

ARCHAEOLOGICAL MONITORING

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A69 LIGHTING WEST DENTON NEWCASTLE UPON TYNE

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A69 LIGHTING, WEST DENTON, NEWCASTLE UPON TYNE

ARCHAEOLOGICAL MONITORING

Summary

This report presents the results of archaeological monitoring of groundworks associated with the replacement of street lighting columns along the A69, on the line of Hadrian's Wall, at West Denton, Newcastle upon Tyne. The report has been produced in accordance with Scheduled Monument Consent (ref. S00073518), as the works location lies within two sections of Scheduled Monument encompassing Hadrian's Wall and its accompanying turrets, milecastle and ditch. The monitoring was undertaken by Northern Archaeological Associates Ltd for Road Link (A69) Ltd, between 21 July and 5 December 2014.

The monitored work included the excavation of footings for replacement lighting columns and trenches for the connecting power cables, both within and adjacent to the Scheduled Area.

The monitoring demonstrated that the natural ground surface had been heavily truncated and infilled along the line of the A69, presumably during its upgrading to a dual carriageway. To the south, the road cutting had been excavated through the sandstone bedrock, a process which would have removed a substantial section of Hadrian's Wall and its associated defences. Fragments of masonry, presumably derived from the wall, were found throughout the excavations.

Excavation of associated cable trenches, across two housing estate roads, Westlands and Roman Way, revealed traces of the ditch accompanying Hadrian's Wall. The trenches were too shallow to prove the depth of the ditch, which was encountered some 0.7m below the modern road surface, but it was at least 5m wide. The principal fill was a blue-grey silty clay, which did not produce any artefacts.

Close to these sections of ditch, the remains of an earlier road surface were recorded in a number of pits. In one location this surface appeared to be a layer of cobbles levelled with angular 'chippings' of whinstone, and the overlying soil deposits contained 19th to early 20th-century potsherds and glass, suggesting a late post-medieval date for the road. Another possible section of earlier road comprised slag bedded on an ashy deposit.

It is considered that, due to the degree of previous ground reduction and construction activities, any future excavation work along the A69 in this area would be unlikely to encounter remains of Hadrian's Wall or its defences. In contrast, the adjacent housing estate roads have seen relatively little disturbance and so excavations here would have some potential for impacting upon archaeological remains.

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ARCHAEOLOGICAL MONITORING

1.0 INTRODUCTION

- 1.1 This report presents the results of archaeological monitoring of groundworks associated with the replacement of street lighting columns along the A69, on the line of Hadrian's Wall, at West Denton, Newcastle upon Tyne (Figure 1). The report has been produced in accordance with Scheduled Monument Consent (ref. S00073518), as the works location lies within two sections of Scheduled Monument (SM nos. TW 28 19 & TW 28 20; Heritage List refs 1003789 & 1003790) encompassing Hadrian's Wall and its accompanying turrets, milecastle and ditch. This also forms part of the buffer zone of the Frontiers of the Roman Empire World Heritage Site (Heritage List 1000098).
- 1.2 The monitoring was undertaken by Northern Archaeological Associates Ltd for Road Link (A69) Ltd, between 21 July and 5 December 2014.

2.0 LOCATION, TOPOGRAPHY AND GEOLOGY

- 2.1 The replacement street lighting was along the A69 at West Denton, Newcastle upon Tyne (Figure 1). The work was undertaken along both sides of the A69 from immediately west of the junction with the A1 (NZ 197 667) for a distance of approximately 1.6km to a point south of a residential street called The Chesters (NZ 181 663). The Scheduled area lies parallel with the A69 and encompasses parts of both carriageways (Figure 2).
- 2.2 The monitored work included the excavation of footings for replacement lighting columns and trenches for the connecting power cables, both within and adjacent to the Scheduled Area (Figure 3).
- 2.3 The solid geology of the area consisted of Carboniferous coal measures, with sandstone outcropping to the south, and coal occurring at or near the surface for some distance to the west (BGS 1981). With the exception of the river terraces, comprising alluvium and sands and gravels, the drift geology consisted of boulder clay (BGS 1977). The soils within the built-up areas were unmapped, but to the west there were slowly permeable fine loams of the Dunkeswick 1 association (Jarvis *et al.* 1984, 165–8).

3.0 ARCHAEOLOGICAL BACKGROUND

3.1 The area of lighting replacement lay on the line of Hadrian's Wall and its associated defences. In the vicinity of West Denton a section of the wall has been preserved alongside the westbound carriageway of the A69. It was

around 10 Roman feet (3m) wide, faced with dressed masonry and with a rubble core. To the north of the wall was a flat area or berm normally about 20 Roman feet (6m) wide (Hadrian's Wall Trust, online). In places, a series of pits have been found on the berm. Some, perhaps all, of the pits had originally held sharpened stakes or branches of thorns, to deter access. Beyond the berm to the north lay a ditch, probably intended to be 30 Roman feet (9m) wide. At a varying distance to the south of the wall was a multiple earthwork known as the vallum, consisting of two banks with a ditch between. It has been suggested that Hadrian's Wall and the vallum delimited a military zone, where civilians were excluded. This zone, including the wall defences and vallum, is part of the Frontiers of the Roman Empire World Heritage Site.

- 3.2 Regularly spaced along the line of the wall were milecastles, i.e. small fortlets approximately one Roman mile apart, between which were two equally spaced turrets. Within the area of archaeological monitoring were milecastles 8 and 9 and between them, turrets 8a and 8b (Figure 2).
- 3.3 Although the construction of the modern A69 will have removed much of the fabric of the wall, turrets and milecastles, there are likely to be substantial but discontinuous below-ground remains.

4.0 AIMS AND OBJECTIVES

- 4.1 The principal aims of the archaeological monitoring were to ensure that the groundworks did not impact upon the structure of Hadrian's Wall, and to identify and record the presence and condition of any associated archaeological features or deposits.
- 4.2 The objectives were:
 - to establish the date, nature, extent, degree of preservation and significance of archaeological features or deposits identified within the trenches or pits;
 - to minimise the impact upon the remains of defences associated with Hadrian's Wall;
 - to recover stratified artefacts and palaeoenvironmental samples, where appropriate;
 - to assess the impacts on the archaeological resource of the area as a basis for future decisions about the preservation of deposits *in situ* or recording in advance of construction;
 - to undertake a scheme of works that meets with the professional standards for archaeological work both nationally and within the local authority within which the development occurred; and

• to produce a report on the results of the archaeological investigation.

5.0 METHODOLOGY

- 5.1 Archaeological monitoring was undertaken in those areas close to the line of Hadrian's Wall and its associated milecastle and turrets.
- 5.2 The various sections of cable trench were excavated using a mini digger. Where the work was within the verge, a toothless bucket was utilised; toothed buckets were necessary for road and pavement crossings. This work was under the supervision of the monitoring archaeologist. The cabling across the carriageway of the A69 was installed using a deep-bladed rock saw, the cable being dropped straight into the cut and sealed with mastic. This element of work was not monitored.
- 5.3 The excavation of the holes for the lighting columns was mostly undertaken by hand, although on some occasions a mini digger was required, again under archaeological supervision.
- 5.4 Where archaeological features or deposits were identified, construction activities ceased to allow the monitoring archaeologist to record the remains. A written and photographic record was maintained. Due to the narrowness of the excavations and the potential for modern contamination, palaeoenvironmental samples were not taken.

6.0 RESULTS

6.1 A summary of the watching brief results is shown in Appendix A, while the locations are indicated on Figure 3. For clarity, only lighting columns specifically referred to in the text are shown on this figure. Prior to excavation, the lighting column pits were given labels LC1-98 (omitting LC56). However, following completion of the installation works, lighting columns were allocated new numbers WD1-97. To avoid confusion during future work, both numbers are referred to in the text below, and a concordance of numbers is given in Appendix B.

North side, adjacent to Westlands

- 6.2 Two sections of cable trenching were monitored within this area (Figure 3). The first was along the verge of the slip road, where the trench was 0.55m deep and encountered only road construction layers. However, there was a fragment of dressed sandstone, potentially derived from Hadrian's Wall (Plate 1).
- 6.3 A second trench was excavated across Westlands, on the western side of the roundabout, to connect the street lighting to the existing electricity main via a distribution box known as Feeder Pillar 1 (FP1). The trench was 0.8m deep,

and exposed the southern edge of a ditch, filled with a humic blue-grey silt (Plate 2). The feature appeared to extend across the full length of the trench (approximately 5m) but its depth was not ascertained. It was assumed that this represented the ditch along the north side of Hadrian's Wall.

North side, alongside Roman Way and South View

- 6.4 The excavation of four separate sections of trenching (Figure 3) and eleven lighting columns was monitored within this section. The sections of trenching along the southern verge of Roman Way, at 0.55m deep, did not encounter any archaeological remains, being entirely within made ground. A trench some 0.9m deep, excavated for approximately 5m across Roman Way to connect Feeder Pillar 3 (FP3) to the existing electricity main, encountered a natural yellow-orange clay overlain by modern topsoil. At the southern end of this trench was a trace of grey silt (not illustrated), possibly ditch fill, suggesting that the extreme northern edge of the ditch was beneath the southern kerb of Roman Way. However, the excavation of nearby lighting columns LC57 and LC59 (WD17 and WD18), about 5m to the south, encountered natural deposits and made ground. This appears to give the ditch a maximum width of 5m.
- 6.5 Within the cable trench between lighting columns LC73 and LC75 (WD25 and WD26), the north-eastern side of the trench contained a grey silty deposit that was absent from the south-western side, suggesting that here, again was the southern edge of the wall ditch. Again the adjacent columns, immediately to the south, encountered natural deposits and made ground. Trenching across Sandringham Road, between LC83 and LC85 (WD27 and WD28), revealed a blue-grey silty deposit at a depth of 0.7m. The work was undertaken at night, so no usable photograph was obtained. To the east of the road crossing, near column LC85 (WD28), the trench continued at a depth of 0.55m, revealing an earlier road surface of whinstone gravel (Plate 3).
- 6.6 The trench excavated to a depth of 0.75m across South View (Plate 4), connecting Feeder Pillar 5 (FP5) to the electricity main, recorded only road construction layers overlying an 'industrial' deposit of ash and slag.
- 6.7 The remaining lighting columns within this section encountered natural deposits overlain by made ground (Plate 5), with the exception of LC69 (WD23), where the earlier road surface of cobbles overlain by whinstone chippings (Plate 6) was again encountered. Within the made ground deposits were several fragments of sandstone, again presumably displaced from Hadrian's Wall.

South side of A69

6.8 Within this section, a length of trenching and the excavation of one lighting column were monitored. The trenching along the southern verge of the A69, together with the pit for column LC88, revealed sandstone bedrock beneath a topsoil layer that in places was no more than 0.05m deep (Plates 7 & 8). A

concerned member of the public enquired about sandstone blocks in the spoil from this area. These were fragments of bedrock only, and none were worked.

Centre of A69

6.9 A shallow trench was excavated for approximately 100m along the central reservation. The trench was 0.3m wide and no more than 0.3m deep and exposed only a deposit of hardcore. Within this were occasional fragments of sandstone, potentially derived from Hadrian's Wall, an above-ground section of which is preserved on the southern side of the road at this point.

7.0 DISCUSSION

- 7.1 The monitoring demonstrated that the natural ground surface had been heavily truncated and infilled along the line of the A69, presumably during its upgrading to a dual carriageway. To the south, the road cutting had been excavated through the sandstone bedrock, a process which would have removed a substantial section of Hadrian's Wall and its associated defences. Fragments of masonry, presumably derived from the wall, were found throughout the excavations.
- 7.2 Excavation of associated cable trenches across two housing estate roads, Westlands (FP1) and Roman Way (FP3), revealed traces of the ditch accompanying Hadrian's Wall. The trenches were too shallow to prove the depth of the ditch, which was encountered some 0.7m below the modern road surface, but it was at least 5m wide. The principal fill was a blue-grey silty clay, which did not produce any artefacts.
- 7.3 Close to these sections of possible ditch, the remains of an earlier road surface were recorded in a number of pits. In one location this surface appeared to be a layer of cobbles levelled with angular 'chippings' of whinstone, and the overlying soil deposits contained 19th to early 20th-century potsherds and glass, suggesting a late post-medieval date for the road. Another possible section of earlier road comprised slag bedded on an ashy deposit.
- 7.4 It is considered that, due to the degree of previous ground reduction and construction activities, any future excavation work along the A69 in this area would be unlikely to encounter remains of Hadrian's Wall or its defences. In contrast, the adjacent housing estate roads have seen relatively little disturbance and so excavations here would have some potential for impacting upon archaeological remains.

Archiving

7.5 The paper and photographic archive will be deposited with a local museums service.

References

- British Geological Survey (1977) *Geological Survey Ten-Mile Map, North Sheet Quaternary Edition* Geological Map
- British Geological Survey (1981) 1:250,000 Solid Edition, Tyne-Tees Sheet 54N 02W. Geological map
- Hadrian's Wall Trust <u>http://www.visithadrianswall.co.uk/empires-edge/about-</u> <u>hadrians-wall/the-building-of-hadrians-wall</u>
- Jarvis, R.A., Bendelow, V.C., Bradley, R.I., Carroll, D.M., Furness, R.R., Kilgour, I.N.L. and King, S.J. (1984) *Soils and Their Use in Northern England.* Soil Survey of England and Wales Bulletin no. **10**

APPENDIX A

Archaeological monitoring summary

Location		Element	Depth	Monitoring results	Interpretation	
North side: eastbound sliproad from A69	LC15-17	Cable trench	0.55m	Mixed compacted clays.	Road embankment	
	LC17-19	Cable trench	0.55m Road sub-base stone chippings, brown sil clay with occ. large s/stones.		Slip road construction	
	LC19-21	Cable trench	0.55m	Road sub-base over rubble, disturbed kerbing and concrete drains.	Former roadside	
	LC21 (FP1)	Cable trench across Westlands for Feeder Pillar 1	0.8m	0.3m of road makeup over blue grey silt with natural clay visible in plan and section in southern end of trench.	Silty ditch fill becoming more humic with depth. North facing slope of Hadrian's Wall ditch visibly aligned with kerb of modern street	
	LC47-49	Cable trench	0.55m	0.4m of concrete and tarmac over compacted dark brown clay	Hardstanding area around bus stop, duct laid directly under tarmac	
North side: between Roman Way and eastbound sliproad to A69	LC51-73	Cable trench	0.55m	0.3-0.4m of topsoil with frequent sandstone boulders, rough masonry and setts over compacted brown clay	Roadside verge consisting of embanked topsoil and demolition rubble	
	LC57 (FP3)	Cable trench across Roman Way for Feeder Pillar 3	0.9m	0.35m of road makeup over 0.4m of compacted road sub-base over yellow orange clay (pos Nat), blue grey silt visible in southern end of trench	Bottom of trench possibly showed truncated natural with possible north edge of Hadrian's Wall ditch under southern kerb of South Road	
	LC57	Column	1.5m	0.28m topsoil over 0.12m tarmac and 1.1m stoney silty clay. Gas main at 1m	Edge of old road overlying natural deposits	
	LC59	Column	0.8m	0.25m topsoil over 0.15m stoney hardcore and 0.2m tarmac, then 0.1m buried topsoil. Stopped by large cobble at 0.8m	Edge of old road overlying made ground	

Location		Element Depth Monitoring result		Monitoring results	Interpretation	
	LC61	Column	0.7m	0.35m topsoil over 0.15m tarmac and 0.2m mixed silty gravel. Stopped by concrete at 0.7m	Edge of old road overlying natural deposits	
	LC63	Column	1.1m	0.3m topsoil over 0.8m+ made ground including concrete and brick rubble	Road embankment	
	LC65	Column	0.6m	0.3m topsoil over 0.3m sand for cable and ducting, stopped.	Uncertain	
	LC69	Column	1.2m	0.25m topsoil over 0.35m made ground containing brick and concrete and fragments of sandstone up to 150mm. Buried topsoil at 0.6m-0.8m depth, over earlier road surface constructed from cobbles with tar, whinstone chippings and steel slag	Earlier road surface overlain by modern road embankment	
North side: between Roman Way and	LC71	Column	1.4m	0.3m topsoil over 0.8m road sub-base and 0.3m buried topsoil mixed with clay. Bedrock at 1.4m	Road embankment	
eastbound sliproad to A69	LC73	Column	1.35m	0.4m topsoil over 0.95m stiff stoney clay with flecks of coal. Bedrock at 1.35m	Natural deposits	
	LC73-75	Cable trench	0.55m	0.3-0.4m of topsoil over light brown/orange boulder clay possibly natural in south-west and dark grey ashy silt in north-east (very much like upper fills of ditch seen elsewhere in corridor)	Grassed dog-walking area, trench narrowness and angle difficult but possible survival of upper ditch fills and southern edge of Hadrian's Wall ditch?	
	LC75	Column	0.7m	0.25m topsoil over 0.45m made ground with fragments of sandstone, one probably derived from Hadrian's Wall. Stopped at 0.7m due to buried cables	Made ground	
	LC83-85	Cable trench across Sandringham Road	0.9m	Connector trench 2.7m x 0.7m. 0.3m of pavement and dolomite over 0.4m of mixed clay, ash and rubble. Blue grey silt encountered at 0.7m	Ditch fill buried under thick modern deposit, no clay visible, possibly middle of Hadrian's Wall ditch?	

Location		Element	Depth	Monitoring results	Interpretation
North side: between Roman Way and eastbound	LC83	Column	1.5m	0.2m topsoil over 0.85m made ground containing sandstone fragments and broken brick. Buried topsoil at depth 1.05m-1.5m then bedrock	Made ground
	LC83 (FP5)	Cable trench across South View for Feeder Pillar 5	0.75m	0.35m road make-up over dolomite. Brown dry/powdery friable ashy silt visible in base at east.	0.75m of road construction over buried 'industrial' deposit
sliproad to A69	LC85	Column	1.5m	0.9m of compacted re-deposited clay over dark grey friable soil with ash and coal	Roadside embankment overlying buried soil horizon
	LC85	Cable trench	0.55m	0.45m of topsoil and turf over compacted stone road metalling	Buried road surface 0.35m below modern street called South View
South side of A69	LC77-88	Cable trench	0.55m	Mixed compacted topsoil 0.05-0.3m thick over sandstone bedrock	Edge of cutting for A69, heavily truncated down to bedrock.
	LC88	Column	1.2m	Mixed compacted topsoil 0.05-0.3m thick over sandstone bedrock	Edge of cutting for A69, heavily truncated down to bedrock.
Centre of A69	LC89-93	Trench along central reservation	0.3m	Road sub-base/ hardcore only. One large stone, possibly derived from wall	Road construction materials only

APPENDIX B

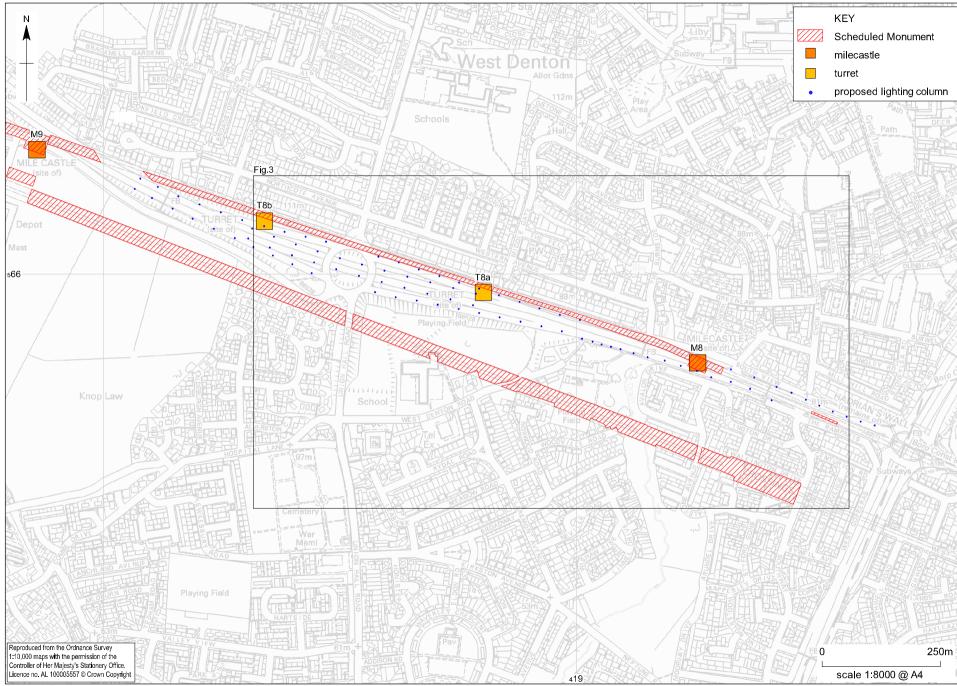
Original	As-dug	Original	As-dug	Original	As-dug
number	number	number	number	number	number
LC1	WD1	LC41	WD49	LC83	WD27
LC2	WD97	LC42	WD54	LC84	WD66
LC3	WD2	LC43	WD50	LC85	WD28
LC4	WD96	LC44	WD53	LC86	WD65
LC5	WD3	LC45	WD51	LC87	WD29
LC6	WD95	LC46	WD52	LC88	WD64
LC7	WD4	LC47	WD12	LC89	WD30
LC8	WD94	LC48	WD86	LC90	WD31
LC9	WD5	LC49	WD13	LC91	WD32
LC10	WD93	LC50	WD85	LC92	WD33
LC11	WD6	LC51	WD14	LC93	WD34
LC12	WD92	LC52	WD84	LC94	WD35
LC13	WD7	LC53	WD15	LC95	WD36
LC14	WD91	LC54	WD83	LC96	WD37
LC15	WD8	LC55	WD16	LC97	WD38
LC16	WD90	LC57	WD17	LC98	WD39
LC17	WD9	LC58	WD82		
LC18	WD89	LC59	WD18		
LC19	WD10	LC60	WD81		
LC20	WD88	LC61	WD19		
LC21	WD11	LC62	WD80		
LC22	WD87	LC63	WD20		
LC23	WD40	LC64	WD79		
LC24	WD63	LC65	WD21		
LC25	WD41	LC66	WD78		
LC26	WD62	LC67	WD22		
LC27	WD42	LC68	WD77		
LC28	WD61	LC69	WD23		
LC29	WD43	LC70	WD76		
LC30	WD60	LC71	WD24		
LC31	WD44	LC72	WD75		
LC32	WD59	LC73	WD25		
LC33	WD45	LC74	WD74		
LC34	WD58	LC75	WD26		
LC35	WD46	LC76	WD73		
LC36	WD57	LC77	WD72		
LC37	WD47	LC78	WD71		
LC38	WD56	LC79	WD70		
LC39	WD48	LC80	WD69		
LC40	WD55	LC81	WD68		

Concordance of lighting column numbers



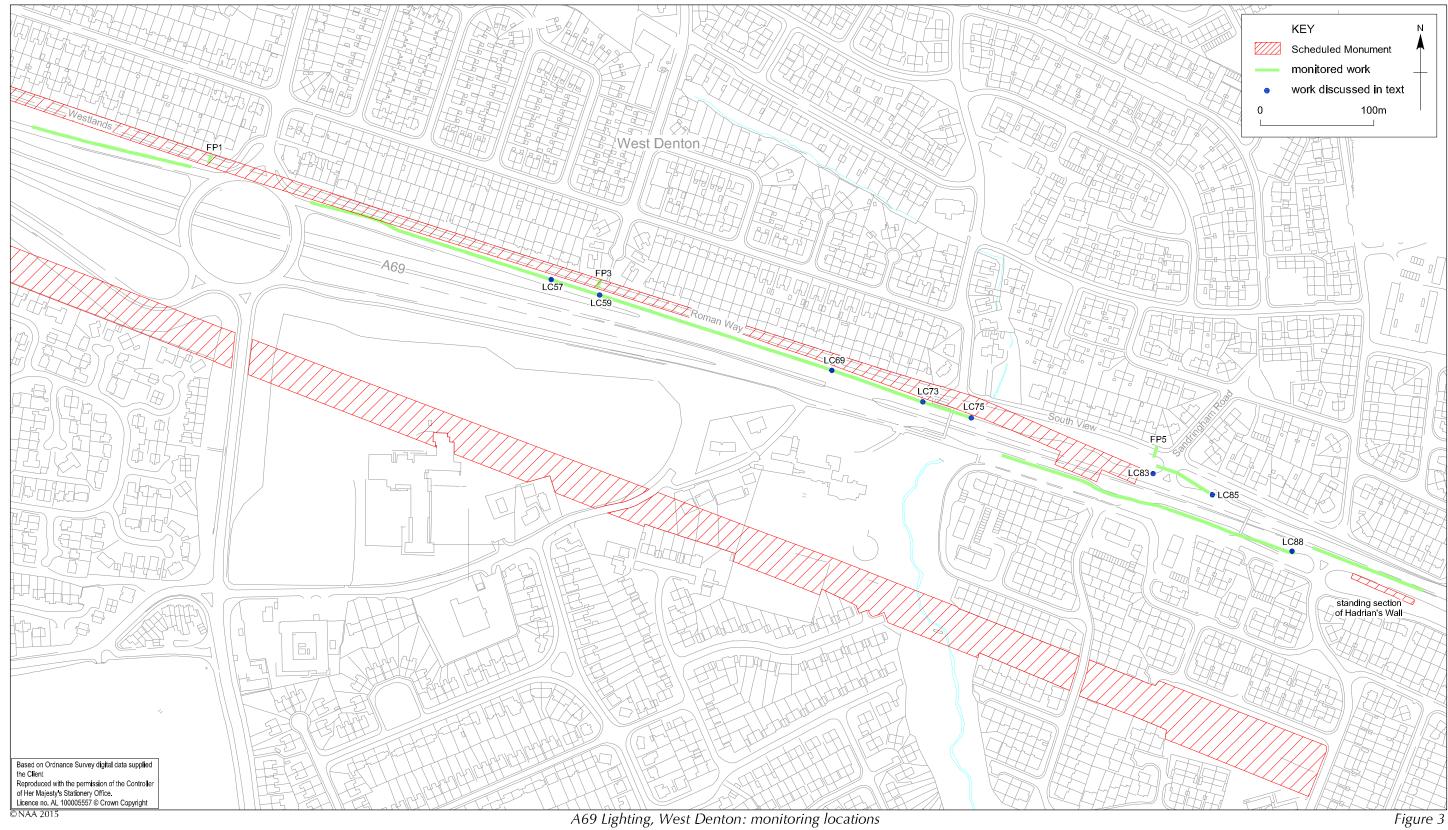
A69 Lighting, West Denton: site location

Figure 1



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A69 Lighting, West Denton: heritage assets



A69 Lighting, West Denton: monitoring locations



A69 Lighting, West Denton: block from Hadrian's Wall?

Plate 1



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Plate 2 A69 Lighting, West Denton: Hadrian's Wall ditch, southern edge (Westlands FPI)



Plate 3 A69 Lighting, West Denton: former road surface near column 85



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A69 Lighting, West Denton: ashy deposit in trench for FP5



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A69 Lighting, West Denton: made ground and bedrock in hole for column 71





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A69 Lighting, West Denton: slag and whinstone from former road surface

Plate 6



⁵ A69 Lighting, West Denton: trenching Plate 7 through bedrock south of A69



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A69 Lighting, West Denton: sandstone bedrock showing edge of cutting, near column 88