



**ELECTRICITY NORTH WEST**

**LAND AT CARLISLE CASTLE,  
CARLISLE,  
CUMBRIA**

**ARCHAEOLOGICAL WATCHING BRIEF REPORT**

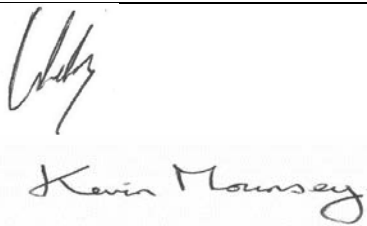

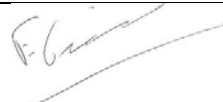
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**ELECTRICITY NORTH WEST**

**Land at Carlisle Castle, Carlisle, Cumbria**

**Archaeological Watching Brief Report**

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DESK BASED ASSESSMENTS  
 ARCHAEOLOGICAL EVALUATION  
 ARCHAEOLOGICAL EXCAVATION  
 GEOPHYSICAL SURVEY  
 TOPOGRAPHIC AND LANDSCAPE SURVEY  
 HISTORIC BUILDING RECORDING  
 ENVIRONMENTAL SERVICES

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## SUMMARY

Wardell Armstrong was commissioned by Electricity North West to undertake a rapid desk-based assessment and archaeological watching brief during emergency electrical repairs within the scheduled site of Carlisle Castle (NHL 1014579). As the repair work involved groundworks within a scheduled monument, Andrew Davison, North West Inspector at Historic England, requested, as a condition of scheduled monument consent, that an archaeological watching brief be carried out. This was to be implemented during all groundworks undertaken in association with the repair work carried out to a high voltage electric cable.

The key archaeological potential was based on the location of the groundworks within the outer bailey of Carlisle Castle (NHL 1014579). The monument includes the upstanding and buried remains of Carlisle medieval tower keep, two lengths of Carlisle city wall, a 16<sup>th</sup> century gun battery and the buried remains of the Roman fort (*Luguvalium*), much of which underlies the later castle. There was the potential for important surviving sub-surface archaeological remains to be revealed by groundworks occurring as part of the repair works to the electricity cable.

The archaeological watching brief, undertaken on Wednesday 21<sup>st</sup> February 2018, monitored all groundworks associated with the repair of a sub-surface electric cable. This consisted of the excavation of an L-shaped trench by a small mechanical excavator. The excavation was located adjacent to the substation, which was situated on the southern edge of the castle, to the west of the main gatehouse.

The L-shaped trench was excavated over the top and either side of a series of high voltage electric cables buried at a depth of 0.40m. Essentially the trench matched the route of the cables and therefore previous groundworks. Modern deposits of topsoil, tarmacadam, gravel, sand and sub-base were encountered along with post medieval made ground and redeposited natural substrate.

Despite the high potential for archaeological features to be encountered during the scheme of works, no evidence for significant archaeological features was observed.

## **ACKNOWLEDGEMENTS**

Wardell Armstrong LLP (WA) thank Victoria Armstrong, Estates and Wayleaves Officer at Electricity North West for commissioning the project, and for all assistance throughout the work. Also, WA thank groundwork staff of Electricity North West, headed by Andrew Bell, for all assistance.

The rapid desk-based assessment research was carried out by Cat Peters and the archaeological watching brief monitoring was undertaken by Kevin Mounsey, both of whom contributed to the report. The figures were produced by Helen Phillips. The project was managed by Frank Giecco and the report was also edited by Frank Giecco.

## **1 INTRODUCTION**

### **1.1 Project Circumstances**

1.1.1 In January 2018, Wardell Armstrong (WA) undertook an archaeological watching brief during groundworks associated with the repair of a sub-surface high voltage electric cable within the grounds of Carlisle Castle (NY 39690 56198; Figure 1). The work was commissioned by Victoria Atkinson, Estate and Wayleaves Officer, Electricity North West.

1.1.2 Archaeological work was required as a condition of scheduled monument consent, as specified by Andrew Davison, North West Inspector for Historic England, because of the location of the groundworks within a scheduled area. The aims of the scheduling are to protect the upstanding and buried remains of Carlisle Castle (NHL 1014579). The groundworks were to take place immediately north of, and adjacent to, an existing electrical substation situated at the southern edge of the castle complex, adjacent to the outer gatehouse, also known as de Ireby's Tower. This gatehouse had been substantially altered between 1378 and 1783 and functioned as the residential quarters for the constable of the castle and as a key administrative, financial and judicial centre for the county.

### **1.2 Project Documentation**

1.2.1 The project conforms to a Written Scheme of Investigation (WA 2018a), approved by Andrew Davison, North West Inspector for Historic England. All work was undertaken in accordance with a Method Statement, issued by Electricity North West (Electricity North West 2018).

1.2.2 This report outlines the initial desk-based research and the archaeological monitoring undertaken on site, together forming the results of this scheme of archaeological works.

## 2 METHODOLOGY

### 2.1 Standards and Guidance

2.1.1 The archaeological watching brief was undertaken following the Chartered Institute for Archaeologists *Standard and Guidance for archaeological watching briefs* (2014a), and in accordance with the WSI (WA 2018) and the WA fieldwork manual (2017).

### 2.2 Documentary Research

2.2.1 A rapid desk-based assessment was undertaken as part of this programme of works and the results are included within this report. The aims of the rapid desk-based assessment were to set out the archaeological and historical background of the site to inform on the potential archaeological finds and features which may have been encountered during the high voltage cable repair groundworks.

### 2.3 The Watching Brief

2.3.1 The watching brief comprised the monitoring of all groundworks occurring as part of the repair work carried out to a sub-surface high voltage electric cable situated adjacent to and immediately to the north of an existing substation within the grounds of Carlisle Castle (Figure 1). The groundworks involved the excavation of a L-shaped trench, exposing a series of high voltage electric cables (Figure 2).

2.3.2 The aims of this monitoring were to:

- to establish the presence/absence, nature, extent and state of preservation of archaeological remains and to record these where they were observed;
- to establish the character of those features in terms of cuts, soil matrices and interfaces;
- to recover artefactual material, especially that useful for dating purposes;
- to recover palaeoenvironmental material where it survives in order to understand site and landscape formation processes.

2.3.3 A full professional archive has been compiled in accordance with the project specification, and the Archaeological Archives Forum recommendations (Brown 2011). The archive will be deposited within Tullie House Museum, with a digital copy of the report sent to the Cumbria County Council Historic Environment Service (CCCHES) in Kendal. The archive can be accessed under the unique project identifier **WA 18, TLE-A, CL12118**.



2.3.4 Wardell Armstrong Archaeology supports the Online Access to the Index of Archaeological Investigations (OASIS) project. This project aims to provide an on-line index and access to the extensive and expanding body of grey literature, created as a result of developer-funded archaeological work. As a result, details of the results of this project will be made available by WA as a part of this national project. The OASIS reference for the project is: **wardella2-310226**.

### 3 BACKGROUND

#### 3.1 Location and Geological Context

3.1.1 Carlisle Castle is located close to the confluence of the River Eden and River Caldew to the north-west of the historic core of the city of Carlisle (Figure 1). The area affected by the groundworks lies towards the southern extent of the castle complex, west of the gatehouse and to the immediate north of an existing electricity substation (NY 39690 56198; Figure 2).

3.1.2 The underlying solid geology within the area of investigation is mapped as mudstone of the Mercia Mudstone Group, formed approximately 201 to 252 million years ago in the Triassic Period. This is overlain by superficial deposits of sand, silt and clay Alluvium deposited up to 2 million years ago during the Quaternary Period (BGS 2018).

#### 3.2 Historic Landscape Character

3.2.1 Carlisle Castle is located within 'Area 10: Carlisle' (Cumbria County Council 2009, 81). Its principal character is dominated by urban development, with a highly nucleated settlement pattern.

3.2.2 The legacy of this character area is '*a largely 19<sup>th</sup> and 20<sup>th</sup> century landscape with moderate legibility of landscape elements of medieval origin, and moderate survival of 19<sup>th</sup> century industrial features*' (Cumbria County Council 2009, 51).

#### 3.3 Historical and Archaeological Background

3.3.1 A rapid desk-based research exercise was carried out to provide a background to the works, and to outline the archaeological potential of the area based on a study area of up to 0.5km from the site. This was undertaken using previous archaeological works, online access to Cumbria County Council's Historic Environment Record (CCC HER 2018), CASCAT, the Cumbria Archive Centres online catalogue (CAC), and the National Heritage List (NHL 2018) as well as other readily available sources, referenced as relevant within the text. The results are outlined below:

3.3.2 **Prehistoric:** as yet there is no known evidence for prehistoric activity at the present fort site, though the potential for prehistoric remains in the vicinity cannot be ruled out.

3.3.3 **Romano-British:** a turf and timber fort was established at the present castle site in the early AD 70s (CCC HER 43216), the western and southern defences having been located during limited targeted investigations, along with a waterlogged and remarkably well-

preserved timber gateway. Evidence has been found for the movement of the defences southwards, suggesting an enlargement of the fort, and in the third century it appears to have been extended again. It continued in use until the AD 330s, after which point occupation is unclear, although scattered traces of a number of crudely built stone structures of 4<sup>th</sup> century origin were built on the later site of the barracks.

3.3.4 **Medieval:** an early medieval brooch find has been recovered from Carlisle Castle (CCC HER 463), though the earliest elements of the extant castle originate in the 11<sup>th</sup> century (CCC HER 5636; NHL 1014579). Documentary sources reference the earliest castle as being constructed in 1092 by William II (Rufus). The construction of the present keep (NHL 1208315) began in the 1120s, and this was protected by an inner bailey curtain wall, now entered through the inner gatehouse or Captain's Tower, built in the 1160s (NHL 1297368). The early inner bailey included a single range comprising the royal apartments, the great hall and a chapel, an area now occupied by 19<sup>th</sup> century magazine (NHL 1197006), militia store (NHL 1293187) and Regimental Museum buildings (NHL 1197007). To the west of the inner bailey lies the larger outer bailey, the two separated by a ditch, which has a half-moon battery extending into it, built in 1542 (NHL 1197005). The outer curtain wall and outer gatehouse (NHL 1197000) was built by Henry II in the 1160s. The outer gatehouse, also known as de Ireby's Tower (NHL 1197000) was altered between 1378 and 1383 by John Lewyn, apparently destroyed in the 14<sup>th</sup> century and altered in the 19<sup>th</sup> and restored in the 20<sup>th</sup> centuries. It presently houses the ticket office and sales area for visitors to the castle, and it just to the south-east of the area to be affected by the groundworks. Various finds have been recovered from the area further attesting to medieval activity at the castle.

3.3.5 **Post-Medieval and Modern:** the castle was adapted many times over the proceeding decades and centuries, in relation to border and territory clashes with the Scots between the 13<sup>th</sup> and 15<sup>th</sup> centuries, refortification during the English Civil War and as a result of further military action in 1745 when Charles Edward Stuart took over the castle. A detailed plan of 1749 shows the castle complex after these changes, and indicates that the range to the south-west of the present watching brief area was a horse barrack (Figure 3). During the 19<sup>th</sup> century, a number of military buildings were constructed within the outer bailey, including an armoury (NHL 1297367), a gunner's house (NHL 1197003), a canteen in 1829 (NHL 1197004), a barrack block in 1836 (NHL 1208301), an officers' mess in 1876 (NHL 1208359) and garrison cells in 1832 (NHL 1293243). The former garrison cells building lies to the south-west of the area to be monitored during the watching brief. Alma block, on the north-east side of the outer

bailey, was built in 1932 (NHL 1297366). The building to the immediate south-east, the electricity substation, first appears on the 1940 Ordnance Survey map (not illustrated).

3.3.6 **Summary:** the area due to be affected by the groundworks and monitored during the watching brief is located within the outer bailey of the scheduled area of Carlisle Castle (NHL 1014579), the origins of which lie in the 11<sup>th</sup> century, but the castle itself overlies an earlier Roman fort. There is therefore the ongoing potential for significant finds of early use of the site to survive. The castle continued to be utilised, for defence, as a garrison, as the County Archives and as a tourist site, during the post medieval and modern periods.

## 4 ARCHAEOLOGICAL WATCHING BRIEF RESULTS

### 4.1 Introduction

4.1.1 The watching brief occurred on Wednesday 21<sup>st</sup> February 2018. It comprised the monitoring of all groundworks occurring due to the need to carry out repair works to a sub-surface, high voltage electric cable within the grounds of Carlisle Castle (NHL 1014579). This necessitated exploratory excavation using a tracked mini excavator with a straight-edged bucket.

### 4.2 Results

4.2.1 The groundworks carried out to repair a faulty high voltage electric cable were situated on the southern side of Carlisle Castle adjacent to the outer gatehouse (Figure 2; Plate 1). A tracked mini excavator using a straight edged bucket excavated a L-shaped trench adjacent to the wooden doors leading into a small compound for an electric substation.



*Plate 1: Location of groundworks. Safety barriers are to the front of the electric substation access doors, facing south-west*

4.2.2 The west, south-west to east, north-east arm of the trench was situated on a grass covered area within the Castle grounds. It measured 2.33m in length and 0.90m in width and was excavated to a maximum depth of 0.70m. Made ground (**101**) consisting of a silty / clay matrix containing red sandstone fragments and sub-rounded stones

was excavated to a depth measuring 0.40m in depth. This was sealed by 0.30m of dark brown, silty, grass covered, topsoil (**100**). Several high voltage electric cables were observed within this trench at a depth of 0.40m (Plate 2).



*Plate 2: L-shaped trench showing exposed high voltage electric cables, facing south-east*

4.2.3 The north, north-west to south, south-east arm of the trench measured 2.30m in length and 1.03m in width across the tarmacadam walkway (**102**). It was excavated to a maximum depth of 0.78m. Under the walkway (**102**) the electric cables were encased in a modern 15mm sub-base deposit (**103**). The east, north-east edge of this trench arm revealed 0.15m of redeposited, orange clay sealed by 0.57m of made ground (**101**) covered by 0.06m of tarmacadam walkway (**102**).

4.2.4 As the north, north-west to south, south-east arm of the trench entered into the substation compound it passed under a concrete threshold and extended for a distance measuring 2.80m up to the substation apparatus. The trench here again measured 0.70m in depth. Orange sand (**105**) measuring 0.58m in depth and

shrouding the electric cables, was sealed by 0.12m of grey, 15mm gravel (104) forming the surface (see plate 3).



*Plate 3: trench showing exposed high voltage electric cables and substation, facing south*

4.2.5 No significant archaeological features were observed during the archaeological monitoring and no significant finds were recovered. No environmental samples were taken.

## 5 FINDS ASSESSMENT

### 5.1 Introduction

4.2.5 A total of 22 artefacts and ecofacts, weighing 581g, were recovered from two stratified and unstratified deposits during a watching brief undertaken at Carlisle Castle, Carlisle, Cumbria (Table 1).

5.1.2 All artefactual and ecofactual material was dealt with according to the recommendations made by Watkinson & Neal (1998) and to the Chartered Institute for Archaeologists (CifA) Standard and Guidance for the collection, documentation, conservation and research of archaeological materials (CifA 2014b). All archaeological material has been boxed according to material type and context, which conforms to deposition guidelines recommended by Brown (2011), EAC (2014), Tullie House Museum and Art Gallery and guidelines published by the Society of Museum Archaeologists (Edwards 2012).

5.1.3 The material archive has been assessed for its local, regional and national potential and further work has been recommended on the potential for the material archive to contribute to the relevant research frameworks.

5.1.4 The artefactual and ecofactual assessment was compiled by Megan Stoakley.

5.1.5 The quantification of bulk material by type and context is visible in Table 1.

Context	Material	Qty	Wgt	Date	Notes
100	Animal Bone	6	134	?	3 x <i>Bos sp</i> vert & limb; 2 x medium-sized ungulate limb frags ( <i>Ovid/Caprid/Sus</i> ) and 1 x <i>Ovid/Caprid</i> radius
101	Animal Bone	7	133	?	1 x miscellaneous limb bone frag; 1 x juvenile <i>Bos sp</i> partial vert; 2 x R <i>Ovid</i> tibiae; 2 x <i>Bos sp</i> ribs & 1 x <i>Bos sp</i> partial proximal tibia
100	CBM	1	158	PM	Partial brick fragment, potentially handmade, hard mid-red fabric, 18th-19th C?
100	Ceramic	2	4	PM	1 x fine red earthenware, terracotta red glaze, rim sherd, small jar, 18th - 19th C?; 1 x Sponge wear shoulder sherd, 19th C
101	Ceramic	1	12	PM	Buckley-type coarse red earthenware, body sherd, 18th-19th C
u/s	Ceramic	1	14	PM	Body sherd from a buff earthenware jar, 19th C



100	Fe	1	95	Mod	Tent peg? Heavy rust corrosion
101	Glass	1	2	PM-Mod	Miscellaneous blue/clear bottle glass
100	Shell	1	22	?	Oyster
101	Shell	1	7	?	Oyster
<b>TOTAL</b>		<b>22</b>	<b>581</b>		

Table 1: Quantification of artefacts and ecofacts by material type and context

## 5.2 Post-medieval Ceramics

5.2.1 Four sherds of late post-medieval pottery, weighing 30g, were recovered from deposits **(100)** **(101)** and unstratified (Table 1). The sherds are in good condition and display little evidence of post-depositional damage.

5.1.2 The sherds were recorded and identified using guidelines published the Medieval Pottery Research Group (MPRG 2001).

5.2.3 Sherds recovered from deposit **(100)**, weighing 4g, comprise a rim sherd of a small, fine red earthenware jar, of probable 18<sup>th</sup> – 19<sup>th</sup> century date, as well as a Sponge wear shoulder sherd from a vessel of 19<sup>th</sup> century date.

5.2.4 The sherd recovered from deposit **(101)**, weighing 12g, comprises a body sherd of Buckley-type coarse red earthenware, of probably 18<sup>th</sup> – 19<sup>th</sup> century date.

5.2.5 The sherd recovered as unstratified, weighing 14g, comprises a body sherd from a buff earthenware jar, which likely dates to the 19<sup>th</sup> century.

5.2.6 The pottery recovered from the watching brief is of little archaeological significance on a local, regional and national level; no further work is recommended.

## 5.3 Post-medieval Ceramic Building Material (CBM)

5.3.1 A single fragment of post-medieval ceramic building material (CBM), weighing 158g, was recovered from deposit **(100)** (Table 1). The artefact is in moderate condition and displays some evidence of post-depositional damage.

5.3.2 The artefact is likely of 18<sup>th</sup> to 19<sup>th</sup> century date and comprises a partial brick fragment in a hard, red fabric with large irregular poorly sorted stone inclusions. The brick fragment appears to be handmade.

5.3.3 The ceramic building material is of little archaeological significance on a local, regional and national level; no further work is recommended.

#### 5.4 **Post-medieval to Modern Glass**

5.4.1 A single fragment of late post-medieval (19th century) to modern clear/blue bottle glass, weighing 2g, was recovered from deposit (101) (Table 1). The artefact is in good condition and displays little evidence of post-depositional damage.

5.4.2 The glass shard is of little archaeological significance on a local, regional and national level; no further work is recommended.

#### 5.5 **Modern Iron**

5.5.1 A single iron artefact, weighing 95g, was recovered from deposit (100) (Table 1). The artefact is in poor condition and displays evidence of heavy rust corrosion.

5.5.2 The artefact comprises a modern tent peg (20th century) and is of little archaeological significance on a local, regional and national level. No further work is recommended.

#### 5.6 **Ecofacts: Oyster Shell**

5.6.1 Two oyster shells, weighing 29g collectively, were recovered from deposits (100) and (101) (Table 1). The shells are in moderate to good condition.

5.6.2 Although the shells are not datable, they were recovered from deposits with late post-medieval ceramics and are likely to be of a contemporary date.

5.6.3 The shells are of little archaeological significance on a local, regional and national level; no further work is recommended.

#### 5.7 **Ecofacts: Zooarchaeological Analysis**

5.7.1 A total of 13 animal bones, weighing 267g, were hand-recovered from deposits (100) and (101). The bone is in moderate to good condition, with only some bones displaying erosion or wear of the cortical surfaces.

5.7.2 The faunal assemblage was rapidly scanned, identified and recorded according to Historic England guidelines for Animal Bones and Archaeology (2014).

5.7.3 A minimum of eight animals is represented in this small assemblage and anatomical elements include limb bones, ribs and vertebral fragments. Species include a juvenile cow, three adult sheep, two medium-sized domestic ungulate and two adult cows.

5.7.4 No unusual pathologies were observed, and no butchery marks or gnawing marks

were recorded. Unusual taphonomic conditions were not observed.

5.7.5 The small assemblage likely represents domestic food waste and is of probable late post-medieval to modern date.

5.7.6 No further work is necessary on the faunal assemblage.

## 5.8 **Statement of Potential**

5.8.1 The artefactual and ecofactual material recovered from the watching brief at Carlisle Castle is of little archaeological significance on a local, regional and national level. No further work is required on the material. The material archive will not be retained.

## 5 CONCLUSIONS

### 5.1 Summary

- 5.1.1 The groundworks were carried out over the line of existing, sub surface, high voltage electric cables. Several of the deposits encountered were modern consisting of sub-base **(103)**, gravel **(104)** and modern sand **(105)**. These were all associated with the original laying of the cables under the tarmacadam walkway **(102)** and within the substation compound. The west, south-west to east, north-east trench wing revealed made ground **(101)** sealed by grass covered topsoil **(100)**. From the made ground **(101)** animal bone fragments and post medieval pottery sherds were recovered dating to the 18<sup>th</sup> and 19<sup>th</sup> century. This suggests that the ground level in this area may have been built up during this period resulting in no medieval deposits being disturbed during these groundworks.
- 5.1.2 No significant archaeological features or finds were observed during the archaeological monitoring of the groundworks.

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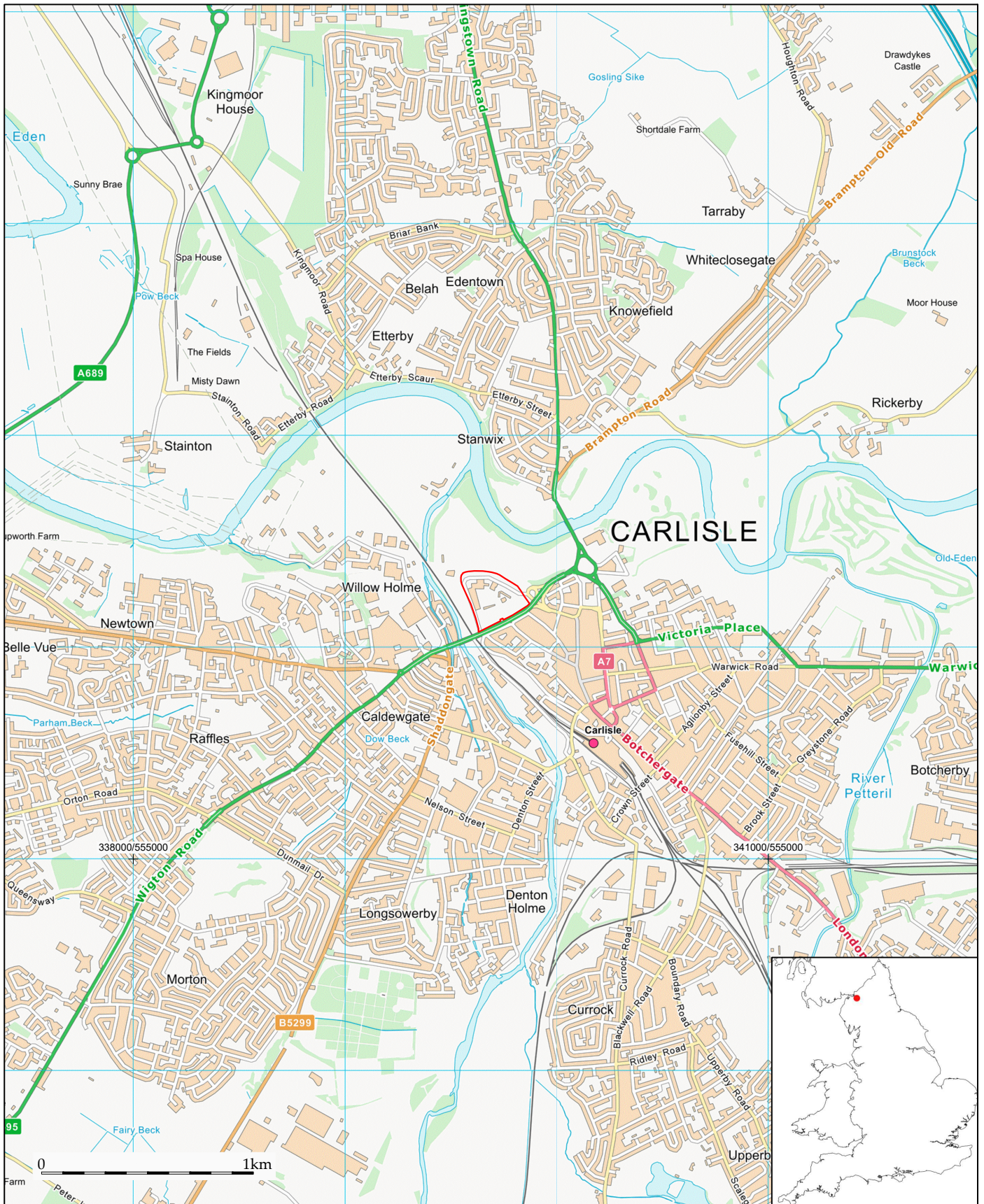
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**APPENDIX 1: FIGURES**






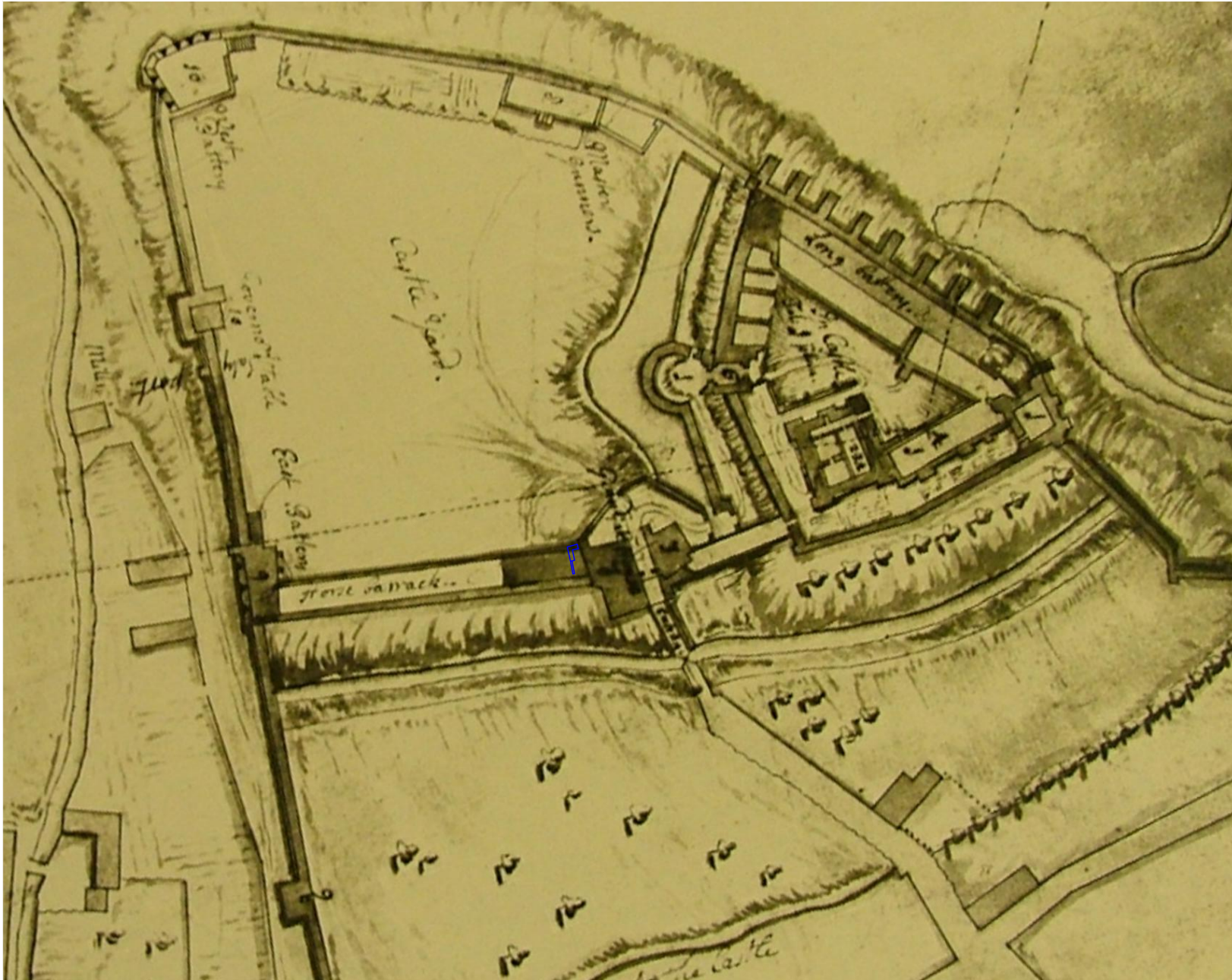
 <p>Wardell Armstrong 2018</p>	PROJECT:	Land at Carlisle Castle	<b>KEY:</b>  <p>Site location and scheduled area of Carlisle Castle and Roman Fort</p> 	<small>Reproduced by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright. All rights reserved. Licence number 100058076.</small>
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	SCALE:	1:25,000 at A4		
	DRAWN BY:	HP		
	CHECKED BY:	HP		
	DATE:	February 2018		
	REPORT No:	CL12118		

Figure 1: Site location.





Figure 2: Trench location plan.



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2018

PROJECT:

Land at Carlisle Castle

CLIENT:

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SCALE: 1:1,250 at A4

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Figure 3: Extract from the 1749 Board of Ordnance Map.

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