

The Three Barrows II.
Project Design Appendix

APPENDIX A.

Specialists

The names of the specialists for the project are tabulated below. The services of the specialists who work on the assessment and analysis of the Lincoln Eastern Bypass Project will be used to ensure the continuity of the archaeological investigations and fulfil the requirements of the paragraph of the Project Design (Part 1, Chapter 6). The names were provided by Network Archaeology Ltd. (NAL).

Artefacts		Specialist
Animal Bone		Dr Matilda Holmes
Burnt Stone		Raquel Margalef
Ceramic Building Material	Roman	Zoe Tomlinson
	Post-Roman	Jane Young
Flint		Rebecca Devaney
Hand axe		Dr Joshua Hogue
Historic and Landscape (local experts)		Dr Peter Chowne, Jim Rylatt
Human Remains		Malin Holst
Metalwork		Adam Daubney
Palaeoenvironmental		James Rackham
Pottery	Prehistoric	Dr Peter Chowne, Diana Fernandes
	Iron Age and Roman	Ian Rowlandson
	Roman (Samian)	Dr Gwladys Monteil
	Roman (Amphorae)	Dr David Williams
	Roman (Mortaria)	Kay Hartley
	Roman (Fine wares)	Dr Kevin Greene
	Post-Roman	Jane Young
Scientific Analysis	Geoarchaeology	Dr Samantha Stein
	OSL	Professor Mark Bateman
	Radiocarbon Dating	BRAMS Tim Knowles

Artefacts	Specialist
Shell (marine)	James Rackham
Wood	Michael Bamforth
Worked Bone	Ian Riddler
Worked Stone	Dr Ruth Shaffrey

APPENDIX B.

Method Statements

The methods refer to the Execution Stage, the stages within the Execution (Part 1, Chapter 8) and the tabulated Task and Products list (Part 2, Chapter 3). The detailed method statement for the Execution Stage was reproduced using the relevant sections of the Lincolnshire *Archaeology Handbook* (Jennings 2019).

Excavation

‘The objective of any excavation within a field evaluation programme should be to define remains rather than totally remove them. Excavation should normally be limited to the minimum necessary to characterise the value or potential of the remains’ (Jennings 2019, p. 62).

The excavation programme will target three prehistoric barrow monuments. The evaluation was set out to investigate these features before their complete disappearance as the mounds are not protected by scheduling and no further works will be expected in the area in the future; however in the light of the potential results, a full excavation programme may be carried out. The excavation strategy is planned with the defined aims, objectives and research questions to ensure effective data, finds and sample retrieval. Two of the barrows are complete while only one half of the third barrow is approachable for examination (see site plan). Two of the barrows will be targeted with T-shaped trenches measuring 40m long and 1.80m wide with a 20m trench joined at a right angle. The third barrow will be excavated in a quadrant. In case of any important archaeological features (e.g. cremation pit, pyre etc.) partially encountered the trenches may be altered in consultation of the planning archaeologist. The trenches will be set out to be as far as possible from the exclusion zones of the high voltage overhead cables.

The mound material is already exposed due to the intensive agricultural activities which led to a hybrid stripping/topsoil removal approach. The machine will be used to remove the remaining topsoil from all ends of the T-shaped trenches, while the actual mound material will be cleaned by hand and recorded before the excavation. All machine work will be supervised by an experienced archaeologist (Supervisor or Project Officer). An appropriate machine (5t on rubber tracks) will be used to remove the excess soil with a wide, toothless ditching blade until the first archaeological horizon is reached. The sections of the trench which require examination will be cleaned using hand tools. The archaeological features will be cleaned by hand. The archaeological deposits and features will be excavated by hand. A representative sample of every archaeological feature, in agreement with the planning archaeologist, must be excavated by hand and the depth of surviving deposits must be determined. The percentage of other naturally deposited material will also be investigated and sampled for palaeoenvironmental assessment. Cleaning, examination and recording should take place in both plan and section (Jennings 2019, p. 62).

<i>Site specific, expected feature types</i>	<i>Recommended representative sample % excavated within a trench (subject to agreement with the planning archaeologist)</i>
Layer or deposit (mound material, occupation layer etc.)	100% excavated
Flint scatter	100% excavated
Pits (non-structural features)	50% excavated
Structural (post holes, stake holes, beam slots etc.)	100% excavated
Ditches	100% excavated or in accordance with the H&S guidance if more than a 1m deep
Inhumation burial	100% excavated
Cremation burial (no vessel or other container)	100% excavated
Cremation burial (with intact vessel)	Block lifted from site, 100% excavated in laboratory
Cremation pyre or other burial related deposits	100% excavated
Natural features (tree throw, hedge)	25-50% excavated
Any other feature type	Subject to guidance and agreement

Recording

Acceptable recording systems will be designed and used for all on-site and post fieldwork procedures (Jennings 2019, p. 63) which will be compatible with the recording system used by Network Archaeology (see Part 1. Interface). The long-term archival requirements of the archaeological record will be considered especially the drawn and photographic records. Both artefacts and ecofacts must be handled according to the requirements of the archaeological archives produced by The Collection, Lincoln. During the Initiation project stage, the receiving museum will be contacted for archive deposition guidance and accession number (Jennings 2019, p. 63). The site archive will be paper based (indices and context sheets) which will be digitised off-site. Photographic, drawn and written records will be required of each trench, feature and archaeological layer. Photographs (pre-ex, mid-ex and post-ex) will be taken to record all features, deposits, finds and the general work. A 'Master' section or representative sections will be drawn of the longest face of each trench at an appropriate scale (1:20 or 1:50). Sections of archaeological features and layers will be drawn at an appropriate scale (1:10 or 1:20) (Wilkins et al. 2016, p. 39).

The features will be recorded using the pre-made company context sheets. Trench and feature plans will be created by digital survey. *‘The trenches and features will be surveyed using an EDM or GPS (Global Positioning System). The GPS equipment required to be accurate to the sub-centimetre level (differential GPS). The vertical survey control will be tied to the Ordnance Datum. The accuracy must be of a level to allow the work to be repeated by a third party’* (Jennings 2019, p. 63).

Finds and Samples

‘Adequate recovery of finds and an appropriate sampling programme to provide environmental evidence from all archaeological deposits should be ensured. A site visit by the nominated environmental specialist may be required’ (Jennings 2019, p. 63). Finds will be retrieved in accordance with the relevant guidance published by CIfA (2020b) *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*. All artefacts will be retained from excavated contexts and a no discard policy will be applied. The collected finds will be handled in line with set guidance in the *Archaeological Handbook* (Jennings 2019, pp. 73-76) and *First Aid for Finds* (Watkinson and Neal 1998 and forthcoming). Finds retrieved from samples will also be assessed.

Animal Bones

For animal bones recovery, the relevant Historic England guidance by Baker and Worley (2019) *Animal Bones and Archaeology Recovery to archive* will be applied. The bones will be cleaned, marked and assessed by a specialist.

Flints

Due to the nature of the site a significant amount of flint is expected. The recovery of the material will be carried out following the guidance from Historic England (2024) *Managing Lithic Sites. Archaeological guidance for commercial and research projects, planning authorities, land management agencies and developers*. The excavated material will be assessed and analysed by a specialist.

Human remains

If human remains are found, an appropriate licence from the Ministry of Justice will be obtained (Jennings 2019, p. 80). The excavation of the remains will be carried out as stated in the relevant guidance *Updated Guidelines to the Standards for Recording Human Remains* by Mitchell and Brickley (2017). The inhumations will be carefully excavated and the surrounding soil will be sampled. The exposed remains are recorded by photos, photogrammetry, survey and written context sheets will be made before lifting. Any grave goods found with the skeleton will also be carefully excavated or block lifted, recorded (survey and photogrammetry). The condition of the finds will be checked and a conservator may be contacted for further guidance. Cremation burials

will be 100% spit excavated and sampled. In case of an undisturbed or slightly disturbed cremation vessel, the urn will be block lifted and the excavation will take place under laboratory conditions. Contexts (pyre or debris) related to the cremation will also be fully excavated and sampled. Disarticulated human bones from features or deposits will be subject of close inspection, excavation and sampling (Wilkins et al. 2016, p. 42). The recovered bones will be cleaned and examined and sampled for further research by a competent specialist.

Metal finds and Metal Detecting

This activity, carried out previously, only targeted the surface and plough soil. As such, the removal of the disturbed topsoil within the trenches will allow further metal detecting. The possible hits detected in an exposed archaeological feature will be marked and will be carefully excavated or lifted when applicable. The removed topsoil and other deposits will also be scanned. The detected metal find will be issued with a unique metal detecting and will be surveyed before recovery. Small finds from spoil heaps will not be surveyed, however a number will be issued. The metal finds will be handled and preserved as recommended in the *Archaeological Handbook* (Jennings 2019, p. 81) and the Heritage Preservation Guidance (2020). Metal finds will also be subject to specialist assessment.

Pottery will be recovered and retrieved by following the relevant guidance of the *Standard of Pottery Studies in Archaeology* (Barclay et al. 2016). The cleaned sherds will be sorted according to the archaeological period and will be assessed by the experts of the period.

Small finds

Any objects of importance (may be decided by the Project Officer or Supervisor) will have a unique identification number and will be recorded in-situ and their condition will be assessed before lifting. These finds may include whole vessels, metal finds, grave goods, personal adornments, worked stones etc.

Organic material (Wood)

When organic materials are discovered, guidance from the wood expert will be sought to ensure a good level of preservation. If needed, the specialist will be invited to carry out examinations on site. For wood remains the Historic England Guidance (2010) *Waterlogged Wood*. The finds will be recorded on site following the company recording procedure and may be block lifted.

Palaeoenvironmental Samples

As the relevant section of Wilkins et al. (2016) states: ‘*All deposits with good palaeoenvironmental potential will be sampled. Bulk samples will be taken from the section as appropriate, under advice from the project specialist. Context specific samples will be taken by the most appropriate means (kubiena tins, contiguous columns, incremental block, bulk etc.) for multi-disciplinary analysis*’. The collection, selection, processing, assessment and reporting will follow the principles set out in

Environmental Archaeology (Historic England 2011) and with reference to the *Archaeological Handbook* (Jennings 2019, p. 76). The sample processing methodology will be set out in cooperation with the environmental, geoarchaeological and scientific dating specialists.

APPENDIX C.

Budget

The staff wages are in keeping with the relevant Pay and Conditions recommended by CifA and BAJR for the year 2024/2025 (Connolly 2024).

Staff Costs

Excavation Staff costs

Execution Stage	Fieldwork (Stage 1)	Persons		Rate (£ daily)	Day	Total
Task	Site setup	1	Project Officer	£130	3	£390
		1	Supervisor	£115	3	£345
	Fieldwork	1	Project Officer	£130	15	£1950
		1	Supervisor	£115	15	£1725
		8	Archaeologist	£105	15	£12600
		Up to 3	*Specialists/ Conservators	£275	1	£825
	Reinstatement	1	Project Officer	£130	2	£260
		1	Supervisor	£115	2	£230
	Site Archive completion	1	Supervisor	£115	3	£345
	Total					£18670

*Specialist visits are subject to findings

Post-excavation Staff Costs

Execution Stage	Assessment and UPD (Post-ex) (Stage2; Stage 3)	Persons		Rate (£ daily)	Day	Total
Task	Finds Processing	1	Find Supervisor	£115	(Estimated) 10	£1150
	Digitalising site archive, databases	1	Supervisor	£115	5	£575
	Survey Data	1	Supervisor	£115	2	£230

Execution Stage	Assessment and UPD (Post-ex) (Stage2; Stage 3)	Persons		Rate (£ daily)	Day	Total
	processing	1	Geomatics	£110	5	£550
	Specialist Assessments	1	Flint Specialist	£275	(Estimated) 5	£1375
		1	Prehistoric Pottery Specialist	£275	(Estimated) 3	£825
		1	Palaeoenvironmental Specialist	£275	(Estimated) 15	£4125
		1	Radiocarbon Dating	£300	(Estimated) 3	£900
		1	OSL	£300	(Estimated) 3	£900
		1	Geoarchaeologist	£275	(Estimated) 5	£1375
		1	Osteologist	£275	(Estimated) 5	£1375
		1	Microexcavation	£275	(Estimated) 8	£2200
		Up to 3	Specialists (Depending on findings)	£275	(Estimated) 3-5	£4125
	Excavation Results and Report	1	Project Officer	£130	5	£650
		1	Supervisor	£115	2	£230
		1	Geomatics	£110	2	£220
	Internal Review 2.	1	Post-Excavation Manager	£180	0.5	£90
		1	Finds Manager	£180	0.5	£90
		1	Project Officer	£130	0.5	£65
	Specialist Analysis	1	Flint Specialist	£275	(Estimated) 3	£825
		1	Prehistoric Pottery	£275	(Estimated)	£825

Execution Stage	Assessment and UPD (Post-ex) (Stage2; Stage 3)	Persons		Rate (£ daily)	Day	Total
			Specialist		3	
		1	Palaeoenvironmental Specialist	£275	(Estimated) 5	£1375
		1	Osteologist	£275	(Estimated) 3	£825
		1	Geoarchaeologist	£275	(Estimated) 3	£825
		Up to 3	Specialist (depending on findings)	£275	(Estimated) 3	£2475
	Analysis Report	1	Project Officer	£130	(Estimated) 15	£1950
	Finalising Report	1	Post-Excavation Manager	£180	3	£540
		1	Project Officer	£130	5	£650
	Prepare for publication	1	Post-Excavation Manager	£180	5	£900
	Internal Review 3.	1	Project Manager	£180	1	£180
		1	Post-Excavation Manager	£180	2	£360
		1	Project Officer	£180	2	£360
Total						£33140

Archiving Staff Costs

Execution Stage	Archiving (Stage 4)	Persons		Rate (£ daily)	Day	Total
Task	Archive preparation	1	Archive Manager	£180	1	£180
		1	Archive Supervisor	£115	(Estimated) 3	£345
		1	Archivist	£105	(Estimated) 3	£315

	Archive Deposition	1	Archive Supervisor	£115	1	£115
Total						£955

Contractor Costs

Execution Stage	Fieldwork (Stage1)	Unit/Person	Rate (£ daily)	Day	Total
Contractor Costs	Welfare Hire	2	£40 (per welfare unit)	25	£2000
	Toolstore Hire	1	£35 (per unit)	28	£1000
	Track Mats Hire	For 500m2	£110	28	£3080
	Fencing Hire	120	£0.60 (per unit)	27	£2000
	Machine (5T on rubber tracks) with machine driver	1+1	£750	3	£2250
	Security Personnel	1	£150	28	£4200
	Additional cleaning fee etc.	4	£75	4	£300
Total					£14830

Non-staff costs

Execution Stage	Excavation; Post-Excavation (Stage 2-4)		Unit	Cost	Total
Non-staff costs	Fuel (vehicle, welfare unit, machine)		N/A	£1000	£1000
	PPE	Hi-Vis Clothing Subject to Risk Assessment	10 sets plus replacement	£1500-£2000	£2000
	Stationery (pens, pencils, permatrace, folders, papers etc.)		N/A	£150	£150
	Packaging material (boxes, bags etc.)		N/A	£500	£500
	Tea and biscuits		N/A	£100	£100
Total					£3750

All costs

Costs	Estimated Totals
Field work staff costs	£18670
Post-excavation staff costs	£33140
Archiving staff costs	£955
Contractor costs	£14830
Non-staff costs	£3750
Total	£71345
Tolerance +15%	£10700
ESTIMATED TOTAL COSTS	£82045

APPENDIX D.

The table was compiled using the tabulated data from *Project Design for a Community Archaeology Project - Barrowed Time* (Wilkins et al. 2016, p. 48) and *Evaluation Strategies, Stage 1 – understanding current practice and encouraging sector engagement (EVALS1)* (Nixon 2020, p. 27).

Risk No.	1	2	3	4	5	6	7	8
Description	Harsh weather conditions (Rain)	Exceptional weather conditions (Heat)	Absence of team members	Absence of specialist	Technical issues, delays, resourcing problems (machinery, deliveries etc.)	Equipment theft/breakage	Serious harm or injury	Time or budget shortfall
Probability	Medium	Medium-Low	Low	Low	Medium	Medium	Medium	Medium
Impact	Medium	Low	Medium-Low	Low	High	Medium	High	High
Countermeasures	Indoor tasks if available or flexible programme	Additional water sources	Alternative staffing or re-shuffling roles	Alternative specialist	Alternative hire, service	Tool maintenance and secure storing place	Health and Safety Risk Assessment, PPE, daily briefings	Close monitoring of the budget
Estimated time/cost	3 days	None	Minimal with immediate action	Minimal with immediate action	1-3 days	1-3 days	3 days+	3 days+
Owner	Project Officer with Supervisor	Project Officer with Supervisor	Project Officer or Project Manager	Project Officer or Project Manager	Project Officer with Project Manager	Project Officer with Supervisor	Project Manager with Project Officer and Supervisor and HS Advisor	Project Manager

APPENDIX E.

Project Timetable

Project Stage	Stage	Task	Person	Months											
				Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	
Execution															
	Fieldwork (Stage1)	Site Preparation	PO; S	01-03											
		Fieldwork	PO; S; A; V	04-30											
		Reinstatement	PO; S		01-02										
		Internal Review 1.	PO; S		03										
	Assessment (Stage 2)	Finds and Sample Processing	FS; V		01-15										
		Digital site Archive	S		07-13										
		Survey Data	S; G		07-13										
		Specialist Assessment report	SP		13-24	Specialist reports									
		Assessment Report UPD	PO; S; G; SP		24	06	Awaiting for Specialist reports								
		Internal Review 2.	PO; PM;			07	Awaiting for Specialist Reports								

Project Stage	Stage	Task	Person	Months											
				Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	
			PEM; FM												
	Analysis (Stage 3)	Specialist Analysis	SP			10	Awaiting for Specialist Analysis Reports								
		Analysis Report	PO; SP									15 days			
		Finalise report and Publication	PO; PEM									10 days			
		Internal Review 3.	PO; PEM; PM									2 days			
	Archive (Stage 4)	Archive preparation and deposition	AM; AS; AR										3 days		
		Online deposition	AS										1 day		
Closure														Closure	

A=Archaeologist; AM=Archive Manager; AR=Archivist; AS=Archive Supervisor; FM=Find Manager; FS=Find Supervisor; G=Geomatics; PEM=Post-Excavation Manager; PM=Project Manager; PO= Project Officer; S=Supervisor; SP=Specialist; V=Volunteer

Figures

(Figures are reproduced from Google Earth images).



Key

Site Compound
Parking; Welfare
units; Tool store

Fenced Area

Exclusion Zone

The Three Barrows II.
Archaeological Eval
Trenching

2023. 03. 27.

80 m

Kamera: 289 m 53°13'25"N 0°29'59"W 2 m

Key



Trench



Exclusion Zone

The Three
Barrows II.
Archaeological
Evaluation
Trenching



40 m

Kamera: 153 m 53°13'26"N 0°29'59"W 2 m

