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Sewage Treatment Works, Minworth, Birmingham

Archaeological Watching Brief

ARCUS report 1222.2(1)

May 2009

Client: Severn Trent Water

Archaeological Watching Brief



Sewage Treatment Works, Minworth, Birmingham

Grid Reference: 401327, 289802

Archaeological Watching Brief

Report No. 1222.2(1)

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Client: Severn Trent Water

Client address: 2297 Coventry Road, Birmingham, B26 3PU

Location of archive: Birmingham Museum

Planning reference: planning condition

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Checked by:	Passed for submission to client:
Date:	Date:
Rob Barnett <i>Project Archaeologist</i>	Richard O'Neill <i>Project Manager</i>

OASIS SUMMARY FORM

PROJECT DETAILS		
OASIS identifier	Arcus2-59596	
Project title	Sewage Treatment Works, Minworth, Birmingham	
Short description of the project	In November 2008, ARCUS were commissioned by Severn Trent Water to undertake an archaeological watching brief on a site at the Sewage Treatment Works, Minworth, Birmingham. centred on NGR 401327, 289802. The watching brief was required as a condition of planning consent for re-development at the site. Sites and find spots ranging in date from the prehistoric to post-medieval periods have been identified within 1 km of the site. The scope of works consisted of excavation of trial holes and foundation trenches. One archaeological feature, a ditch, was identified in Area 3. Areas 1 and 2 consisted of made ground associated with the construction and subsequent expansion of the sewage works in the 20th century.	
Project dates	05-11-2008 to 27-04-2009	
Previous/future work	Archaeological assessment (Ellis 1996), Desk-based Assessment (Ramsey 2007), Archaeological Watching Brief (Mitchell 2008a), Archaeological Evaluation (Mitchell 2008b)	
Monument type and period	none	
Significant finds (artefact type and period)	none	
PROJECT LOCATION		
County/Parish	West Midlands, Birmingham, Minworth	
Site address	Kingsbury Road, Minworth, Birmingham B76	
Site co-ordinates	SP 401327, 289802	
Site area	120 m ²	
Height OD	80m AOD	
PROJECT CREATORS		
Organisation	ARCUS	
Project brief originator	n/a	
Project design originator	ARCUS	
Project supervisor	Rob Barnett, Neil Dransfield and Richard Jackson	
Project manager	Richard O'Neill	
Sponsor or funding body	Severn Trent Water	
PROJECT ARCHIVES		
Archive Type	Location/Accession no.	Content (e.g. pottery, metalwork, etc)
Physical	none	none
Paper	Birmingham Museum	report, watching brief sheets, sections and digital photographs.
Digital	Birmingham SMR	pdf copy of report
BIBLIOGRAPHY		
Title	Archaeological Watching Brief, Sewage Treatment Works, Minworth, Birmingham.	
Report no	1222.2(1)	
Author	Rob Barnett	
Date	May 2009	

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- 2 Area 3. Southwest-facing section showing ditch [105]
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NON-TECHNICAL SUMMARY

In November 2008, ARCUS were commissioned by Severn Trent Water to undertake an archaeological watching brief on a site at the Sewage Treatment Works, Minworth, Birmingham, centred on NGR 401327, 289802. The watching brief was required as a condition of planning consent for re-development at the site. Sites and find spots ranging in date from the prehistoric to post-medieval periods have been identified within 1 km of the site. The scope of works consisted of excavation of trial holes and foundation trenches. One archaeological feature, a ditch, was identified in Area 3. Areas 1 and 2 consisted of made ground associated with the construction and subsequent expansion of the sewage works in the 20th century.

1 INTRODUCTION

1.1 Scope of Report

This report presents the results of an archaeological watching brief on a site at Sewage Treatment Works, Minworth, Birmingham. This was required by Birmingham City Council as a condition of planning consent on an application for redevelopment at the site. The watching brief was undertaken in line with Birmingham City Council's Archaeology Supplementary Planning Guidance policies 8, 12 and 13, and with the government's planning guidelines set down in PPG16 (1990). ARCUS were commissioned by Severn Trent Water to undertake the watching brief on groundworks and excavation of building footprints.

1.2 Site Location

The site (centred on NGR 401327, 289802) is located to the east of Minworth, south of the Kingsbury Road (A4097) and close to the Birmingham/Warwickshire County Boundary on the floodplain of the River Tame (**Illustration 1**).

The underlying drift geology consists of glacial sands and gravels.

1.3 Archaeological Background

Archaeological deposits relating to undated and 18th- to 19th-century land use have been identified within the site of Minworth Sewage Treatment Works (Mitchell 2008b). These include linear ditches, field boundaries and the former course of a water channel that was diverted at a date between 1892 and 1903.

Sites and find-spots ranging in date from the prehistoric to the post-medieval periods have also been identified within 1 km of the site. These include flint artefacts, heat-shattered pebbles associated with the burnt mounds of a possible Bronze Age settlement, a cropmark enclosure, Roman pottery, and medieval ridge and furrow earthworks.

The site is located within an area of extensive medieval settlement with Minworth Greaves to the west, and Curdworth to the north-east being recorded in the 1086 Domesday survey. Medieval settlement is also recorded at Water Orton to the south-east, while the site of a deserted medieval village is located at Wiggins Hill to the north. Kingsbury Road (the present-day A4097), to the north of the site, was recorded on a post-medieval map dating from 1589.

2 AIMS AND METHODOLOGY

2.1 Aims and Objectives

The general aim of the watching brief was to mitigate the impact of the groundworks associated with the development on the archaeological resource, through preservation by record of any archaeology encountered during the groundworks.

The specific aims were:

- to determine the extent, condition, character, importance and date of any archaeological remains present;
- to preserve by record any features of archaeological significance within the

area of groundworks;

- to provide information that will enable the remains to be placed with their local, regional, and national context and an assessment of the significance of the archaeology of the site to be made;
- to provide information to Birmingham City Council's Planning Archaeologist to enable the requirements for further archaeological monitoring, if any, to be determined.

2.2 Methodology

All site work was carried out in accordance with the methodology outlined in the Written Scheme of Investigation (Bell 2008). This was based on a desk based assessment and impact assessment prepared by Birmingham Archaeology (Ramsey 2007), on IfA guidelines (2008), health and safety regulations (SCAUM 2007) and current industry best practice. The groundworks subject to the watching brief consisted of three potential areas of archaeological interest totalling approximately 120m² (Illustration 2):

- Area 1: Scum Treatment Plant - this development included excavation to a depth of 2 m;
- Area 2: Chemical Dosing Plant and T.T.E. kiosk - this development included groundworks associated with the construction of the plant and kiosk foundations. The possible presence of services in this area was investigated through a series of trial holes excavated in advance of the commencement of works;
- Area 3: New Sub-station - this development included excavation to a depth of 2m (Illustrations 3 and 4).

Site monitoring visits were made during all groundworks. Archaeological deposits and features were recorded using the ARCUS standard recording system. Archaeological recording comprised of a full written, drawn and digital photographic record.

2.3 Fieldwork Programme

The project was managed by Richard O'Neill ARCUS Project Manager. Fieldwork was undertaken between 5th November 2008 and 27th April 2009 by Rob Barnett, Neil Dransfield and Richard Jackson, ARCUS Project Archaeologists.

3 RESULTS

3.1 Area 1: Scum Treatment Plant

The area chosen for the construction of the Scum Treatment Plant had been formerly used as a car park. The area was sealed with a layer of tarmac. Initial excavation entailed the removal of this surface with a small mechanical excavator fitted with a toothed bucket. The made ground immediately beneath the tarmac comprised a compacted deposit of crushed red-brick rubble. Two trial holes were then excavated at the locations specified for the Scum Treatment Plant, which measured 4m by 8m and 4m by 3m. The trial holes were excavated to a depth of 2m into the underlying natural sand and gravel deposits. No archaeological features, structures or artefacts were exposed during the excavation. Both trial holes exposed the same sequence of deposits. The deposits recorded are described below.

- (1) Tarmac to 0.1m
- (2) Coarse brick rubble made ground to 0.5m
- (3) Mixed grey-brown made ground to 1.25m
- (4) Buried grey subsoil to 1.45-1.63m
- (5) Yellow coarse sand natural substrate containing 20% rounded gravel and pebbles below (4)

3.2 Area 2: Chemical Dosing Plant and T.T.E. Kiosk

Three trial holes 4A (Plate 1), 4B and 4C, aligned east to west and 2.5m apart, were excavated in Area 2. Following CAT scanning initial areas of 1m² were hand-excavated to determine depth and location of buried services. The trial holes were then excavated by mini-digger to full size. The deposits recorded are described below.

Trial Hole 4A 16.1m x 0.7m x 1.16m

- (1) Turf and dark brown silty topsoil to 0.05m
- (2) Dark grey re-deposited clay silt containing 10% small rounded stones to 1m
- (3) Yellow coarse sand at 0.3m to 0.5m depth, within (2)
- (4) Two concrete slabs at 3.5m from the west end forming a 1m wide duct containing service pipes within deposit (2)
- (5) Orange fine sand filling (4)
- (6) Dark brown sandy-silt extending for 5.50m from the east end to 0.2m
- (7) Orange fine sand below (6), extending for 8m from the east end to 0.6m
- (8) Yellow coarse sand natural substrate containing 20% rounded gravel and pebbles from 0.6m to 1m

Trial Hole 4B 11.50m x 0.7m x 1m

- (1) Turf and dark brown silty topsoil to 0.08m
- (2) Dark grey clay silt with lenses of coarse yellow sand to 0.8m
- (3) Yellow coarse sand natural substrate to 1m
- (4) Concrete duct at the far west end within (2)
- (5) Orange fine sand filling (4)

Trial Hole 4C 12m x 0.55m x 1m

- (1) Turf and dark brown silty topsoil to 0.08m
- (2) Dark grey clay silt to 1m
- (3) Yellow coarse sand extending for 4.75m from the west end within (2) at 0.15 to 0.35m
- (4) Yellow coarse sand natural substrate at 0.5 to 0.9m

3.3 Area 3: New Sub-Station

An area measuring 8m by 5m on a landscaped bank sloping from south to north was stripped of topsoil by JCB excavator fitted with ditching bucket. No features were identified at this stage. Subsequent excavation of the footprint for the new sub-

station was to an average of depth of 1.5m with a sondage on the north side to a depth of 1.75m. The deposits recorded are described below and shown on **Illustrations 3 and 4**.

(100) Reddish-brown sand containing 40% random sized rounded pebbles, occasional patches and lumps of reddish-brown and grey sandy clay to a maximum depth of 0.7m

(101) Dark grey re-deposited sandy clay silt containing 10% rounded pebbles to a maximum depth of 1.22m

(102) Light red re-deposited undulating sandy clay to a maximum depth of 1.3m

(103) Dark grey silty buried soil to a maximum depth of 1.3m; this deposit was only present in the northeast corner of the excavated area

(104) Light red sandy clay natural substrate at a depth of 1.7m depth

[105] A right-angled linear cut aligned northeast to southwest and returning northwest to southeast forming a right angle in the deepest area of the excavated footprint. This feature measured 2.2m in maximum width by 1.12m in depth (**Plates 2 and 3**). The feature had irregular sloping sides and a flat base, and cut through deposits (101), (102), (103) and into (104). The top of the feature was at 0.75m below the present ground surface and the base at 1.8m.

(106) Yellowish grey coarse sandy clay containing 10% random sized rounded pebbles filling [105]

4 CONCLUSION

4.1 Summary and Discussion

The results of the watching brief showed that the development areas had all been heavily disturbed with ground levels being made up by the re-deposition of soils. Service pipes and cables had been laid directly on the underlying sand and gravel deposits and subsequently buried by materials up to 1m in depth. The making up of ground levels relates to the date of the early 20th-century construction and subsequent phases of expansion and alteration of the present sewage works (Ramsey 2007). No archaeological deposits or artefacts were identified in Areas 1 and 2. In Area 3 three phases of activity were identified; Phase 1, the earliest, being the deposition of (101) and (102) which appeared to have been laid directly on top of the original topsoil (103). These deposits are likely to represent upcast generated from sewage works construction activity. Phase 2 was the cutting of the ditch [105] which cut (101), (102) and (103) and into the natural clay substrate (104). The ditch may represent an early sewage feature pre-dating the existing structures. A sherd of salt glazed ceramic drain recovered from the ditch fill (106) dates from c.1850 (John Tibbles, pers. comm.). The third and latest phase is represented by the dumping of deposit (100) forming the slope and sealing service cables and pipes.

The overall reliability of the watching brief is considered to be good.

4.2 Recommendations for Further Work

The archaeological potential of the site is considered to be low, and therefore, no further archaeological work is recommended.

5 ARCHIVE

The project archive will be deposited with Birmingham Museum. The accession number is to be determined. The archive will be prepared by ARCUS staff in accordance with the requirements specified in Management of Research Projects in the Historic Environment (English Heritage 2006) and with UKIC guidelines (1990). In addition, copies of this report will be deposited with the Birmingham SMR, circulated to the client, and retained in the offices of ARCUS.

6 BIBLIOGRAPHY

Bell, S. 2008. *Minworth Sewage Treatment Works, Written Scheme of Investigation for Archaeological Fieldwork*. Unpublished ARCUS report No. 1222.1 (1).

Department of Environment. 1990. *Planning Policy Guidance Note 16: Archaeology and Planning*.

Ellis, P. 1996. *Land at Minworth Sewage Treatment Works: Stage 1 Archaeological Assessment*.

English Heritage. 2006. *Management of Research Projects in the Historic Environment*. Swindon: English Heritage.

IfA. 2008. *Standard and Guidance for an Archaeological Watching Brief*. Institute for Archaeologists.

Mitchell, W. 2008a. *Sewage Treatment Works, Minworth, Birmingham. An Archaeological Watching Brief*. Unpublished Birmingham Archaeology Report No. 1775.

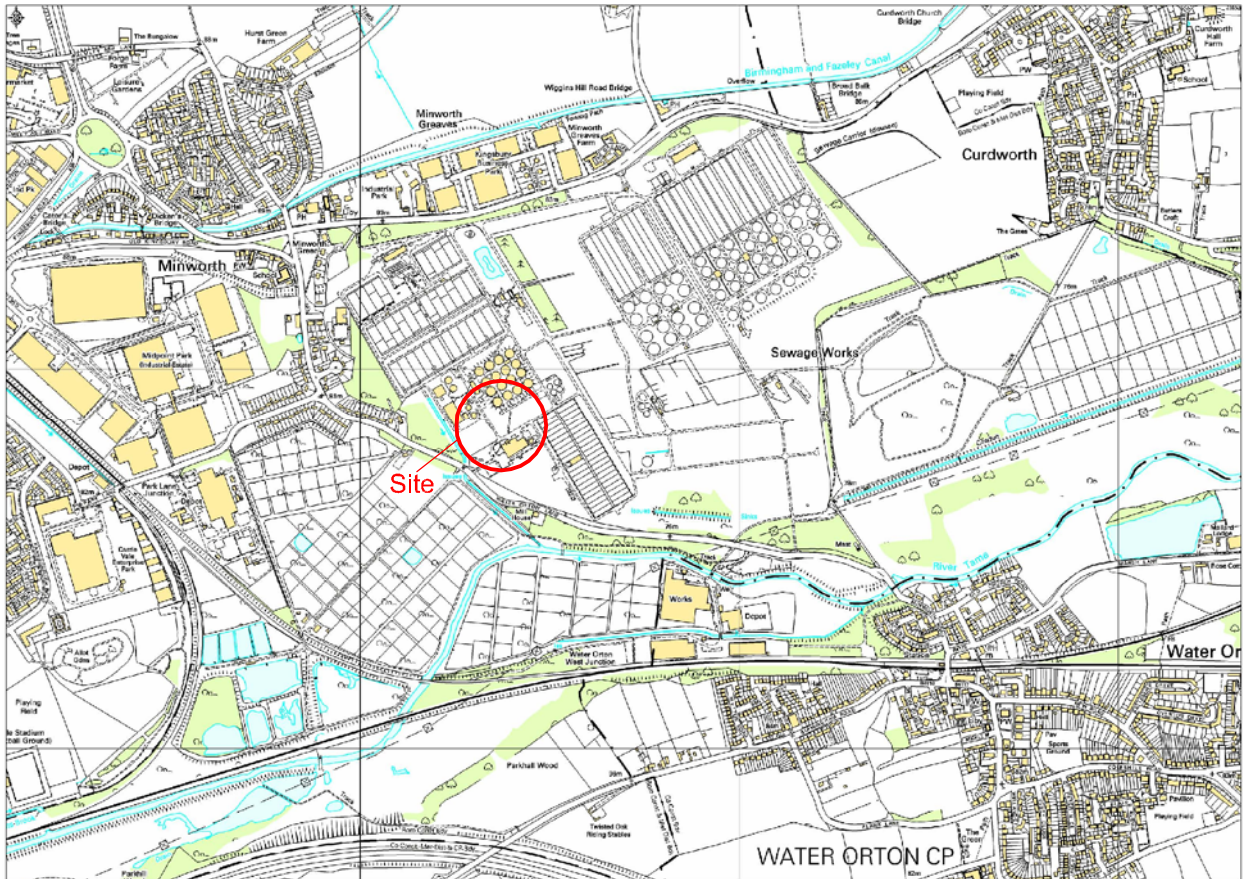
Mitchell, W. 2008b. *Tree Planting Area, Sewage Treatment Works, Minworth, Birmingham: an Archaeological Evaluation*. Unpublished Birmingham Archaeology Report No. 1781.

Ramsey, E. 2007 *Minworth, Birmingham Desk-Based Assessment and Impact Assessment*. Unpublished Birmingham Archaeology Report No 1606.

SCAUM. 2007. *Health and Safety in Field Archaeology*. Standing Conference of Archaeological Unit Managers.

UKIC. 1990. *Guidelines for the Preparation of Excavation Archives for Long Term Storage*. United Kingdom Institute of Conservation. London.

7 ILLUSTRATIONS AND PLATES



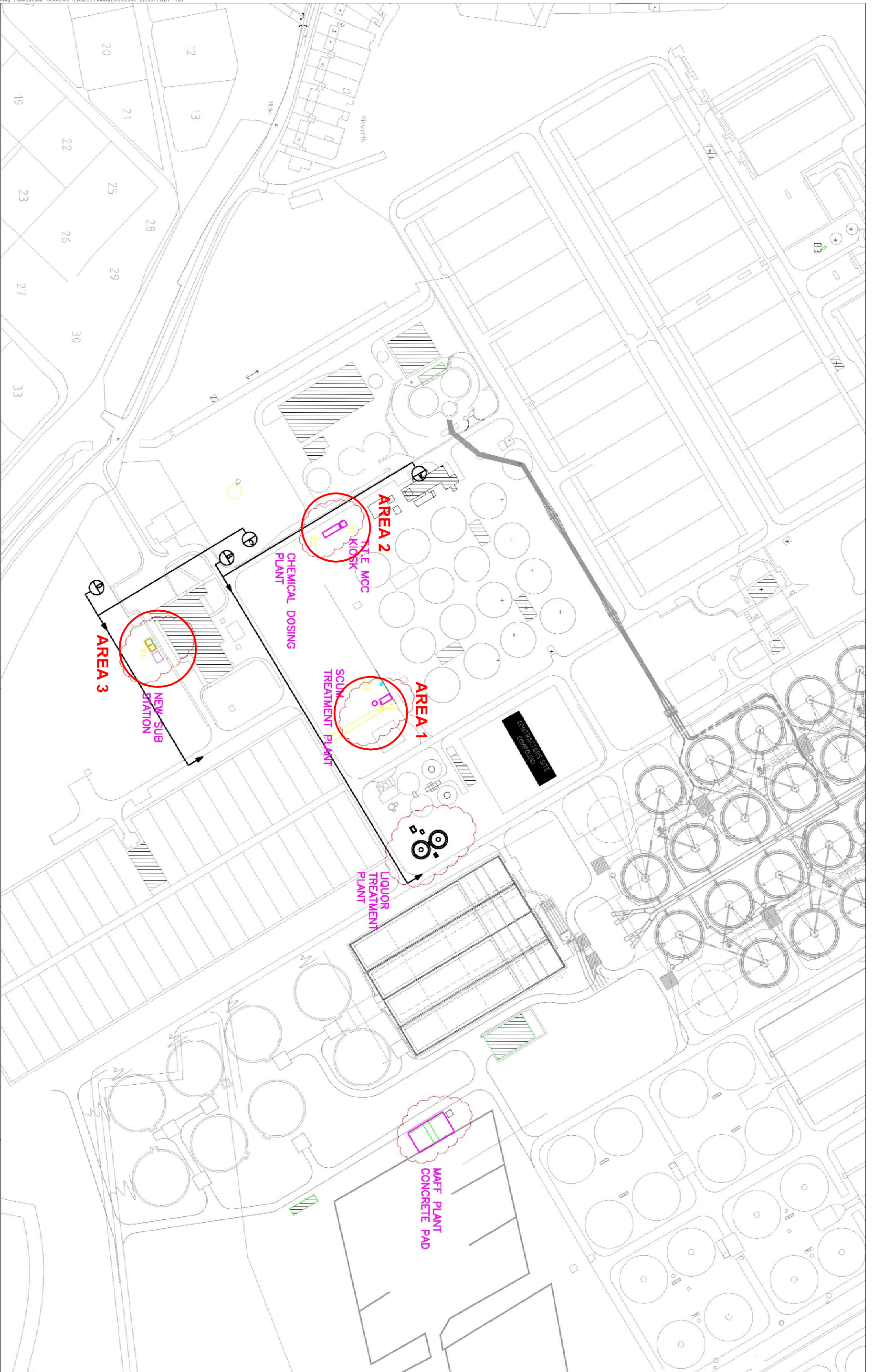
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Project: Minworth, Birmingham	Scale 1:20000	Date May 2009
	NGR 401327 289802	Drawn J Debska
Title Site location plan	Project No. 1222	Illustration No. 1



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Project:		Minworth, Birmingham	
Title		Site plan	
Scale	1:2500	Date	May 2009
NGR	401327 289802	Drawn	J Debska
Project No.	1222	Illustration No.	2

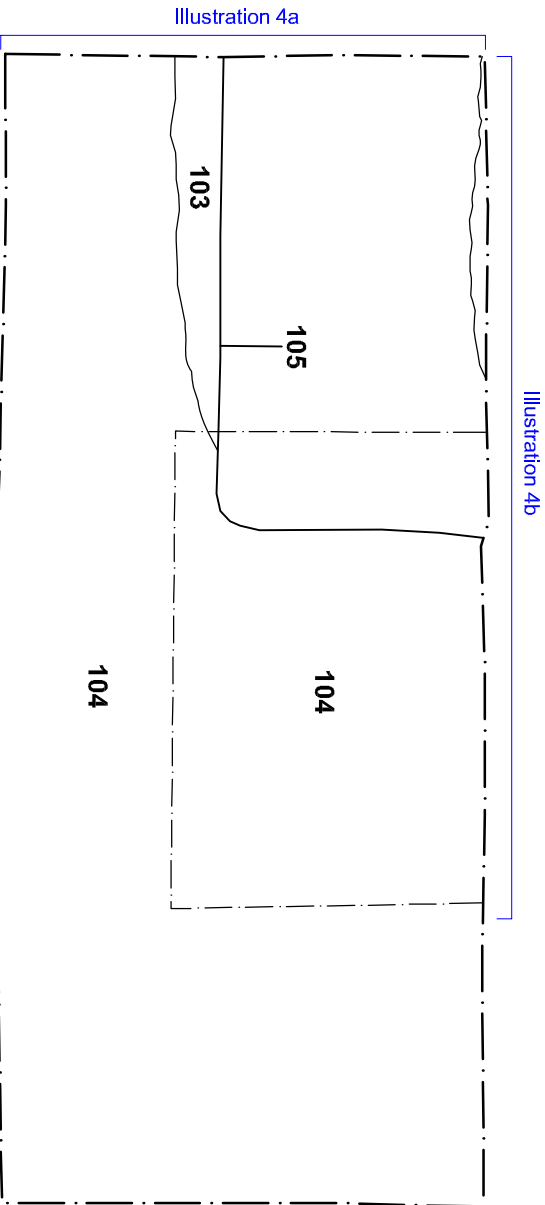


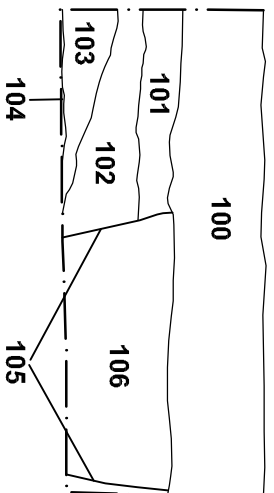
Illustration 4b

Illustration 4a

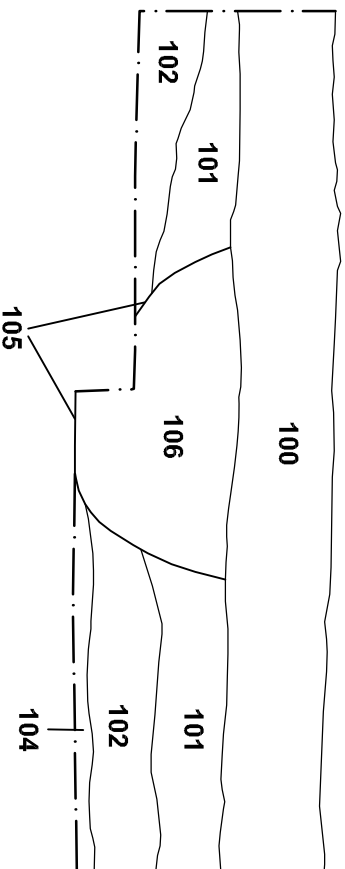


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Project:	Minworth, Birmingham		Scale	1:50	Date	May 2009
	Title	Plan of Area 3		NGR		401327 289802
			Project No.	1222	Illustration No.	3



4a. South - west facing section



4b. North - east facing section



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Project:

Minworth, Birmingham

Title

Sections - Area 3

Scale

1:50

Date

May 2009

NGR

401327 289802

Drawn

J Debska

Project No.

1222

Illustration No.

4



Plate 1 – Area 2. Trial hole 4A; looking east



Plate 2 - Area 3. Southwest-facing section showing ditch cut [105]



Plate 3 - Area 3. Northeast-facing section showing ditch cut [105]

8 APPENDICES

Appendix 1: Archive Contents

The paper archive will be deposited with Birmingham Museum, accession number to be determined.

Paper Archive

Description	Number of sheets
Field drawings	3
Photographic register	1
Copy report	1

Photographic Archive

Description	Number of pictures
Digital photographs (1 CD)	28

Appendix 2: List of Contexts

Site sub-division	Context No	Context type	Description
Area 1	1	Structure	Tarmac surface
Area1	2	Deposit	Brick rubble – made ground
Area1	3	Deposit	Mixed grey-brown made ground
Area1	4	Deposit	Buried subsoil
Area1	5	Deposit	Sand substrate
Area 2 Trial Hole 4A	1	Deposit	Turf and topsoil
Area 2 Trial Hole 4A	2	Deposit	Re-deposited clay silt
Area 2 Trial Hole 4A	3	Deposit	Re-deposited sand
Area 2 Trial Hole 4A	4	Structure	Concrete duct
Area 2 Trial Hole 4A	5	Deposit	Sand backfill of [4]
Area 2 Trial Hole 4A	6	Deposit	Re-deposited sandy silt
Area 2 Trial Hole 4A	7	Deposit	Re-deposited orange sand
Area 2 Trial Hole 4A	8	Deposit	Sand substrate
Area 2 Trial Hole 4B	1	Deposit	Turf and topsoil
Area 2 Trial Hole 4B	2	Deposit	Re-deposited clay silt
Area 2 Trial Hole 4B	3	Deposit	Sand substrate
Area 2 Trial Hole 4B	4	Structure	Concrete duct
Area 2 Trial Hole 4B	5	Deposit	Sand backfill of [4]
Area 2 Trial Hole 4C	1	Deposit	Turf and topsoil
Area 2 Trial Hole 4C	2	Deposit	Re-deposited clay silt
Area 2 Trial Hole 4C	3	Deposit	Re-deposited sand within (2)

Site sub-division	Context No	Context type	Description
Area 2 Trial Hole 4C	4	Deposit	Sand substrate
Area 3	100	Deposit	Re-deposited sand and clay
Area 3	101	Deposit	Re-deposited sandy clay silt
Area 3	102	Deposit	Re-deposited sandy clay
Area 3	103	Deposit	Buried soil
Area 3	104	Deposit	Sandy clay substrate
Area 3	105	Cut	Right angled linear ditch
Area 3	106	Deposit	Sandy clay fill of [105]

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