Summary

- *Pre-Construct Archaeology (Lincoln) was commissioned by Scott Wilson Ltd on Behalf of AMScott to undertake a programme of archaeological works as part of the A1 North Muskham Drainage Scheme.*

- *The principal scheme included the construction of a new drainage trench and landscape enhancement for the North Muskham Cross, a Scheduled Ancient Monument. This involved the hand excavation of the initial 2m of the drainage trench down to natural deposits and further hand excavation of a 2.4m radius around the cross, which was stepped down to a maximum depth of 185mm. These works were followed by a watching brief to monitor the pipe run and associated manhole chambers to the southeast of the scheduled area.*

- *Due to its depth, the hand excavation of the landscaping area revealed only modern deposits. Significantly, the base of the cross was exposed and was observed to sit within the modern topsoil, which overlay a Victorian deposit, suggesting the cross is not in-situ.*

- *The works associated with the new drainage trench revealed post-medieval and modern deposits relating to made ground and previous drainage and construction schemes. The only archaeological feature observed was a seemingly isolated medieval pit.*

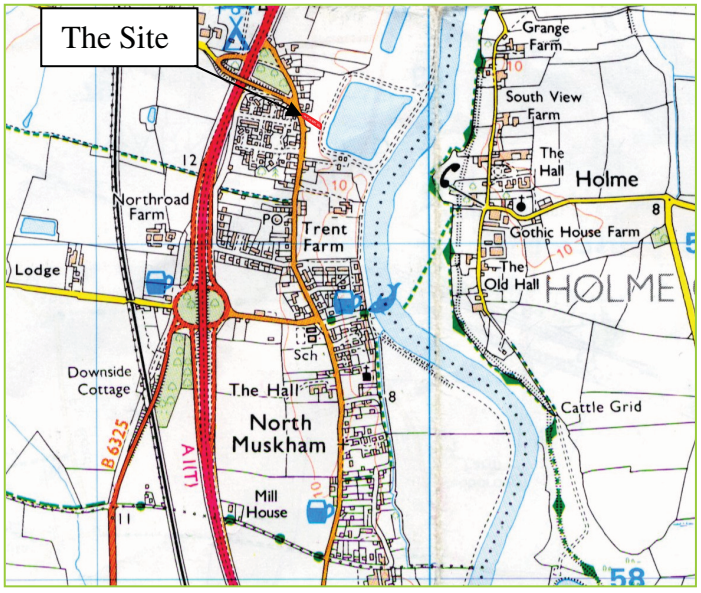

Fig.1: Site Location map. The area of archaeological monitoring is highlighted in red. Scale at 1:25 000.

1.0 Introduction

Pre-Construct Archaeology (Lincoln) was commissioned by Scott Wilson Ltd on behalf of their client AMScott to undertake an archaeological watching brief on a drainage trench and associated manhole chambers that formed part of the A1 North Muskham Drainage Scheme, Nottinghamshire. As part of this Pre-Construct Archaeology (Lincoln) was also required to hand-excavate an initial 2m stretch of pipe trench where this lay in close proximity to the Scheduled Ancient Monument of the North Muskham cross. The recording brief was commissioned following consultation with the Assistant Archaeological Officer for Nottinghamshire County Council and English Heritage. Site works (NMDS 09, PCA Ref 09/527) commenced on 15/04/09 and were completed on 26/05/09.

The archaeological programme was undertaken to meet the objectives of a project specification prepared by Scott Wilson Ltd and in accordance with the recommendations of *Archaeology & Planning: Planning Policy Guidance Note 16* (Department of the Environment, 1990); *Code of Conduct* (Institute of Archaeologists, 2008) and *Standards and Guidance for Archaeological Watching Briefs* (Institute of Field Archaeologists, 2008 *as revised*).

2.0 Site Location and Description (Figs. 1&2)

North Muskham lies *c.* 5km north of the centre of Newark-on-Trent, to the east of the A1 national trunk road, Nottinghamshire. The drainage scheme lies between Main Street to the west and the River Trent to the east. The drainage trench commences in the northwest of the site, within the scheduled area of the standing cross (SAM 29924), NGR SK 7962 5937 and starts at an existing manhole. The pipe trench then runs southeast across an area of grassland out of the scheduled area, before turning east towards Dickenson Way. The pipe trench crosses Dickenson Way then heads north and east around the edge of Nottinghamshire Wildlife Trust's North Muskham Nature Reserve and flows into the River Trent. With the exception of Manhole chamber 2, the pipe trench to the east of Dickenson Way is not covered by the archaeological brief.

The landscaping scheme concentrates solely on the scheduled standing cross (SAM 29924).

The solid geological substrate of the monitored area consists of Upper Triassic marls and sandstone, which are overlain by drift deposits of sands and gravels associated with the first gravel terrace of the River Trent (BGS, 1966).

3.0 Archaeological and Historical Background

The archaeological and historical context to the scheme is comprehensively covered in the specification produced by Scott Wilson Ltd (Scott Wilson, 2008), summarised below:

Evidence of prehistoric activity has been recovered from the South Muskham area in the form of Mesolithic, Neolithic and Bronze Age flint scatters (Knight and Howard

2004, 35-36), and a scheduled pit alignment (NT 168) was revealed just to the southwest of North Muskham village (*ibid*. 66).

There is evidence for extensive Iron Age activity extending along the west bank of the River Trent. This includes a scheduled site just south of North Muskham village (SAM NT173), scheduled square barrows to the north of the village (SAM NT 167) and extensive crop marks to the north and south of the of the village (Knight and Howard 2004, 144). Close to the site, immediately northwest of the proposed pipe trench, an archaeological evaluation undertaken in advance of the construction of housing off Dickenson Way uncovered an Iron Age trackway (Spence, pers.comm).

Inevitably, the Iron Age landscape became a Romanised landscape, and Romano-British pottery has been recovered during fieldwalking at South Muskham (Knight and Howard 2004, 144). The area was further utilised in the Roman period due to its strategic importance; being situated just to the north and northwest of the River Trent and the Fosse Way Roman road. A scheduled Roman military camp is situated on the east side of the River Trent at Holme (SAM 29929), to the east of the proposed drainage scheme.

The village of North Muskham has its origins in the medieval period, with the church of St. Wilfrid's dating to the 12th century. This settlement would have extended along Main Street to the south of the drainage scheme.

Two medieval crosses, now both scheduled monuments (SAM 29921 and SAM 29924), marked the points where a medieval road, known as Trent Ford Road, turned towards the River Trent in the villages of North Muskham and Holme. This route led down to a ford and later a ferry crossing point of the river. Before crossing the river each passenger would commend themselves at the cross to the mercy of God. It is believed also that the cross was used as a place where transactions relating to the local wool trade were validated. The crosses are of national importance and are grade II listed. The North Muskham cross is situated in the north of the village between the junction of Main Street and the former Trent Ford Road. The Trent Ford Road has mainly been removed by improvements to the A1 and by gravel extractions that were undertaken in the modern period in what is now the nature reserve. The cross however is believed to be sited in its original location and archaeological deposits relating to its construction and use may survive intact in close proximity to it.

4.0 Aims and Objectives

The aim of the archaeological programme was to identify and record any archaeological deposits or features associated with the cross or other evidence relating to prehistoric or later activity that would potentially be exposed and/or disturbed by the drainage scheme and associated landscaping.

5.0 Methodology

5.1 Archaeological Hand Excavation, Areas 1 and 2 (Figs. 2 & 3)

The first 2m of the drainage trench within the scheduled area, Area 1, was marked out to a width of 0.60m by AMScott crew and it was then hand-excavated by a qualified and experienced archaeologist down to a safe depth of 1.20m. Natural deposits were not encountered at this depth but, due to health and safety considerations, the excavation was ceased.

The area for landscaping around the standing cross, Area 2, was divided into two parts (a and b). The inner part of Area 2, which had a maximum 1.5m radius from the centre of the cross base (Area 2a) is scheduled. Once this area was defined by AMScott, the topsoil was archaeologically hand-excavated down to a maximum depth of 170mm from the existing ground surface. The outer part of the landscaping area (Area 2b) from 1.5m to 2.4m, is not scheduled but was likewise archaeologically hand excavated down to a maximum depth of 185mm. Four bulks, in the form of a cross, were retained to enable the production of section drawings.

Following excavation the areas were hand cleaned and then inspected to assess the presence/absence and nature of any features and/or deposits of archaeological interest and to recover datable artefacts (the spoil heap was scanned using a metal detector). These investigations resulted in the production of written descriptions of each deposit on standard context record sheets. Colour and monochrome photographs and drawings at scales 1:10 and 1:20 were taken or prepared to complement these accounts. Levels, and a plan of the area locating the works, were established using a Total Station.

5.2 Archaeological Monitoring, Area 3 (Fig. 2)

The area of the pipe trench covered by archaeological monitoring was located by the subcontractors and the area was stripped of topsoil and some subsoil using a mini-digger with a toothless blade. A qualified and experienced archaeologist monitored all excavation and/or soil disturbance.

Features and representative sections were cleaned and recorded, with non-modern datable artefacts retrieved and the spoil heaps scanned with a metal detector.

The excavation of the pipe trench to 3.5m was then undertaken using a large 360˚ machine. Due to the depth of the trench and the unstable nature of gravel deposits through which it cut, monitoring was only possible from a designated safe distance, and exposed sections could not be cleaned (similarly, the photographs taken lack scale bars and information boards for the same reason).

A site location plan at scale 1:200, indicating the stripped area and the pipe trench within it, was recorded using triangulation from known structures.

All non-modern finds from all three areas of excavation were retained and their value for further interpretation and analysis was assessed.

6.0 Results

6.1 Area 1 (Fig. 3 – plan and section C)

At the base of the hand-dug pipe trench, 1.20m below existing ground level, c. 60cm of redeposited mid-brown sandy-gravel containing occasional brick rubble was encountered (104). This was sealed by a 0.12m deep layer of redeposited mid-brown clay-sand which contained lenses of sand and chunks of coal (103). Sealing this was a 0.28m deep dark grey clay-sand which contained Victorian pottery (102). Cutting all three deposits was a modern sewer trench [105] which was not bottomed within the 1.20m deep excavation slot. The fill of the modern sewer was a mid orangey-brown sandy-gravel which contained modern pottery and building material (101). This, and the earlier deposits was sealed by a layer of dark modern topsoil (100)

6.2 Area 2 (Fig. 3 – plan and sections A and B)

At the base of Area 2b in the southwest quadrant of the landscaped area, a mid whitish-grey layer of mortar was revealed (205). Due to the limited exaction of the area, down to specific depths, this deposit was only visible as a small exposed patch with its limits not defined. Towards the west of this deposit, and adhered to it, was a row of northwest-southeast aligned bricks dating to the turn of the 20th century. The single course comprised red bricks with rounded ends laid on their sides (204). To the west was a dark bluish-grey asphalt surface (203) which was clearly edged by (204). This surface extended beyond the western limits of the excavation area and was visible extending into the northwest quadrant of the landscaped area.

In this northwestern quadrant, running east-west within area 2b, a mid-orange-brown redeposited sandy-gravel was exposed (201). This was the backfill of the modern sewer trench (same as 101). Sealing it, in patches, was a dump, 0.05m deep, of mid yellowish-white concrete. This was probably waste from the construction of the manhole chamber of the modern sewer.

The northeast and southeast quadrants of the landscaped area also revealed deposit (201), representing the path of the pipe trench and the location of the manhole limits.

Sealing all of Area 2 was a dark greyish-brown topsoil. Within this deposit was the base of the standing cross.

6.3 Area 3 (Fig. 4 – plan and section D and Fig. 5 – sections E - I)

At the base of the pipe trench and manhole chambers several layers of drift sands and gravels were encountered (303), (313, (304) and (305). These deposits were observed at 0.80m-0.90m below existing ground level and were exposed to depths in excess of 3.5m below existing ground level.

Cutting the natural gravel deposit (303), *c*. 15m southeast of the standing cross, a small slightly irregular u-shaped pit was exposed [306]. This oval feature showed root

disturbance on the southeast side, creating an irregular profile. This feature was filled with mid greyish-brown clayey sand, which contained medieval pottery and tile (Appendices 3 & 4). Sealing this feature was a mid to dark greyish-brown sandy silt subsoil which contained a large quantity of post-medieval/early modern pottery and tile.

Cutting through the subsoil, running east-west was a large u-shaped pipe trench [314], seemingly running under the southwest corner of the cross. This trench contained a dark greyish-black redeposited silty sand which yielded a large quantity of Victorian glass bottles (315). This feature cut through deposits (103) and (104) revealed in Area 1's pipe trench. Sealing the pipe trench and the northwest half of the stripped area was a mid to dark blackish-grey clayey sand which yielded large amounts of post-medieval to early modern pottery, glass and building material (309). This was the same deposit as (102) in Area 1.

Sealing the above, and covering half of the stripped area, was a 0.20m deep layer of mid-orange-brown sandy gravel containing modern plastic and other rubbish (very similar to deposits (101) and (201) in Areas 1 and 2). This material probably represents excess from the backfilling of the modern manhole chamber - dumped and spread. This, and the entire northwest of the stripped area, was sealed by a mid greyish-brown silty sand topsoil (300).

The upper deposits, sealing the natural, stopped and altered abruptly approximately 24m southeast of the standing cross, roughly in a line with the rear of existing properties. This change in sequence has been interpreted as a large-scale truncation of the area [312].

In this area sealing the natural deposits (303), (304) and (313) a layer of mid greyish-brown sandy silt with frequent gravel inclusions was lain down and spread (311). Sealing this was a layer of topsoil (316) very similar to topsoil (300), and probably derived from it, but redeposited at a later date.

To the east of Dickenson Way, at the location of manhole chamber 2, the sequence of deposits differed slightly again from the pattern observed over the rest of the site. At the base of the chamber, natural drift deposits were encountered *c*. 0.80m below existing ground level and were exposed down to depths in excess of 3.5m ((303), (304) & (305)). Sealing the upper of these deposits was a thin layer of the subsoil (308), which was in turn sealed by a layer of buried topsoil (302). This was very similar to deposit (309) but was sealed at a much later date, the turf line still being visible.

This topsoil was sealed by a layer of mid to light greyish-brown silty sand (301) which was in turn beneath a layer of modern topsoil (317), which was very similar to (300) but lain down at a later date.

7.0 Discussion and Conclusion

7.1 Area 1

The earliest deposits exposed in Area 1 were redeposited sands (104) and (103). Unfortunately, due to the truncation on both sides, the context of these deposits is unclear. Deposit (104) yielded a small amount of bricks that were adhered to one another, possibly the remains of a culvert, the orientation of which is unknown. These deposits therefore could possibly relate to an earlier drainage feature. The remainder of the trench revealed deposits relating to the construction and backfill of the modern manhole chamber and topsoil deposits.

7.2 Area 2

The earliest deposits revealed within Area 2 related to a brick edged surface, possibly an old pavement edge ((203), (204) & (205)). This surface edge runs parallel to the existing pavement edge but is *c*. 2m east of its location suggesting that the road has shifted or narrowed within the modern period. Stratigraphically the next latest deposits revealed within this area relate to the construction and backfilling of the existing manhole chamber and pipe trench. These 19th/20th century deposits were sealed by topsoil (200) which, interestingly, the standing cross appears to sit within. This suggests that the cross is not situated within its original historic context. This supposition is further supported by the stratigraphic sequence highlighted in Area 1. The topsoil ((200) same as (100)) that the cross sits within seals buried topsoil (102) which dates to the 19th century.

7.3 Area 3

The northwest of Area 3 revealed naturally formed silt horizons, dumped deposits, two early modern drainage features and a single significant archaeological feature. The latter, a small pit, appears to date to the late medieval period.

The southeast area of the pipe trench and the area of manhole chamber 2, within the Nature Reserve, were devoid of archaeology. The southeast of the pipe trench, up to Dickenson Way, revealed evidence of a large scale truncation. This probably took place when the area was stripped prior to the construction of houses on Dickenson Way.

The only man-made action recorded within the area of manhole chamber 2 was a made ground deposit, possibly forming part of a recent landscaping. All other deposits revealed in this area were of geological origin or were naturally formed silt deposits.

The deposits, drainage features and finds yielded from Areas 1, 2 and 3 are not archeologically exciting in themselves, though they help to inform on the context of the scheduled cross. The early modern deposits that are stratigraphically beneath the cross, and the presence of a northwest-southeast drainage feature seemingly running below the southwest corner of the cross, suggest that the cross has been relocated.

The exact original location and historic context of the cross could be very close to its present situation; however, given the limited depths of the excavation in Area 2 this was not located.

8.0 Effectiveness of Methodology

The methodology employed was entirely sufficient to allow the investigation and recording of deposits and features exposed around the cross and within the pipe run.

9.0 Acknowledgements

Pre-Construct Archaeology (Lincoln) would like to thank Scott Wilson Ltd for this commission and for their assistance during the project and for the assistance provided by AMScott (the client) and the principal contractors North Midlands.

10.0 Bibliography

British Geological Survey, 1960, *Nottingham, England and Wales Sheet 126, Solid and Drift Geology, 1:50 000 Series*. Keyworth, Nottingham: British Geological Survey

Department of the Environment, 1990 Planning Policy Guidance 16: Archaeology and Planning

Institute for Archaeologists, 2008. *Code of Conduct.* Reading: IfA

Institute for Archaeologists, 2008. *Standard and Guidance for Archaeological Watching Briefs.* Reading: IfA

Scott Wilson Ltd, 2008. *A1 North Muskham Drainage Scheme, Nottinghamshire: Specification for Archaeological Works*. Unpublished Project Specification.

North Muskham Archaeology Report – Addendum

Concrete Removal Monitoring around North Muskham Cross SAM

1.0 – Introduction

Pre-Construct Archaeology (Lincoln) was commissioned by Scott Wilson on behalf of AMScott to undertake an archaeological watching brief and hand excavation around the North Muskham cross, a Scheduled Ancient Monument (SAM 29924). These works were successfully undertaken and completed on 26/05/09.

Following the completion of the archaeological works on site, the landscaping works around the cross commenced. The contractors did not follow the issued English Heritage approved specification written by Scott Wilson and instead of limiting the bedding layer of concrete to an outer ring starting 1.54m from the centre of the cross shaft, they instead laid the concrete in the entire hand-excavated area up to the base of the cross base. Strips of plastic were placed around the cross base to protect the fabric from the concrete.

Following consultation with English Heritage, Scott Wilson prepared a specification for the immediate removal of the concrete from the inner circle up to the cross base. This specification was approved by English Heritage. Pre-Construct Archaeology (Lincoln) was commissioned to oversee the removal of this concrete by the contractors and ensure that no damage occurred to the cross. The works took place from 29th-30th June.

2.0 – Methodology

The contractors were instructed to remove the inner circle of concrete and any sub-base that had been laid below. The outer ring of concrete was laid according to the original specification and could therefore remain in situ. At 1.54m from the centre of the cross, the concrete was to be cut with a hammer and chisel and removed by hand. Then, any sub-base which had been laid below the concrete was to be removed with a trowel or similar appropriate tools to ensure that no ground beneath the sub-base would be disturbed by the removal works.

During these works, the cross was to be protected at all times to prevent any damage from occurring.

3.0 – Results of Monitoring

An initial consultation between AmScott, Pre-Construct Archaeology and the contractors was undertaken on site on the Monday morning to discuss the specification for the works and the best way to protect the cross during the remedial works. Once these decisions had been confirmed and the materials ordered it was arranged for works to begin the following day.

Photographs of the current landscaping and damage to the cross were taken prior to the1.54m diameter circle for concrete removal being marked out by the contractors. A

wooden shuttering box was then erected around the cross to protect it from the forthcoming works. The inner circle of concrete was then removed as specified. An archaeologist remained on site until the concrete was removed and the galvanised angle and gravel infill situated around the cross base.

4.0 – Conclusions

The monitoring works were completed successfully and ensured that mistakes made by the contractor, in contravention of the SAM consent were remedied swiftly and with no further damage to the cross.

Plate 1: The cross shown surrounded by concrete. The damage to the base can be seen on the front right corner.

Plate 2: Close up of the cross base showing the damage. The concrete landscaping with the area marked out for removal can be seen in the background.

Plate 3: Remedial works being carried out by hand once the wooden shuttering had been erected.

Plate 4: The inner circle of concrete has been removed and the galvanised angle and gravel infill has been situated.