

**SWINDON DESIGNER OUTLET CENTRE
KEMBLE DRIVE
SWINDON
WILTSHIRE**

ARCHAEOLOGICAL WATCHING BRIEF

For

FLUID STRUCTURES

CA PROJECT: 3214
CA REPORT: 10166

NOVEMBER 2010

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CA PROJECT: 3214
CA REPORT: 10166

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date	1 November 2010
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date	1 November 2010
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signed	
date	2 November 2010
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SUMMARY

Project Name: Swindon Designer Outlet Centre
Location: Kemble Drive, Swindon, Wiltshire
NGR: SU 1410 8490
Type: Watching Brief
Date: 25, 26 and 31 August 2010
Location of Archive: At CA offices Kemble (no deposit currently possible at Swindon Museum)
Site Code: SDO 10

An archaeological watching brief was undertaken by Cotswold Archaeology during the excavation of geotechnical test pits and the taking of a window sample in the Swindon Designer Outlet Centre, within the former Great Western Railway Works, Swindon, Wiltshire. Four further boreholes were drilled and the cores logged. These confirmed the depths of made ground at the four corners of the site.

No features or deposits other than those associated with the Railway Works were encountered. These consisted of the footings of the various buildings, and the make-up against them.

1. INTRODUCTION

- 1.1 In August 2010 Cotswold Archaeology (CA) carried out an archaeological watching brief for Fluid Structures during geotechnical works at the Swindon Designer Outlet Centre, Swindon, Wiltshire (centred on NGR: SU 1410 8490; Fig. 1). The watching brief was requested by Liz Smith, Conservation Officer, Swindon Borough Council.
- 1.2 The watching brief was carried out in accordance with a detailed *Written Scheme of Investigation* (WSI) produced by CA (2010) and approved by Melanie Pomeroy-Kellinger County Archaeological Officer, Wiltshire County Council. The fieldwork also followed the *Standard and Guidance for an Archaeological Watching Brief* (IfA 2008), the *Statement of Standards and Practices Appropriate for Archaeological Fieldwork in Wiltshire* (WCC 1995) and the *Management of Research Projects in the Historic Environment (MoRPHE): Project Manager's Guide* (EH 2006).

The site

- 1.3 The site lies immediately north of the London to Bristol railway line at c. 100m AOD. It is bounded on the north by Kemble Drive, on the west by Rodborough Road and on the east by a car park and the *Steam* museum (Figs 1 and 2). The site is effectively level.
- 1.4 The site covers an area of c. 4.5ha and is covered with the converted Railway Works buildings, open paved spaces and some modern buildings (Fig. 2). It is currently used almost entirely for retail purposes. The Long Shop, on the south side of the site and part of the 1870s extensions to the original Railway Works, has not been converted to a new use (except at the extreme west end, where it is used as a stock room) and is currently empty.
- 1.5 The underlying geology of the area is mapped as Kimmeridge Clay, but the made ground is so extensive here it is actually shown on the geological map (BGS 1974).

Archaeological background

- 1.6 The archaeological and historical background was presented in the desk-based assessment (CA 2004) and is summarised here. There is no evidence for prehistoric or Roman activity within the vicinity of the site. The first documentary reference to the town is in the Domesday Book of 1086, and the site lies within the northern most part of the parish which was centred on the early settlement at Old

Town. Little is known of the activity within the parish during the medieval period, and it is likely that it formed part of the wider agricultural landscape.

- 1.7 The earliest detailed records of land use around the site comprise the Tithe Apportionment survey for Swindon Parish completed in 1841 that shows the site as an area of pasture.
- 1.8 In 1833 the Great Western Railway (GWR) Company was formed to obtain an Act of Parliament (passed in 1835) for a rail link between London and Bristol. In 1836 the Cheltenham and Great Western Union Company obtained a separate Act for a line to meet the Great Western at Swindon.
- 1.9 In 1846, the Truck Shop, later to become the Smithy and Brass Shop, was built (Fig. 2), and is the oldest building in this part of the site, although it is an addition to the original works established in the late 1830s (Cattell and Falconer 2000, Fig. 20). The rest of the buildings in this part of the site were erected between 1873 and 1879 as part of an organized extension of the works under Joseph Armstrong (*ibid*, 93-101).
- 1.10 The buildings were modified for retail use in 1996-7. None of the main buildings were demolished, although some of the sheds and offices in what is now the service yard at the south-west of the complex were cleared. A new block for the cafes and restaurants, matching in style and proportions the older buildings, was added to the north-east corner of the complex. Ground and floor levels do not seem to have changed much in this process and below-ground remains of the 19th and 20th-century GWR works are likely to be found very close to the modern ground surface (CA 2004).
- 1.11 The site falls within the Swindon Railway Works Conservation Area.

Methodology

- 1.11 The fieldwork followed the methodology set out within the WSI (CA 2010). Thirteen geotechnical pits were hand-dug by the contractors to Fluid Structures under constant monitoring from a CA archaeologist (Fig. 2). The test pits tended to be very small, as little as 0.5m square at the surface, reducing at depth to often no more than 0.20m. Some test pits were abandoned as impracticable. One window sample was taken (Test Pit 8) and four core samples were drilled (Fig 2).

- 1.12 Where archaeological deposits were encountered written, graphic and photographic records were compiled in accordance with CA Technical Manual 1: *Fieldwork Recording Manual* (2007).
- 1.13 The archive from the watching brief is currently held by CA at their offices in Kemble. The site archive will be deposited in an appropriate repository, when one becomes available. In the meantime the archives will be stored in the CA offices at Kemble. A summary of information from this project, set out within Appendix A, will be entered onto the OASIS online database of archaeological projects in Britain.

2. RESULTS

- 2.1 The natural Kimmeridge Clay was not reached during these works, except in the window and borehole samples.
- 2.2 Test Pit 1 was dug against the north side of the 1921-2 extension to the Long Shop. At the base of the trench, 0.76m below present ground level (bpgl), was iron sheet 105 on which concrete block 103, cast in the corner of the Long Shop footings (106) and north/south brick wall 102 was identified. A 0.03m-thick concrete surface (104) was laid against it and over the iron plate (Fig. 3). Above this, and sealing all these structures, was the fill of adjacent modern services. Fixings for a metal down-pipe were evident in the wall of the Long Shop above the concrete block.
- 2.3 Test Pit 2 was backfilled before observation. It was dug against the north wall of the original 1876 Long Shop (Fig. 2), just east of the now demolished cupola hearth shed (the Long Shop was originally built as a heavy iron foundry). The fill of the test pit was reported to be entirely scalplings as a modern service trench runs all along the north side of the building.
- 2.4 Test Pit 3 was dug against the south wall of the 1846 truck shop/smithy (Fig 2) as left after its truncation in 1921 for the extension of the Long Shop (Cantell and Falconer 2000, 148). It was excavated to 0.8m bpgl, revealing modern scalplings 303 against the modern concrete kerb. This was sealed by modern concrete flaunching 302 and gravel 301. The footing of the south wall, which had straight joints with the side walls at each end, had been underpinned in concrete, 304, from 0.36m bpgl.

- 2.5 Test Pit 4 was abandoned almost immediately due to space restrictions. It was located against the north side of the later 20th century wall of the outbuildings added to the 1920s extension to the Long Shop.
- 2.6 Test Pit 5 was dug at the west end of the 1876 Long Shop against its north wall. Modern scalplings 502 were recorded to 1.4m bpgl. Footings 503 for the north wall were on three offsets of three brick courses each, starting 0.28m below current tarmac surface 501. Each offset was half a brick wide, c. 50.8mm. The base of the footings was not reached.
- 2.7 Test Pit 6 was dug against the west wall of the 1846 truck shop, later a smithy. Footing 605 was constructed of stone with no offset and was revealed to 1.24m below the plinth in the wall just above ground level (Fig. 4). At 0.96m below this plinth, grey clay make-up 604 was observed continuing below the base of excavation. This, in turn, was sealed by a gritty dark grey dump 603, about 0.2m thick, which was overlain by recent scalplings, 602, and tarmac 601, together 0.5m thick.
- 2.8 Test Pit 7 was dug against the east wall of the Brass Foundry of 1873. The foundations, 705, were traced to 0.66m bpgl at which point they were offset by 0.44m. However, the detail of the offsets was destroyed by a modern service trench (707, filled with scalplings 702 and pea grit 703). The base of the footings was not reached. Wall 706 above the footings had been cut out and refaced for 11 courses above ground level.
- 2.9 Test Pit 8 was dug against the west wall of the 1873 Brass Foundry. Only the tarmac and a small depth of scalplings was removed before the window sample was taken. The window sample itself recorded made ground down to 3.8m bpgl.
- 2.10 Test Pit 9 was dug against the south wall of the 1873 Machine Shop. Footings 904 were offset from 0.30m below the present tarmac in three steps of two, three and three courses. The lowest offset sat on a concrete footing at 0.92m bpgl. The bottom offset had been hacked away, possibly for a now-vanished pipe or duct through the wall. Abutting the wall footing was dark grey, gritty, cindery clay, 903, that was sealed by modern scalplings 902 and current tarmac surface 901.
- 2.11 Test Pit 10 was dug against the north wall of the single storey stores block, part of the Power House block of 1874. It was dug to a depth of 0.7m and probed to 1.7m

- bpgl. The visible 0.7m consisted of modern scalplings 1002 that abutted footings 1003. The latter were not offset, and the probe failed to find their base.
- 2.12 Test Pit 11 was dug to a depth of 0.4m bpgl against the south side of the Engine Paint Shop of 1876. The door in the opening here is the only original one in this shed. The arched opening around this door had been widened by shaving back the western order, and this was apparent in the test pit, where the base of the full-width wall jamb still survived (1102). A sleeper wall, 1101, below the opening was of brick-sized stone blocks in three offset courses, while the jamb footing was of brick and not offset (Fig. 5). Modern concrete floor slab 1103 had been laid over the stone sleeper wall and under the door, which has presumably been reset. At the base of the test pit, dark cindery make-up 1104 was encountered, sealed by modern scalplings 1106, finished by a thin layer of gravel, 1105.
- 2.13 Test Pit 12 was dug against the new building erected in 1996-7 to house the food area in the new outlet centre. Only modern footings and fills were seen.
- 2.14 Test Pit 13 was dug to a depth of 0.72m against the north wall of the 1879 extension to the Boiler Shop. Brown clay 1306 was seen 0.60m bpgl, sealed by gravel make-up 1305 for reinforced concrete slab 1301. This slab had two stubs of bullhead rail, apparently *in situ*, at a standard gauge apart, either side of the trench. Above it was the modern floor screed or slab over a plastic membrane. The 1879 wall must have been an open arcade, or at least had large openings in it, as no footings belonging to it were seen, only the slabs and the present wall of the shed, which is a modern metal-screened steel frame. The older concrete slab had been cut away for the insertion of a modern kerb (Fig. 6).
- 2.15 Test Pit 14 was not excavated.

The Finds

- 2.16 No finds were recovered during the current works.

3. DISCUSSION

- 3.1 The small size and limited depth of the test pits, and especially their constricted size at depth, meant that only limited observations could be made. In addition, the recent insertion of services along the base of walls (particularly, it seems, in the 1996-7

conversion of the works to the outlet centre) has led to the removal of later 19th and earlier 20th century deposits relating to the Railway Works.

- 3.2 Nonetheless, some details of the footings of the Armstrong buildings of the 1870s were recorded and the construction methods (and scale) of these buildings compared with the very different 1846 structures.
- 3.3 The 1846 stone buildings are relatively poorly built in coursed, mixed rubble and were typically small in scale. The observed footings, while deep, were not offset, essentially following pre-Victorian practice. The brick Armstrong buildings of the 1870s have deep and, presumably, well-founded, footings with substantial offsets, representing the more usual Victorian practice. The use of mass concrete in the footings of the 1873 Machine Shop was noted in Test Pit 9.
- 3.4 Test Pit 3 also identified concrete footings, but these appeared to represent later underpinning. Certainly, the wall it underlies shows distinct signs of movement and repair and this is most likely a result of the truncation of this range in 1921. However, the wall itself, while not original (compare Cattell and Falconer Fig. 21 with their figures 100 and 116), seems to be an early alteration, as a railway track passes through the range just south of this wall by 1880, and the wall was certainly in existence by 1877 (*ibid*, Fig 116). While it seems at first glance unlikely that this rubble wall is contemporary with the well-built brick structures of the Armstrong era, the concrete footing, if not a late underpinning, could nonetheless date it to the 1870s.
- 3.5 The cutting-back of the order on the west jamb of the arch above Test Pit 11 is slightly odd, as it does not actually widen the opening itself. The purpose or date of the cut-back remains uncertain.
- 3.6 The open or arcaded nature of the north wall of the 1879 Boiler Shop extension is confirmed by the rail track remnants (Test Pit 13), which connected to the transfer track that occupied the space between this building and the engine and paint shops to the north and allowed wheeled engines/frames etc to be brought along from the north/south line that ran along the east side of the Armstrong works.
- 3.7 The concrete structures in Test Pit 1 were clearly later than the 1922 extension of the Long Shop. The concrete block was clearly a support for a rainwater down pipe as it turned to the horizontal, presumably before connecting to the ground drainage. The function of the wall abutting the Long Shop footings is unknown. The iron plate

identified at the base of the test pit may have been part of a wagon turntable known to have been located very close to the Long Shop and belonging to the developments of the 1870s.

- 3.8 It is evident from earlier investigations, observation, and historical sources that the Railway Works were built on an extensive platform of made ground. The window sample in Test Pit 8, and boreholes CP1 and CP2 showed 3.2m to 4.5m of made ground at the south end of the works, which fits in well with the observed change in level from the town south of the railway to the works on the north. Boreholes CP3 and CP4, at the north end, showed made ground at 2.6m (CJ Associates 2010).

4. CA PROJECT TEAM

Fieldwork was undertaken by Peter Davenport. The report was written by Peter Davenport. The finds report was compiled by Ed McSloy. The illustrations were prepared by Lorna Gray. The archive has been compiled by Peter Davenport, and prepared for deposition by James Johnson. The project was managed for CA by Cliff Bateman.

5. REFERENCES

BGS (British Geological Survey) 1974 *Sheet 252 Swindon*.

CA (Cotswold Archaeology) 2004 *Site 7, Former GWR Works, Churchward, Swindon: Archaeological Desk-Based Assessment*. CA typescript report **04118**.

CA (Cotswold Archaeology) 2010 *Swindon Designer Outlet Centre, Swindon, Wiltshire: Written Scheme of Investigation for an Archaeological Watching Brief*.

Cattell, J. and Falconer, K. 2000 *Swindon: the Legacy of a Railway Town* (2nd, revised, paperback edition, Swindon).

CJ Associates 2010 *Amended percussive borehole logs and window sampler logs dated 07-09-2010*. CJ Associates typescript report.

APPENDIX A: CONTEXT DESCRIPTIONS

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
101	deposit	Tarmac	As trench	As trench	0	
102	structure	Brick wall	As trench	unknown	0.02	
103	structure	Concrete block cast in situ	0.8	0.37	0.27	
104	deposit	Concrete floor	As trench	As trench	0.80	
105	structure	Iron or steel plate	As trench	As trench	0.85	
106	structure	Brick footings	unknown	unknown	0	
107	deposit	Scalpings	As trench	As trench		
301	deposit	Gravel	As trench	0.4	0.4	
302	deposit	Concrete	As trench	0.4	0.4	
303	deposit	Scalpings	As trench	0.16	>0.8	
304	structure	Concrete	As trench	0.25	>0.8	
501	deposit	Tarmac	As trench	As trench	0	
502	deposit	Scalpings	As trench	As trench	0.03	
503	structure	Offset brick footings	As trench	0.15	0.28	
601	deposit	Tarmac	As trench	As trench	0	
602	deposit	Scalpings	As trench	As trench	0.1	
603	deposit	Mixed dark grey gravelly clay	As trench	As trench	0.5	
604	deposit	Grey/beige sticky clay	As trench	As trench	0.71	
605	structure	Stone footings	As trench	0.14	>0.99	
701	deposit	Tarmac	As trench	As trench	0	
702	fill	Scalpings	As trench	As trench	0.08	
703	fill	Pea grit	As trench	As trench	0.36	
704	fill	Brick dust	As trench	0.30	0.45	
705	structure	Offset brick footing	As trench	0.06		
706	structure	Inserted brickwork	c.3	unknown	-0.9	
707	cut	Service trench	As trench	unknown	0.06	
901	deposit	Tarmac	As trench	As trench	0	
902	fill	Scalpings	As trench	As trench	0.08	
903	fill	Cindery grey clay make up	As trench	As trench	0.45	
904	structure	Offset brick footings on concrete base	As trench	0.3	0.3	
1001	deposit	Gravel surface	As trench	As trench	0	
1002	deposit	Scalpings	As trench	As trench	0.1	
1003	structure	Brick footings	As trench	0	To >1.7	
1101	structure	Stone sleeper wall under door	As trench	0.2	0.18	
1102	structure	Brick footing for jamb	As trench	0.2	0.25	
1103	structure	Concrete slab	As trench	unknown	0	
1104	deposit	Dark cindery make up	As trench	As trench	0.4	
1105	deposit	Gravel	As trench	As trench	0	
1106	deposit	Scalpings	As trench	As trench	0.04	
1301	structure	Reinforced concrete slab	As trench	0.12	0	
1302	deposit	Concrete kerb flaunching	As trench	0.2	0	
1303	deposit	Scalpings	As trench	0.3	0	
1304	deposit	Weak concrete blinding	As trench	As trench	0.28	
1305	deposit	Yellow gravel	As trench	As trench	0.42	
1306	deposit	Brown clay	As trench	As trench	0.64	

APPENDIX B: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Swindon Designer Outlet Centre	
Short description	<p>An archaeological watching brief was undertaken by Cotswold Archaeology during the excavation of engineering test pits and the taking of a window sample in the Swindon Designer Outlet Centre, the former Great Western Railway Works, at Swindon, Wiltshire. Four further boreholes were drilled and the cores logged. These confirmed the depths of made ground at the four corners of the site.</p> <p>No features or deposits other than those associated with the Railway Works were encountered. These consisted of the footings of the various buildings, and the make-up against them.</p>	
Project dates	25-26 and 31 September 2010	
Project type	Watching brief.	
Previous work	A study of the history and development of the works has been carried out by RCHM(E) . No known excavation in this part of the works	
Future work	Unknown	
PROJECT LOCATION		
Site Location	Kemble Drive, Swindon, Wiltshire	
Study area (M ² /ha)	c.4.5ha	
Site co-ordinates (8 Fig Grid Reference)	SP 1410 8490	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator	None	
Project Design (WSI) originator	Cotswold Archaeology	
Project Manager	Cliff Bateman	
Project Supervisor	Peter Davenport	
PROJECT ARCHIVES		
	Intended final location of archive <i>No repository currently available. Currently at CA offices, Kemble</i>	Content
Physical	N/A	N/A
Paper	N/A	Trench plan, section drawings, report
Digital	N/A	Digital photos
BIBLIOGRAPHY		
CA (Current Archaeology) 2010 <i>Swindon Designer Outlet Centre, Kemble Drive, Swindon, Wiltshire: Archaeological Watching Brief</i> . CA typescript Report 10166 .		

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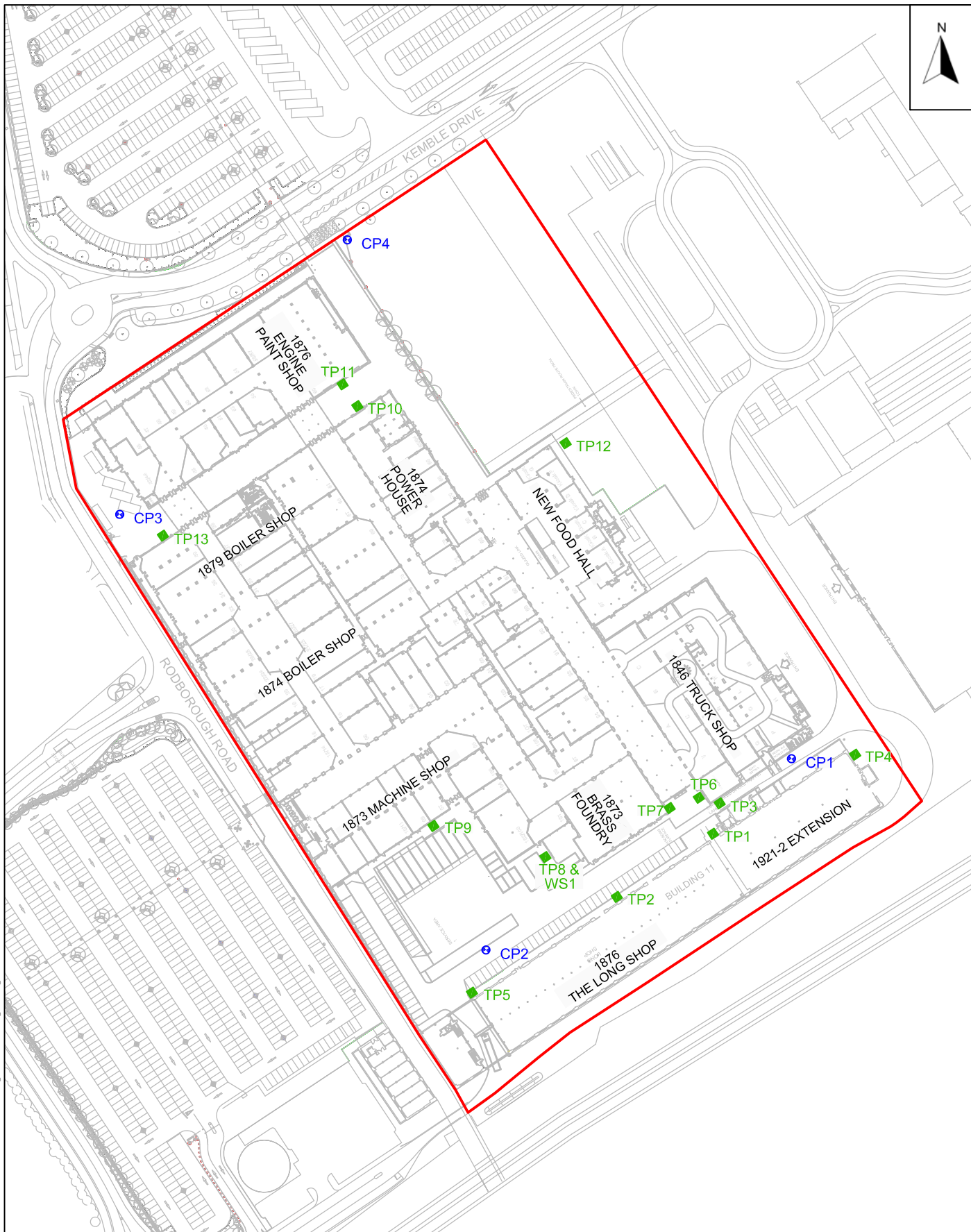


COTSWOLD ARCHAEOLOGY


PROJECT TITLE
Swindon Designer Outlet Centre Swindon


FIGURE TITLE
Site location plan

DRAWN BY	SCALE	PROJECT NO.	FIGURE NO.
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 site

 test pit and window sample

 borehole



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Swindon Designer Outlet Centre
Swindon

FIGURE TITLE

**The site, showing location of
groundworks**

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3214

FIGURE NO.

2



3

3 Test pit 1, against the 1920s extension to the Long Shop, looking east. Scale 0.15m



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Swindon Designer Outlet Centre
Swindon

FIGURE TITLE

Photograph

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PROJECT NO.

3214

FIGURE NO.

3



4

**4 Test pit 6, against the 1846 Truck Shop, looking east.
Tape bent at 1.25m**



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PROJECT TITLE

Swindon Designer Outlet Centre
Swindon

FIGURE TITLE

Photograph

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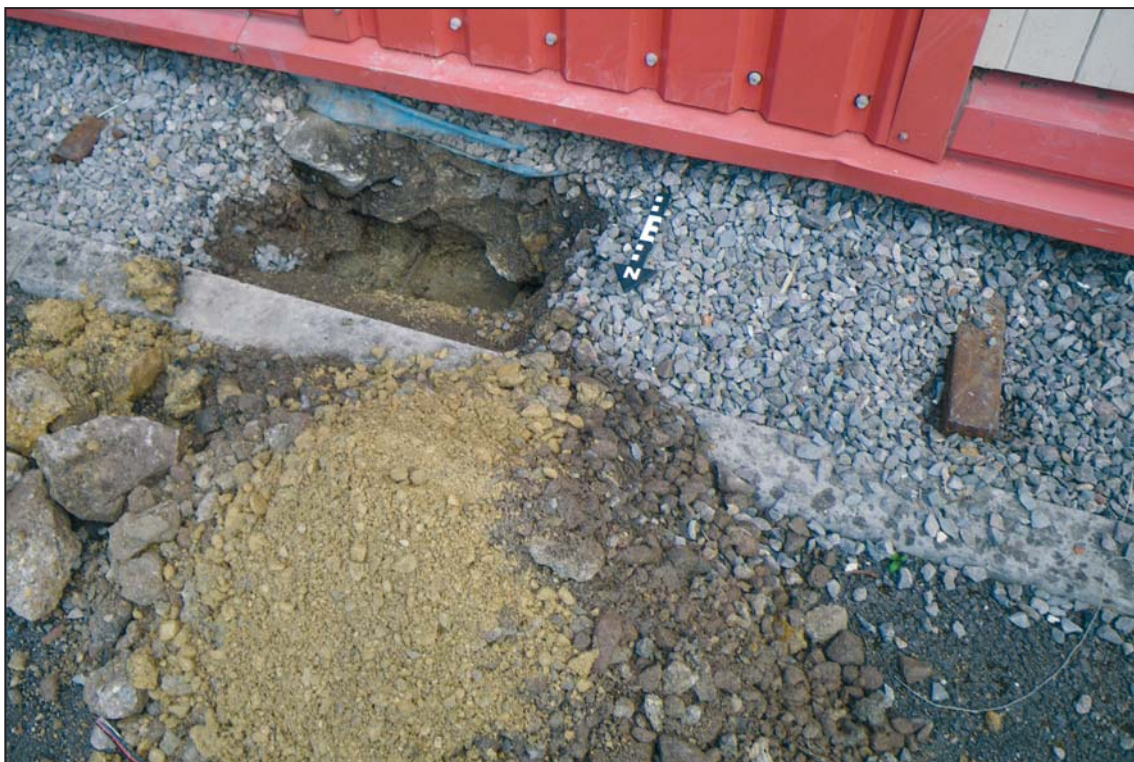
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FIGURE NO.

4



5



6

5 Test pit 11, against the south side of the 1876 Engine Paint Shop, looking west. Scale 0.15m

6 Test Pit 13, against the north side of the extended Boiler Shop of 1879, looking south. Scale 0.15m



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Swindon Designer Outlet Centre Swindon

FIGURE TITLE

Photographs

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FIGURE NO.

5 & 6