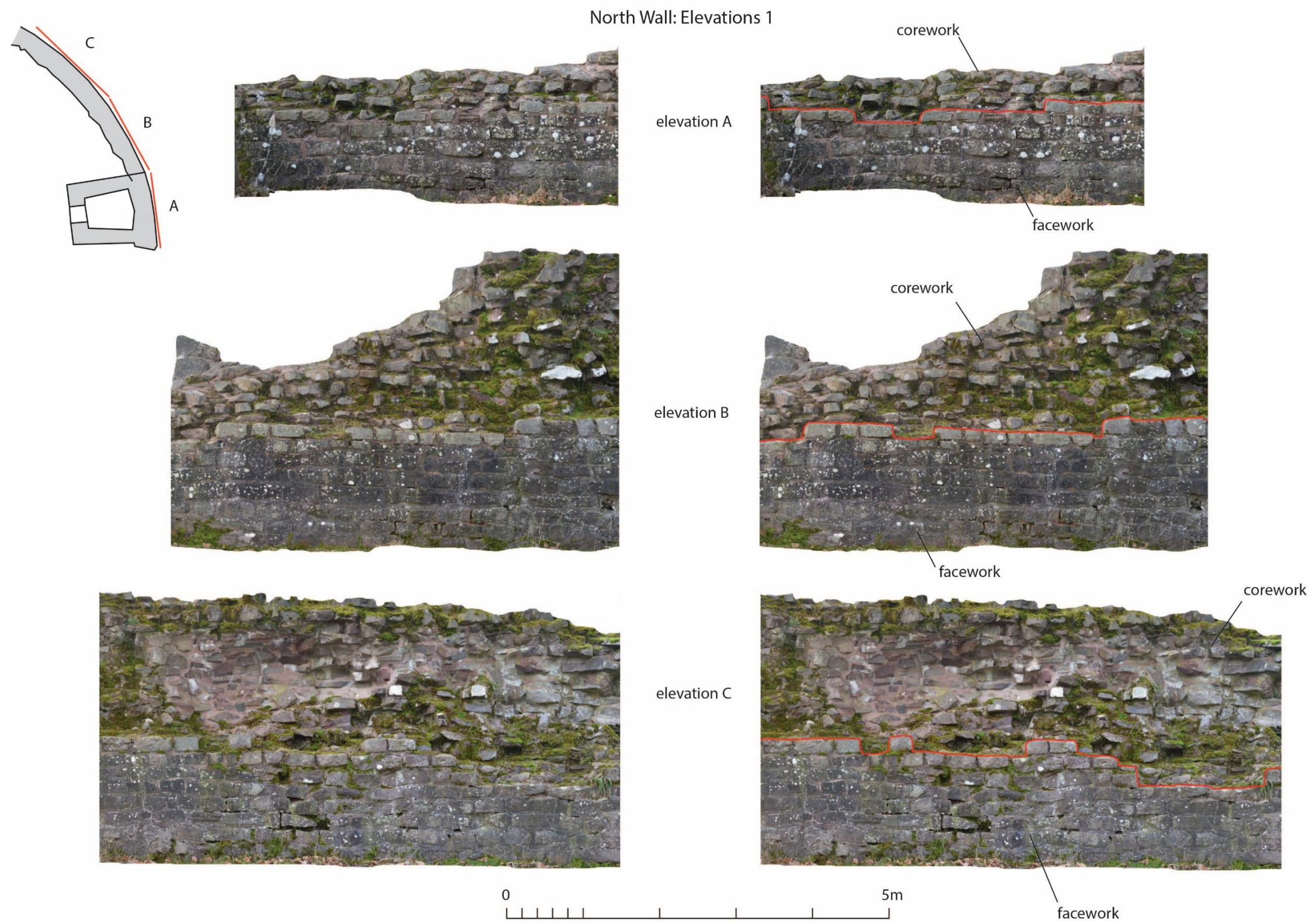


Fig. 31 North Wall: photogrammetric elevations (1)

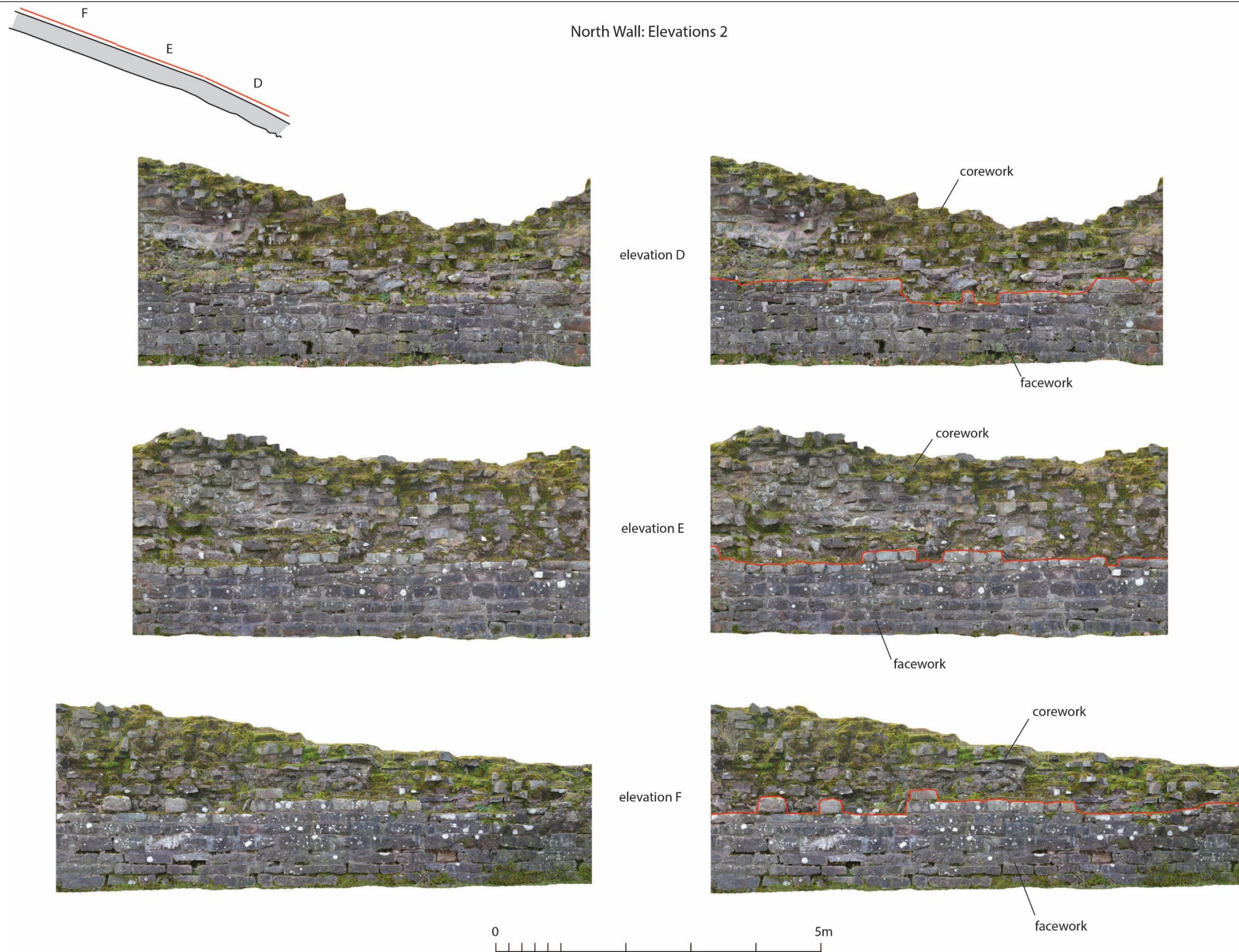


Fig. 32 North Wall: photogrammetric elevations (2)

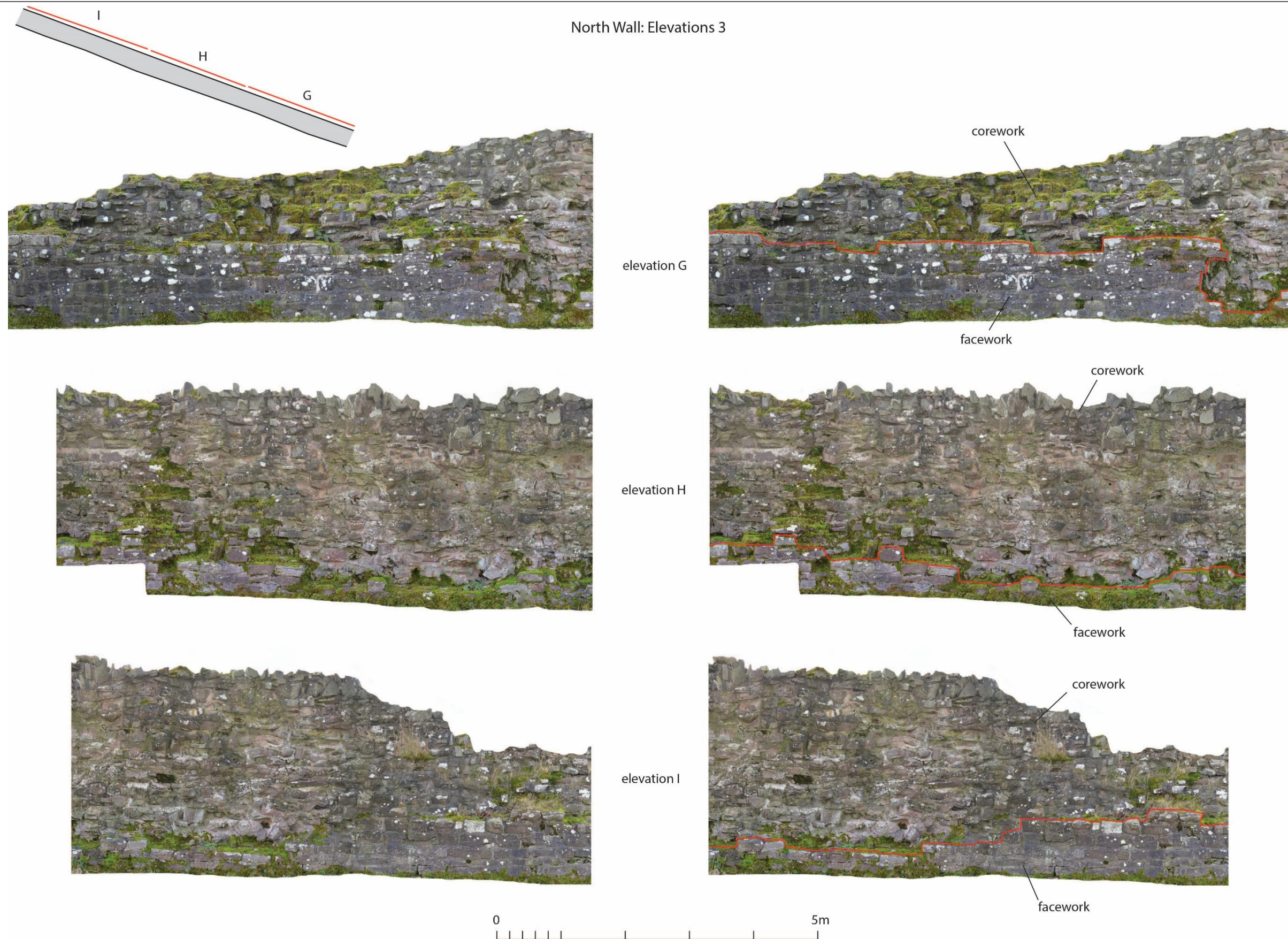


Fig. 33 North Wall: photogrammetric elevations (3)

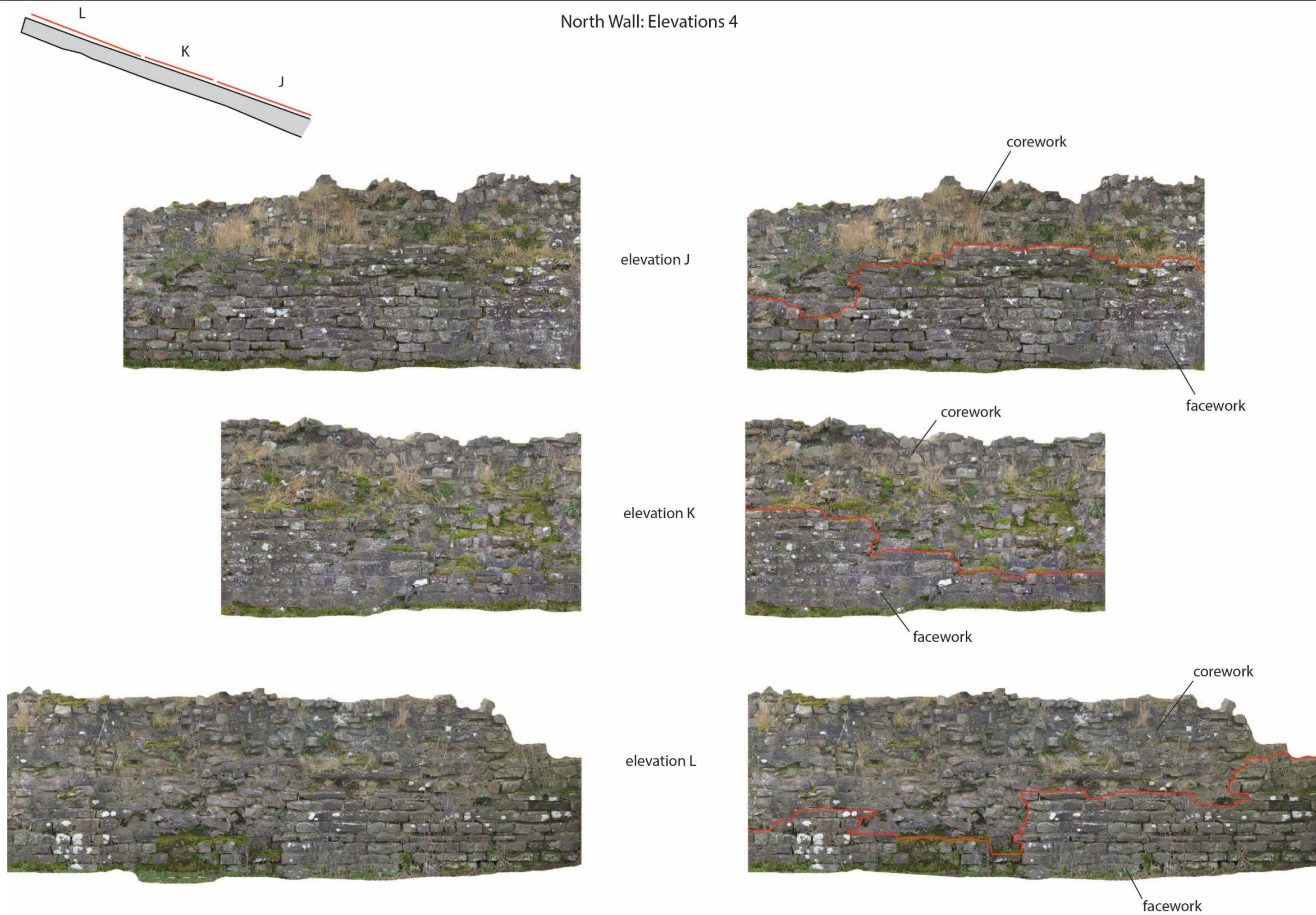


Fig. 34 North Wall: photogrammetric elevations (4)