UNIVERSITY OF LEICESTER
Archaeological Services

An Archaeological Field Evaluation on Land at the former Hemington Pit Compound, Tamworth Road, Lockington-Hemington, Leicestershire (SK 45790 0111)

James Patrick

ULAS Report No 2017- 015

An archaeological field evaluation on land at the former Hemington Pit Compound,

Tamworth Road, Lockington-Hemington, Leicestershire

(SK 45790 0111)

James Patrick

for

Costain Galliford Try

P.A 16/00998/FULM

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An archaeological field evaluation on land at the former Hemington Pit Compound, Tamworth Road, Lockington-Hemington, Leicestershire

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Summary

An archaeological field evaluation by trial trenching was carried out by University of Leicester Archaeological Services (ULAS) on land at the former Hemington Pit Compound, Tamworth Road, Lockington-Hemington Leicestershire (SK 45790 0111). Previous archaeological work undertaken during the former quarries gravel extraction operations revealed a Bronze Age fishweir /revetment which lay within the site perimeter and other prehistoric and medieval structures along with palaeoenvironmental deposits were located adjacent to the present site.

The work was in advance of excavation of a c.135 metre long by 5 metre wide drainage ditch aligned north-west to south-east with associated c. 18m metre by 10 metre attenuation tank. The proposed ditch will be associated with the construction of a large compound on the former quarry gravel processing works. The compound is related to improvements to the M1 motorway (smart motorways) and is in the form of a large complex of modular buildings on existing hard standing ground, therefore no other ground-works threaten potential archaeological remains.

Six trenches were proposed; five orientated north-west to south-east along the length of the drainage ditch with the sixth trench oriented north-east to south-west across the attenuation tank. Two further trenches were added due to on-site constraints. No archaeological remains were located. Modern intrusions and disturbed sand and gravel above o alluvium deposits of modern date were located. The archive for this work will be deposited with Leicestershire Museums with accession number X.A.49.2016.

Introduction

University of Leicester Archaeological Services (ULAS) were commissioned by Costain Galliford Try to carry out an archaeological field evaluation on land on the former Hemington Pit Compound, Tamworth Road, Leicestershire (SK 45790 0111). This archaeological work is in accordance with NPPF Section 12: Enhancing and Conserving the Historic Environment and was a first stage to address the requirements of Conditions 14-15 of the outline planning permission (P.A 16/00998/FULM). The work followed the Written Scheme of Investigation (hereinafter WSI; ULAS 04.01.2017) approved by Leicestershire County Council (LCC) as historic environment advisors to North West Leicestershire District Council.

The Leicestershire and Rutland Historic Environment Record (HER), indicates that the application area lies within an area rich in archaeological remains dating from the prehistoric

and medieval periods. This included good waterlogged preservation of Bronze Age fishweirs/revetment, within the site perimeter while a medieval mill dam and fishweirs with palaeoenvironmental deposits preserving evidence from the climatic conditions from the post-glacial, Neolithic, and medieval periods discovered during gravel extraction in the surrounding area.

Site Location, Details and Geology

The application area is situated off the north-west side of the B6540 Tamworth Road approximately four kilometres south-west of Long Eaton and approximately two kilometres north of Hemington village. The former quarry gravel processing plant is located in the area known as Hemington Fields and is bounded by protected woodland to the north-west and south-east next to Tamworth Road. Lakes created by the former quarry workings lie directly to the south-west and north of the application area. Access onto the site is via the former quarry plant access road of Tamworth Road. The site is on brownfield land of the former Hemington Quarry gravel processing and re-cycling plant. The site is partly overlain by concrete foundations of the former plant, with thick hardcore created by demotion and levelling of the former processing plant buildings. Drains and trackways also lie within the application area formerly associated with the plant. The site is roughly rectangular with the ground-works for the drainage ditch covering a length of 135 metres aligned north-west to south-east by a width of five to 15 metres. A proposed attenuation tank situated at the south-east end of the drainage ditch covers an area approximately 18 by 10 metres.

The site is relatively flat with the western edge the highest point at a maximum height of *c.*32m AOD falling to the north-eastern side to a level of *c.*30.8m AOD. The average level of the site is 31.7m AOD. The Geological Survey of England & Wales, shows the site to lie on mudstone bedrock (Edwalton Member) overlain with sands and gravels. Previous archaeological work in the area has identified archaeological assets preserved in a riverine environment of braided palaeochannels created by the changing course of the river Derwent and Trent.

Figure 1: **Site Location**

Historical and Archaeological Background

A desk-based assessment has been undertaken (Arup 2016) which identified that Hemington Quarry had been subject to gravel extraction in various phases between the 1950's and 2010. A number of nationally important archaeological features and deposits were identified during archaeological work carried out in mitigation of the gravel extraction works. These included Bronze Age fishweirs/revetment, a medieval mill dam, three medieval bridges, fishweirs and palaeoenvironmental deposits preserving evidence of climactic conditions from the post glacial, Neolithic and medieval periods. One of these features lay within the site (the Bronze Age fishweir/revetment) and others about the site to the west and north (Figure 2).

Figure 2: Location of application area in relation to surrounding archaeological finds/ sites (From Arup 1916).

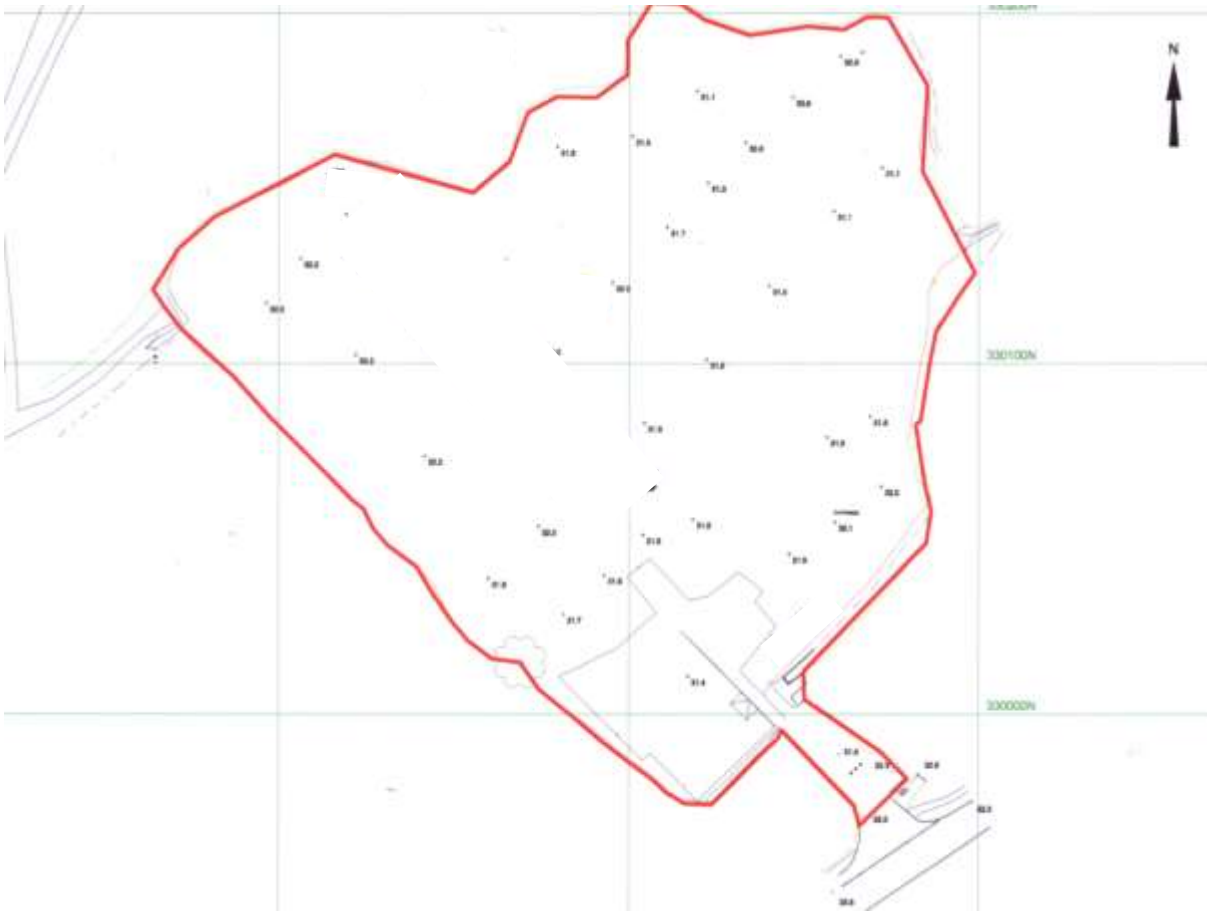

Figure 3 Plan of the application area

Archaeological Objectives

The archaeological evaluation was identified as having the potential to contribute to the following research aims.

Prehistoric - Medieval

Previous work in Hemington Quarry has located nationally important remains relating to the fishing industry and communications across and along the river Trent from the prehistoric to medieval periods including boat timbers, fishweirs, mill dams and mill wheel pit and three phases of bridge crossing the river (Clay and Salisbury 1990; Cooper 2003; Ripper and Cooper 2009; Salisbury 1991). The archaeological work may contribute to the study of the exploitation of the Trent floodplain over time. (taken from WSI).

The main objectives of the evaluation were:

- To identify the presence/absence of any archaeological deposits.
- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed ground works.

- To produce an archive and report of any results.

Within the stated project objectives, the principal aim of the evaluation is to establish the nature, extent, date, depth, significance and state of preservation of archaeological deposits on the site in order to determine the potential impact upon them from the proposed development.

Trial trenching is an intrusive form of evaluation that will demonstrate the existence of earth-fast archaeological features that may exist within the area.

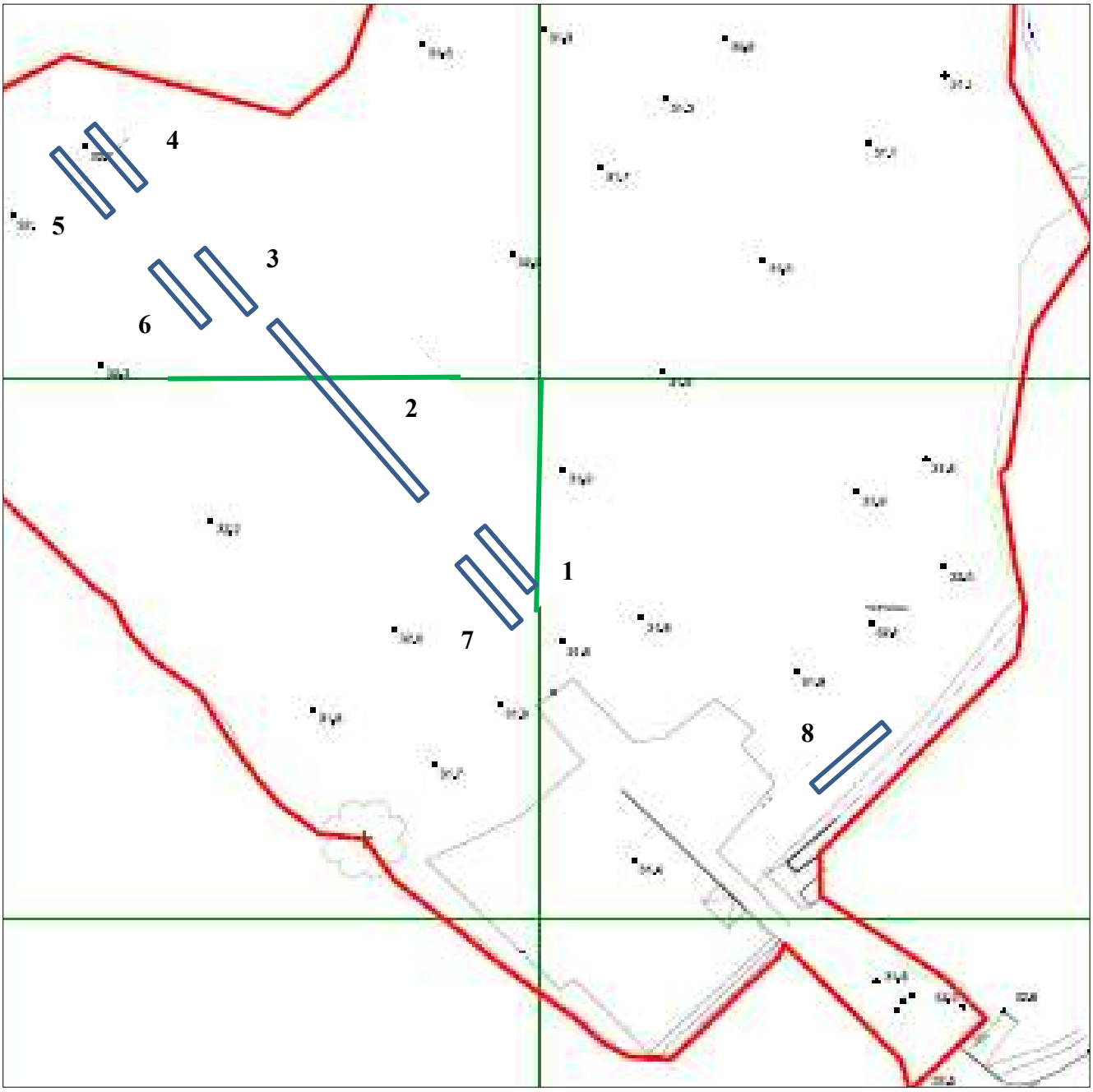

Figure 4: Location of trenches. 100m grid (plan provided by Costain Galliford Try)

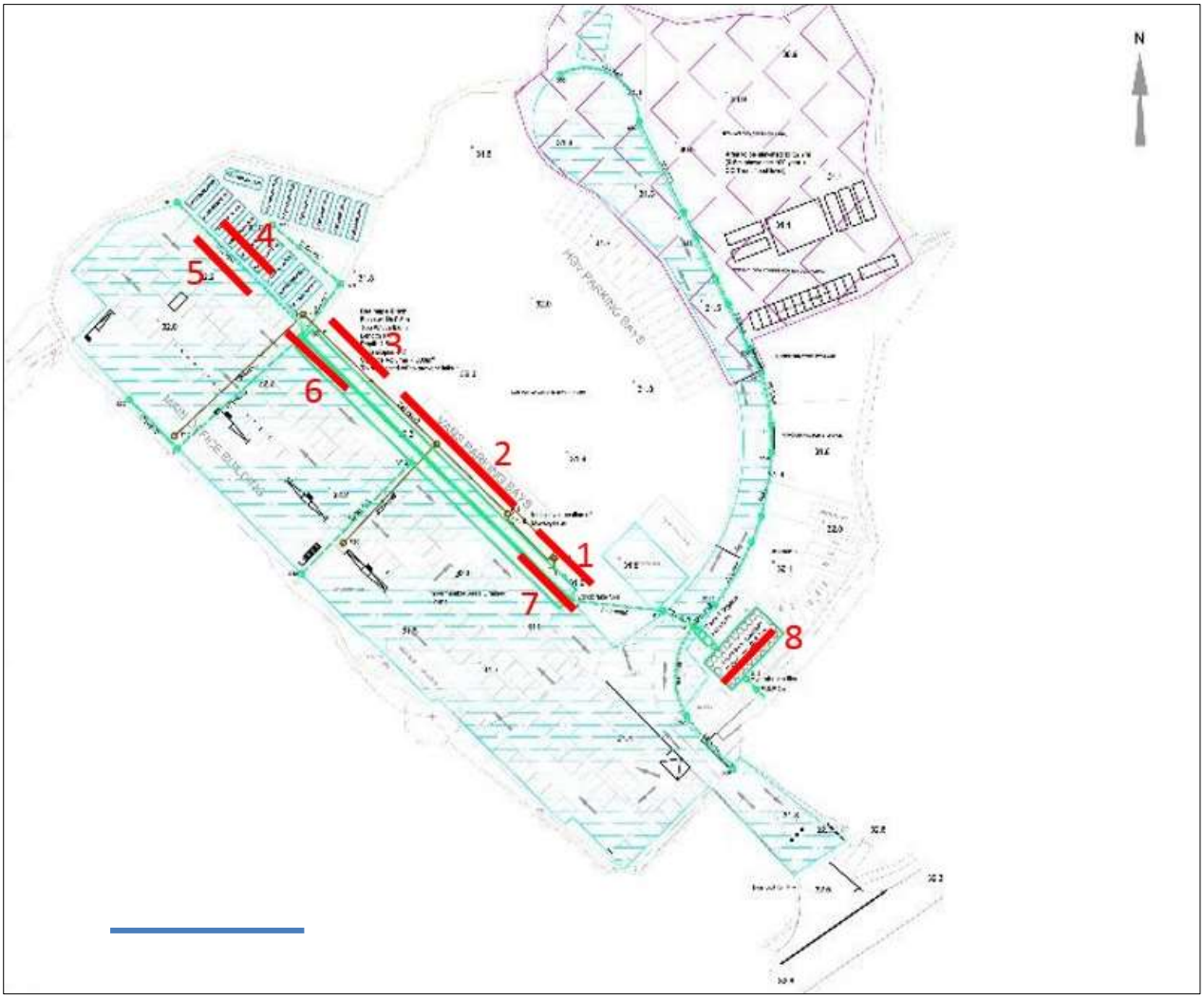

Figure 5: Location of trenches in relation to development proposals. Scale bar: 50m

Methodology

All work followed the Chartered Institute for Archaeologists (CIfA) *Code of Conduct* (2014a) in accordance with their *Standard and Guidance for Archaeological Field Evaluation* (2014b).

The WSI proposed six 20m x 1.60m trenches targeting the location of the drainage ditch. This equated to a total of 192 square metres. However the trench locations and overall depths were modified in view of the ground conditions, notably flooding (Figures 4-5) and two additional trenches were excavated.

Figure 6: Application area prior to evaluation, looking south- east towards former quarry entrance. Original Swathe defined by pegged area

Figure 7: Removing hardcore in Trench 4

Results

The trenches were excavated by a wheeled excavator with a 1.60m ditching bucket under archaeological supervision. After excavation and recording, the trenches were backfilled. Due to the thick concrete foundations of the former gravel processing plant, trenches 1 to 4 were re-located 9.3 metres to the north-east, alongside the original drainage ditch. As extensive concrete foundations covered just the south-eastern end of the drainage ditch location, an on - site decision by the engineer required an extra two trenches at the north-west end of the original marked out drainage ditch. This was undertaken in case the work went on to remove the concrete, otherwise the drainage ditch (swathe) would be re-located along the course of trenches 1 to 4. Trench 2 was extended to 40m from 20 metres as flooding prevented having two separate 20 metre trenches. There was no top-soil or sub-soil, as this had been previously removed during the gravel processing plants construction and subsequent plant operations within the concreted area.

A thick layer of hardcore levelling following demolition of the plant was evident across the whole of the site. The natural substratum consisted of a disturbed and truncated light orange brown silty-sand and gravel together with fine channel sands. This overlay an undefined depth of dark green/ blue-grey silty-clay alluvium continuing down to the swathes formation level of 1.50 metres. Post-medieval pottery and modern debris was identified within the alluvium with no archaeological remains encountered.

Trench 01

Orientation: North-west to south-east

Length: 20m

Width: 1.6m

Topsoil: Hardcore demolition levelling

Natural Substratum: Light orange brown silty sand and gravel

No archaeological remains were identified: As with trenches 2 to 4 listed below, this trench was re-located for a possible alternative drainage ditch location running parallel to the pegged out original. A single test pit was excavated at the south-east end which showed a light orange brown silty-sand and gravel down to the 1.50 metre deep formation level. The sand and gravel was heavily disturbed by associated services trenches formerly used by the quarry plant.

Interval	SE 0m	5m	10m	15m	20m
Hardcore	0.80	0.80	0.50	0.60	0.70
Top of natural sand/gravel	0-80	0.80	0.50	0.60	0.70
Sand gravel	0.70+	-	-	-	-
Base of Trench Formation level	1.50 Test pit	0.80	0.70	0.70	0.70

Figure 8: Trench 1 looking north-west

Figure 9: Trench 1 looking north-east

No archaeological remains were identified: As with trenches 2 to 4 listed below, this trench was re-located for a possible alternative drainage ditch location running parallel to the pegged out original. A single test pit was excavated at the south-east end which showed a light orange brown silty-sand and gravel down to the 1.50 metre deep formation level. The sand and gravel was heavily disturbed by associated services trenches formerly used by the quarry plant.

Trench 02

Orientation: North-west to south-east

Length: 40m

Width: 1.60m

Topsoil: Hardcore demolition levelling

Natural Substratum: Light orange brown silty sand and gravel above dark grey-blue silty-clay alluvium

No archaeological remains were identified: As with Trenches 1, 3 and 4, this trench was re-located for a possible alternative drainage ditch location running parallel to the pegged out original. The trench was excavated to a 1.5m depth at the north-west and south-east ends which showed a light orange brown silty-sand and gravel down to the formation level.

Interval	SE 0m	10m	20m	30m	40m
Hardcore	0.50	0.50	0.20	0.50	0.40
Top of natural sand/gravel/alluvium	0.50	0.50	0.20	0.50	0.40
Sand gravel	-	-	0.20	-	0.20
Alluvium	1.0m +	1.0m+	1.10m+	-	0.90m+
Base of Trench Formation level	1.50	1.50	1.50	0.50	1.50

Figure 10: Trench 2, Looking South-east

Trench 03

Orientation: North-west to south-east

Length: 20m

Width: 1.6m

Topsoil: Hardcore demolition levelling

Natural Substratum: Light orange brown silty sand and gravel and dark grey/ blue silty-clay alluvium below

No archaeological remains were identified: Three one metre wide test pits to a depth of *c.* 1.5m were excavated through the alluvium. Copper wire within the alluvium was evident at the trench base at the north-west end. The fine channel sand above the alluvium was disturbed.

Interval	SE 0m	5m	10m	15m	20m
Hardcore	0.40	0.50	0.50	0.50	0.50
Top of natural sand/gravel/alluvium	0.40	0.50	0.50	0.50	0.50
Sand gravel	0.30	-	0.30	-	0.40
Alluvium	0.80 +	-	0.70+	-	0.60+

Base of Trench Formation level	1.50 Test pit	0.50	1.50 Test pit	0.50	1.50 Test pit

Figure 11: Trench 3, looking south-east

Figure 2: Trench 3, showing metal cable within the alluvium. Looking south-west

Trench 04

Orientation: North-west to south- east

Length: 20m

Width:1.6m

Topsoil: Hardcore demolition levelling

Natural Substratum: Light orange brown silty sand and gravel and dark grey/ blue grey silty-clay alluvium below

Two one metre wide test pits to a depth of *c.* 1.5m were excavated through the alluvium at the south-east and north-west ends of the trench. No archaeological deposits were identified.

Interval	SE 0m	5m	10m	15m	20m
Hardcore	0.50	0.50	0.40	0.50	0.40
Top of natural sand/gravel/alluvium	0.50	0.50	0.40	0.50	0.40
Sand gravel	0.30	-	0.20	0.10	0.30
Alluvium	0.70 +	-	-	-	0.80+
Base of Trench Formation level	1.50 Test pit	0.50	0.60	0.60	1.50 Test pit

Figure 3: Trench 4, looking south-east

Trench 05

Orientation: North-west to south-east

Length: 20m

Width:1.6m

Topsoil: Hardcore demolition levelling

Natural Substratum: Light orange brown silty sand and gravel and dark grey/ blue grey silty-clay alluvium below

This trench was positioned along the original pegged out course of drainage ditch where the concrete was absent at the north-west end. Three one metre wide test pits to a depth of *c.* 1.5m were excavated through the alluvium at the south-east, central and north-west ends of the trench. A fragment of modern pot / brick and concrete was found within the alluvium. No archaeological deposits were identified

Interval	SE 0m	5m	10m	15m	20m
Hardcore	0.40	0.50	0.50	0.50	0.50

Top of natural sand/gravel/alluvium	0.40	0.50	0.50	0.50	0.50
Sand gravel	0.40	-	0.30	-	0.40
Alluvium	0.70 +	-	0.70+	-	0.60+
Base of Trench Formation level	1.50 Test pit	0.50	1.50 Test pit	0.50	1.50 Test pit

Figure 4: Trench 5, looking south-east

Trench 06

Orientation: North-east to south-west

Length: 20 m

Width: 1.6m

Topsoil: Hardcore demolition levelling

Natural Substratum: Light orange brown silty sand and gravel

and dark grey/ blue grey silty-clay alluvium below

Interval	SE 0m	5m	10m	15m	20m
Hardcore	0.50	0.50	0.40	0.50	0.40
Top of natural sand/gravel/alluvium	0.50	0.50	0.40	0.50	0.40
Sand gravel	0.40	-	0.40	-	0.30
Alluvium	0.60 +	-	0.70+	-	0.80+
Base of Trench Formation level	1.50 Test pit	0.50	1.50 Test pit	0.50	1.50 Test pit

Figure 5: Trench 6, looking south-east

This trench was positioned along the original pegged out course of drainage ditch where the concrete was absent at the north-west end. Three one metre wide test pits to a depth of *c.* 1.5m were excavated through the alluvium at the south-east, central and north-west ends of the trench. No archaeological remains were identified.

Trench 07

Orientation: North-east to south-west

Length: 20 m

Width: 1.6m

Topsoil: Hardcore demolition levelling

Natural Substratum: Not applicable

Interval	SE 0m	5m	10m	15m	20m
Hardcore	0.20	0.30	0.10	0.10	0.18
Base of trench, concrete	0.20	0.30	0.10	0.10	0.18

Figure 6: Trench 7, looking south-east

No archaeological remains were identified. This trench was positioned along the original pegged out course of the drainage ditch at the south-east end. However the presence of concrete prompted the decision for an alternative parallel drainage ditch nine metres to the north-west.

Trench 08

Orientation: North-east to south-west

Length: 18 m

Width: 1.6m

Topsoil: Hardcore demolition levelling

Natural Substratum: Dark grey/ blue grey silty-clay alluvium
This trench was excavated within the area of the planned attenuation tank. Three one metre wide test pits to a depth of *c.* 1.5m were excavated through the alluvium at the south-west, central and north-east ends of the trench. No archaeological remains were identified. Heavy disturbance showed in both test pits at each end with a rubber hose located within the alluvium at the base of trench. The hardcore overlay concrete and other compacted materials. The trench was also contaminated with oil/diesel so was abandoned.

Interval	SE 0m	5m	10m	15m	20m
Hardcore	0.50	0.50	0.40	0.50	0.40
Top of natural sand/gravel/alluvium	0.50	0.50	0.40	0.50	0.40
Sand gravel	0.40	-	0.40	-	0.30
Alluvium	0.60 +	-	0.70+	-	0.80+
Base of Trench Formation level	1.50 Test pit	0.50	1.50 Test pit	0.50	1.50 Test pit

Conclusion

The archaeological evaluation proved negative for archaeological remains. A large contributory factor was the heavy disturbance by the construction of the gravel quarry processing plant and subsequent demolition following disuse. The preparation and deposition of the thick layer of concrete would have severely truncated the underlying sand and gravel natural substrata. However there was some potential within the thick alluvium deposits encountered below the sand and gravel. This was with exception to Trench 1 which only showed truncated natural sand and gravel, and Trench 7 which revealed concrete. Initial inspection of the deep alluvium showed it to be clean and undisturbed. However 18th or 19th century due to Panchion Ware was recovered in Trench 2 and post-medieval pottery / brick recovered in Trench 5. Further inspection showed it to be probably more recent with a metal electrical cable identified deep down in Trench 3 and concrete fragments within Trench 5. A rubber hose was visible at the base of trench 8 within the attenuation tank area deep within the alluvium. Although this area was thought to have been where gravel extraction had taken place, the presence of these recent objects could indicate evidence of a former lagoon separated from the concrete and processing plant. Alternatively the alluvium may have undergone heavy churning up by plant during the operation of the quarry.

The fishweir / revetment (**MLE4463**) from the previous excavations was located at a depth below the formation depth of the ground-works for the ditch. The depth of the other structures located previously during quarry operations at Hemington pit immediately to the west

(**MLE9691**) were all below 30m.OD (27.25 - 28.26m AOD; Cooper and Ripper 2012, 15). As the proposed channel and attenuation tank will be to a depth of 1.5 m from the current ground surface which varies between 31.6 – 32.3mOD it is highly unlikely that there would be any impact on any surviving structures.

Acknowledgements

ULAS would like to thank Costain Galliford Try for their co-operation during the project. Also thanks Rob Taylor Plant Hire and ground staff during excavation of the trenches. The project was managed by Patrick Clay and the fieldwork was carried out by the author also of ULAS.

Figure 7: Trench 8, looking south-west

Publication

Since 2004 ULAS has reported the results of all archaeological work through the *Online Access to the Index of Archaeological Investigations* (OASIS) database held by the Archaeological Data Service at the University of York.

A summary of the work will also be submitted for publication in a suitable regional archaeological journal in due course.

Archive

The archive for this project will be deposited with Leicestershire Museums with accession number X.A4.2017

The archive consists of the following:

8 Trench recording sheets

1 indice record sheets

1 Unbound copy of this report

1 CD digital report

1 Contact sheet of digital photographs

1 CD digital photograph

Bibliography

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Appendix 1 OASIS Information

PROJECT DETAILS	**Oasis No**	universi1-xxxx		
	Project Name	An Archaeological Evaluation on land at Hemington Pit compound, Tamworth Road, Leicestershire. SK 45790 0111		
	Start/end dates of field work	16-01-2017- 18-01-2017		
	Previous/Future Work			
	Project Type	Evaluation		
	Site Status	None		
	Current Land Use	Brown Field		
	Monument Type/Period			
	Significant Finds/Period			
	Development Type	Highways. compound		
	Reason for Investigation	NPPF		
	Position in the Planning Process	Planning Condition		
	Planning Ref.	P.A. 16/00998/FULM		
PROJECT LOCATION	**Site Address/Postcode**	Hemington Pit compound, Tamworth Road, Leicestershire.		
	Study Area			
	Site Coordinates	SK 45790 0111		
	Height OD	*c* 31.7m OD		
PROJECT CREATORS	**Organisation**	ULAS		
	Project Brief Originator	Local Planning Authority		
	Project Design Originator	ULAS		
	Project Manager	Patrick Clay		
	Project Director/Supervisor	James Patrick		
	Sponsor/Funding Body	Developer :Costain Galliford Try		
PROJECT ARCHIVE		**Physical**	**Digital**	**Paper**
	Recipient	NA	LCC	LCC
	ID (Acc. No.)		A49-2016	A9_2015
	Contents		Photos Survey data	Fieldwork records Field Notes
PROJECT BIBLIOGRAPHY	**Type**	Grey Literature (unpublished)		
	Title	An Archaeological Evaluation on land at Hemington Pit compound, Tamworth Road, Leicestershire. SK 45790 0111		
	Author	James Patrick		
	Other bibliographic details	ULAS Report No 2017-		
	Date	2017		
	Publisher/Place	University of Leicester Archaeological Services / University of Leicester		
	Description	Developer Report A4 pdf		

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