
**ARCHAEOLOGICAL MONITORING AND
RECORDING
ON WIND TURBINE BASES AT
DEEPING FEN FARM,
DEEPING ST. NICHOLAS,
LINCOLNSHIRE
(DNWF12)**

**Work Undertaken For
Vine House Farm**

January 2013

Report Compiled by
Liz Murray BA (Hons)

Planning Application No: H03-0713-11
National Grid Reference: TF 1507 1680
Museum Accession No: LCNCC: 2012.32
OASIS Record No: archaeo11-142081

APS Report No. 13/13

**ARCHAEOLOGICAL
PROJECT
SERVICES**



**Quality Control
 Deeping Fen Farm,
 Deeping St. Nicholas, Lincolnshire
 (DNWF12)**

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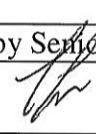
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Date: 29/01/2013	Date: 4-2-13

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1. SUMMARY

A programme of archaeological monitoring and recording was undertaken during groundworks associated with the construction of two wind turbines at Deeping Fen Farm, Deeping St. Nicholas, Lincolnshire. The work monitored the excavation of two wind turbine bases.

The site is archaeologically sensitive, located within a landscape containing archaeological remains dating from the Bronze Age through to the medieval period.

The monitoring recorded two linear features of modern agricultural origin that were observed to be repeated across the unexcavated areas of the field. The depth of the turbine bases allowed the recording of a series of common alluvial deposits that reflected the earlier nature of the area prior to its drainage.

2. INTRODUCTION

2.1 Planning Background

Archaeological Project Services was commissioned by Vine House Farm to undertake a programme of archaeological monitoring and recording during groundworks associated with the construction of two new wind turbines at Deeping Fen Farm, Deeping St. Nicholas, Lincolnshire. Approval for the development was sought through the submission of planning application H03-0713-11. The watching brief was carried on the 17th, 19th and 20th July 2012.

2.2 Topography and Geology

Deeping St. Nicholas is located approximately 7km southwest of Spalding, in the administrative district of South Holland, Lincolnshire (Fig. 1).

The site is located immediately to the north of Deeping Fen Farm, on the western limit of the parish, close to the boundary with Baston, centred on TF 1507 1680.

The site lies close to the boundary between soils of the Downholland 1A and Badsey 2 Associations (Hodge *et al.* 1984, 166). The former comprise deep stoneless humose clayey soils developed on marine alluvium and fen peat. Badsey 2 Association soils comprise well drained calcareous fine loamy soils over limestone gravel. These soils reflect the fen edge location of the site, whereby Flandrian alluvial deposits overly terrace gravels.

2.3 Archaeological Setting

The proposed development lies close to the junction of fen edge gravels and later marine and fen peat alluvium and was included within the area covered by the Fenland Survey (Hayes and Lane, 1992). The survey demonstrated that within the fen itself the early prehistoric land surface lies buried beneath alluvial deposits (Hayes and Lane 1992, 164-171), however to the west, the fen edge gravels occur at the present day ground surface.

Early Bronze Age barrow cemeteries, characteristic of this part of the fen edge, are represented in Deeping Fen by a cluster of the monuments around 5km to the south and a second possible group around 2km further north at Langtoft Fen (Lane and Trimble, 2010).

Further episodes of marine flooding deposited the clay alluvium that sealed the prehistoric ground surface and created a dendritic creek system. By the Middle Iron Age, the marsh had matured enough to allow salt-making to occur to the east of the site and settlements were established upon roddons, continuing into the Romano-British period (Phillips 1970, 279).

Previous excavations to the west within Baston village have recorded remains from the Bronze Age through to the medieval period. Two watching briefs to the east in Deeping St. Nicholas (Cope-Faulkner, 2006; Mellor 2003) recorded a series of alluvial deposits but no archaeological features.

3. AIMS

The aim of the archaeological investigation was to ensure that any archaeological features exposed during the groundworks should be recorded and, if present, to determine their date, function and origin.

4. METHODS

The topsoil within the bases for the wind turbines was excavated using a 360 degree excavator fitted with a 2m toothless bucket with the remainder of the depth excavated with a 2m toothed bucket. Where it was deemed necessary selected deposits were excavated further to retrieve any artefactual material and to determine the function of features. The depth of the turbine bases did not allow for the cleaning of the majority of the deposits on health and safety grounds. The depth and thickness of each deposit was measured from the ground surface.

Each deposit was allocated a unique reference number (context number) with an individual written description. A list of all contexts and their descriptions appears as Appendix 1. A photographic record was compiled and sections were drawn at a scale of 1:10. Recording was undertaken according to standard Archaeological Project Services' practice.

The records were also checked and a stratigraphic matrix produced. Phasing was assigned based on the nature of the deposits and recognisable relationships between them.

5. RESULTS

Archaeological contexts are listed below and described. The numbers in brackets are the context numbers assigned in the field.

The earliest deposit observed was a 'clean' bluish grey (012/018) clay at the base of the turbine trenches. Overlying this was a reddish gravel and sand up to 0.8m in thickness (011/017). Above this was a further layer of bluish clay (010/016) with occasional gravel, up to 0.3m thick. Sealing this was a layer of dark reddish brown peat, up to 0.2m thick, with regular pieces of large organic material (009/015). A further layer of clay (013/014) overlay the peat, light blue in colour with regular orange mottles, up to 0.4m thick. This deposit was cut by several features.

Cutting deposit (013), within Turbine Base 1, was a 0.7m wide, northwest-southeast aligned, ditch [001]. It was shallow, 0.07m deep, with an irregular base. The ditch was filled with a reddish brown peat (002).

Within Turbine Base 2, cutting deposit (014) was a further, northwest-southeast aligned, ditch [007]. The cut was 0.1m deep with a steep sides and a flat base and was also filled by a reddish brown peat (008).

The features were sealed by subsoil (004/006), a hard mid greyish brown clay up to 0.1m thick. Extant across the site was a topsoil up to 0.25m thick, composed of a mid grey silty clay.

There were no material finds retained or observed during the programme of monitoring.

6. DISCUSSION

The majority of deposits were alluvial, formed from a series of marine flooding events. The linear features were only 2 of

several noted occurring regularly, approximately every 10m, across the field and are likely to be related to modern agricultural, probably furrows. The topsoil and subsoil are derived from the current agricultural use of the land.

There were no material finds observed or recovered from this programme of monitoring.

7. CONCLUSION

A programme of monitoring and recording was undertaken during groundworks for the construction of two wind turbines at Deeping Fen Farm, Deeping St. Nicholas, Lincolnshire.

The monitoring was required due to the archaeologically sensitive nature of the area, located within a landscape containing a sealed prehistoric landscape and remains dating from the Bronze Age to the medieval period.

The work recorded several deposits, the majority of which were clear and repeated alluvial deposition layers, a reflection of the areas history as former wetland.

The linear features noted are likely to be of modern agricultural origin and other examples were observed across the remainder of the field.

No archaeological remains or artefacts were present during the programme of monitoring and recording.

8. ACKNOWLEDGEMENTS

Archaeological Project Services wishes to acknowledge the assistance of Robert Goddard acting on behalf of R P Watts Ltd. who commissioned both the fieldwork and this report. The work was coordinated by Dale Trimble who, together with Tom Lane, edited this report.

9. PERSONNEL

Project Coordinator: Dale Trimble
 Site Supervisors: Gary Trimble, Liz Murray
 Photographic reproduction: Sue Unsworth
 Illustration: Liz Murray
 Post-excavation analysis: Liz Murray

10. BIBLIOGRAPHY

Cope-Faulkner, P., 2006 *Archaeological Watching Brief at Deeping St. Nicholas, Lincolnshire* APS Unpublished report **12/06**

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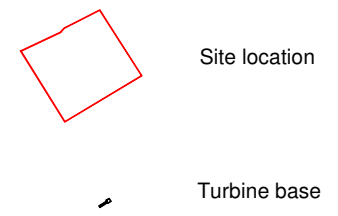
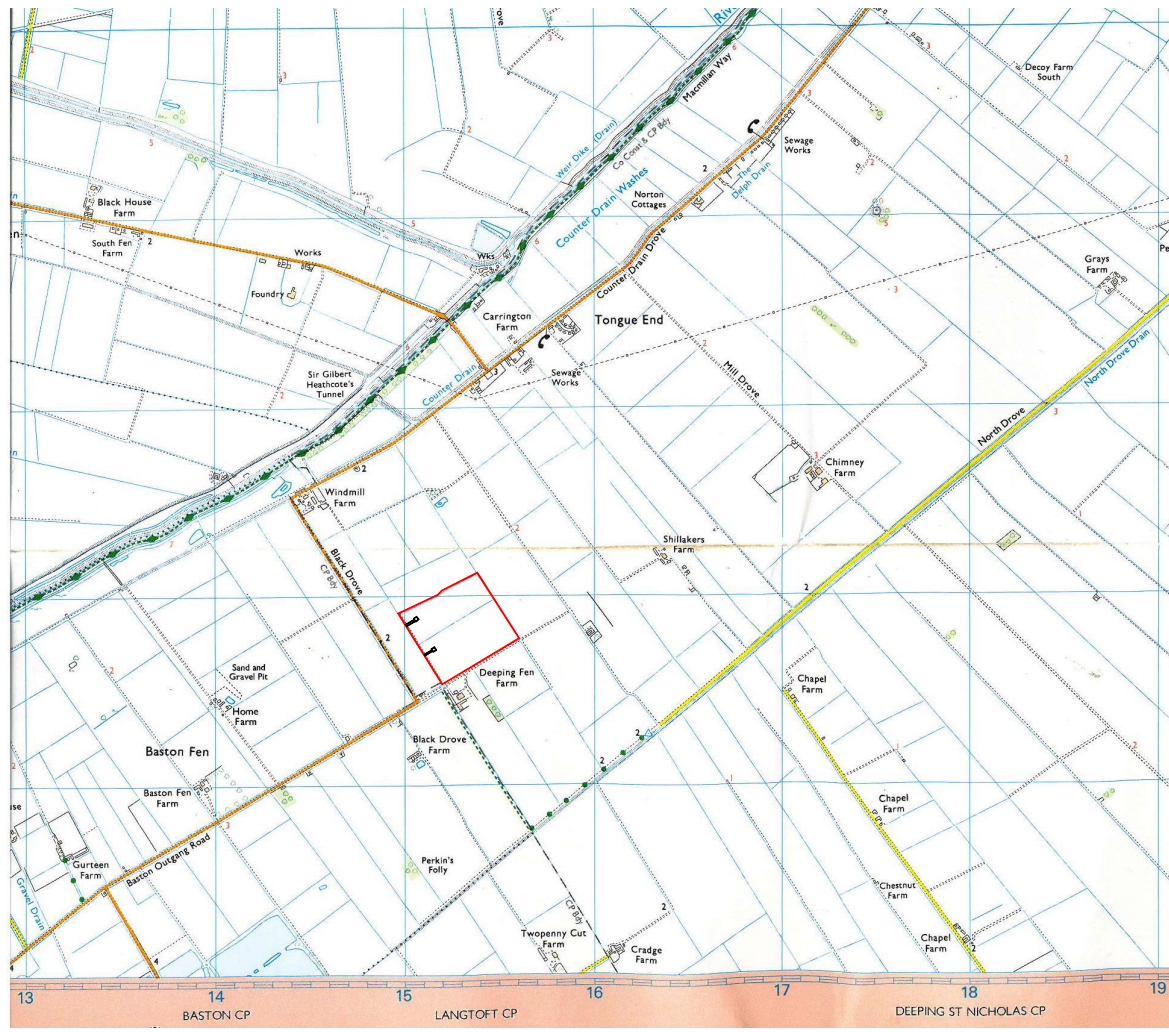
Phillips, C.W., 1970, *The Fenland in Roman Times*, RGS Research Series No. **5**

11. ABBREVIATIONS

APS Archaeological Project Services



Figure 1: General Location Plan



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 Archaeological Project Services		
Project Name: Deeping St. Nicholas Wind Farm		
Scale 1:40000	Drawn by: LM	Report No: 13/13

Figure 2: Site location plan

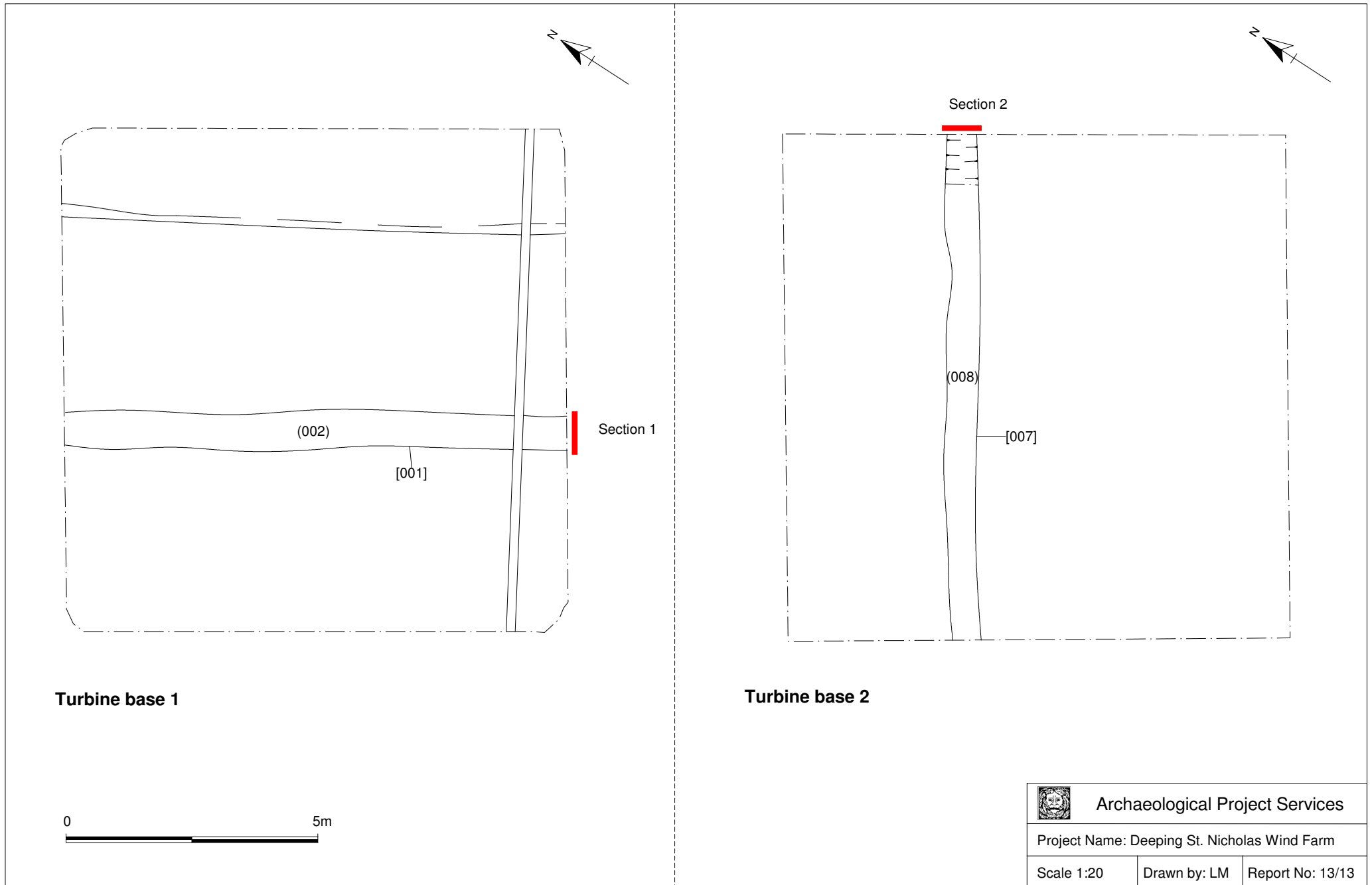


Figure 3: Plan of turbine bases

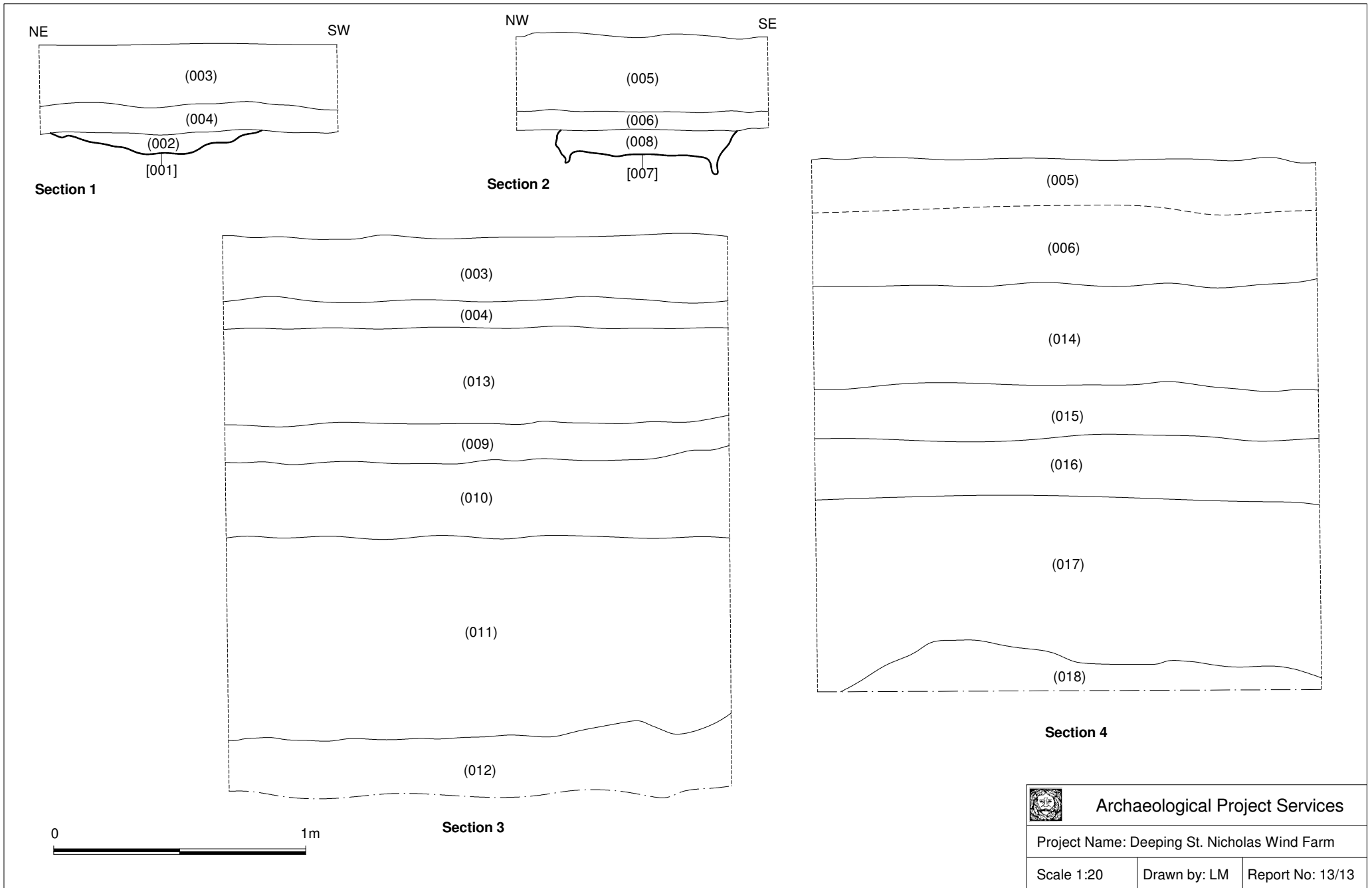


Figure 4: Sections 1-4

Plates



Plate 1: Ditch [001] in Turbine Base 1



Plate 2: Ditch [007] in section



Plate 3: Series of alluvial deposits as observed in Turbine Base 1 and 2

Appendix 1

CONTEXT LIST

Context Number	Trench	Description	Interpretation
001	1	Cut of a linear aligned NW-SE, with shallow irregular sides and base, 0.70m wide and 0.07m deep	Agricultural ditch
002	1	Loose reddish brown peat, 0.7m thick	Peat fill of ditch [001]
003	1	Firm mid grey silty clay, 0.25m thick	Topsoil
004	1	Hard mid greyish brown clay, 0.10m thick	Subsoil
005	2	Light mid grey silty clay, 0.30m thick	Topsoil
006	2	Firm mid grey clay, 0.06m thick	Subsoil
007	2	Cut of a linear aligned NW-SE, with steep sides and a flat base, 0.70m wide and 0.10m deep	Agricultural ditch
008	2	Loose reddish brown peat, 0.10m thick	Peat fill of ditch [007]
009	1	Loose dark reddish brown peat with occasional pebble inclusions, 0.15m thick	Natural peat layer
010	1	Firm light creamy blue silty clay with occasional gravel inclusions, 0.30m thick	Natural alluvial deposit
011	1	Loose mid orange sand (60%) and gravel (40%), 0.80m thick	Natural gravel
012	1	Firm mid blue clay, at least 0.20m thick	Natural
013	1	Firm light blue clay with orange patches, 0.35m thick	Natural alluvial deposit
014	2	Firm mid grey clay with orange mottling, 0.40m thick	Natural alluvial deposit
015	2	Friable dark reddish brown peat, 0.20m thick	Natural peat layer
016	2	Firm mid bluish grey clay, 0.25m thick	Natural alluvial deposit
017	2	Loose mid reddish orange sand and gravel, 0.75m thick	Natural
018	2	Firm light bluish grey clay, at least 0.20m thick	Natural

Appendix 2

GLOSSARY

Alluvium	Deposits laid down by water. Marine alluvium is deposited by the sea, and fresh water alluvium is laid down by rivers and in lakes.
Bronze Age	A period characterised by the introduction of bronze into the country for tools, between 2250 and 800 BC.
Context	An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretation of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, e.g. [004].
Cut	A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, etc. Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded.
Fill	Once a feature has been dug it begins to silt up (either slowly or rapidly) or it can be back-filled manually. The soil(s) that become contained by the 'cut' are referred to as its fill(s).
Iron Age	A period characterised by the introduction of Iron into the country for tools, between 800 BC and AD 50.
Layer	A layer is a term used to describe an accumulation of soil or other material that is not contained within a cut.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.
Natural	Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity
Neolithic	The 'New Stone Age' period, part of the prehistoric era, dating from approximately 4500 - 2250 BC.
Prehistoric	The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1st century AD.
Roddon	Raised banks of clay or silt representing sinuous channels which formed dendritic patterns and which later became silted up. Roddons stand proud of the fen surface due to tidal levees and also due to post depositional compression and wastage of the surrounding peat.
Romano-British	Pertaining to the period dating from AD 43-410 when the Romans occupied Britain.

Appendix 3

THE ARCHIVE

The archive consists of:

18	Context records
1	Photographic record sheet
1	Section record sheet
1	Plan record sheet
2	Daily record sheet
4	Sheets of scale drawings

All primary records are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

The Collection
Art and Archaeology in Lincolnshire
Danes Terrace
Lincoln
LN2 1LP

Accession Number LCNCC:2012.32

Archaeological Project Services Site Code: DNWF12

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.

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