

# BREMENIUM ROMAN FORT

HIGH ROCHESTER, NORTHUMBERLAND

## ARCHAEOLOGICAL MONITORING DURING CONSERVATION WORKS

November 2019



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## SUMMARY

*Conservation works were carried out under scheduled monument consent at Bremenium Roman Fort, High Rochester, Northumberland, over the winter of 2018-2019 as per the recommendations of a Conservation Management Plan prepared in 2017 by Doonan Architects for Northumberland National Park Authority, Historic England and local landowners.*

*Works focused on the rampart and remains of the fort walls, addressing a range of issues including the fragility of areas of standing Roman fabric and the dilapidation of modern dry-stone boundary/livestock walls around the perimeter. They were monitored archaeologically and recorded by Alan Williams Archaeology (AWA) and Vindomora Solutions to the terms of a Written Scheme of Investigation prepared by AWA. The following report sets out the results of these works.*



**Plate 1:** Conservation of the fort wall (Block W19) in February 2019.



## **1. PROJECT BACKGROUND**

### **1.1 Conservation and Rebuilding Works at Bremenium**

Conservation of Roman fabric and rebuilding of dry-stone boundary/livestock walls was carried out at Bremenium Roman Fort (Scheduled Monument No. ND 20, HA1006610), High Rochester, Northumberland over the winter of 2018-2019 as per recommendations within a Conservation Management Plan (Bremenium Roman Fort Conservation management Plan 2014) prepared by Doonan Architects for the Northumberland National Park Authority (NNPA) and implemented by the NNPA, Historic England and local landowners. Conservation works were archaeologically monitored and the results recorded by Alan Williams Archaeology (AWA) and Vindomora Solutions (VS).

### **1.2 Conservation Management Plan**

The Conservation Management Plan (CMP) for the site, prepared in 2014, addresses issues regarding the upkeep of the Roman fort of Bremenium - which encompasses the settlement of High Rochester - focussing mainly on the perimeter ramparts and walls of the fort. It sets out a programme for the long-term management of the remains, minimising intervention and disturbance to original Roman fabric, while ensuring that repairs are sufficient to halt the demonstrable gradual slow loss of Roman facework and core along the curtain wall of the fort, the degradation and erosion of the earth ramparts, and the collapse of dry-stone boundary walls.

### **1.3 Scheduled Monument Consent**

Scheduled monument consent (SMC) to carry out identified conservation and rebuilding works at Bremenium as per the CMP was granted by the North East Office of Historic England on 24th January 2018 (Appendix 3 in this report) and included requirements for the preparation of a written scheme of investigation (WSI) for the appropriate archaeological monitoring of these works (Appendix 2 in this report) and for the preparation of a final report.

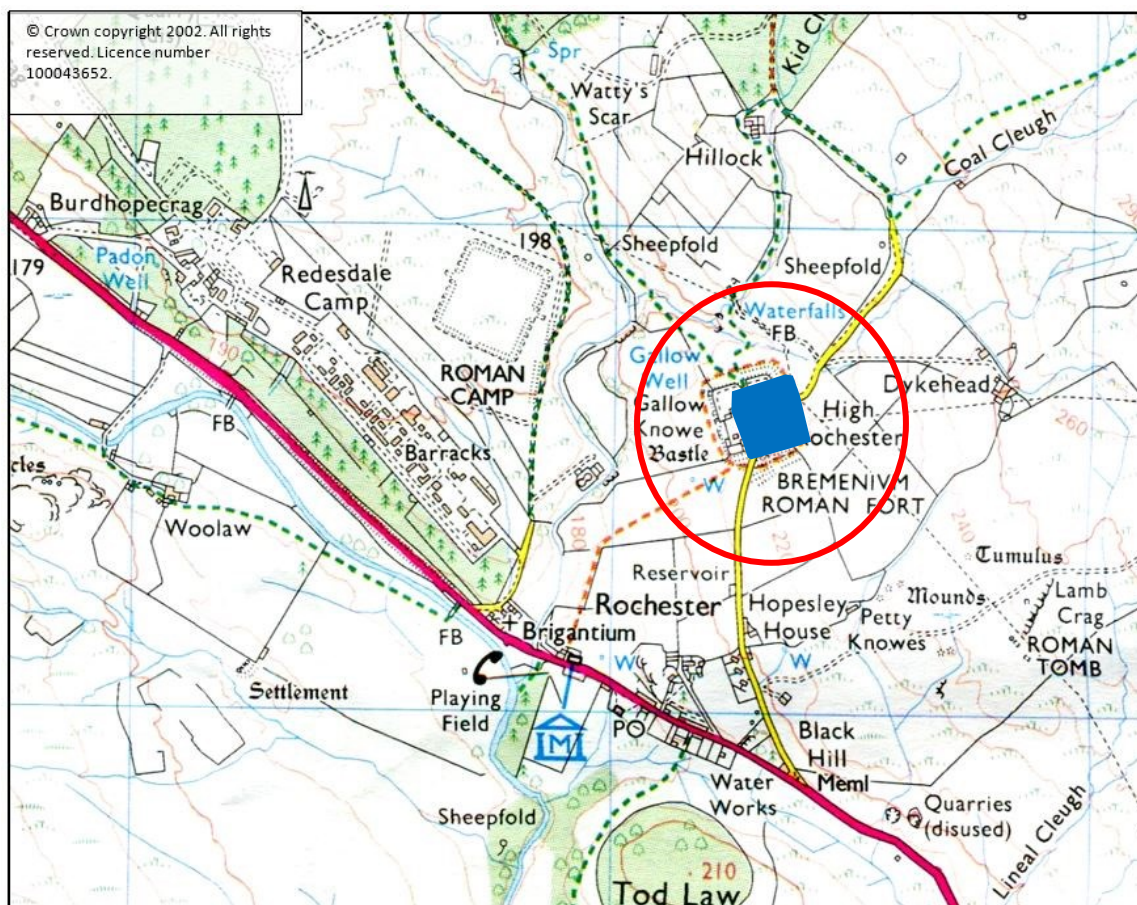
### **1.4 This Document**

The following report sets out the progress and results of conservation and consolidation works carried out at High Rochester over the winter of 2018-2019 as per the WSI. It has been prepared by Alan Williams Archaeology and Vindomora Solutions.

## 2. HISTORIC BACKGROUND

### 2.1 High Rochester

The settlement of High Rochester lies towards the head of Redesdale, a tributary of the River North Tyne, in the upland west of Northumberland at NY 832 982. It is accessed from the A68 by a minor road which branches north at Rochester. Beyond High Rochester, to the north and north-east, are extensive MoD military ranges. Bellingham is the closest substantial settlement, lying to the south in the valley of the North Tyne. High Rochester consists of dispersed houses, including two bastles and two derelict longhouses, around an open green. It is encompassed by the raised platform of the Roman fort of Bremenium which was garrisoned for over 300 years.



**Figure 1:** The settlement of High Rochester circled, the Roman fort in blue tone.

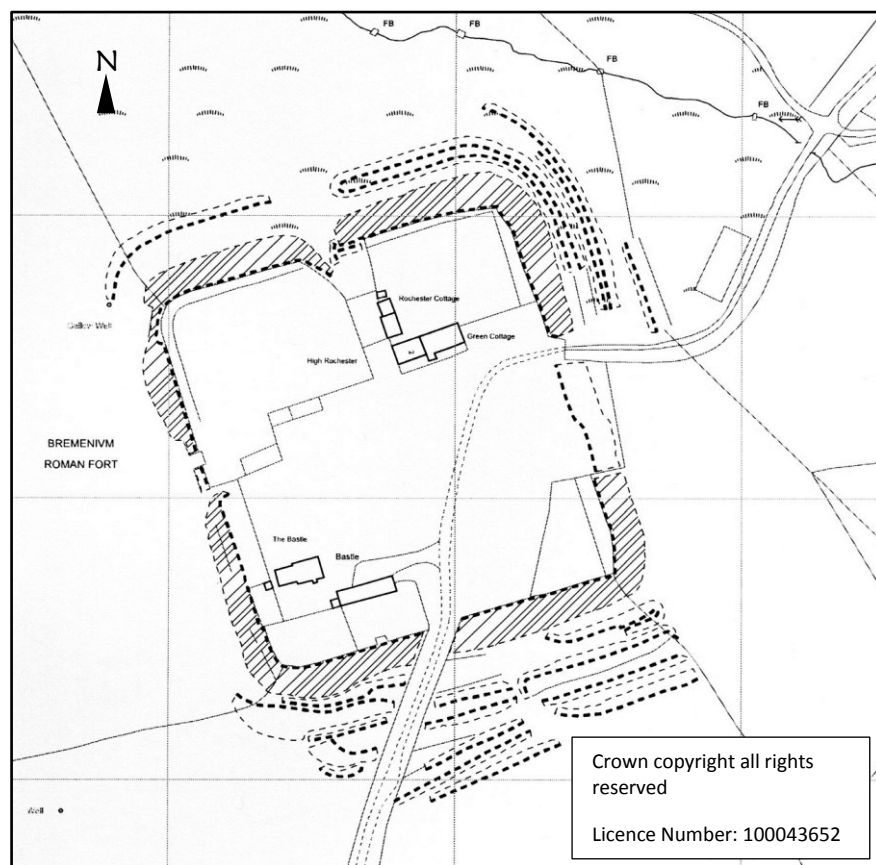
### 2.2 Bremenium and Adjacent Remains

The remains of Bremenium Roman fort form a prominent raised platform bounded by multiple defensive ditches, an earth rampart and intermittent exposures of its stone circuit wall as well as portions of two gates (north and west) and interval and angle towers. Relatively modern dry-stone boundary walls have been constructed along and sometimes across the Roman High Rochester Roman Fort Conservation Works

Archaeological Monitoring and Recording

walls and ramparts. The condition of the ramparts and of the surmounting dry-stone walls, the primary focus of the conservation and rebuilding works prior to commencement of works in 2018 is provided in the WSI (Appendix 2 in this report).

The Roman fort was established on the site in the late first century AD guarding Dere Street, a major Roman route into Scotland. It was one of five outpost stations beyond Hadrian's Wall and is one of the best-preserved archaeological sites within Northumberland National Park. The fort, oriented NNW-SSE, is rectangular in plan with rounded corners and slightly longer on its N-S (147m) than E-W (136m) axis. Multiple surrounding ditches are visible on all but the west perimeter and around the south-west angle of the fort (figure 2). The earth rampart is prominent throughout with remains of a stone curtain wall, towers and gates visible intermittently around the circuit. The south-west interval tower and west gate, both cleared during early excavations on the site, are notable survivals.



**Figure 2:** *Bremenium Roman Fort encompasses the settlement of High Rochester. The fort rampart is hatched. One grid square = 100m.*

Associated archaeological remains lie nearby: Likely military annexes and compounds on the

west flank of the fort, as well as the putative outline of an underlying prehistoric enclosure, have been identified by geophysical survey. A number of temporary marching or work camps sit along Dere Street to the north and west of the fort, and upstanding remains of a Roman cemetery can still be seen at Petty Knowes a little way to the south-east. Together, the remains form a unique archaeological assemblage and landscape.

### **3. CONSERVATION WORKS**

Conservation works involved the rebuilding of defective drystone walls along the Roman ramparts (3.1) or the consolidation of structural remains of the fort walls, towers or gates (3.2) and areas of eroded rampart/curtain (3.3). Each area considered to require attention was given an identification code and appears on figure 3. The coding is formed of the flank of the fort perimeter (north, south, east or west) and a number for each discrete task per flank.

#### **3.1 Dry-Stone Walls**

Dry-stone walls run around most of the perimeter rampart of the Roman fort, sometimes along the line of the outer curtain wall. Other walls run across the rampart and on to the fort platform. They are important for the well-being of the monument, providing protection to Roman wall core below, and reducing movement of livestock both across and along the top of the ramparts and within the fort platform. No repair works were necessary on the dry-stone walls around the western half of the fort; they are modern and in good condition. Works were required on a number of the walls over the eastern part of the fort, including **N2**, a north-south stretch, running towards the Roman north gate and flanking the sunken way out of the fort; **N3**, the wall running along the north-eastern half of the fort rampart, **E1**, the wall continuing on from N3 along the eastern crest of the rampart as far south as the farm road running through to Dykehead and Hillock, **S5**, a stretch of wall running from the site of the Roman south gate to the east (and including a stretch of very dilapidated wall running into the fort along the east flank of the access road. No works were carried out during the project on walls **E3**, **E4** and **E5** as agreed.

#### **3.2 Roman Structures**

A range of Roman structures, largely on the western perimeter of the fort including the substantial west gate as well as intermittent stretches of circuit wall, required conservation. Isolated exposures of standing masonry on the southern perimeter of the fort, including the south-west interval tower, also required attention. Problems included:



- Loss of mortar/loose stones
- Encroaching vegetation
- Degraded turf-capping

Repairs carried out during the project to address these issues included:

- Deep Tamping of Mortar and Re-Bedding of Facing Stones
- Removal of Woody Vegetation
- Turf Capping

### **3.3 Exposed Core of Roman Curtain Wall and Overlying Rubble**

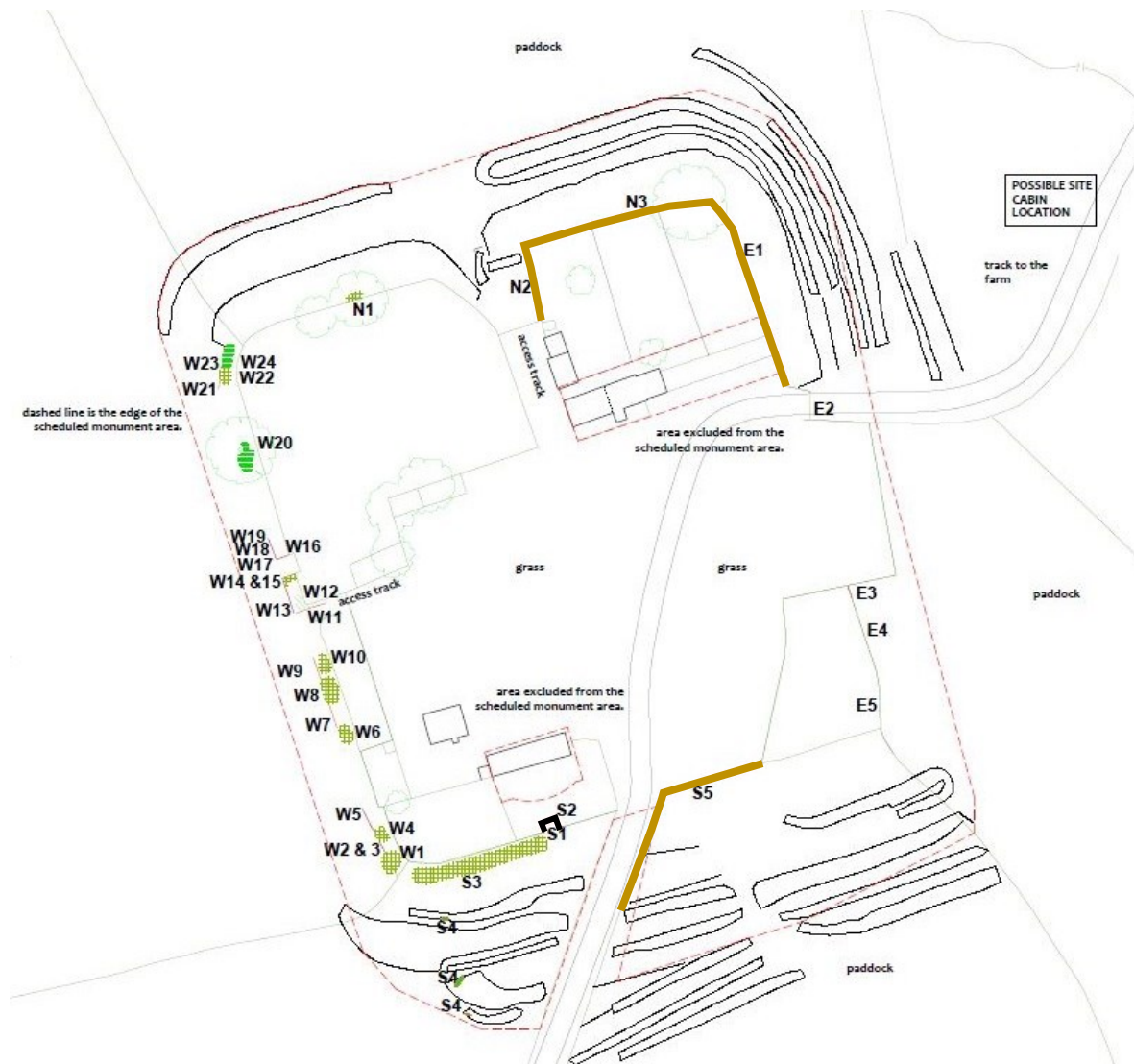
A number of areas along the western rampart face and at the north-west angle have suffered from erosion by livestock which has exposed the core of the Roman curtain wall and spread overlying rubble. The most extensive exposures of core and rubble are between standing sections of curtain wall (W1, W6, W8 and W12, W22 & W24 in the WSI, Appendix 1 in this report). Elsewhere, a narrow gate in the dry-stone wall at the north-west angle of the rampart, used for the movement of sheep, has caused limited erosion exposing Roman core.

Although much of the exposed core was in stable and reasonable condition, in certain areas it was fragile, with loose stones and cavities; potentially unstable and prone to stock damage (see S3, W4, W10, W12, W15 & W22 in the WSI, Appendix 2 in this report).

## **4. ARCHAEOLOGICAL MONITORING**

As per the WSI (Appendix 2 in this report), an archaeological watching-brief was maintained during:

- Taking-down of dry-stone walling at the interface between Roman deposits/structures and modern fabric;
- Removal and re-insertion of Roman fabric during consolidation;
- Consolidation of rubble overlying/adjacent to Roman curtain wall;
- Intermittently during general conservation works on the fort ramparts



**Figure 3:** Dry-stone walls rebuilt in brown line: N2, N3, E1, S5 and south of the entrance to the fort; Conservation/consolidation works on the ramparts in green tone: S1-4, W1-24 and N1.

#### 4.1 Rebuilding of Dry-Stone Walls

Dry-stone walls were rebuilt on the site between September and the end of November 2018 by Louis Walsh and team. This involved the disassembly and rebuilding of specified lengths of defective walling running around or close to the perimeter of the fort including the eastern part of the north rampart **N3**; a wall returning in to the fort platform from the western end of this stretch **N2**; the northern part of the east rampart **E1**; a portion of the eastern part of the

south rampart **S5** and a length of wall running along the east side of the road from the fort. Disassembly of all areas was monitored by Alan Williams Archaeology.

#### **4.1.1 Area N3 (plates 2 to 8 and figure 3)**

This area of walling (c 50m) runs along the crest of the northern rampart of the fort, east of the remnants of the north gate. In 2018 the wall here was in a very poor condition; intermittently tumbled and slumped, with very little coherence as a structure. All of the stretch was disassembled and rebuilt. Because there was no level ground adjacent to the wall along its north face, a platform was used to lay out and sort the dropped stones. This consisted of a framework of scaffold posts jettied out from the rampart supporting a plywood platform and was moved and built entirely manually. No *in-situ* Roman fabric was seen or impacted during the work. A number of worked stones had been incorporated in the wall, including portions of two small troughs or basins (3 and 4), one a creeing trough.



**Plate 2:** *The eastern part of the north rampart (N3) with a badly-tumbled dry-stone wall above. Looking west.*





**Plate 3:** *The north rampart, looking east. Platform constructed to take dropped stones for rebuilding.*



**Plate 4:** *Removing dry-stone walling from the north-east corner of the rampart. Looking east.*





**Plate 5:** *Starting to rebuild at the north-east corner of the fort. Looking west.*



**Plate 6:** *Laying out the line of the new wall along the north rampart. Looking west.*





**Plate 7:** *The west end of N3 before rebuilding. Looking east.*



**Plate 8:** *The same area as in plate 7 after the rebuild.*





**Plate 9:** Rebuilding a sheep creep along the north rampart.  
Looking north.

#### **4.1.2 Area N2 (plates 10 and 11 and figure 3)**

This short stretch of wall (c 20m) runs south from the western end of **N3**, flanking the eastern edge of the access ramp falling from the fort platform. This was not on the line of any Roman structure. No Roman stonework was seen during the rebuild.



**Plate 10:** Rebuilding wall N2 running in to the fort platform.  
Looking east.





**Plate 11:** *The northern section of N2 rebuilt. Looking east.*

#### **4.1.3 Area E1 (plates 12 to 15 and figure 3)**

As with the eastern part of the north rampart wall, the dry-stone wall along the northern part of the east rampart (c 50m) was in a very bad condition in 2018 with long stretches tumbled and slumped. Running along the outer edge of the rampart top, it was also necessary to use a platform to drop and sort the wall stones.



**Plate 12:** *Rebuilding the southern part of E3 on the east rampart. Looking north.*





**Plate 13:** Loading stones on the platform for rebuilding.  
The east rampart. Looking north-west.



**Plate 14:** Working on the east rampart. Looking  
south-west



**Plate 15:** *Taking down the wall at the north-east corner of the rampart. Looking north-west.*

#### **4.1.4 Area S5 (plates 16 to 19 and Figure 3)**

This length of wall runs from east from the access road for c25m along the line of the south edge of the rampart before turning at an oblique angle to the north-east. A part of the run is undulating. No platform was needed to hold dropped stone over this length as the wall is set slightly to the north of the crest and the rampart less steep than along the east and north sides.



**Plate 16:** *S5 disassembled. Looking east.*





**Plate 17:** *Measuring the width for the rebuilt wall S5. Looking west.*



**Plate 18:** *Starting to rebuild. Looking west.*



**Plate 19:** *The wall partially completed. Looking east.*

#### **4.1.5 Dry-Stone Wall Flanking the Access Road (Plates 20 and 21 and figure 3).**

This was in a very poor condition in 2018 and rebuilt as a part of the project.



**Plate 20:** *Wall flanking the east side of the access road as it passes into the area of the fort. Looking north-east.*





**Plate 21:** *Wall following rebuild.*

#### **4.1.6 Residual Stone**

Some of the areas of defective dry-stone walling around the fort had been partially rebuilt on a number of previous occasions, becoming amorphous and broad, containing substantial quantities of stone. Rebuilding these areas from the ground up required less stone. Residue, checked for any worked stone, has been re-used by the farmer.

#### **4.1.7 Worked Stones**

##### **Facing Stones**

Although no *in-situ* Roman fabric from the fort walls was disturbed during the rebuilding works, a proportion of the make-up of the drystone walls is re-used Roman facing-stones, all of which are squared and shaped for purpose. One stone, rebuilt into the fabric of a stretch of rebuilt wall, has diamond-broached tooling. It sits in the west face of the wall on the east side of the access road to the fort, immediately to the south of the entrance. Facing stones not re-used (c.15) are stored on a hard-standing within and north of the farm gate in the east side of the rampart.



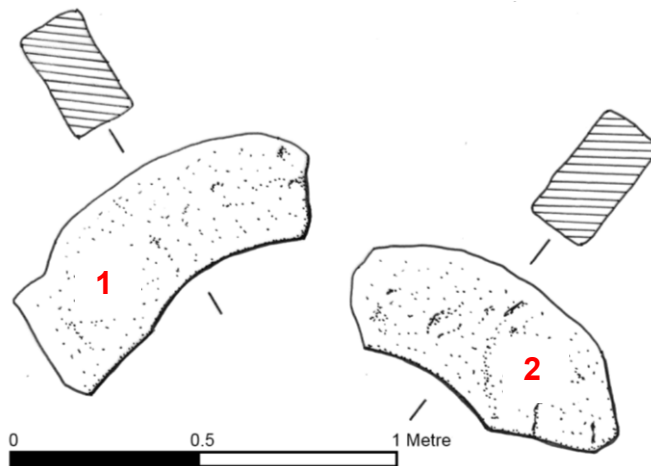
**Plate 22:** *Diamond-broached facing stone in the field wall south of the road entrance to the fort.*

### Other Worked-Stone (plates 24 to 26 and figures 4 and 5)

1. Two roughly-shaped blocks of yellow sandstone (1: 0.82m long by 0.30m wide and 0.17m thick; 2: 0.76m long by 0.33m wide and 0.17m thick) with part of the circumference of a circle cut in each stone. Possibly two parts of a window or door head, the form more likely of late-medieval/post-medieval date than Roman. The pieces were found together in the drystone wall immediately to the south of the fort along the access road (Plate 23 and figure 4).



**Plate 23:** Two blocks of sandstone, possibly parts of a window Or door head. They are more likely post-medieval than Roman.



**Figure 4:** Two blocks of sandstone, possibly parts of a door or window head. 1:20 scale.

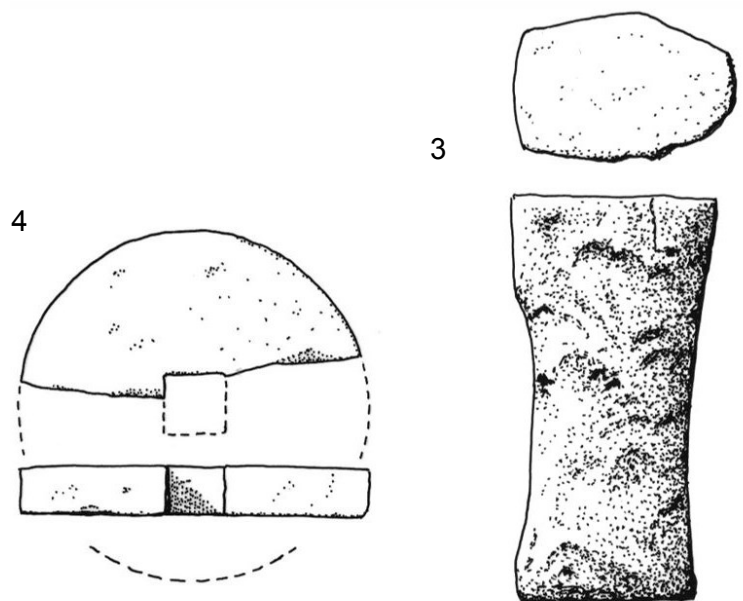




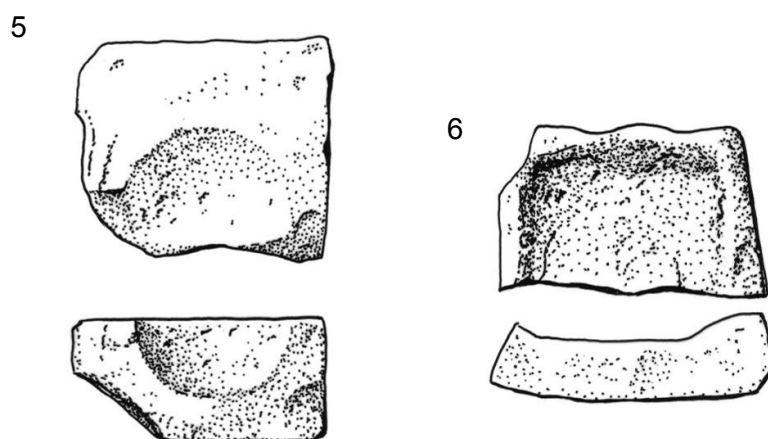
**Plates 24 Left:** *Waisted sandstone pillar (3). Probably a pilae from the bathhouse. From the east rampart; **Plate 25 Right:** *Half of a millstone (4). From north rampart.**



**Plate26:** *Left: Portion of a small rectangular trough (5) from the tumbled dry-stone wall over the north rampart; **Plate 27:** *Right: Portion of a creeing trough (6) from the tumbled dry-stone wall over the north rampart.**



0 10 20 30 40 50  
Centimetres



0 10 20 30 40 50  
Centimetres

**Figure 5:** Millstone (4) and pillar (3). Part of a creeping trough (5) and part of a rectangular trough or basin (6). 1:10 scale.



2. Crudely worked (waisted), fire-reddened, sandstone pillar (0.53m long by max 0.28m wide). Probably a *pilae* from the underfloor structure of the Roman bath house at the fort. This came from the drystone wall immediately north of the farm gate at the centre of the east rampart.
3. Half of a millstone. Fine yellow sandstone with square socket. 0.45m diameter and 0.07m thick with a square socket c.0.07m. From the drystone wall over the north rampart of the fort. Uncertain date. Possibly Roman.
4. Part of a small, sub-rectangular stone trough. Fine yellow sandstone. 0.37m wide by 0.13m thick. From a pile of tumbled stone fallen from the drystone wall over the north rampart. Uncertain date. Possibly Roman.
5. Portion (about three-quarters) of a creeing trough (probably post-medieval/modern). Fine yellow sandstone. Roughly hemispherical trough with diameter of c. 0.15m in a roughly worked rectangular block, 0.31m wide by an uncertain length and 0.17m deep. From tumbled drystone wall over the north rampart.

**As of December 2019:**

Stones 1 and 2 remain in the field adjacent to the road access to the fort. Pillar 3 is stored with facing stones next to the access road through the east rampart. Stones 3, 4 and 5 have been drawn and will be returned to the site to be stored with the facing stones.

#### **4.2 South Rampart: Conservation of Interval Tower (S1-2) and Sheep Scrapes (S4) plates 28 to 30)**

Limited conservation works were carried out on the south rampart and on banks to the south of the rampart. Works included the filling of open joints, re-bedding of a number of upper stones and turf capping of the east face of the interval tower (S1-2: plate 28 and Appendix 1). No work was carried out on the rampart (S3). Turf was laid in a number of sheep scrapes on banks south of the rampart (S4: plates 29 and 30.). This appears to have been ineffective as a remedy. Consolidation work on this and the west rampart was carried out by Northumbria Masonry Conservation Ltd. (Adrian Wallace) over the winter of 2018-2019.



**Plate 28:** *The interval tower as conserved. Looking north.*



**Plates 29 and 30:** *Sheep scrapes (S4) on banks to the south of the fort. Looking east.  
Turf laid in the scrapes has not prevented erosion (photos taken November 2019).*

#### **4.3 West Rampart: Conservation of Roman Masonry (W2-3, W5, W7, W9, W11, W13, W14-17, W21, W23 Plates 31 to 46 and figure 3)**

Much of the visible Roman masonry at Brementium lies along the west rampart. This includes intermittent lengths of the curtain wall around the fort which faced the earth rampart as well as a substantial part of the late single-portal west gate. The exposed masonry was photographed as montages in 2014 prior to conservation and again in summer 2019, following conservation works. These are included as before and after views in Appendix 1 in this report. Consolidation included deep tamping of open joints, tail bedding of upper courses where exposed and more rarely, the removal and replacement of coursed masonry where loose and unstable.



**Plate 31:** *Blocks W2-3 and 5, prior to conservation. Looking north.*



**Plate 32:** *Block W2-3 following consolidation and turf capping. Arrow marks fallen stone recovered from base of wall which has been re-inserted.*





**Plate 33:** Block W5 during conservation, looking north.



**Plate 34:** Block W7 during conservation, open joints have been deep tamped.  
Prior to turf capping. Looking east.





***Plate 35: Block W7 following conservation and with turf capping added.***



***Plate 36: Mortar work on Block W9.***





**Plate 37:** Block W13. Masonry south of the west gate during conservation. Open joints have been mortared. Looking east.



**Plate 38:** Block W14, ashlar stonework of the west gate. South of the single portal. Looking east.





**Plate 39:** Block W16. The west gate. Pre-conservation with woody vegetation growing out of the upper courses of stonework. Looking north-east.



**Plate 40:** Block W16 following conservation, woody vegetation removed.





**Plate 41:** *Block W19 North of west gate during conservation. Four courses removed exposing core. Looking east.*



**Plate 42:** *Block W17 west gate (right) and Block W19 north of west gate following conservation. Looking north-east.*





**Plate 43:** Blocks W21 (right) and W23 at the north-west angle of the fort before consolidation.  
Looking east



**Plate 44:** Block W21 during consolidation, a number of facing stones removed for re-bedding. Looking east.





**Plate 45:** Block W23 (south) during consolidation, facing stones re-bedded and corework above and to right (W22 and W24) consolidated with turf and soil. Looking east.



**Plate 46:** Block W23 (north) in autumn 2019. Facing stones re-bedded and corework above (W24) consolidated with turf and soil. Looking south.



#### **4.4 West Rampart: Stabilisation of Exposed Core (plates 47 to 54 and figure 3)**

Areas of the west rampart and remnants of its facing wall are subject to livestock erosion. In addition to consolidation carried out on the facework of the Roman walls and gate (Section 4.3), works were also carried out to stabilise rubble core and rampart materials exposed along this face. This involved the spread of soil to level areas of rubble between and above exposed facework and intermittent clumping of turf where necessary. Areas of exposed facework were also re-capped with turf. No work was carried out on Blocks W20 and N1.



**Plate 47:** Block W. Rampart slope looking south.  
Area stable in autumn 2019.



**Plate 48:** Block W6. Topsoil spread to stabilise and protect loose rubble  
with some turf clumping around exposed stones. Looking east.



**Plate 49:** Block W6 before consolidation;

**Plate 50:** Block W6 after works in autumn 2019.

*Both plates looking north-east*



**Plate 51:** Block W8. Topsoil spread to stabilise and protect loose rubble. Looking east.





**Plate 52:** Block W12 to north of farm track through west rampart in early 2018. Looking east.



**Plate 53:** Block W12 in autumn 2019, stable following clearance and consolidation works. Looking north.





**Plate 54:** Block W24 in autumn 2019 following consolidation and stabilisation works. Looking north-east.

**Table 1: Archaeological Monitoring**

See figure 3 for locations of work blocks.

No.	Type	Location	Defect	Repair
<b>S1</b>	Standing masonry (tower)	South-west Interval tower	Open joints in lower masonry	Deep tamping
<b>S2</b>	Standing masonry (tower)	South-west Interval tower	Loose bedded stones at top of east side wall	Rebedding of loose stones. Turf capping and clumping
<b>S3</b>	Rampart	South-west perimeter	Loose, exposed and fragile rubble	No work carried out
<b>S4</b>	Outer ditches	South-west perimeter	Sheep scrapes in ditch banks	turf repairs
<b>S5</b>	Dry-stone perimeter wall	Along rampart east of access road	Wall in state of collapse	Taken down and rebuilt
<b>W1</b>	Rubble corework	South angle of west perimeter	Large area of loose rubble, possibly some Roman core	Exposed/loose rubble stabilised with turf and topsoil
<b>W2 &amp; W3</b>	Standing masonry (curtain)	Towards south angle	Voided joints and displaced stones. Missing stone	Loose stones re-bedded and rear areas deep tamped. Eroded turf capping removed and upper stones tail-bedded. Turf capping replaced
<b>W4</b>	Exposed core In rampart face	West rampart	Loose stones and eroding rampart	Loose stones stabilised with turf and topsoil
<b>W5</b>	Standing masonry (curtain)	West rampart	Open joints bulging at north end and displaced stone	Turf clumping added and stones mortared and stabilised.
<b>W6</b>	Rubble and wall core	West rampart	Loose and eroding surface	Turf clumping and topsoil to stabilise rubble and core. No consolidation of stonework required
<b>W7</b>	Standing masonry (curtain)	West rampart	Loose upper stones with no turf capping. Open joints	Upper stones removed and rebedded. Tail bedding to stones below, deep tamping and turf capping added
<b>W8</b>	Rubble and wall core	West rampart	Loose and eroding surface	Topsoil added to stabilise rubble and core
<b>W9 &amp; W10</b>	Standing masonry (curtain) and wall core	West rampart	Open joints in facework. Loose core above	Deep tamping to stabilise
<b>W11</b>	Dry-stone faced wall core (curtain) at farm entrance	Over west rampart	Loose (modern) facing and core	Dry-stone face rebuilt
<b>W12</b>	Wall core and rampart	West rampart	Loose core and eroding rampart	Turf clumping to stabilise core and rampart
<b>W13</b>	Standing masonry (curtain)	West rampart	Open joints Eroded turf capping	Deep tamping of open joints. Areas of turf capping replaced



<b>W14</b>	Standing masonry	West gate	Displaced stone	No work required
<b>W15</b>	Core	West gate	Loose core work and eroded turf capping	Turf clumping added to stabilise core
<b>W16</b>	Standing masonry	West gate	Open joints with intrusive woody vegetation	Woody vegetation removed, open joints deep tamped
<b>W17</b>	Standing masonry	West gate	Loose facing stones at N. end of gate. Eroding turf capping	Loose stones re-bedded and reinstated. Turf capping added
<b>W18</b>	Standing masonry	West rampart	Bramble infested turf capping	Turf capping replaced and upper masonry tail-bedded
<b>W19</b>	Standing masonry (curtain)	West rampart	Masonry leaning out and upper courses with open joints. Bramble infested turf capping and exposed core	Area same as W17
<b>W20</b>	Tree	On west rampart	Stock erosion around base impacting on rampart core	No work carried out
<b>W21</b>	Standing masonry (curtain)	West rampart	Loose masonry and open joints	Top courses removed. Area tail-bedded, stones re-bedded and turf added
<b>W22</b>	Wall core and rampart	West rampart	Loose and exposed core, eroding rampart	Work not monitored. Uncertain status
<b>W23</b>	Standing masonry (curtain)	West rampart	Loose upper course, open joints and eroded turf capping	Top courses removed, area deep tamped and turf capping added.
<b>W24</b>	Wall core and rampart	West rampart	Very exposed and loose core, eroding rampart	Minor works carried out. Not monitored
<b>N1</b>	Wall core and rampart	North rampart	Stock erosion next to a tree	No work monitored
<b>N2</b>	Dry-stone wall	Up to north gate	Dry stone wall collapsed at N/S ends	Wall taken down and rebuilt
<b>N3</b>	Dry-stone wall	Along north rampart	Wall in poor condition and tumbled	Wall taken down and rebuilt
<b>E1</b>	Dry-stone wall	Along east rampart	Wall in poor condition and tumbled	Wall taken down and rebuilt
<b>E2</b>	Wooden stile	On east rampart	Defective	Not monitored
<b>E3</b>	Dry-stone wall	Along east rampart	Wall has collapsed	Work not required
<b>E4</b>	Dry-stone wall	Along east rampart	Invasive woody vegetation	Not monitored
<b>E5</b>	Dry-stone wall	Running up east rampart	Partially collapsed. Small tree	Work not required

## High Rochester Appendix 1: Photo Montages

LOOKING NORTH



*Pre-consolidation*



*Post-consolidation*

LOOKING WEST



*Pre-consolidation*



*Post-consolidation*

LOOKING EAST

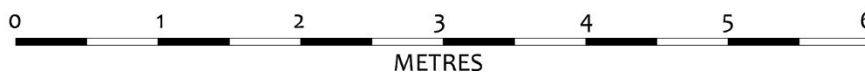


*Pre-consolidation*



*Post-consolidation*

### ***Interval Tower South Rampart: Blocks S1 and S2***





W2-W3, LOOKING EAST



*Pre-consolidation*



*Post-consolidation*

W5, LOOKING EAST



*Pre-consolidation*



*Post-consolidation*

W7, LOOKING EAST



*Pre-consolidation*



*Post-consolidation*

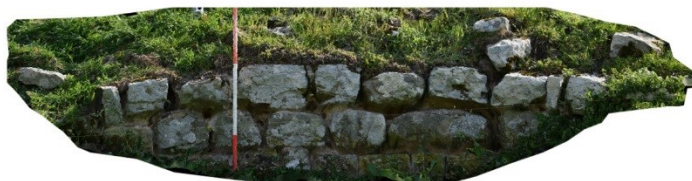
***West Rampart: Blocks W2-3, W5 and W7***



W9, LOOKING EAST



*Pre-consolidation*



*Post-consolidation*

W11, LOOKING SOUTH



*Pre-consolidation*



*Post-consolidation*

***West Rampart: Blocks W9 and W11***





W14, LOOKING EAST



*Pre-consolidation*



*Post-consolidation*

W14 LOOKING SOUTH

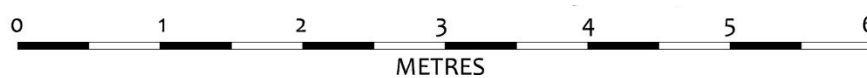


*Pre-consolidation*



*Post-consolidation*

### ***West Rampart: Gate Blocks W13 and W14***



W17, LOOKING EAST



*Pre-consolidation*

W16, LOOKING EAST



*Post-consolidation*

W16 LOOKING NORTH



*Pre-consolidation*



*Post-consolidation*

***West Rampart: Gate Blocks W16 and W17***





W21, LOOKING EAST



*Pre-consolidation*



*Post-consolidation*

W23, LOOKING EAST



*Pre-consolidation*

*Pre-consolidation*



*Post-consolidation*



*Post-consolidation*

**West Rampart: Blocks W21 and W23**



Rebuilt dry-stone wall running along the top of the south rampart east of the road

WEST END



EAST END

### DRY STONE WALL SECTION S5 LOOKING NORTH





Rebuilt dry-stone wall running along the top of the northern part of the east rampart

SOUTH END



NORTH END

DRY STONE WALL SECTION E1 LOOKING WEST





Rebuilt dry-stone wall running along the top of the eastern half of the north rampart

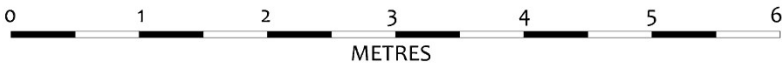
EAST END



WEST END



DRY STONE WALL SECTION N3 LOOKING SOUTH





## BREMENIUM ROMAN FORT

HIGH ROCHESTER, NORTHUMBERLAND  
WRITTEN SCHEME OF INVESTIGATION FOR  
ARCHAEOLOGICAL MONITORING  
DURING CONSERVATION WORKS

August 2017



*Prepared for Doonan Architects by:*

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## **SUMMARY**

*Conservation works are to be carried out at the scheduled Bremenium Roman Fort, High Rochester, Northumberland, under scheduled monument consent and as one component of a Conservation Management Plan (CMP) for the maintenance of the important remains set in place and implemented by Northumberland National Park Authority, Historic England and local landowners.*

*The CMP (prepared by Doonan Architects of Hexham and a range of specialists) focuses mainly on the perimeter rampart and walls of the fort, setting out a programme for their long-term management. A range of issues is addressed including the fragility of certain areas of standing Roman fabric and the dilapidation of modern dry-stone boundary walls around the fort which have allowed movement of livestock across the rampart. A range of solutions is provided including consolidation and conservation work on Roman structures and the rebuilding of dry-stone walls.*

*The following document forms a written scheme of investigation (WSI) setting out required archaeological monitoring and recording to accompany these conservation and rebuilding works at High Rochester. It has been prepared by Alan Williams Archaeology and Vindomora Solutions Ltd.*

## **1. PROJECT BACKGROUND**

### **1.1 Conservation and Rebuilding Works at Bremenium**

Conservation of historic fabric and rebuilding of overlying dry-stone boundary walls is to be carried out at the scheduled Bremenium Roman Fort, High Rochester, Northumberland. under scheduled monument consent and as one component of a Conservation Management Plan (Bremenium Roman Fort Conservation management Plan 2014 Prepared by Kevin Doonan Architect) for the maintenance of the important remains set in place and implemented by Northumberland National Park Authority (NNPA), Historic England (HE) and local landowners.

### **1.2 Management Plan**

The Conservation Management Plan (CMP) addresses conservation and upkeep of the Roman fort which encompasses the settlement of High Rochester and lies within a working agricultural landscape. It focuses mainly on the perimeter ramparts and walls of the fort, setting out a programme for the long-term management of the remains. A range of issues is addressed including the fragility of certain areas of standing Roman fabric and the dilapidation of modern dry-stone boundary walls around the fort which have allowed movement of livestock across the rampart. A range of solutions is provided including consolidation and conservation work on Roman structures and the rebuilding of dry-stone walls.

The guiding philosophy determining the scale of conservation and rebuilding works for Bremenium, set out in the management plan, is to minimise intervention and disturbance to original Roman fabric, while ensuring that repairs are sufficient to halt the gradual slow loss of Roman facework and core along the curtain wall of the fort which has been demonstrated over the past 20 years, the degradation and erosion of the earth ramparts; and the collapse of dry-stone boundary walls.

The interventions also provide the least visually intrusive solution to this conservation, an important consideration given the fort's setting in the open landscape of the Northumberland National Park. As the fort lies across two farm properties, the practicalities of maintaining farming operations has also been taken into account.

### **1.3 Scheduled Monument Consent**

Application for scheduled monument consent (SMC) to carry out identified conservation and rebuilding works at Bremenium has been made to Historic England. Requirements included the preparation of a written scheme of investigation (WSI) for the appropriate archaeological monitoring of these works, and that the preparation of a report providing the results of the works once completed would be supplied to Historic England North East as advisors to the Secretary of State.



## **1.4 This Document**

The following document forms the required written scheme of investigation (WSI) setting out required archaeological monitoring and recording to accompany conservation and rebuilding works at High Rochester. It has been prepared by Alan Williams Archaeology. It should be read in conjunction with the CMP prepared for the overall project.

## **2. HIGH ROCHESTER AND BREMENIUM**

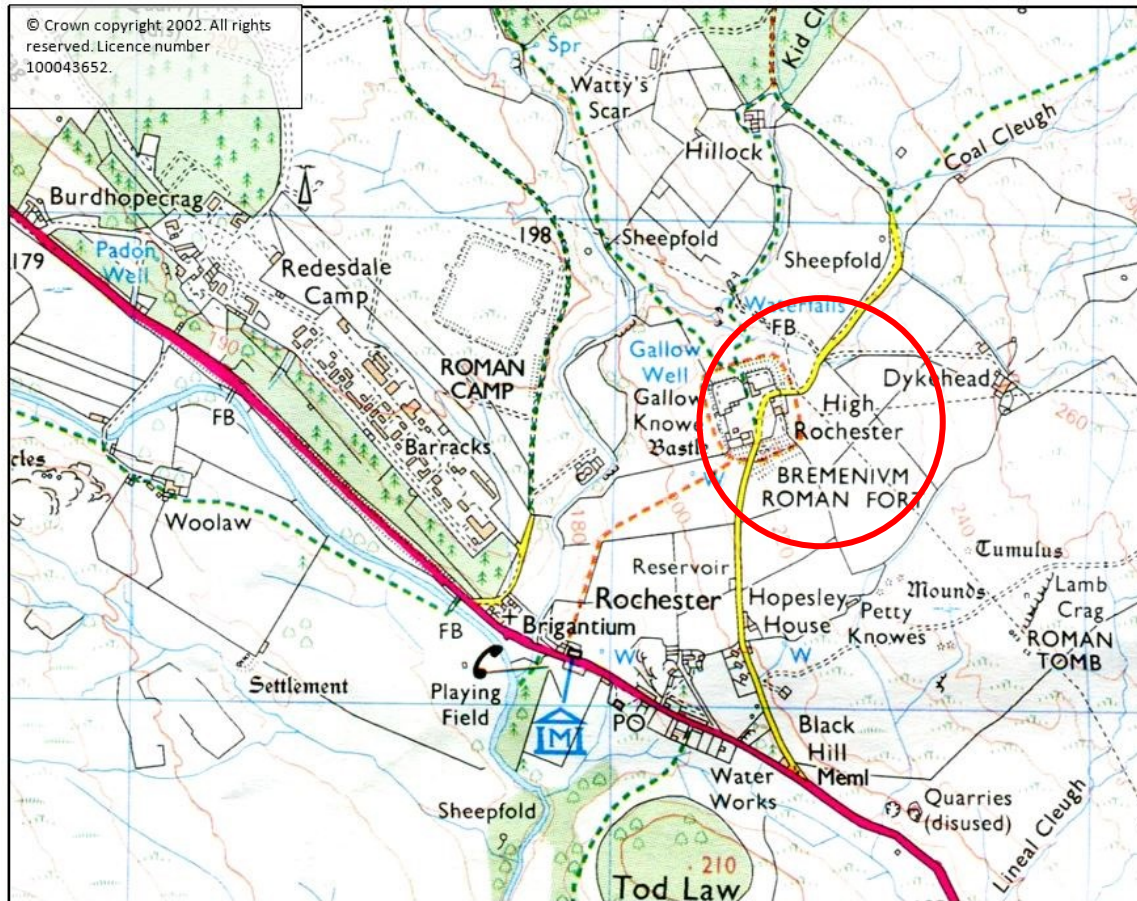
### **2.1 High Rochester**

The remote settlement of High Rochester lies towards the head of Redesdale, a tributary of the River North Tyne in the upland west of Northumberland at NY 832 982. It is accessed from the A68 by a minor road which branches north at Rochester. Beyond High Rochester, to the north and north-east, are extensive MoD military ranges. Bellingham is the closest substantial settlement, lying to the south in the valley of the North Tyne. High Rochester consists of dispersed houses including two bastles and two derelict longhouses lying around an open green. It is encompassed by the raised platform of the Roman fort, a product of the physical development and decline of the station which was garrisoned for over 300 years.

### **2.2 Bremenium**

The Roman fort of Bremenium was established on the site in the late first century AD guarding Dere Street, a major Roman road into Scotland. It was one of five outpost stations beyond Hadrian's Wall and is one of the best-preserved archaeological sites within Northumberland National Park. The fort, oriented NNW-SSE, is rectangular in plan with rounded corners and slightly longer on its N-S (147m) than E-W (136m) axis. Multiple surrounding ditches are visible on all but the west face and around the south-west angle of the fort. The perimeter earth rampart is prominent throughout with remains of a stone curtain wall, towers and gates visible intermittently around the circuit. The south-west interval tower and west gate, both cleared during early excavations on the site, are notable survivals.

Associated archaeological remains lie nearby: Likely military annexes and compounds on the west flank of the fort, as well as the putative outline of an underlying prehistoric enclosure, have been identified by geophysical survey. A number of temporary marching or work camps sit along Dere Street to the north and west of the fort, and upstanding remains of a Roman cemetery can still be seen at Petty Knowes a little way to the south-east. Together, the remains form a unique archaeological assemblage and landscape.



**Figure 1:** Bremenium Roman Fort (circled in red) at High Rochester, Northumberland.

### 2.3 Site Designations

Bremenium Roman Fort is a scheduled monument (List entry no 1006610). This includes the whole area of the fort, including its rampart and most (but not all) of the multiple defensive-ditches around the perimeter.

### 2.4 Listed Buildings

The standing remains of the walls of the fort are also listed grade II (List entry no 1044837). This includes curtain walls visible at a number of points along the west rampart as well as the considerable remains of the west gateway and south west interval tower and fragments of the north and south gates.

**Rose Cottage** (List entry no 1044838) Grade II listed late 16<sup>th</sup> or early 17<sup>th</sup> century bastle-house, lies in the north-east quadrant of the Roman fort.

**The Bastle** (List entry no 1302885) Grade II listed late 16<sup>th</sup> or early 17<sup>th</sup> century bastle-house, lies in the south-west quadrant of the Roman fort.



## **2.5 Landscape Designations**

As part of an agreement between landowners at High Rochester, the National Park Authority and Historic England, permissive access is provided to the public around the outer ramparts of the fort from a path running south-west to the former Brigantium Heritage Centre on the A68.

## **3. THE SITE TODAY**

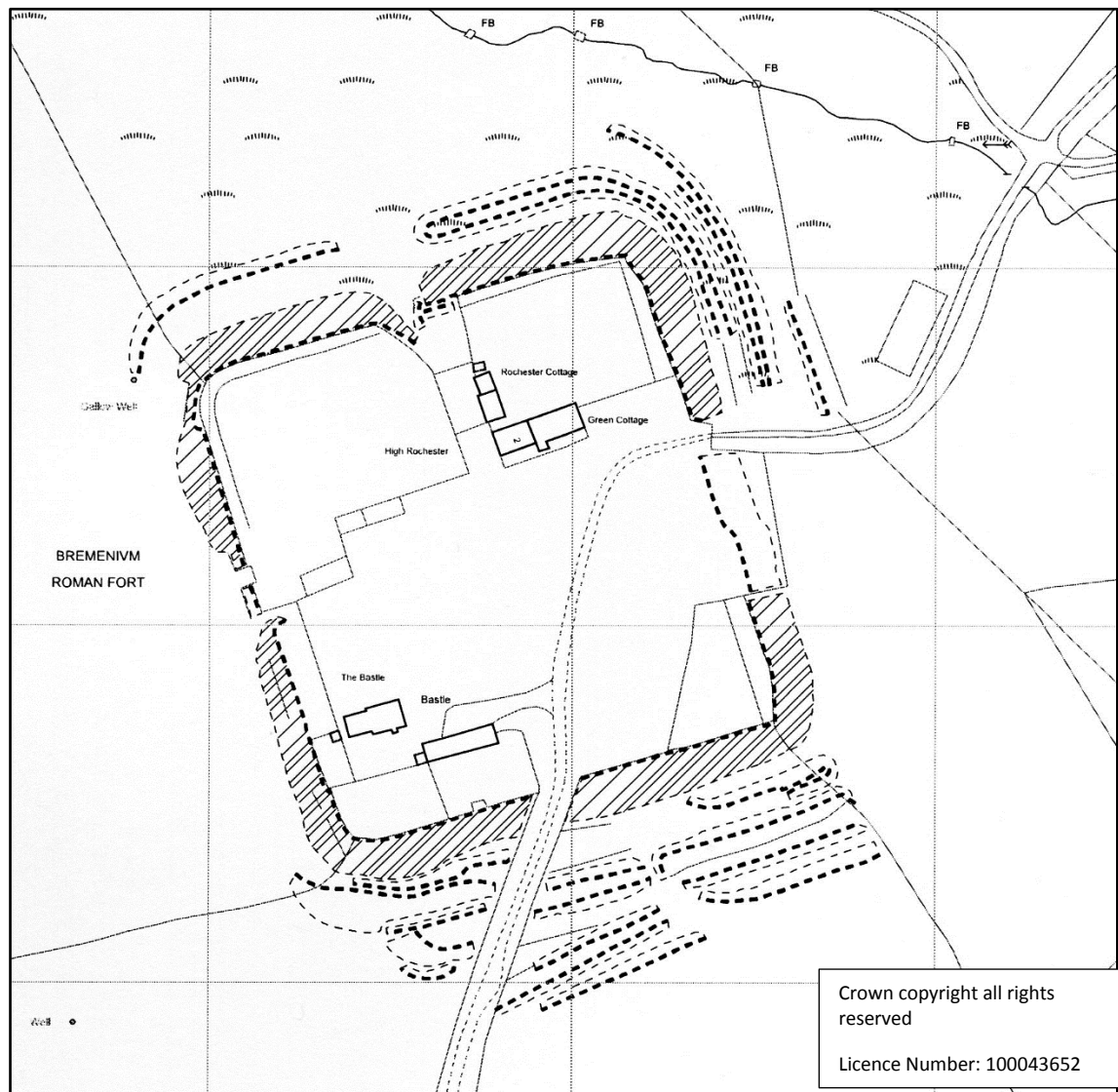
The remains of Brementium Roman fort form a prominent raised platform bounded by multiple ditches, earth ramparts and isolated exposures of its stone circuit wall, portions of gates (the west gate very substantial) and interval and angle towers. Relatively modern dry-stone boundary walls have been constructed along and across the Roman walls and ramparts. The few houses forming the settlement of High Rochester lie entirely within the perimeter of the Roman fort, dotted around the central green. The character and condition of the ramparts and overlying structures, the main focus of the CMP, are set out briefly below.

### **3.1 North Rampart**

The north rampart is steep and prominent with a number of livestock tracks running along its face. Three mature trees are embedded within or sit adjacent to the dry-stone boundary wall which runs along and is set slightly back from the lip of the rampart. The condition of this wall is mixed: west of the north gate of the fort - marked by a broad ramp sloping down from the interior platform – it is in fair condition; east of the gate it is in poor condition, much of it fallen. Other than possible corework marking the line of the curtain wall, the only visible Roman fabric is an isolated fragment of the east jamb of the north gate.

### **3.2 East Rampart**

From the north-east angle of the fort, up to the location of the Roman east gate (its location marked by a farm track) the rampart is topped with a dilapidated and partially collapsed dry-stone boundary wall. To the south of the farm track there is no dry-stone wall along the rampart (the wall shifts eastwards) for 30m, after which it returns. A few *in-situ* facing stones of the curtain wall lie about 40m to the north of the south-east angle. There are no visible remains of the Roman east gate.



**Figure 2:** *Bremenium Roman Fort encompasses the settlement of High Rochester. The fort rampart is hatched. One grid square = 100m. North to top.*

### 3.3 South Rampart

The east end of the south rampart is clear of a dry-stone wall for 30m, from which point a boundary wall runs in from the fort platform and continues along the rampart top to the modern access road at the former position of the south gate. The condition of the dry-stone wall is mixed; some areas are tumbled. West of the access road, the rampart is substantial and topped with a recent dry-stone wall in good condition. There is an interval tower in this stretch of the rampart with its face robbed out and a single visible fragment of the south-west angle tower but there is little evidence for the curtain.

### 3.4 West Rampart

The west rampart is substantial with a sound dry-stone wall at its lip or set back a little way into the fort platform. Lengths of the fort curtain wall and core are visible in this face (some sections of the face are



in reasonable repair, others not so) along with the substantially cleared and still impressive west gate. Between the standing sections of wall there are areas of exposed rubble, some of which masks probably *in-situ* corework.

#### 4. STRUCTURAL TYPES AND REQUIRED WORKS (See Appendices 1 and 2)

The MP divides structural remains forming or surmounting the Roman ramparts into three types:

- Exposed Roman walls/structures with surviving facework;
- Exposed Roman core and overlying rubble without facework;
- Dry-stone boundary walls.

##### 4.1 Exposed Roman Walls with Surviving Facework (Appendix 2. Fig. 4)

###### 4.1.1 Location and Character

Standing Roman walls (see montage photographs A2 to A16 in Appendix 2 in the CMP) can be seen mainly on the western face of the rampart including the west gate. There are also more isolated exposures on the southern face including the south-west interval tower and on the north face where there is a remnant of the east jamb of the north gate. There has been a slow attrition of facing stones (20) over the last c.20 years established from comparison of current and earlier photography. There has also been degradation in some areas of turf capping.

###### 4.1.2 Defects

- **Loss of Mortar/Loose Stones** Although there is little evidence of bonding mortar, most Roman masonry is reasonably stable, particularly where it forms a substantial block. However, stones at the heads and edges of areas of facework are less stable, and at risk of displacement by stock movement. Also, at specific points, notably where exposed curtain wall is retaining the rampart, loss of mortar has resulted in displaced, disengaged and bulging stonework (see W9 & W19 in Appendix 1).
- **Encroaching Vegetation** Large open joints in facework allow vegetation to establish. Whilst this does not present a significant issue with annual plants, the establishment of woody species presents a substantial risk to stability as roots develop over time (see W16 in Appendix 1).
- **Degraded Turf-Capping** Turf capping over the Roman work is frequently eroded and in places non-existent (see W7 in Appendix 1). Turf capping protects stonework by preventing excessive water penetration which washes out mortar, and protects wall heads from extremes of temperature which increases the rate of decay. Loss of mortar, where walling is poorly turf-capped, reduces structural integrity. In part, loss of turf capping at Bremenium is due to grazing and tracking of livestock; renewal will protect masonry from stock movement.

#### 4.1.3 Repairs

- **Deep Tamping of Mortar and Re-Bedding of Facing Stones** In order to improve structural stability in exposed curtain walling, where joints are voided or current modern mortar is poor and will be removed, masonry will be deep tamped. This involves the insertion of lime mortar into stonework joints, improving the structural integrity of walls and preventing distortion but without forming a traditional pointed face to the joint. Where stones are loose, have been displaced or distortion has caused a risk of tumble not solved by deep tamping, they will be individually identified, removed and re-bedded as per original formation (see S2, W2 & W7 in Appendix 1). Infrequently, where joints and voids in curtain walls are very substantial, gallets or pinnings will be introduced to avoid large areas of exposed mortar. These new stones will be visually distinguishable from original stonework (see S1, W7 & W13 in Appendix 1).
- **Removal of Woody Vegetation** Where brambles have established in the joints of stonework north of the west gate. (see W16 in Appendix 1) they will be cut out and deep roots poisoned. Where brambles are evident in contiguous turf capping, this will be removed and replaced. (see W18 in Appendix 1).
- **Turf Capping** All re-bedded facework will be capped with turf, as will areas of facework where the existing capping is badly worn or where none presently exists.

#### 4.2 Exposed Core of Roman Curtain Wall and Rubble Scatter (Appendix 2. Figs 5, 6 and 7)

**4.2.1 Location and Character** A number of areas along the western rampart face and at the north-west angle have suffered from erosion by stock movement and stock-feeding arrangements. This has exposed the core of the Roman curtain wall and overlying rubble. This latter material is possibly, but by no means certainly, derived from the curtain wall. The most extensive exposures of core and rubble are between standing sections of curtain wall (see W1, W6, W8 and W12, W22 & W24 in Appendix 1). Elsewhere, a narrow gate in the dry-stone wall at the north-west angle used for the movement of sheep has caused limited but deep erosion of the rampart exposing Roman core (see W22 & W24 in Appendix 1).

#### 4.2.2 Defects

- **Roman Core** Much of the exposed core is in stable and reasonable condition. However, in certain areas it is fragile, with loose stones and cavities between stones and is potentially unstable and prone to stock damage (see S3, W4, W10, W12, W15 & W22 in Appendix 1).

#### 4.2.3 Repair: Exposed Core of Roman Curtain Wall and Rubble

- **Roman Core** Where exposed and stable in the surface of the rampart, no remedial work is required. Where the core is fragile and has cavities, a mix of mortar and turf will be employed to stabilise the areas. Mortar with stone pinnings will provide support to stones where they are



protruding. Where less structural support is required clumps of locally cut turf will be inserted between stones to protect and cushion them from stock movement and improve the overall integrity of the rampart.

- **Rubble Scatter** Most rubble on the rampart face will be left in situ. Limited areas of rubble will be used to level adjacent hollows in the rampart (see W1 & W6 in Appendix 1). Where unstable and prone to erosion, rubble will be covered with top soil and turf. Limited re-profiling of areas of the rampart will occur where rubble is spread and top soil and turf introduced but this will be marginal. A marker will be laid at the base of introduced material. At a number of points along the west face of the rampart, layers of turf will be built up as an 'Icelandic' repair to level sheep scrapes and erosion (see S4, W20 and W24 in Appendix 1).

#### 4.3 Dry-Stone Walls (Appendix 2. Fig. 8)

A number of dry-stone walls run around the perimeter of the fort rampart, frequently along the Roman curtain wall. Others run across the rampart and onto the fort platform. All of these walls are important for the well-being of the monument, providing protection to Roman wall core below, and reducing movement of livestock both across the wall mounds, and from the fields beyond the fort into properties within the fort platform.

##### 4.3.1 Defects

- Rebuilt in the 1980s, walls around the western half of the fort are in good condition. Those around the eastern half, considerably earlier, are in poor condition. There are tumbled walls along the north-east perimeter and at the north east angle of the fort (see N2, N3 & E1 in Appendix 1), towards the south-east of the fort where the wall has almost entirely collapsed and has been replaced with a fence (see E3 and E5 in Appendix 1) and at the south-east angle, where a partially collapsed wall runs up the rampart (see E6 in Appendix 1).

##### 4.3.1 Repair: Dry-Stone Walls

No repair works are necessary on the dry-stone walls around the western half of the fort as these are modern and in good condition. The remainder of the walls will require extensive rebuilding:

- **North Rampart** The majority of the walls running around the north eastern perimeter of the rampart will require dismantling and rebuilding. They probably directly overlie the Roman curtain wall (see N2, N3 in Appendix 1).
- **South Rampart** A dry-stone wall running west from the access road will be taken down and rebuilt, leaving a well-preserved 5m stretch in the centre. (see S6 in Appendix 1).
- **East Rampart** The wall running from the north eastern angle of the rampart to the central farm gate will require dismantling and rebuilding. It probably directly overlies the Roman curtain wall (see E1 in Appendix 1).

## **5. ARCHAEOLOGICAL REQUIREMENT**

**5.1** A general photographic record of each area of conservation work will be prepared prior to commencement.

**5.2** Once conservation and rebuilding works are completed, an orthogonal photographic montage of all standing faces, structures and core will be prepared as per the photographic record prepared in 2014 accompanying the CMP (Appendix 8).

**5.3** Individual monitored conservation and rebuilding tasks are set out in Appendix 1 in this document and in the Condition Report by Doonan Architects in the CMP. In summary, a continuous archaeological watching-brief will be maintained during:

- Taking-down works for dry-stone walling at the interface between Roman deposits/structures and modern fabric;
- Removal and re-insertion of Roman fabric;
- Clearance of rubble overlying/adjacent to Roman curtain wall;

An intermittent archaeological watching-brief will be put in place to monitor general conservation and rebuilding works on the fort ramparts.

**5.4** The conservation builder and archaeologist will liaise closely to coordinate opening-up works to avoid loss or damage to archaeological deposits/structures and to ensure that fabric is fully recorded.

**5.5** The location of site cabins, spoil heaps, material storage and routes for vehicle access will be agreed between the contractor, site owners, archaeologist and Historic England before works commence. This will ensure there is no adverse impact on the archaeology of the site, the operational activities of the land owners and the occupants of the site.

**5.6** Areas of facework identified for rebuilding will require individual identification per stone to ensure they are re-laid in original locations. Fallen facing stones, where original locations cannot be verified, will not be re-laid. Repairs and the extent of any rebuilding will also be fully recorded as work progresses.

## **6. ARCHAEOLOGICAL METHODOLOGY**

**6.1.** A photographic, written and, where necessary, drawn record, will be maintained before, during and after conservation works have been completed. An appropriate recording system will be maintained. Drawn plans and sections will be produced at 1:10 or 1:20 scale. A digital camera will be used to record all features. The photographic archive will be deposited with Archaeological Data Service (ADS) as a



digital archive.

**6.2** Pottery, metalwork and animal bone will be retained and located by context. Loose architectural fragments will be treated as small finds and recorded individually.

**6.3** Finds of significance will be deposited with the North East Museum (Hancock) Newcastle upon Tyne.

#### **6.4 Specialist Analyses**

**6.4.1** Although unlikely on the current project, the potential requirement for specialist analyses is an unavoidable risk in all archaeological work.

**6.4.2** On completion of the fieldwork, any samples will be processed and artefacts cleaned, conserved, identified, labelled and packaged. An appropriate programme of analysis and publication of the results will be completed if no further archaeological investigations are to be carried out.

#### **6.5 Archive**

**6.5.1** A digital archive (photographs) will be retained within the archive/report.

**6.5.2** Final drawings will be provided in digital format.

**6.6** If appropriate, arrangements will be made to publish the results of the investigations through a local or national journal.

**6.7** AWA supports the Online Access to Index of Archaeological Investigations (OASIS). The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The online OASIS form will be completed at <http://ads.ahds.ac.uk/project/oasis/>.

#### **6.8 Site Archive and Report**

**6.8.1** The site archive will be prepared to the standards specified in the Management of Research Projects in the Historic Environment (MoRPHE), English Heritage, 2006. Archive preparation and deposition will be undertaken with reference to the repository guidelines and standards, and where necessary the Museums and Galleries Commission (MGC), United Kingdom Institute for Conservation (UKIC) standards and guidelines.

**6.8.2** An illustrated report will be supplied within 2 months (or shorter period by mutual agreement) on completion of the fieldwork. Copies of the report will be sent to the client, Historic England (one bound and one digital copy in Word or PDF format) and the County Historic Environment Record. The report will contain:

- Non-technical summary
  - Introductory statement
- High Rochester Roman Fort Conservation Works

- Aims and objectives
- Methodology
- Results
- Any further recommendations
- Index and location of archive
- References and bibliography
- Copy of project design (WSI)

## **7. HEALTH AND SAFETY**

**7.1** AWA will comply with the Health and Safety at Work Act and subsequent additions and amendments.

**7.2** If the Provisions of Construction, Design and Management (CDM) Regulations 2007 are appropriate the employer will appoint a CDM Coordinator who will prepare a Health and Safety Plan which will be made available to the archaeological contractor prior to the commencement of work.





***Plate 1:*** The south-west perimeter of the fort. Access road at the right, interval tower towards the centre.



***Plate 2:*** The western perimeter of the fort looking north at core and facing stones of the fort wall.



***Plate 3:*** Farm entrance through the fort wall on its western flank.



***Plate 4:*** Impressive remains of the Roman west gate, looking east.





***Plate 5:*** The north-west angle of the fort with standing facework and exposed core below a modern dry-stone wall.



***Plate 6:*** Remains of the north gate. Looking east along the rampart.





***Plate 7: The north end of the east rampart of the fort.***



***Plate 8: The southern end of the east rampart of the fort topped with a fence. Looking north.***



**Plate 9:** *The south-east angle of the rampart, looking south-west.*



**Plate 10:** *The southern rampart, looking west with wall flanking access road running in from the left.*



## High Rochester: Defect Repairs and Archaeological Monitoring

(NB: All works preceded by general photographic recording)

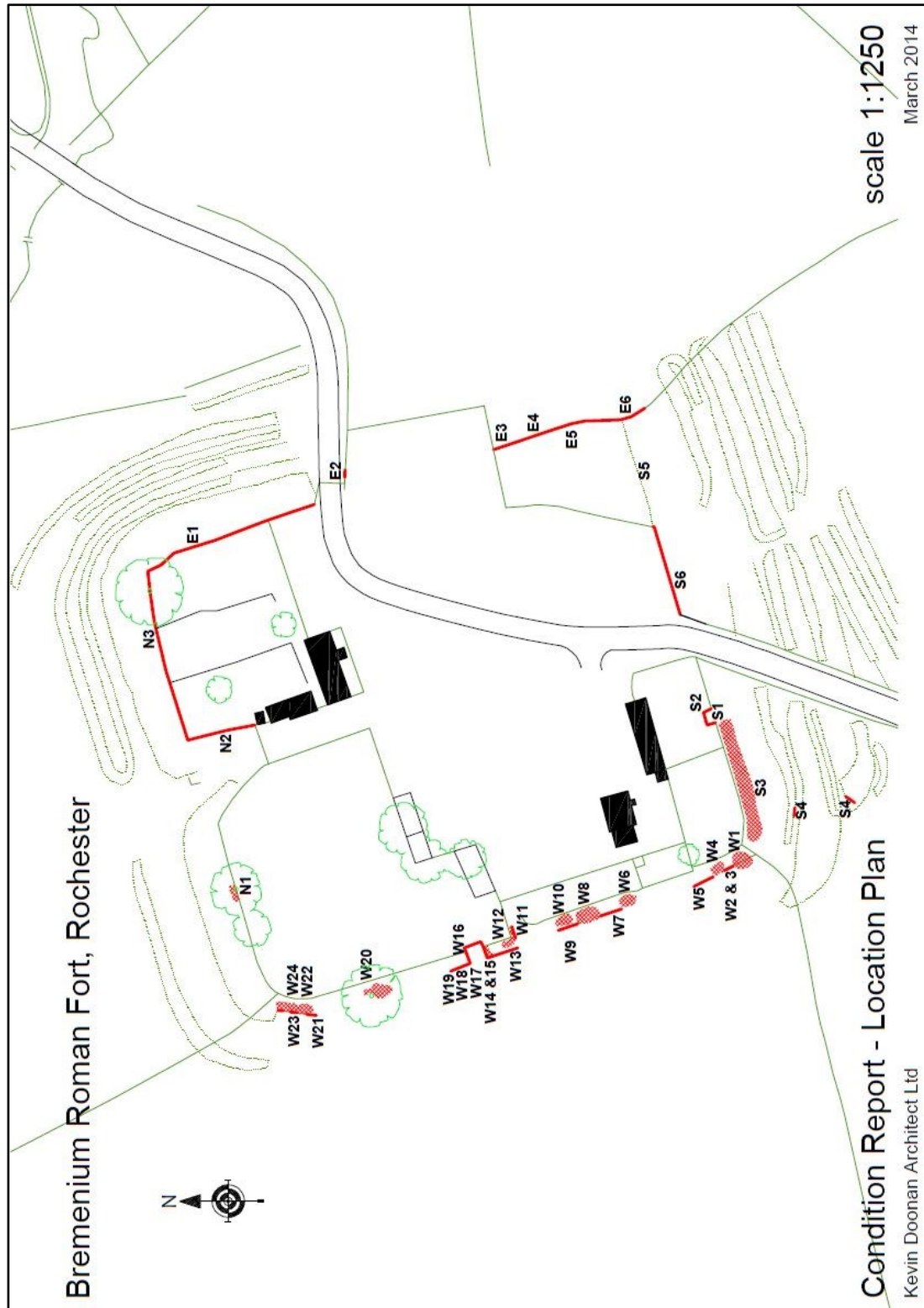
See plan (Fig. 3) at end of section for location of defects and see Condition Report in CMP

No.	Type	Location	Defect	Repair	Monitoring Required: <b>Constant</b> <b>Intermittent</b>
S1	Standing masonry (tower)	South-west Interval tower	Open joints in lower masonry	Deep tamping	<b>Intermittent</b>
S2	Standing masonry (tower)	South-west Interval tower	Loose bedded stones at top of east side wall	Rebedding of loose stones. Turf capping and clumping	<b>Constant</b> during removal and rebedding. <b>Intermittent</b> during turfing
S3	Rampart	South-west perimeter	Loose, exposed and fragile rubble	Turf clumping around loose stones	<b>Intermittent</b>
S4	Outer ditches	South-west perimeter	Sheep scrapes in ditch banks	'Icelandic' turf repairs	<b>Intermittent</b>
S5	Dry-stone perimeter wall	Along rampart east of access road	Wall in state of collapse	Take down and rebuild	<b>Constant</b> as base of dry-stone wall stripped and rampart/wall exposed
W1	Rubble corework	South angle of west perimeter	Large area of loose rubble, possibly some Roman core	Spread very exposed/loose rubble and re-bed with turf and topsoil	<b>Constant</b> during removal of stonework, then <b>intermittent</b>
W2 & W3	Standing masonry (curtain)	Towards south angle	Voided joints and displaced stones. Missing stone	Rebed loose stones. Deep tamp. Removal of turf, tail bedding of upper courses and replace turf	<b>Constant</b> during removal and replacement, then <b>intermittent</b>
W4	Exposed core in rampart face	West rampart	Loose stones and eroding rampart	Deep tamping of stones with galleting where required. Turf cap and turf clumping	<b>Constant</b> as stones exposed, then <b>intermittent</b>
W5	Standing masonry (curtain)	West rampart	Open joints bulge at north end and displaced stone	Turf clumping, deep tamping across bulge and replacement of stone	<b>Intermittent</b>
W6	Rubble and wall core	West rampart	Loose and eroding surface	Turf clumping and topsoil to stabilise rubble and core. Area of facing rebuilt next to W5 if photographs show disposition	<b>Constant</b> when facework rebuilt, then <b>intermittent</b>
W7	Standing masonry (curtain)	West rampart	Loose upper stones with no turf capping. Open joints	Upper stones removed and rebedded. Tail bedding to stones below, deep tamping and turf capping added	<b>Constant</b> when facework rebuilt, then <b>intermittent</b>
W8	Rubble and wall core	West rampart	Loose and eroding surface	Turf clumping and topsoil to stabilise rubble and core	<b>Intermittent</b>

W9 & W10	Standing masonry (curtain) and wall core	West rampart	Open joints in facework. Loose core above	Deep tamping with galleting to stabilise	Intermittent
W11	Dry-stone faced wall core (curtain) at farm entrance	Over west rampart	Loose (modern) facing and core	Rebuild dry-stone face to stabilise core with pinnings if needed. Turf capping	Constant as core exposed, then intermittent
W12	Wall core and rampart	West rampart	Loose core and eroding rampart	Turf capping and turf clumping to stabilise core and rampart. Possible use of mortar and galleting	Intermittent
W13	Standing masonry (curtain)	West rampart	Open joints Eroded turf capping	Deep tamp open joints Turf clumping	Intermittent
W14	Standing masonry	West gate	Displaced stone	Re-locate	Constant
W15	Core	West gate	Loose core work and eroded turf capping	Add turf clumping to stabilise core	Intermittent
W16	Standing masonry	West gate	Open joints with intrusive woody vegetation	Rake out and remove vegetation. Deep tamping?	Intermittent
W17	Standing masonry	West gate	Loose facing stones at N. end of gate. Eroding turf capping	Rebed loose stones and reinstate turf capping	Constant when stones rebedded, then intermittent
W18	Standing masonry	West rampart	Bramble infested turf capping	Remove turf capping, tail bed exposed stones and replace turf capping	Constant when turf removed, then intermittent
W19	Standing masonry (curtain)	West rampart	Masonry leaning out and upper courses with open joints. Bramble infested turf capping and exposed core	Remove infested turf capping. Number top 4 courses of facework and take down. Rebuild facework and reinstate turf capping	Constant when facework removed and rebuilt, then intermittent
W20	Tree	On west rampart	Severe stock erosion around base impacting on rampart core	Level hollow around tree with 'Icelandic' turf repair and topsoil	Intermittent
W21	Standing masonry (curtain)	West rampart	Loose masonry and open joints	Remove capping. Number top 2 courses and remove. Tail bed and replace. Add turf capping	Constant when stones removed and rebuilt, then intermittent
W22	Wall core and rampart	West rampart	Loose and exposed core, eroding rampart	Mortar and galleting to support loose core work, turf clumping to stabilise rampart	Intermittent
W23	Standing masonry (curtain)	West rampart	Loose upper course, open joints and eroded turf capping	Number and replace and rebed top course, deep tamp and add turf capping	Constant when stones removed and rebedded, then intermittent
W24	Wall core and rampart	West rampart	Very exposed and loose core, eroding rampart	'Icelandic' turf repair to main cavity, possibly mortar and galleting to fix loose core	Intermittent



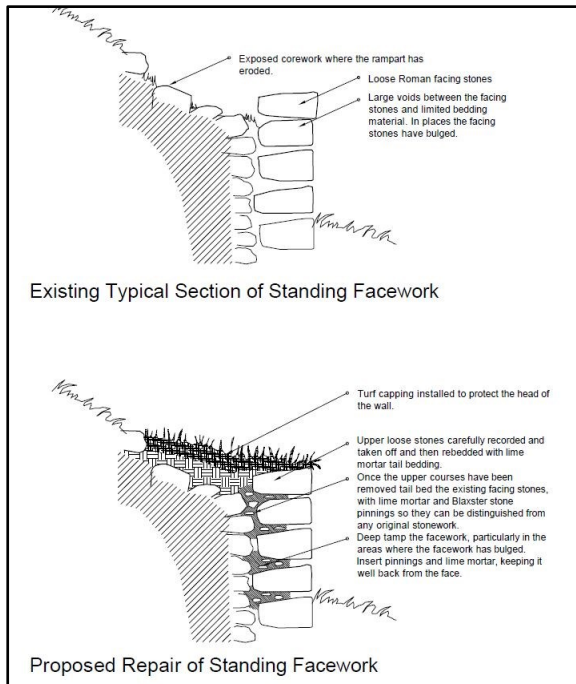
N1	Wall core and rampart	North rampart	Stock erosion next to a tree	Turf clumping or possibly 'Icelandic' repair	Intermittent
N2	Dry-stone wall	Up to north gate	Dry stone wall collapsed at N/S ends	Take down wall and rebuild	Constant as base of wall stripped, then intermittent
N3	Dry-stone wall	Along north rampart	Wall in poor condition and tumbled	Take down wall and rebuild apart from central 5m section	Constant as base of wall stripped, then intermittent
E1	Dry-stone wall	Along east rampart	Wall in poor condition and tumbled	Take down wall and rebuild apart from central 10m section	Constant as base of wall stripped, then intermittent
E2	Wooden stile	On east rampart	Defective	replace	Constant during excavations if required
E3	Dry-stone wall	Along east rampart	Wall has collapsed	Rebuild?	
E4	Dry-stone wall	Along east rampart	Invasive woody vegetation	Cut back and poison stumps	Intermittent
E5	Dry-stone wall	Running up east rampart	Partially collapsed. Small tree	Take down and rebuild wall. Remove tree	Constant as base of wall stripped, then intermittent



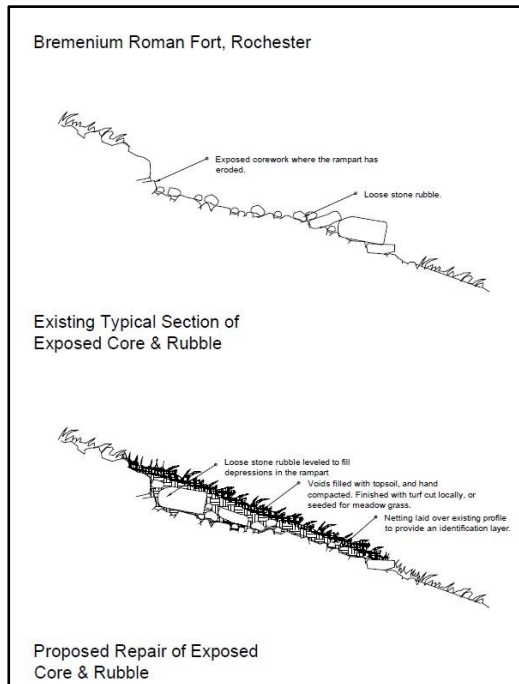
**Figure 3:** Condition plan for the ramparts and environs of Bremenium Roman Fort at High Rochester (Doonan Architects 2014). See Appendix 1 above and condition survey in Management Plan for descriptions of identified areas of work.

## Defect Repairs and Rebuilding (Drawings by Doonan Architects)

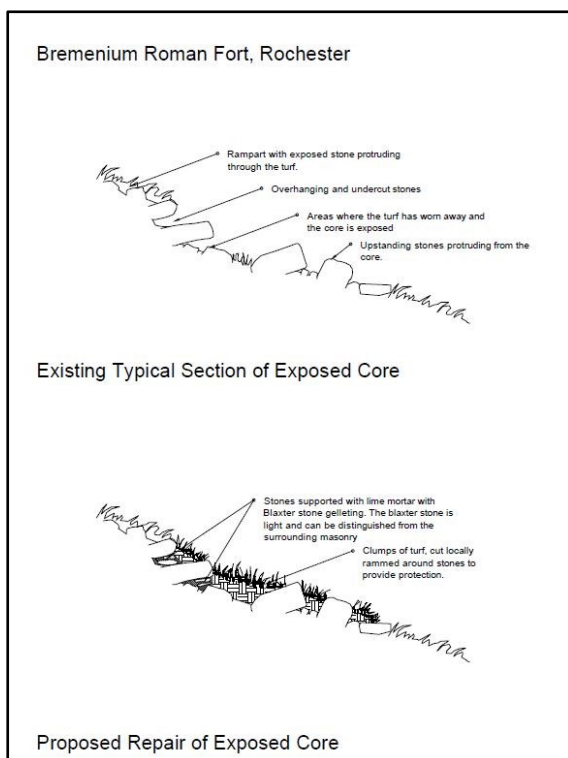
**Figure 4: Standing Facework**



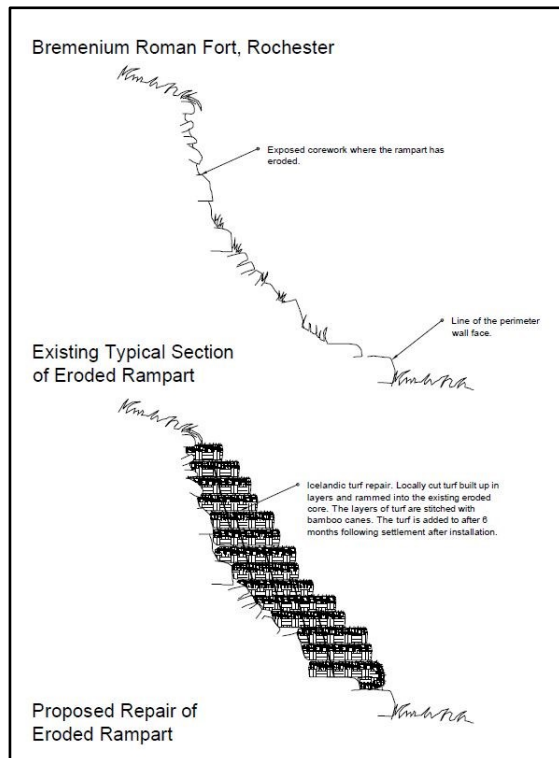
**Figure 5: Exposed Core and Rubble (A)**



**Figure 6: Exposed Core and Rubble (B)**

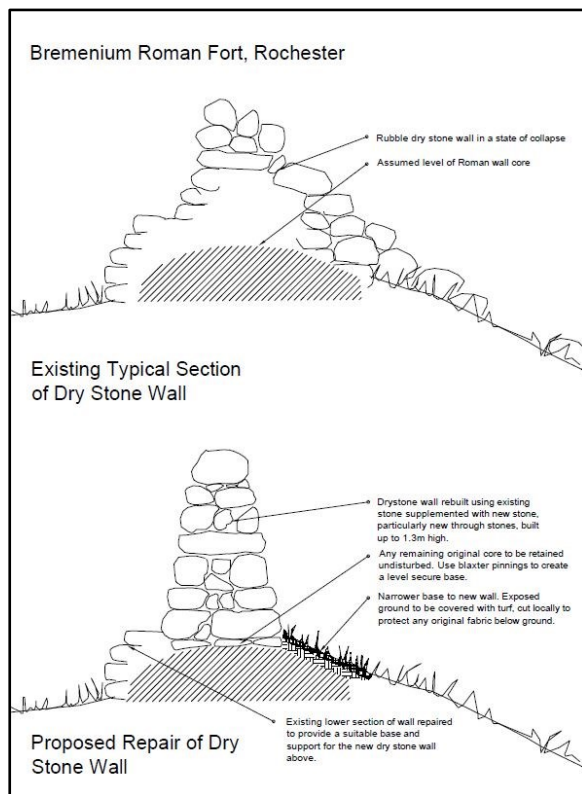


**Figure 7: Repair of Eroded Rampart**





**Figure 8: Taking Down and Rebuilding Dry-Stone Walls**



## Appendix 3: Scheduled Monument Consent Document



Historic England

NORTH EAST OFFICE

Mr Tristan Spicer  
Doonan Architects  
16 Hallstile Bank  
Hexham  
Northumberland  
NE46 3PQ

Direct Dial: 0191-269-1239

Our ref: S00184069

24 January 2018

Dear Mr Spicer

**Ancient Monuments and Archaeological Areas Act 1979 (as amended); Section 2  
control of works  
Application for Scheduled Monument Consent**

**BREMENIUM ROMAN STATION, HIGH ROCHESTER  
Scheduled Monument No: SM ND 20, HA 1006610  
Our ref: S00184069  
Application on behalf of Northumberland National Park Authority**

1. I am directed by the Secretary of State for Digital, Culture, Media & Sport to advise you of the decision regarding your application for Scheduled Monument Consent received 21 December 2017 in respect of proposed works at the above scheduled monument concerning the repair and consolidation of the standing Roman facework, the exposed corework, the repair of the sheep scrapes and re-building of the collapsed dry stone walls at the head of the perimeter embankment. The works were detailed in the following documentation submitted by you:

- Doonan Architect Drawings:
  - 1008 E01 Existing Plans
  - 1008 E02 Existing Elevations
  - 1008 P01 Proposed repair plans
  - 1008 P02 Proposed repair elevations
- Doonan Architect Documents:
  - Conservation Management Plan
  - Scheduled monument plan location
  - Specification
  - Schedule of Works
- Brementium Roman Fort, High Rochester, Northumberland, Written Scheme of Investigation for Archaeological Input During Conservation Works. Alan Williams Archaeology, August 2017.



BESSIE SURTEES HOUSE 41-44 SANDHILL NEWCASTLE-UPON-TYNE NE1 3JF

Telephone 0191 269 1255  
[HistoricEngland.org.uk](http://HistoricEngland.org.uk)



Historic England is subject to the Freedom of Information Act 2000 (FOIA) and Environmental Information Regulations 2004 (EIR). All information held by the organisation will be accessible in response to an information request, unless one of the exemptions in the FOIA or EIR applies.

Historic England will use the information provided by you to evaluate your application for Scheduled Monument Consent. Information contained in this application and any information obtained from other sources will be retained in all cases in hard copy form and/or on



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2. In accordance with paragraph 3(2) of Schedule 1 to the 1979 Act, the Secretary of State is obliged to afford you, and any other person to whom it appears to the Secretary of State expedient to afford it, an opportunity of appearing before and being heard by a person appointed for that purpose. This opportunity was offered to you by Historic England and you have declined it.

3. The Secretary of State is also required by the Act to consult with the Historic Buildings and Monuments Commission for England (Historic England) before deciding whether or not to grant Scheduled Monument Consent. Historic England considers the effect of the proposed works upon the monument to be beneficial for the preservation of the monument, but necessitating unavoidable but on balance acceptable disturbance to buried archaeological deposits. Appropriate arrangements for excavation and / or recording are specified in the application.

I can confirm that the Secretary of State is agreeable for the works to proceed providing the conditions set out below are adhered to, and that accordingly Scheduled Monument Consent is hereby granted under section 2 of the 1979 Act for the works described in paragraph 1 above, subject to the following conditions:

- (a) The works to which this consent relates shall be carried out to the satisfaction of the Secretary of State, who will be advised by Historic England. At least 4 weeks' notice (or such shorter period as may be mutually agreed) in writing of the commencement of work shall be given to Ms. Lee McFarlane, Inspector of Ancient Monuments, Historic England, Bessie Surtees House, 41-44 Sandhill, Newcastle, NE1 3JF; 0191-269-1239; lee.mcfarlane@HistoricEngland.org.uk, in order that an Historic England representative can inspect and advise on the works and their effect in compliance with this consent.
- (b) The specification of work for which consent is granted shall be executed in full.
- (c) All those involved in the implementation of the works granted by this consent must be informed by the owner, occupier and/or developer that the land is designated as a scheduled monument under the Ancient Monuments and Archaeological Areas Act 1979 (as amended); the extent of the scheduled monument as set out in both the scheduled monument description and map; and that the implications of this designation include the requirement to obtain Scheduled Monument Consent for any works to a scheduled monument from the Secretary of State prior to them being undertaken.
- (d) Equipment and machinery shall not be used or operated in the scheduled area in conditions or in a manner likely to result in damage to the monument/ ground disturbance other than that which is expressly authorised in this consent.



BESSIE SURTEES HOUSE 41-44 SANDHILL NEWCASTLE-UPON-TYNE NE1 3JF

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- (e) The specified works to which this consent relates shall be carried out only by Alan Williams of *Alan Williams Archaeology* and his nominated excavation team.
- (f) The written scheme investigation (including analysis, post-excavation and publication proposals) for which consent is granted shall be executed in full, unless variations have been agreed under the terms of condition 1.
- (g) A report on the archaeological recording shall be sent to the Northumberland Historic Environment Record and to Claire Botham at Historic England within 3 months of the completion of the works (or such other period as may be mutually agreed).
- (h) The contractor shall complete and submit an entry on OASIS (On-line Access to the Index of Archaeological Investigations - <http://oasis.ac.uk/england/>) prior to project completion, and shall deposit any digital project report with the Archaeology Data Service, via the OASIS form, upon completion.

4. By virtue of section 4 of the 1979 Act, if no works to which this consent relates are executed or started within the period of five years beginning with the date on which this consent was granted (being the date of this letter), this consent shall cease to have effect at the end of that period (unless a shorter time period is set by a specific condition above).

5. This letter does not convey any approval or consent required under any enactment, bye law, order or regulation other than section 2 of the Ancient Monuments and Archaeological Areas Act 1979.

6. Your attention is drawn to the provisions of section 55 of the 1979 Act under which any person who is aggrieved by the decision given in this letter may challenge its validity by an application made to the High Court within six weeks from the date when the decision is given. The grounds upon which an application may be made to the Court are (1) that the decision is not within the powers of the Act (that is, the Secretary of State has exceeded the relevant powers) or (2) that any of the relevant requirements have not been complied with and the applicant's interests have been substantially prejudiced by the failure to comply. The "relevant requirements" are defined in section 55 of the 1979 Act: they are the requirements of that Act and the Tribunals and Inquiries Act 1971 and the requirements of any regulations or rules made under those Acts.



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Historic England

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Yours sincerely

**Lee McFarlane**

Inspector of Ancient Monuments

E-mail: [lee.mcfarlane@HistoricEngland.org.uk](mailto:lee.mcfarlane@HistoricEngland.org.uk)

For and on behalf of the Secretary of State for Digital, Culture, Media and Sport



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