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by

Tom Hill[1], Roz McKenna[1] & Michel Vorenhout[2]

[1] *Birmingham Archaeo-Environmental, University of Birmingham, UK*
[2] *Institute for Geo- and Bioarchaeology, VU University Amsterdam, The Netherlands*

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Summary

RSPB propose to create a wetland habitat at Beckingham Marshes, Nottinghamshire. The restoration project would involve raising local water tables supported by surface scraping and the excavation of additional ditches within the site. As a consequence, a palaeoenvironmental assessment was required to be undertaken at the site in order to fully understand the subsurface stratigraphy present.

Fieldwork consisted of high-resolution sedimentary coring supported by groundwater monitoring across the site. The study identified considerable variation within the site's stratigraphic sequence, which was typified by upper alluvial silts and clays underlain by organic rich silts and herbaceous peats. As the majority of the ground works will involve shallow surface scraping within the upper alluvial silts and clays, most of the site requires no further palaeoenvironmental work. However, the excavation of drainage ditches to the east of the site will result in disturbance of organic deposits of high palaeoenvironmental and possibly archaeological potential. Consequently, recommendations to assess the palaeoenvironmental value of these organic deposits through the application of pollen assessments supported by radiocarbon dating are advanced.

KEYWORDS: Beckingham Marshes, Nottinghamshire, River Trent, palaeochannel

Contact address for authors:

Birmingham Archaeo-Environmental
Institude of Archaeology and Antiquity
University of Birmingham
Edgbaston
Birmingham
B15 2TT

Prepared for:

RSPB
46 The Green
South Bar
Banbury
Oxfordshire
OX16 9AB

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1. INTRODUCTION

RSPB propose to develop a wetland habitat at Beckingham Marshes, Nottinghamshire (NGR SK799896) to restore breeding wader populations in the area. As part of the planning proposal, around 60 ha of the area will be restored to wet grassland primarily through the raising of the local water level achieved through the re-profiling of existing ditches. In addition, surface scraping of certain areas within Beckingham Marshes will be undertaken to both encourage seepage and develop freshwater pond areas.

An initial archaeological desk-based assessment was undertaken by Birmingham Archaeology (Hislop & Krawiec, 2004) which identified an area of known marshland which has undergone progressive draining from the 18th century onwards. The desk-based assessment identified evidence for prehistoric activity within the Trent Valley area, although evidence from Beckingham Marshes itself was somewhat limited. In addition, the desk-based assessment identified relict channel features (palaeochannels) within the study area, which were deemed to be of significant palaeoenvironmental potential. It was therefore concluded that there was considerable geoarchaeological potential within the study area which required further investigation.

Due to the potential threat to the sedimentary archive of the proposed ground disturbance, an initial assessment of the deposits at Beckingham Marshes was undertaken (Tetlow and Moscrop, 2006). The coring survey identified an abundance of organic-rich deposits throughout much of the study area, commonly capped by alluvial silts derived from floodplain processes. The survey also confirmed the presence of palaeochannels dissecting the site. Recommendations for palaeoenvironmental assessments were therefore made based on these results. However, since completion of the assessment, a number of changes have been made to the proposed restoration project which were not adequately accounted for in the initial assessment. An extensive drainage ditch is now required proximal to an oil pipeline that runs through the site. This is necessary in order to reduce the potential threat of pipeline corrosion. In addition, a number of the fields within the study area were not assessed for their palaeoenvironmental potential during the initial assessment. As a consequence, further investigations were required. It was therefore proposed to undertake further coring across the site in order to assess spatial and temporal variations in the sedimentary archive. A coring strategy was developed to concentrate on the areas within Beckingham Marshes that were to be affected by drainage ditch construction and surface scraping.

In addition to understanding the site's stratigraphy, it was proposed that the core locations would also be used to undertake initial assessments of the local water table as well as the pH status of the organic deposits. The results of these measurements would then provide baseline data which would be used to set up a monitoring programme for the site. This programme will subsequently provide the opportunity to assess variations in the water table and pH results obtained before, during and after the completion of the restoration project.

2. METHODS

2.1 Borehole Survey

At the time of fieldwork, the majority of the fields under assessment were either agricultural or land set-aside by the RSPB. A site visit was undertaken over a four-day period from 31st March to 4th April, during which coring was undertaken across the site to ensure a clear spatial understanding of the subsurface stratigraphy. Due to the potential threat imposed on nesting birds, access to particular fields was limited to 40 minutes at a time. Figure 1 shows the location and assigned number of each core taken across the site.

Through discussions with the RSPB and Ursilla Spence (Senior Archaeological Officer, Nottinghamshire County Council), it was concluded that the coring strategy would concentrate on areas proximal to the oil pipeline, where cores should continue to at least 2.0 m depth (the proposed depth at which the drainage ditches would be excavated being 1.40 m). The additional coring across the site was not required to go further than 1.50 m depth due to the shallow nature of the proposed surface scraping (<0.50 m depth).

A total of 38 cores were taken during the assessment, varying in depth from 1.50m to 5.80m. Cores were extracted using a manual gauge 'Eijkelcamp' corer. If deposits of palaeoenvironmental potential were encountered in areas under threat by the proposed ground works, sample cores were to be taken. These cores were extracted in 1.0 m length sections and transferred into 1.0 m lengths of plastic guttering for storage, transport and palaeoenvironmental consideration.

2.2 Stratigraphic Analysis

Whilst an initial assessment of the sedimentary archive was made on-site, detailed stratigraphic analysis of selected sample cores was undertaken at the Birmingham Archaeo-Environmental laboratory at the University of Birmingham. Each 1.0m section of sample was carefully opened ensuring the enclosed stratigraphy remained intact. Sediments were recorded using the Troels-Smith (1955) classification scheme. The scheme breaks down a sediment sample into four main components and allows the inclusion of extra components that are also present, but that are not dominant. Key physical properties of the sediment layers are also identified according to darkness (Da), stratification (St), elasticity (El), dryness of the sediment (Dr) and the sharpness of the upper sediment boundary (UB). A summary of the sedimentary and physical properties classified by Troels-Smith (1955) and the nomenclature used is provided in Table 1. A full stratigraphic breakdown of the cores is provided in Appendix I.

2.3 Water table, Electrical Conductivity and pH measurement.

Water tables were measured at each core location between 24-72 hours after the augering had taken place. Water tables were recorded relative to soil level. When degraded peat was encountered within core profiles, the organic remains were deemed suitable for pH analysis. About 10g fresh weight was taken from the layer between the degraded peat and the underlying fully intact peat. The sample was shaken with demi water and pHdemi was measured with a WTW P340i and connected SENTIX pH probe. Electrical conductivity of the groundwater was measured in the augering hole.

3. PRELIMINARY RESULTS OF FIELDWORK

3.1 Borehole Survey

The sedimentary coring undertaken across the Beckingham Marshes site identified a stratigraphic archive with considerable spatial variation. However, the sedimentary deposits encountered can be broadly divided into three units:

- Alluvium, comprising silts and clays, located in the central and western sections of the site,
- A combination of herbaceous and well humified peats encountered in the palaeochannel locale, and
- A sequence of organic-rich silts overlain by peat and alluvium in the eastern section of the site.

Figure 2 provides a generalised summary of the stratigraphic variation encountered. Up to 1.50 m of silts and clays were present in the central and western margin of the site, predominantly within fields 4, 9, 10, 11 and 14 (Transects 1, 6, 7, 8, and 9; Figure 2). The deposits were light grey-brown silty clays with occasional organic mottling and sand content varying with depth. Occasional dark brown organic horizons were encountered in cores 1, 25, 26 and 30. Iron oxide mottling was also commonly observed between 0.40 m and 0.80 m depth, giving the silts and clays a red-brown to orange-brown coloration.

The identification of a palaeochannel running approximately north-south through fields 16 and 17 warranted further investigation. Coring was undertaken in field 16 due to the lack of fieldwork undertaken in this location previously. The three cores taken identified an upper layer of light grey-brown silty clay varying in thickness from *c*. 0.44 m to *c*. 0.75 m. This was immediately underlain by a thin horizon of dark brown to black very well humified peat, below which red-brown herbaceous peats were present. With depth, occasional horizons of organic-rich silts were encountered.

To the east of the site, coring was undertaken within fields 18 and 19, concentrating on the area to be affected by the proposed pipeline route. Transects 2 and 3 were positioned to approximately follow the proposed pipeline route (Figure 1). In general, coring was undertaken to a depth of *c*. 2 m along these transects. As very little was known about the underlying stratigraphic archive, attempts were also made to reach basal deposits (sands and gravels) at cores 8 and 10. However, due to the considerable thickness of deposits, the cores only reached 4.0 m and 4.5 m depth respectively without reaching the basal gravels. The stratigraphy in the eastern area of the site was typified by light grey-brown silty clays to a depth of between 0.5 m and 1.0 m. Iron mottling was once again commonly encountered towards the base of the unit. The silty clay unit was underlain by dark brown and dark red-brown herbaceous well humified peats to a depth of between 2.0 m and 2.5 m. This peat unit was in turn underlain by a grey-brown organic-rich silt unit with occasional peat horizons.

Based on the sedimentary sequences encountered during fieldwork, initial on-site interpretations suggested that deposits of palaeoenvironmental potential were present within the palaeochannel and also in the eastern section of the site along the pipeline route. As a consequence, sample cores were taken from these two locations (Cores 10 and 20; see Figure 1 and Appendix I for reference).

3.2 Water table, Electrical Conductivity and pH measurement

A summary of results are provided in Table 1. The core samples that were analysed for pH indicated a pHdemi with a small variation. The pH measurements obtained from the degraded peat layers varied between 3.66 and 5.79, suggesting that relatively acidic conditions are present. Due to the commonly acidic nature of peatland environments, peat deposits can have a pH of as low as 3. The values found are therefore not raised from standard values.

The water table relative to soil level is very stable. The fields with peat show a water table at 0.0 m to 0.5 m below soil level. Only the fields with a smaller peat layer, and those with a higher elevation show a water table depth greater than 0.5 m. Comparisons between water table depths indicate measurements within the same field show very little variation, whilst inter-field comparisons show greater differences relative to soil level. The EC results varied from 121 µS/cm to 4380 µS/cm. Inter-core measurements within individual fields however show much less variation in EC results.

4. CONCLUSIONS

The palaeoenvironmental assessment across Beckingham Marshes has revealed considerable spatial variation in the site's subsurface stratigraphy, with a corresponding variation in palaeoenvironmental potential. Coring revealed upper alluvial clays and silts present across the study area, which commonly varied in depth from 0.50 m to 1.0 m. For such fine-grained deposits to accumulate, standing/slowly moving water is required from which the clays and silts can settle out through suspension deposition. These deposits have therefore developed through floodplain sedimentation during periods of flooding by the River Trent. Iron mottling was also a common feature within the silts and clays, especially towards the base of the unit. The mottling indicates the precipitation of iron oxides as a result of fluctuations in the water table, causing the oxidation of the iron minerals within the sediment. The upper alluvium is likely to have accumulated between the Late Holocene period and prior to the commencement of extensive drainage in the region from the 18th century onwards.

Coring within the palaeochannel identified an abundance of organic deposits underlying the alluvium. Although the coloration and humification of the peat varied with depth, the upper-most peat was commonly found to be black and very well humified, whilst the deposits immediately underlying were red-brown in colour with a greater herbaceous content. This suggests the peat accumulated within an environment in which plants such as grasses and sedges were growing. Core 20 reached a depth of 5.80 m, which highlights the depth of the sedimentary archive preserved within the palaeochannel. Such deposits accumulated within a former channel of the River Trent which subsequently became isolated from the active fluvial system, probably as a result of lateral channel migration of the river across its floodplain. In is not clear when this may have happened, but due to the extensive depth of deposits present, a Mid Holocene timescale may be possible.

The interbedded peat and alluvial sequence encountered in the eastern area of the site are dissected by the palaeochannel and hence these deposits must predate palaeochannel development. Such an extensive sedimentary archive may therefore date back to the Early-Mid Holocene period. The deposits were probably deposited in a backwater lagoonal environment of the River Trent. High water tables would have encouraged vegetation colonisation and expansion within the waterlogged floodplain, which would have resulted in peat accumulation. In contrast, the interbedded alluvial silts and clays would have been deposited during periods of enhanced fluvial discharge and floodplain inundation (similar to the conditions responsible for the development of the upper alluvial clays and silts). The abundance of organic deposits within the alluvium however indicates the maintained presence of vegetation on the floodplain during minerogenic sedimentation.

The river terrace trending *c*. north-south through the site is primarily responsible for the variation in stratigraphy encountered within Beckingham Marshes. The terrace, immediately west of the palaeochannel, ensured the land to the east was lower in elevation than that to the west. As the eastern region was on the floodplain of the River Trent, the area was more susceptible to flooding and increased the potential for alluviation and palaeochannel development. The saturation of the floodplain sediments would have encouraged peat growth, accounting for the extensive organic deposits across the eastern area of the site. The lower relative elevation would also have enabled lateral migration of the River Trent hence the presence of the palaeochannel dissecting the site. The higher elevation of the area to the west resulted in the area being less prone to inundation, restricting sedimentation to alluvial silts and clays during periods of higher than average discharge.

5. RECOMMENDATIONS FOR FURTHER ANALYSIS

The upper alluvial silt and clay unit that covers the whole of the site is of low palaeoenvironmental potential. This is due to the overall absence of organic remains within this deposit; no visible plant macrofossil remains were evident and pollen would be relatively poorly preserved within such minerogenic sediments (especially when the deposits are iron mottled, as encountered here). Therefore, as the alluvial unit was found to be *c*. 0.50 m thick across much of the site, and the proposed surface scraping taking place as part of the restoration scheme will not excavate to a depth greater than 0.40 m, the majority of the area does not require palaeoenvironmental assessment.

However, the proposed excavation of a series of trenches proximal to the oil pipeline route in fields 18 and 19 would result in ground disturbance to a depth of *c*. 1.40 m. Palaeoenvironmental assessments are therefore required as peat deposits are present below the *c*. 0.50 m thick alluvial unit. Due to the potential for fluctuations in the level of the water table once the trench has been excavated, it is recommended that palaeoenvironmental assessments are undertaken on the peat deposits to a depth of 2.00 m. Therefore, the following assessment is proposed:

- Pollen analysis at regular *c*. 0.16 m intervals throughout the peat deposits to a depth of 2.00 m to assess the preservation and concentration of sub-fossil pollen and to determine the potential for palaeoenvironmental reconstruction (9 samples in total).
- Radiocarbon dating of the top (*c*. 0.60 m), middle (1.30m) and base (*c*. 2.00 m) of the peat unit in order to establish the chronology of sediment accumulation (3 radiocarbon dates in total).

It is also recommended that groundwater monitoring is continued along the area affected by the oil pipeline trenches. It is unclear at present how the water table will be affected by a) the initial trench excavation and b) the flooding of the surrounding lowlands as part of the restoration project. The stability of the water table over and short and long-term periods will influence the preservation of the archive. Monitoring should therefore be undertaken to provide information relating to the impact of such proposed ground disturbance.

The presence of waterlogged organic deposits in the study area raises the possibility of preserved organic archaeological remains, especially within the peat units. Whilst this may be relatively unlikely, it cannot be discounted entirely.

6. ARCHIVE

All cores sampled during fieldwork are currently stored by Birmingham Archaeo-Environmental, University of Birmingham, Edgbaston, Birmingham, B15 2TT. The sample cores will only be disposed of upon consultation with the client. In addition, original core logs, site location plans, photographs and associated material are stored within Birmingham Archaeo-Environmental.

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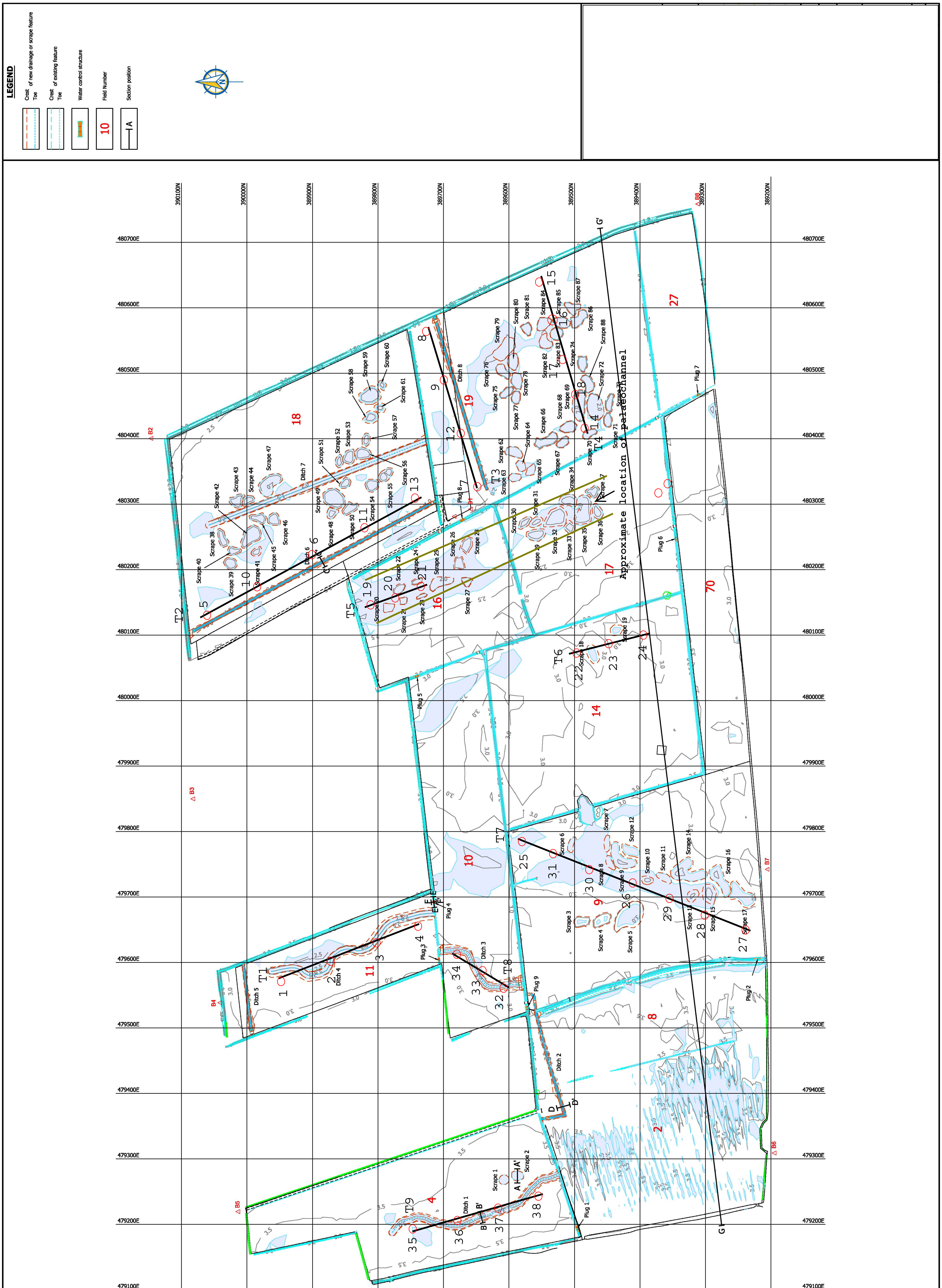

Figure 1: Site plan of Beckingham Marshes, Nottinghamshire. Plan locates all proposed restoration features and approximate positions of cores taken during Phase 2 (core grid references provided in Appendix I)

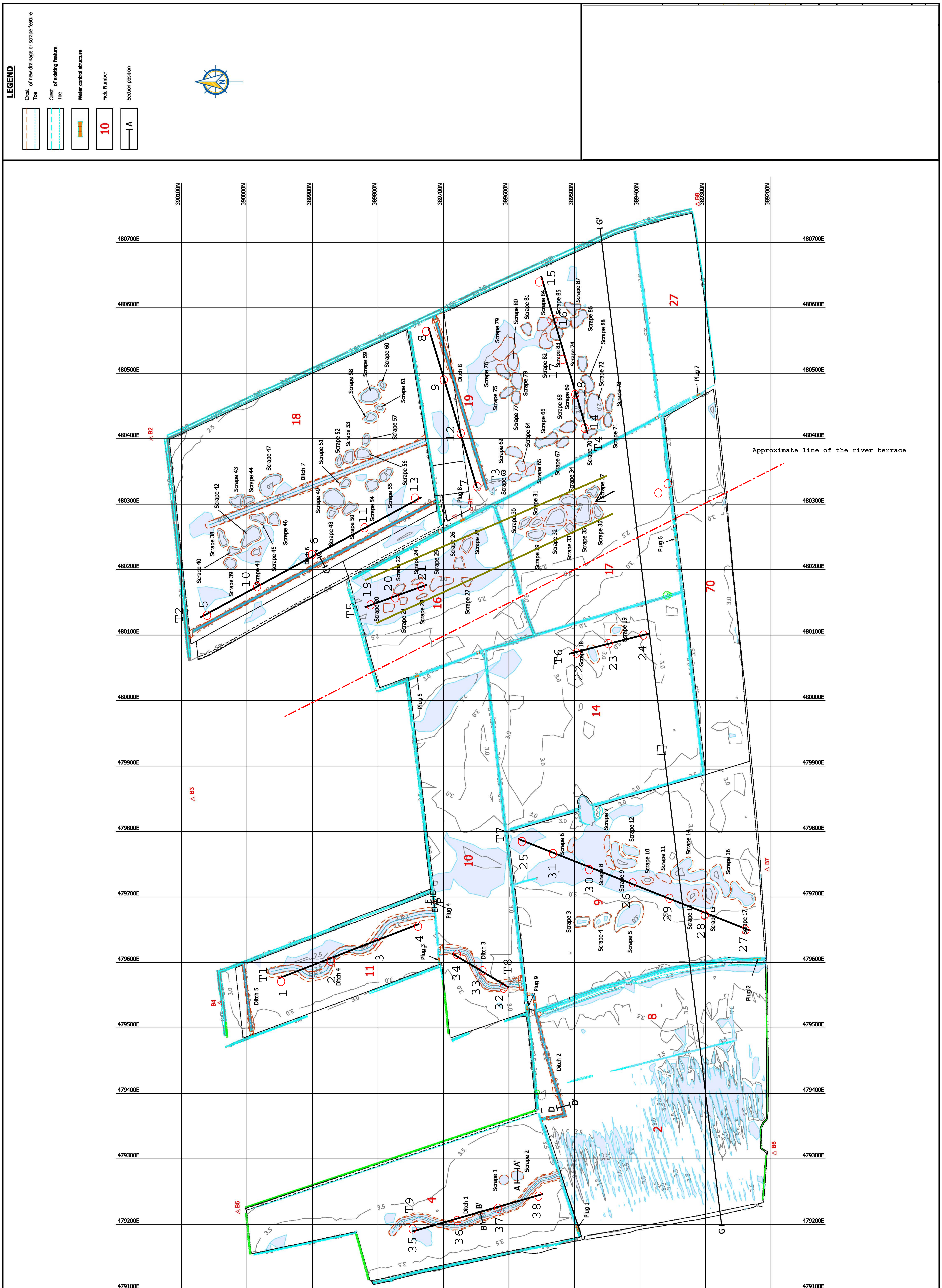

Figure 2: Site plan of Beckingham Marshes, Nottinghamshire. Plan generalises the subsurface stratigraphy into three zones. Blue = alluvial silts, Green = palaeochannel peat capped by alluvial silts, Brown = floodplain peat capped by allivual silts

Core number	Water table (cm)	EC water	pH peat	Description sample
1	50	474	5.61	Degraded peat
2	66	639		
3	77	583		
4	77	195		
5	55	1326	5.73	Below degraded peat, high quality
6	15	1657	4.89	Below degraded peat, high quality
7	27	1882	5.78	Below degraded peat, high quality
8	31	4380	4.55	Below degraded peat, middle quality
9			3.66	Below degraded peat, high quality
10	30	1421	4.91	Below degraded peat, high quality
11	8	1792	4.08	Below Black peat, silty
12	12	1517	5.05	Below Black peat, silty
13	14	1420	5.21	Below Black peat, silty
14	21	1242	5.24	Below Black peat, silty
15	20	1887	4.48	Below Black peat, somewhat humified
16	15	1527	4.46	Below Black peat, slightly silty
17	18	1218	4.22	Top, straight below silt
18	21	1215	5.18	Below Black peat, silty
19	0	550	5.79	Very well degraded peat
20	10	460	5.31	Very wet in channel area
21	0	384	5.24	Below very dark peat
22	116	609		
23	113	np		
24	115	121		
25	lost		5.5	
26	25	1301		
27	dry			
28	29	937		
29	36	1109		
30	15	947	5.45	Below degraded peat, high quality
31	45	1456	4.19	Sample of sandy degraded peat
32	dry			
33	5	3390		
34	19	2410		
35	dry			
36	94	2040		
37	51	2050		
38	46	2260		

Table 1: Summary of water table, pH and EC results obtained from core locations

APPENDIX I

Core Stratigraphy

Refer to Table 1 for summary of sedimentary classification scheme of Troels-Smith (1955)

Locations of cores is provided in Figure 1

Core 1 (SK79549 BNG89986)

0.00-0.20m	Da	St	El	Dr	UB
	2	0	0	0	-

As3, Ag1, Shg+, Th+, Dh+
Light grey-brown organic mottled silty clay

0.20-0.92m	Da	St	El	Dr	UB
	1+	0	0	0	1

As3, Ag1, Lf+
Light grey slity clay with iron mottling

0.92-0.97m	Da	St	El	Dr	UB
	2+	0	0	0	2

As3, Ag1, Lf+, Sh+
Light grey-brown organic mottled silty clay

0.97-1.02m	Da	St	El	Dr	UB
	3+	0	0	1	3

Dg3, Sh1, Th+, Dh+
Dark brown well humified peat

1.02-1.15m	Da	St	El	Dr	UB
	2+	0	0	2	2

Sh2, Ag1, Ga1
Dark grey-brown organic-rich sands and silts

1.15-1.32m	Da	St	El	Dr	UB
	1	0	0	2	1

Ga4, Ag+
Light grey sand

1.32-1.50m	Da	St	El	Dr	UB
	2	0	0	1	2

Ag2, As1, Ga1, Dh+, Lf+
Grey-brown iron mottled clayey silt

Core 2 (SK79567 BNG89931)

0.00-0.20m	Da	St	El	Dr	UB
	2	0	0	0	-

As3, Ag1, Th+, Sh+
Light grey-brown organic mottled silty clay

0.20-0.65m	Da	St	El	Dr	UB
	2	0	0	0	0+

As3, Ag1, Lf+
Light grey silty clay with iron mottling

0.65-0.90m	Da	St	El	Dr	UB
	1+	0	0	1	1

Ga3, Ag1, Lf+
Light grey silty sand with iron mottling

0.90-1.05m	Da	St	El	Dr	UB
	2+	0	0	2	1

Ga4, Ag+, Lf+
Orange brown sand

1.05-1.35m	Da	St	El	Dr	UB
	2+	0	0	1	1

Ag2, Ga1, Sh1
Grey-brown organic-rich sandy silt

Core 3 (SK79592 BNG89862)

0.00-0.25m	Da	St	El	Dr	UB
	2	0	0	0	-

As3, Ag1, Th+, Sh+
Light grey-brown organic mottled silty clay

0.25-0.70m	Da	St	El	Dr	UB
	2	0	0	0	2

As3, Ag1, Lf+, Sh+
Light grey-brown silty clay with iron mottling

0.70-1.00m	Da	St	El	Dr	UB
	2	0	0	2	1

Ga2, Ag1, As1
Light grey silty sand

1.00-1.45m	Da	St	El	Dr	UB
	2	0	0	2	1

Ga2. Ag1, As1, Lf+
Oragne-brown silty sand

1.45-1.55m	Da	St	El	Dr	UB
	2+	0	0	2	1

Ag2, As1, Ga1
Dark red-brown sandy silt

Core 4 (SK79638 BNG89779)

0.00-0.35m	Da	St	El	Dr	UB
	2	0	0	0	-

As3, Ag1, Sh+, Th+
Light grey-brown organic mottled silty clay

0.35-0.60m	Da	St	El	Dr	UB
	2	0	0	0	1

As3, Ag1, Lf+
Oragne-brown silty clay with iron mottling

	Da	St	El	Dr	UB
0.60-0.70m	2	0	0	2	1

Ga4, Ag+
Light grey sand

	Da	St	El	Dr	UB
0.70-1.50m	2	0	0	2	1

Ga3, Ag1
Orange-brown sily sand

Core 5 (SK80092 BNG90074)

	Da	St	El	Dr	UB
0.00-0.25m	3	0	0	0	-

As3, Ag1, Sh+, Th+
Dark brown organic silty clay

	Da	St	El	Dr	UB
0.25-0.90m	2	0	0	0	1

As3, Ag1, Lf+, Sh+
Light grey-brown silty clay with iron mottling

	Da	St	El	Dr	UB
0.90-1.00m	3	0	0+	1	1

Ag2, As1, Sh1, Dg+
Dark grey-brown organic-rich silt

	Da	St	El	Dr	UB
1.00-1.32m	3+	1	1	1	1

Sh2, Sg1, Dh1, Ag+
Dark brown herbaceous well humified peat

	Da	St	El	Dr	UB
1.32-2.00m	3+	1	2	2+	1

Dg2, Dh1, Sh1, Dl+, Th+
Dark brown to red-brown herbaceous peat with occasional wood fragments

Core 6 (SK80161 BNG89935)

	Da	St	El	Dr	UB
0.00-0.20m	2	0	0	0	-

As3, Ag1, Th+, Sh+
Light grey-brown clayey silt

	Da	St	El	Dr	UB
0.20-0.60m	2	0	0	0	1

As3, Ag1, Lf+
Orange-brown silty clay with iron mottling

	Da	St	El	Dr	UB
0.60-0.80m	2	0	0	1	1

Ag2, As1, Sh1
Grey-brown organic-rich silt

	Da	St	El	Dr	UB
0.80-1.00m	3+	0	1	2+	1

Sh2, Dg1, Dh1, Th+

	Dark brown to black very well humified peat				
1.00-1.45m	Da	St	El	Dr	UB
	3+	1	2+	2+	1
	Dg2, Dh1, Sh1, Th+				
	Dark brown herbaceous peat				
1.45-2.00m	Da	St	El	Dr	UB
	3	1	2	2+	1
	Dg2, Dh1, Sh1, Tl+, Th+				
	Red-brown herbaceous peat				

Core 7 (SK80301 BNG89657)

0.00-0.75m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Sh+, Th+, LF+				
	Light grey-brown organic mottled silty clay, iron mottling with depth				
0.75-0.80m	Da	St	Elk	Dr	UB
	3+	0	0	2+	2
	Ag2, Sh1, Dg1, As+				
	Dark grey organic-rich silt				
0.80-1.10m	Da	St	El	Dr	UB
	3	0	2	2	1
	Sh2, Dg1, Dh1, Th+				
	Grey-brown well humified peat				
1.10-2.00m	Da	St	El	Dr	UB
	3+/4	1	2+	2+	1
	Dh2, Dg1, Sh1, Dl+				
	Dark brown to black herbaceous peat				

Core 8 (SK80545 BNG 89734)

0.00-0.16m	Da	St	El	Dr	UB
	2+	0	0	0	-
	Ag2, Sh1, As1				
	Dark grey organic-rich clayey silt				
0.16-0.60m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Lf+				
	Light grey-brown clayey silt with iron mottling				
0.60-0.77m	Da	St	El	Dr	UB
	3+	0	0	2	2
	Ag2, Dg2, As+, Sh+				
	Dark brown organic-rich silt				
0.77-1.22m	Da	St	El	Dr	UB
	3+	1	1	2	2
	Dg2, Dh1, Sh1, Dl+, Ag+				
	Dark brown to red-brown well humified peat				
1.22-1.40m	WOOD HORIZON				

1.40-1.50m	Da	St	El	Dr	UB
	3+	0	2	2	3

Dh2, Sh1, Dg1, Dl++
Dark brown wood-rich humified peat

1.50-1.70m	Da	St	El	Dr	UB
	1+	0	0	2	1

Ag2, Dh1, Sh1, Dg+, As+, Dl+
Light grey organic-rich silt

1.70-1.75m WOOD HORIZON

1.75-3.30m	Da	St	El	Dr	UB
	1+	0	0	2	1

Ag2, Dh1, Sh1, As+, Dl+, Th+
Light grey organic-rich silt
Wood horizons at 2.10m and 2.60m depth

3.60-4.00m	Da	St	El	Dr	UB
	3+	0	2	2+	1

Dg2, Dh1, Ag1, Sh+
Dark grey-brown silty peat

Core 9 (SK80472 BNG89716)

0.00-0.10m	Da	St	El	Dr	UB
	2+	0	0	0	-

As3, Ag1, Sh+
Grey-brown organic mottled silt

0.10-0.50m	Da	St	El	Dr	UB
	2	0	0	0	1

As3, Ag1, Lf+, Sh+
Light grey-brown sily clay with iron mottling

0.50-0.86m	Da	St	El	Dr	UB
	3	0	1	2	2

Dg2, Sh1, Ag1, Dh+
Dark brown silt-rich humified peat

0.86-0.95m WOOD HORIZON

0.95-1.10m	Da	St	El	Dr	UB

Ag2, Sh1, Dg1
Dark grey organic-rich silt

1.10-1.70m	Da	St	El	Dr	UB
	3	1	2	2	1

Dg2, Dh1, Sh1, Th+, Dl+
Dark red-brown herbaceous peat

1.70-2.00m	Da	St	El	Dr	UB
	3	0	0	2	1

Ag2, Dg1, Sh1, Dl+
Grey-brown organic-rich silt

Core 10 (SK80133 BNG89991)

0.00-0.20m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Sh+				
	Light grey-brown organic mottled silty clay				
0.20-0.57m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Lf+				
	Light grey-brown silty clay with iron mottling				
0.57-0.65m	Da	St	El	Dr	UB
	3	0	1	2	1
	Sh2, Dg1, Ag1, Th+				
	Dark brown silt-rich well humified peat				
0.65-0.75m	UNSAMPLED				
0.75-1.04m	Da	St	El	Dr	UB
	3	1	1	2	-
	Sh2, Dg1, Ag1, Dh+				
	Dark brown silt-rich well humified peat				
1.04-1.28m	Da	St	El	Dr	UB
	3+	1	2	2+	1
	Dh2, Dg1, Sh+, Dl+				
	Dark brown herbaceous peat				
1.28-1.38m	WOOD HORIZON				
1.38-1.72m	Da	St	El	Dr	UB
	3	0	1	2	3
	Dg2, Sh1, Dh1, Th+				
	Medium brown well humified peat				
1.72-2.17m	Da	St	El	Dr	UB
	3	1	2	2	1
	Sh2, Dh1, Dg1, Ag+				
	Dark brown well humified peat				
2.17-2.50m	Da	St	El	Dr	UB
	2+	0	0	1	1
	Ag2, Sh1, Dgh1, Dl+				
	Grey-brown organic-rich silt				
2.50-2.80m	Da	St	El	Dr	UB
	3	0	1	2	1
	Dg2, Dh1, Sh1, Ag+				
	Light brown well humified peat				
2.80-4.50m	Da	St	El	Dr	UB
	2	0	0	1	1
	Ag2, As1, Sh1, Dh+, Dl+				
	Light grey organic-rich clayey silt				
	Abundant wood fragments 3.80-4.10m				

Core 11 (SK80206 BNG89853)

0.00-0.59m	Da	St	El	Dr	UB
	2+	0	0	0	1
	As3, Ag1, Sh+, Th+, Lf+				
	Grey-brown organic mottled silty clay, iron mottling with depth				
0.59-0.65m	Da	St	El	Dr	UB
	4	0	1	2+	2
	Dg2, Ag1, Sh1, Th+				
	Black well humified silt-rich peat				
0.65-0.76m	Da	St	El	Dr	UB
	3	0	0+	2	2
	Sh2, Dg1, Ag1, Th+				
	Medium brown well humified silt-rich peat				
0.76-0.93m	Da	St	El	Dr	UB
	3	1	1+	2+	2
	Dg2, Dh1, Sh1, Th+				
	Dark brown well humified peat				
0.93-1.14m	Da	St	El	Dr	UB
	4	0	1+	2+	1
	Dg2, Dh1, Sh1, Th+				
	Black herbaceous peat				
1.14-1.50m	Da	St	El	Dr	UB
	3	1	2	3	1
	Dh2, Dg1, Sh1, Th+, Dl+				
	Red-brown herbaceous peat				
1.50-1.90m	Da	St	El	Dr	UB
	3	0	2	2+	1
	Dg2, Sh1, Ag1, Dh+, Dl+				
	Wood horizon 1.60-1.65m				
1.90-3.00m	Da	St	El	Dr	UB
	2	0	0	2	2
	Ag2, As1, Sh1, Dh+, Dl+, Th+				
	Light grey organic-rich silt				
	Wood horizon 2.46-2.54m				

Core 12 (SK80371 BNG89692)

0.00-0.23m	Da	St	El	Dr	UB
	2+	0	0	1	-
	As3, Ag1, Sh+, Th+				
	Grey-brown organic-mottled silty clay				
0.23-0.60m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Lf+				
	Light grey silty clay with iron mottling				
0.60-0.65m	Da	St	El	Dr	UB
	3	1	0	1	2
	Ag2, Dg1, Sh1, Th+				
	Grey-brown organic-rich silt				

0.65-0.78m
Da St El Dr UB
4 0 2+ 2 2
Dg2, Sh1, Ag1, Th+
Black very well humified peat

0.78-0.95m
Da St El Dr UB
3 1 1 2 2
Dg2, Sh1, Ag1, Dh+
Medium brown silty well humified peat

0.95-1.35m
Da St El Dr UB
3+ 1 1+ 2 1
Dh2, Dg1, Sh1, Dl+
Dark brown herbaceous peat

1.35-1.80m As above but red-brown

1.80-2.07m As above but medium brown

2.07-2.32m WOOD HORIZON

2.32-2.61m
Da St El Dr UB
2+ 0 0+ 2+ 3
Ag2, As1, Sh1, Dl+, Dh+, Th+
Grey-brown organic-rich silt

2.61-2.67m WOOD HORIZON

2.67-2.80m UNSAMPLED

Core 13 (SK80268 BNG89729)

0.00-0.23m
Da St El Dr UB
2+ 0 0 0 -
As3, Ag1, Sh+, Th+
Grey-brown organic mottled silty clay

0.23-0.52m
Da St El Dr UB
2+ 0 0 0 1
As3, Ag1, Lf+
Grey brown sily clay with iron mottling

0.52-0.68m
Da St El Dr UB
2 0 0 0 1
As3, Ag1, Sh+
Grey brown organic mottled silty clay

0.68-0.84m
Da St El Dr UB
4 0 1 2 2
Sh2, Dg1, Ag1
Black silt-rich ell humified peat

0.84-1.00m
Da St El Dr UB
Dg2, Dh1, Sh1, Th+
3+ 1 1+ 2 2
Dark brown herbaceous peat

1.00-1.20m	Da	St	El	Dr	UB
	3	1	0+	2	1
	Dg2, Dh1, Sh1				
	Medium brown herbaceous peat				
1.20-2.00m	Da	St	El	Dr	UB
	3+	1	2	2	1
	Dh2, Dg1, Sh1, Th+				
	Dark brown herbaceous peat				
2.00-2.30m	Da	St	El	Dr	UB
	3	1	1	2+	1
	Dg2, Sh1, Ag1, Dl+, Dh+				
	Medium brown silt-rich humified peat				
2.30-3.00m	Da	St	El	Dr	UB
	2	0	0	1	2
	Ag2, As1, Sh1, Dh+, Dl+				
	Light grey-brown organic-rich silt				

Core 14 (SK80398 BNG89496)

0.00-0.15m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Sh+, Th+				
	Grey-bron organic-mottled silty clay				
0.15-0.67m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Lf+				
	Light grey-brown silty clay with iron mottling				
0.67-0.80m	Da	St	El	Dr	UB
	4	0	0+	2	2
	Sh2, Dg2, Th+, Ag+				
	Black very well humified silty peat				
0.80-1.15m	Da	St	El	Dr	UB
	3	1	1	2	2
	Sh2, Dg1, Dh1, Ag+, Th+				
	Medium brown well humified peat				
1.15-2.00m	Da	St	El	Dr	UB
	3+	1	2	2+	1
	Dh2, Dg1, Sh1, Dl+, Th+				
	Dark brown herbaceous peat				

Core 15 (SK80609 BNG89566)

0.00-0.20m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Th+, Sh+				
	Grey-brown organic mottled silty clay				
0.20-0.63m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Th+,, Lf+				

	Grey-brown silty clay with iron mottling				
0.63-0.73m	Da	St	El	Dr	UB
	3	0	1	1	2
	Dg2, Ag2, As+, Sh+				
	Dark brown organic-rich silt				
0.73-0.80m	Da	St	El	Dr	UB
	3	0	0	1	2
	Ag2, Dg1, Sh1, Th+				
	Medium brown organic-rich silt				
0.80-1.00m	UNSAMPLED				
1.00-1.20m	Da	St	El	Dr	UB
	3+	0	1	2+	-
	Dg2, Sh1, Dh1, Dl+				
	Dark brown herbaceous peat				
1.20-1.90m	Da	St	El	Dr	UB
	3+	0	0+	2+	2
	Dg2, Sh1, Ag1, Dh+, Dl+				
	Dark brown silt-rich well humified peat				
	Wood fragments increase in abundance with depth				
1.90-2.00m	Da	St	El	Dr	UB
	3	0	0	2+	2
	Ag2, Sh1, Dg1, Dl+, As+				
	Medium brown organic-rich silt				

Core 16 (SK80550 BNG 89548)

0.00-0.18m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Th+, Sh+				
	Grey-brown organic mottled silty clay				
0.18-0.65m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Lf+				
	Grey brown silty clay with iron mottling				
0.65-0.75m	Da	St	El	Dr	UB
	3	0	0	1+	2
	Ag2, Dg1, Sh1, Dh+, As+				
	Grey-brown organic-rich silt				
0.75-0.90m	Da	St	El	Dr	UB
	3	0	0	1+	1
	Sh2, Ag1, Dg1, Th+				
	Mediumbrown silt-rich well humified peat				
0.90-1.60m	Da	St	El	Dr	UB
	3+	1	1	2	2
	Dg2, Sh1, Dh1, Th+				
	Dark brown herbaceous peat				

1.60-1.75m	Da	St	El	Dr	UB
	3	0	0+	2+	1
	Sh2, Dg1, Ag1, Th+, Dh+				
	Grey-brown silt-rich well humified peat				
1.75-2.00m	Da	St	El	Dr	UB
	2+	0+	0	2	1
	Ag2, As1, Sh1, Dh+, Dl+				
	Grey-brown organic-rich silt				
	Wood horizon 1.85-1.95m depth				

Core 17 (SK80495 BNG89532)

0.00-0.31m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Th+, Sh+				
	Grey-brown organic mottled silty clay				
0.31-0.60m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Lf+				
	Grey-brown silty clay with iron mottling				
0.60-0.67m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Sh+				
	Grey-brown organic mottled silty clay				
0.67-1.65m	Da	St	El	Dr	UB
	3+	1	1	2	3+
	Dh2, Dg1, Sh1, Th+				
	Dark brown to black herbaceous peat				
1.65-1.80m	Da	St	El	Dr	UB
	3	1	2	3	1
	Dh1, Dg1, Sh1, Ag1, Dl+				
	Grey-brown silt-rich well humified peat				
1.80-2.00m	Da	St	El	Dr	UB
	3	0	0	2	2
	Ag2, Sh1, Dg1, Dh+, Dl+				
	Grey-brown organic-rich silt				

Core 18 (SK80443 BNG89514)

0.00-0.28m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Sh+, Th+				
	Grey-brown organic mottled silty clay				
0.28-0.64m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Lf+				
	Grey brown silty clay with iron mottling				

0.64-0.78m	Da	St	El	Dr	UB
	3	0	0	1	2
	Ag2, As1, Sh1, Th+				
	Dark brown organic-rich silt				
0.78-0.95m	Da	St	El	Dr	UB
	3	0	0	1	2
	Ag2, Dg1, Dh1, Sh+				
	Grey-brown silt-rich well humified peat				
0.95-2.00m	Da	St	El	Dr	UB
	3+	1	2	3	1
	Dh2, Dg2, Sh+, Dl+, Th+				
	Dark brown herbaceous peat				

Core 19 (SK80146 BNG89812)

0.00-0.23m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Th+, Sh+				
	Grey-brown organic mottled silty clay				
0.23-0.74m	Da	St	El	Dr	UB
	2+	0	0	0	1
	As3, Ag1, Lf+, Sh+				
	Grey-brown organic mottled silty clay with iron mottling towards centre				
0.74-0.90m	Da	St	El	Dr	UB
	3	0	0	1	1
	Ag2, Dg1, Sh1, Th+, Dh+				
	Grey-brown organic-rich silt				
0.90-1.00m	Da	St	El	Dr	UB
	3+	0	0	2	2
	Sh3, Dg1, Th+				
	Dark brown very well humified peat				
1.00-1.40m	Da	St	El	Dr	UB
	3	1	2	2	1
	Dh2, Dg1, Sh1, Th+				
	Dark brown herbaceous peat				
	Light brown peat horizon 1.30-1.40m depth				
1.40-2.20m	Da	St	El	Dr	UB
	3	1	2	2	2
	Dg2, Dh1, Sh1, Th+, Dl+				
	Red-brown herbaceous peat				
2.20-3.00m	Da	St	El	Dr	UB
	3	0	1	2	2
	Dg2, Sh1, Ag1, Dl+, Dh+, Th+				
	Dark grey-brown silt-rich well humified peat				
3.00-4.00m	Da	St	El	Dr	UB
	3	0	0	2	1
	Ag2, Dg1, Dh1, Sh+, Dl+, As+				
	Interbedded layers of dark grey-brown organic-rich silt and silt-rich peat				

4.00-5.70m	Da	St	El	Dr	UB
	3+	0	1	2+	1
	Sh2, Dg1, Dh1, Dl+, Th+				
	Dark brown well humified peat				
	Wood horizon 4.60-4.70m depth				

Core 20 (SK80166 BNG 89773)

0.00-0.17m	Da	St	El	Dr	UB
	2	0	0	0	_
	As3, Ag1, Th+, Sh+				
	Grey-brown organic mottled silty clay				
0.17-0.58m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Lf+, Th+				
	Grey-brown silty clay with iron mottling				
0.58-0.63m	Da	St	El	Dr	UB
	4	0	1	2+	3
	Sh2, Dg2, Th+				
	Black very well humified peat				
0.63-1.00m	Da	St	El	Dr	UB
	3+	1	1	2+	2
	Dg2, Sh1, Dh1, Ag+				
	Dark brown well humified peat				
1.00-2.20m	Da	St	El	Dr	UB
	3	1	2	3	1
	Dg2, Dh1, Sh1, Dl+, Th+				
	Dark red-brown well humified peat				
	Light brown peat horizon 1.30-1.35m depth				
2.20-3.00m	Da	St	El	Dr	UB
	3	0	1	2+	2
	Sh2, Dg1, Ag1, Dh+, Dl+, Th+				
	Dark grey-brown silt-rich peat				
3.00-4.00m	Da	St	El	Dr	UB
	3	0	0+	2+	0
	Sh2, Dg1, Ag1, Dl+, Dh+				
	Dark grey-brown very well humified peat				
4.00-5.80m	Da	St	El	Dr	UB
	3	0	1	3	1
	Dg2, Sh1, Dh1, Dl+, Th+				
	Dark red-brown well humified peat				

Core 21 (SK80195 BNG89715)

0.00-0.22m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Sh+, Th+				
	Grey-brown organic mottled silty clay				

0.22-0.44m	Da	St	El	Dr	UB
	2	0	0	0	1

As3, Ag1, Lf+, Th+
Grey brown silty clay with iron mottling

0.44-0.60m	Da	St	El	Dr	UB
	4	0	1	2	2

Sh3, Dg1, Ag+, Th+
Black very well humified peat

0.60-0.90m	Da	St	El	Dr	UB
	3	1	2	2	2

Dg2, Sh1, Dh1, Th+
Medium brown well humified peat

0.90-2.10m	Da	St	El	Dr	UB
	3+	1	2	2	1

Dh2, Sh1, Dg1, Th+
Dark brown herbaceous peat
Light brown peat horizon 1.20-1.30m depth

2.10-2.55m	Da	St	El	Dr	UB
	2+	0	0	2	2

Ag1, Sh1, Dh1, Dh1, Th+, As+
Grey-brown silt-rich well humified peat

2.55-3.00m	Da	St	El	Dr	Ub
	2+	0	1	2	2

Sh2, Dg2, Dh+, Dl+, Ag+
Grey-brown very well humified peat

Core 22 (SK80085 BNG89521)

0.00-0.45m	Da	St	El	Dr	UB
	2	0	0	0	-

As3, Ag1, Sh+, Lf+
Grey-brown organic mottled silty clay
Orange brown with iron mottling 0.25-0.35m depth

0.45-0.70m	Da	St	El	Dr	UB
	1+	0	0	0	1

Ga3, Ag1, Lf+, Th+
White-grey silty sand with iron mottling

0.70-0.93m	Da	St	El	Dr	UB
	2	0	0	1	1

Ga2, Ag2, Ggmaj+, Sh+, Lf+
Light grey-brown sandy silt

0.93-1.05m	Da	St	El	Dr	UB
	2	0	0	1	2

Ag2, As1, Ga1
Lightr red-brown sandy silt

1.05-1.35m	Da	St	El	Dr	UB
	1+	0	0	1+	1

Ga4, Ag+
Light grey-brown sand

1.35-1.42m	Da	St	El	Dr	UB
	2	0	0	1	1

Ag2, Ga1, Ggmin1, As+, Ggmaj+
Pale red-brown gravely silt

1.42-1.70m	Da	S	El	Dr	UB
	2+	0	0	0+	2

As3, Ag1, Ga+
Dark grey silty clay

1.70-2.00m	Da	St	El	Dr	UB
	2	0	0	3	3

Ga4, Ag+
Grey-brown sand

Core 23 (SK80092 BNG89495)

0.00-0.65m	Da	St	El	Dr	UB
	2	0	0	0	-

As3, Ag1, Sh+, Th+, Lf+
Grey-brown organic mottled silty clay
Iron mottled 0.35-0.50m depth

0.65-0.90m	Da	St	El	Dr	UB
	1+	0	0	0+	1

Ga3, Ag1, Lf+
Light grey silty sand with iron mottling

0.90-1.24m	Da	St	El	Dr	UB
	2	0	0	0	2

Ag2, As1, Ga1, Lf+
Grey-brown sandy silt

1.24-1.35m	Da	St	El	Dr	UB
	2	0	0	0	1

As4, Ag+
Red-brown clay

1.35-1.50m	Da	St	El	Dr	UB
	1+	0	0	0	2

Ga2, Ag2, As+
Light grey fine silty sand

Core 24 (SK80100 BNG89459)

0.00-0.55m	Da	St	El	Dr	UB
	2	0	0	0	-

As3, Ag1, Sh+, Th+, Lf+
Grey-nbrown silty clay
Iron mottled 0.25-0.40m depth

0.55-0.85m	Da	St	El	Dr	UB
	2	0	0	0+	2

Ga3, Ag1, As+
Light grey silty sand

0.85-1.45m Da St El Dr UB
2 0 0 1 2
Ga4, Ag+
Grey-brown sand

Core 25 (SK79787 BNG89590)

0.00-0.65m Da St El Dr UB
2 0 0 0 -
As3, Ag1, Th+, Sh+, Lf+
Grey-brown silty clay
Iron mottled 0.30-0.50m depth

0.65-0.76m Da St El Dr UB
2+ 0 0 1 2
Sh2, Ag2, Th+, As+
Grey-brown organic-rich silt

0.76-0.81m Da St El Dr UB
3+ 0 2 2 2
Sh2, Dg2, Th+, Ag+
Dark brown very well humified peat

0.81-0.88m Da St El Dr UB
2+ 0 0 2 2
Ag2, Ga1, Sh1, Th+
Light grey-brown organic-rich silt

0.88-1.35m Da St El Dr UB
2+ 0 0 2 1
Ga4, Ag+, Lf+, Sh+
Light grey sand with occasional organic and iron mottling

1.35-1.50m Da St El Dr UB
2 0 0 3 2
Ga4, Sh+, Ag+
Light grey very fine sand

Core 26 (SK79705 BNG89441)

0.00-0.15m Da St El Dr UB
2+ 0 0 1 -
As2, Ag1, Sh1, Th+, Ga+
Dark grey-brown organic-rich silty clay

0.15-0.40m Da St El Dr UB
2 0 0 0 2
As3, Ag1, Lf+, Th+, Sh+
Light grey silty clay with iron mottling

0.40-0.80m Da St El Dr UB
2 0 0 0 2
Ag2, As1 Ga1
Light grey sandy silt wiuth occasional iron mottling with depth

0.80-1.10m	Da	St	El	Dr	UB
	2	0	0	1	2

As3, Ag1, Ga+, Lf+, Sh+
Light grey-brown silty clay

1.10-1.25m	Da	St	El	Dr	UB
	2	1	0	1	1

Ag2, As1, Ga1
Light grey sandy silt with occasional silt lenses

1.25-1.40m	Da	St	El	Dr	UB
	2	0	0	0	2

As3, Ag1, Ga+, Lf+
Light grey silty clay

1.40-1.58m	Da	St	El	Dr	UB
	2+	0	0	0	2

Ga2, Ag2, As+, Lf+
Dark grey silts and sands with occasional iron mottling

1.58-1.62m	Da	St	El	Dr	UB
	4	0	0	1	3

Ag2, Sh2, As+
Black organic-rich silt

1.62-1.80m	Da	St	El	Dr	UB
	2	0	0	1	2

Ag2, As1, Ga1
Light grey sandy silt

1.80-1.85m	Da	St	El	Dr	UB
	2	0	0	2	2

Ga4, Ag+
Grey sands

Core 27 (SK79627 BNG89252)

0.00-0.20m	Da	St	El	Dr	UB
	2+	0	0	0	-

Ag2, As1, Sh1, Th+
Dark brown organic-rich clayey silt

0.20-0.70m	Da	St	El	Dr	UB
	2	0	0	0	1

As3, Ag1, Lf+
Orange-brown silty clay

0.70-1.50m	Da	St	El	Dr	UB
	2+	0	0	0	1

As4, Ag+
Red-brown dense clay

Core 28 (SK79650 BNG89319)

0.00-0.25m	Da	St	El	Dr	UB
	2+	0	0	0	-

Ag2, As1, Sh1, Th+, Ga+
Medium brown organic-rich silt

0.25-0.77m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Lf+, Sh+				
	Orange-brown silty clay with iron mottling				
0.77-1.20m	Da	St	El	Dr	UB
	1	0	0	0	1
	Ga3, Ag1, Lf+				
	White-grey silty sand with occasional iron mottling				
1.20-1.50m	Da	St	El	Dr	UB
	2	0	0	1	2
	Ag2, As1, Ga1				
	Red-brown sandy silt				

Core 29 (SK79678 BNG89382)

0.00-0.20m	Da	St	El	Dr	UB
	3	0	0	0	-
	Ag2, As1, Sh1, Th+				
	Dark grey organic-rich silt				
0.20-0.80m	Da	St	El	Dr	UB
	As3, Ag1, Lf+				
	Orange-brown silty clay				
0.80-0.95m	Da	St	El	Dr	UB
	0+	0	0	1+	2
	Ga4, Ag+				
	Pale white sand				
0.95-1.30m	Da	St	El	Dr	UB
	2+	0	0	2	2
	Ga4, Ag+, Lf+				
	Orange-brown sand with abundant iron mottling				
1.30-1.50m	Da	St	El	Dr	UB
	2+	0	0	2	2
	Ga2, Ag2, As+, Lf+				
	Orange-brown silts and sands				
1.50-1.70m	Da	St	El	Dr	UB
	2	0	0	1	2
	As3, Ag1, Ga+				
	Light grey-brown silty clay				

Core 30 (SK79728 BNG89484)

0.00-0.14m	Da	St	El	Dr	UB
	3	0	0	1	-
	Ag2, As1, Sh1, Th+				
	Dark brown organic-rich silt				
0.14-0.90m	Da	St	El	Dr	UB
	2	0	0	0	2
	As3, Ag1, Lf+, Sh+				
	Grey silty clay with occasional iron mottling				

0.90-1.20m	Da	St	El	Dr	UB
	Sh2, Ag2, As+, GA+				
	Medium brown organic-rich silt				
1.20-1.45m	Da	St	El	Dr	UB
	3+	0	1	1	2
	Sh2, Dg1, Dh1, Ag+, As+, Dl+, Ga+				
	Dark brown very well humified peat				
1.45-1.50m	Da	St	El	Dr	UB
	2	0	0	1	2
	Ag2, As1, Sh1				
	Light grey-brown organic silt				

Core 31 (SK79755 BNG 89536)

0.00-0.17m	Da	St	El	Dr	UB
	2+	0	0	1	-
	Ag2, As1, Sh1, Th+				
	Grey-brown organic-rich silt				
0.17-0.55m	Da	St	El	Dr	UB
	2	0	0	1	1
	Ag2, As1, Ga1, Lf+				
	Light grey-brown sandy silt				
0.55-0.80m	Da	St	El	Dr	UB
	2	0	0	0	1
	Ga2, Ag2, As+, Lf+				
	Light yellow-brown silty sand				
0.80-1.10m	Da	St	El	Dr	UB
	2	0	0	1	1
	Ag2, As2, Lf+				
	Light grey silty clay iron mottled between 0.80-0.90m				
1.10-1.20m	Da	St	El	Dr	UB
	3	0	1	1	2
	Sh2, Dg1, Ag1, Ga+				
	Medium brown silt-rich peat				
1.20-1.70m	Da	St	El	Dr	UB
	Ga4, Ag+				
	Orange-brown sands				

Core 32 (SK79535 BNG89590)

0.00-0.25m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Th+, Ga+, Sh+				
	Light grey-brown silty clay				
0.25-0.40m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Th+, Lf+, Sh+				
	Light grey-brown silty clay with iron mottling				

0.40-0.70m Da St El Dr UB
2 0 0 0 1
Ag2, As1, Ga1, Lf+
Grey-brown sandy silt with occasional iron mottling with depth

0.70-1.50m Da St El Dr UB
2+ 0 0 0 1
As4, Ag+
Red-brown dense clay

Core 33 (SK79560 BNG89632)

0.00-0.55m Da St El Dr UB
As3, Ag1, Sh+, Th+, Lf+
Light grey silty clay with iron mottling with depth

0.55-0.65m Da St El Dr UB
2 0 0 01 1
Ga3, Ag1, As+
Light grey-brown silty sand

0.65-1.00 Da St El Dr UB
2 0 0 1 1
Ga4, Ag+, Lf+
Yellow-grey sand with occasional charcoal

1.00-1.45m Da St El Dr UB
2 0 0 2 2
Ga2, Ag2, As+
Grey-brown silty sand

Core 34 (SK79584 BNG89664)

0.00-0.55m Da St El Dr UB
2 0 0 0 -
As3, Ag1, Sh+, Th+, Lf+
Light grey-brown silty clay with iron mottling with depth

0.55-0.65m Da St El Dr UB
2 0 0 1 2
Ag2, As1, Ga1
Light grey-borwn sandy silt

0.65-0.72m Da St El Dr UB
2 0 0 1 1
Ga3, Ag1
Light grey silty sand

0.72-1.05m Da St El Dr UB
1+ 0 0 2 2
Ga4, Ggmaj+, Ag+
Yellow-grey sand

1.05-1.35m Da St El Dr UB
1+ 0 0 2 2
Ag2,As2, Ga+
Yellow-grey claysy silt

Core 35 (SK 79202 BNG89782)

0.00-0.30m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Th+, Sh+				
	Grey-brown silty clay				
0.30-1.55m	Da	St	El	Dr	UB
	2	0	0	0	1
	As3, Ag1, Ga+, Lf+, Ggmin+				
	Red-brown silty clay with occasional gravel with depth				

Core 36 (SK79215 BNG89722)

0.00-0.40m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Ga+, Th+, Sh+, Lf+				
	Grey-brow silty clay, iron mottled with depth				
0.40-0.55m	Da	St	El	Dr	UB
	2	0	0	0	1
	Ag2, As2, Ga+, Lf+				
	Red-brown slayey silt				
0.55-1.20m	Da	St	El	Dr	UB
	2	0	0	0	1
	As2, Ag2, Lf+, Ga+, Ggmin+				
	Red-brown silty clay with occasional gravel with depth				

Core 37 (SK79231 BNG89638)

0.00-0.55m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Th+, Sh+, Ga_, Lf+				
	Grey-brown silty clay, iron mottled with depth				
0.55-0.80m	Da	St	El	Dr	UB
	1+	0	0	0	2
	Ag2, As1, Ga1, Lf+, Ggmin+				
	Yellow-brown sandy silt				
0.80-1.45m	Da	St	El	Dr	UB
	1+	0	0	0	1
	As2, Ag2, Lf+				
	Light yellow-grey clayey silt				
1.45-1.70m	Da	St	El	Dr	UB
	2	0	0	0	2
	Ag2, As1, Ga1, Ggmin+				
	Orange-brown clays and silts				

Core 38 (SK79244 BNG89573)

0.00-0.65m	Da	St	El	Dr	UB
	2	0	0	0	-
	As3, Ag1, Th+, Sh+				
	Grey-brown silty clay, iron mottled with depth				
0.65-1.25m	Da	St	El	Dr	UB
	1	0	0	0	2
	Ag2, As2, Ga+, Ggmin_, Lf+				
	Light yellow-grey silty clay				
1.25-1.80m	Da	St	El	Dr	UB
	1+	0	0	0	1
	Ag2, As1, Ga1, Lf+				
	Grey to red-brown sandy silt with iron mottling				