

Cotswold Archaeology

Power Court Site Luton Bedfordshire

Archaeological Watching Brief



for 2020 Developments (Luton) Ltd

on behalf of Luton Town Football Club

> CA Project: 660816 CA Report: 17086

Site Code: PCSL17 Entry Number: LTMNG 1268 Accession no: tbc

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SUMMARY

Project Location:	Power Court, Luton, Bedfordshire
NGR:	509603 221263
Туре:	Watching Brief
Date:	6th February 2017 to 27th February 2017
Planning Reference:	16/01400/OUTEIA
Location of Archive:	Luton Culture
Accession Number:	ТВС
Site Code:	PCSL17

During February 2017, Cotswold Archaeology maintained an archaeological watching brief during geotechnical investigations at Power Court, Luton, Bedfordshire. The geotechnical investigations comprised the machine excavation of trial pits, cable-percussion coring and window sampling. The work was commissioned by 2020 Developments (Luton) Ltd on behalf of Luton Town Football Club and was carried out in order to inform a planning application to Luton Borough Council (LBC; the local planning authority) for a new football stadium with ancillary stadium related facilities, along with residential and community/commercial development, hotel and infrastructure.

Previous archaeological investigations to the south of the site had revealed evidence of medieval and post-medieval activity, the former associated with a 13th century castle (known as Fulk de Breaute's Castle). Based on these investigations it had been suggested that evidence for medieval occupation may have extended into the southern part of the site. However, much of the site has undergone extensive modification and multiple phases of redevelopment during the later post-medieval period. Monitoring of the geotechnical interventions revealed that despite much of the site having been disturbed by later phases of redevelopment, earlier deposits survived in some areas. In lower-lying areas, pseudo-peat and alluvial deposits were sealed beneath recent materials and overlay Terrace Gravel and Cretaceous Chalk deposits. In other areas, post-medieval and undated anthropogenic deposits were encountered lying between natural deposits and modern made ground.

1. INTRODUCTION

- 1.1 During February 2017, Cotswold Archaeology (CA) maintained an archaeological watching brief during geotechnical ground investigations at Power Court, Luton, Bedfordshire (site centred on NGR: TL 09603 21263; Fig. 1). The geotechnical investigations comprised the machine excavation of trial pits, cable percussion coring and window sampling at locations across the site (Fig. 2). The work was commissioned by 2020 Developments (Luton) Ltd on behalf of Luton Town Football Club and was carried out in order to inform a planning application to Luton Borough Council (LBC; the local planning authority) for a new football stadium with ancillary stadium related facilities, along with residential and community/commercial development, hotel and infrastructure, which had previously received outline planning permission (16/01400/OUTEIA). The requirement for the archaeological investigation was in accordance with planning guidance stated in the *National Planning Policy Framework* (DCLG 2012).
- 1.2 The scope of the archaeological work, which comprised the monitoring of the geotechnical ground investigations, was established through discussions between CA and Martin Oake and Hannah Firth, Archaeologists for Central Bedfordshire Council's Archaeological Service (CBCAS; the archaeological advisors to LBC). The discussion was informed by an archaeological desk-based assessment (DBA) prepared by CA (2016) and the watching brief was carried out according to a *Written Scheme of Investigation* (WSI) prepared by CA (2017) and approved by Martin Oake.
- 1.3 The project was carried out in accordance with the WSI (*ibid*) and adhered to the Chartered Institute for Archaeologists' (CIfA) Standard and Guidance for Archaeological Field Evaluation (CIfA 2014a) and Standard and Guidance for Archaeological Watching Briefs (CIfA 2014b), and the Historic England (formerly English Heritage) procedural documents Management of Archaeological Projects 2 (EH 1991) and Management of Research Projects in the Historic Environment (MoRPHE): Project Manager's Guide (HE 2015).

2. SITE BACKGROUND

Site location, topography and geology

- 2.1 The proposed development site, which covers an area of approximately 7ha, is located in the centre of Luton, immediately to the south-east of the railway station (Fig. 1). The Site is bounded to the north by the Luton–Dunstable Busway, which traces the railway line, and the routes and interchange of Church Street/St. Mary's Road (to the south-west) and Crawley Green Road (to the south-east). The Arndale Centre (a large shopping mall) and the Grade I Listed St. Mary's Church are located on the opposite side of St. Mary's Road, *c.* 20m to the south-west and *c.* 20m to the south respectively.
- 2.2 The Site was formerly the location of an electricity power station that was in operation from 1901–1969; its two large cooling towers and other structures were demolished in 1972. The Site was subsequently used as an industrial estate, but most of the late 20th-century warehouses and units have now been demolished. The Site lies at approximately 107m above Ordnance Datum (aOD), on roughly flat ground, though there are significantly elevated areas to the east.
- 2.3 The underlying bedrock geology of the area is mapped as Holywell Nodular Chalk Formation and New Pit Chalk Formation of the Cretaceous Period, overlain by glaciofluvial sand and gravel deposits of the Mid Pleistocene epoch (BGS 2016).
- 2.4 Due to the size of the site and for easy reference the site was divided into a number of arbitrary areas during the fieldwork (Figs. 3 & 4): Area A, a raised, former car-park to the north-east; Area B, a large central area, formerly occupied by industrial buildings; Area C, a small area at the west of the site, immediately south and east of a currently occupied commercial premises and itself formerly largely occupied by buildings; Area D, a small area at the north of the site, immediately north of Area A and formerly occupied by a number of buildings, including a public house; Area E, a sloping, vegetated area at the south of the site, formerly occupied by residential and commercial buildings; Area F, a small area at the south-west of the site, formerly occupied by commercial buildings; Area G, a small area at the west of the site, immediately north and east of an industrial estate that is still in use; and Area H, a small area at the south-east corner of the site, formerly under industrial use.

Historical and archaeological background

2.5 The archaeological and historical background of the site has been presented in detail in the *Heritage Desk-Based Assessment* prepared by CA (2016), which is summarised as follows:

Pre-Holocene activity (c. 500,000 – 10,000BC)

2.6 The earliest evidence for hominin presence in the Luton area comprises flint implements, including a variety of Lower and Middle Palaeolithic tools discovered within brick-earth deposits of clay extraction pits during the 19th and early 20th centuries (Albion Archaeology 2005, 12). Findspots are located at Caddington (*c*. 3.5km to the south-west of the Site), Ramridge End (*c*. 2km to the north-east of the Site) and Leagrave (*c*. 4km to the north-west of the Site).

Later Prehistoric activity (10,000BC – AD43)

- 2.7 While there is no substantial evidence for Mesolithic activity in the area, Neolithic occupation is well-attested (Albion Archaeology 2005, 12) through a number of enclosure and monument sites within the wider landscape surrounding the Site. These include a large curvilinear ditched enclosure known as Waulud's Bank, adjacent to the source springs of the river Lea, *c.* 4.5km to the north-west of the Site; as well as Neolithic and Bronze Age ceremonial monuments *c.* 5.5km to the north of the Site at Warden Hill and Galley Hill.
- 2.8 A settlement established *c*. 3000BC is located north of Waulud's Bank at Sundon Park (Albion Archaeology 2005, 12), with subsequent occupation focused on the alluvial terraces and chalk ridges overlooking the River Lea, *c*. 1-4km to the northwest of the Site (Carmichael *et al.* 2011, 27). The remains of a 'log causeway' associated with 2nd to1st-century BC pottery have been discovered at Leagrave, *c*. 4km to the north-west of the Site (BBC/CBC 2016a). It is likely that the Luton area was 'an extensive agricultural landscape' during the Iron Age (Albion Archaeology 2005, 13).

Roman activity (AD43 – 410)

2.8 More substantial evidence of later occupation is recorded within (what is now) the modern town of Luton. At Limbury, slightly to the south of Leagrave and *c.* 3.7km north-west of the Site, excavations uncovered a timber-built settlement of 2nd–4th century date (Albion Archaeology 2005, 15). A section of a 'service road', which

would have connected settlements to key routes such as Watling Street, has been identified at Leagrave Marsh, *c.* 3.3km to the north-west of the Site (HER Ref. 167).

- 2.9 A dense concentration of Roman period features and material has been recorded beneath the former Waller Street and at Vicarage Street, *c.* 50–250m from the Site (Carmichael *et al.* 2011, 27). In 1975–6, groundworks at Vicarage Street, *c.* 130m to the south of the Site, recovered Roman building debris that included box and flue tile fragments and pottery sherds.
- 2.10 There are no findspots of Roman date recorded within the Site and it is considered unlikely that there would have been a settlement here at this date as the River Lea (which is now culverted) once flowed in a south-easterly direction through the Site (CA 2016). It is probable, however, that the river and its floodplains were exploited for aquatic, floral and faunal resources during the prehistoric and Roman periods.

Early Medieval Origins of Luton (AD410 - 1066)

- 2.11 The establishment of a town at Luton is thought to have occurred in the 6th century, since the Anglo-Saxon Chronicle records an attack by a Saxon army on a place known as *Lygeanberg* (meaning a defended enclosure on the River Lea) in AD571 (Carmichael *et al.* 2011, 28). Archaeological evidence for activity during the first half of the first millennium is scarce, but suggests ongoing occupation at Leagrave, *c* 4.5km to the north-west of the Site, from the Roman period (Albion Archaeology 2005, 16).
- 2.12 An extensive cemetery of 5th to 6th-century date has been excavated at Biscott, *c*. 2km to the north-west of the Site, but no traces of Saxon buildings have yet been found in Luton, where the settlement at this time is likely to have consisted of dispersed hamlets (Albion Archaeology 2005, 16). During the later first millennium, the River Lea formed the boundary of the Kingdom of Wessex, with a number of territorial disputes centred on *Lygetune* (as it was re-named later) and its hinterland (CA 2016).

Medieval development of Luton (AD1066 - 1539)

2.13 By the time of the Domesday Survey (AD1086), Luton goes by the name of *Loitoine* and is described as a very large settlement with land for 82 ploughlands, woodland for 2000 pigs, six mills and a market (Open Domesday, accessed 16.12.16).

2.14 Following the ascension of King Stephen, the Manor of Luton was granted to Robert de Waudari, a foreign mercenary who built a substantial motte-and-bailey castle on high ground to the south of (but overlooking) the medieval town, *c.* 690m south-west of the Site. This castle was demolished in AD1154 under the terms of a truce (Carmichael *et al.* 2011, 29); archaeological investigations have located its 3–4m wide bailey ditch and it is thought that Castle Street follows the alignment of the inner ditch (Albion Archaeology 2005, 23). A new castle was established by Fulk de Breaute when he acquired the Manor of Luton in AD1221, on a Site adjacent to St. Mary's Church and overlooking the River Lea. The castle appears to have been moated. It was partially destroyed in 1224–1225 following de Breaute's exile, but the Site was re-used in the later 13th and 14th centuries (Carmichael *et al.* 2011, 29). Archaeological excavations at Park Square have unearthed buried remains of medieval structures, deposits and debris relating to the use, demolition and re-use of the castle complex.

Fulk de Breaute's castle

- 2.15 The general location of Fulk de Breaute's castle has been identified from both documentary sources and archaeological evidence. A 13th century account mentions flooding caused by a dam in the River Lea, intended to provide water for the castle's moat (Keir 2011, 20). A map of Luton dating to 1855 notes the Site of the castle with a short description of visible surviving earthworks. It is labelled as 'Site of Fulk de Brent's [sic] Castle' and the accompanying text notes: 'This castle probably stood in the meadow at the east corner of the churchyard, where the site of a large square moated mansion is still very plainly to be seen; the meadow adjoining it is surrounded by a very high bank of earth, and a deep ditch' (Davis 1855, 8, 144). Other more recent works have also repeated this mention of some surviving earthworks (Austin 1928).
- 2.16 The site of the castle has been the subject of several archaeological investigations, including excavation, since it was first evaluated in 1976 (CA 2016, 25-26). Most recently, investigations were carried out by Albion Archaeology in 2011 and Headland Archaeology in 2011 and 2013-2014. These provided some considerable evidence for the extent and location of the moat, as well as the layout and possible use of the castle buildings. Recovered assemblages of local and imported ceramic wares, decorative metalwork and imported coinage also demonstrated that the site remained a high-status site, perhaps even a political centre, before being abandoned in the mid-14th century (Headland Archaeology 2015, 60). Across the

area of the 2013–2014 excavations, modern ground reduction and levelling had penetrated no deeper than *c*. 0.3m above the medieval horizon (Headland Archaeology 2015, 28), causing only localised disturbance to medieval deposits.

Medieval settlement

2.17 It seems that medieval Luton was a linear settlement comprising George Street and Park Street (on the same orientation as the River Lea), Bridge Street, Castle Street and Church Street (Albion Archaeology 2005, 51–52). Archaeological investigations have unearthed evidence of medieval occupation in these localities. Another medieval settlement was located on rising ground on the north side of the River Lea, *c.* 400m to the north-east of the Site at Crawley Green. Land here (and probably elsewhere in Luton) was owned by St. Albans Abbey prior to the Dissolution.

Post-medieval (1540 - 1800) and Modern (1800 - present) Luton

- 2.18 Brick-making was an important industry during the post-medieval period, although brewing and the sale of beer and spirits was the town's principal trade (CA 2016, 31).
- 2.19 The main growth of the town did not occur until the middle of the 18th century, when the near-doubling of Luton's population necessitated the creation of many new streets across former farmland and common along the river valley (Carmichael *et al.* 2011, 32). In the early 20th century, surrounding hamlets became absorbed into the town.

3. AIMS AND OBJECTIVES

- 3.1 The principal aim of the archaeological investigation was to provide information about the archaeological resource within the site, including its presence/absence, character, extent, date, integrity, state of preservation and quality.
- 3.2 The specific objectives of the archaeological investigation were:
 - to monitor ground investigations, and to identify, investigate and record all significant buried archaeological deposits revealed on the site during the course of the ground investigations;

- To provide archaeological input and interpretation of geotechnical data derived from geotechnical ground investigations
- at the conclusion of the project, to produce an integrated archive for the project work and a report setting out the results of the project and the archaeological conclusions that can be drawn from the recorded data;

4. FIELDWORK METHODOLOGY

- 4.1 The watching brief comprised the observation by an experienced archaeologist of the machine excavation of 21 geotechnical trial pits (Fig. 2), each measuring between 3m and 4m in length by between 0.6m and 1m wide and up to 4m deep, the mechanical excavator being equipped with a toothless bucket and nonarchaeologically significant deposits being removed by the contractors under archaeological supervision. In addition to the trial pits, fifteen windowless sample boreholes (Fig. 2) were also excavated to depths of up to 5m below present ground level (bpgl), preceded by hand digging to 1.2m and monitored archaeologically. A number of cable percussion boreholes (Fig. 2) were also excavated across the site, though only two of these (CP2 and RH3) along with a machine-excavated pit above a third (RH7) were archaeologically monitored. It had initially been intended to excavate a number of rotary boreholes though these were changed to cable percussion boreholes, however the numbering sequence for each of the interventions, devised before the fieldwork commenced, was retained for ease of reference. Three trial pits included in the original plan were not excavated as they lay within buildings still under occupation, whilst a number of other interventions were moved from their intended locations for practical reasons. Sufficient time allowance was made by site contractors for the investigation of any archaeological remains revealed during groundworks.
- 4.2 When archaeological deposits were encountered, they were investigated by hand, characterised and excavated as necessary. They were then planned and recorded in accordance with *Technical Manual 1: Fieldwork Recording Manual* (CA 2013). Each borehole was recorded on a *pro-forma* borehole recording sheet and each trial pit was recorded on a *pro-forma* trench recording sheet. Representative sections of all pits were drawn and photographed, even if they contained no deposits of archaeological interest, drawn records including the full depth of the geotechnical

intervention. All finds and samples were bagged separately and related to the context record. All artefacts were retained for processing and analysis in accordance with *Technical Manual 3: Treatment of Finds Immediately after Excavation* (CA 1995).

- 4.3 Due care was taken to identify deposits with environmental potential, with a view to possible future environmental sampling, though no such material was sampled at this stage because of the high risk of contamination; geotechnical samples taken during the trial pitting and window sampling, being analysed for contaminants and to inform future works.
- 4.4 Artefacts from topsoil and other recent contexts were noted but not retained unless they were of intrinsic interest (e.g. a complete early 20th-century beer bottle from TP5). All artefacts were collected from stratified excavated contexts except for large assemblages of post-medieval or modern material.

5. INVESTIGATION RESULTS

Summary

5.1 The geotechnical investigations revealed extensive evidence of modern redevelopment across much of the site, with up to 3.5m of recently reworked and redeposited material in the former coal yard/car park area at the north of the site (Area A), for example. However, modern deposits had sealed surviving deposits of Holocene pseudo-peat and alluvium as well as Pleistocene Terrace gravel, which in turn overlay natural Cretaceous chalk geology.

Trial Pits

Trial Pit TP1 (Surface elevation: 105.95m aOD)

5.2 Only modern demolition rubble (100) was encountered in TP1, which was located within Area D at the north-east corner of the site. The pit was machine excavated to a depth of 1.7m bpgl but because of constant collapsing of loose material from the sides, it was not possible to excavate further. It is likely that the demolition rubble was infilling the cellar of a former public house that had occupied this area.

Trial Pit TP2 (Surface elevation: 106.06m aOD)

5.3 The basal material recorded in this trial pit, located some 50m south of TP1, was a buried concrete slab (204), at least 0.4m thick but the breaker on the mechanical excavator could not penetrate beyond this. Above the slab was 0.55m of brick rubble (203), which formed the bedding for an upper reinforced concrete slab (200) that was 0.35m thick. Elsewhere within the pit, the upper slab was underlain by 0.2m of friable, black silt sand containing frequent brick fragments.

Trial Pit TP3 (Surface elevation: 107.60m aOD)

5.4 The basal material recorded in this trial pit located towards the north of Area A was a stiff, mid orange brown clay with various inclusions including brick fragments (305), which extended from the base of the pit at 4m bpgl (103.60m aOD) up to 1m bpgl. It was overlain by a 0.2m thick deposit of loose, black, ashy silt sand and coal dust (304), which in turn was covered by a 0.15m thick layer of large, sub-rounded stones and slag fragments in a sandy matrix (303). This was overlain by 0.1m of hard, mid orange brown sandy gravel (302), which in turn was sealed by a 0.43m thick deposit of slightly friable, very dark greyish brown to black silt sand with chalk lensing (301). The stratigraphic sequence was completed by a 0.12m thick layer of asphalt that had formed the former car park surface (300). All of the deposits below the asphalt surface in this pit appear to have been deposited alluvial clay with various deposits associated with industrial usage lying above this.

Trial Pit TP4

5.5 The proposed location for this trial pit lay within a building, currently in use and hence the trial pit was not excavated.

Trial Pit TP5 (Surface elevation: 107.67m aOD)

5.6 This trial pit was located approximately 30m east of TP3 and exhibited a similar stratigraphic sequence. The basal material was a slightly friable, very dark, slightly green, grey brown sand silt with coal dust (506), which extended 0.2m upwards from the 4m bpgl (103.67m aOD) base of the pit. It was overlain by a 2.7m thick, stiff clay deposit (505), comparable with layer 305 in TP3. Above this was a 0.3m thick layer of loose, very dark grey brown, sand silt (504), similar to layer 304 in TP3 but yielding a complete late 19th-/early 20th-century bottle from the Paten Company of Peterborough, though this find is likely to have been residual within this deposit. Overlying this was 0.46m of firm, light grey sandy gravel (503) that included frequent

fragments of sulphurous slag. This was overlaid by two further, friable sand/silt made ground deposits (502 and 501) and the sequence was capped by the modern asphalt surface (500).

Trial Pit TP6

5.7 The proposed location for this trial pit lay within a building, currently in use and hence the trial pit was not excavated.

Trial Pit TP7 (Surface elevation: 104.69m aOD)

5.8 The basal material recorded in this trial pit, which lay within the footprint of a former building towards the north-west of the site, was a firm, light grey, fine, sand silt alluvium (708). This extended from the base of the pit at 4m bpgl (100.69m aOD) up to 3.6m bpgl and was overlain by a 0.6m thick layer of what appeared to be disturbed chalk (707). Above this was a 0.3m thick deposit of very firm, mid grey brown, coarse alluvial gravel with a moderate organic content (706), which in turn was overlain by 0.7m of slightly firm, dark brown grey silt (705) that contained abundant macrobotanical remains, giving the appearance of a pseudo-peat material, along with bivalve and gastropod mollusc shells, indicating material laid down in a standing water environment. A fragment of very large cattle long bone was also recovered from this deposit. It was sealed by a 0.6m thick layer of friable, mid grey brown clay silt that contained moderate small ceramic building material fragments (CBM) (704), above which were three layers (703, 702 and 701) of modern made ground totalling 1.22m in thickness. The sequence was capped by a 0.18m thick modern concrete floor slab (700). The lower deposits in this sequence represented various high and low energy alluvial materials, the surface of which, lay at 101.99m aOD, capped by standing water deposits (surface elevation: 102.69m aOD), indicating a dynamic floodplain environment with a transition to a standing water environment, possibly within a cut-off channel or similar feature. The area was then exploited for human use prior to modern redevelopment.

Trial Pit TP8 (Surface elevation: 104.69m aOD)

5.9

This trial pit was located approximately 30m south-west of TP7 but its excavation was limited by the presence of live services. A live drain run was encountered at a depth of 1.1m bpgl (103.59m aOD), above which, was 0.68m of mixed sand silt and demolition rubble (803). This was overlain by 0.07m of redeposited chalk (802), above which, was a further 0.1m of demolition rubble (801) that provided the bedding for a 0.25m thick concrete floor (800).

Trial Pit TP9 (Surface elevation: 107.54m aOD)

5.10 This trial pit was located in the former car park at the north-east of the site and exposed a similar sequence to other interventions in this area. The basal deposit, extending from 4m bpgl (103.54m aOD) up to 2m bpgl was a stiff, mixed clay (905) comparable with 305 in TP3 and 505 in TP5. It was overlain by 0.3m of redeposited chalk (904) which in turn was covered by 0.2m of friable, black, ashy material (903), again comparable with similar materials in TP3 and TP5. Above this were further modern made ground deposits (902 and 901) and the sequence was capped by a 0.05m thick modern root mat.

Trial Pit TP10 (Surface elevation: 107.60m aOD)

5.11 This trial pit was also excavated in the former car park area, though a slightly more complex stratigraphic sequence was exposed. Extending from the base of the pit at 4m bpgl (103.60m aOD) up to 3.7m bpgl was a stiff, mixed clay deposit (1011), which was overlain by 0.5m of variably compacted, ashy silt sand and chalk rubble (1010). Above this was 2.38m of stiff, mixed clay (1009), comparable to the massive clay layers recorded in other nearby sequences. The clay was overlain by a series of variable modern made ground deposits (1008, 1007, 1006, 1005, 1004, 1003, 1002 and 1001) totalling 0.76m in thickness and including some clearly industrial residues. The sequence was capped by a 0.06m thick, weakly-developed topsoil (1000).

Trial Pit TP11 (Surface elevation: 107.53m aOD)

5.12 This trial pit was also located within the former car park area and exhibited a similar sequence to nearby interventions. Extending from the base of the pit at 3.8m bpgl (103.73m aOD) up to 1.5m bpgl was a stiff, mixed clay (1107), similar to that seen in other sequences, which was overlain by a 0.2m thick layer of large stone and slag blocks in a sandy matrix (1106). Above this was 0.2m of redeposited chalk (1105), which was overlain by a further, 0.4m thick, large stone and slag deposit (1104). Above this were further, modern made ground deposits (1103, 1102 and 1101) totalling 0.62m in thickness and the sequence was completed by a 0.08m thick topsoil (1100).

Trial Pit TP12 (Surface elevation: 105.06m aOD)

5.13 This trial pit was located close to the western edge of the site, within the footprint of a former industrial building. Extending from the base of the pit at 3.2m bpgl (101.86m aOD) up to 1.45m bpgl (103.61m aOD) was a very firm deposit of light yellow brown sandy gravel (1206), probably representing the Pleistocene Terrace gravel. This was overlain by 0.4m of friable, very dark grey brown sand silt (1205), which also contained occasional shell fragments and animal bone but was unfortunately undateable. Above this was 0.45m of slightly friable, dark grey brown silt (1204), which contained small CBM fragments (surface elevation: 104.46m aOD). These latter two deposits may both have some archaeological potential. Above 1204 was a 0.14m thick cement and rubble layer (1203) that had acted as bedding for a checkerboard-patterned tile floor (1202), remnants of which survived within the pit. This floor was possibly associated with development of this area in 1924, when it is shown as Corporation Yard. Above the floor was a 0.14m thick, friable, ashy silt sand layer (1201) and the stratigraphic sequence was completed by a 0.28m thick, reinforced concrete floor slab (1200).

Trial Pit TP13 (Surface elevation: 105.05m aOD)

5.14 Located some 40m south-east of TP12 was TP13, which exhibited a somewhat different stratigraphic sequence. The basal deposit, extending up to 3.6m bpgl was a firm, banded, light grey/light orange brown alluvial silt (1308), which was overlain by further alluvial clay silt (1307), gravel (1306), silt (1305) and clay silt (1304) deposits up to 1.25m bpgl (103.80m aOD). This broadly corresponded with the sequence of alluvial deposits recorded in TP7, some 90m to the north, though there was no later pseudo peat layer. Instead, the alluvium was directly overlain by layers (1303 and 1302) of quite recent origin and containing frequent demolition rubble. A former asphalt and gravel surface was located between 0.3m and 0.45m bpgl and the sequence was completed by a 0.3m thick reinforced concrete floor slab (1300).

Trial Pit TP14 (Surface elevation: 105.03m aOD)

5.15 During the mechanical breaking out of the concrete slab (1400) for this trial pit, it was realised that the slab had been reinforced with 25mm rebars, which were impenetrable with the equipment available. Consequently this trial pit was abandoned.

Trial Pit TP15 (Surface elevation: 104.55m aOD)

5.16 This trial pit was located within the footprint of an extensive former boiler and engineering works towards the centre of the site. The basal material recorded was natural chalk (1505) which extended up to 3.1m bpgl (101.45m aOD) and was overlain by 0.9m of soft to slightly plastic, mid grey brown alluvial silt (1504). Above

this were variable layers (1503, 1502 and 1501) of recent made ground up to 0.3m bpgl, 19th/20th-century CBM, pottery and glass being recovered from the former and the sequence was capped by a reinforced concrete floor.

Trial Pit TP16 (Surface elevation: 104.71m aOD)

5.17 This trial pit lay approximately 40m north-east of TP15 and the basal deposit was natural chalk (1606), recorded at an upper level of 0.85m bpgl (103.86m aOD), Cut directly into the chalk was a 0.6m deep feature (1605), which had a steeply sloping, quite straight south-western edge and a flattish base. The exact form and further dimensions of the feature were unclear as it extended beyond both sides and the north-eastern end of the pit, though it measured at least 2m by 0.8m. It was filled with a single, friable, mid brown sand silt deposit (1604) that contained very small fragments and larger pieces of CBM, probably indicating a late 19th-century date. The backfilled feature was sealed by a 0.05m thick layer of mixed, redeposited clay (1603), which was overlain by 0.36m of friable, very dark grey to black ashy sand silt (1602). Above this was a 0.11m thick demolition rubble deposit (1601) that acted as bedding for a 0.33m thick, reinforced concrete floor slab (1600).

Trial Pit TP17

5.18 The proposed location for this trial pit lay within a building, currently in use and hence the trial pit was not excavated.

Trial Pit TP18 (Surface elevation: 106.19m aOD)

5.19 TP18 was located approximately 30m east of TP16 and its excavation proved somewhat difficult as it was located over an extensive area of modern demolition rubble (1800). During mechanical excavation the loose rubble constantly collapsed into the pit and for practical, as well as health and safety reasons, excavation ceased at 1.3m bpgl.

Trial Pit TP19 (Surface elevation: 104.63m aOD)

5.20 TP19 was located approximately 50m south-east of TP15 and its excavation also proved difficult. The basal material excavated was variably compacted modern demolition rubble (1901), which constantly collapsed leaving some dangerous, open voids and for health and safety reasons, excavation was abandoned at 1.8m bpgl (102.83m aOD). It is likely that the rubble was infilling a basement to a former industrial building. Subsequent to the basement infilling a 0.4m thick, reinforced concrete floor (1900) had been laid over the rubble.

Trial Pit TP20 (Surface elevation: 104.20m aOD)

5.21 This trial pit was located within the footprint of a former building at the south-west corner of the site. At the base of the trial pit at 4m bpgl (100.20m aOD) was a coarse sandy gravel alluvium that fined upwards to a firm, light, slightly yellow grey silt (2010) at 2.95m bpgl (101.25m aOD). It was overlain by 0.85m of soft, very dark grey brown to black, laminated organic silt (2009, surface elevation: 102.10m aOD), which was very similar to the pseudo peat deposit in TP7. Above this were further alluvial deposits; a 0.3m thick, firm, mid brown grey silt clay (2008) and a 0.55m thick, friable, mid brown sand silt (2007). The latter deposit was overlain by 0.05m of friable, mid grey brown sand silt with occasional CBM fragments (2006) and this in turn was overlain by 0.05m of friable, very dark grey brown to black sand silt (2005, surface elevation: 103.05m aOD). Above this were a number of modern made ground deposits (2004, 2003, 2002 and 2001) totalling 0.85m in thickness, most containing recent demolition rubble. The sequence was completed by a rubble bedding supporting a reinforced concrete floor (2000), 0.3m thick.

Trial Pit TP21 (Surface elevation: 104.17m aOD)

5.22 This test pit lay approximately 50m east of TP20 and the earliest material exposed, extending from the base of the pit at 3.6m bpgl up to 2.3m bpgl (101.87m aOD), was a firm, light yellow brown silt, sand and gravel deposit (2108), possibly Pleistocene Terrace Gravel. It was overlain by 0.65m of banded alluvial deposits (2107, surface elevation: 102.52m aOD) comprising friable, mid orange brown fine sand and firm, dark brown silt clay. This in turn was overlain by 0.35m of firm, mottled mid red/grey brown clay silt with occasional charcoal fragments (2106), which appears to have been a disturbed alluvial deposit. Above this was a 0.25m thick layer of firm, mid brown clay silt with occasional small CBM fragments (2105, surface elevation: 103.12m aOD) and this was overlain by a series of modern made ground deposits (2104, 2103, 2102 and 2101) totalling 0.8m in thickness. The sequence was capped by a 0.25m thick, reinforced concrete floor (2100).

Trial Pit TP22 (Surface elevation: 105.04m aOD)

- 5.23
- This trial pit was located a short distance east of the culverted River Lea and approximately 50m north-east of TP20. From the base of the pit at 3.1m bpgl up to 1.85m bpgl (103.19m aOD) was a firm, light orange brown, flinty and chalky silt clay that became more gravelly up profile (2208), which appears to have represented partial alluvial reworking of the natural chalk. It was overlain by 0.55m of firm, mid

brown silt with occasional flint and charcoal fragments (2207, surface elevation: 103.74m aOD), which appears to have been a reworked alluvial deposit. It was covered by a 0.1m thick layer of friable, black sand silt (2206) that exhibited a distinctive hydrocarbon odour. This was overlain by further, modern made ground deposits (2205, 2204, 2203, 2202 and 2201) totalling 1.05m in thickness and comprising large amounts of demolition rubble. The sequence was capped by a 0.15m thick deposit of loose vegetation, gravel and CBM fragments.

Trial Pit TP23 (Surface elevation: 105.27m aOD)

5.24 This trial pit was located in the southern part of the site, approximately 60m southeast of TP22. The basal material recorded in this pit was natural chalk (2307), the surface of which, was exposed at 2.35m bpgl (102.92m aOD). It was overlain by 0.55m of friable, light grey/grey brown chalky silt (2306, surface elevation: 103.47m aOD), which appears to have represented a reworking of the chalk surface. Above this was 0.4m of friable, mid to dark brown sand silt with occasional small CBM fragments (2305, surface elevation: 103.87m aOD). This was overlain by a series of modern made ground deposits (2304, 2303, 2302 and 2301) totalling 1.32m in thickness, the lowest deposit (2304) including plastic fragments and the others including variable quantities of demolition rubble. The sequence was capped by a weakly developed, mossy topsoil (2300).

Trial Pit TP24 (Surface elevation: 106.07m aOD)

5.25 Located approximately 60m north-east of TP23 the earliest deposit encountered in this trial pit was natural chalk (2404), recorded at an upper elevation of 1.5m bpgl (104.57m aOD). This was directly overlain by modern demolition rubble (2403) with further made ground deposits (2402 and 2401) above. The sequence was capped by a 0.08m thick, weakly developed topsoil (2400).

Trial Pit TP25 (Surface elevation: 106.20m aOD)

5.26 This trial pit was located approximately 40m south-east of TP24 and the earliest deposit recorded was natural chalk (2504), the surface of which, was encountered at 1.2m bpgl (105.00m aOD). This was overlain by a 0.4m thick layer of very firm, redeposited chalk and demolition rubble (2503). Further made ground deposits (2502 and 2501) lay above this and the sequence was capped by a 0.08m thick, weakly developed, mossy topsoil (2500).

Windowless Samples

Borehole WS1 (Surface elevation: 107.49m aOD)

5.24 Located within the former car park at the north of the site, the basal material recorded in this borehole was a hard, mid orange brown, coarse sandy gravel (4315) that extended from the base of the borehole at 5.5m bpgl up to 4.6m bpgl (102.89m aOD). This probably represented Pleistocene Terrace Gravel and was overlain by layers of apparently alluvially reworked material (4314, 4313, 4312, 4311, 4310 and 4309) up to (3.6m bpgl (103.89m aOD). Above these was a 0.25m thick deposit of friable, very dark grey to black sand silt with occasional small CBM fragments (4308), which was covered by a 0.1m thick layer of stiff, mid brown clay (4307). This was overlain by 0.25m of stiff, very light grey/white chalky clay (4306), 0.8m of stiff, mottled, mid grey/orange brown clay (4305) and 1.5m of stiff, mixed, dark grey/mid orange brown clay (4304), these latter two deposits broadly corresponding with the massive clay deposits recorded in test pits in this area. The clay was overlain by further slag-rich made ground deposits (4303, 4302 and 4301) and the sequence was capped by a 0.05m thick deposit of friable, silt sand and gravel (4300).

Borehole WS2 (Surface elevation: 104.83m aOD)

5.25 This borehole was located within the car park of a commercial premises, still in use at the north-west of the site. A firm chalky gravel (4410) extending from the base of the borehole at 5.5m bpgl up to 4.5m bpgl (100.33m aOD) appears to have represented the upper levels of disturbed natural chalk. It was overlain by various silt sand and gravel layers (4409, 4408, 4407 and 4406) up to 2.7m bpgl (102.13m aOD), which appear to have represented variable intensity alluvial episodes. The alluvium was overlain by various made ground deposits (4405, 4404 and 4403) up to 0.5m bpgl (104.33m aOD), which were capped by a 0.1m thick asphalt surface (4402). This was subsequently covered by 0.3m of demolition rubble (4401) and a second layer of asphalt (4400) laid to form the current car park surface.

Borehole WS3 (Surface elevation: 107.62m aOD)

5.26 This borehole was also located in the former car park area at the north of the site. Extending from the base of the borehole at 5.5m bpgl up to 4.3m bpgl (103.32m aOD) was a layer of very firm, light yellow brown, silt sand gravel (4504), most likely Pleistocene terrace Gravel. This was overlain by 0.75m of firm, very dark grey brown silt clay with occasional small, sub-rounded chalk fragments (4503, surface elevation: 104.07m aOD), which in turn was covered by 1.75m of firm, mixed clay (4502), comparable with the other massive clay deposits recorded in the area. This was overlain by 1m thick deposit of large stone and slag blocks in a sandy matrix (4501) and the sequence was completed by 0.8m of variably compacted, very dark grey to black, ashy sand and clinker (4500).

Borehole WS4 (Surface elevation: 104.76m aOD)

5.27 This borehole was located towards the northern edge of the footprint of the former extensive industrial building complex that had occupied the central area of the site. The basal deposit, which extended from 5.5m bpgl up to 4.8m bpgl (99.96m aOD), was a firm, chalky gravel (4606), which probably represented the disturbed upper level of natural chalk. It was overlain by variable sand and silt layers (4605, 4604 and 4603) up to 2.4m bpgl (102.36m aOD), which probably represented different alluvial episodes. These were overlain by made ground deposits (4602 and 4601, surface elevation: 104.16m aOD) of post-medieval date and the sequence was capped by a 0.6m thick, reinforced concrete floor slab (4600).

Borehole WS5 (Surface elevation: 105.95m aOD)

5.28 This borehole was located close to TP18, over the same demolition rubble deposit (4700). Problems were also experienced with this intervention and the corer refused at 1.5m bpgl (104.45m aOD). Recovery of the core revealed asbestos at this level.

Borehole WS6 (Surface elevation: 104.41m aOD)

5.29 This borehole was located no more than 20m south-west of TP19 and close to the culverted River Lea. Extending from the base of the core at 5.5m bpgl up to 1.8m bpgl (102.61m aOD) were various sand, silt and gravel layers (4813, 4812, 4811, 4810, 4809, 4808, 4807 and 4806), exhibiting a complex sequence of alluvial deposition. These were overlain by 0.2m of friable, dark grey brown, sand silt clay (4805), which may have been further alluvium, and 0.35m of firm, mid red brown clay (4804, surface elevation: 103.16m aOD), possibly anthropogenically reworked alluvium. This was covered by variable modern made ground deposits (4803, 4802 and 4801) up to 0.15m bpgl and the sequence was capped by a modern asphalt surface.

Borehole WS7 (Surface elevation: 104.52m aOD)

5.30 This borehole was located towards the south-west of the site, in a car park associated with a still operating, industrial estate. The basal deposit extending from 2.9m bpgl (where there was core refusal) up to 2m bpgl (102.52m aOD) was a very firm, mid orange brown, coarse sand and gravel (4906), probably Pleistocene

Terrace gravel. This was overlain by 0.3m of firm, very dark grey brown silt (4905, surface elevation: 102.82m aOD) probably the remnants of natural alluviation in this area, whilst above this was 0.7m of firm, mid grey brown clay silt with occasional CBM and charcoal fragments (4904, surface elevation: 103.52m aOD), probably representing post-medieval reworking of the alluvium. This was overlain by a recent deposit of slightly friable, silt sand and gravel with CBM fragments (4903), capped by a 0.2m thick concrete slab (4902). The slab was covered by 0.48m of firmly compacted, modern demolition rubble and the sequence was completed by the 0.12m thick, modern asphalt car park surface.

Borehole WS8 (Surface elevation: 104.83m aOD)

5.31 This borehole was located approximately 50m north-west of WS7 and encountered the surface of natural chalk (5008) at 4.5m bpgl (100.33m aOD). This was overlain by various layers of clay, silt, sand and gravel (5007, 5006, 5005, 5004, 5003 and 5002) up to 0.7m bpgl (104.13m aOD), representing a complex sequence of alluviation. The alluvium was capped by a 0.05m thick layer of firm, mid brown silt clay with CBM fragments (5001), which was overlain by 0.65m of variably compacted, mixed modern demolition rubble, capped by gravel at the surface (5000).

Borehole WS9 (Surface elevation: 108.52m aOD)

5.32 In this borehole, located towards the eastern side of the site some 80m south-east of TP18 encountered natural chalk (5105) at an upper elevation of 1.4m bpgl (107.12m aOD). It was overlain by 0.4m of firm, mid brown clay silt (5104), representing possible alluvial accumulation. Above this was 0.3m of firm, light yellow grey, redeposited chalk and gravel (5103) and 0.25m of firm, mid brown clay silt with CBM fragments (5102, surface elevation: 108.07m aOD), both of these deposits representing apparent post-medieval activity in this area. Layer 5102 was covered by 0.35m of variably compacted, modern demolition rubble (5101) and the sequence was completed by a 0.1m thick , modern asphalt surface (5100).

Borehole WS10 (Surface elevation: 106.41m aOD)

5.33 This borehole was located approximately midway between WS5 and WS9 and encountered the surface of natural chalk (5206) at 3.3m bpgl (103.11m aOD). It was overlain by 1.75m of firm, light grey brown silt with frequent chalk flecks and flint fragments (5205), which appears to have been alluvially reworked chalk. Above this was 0.35m of firm, mid brown clay silt (5204, surface elevation: 105.21m aOD))

representing further alluviation and this was covered by 0.5m of slightly friable, very dark grey brown to black sand silt with CBM fragments (5203), which in turn was overlain by 0.4m of firm, mid grey brown clay silt with CBM fragments (5202, surface elevation: 106.11m aOD), the latter two layers representing possible post-medieval activity. Above these was 0.2m of heavily compacted, modern demolition rubble (5201) and the sequence was completed by a 0.1m thick, modern asphalt surface.

Borehole WS11 (Surface elevation: 104.61m aOD)

5.34 This borehole was located a short distance north-west of TP22 and encountered natural chalk (5305) at 3.2m bpgl (101.41m aOD). It was overlain by 1.5m of firm, banded, light red/grey brown silt clay (5304, surface elevation: 102.91m aOD), representing alluviation in this area. Above this was 0.7m of firm, mid grey brown clay silt with occasional CBM and charcoal fragments (5303, surface elevation: 103.61m aOD), representing possible post-medieval activity and this was overlain by deposits of modern demolition rubble (5302 and 5301) up to 0.15m bpgl. The sequence was capped by a layer of loose vegetation, gravel and CBM fragments (5300).

Borehole WS12 (Surface elevation: 108.05m aOD)

5.35 WS12, located some 50m south of WS9, encountered the surface of natural chalk (5404) at 1.35m bpgl (106.70m aOD). It was directly overlain by a 0.65m thick layer of firm, mid brown clay silt containing small CBM fragments (5403), probably representing post-medieval activity. Above this was a further 0.3m of post-medieval made ground (5402, surface elevation: 107.65m aOD), which was covered by 0.3m of more recent material containing modern demolition rubble (5401) and the sequence was completed by 0.1m of topsoil (5400).

Borehole WS13 (Surface elevation: 105.10m aOD)

5.36 This borehole, located approximately midway between TP22 and TP23, encountered the surface of natural, blocky chalk (5504) at 1.8m bpgl (103.30m aOD). Above this was 0.5m of firm, dark grey brown silt with moderate CBM and charcoal fragments (5503), probably representing post-medieval activity. This was covered by a 0.7m thick layer of redeposited chalk (5502), which in turn was overlain by a 0.1m thick deposit of firm, very dark grey brown ashy silt (5501, surface elevation: 104.60m aOD). The sequence was completed by 0.5m of firmly compacted, mixed modern demolition rubble (5500).

Borehole WS14 (Surface elevation: 104.16m aOD)

5.37 WS14 was located at the south-west of the site, approximately 20m west of TP20. The corer struck an impenetrable layer, probably a basement floor (5601) at 2.7m bpgl (102.46m aOD). Above this, variable compacted, mixed modern demolition rubble (5600) extended up to the modern surface.

Borehole WS15 (Surface elevation: 104.26m aOD)

5.38 This borehole was located at the south-west of the site, approximately 30m northwest of WS14, and encountered the surface of solid, natural chalk at 5.25m bpgl (99.01m aOD). This was overlain by 0.35m of very firm, light yellow brown chalky silt with frequent flint gravel (5712), probably representing the upper disturbed level of the natural chalk. Above this were a number of deposits (5711, 5710, 5709, 5708, 5707, 5706, 5705 and 5704) up to 0.9m bpgl (103.36m aOD), representing a complex sequence of alluvial deposition. The alluvium was overlain by a number of deposits (5703, 5702 and 5701) up to 0.15m bpgl, mostly containing modern demolition rubble and the sequence was capped by modern topsoil (5700).

Cable-Percussion Boreholes

Borehole CP2 (Surface elevation: 107.65m aOD)

5.39 This borehole was located in the former car park at the north-east of the site and the surface of natural chalk geology (2705) was recorded at 6.5m bpgl (101.15m aOD). It was overlain by 2.3m of slightly friable, light yellow brown, Terrace gravel (2704, surface elevation: 103.45m aOD)). Above the gravel was a 0.5m thick layer of friable, black ashy sand (2703), being the remnants of residue from the former coal yard. This was overlain by a 0.2m thick deposit of stiff, mid brown clay (2702), above which was an extensive, 2.7m thick layer of firm, mid brown to mid bluish grey, silt clay (2701), these latter two deposits being interpreted as redeposited alluvial clay. The stratigraphic sequence was completed by a 0.8m thick deposit of slightly friable, very dark grey, silt sand (2700), which had formed the bedding for the car park surface that previously occupied the site.

Borehole RH3 (Surface elevation: 107.65m aOD)

- 5.40
 - This borehole was also located in the north-eastern former car park area and the surface of natural chalk geology (3806) was recorded at 6m bpgl (101.65m aOD). It was overlain by 1.3m of slightly friable, light yellow brown, Terrace gravel (3805, surface elevation: 102.95m aOD). Above the gravel was a 1.1m thick layer of friable, black ashy sand (3804), being the remnants of residue from the former coal yard.

This was overlain by a 1.6m thick deposit of stiff, mid grey brown clay (3803), above which was a thin, 0.2m thick layer of firm, very dark, grey brown, clay silt (3802), these latter two deposits being interpreted as redeposited alluvial material. This was overlain by a 1.2m thick deposit of firm, sand gravel with frequent sub-rounded cobbles and large stone and slag blocks (3801) and the stratigraphic sequence was completed by a 0.6m thick deposit of slightly friable, very dark grey, silt sand (3800), which had formed the bedding for the car park surface that previously occupied the site.

Borehole RH7 (Surface elevation: 105.30 aOD)

5.41 Due to sub-surface, concrete obstructions, it was necessary to break out the top of this borehole in the central area of the site by machine and a small pit was excavated into soft deposits to a depth of 2.4m bpgl (102.90m aOD). The earliest deposit recorded was a friable, silt sand with occasional brick fragments (4205). This was 0.3m thick and overlain by 0.72m of slightly friable, very dark grey to black sand silt with demolition rubble. A further 0.6m of modern made ground deposits (4202 and 4201) lay above and the sequence was capped by a 0.65m thick, reinforced concrete floor slab (4200). Subsequent coring at this location encountered an impenetrable barrier, probably a basement floor slab, a short distance below the level machined to.

6 FINDS

By Jacky Sommerville

6.1 Artefactual material from the watching brief was hand-recovered from five deposits (a pit fill, a tiled floor and three made ground layers). The recovered material dates to the post-medieval/modern period. The pottery has been recorded according to sherd count/weight per fabric.

Pottery

6.2 A base sherd (20g) from a plate or dish in Creamware, which dates to the 18th century, was retrieved in good condition from made ground layer 1503.

Ceramic building material

6.3 Ceramic building material of post-medieval/modern date totalled seven fragments (2.727kg). Included was: a half brick (measuring 4 x 3") from made ground layer

1010; flat roof tile from made ground layer 1503; and two ceramic tiles from tiled floor 1202. The latter, one black and one orange, were square and measured 4 x 4". They featured an impressed decoration with a crown in the centre and are likely to be of 20th century date.

Other finds

6.4 Two modern glass items were recovered. Made ground layer 504 produced a complete wine/spirits bottle in dark green-coloured glass. The body was embossed with the maker's mark "Paten & Co, Peterborough". Alfred John Paten established the company as a wine merchant in 1898 and it continued until at least the first quarter of the 20th century. A fragment from the rim of a vessel in opaque, white glass is probably dateable to the 20th century.

7. DISCUSSION

- 7.1 Archaeological monitoring of the geotechnical investigations that took place across the Power Court site recorded sequences that encompassed deposits ranging from natural chalk dating to the Cretaceous era up to modern concrete and asphalt surfaces. The earliest deposit, exposed in a number of the trial pits and window sample boreholes was natural chalk, which generally appeared as a solid mass at lower levels with a more granular, disturbed upper surface. Where exposed, the surface of the chalk exhibited a general upward slope from south-west to north-east, reflecting the natural topographic slope on the north side of the Lea Valley in this area, and the down cutting of the river into the chalk in the base of the valley.
- 7.2 Sands and gravels, apparently associated with Pleistocene Terrace Gravel deposits were also exposed in a number of sequences, though this exposure was not as widespread as that of the chalk, probably because this material, lying at a higher level, was more susceptible to truncation by recent site redevelopment. Therefore rather the natural topography being widely apparent, it was more an indicator of varying levels of survival of materials across the site.
- 7.3 In a number of sequences, particularly those towards the south-west of the site and in the vicinity of the now culverted River Lea, sometimes complex sequences of alluvial deposition were exposed, ranging from high-energy gravel deposits through to banded fine silts and clays, representative of low energy deposition. In a small

number of locations, the alluvial deposits were overlain by organic-rich silts and clays, indicative of standing water or even drying environments. In one location, the organic material was overlain by further alluvial material and it is possible that this later alluvial phase was also present in a number of other sequences. None of these alluvial or organic deposits were dateable, as only undated animal bone was recovered.

- 7.4 Previous archaeological investigations to the south of the site had revealed evidence for medieval activity indicating the possibility that medieval deposits extended into the southern corner of the site and elsewhere across the site where there had not been extensive truncation by basement excavation or other modern disturbance. The watching brief revealed deposits of possible archaeological interest, however many of these were clearly of post-medieval date and activity associated with the row of houses that formerly stood at the southern edge of the site appears to have been present in a number of the sequences in this area. Whilst no medieval deposits were identified many of the deposits remained undated including the organic-rich silt sediments.
- 7.5 There had been extensive late post-medieval remodelling and multiple phases of redevelopment across much of the site, which was borne out by the majority of geotechnical interventions. In central areas of the site, formerly occupied by industrial buildings, deep truncation, particularly for the excavation of basements had significantly impacted upon earlier buried deposits and in other areas, modern materials lay directly over natural deposits, also demonstrating the removal of any earlier deposits and possible archaeological levels.
- 7.6 In addition to the interventions that were archaeologically monitored, there were further cores that were logged but not archaeologically monitored (Webb 2017) and core logs were also made available from previous geotechnical investigations in 2007/8. Logs from the current and previous investigations were combined to create schematic north-west/south-east and north-east/south-west cross-sections across the site (Appendix D), which illustrate the broad pattern of natural chalk, alluvial gravels and made ground across the site.
- 7.7 The former section indicates a raised elevation of Cretaceous Chalk to the southeast of the site, reflecting the rise in the natural morphology, and there are negligible sand and gravel deposits. As the chalk slopes down to the north-west however,

there are significant sand and gravel deposits which continue across the remainder of the site, though thin out slightly towards the north-west of the site; the section indicating a more widespread survival of gravel deposits than suggested by the archaeologically monitored investigations alone. No distinction is made in the crosssection between Pleistocene drift deposits and Holocene alluvium but it is clear that significant superficial deposits, upon which archaeological deposits may survive, are present across much of the site.

- 7.8 The north-east/south-west cross section indicates sand and gravel above natural chalk across the full width of the site with a slight anomaly close to the south-western edge, almost certainly reflective of a former channel of The River Lea here. Again, no distinction has been made between drift and alluvial deposits, though those towards the south-west are more likely to be alluvial, but this cross-section too indicates that there are potential Pleistocene and Holocene surfaces upon which, archaeological deposits may survive.
- 7.9 The cross sections both show extensive made ground across the site, largely indicative of the widespread 20th-century industrial development, however, no distinction is made between recent industrial deposits, made ground and potential archaeological archaeologically monitored deposits. The investigations demonstrated that some modern developments extended a significant distance below current ground level, particularly in basemented areas and it is likely that such developments will have removed any archaeological deposits overlying or cutting into superficial geology. However, the archaeological investigations also revealed deposits with archaeological potential overlying natural materials at a number of locations outside basemented areas. It is likely therefore that there is intermittent survival of archaeological deposits in areas that have not experienced significant deep truncation.
- 7.10 In summary, the investigations have shown that despite extensive industrial development of the site there is a likelihood that remains with both palaeoenvironmental and archaeological potential survive in some areas. The former will be concentrated along the lower-lying areas in the south-west of the site, where there has been a complex chronology of alluvial deposition and peat formation, whilst the latter will be more fragmented according to the nature of the industrial development.

8 CA PROJECT TEAM

8.1 The fieldwork was undertaken by Peter Boyer. The report was written by Peter Boyer, with illustrations prepared by Daniel Bashford and Lucy Martin. The finds report was written by Jacky Sommerville. The archive has been compiled by Emily Evans and prepared for deposition by Jessica Cook. The project was managed for CA by Michelle Collings.

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- Webb, P. 2017 *Power Court, Luton: Phase 2 Land Contamination Investigation Report,* Peter Brett Associates LLP Doc. Ref: 32444/3501/R1

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Context	Context Interpretation	Context Description	L (m)	W (m)	T (m)	Date
TP1 (3ı	n x 0.6m)					
100	Demolition Rubble	Variably compacted modern demolition rubble. Machining abandoned at 1.7m bpgl because of constant collapse	>3m	>0.6m	>1.7m	Modern
TP2 (3n	n x 1.3m)					
200	Concrete	Modern reinforced concrete slab	>3m	>3m	0.35m	Modern
201	Made ground	Friable, black silt sand with modern brick fragments. Contaminated	>1m	>0.6m	0.2m	Modern
202	Made ground	Friable, mid orange brown sand with frequent small, sub-rounded to sub- angular stones. Only seen at SE end of trench then trench re-aligned	>1m	>0.6m	>0.1m	Modern
203	Rubble bedding	Brick rubble bedding fro concrete slab along with mixed black and mid red brown silt sand and demolition rubble	>1m	>0.6m	0.55m	Modern
204	Concrete	Modern concrete slab	>1m	>0.6m	>0.4m	Modern
TP3 (3.6	6m x 0.6m)					
300	Asphalt	Modern asphalt surface	>3.6m	>0.6m	0.12m	Modern
301	Made ground	Slightly friable, very dark grey brown to black, silt sand with chalk lensing	>1m	>0.6m	0.43m	Modern
302	Redeposited Terrace gravel	Hard, mid orange brown, coarse sand gravel	>1m	>0.6m	0.1m	Modern
303	Made ground	Hard layer of large, sub- rounded stones and slag fragments in a sand matrix	>1m	>0.6m	0.15m	Modern
304	Made ground	Loose, black, ashy, silt sand and coal dust	>1m	>0.6m	0.2m	Modern
305	Redeposited alluvium	Stiff, mid orange brown clay with variable (modern) inclusions	>1m	>0.6m	>3m	Modern
TP5 (3.5	m x 0.6m)					
500	Asphalt	Modern asphalt surface	>3.5m	>0.6m	0.12m	Modern
501	Made ground	Friable, mid brown, sand silt	>1m	>0.6m	0.11m	Modern
502	Made ground	Friable, black silt sand	>1m	>0.6m	0.11m	Modern
503	Made ground	Firm, light grey sand gravel with frequent fragments of sulphurous slag	>1m	>0.6m	0.46m	Modern
504	Made ground	Loose, very dark grey brown sand silt	>1m	>0.6m	0.3m	Modern
505	Redeposited alluvium	Stiff, mid orange brown clay	>1m	>0.6m	2.7m	Modern
506	Made ground	Slightly friable, very dark, slightly greenish, grey brown sand silt with coal dust	>1m	>0.6m	>0.2m	Modern
TP7 (2.8	3m x 1m)					
700	Concrete	Modern reinforced concrete	>2.8m	>1m	0.18m	Modern

APPENDIX A: CONTEXT DESCRIPTIONS

701	Rubble bedding	Firm, concrete, brick and stone rubble bedding for concrete	>1m	>1m	0.12m	Modern
702	Made ground	Firm, white, chalk and flint blocky deposit	>1m	>1m	0.1m	Modern
703	Made ground	Friable, very dark brown/mid orange brown/dark brown/black sand silt with modern demolition rubble	>1m	>1m	1m	Modern
704	Made ground	Friable, mid grey brown clay silt with frequent small, sub-rounded to angular stones and moderate small CBM fragments	>1m	>0.6m	0.6m	Post-Medieval
705	Pseudo peat?	Slightly firm, dark brown grey silt with frequent organics, occasional water snail shell fragments and animal bone. Laminar and anaerobic	>1m	>0.6m	0.7m	Prehistoric/medieval?
706	Alluvium	Very firm, mid grey brown, coarse sand, flinty gravel (coarse clastic sediment)	>1m	>0.6m	0.3m	Holocene
707	Alluvium?	Friable, light grey/white disturbed chalk	>1m	>0.6m	0.6m	Holocene
708	Alluvium	Firm, light grey, fine sand	>1m	>0.6m	>0.4m	Holocene
TP8 (4n	n x 1m)					
800	Concrete	Modern reinforced concrete	>4m	>1m	0.25m	Modern
801	Rubble bedding	Mixed demolition rubble bedding for concrete	>4m	>1m	0.1m	Modern
802	Made ground	Firm white chalk and blocky flint layer (redeposited)	>2m	>1m	0.07m	Modern
803	Made ground	Friable, dark brown/very dark brown/mid orange brown, sand silt with frequent mixed modern demolition rubble. Pit abandoned at 1.1m bpgl because of modern drain at this level	>2m	<1m	0.68m	Modern
TP9 (3.	5m x 0.6m)					
900	Root mat	Friable, dark brown sand silt with very frequent roots	>3.5m	>0.6m	0.05m	Modern
901	Made ground	Variably compacted, mid orange brown, brick demolition rubble	>2m	>0.6m	0.45m	Modern
902	Made ground	Firmly compacted, large, sub-rounded stones and slag fragments in a sand matrix	>1m	>0.6m	0.4m	Modern
903	Made ground	Friable, black ashy sand and coal dust with highly sulphurous smell	>1m	>0.6m	0.8m	Modern
904	Made ground	Firm, light grey/white chalk (redeposited)	>1m	>0.6m	0.3m	Modern
905	Made ground	Stiff, mixed mid brown/mid yellow brown/mid red brown clay	>1m	>0.6m	>2m	Modern
TP10 (3	.5m x 0.6m)					
1000	Topsoil	Loose, dark grey brown, silt sand with frequent organics	>3.5m	>0.6m	0.06m	Modern
1001	Made ground	Very firm, mid pinkish brown, coarse sand gravel	>3.5m	>0.6m	0.04m	Modern
		Friable, black silt sand with	-			Modern

1003	Made ground	Firm, dark brown, sand gravel	>3.5m	>0.6m	0.1m	Modern
1004	Made ground	Firm, white chalk (redeposited)	>3m	>0.6m	0.09m	Modern
1005	Made ground	Friable, black silt sand with coal waste	>3m	>0.6m	0.04m	Modern
1006	Made ground	Very firm, mid orange brown, coarse sand gravel	>2m	>0.6m	0.08m	Modern
1007	Made ground	Firm, large, sub-rounded stone and slag fragments in a sand matrix	>1m	>0.6m	0.15m	Modern
1008	Made ground	Loose, black, ashy, silt sand	>1m	>0.6m	0.17m	Modern
1009	Made ground	Stiff, mixed dark grey/mid brown/mid orange brown clay with variable modern inclusions	>1m	>0.6m	2.38m	Modern
1010	Made ground	Variably compacted, mixed chalk and black, ashy, silt sand	>1m	>0.6m	0.5m	Modern
1011	Made ground	Stiff, mixed dark grey/mid brown/mid orange brown clay with variable modern inclusions	>1m	>0.6m	>0.3m	Modern
TP11 (3	3.5m x 0.6m)					
1100	Topsoil	Friable, mid to dark brown, sand silt	>3.5m	>0.6m	0.08m	Modern
1101	Made ground	Friable, mid red brown, silt sand including brick dust with demolition rubble	>3.5m	>0.6m	0.07m	Modern
1102	Made ground	Slightly friable, black, silt sand, becoming brown with depth	>3m	>0.6m	0.3m	Modern
1103	Made ground	Very firm, mid orange brown, coarse, sand gravel lenses	>2m	>0.6m	0.25m	Modern
1104	Made ground	Large sub-rounded, stone and slag fragments in a sand matrix	>1m	>0.6m	0.4m	Modern
1105	Made ground	Firm, white/pale pink, redeposited chalk	>1m	>0.6m	0.2m	Modern
1106	Made ground	Large sub-rounded, stone and slag fragments in a sand matrix	>1m	>0.6m	0.2m	Modern
1107	Made ground	Stiff, mixed mid brown/mid orange brown clay	>1m	>0.6m	>2.3m	Modern
TP12 (3	3.2m x 0.9m)					
1200	Concrete	Reinforced concrete slab and bedding	>3.2m	>0.9m	0.28m	Modern
1201	Made ground	Friable, very dark grey/black, ashy, silt sand	>3m	>0.9m	0.14m	Modern
1202	Tile floor	Hard red/black chequerboard-patterned floor	>1m	>0.9m	0.04m	Modern
1203	Floor bedding	Firm, cement and demolition rubble bedding for floor	>1m	>0.9m	0.14m	Modern
1204	Made ground	Slightly friable, dark grey brown silt with occasional small to medium, sub- rounded to sub-angular pebbles and CBM fragments	>1m	>0.9m	0.45m	Post-Medieval
1205	Alluvium	Friable, very dark grey brown, sand silt with moderate, small to medium, sub-angular flint nodules, occasional shell fragments and animal bone	>1m	>0.6m	0.4m	Holocene

1206	Terrace Gravel?	Very firm, light yellow brown, sand gravel, becoming a little more clay with depth	>1m	>0.6m	>1.75m	Pleistocene?
TP13 (3	3m x 1m)					
1300	Concrete	Reinforced concrete slab and bedding	>3m	>1m	0.3m	Modern
1301	Asphalt	Hard, black buried asphalt surface	>2m	>1m	0.15m	Modern
1302	Made ground	Heavily compacted, mixed modern demolition rubble	>2m	>1m	0.09m	Modern
1303	Made ground	Slightly friable, dark grey brown, sand silt with moderate mixed demolition rubble	>2m	>1m	0.71m	19th century?
1304	Alluvium?	Firm, mid red brown, clay silt with occasional organics	>1m	>0.6m	0.85m	Holocene
1305	Alluvium	Slightly friable, light yellow brown silt with occasional small to medium, sub- angular flint fragments	>1m	>0.6m	0.3m	Holocene
1306	Alluvium	Very firm, light yellow brown, sand gravel with frequent small to medium, sub-rounded to sub- angular flints	>1m	>0.6m	0.45m	Holocene
1307	Alluvium	Stiff, mid yellow brown, clay silt with occasional coarse, chalky sand	>1m	>0.6m	0.75m	Holocene
1308	Alluvium	Firm, banded, light grey/light orange brown silt	>1m	>0.6m	>0.4m	Holocene
TP14 (3	3m x 0.8m)					
1400	Concrete	Modern reinforced concrete with thick rebars. Impenetrable with JCB so abandoned	>3m	>0.8m	>0.1m	Modern
TP15 (3	3m x 0.8m)		1	1		
1500	Concrete	Modern reinforced concrete	>3m	>0.8m	0.3m	Modern
1501	Rubble bedding	Mixed modern demolition rubble bedding for concrete	>3m	>0.8m	0.25m	Modern
1502	Made ground	Friable, very dark grey to black, sand silt with occasional iron slag and CBM fragments. Becoming very firm with depth	>2m	>0.8m	0.85m	Modern
1503	Made ground	Friable, mid brown, clay silt with frequent charcoal, occasional CBM, glass and pot	>1m	>0.8m	0.8m	19 ^t h century?
1504	Alluvium?	Soft, slightly plastic, mid grey brown silt with few observable inclusions	>1m	>0.8m	0.9m	Holocene
1505	Natural chalk	Slightly friable, pale pink to white chalk, becoming firmer with depth	>1m	>0.8m	>0.9m	Cretaceous
TP16 (3	3m x 0.8m)					
1600	Concrete	Modern reinforced concrete	>3m	>0.8m	0.33m	Modern
1601	Rubble bedding	Demolition rubble bedding for concrete	>3m	>0.8m	0.11m	Modern
	1	Friable, very dark grey to	. 0	>0.8m	0.26m	Modern
1602	Made ground	black, ashy, sand silt	>2m	>0.011	0.36m	
1602 1603	Made ground Made ground		>2m >2m	>0.8m	0.36m	Modern

]	CBM fragments				
1605	Pit cut	Pit with steeply sloping, slightly concave sides and flattish base	>1.8m	>0.8m	0.6m	19th century?
1606	Natural chalk	Firm, light grey/white blocky chalk, becoming very firm with depth	>1.8m	>0.8m	>2.15m	Cretaceous
TP18 (3	8m x 0.8m)					
1800	Demolition rubble	Friable modern demolition rubble. Pit abandoned at 1.3m bpgl because of constant collapse	>3m	>0.8m	>1.3m	Modern
TP19 (3	8m x 0.8m)					
1900	Concrete	Modern reinforced concrete	>3m	>0.8m	0.4m	Modern
1901	Made ground	Variably compacted, modern demolition rubble, possibly basement infill. Pit abandoned at 1.8mbpgl because of collapse and voids appearing	>2m	>0.8m	>1.4m	Modern
TP20 (3	8.5m x 1m)					
2000	Concrete	Modern reinforced concrete	>3.5m	>1m	0.3m	Modern
2001	Made ground	Variably compacted, mixed	>3m	>1m	0.1m	Modern
2002	Made ground	modern demolition rubble Friable, very dark grey brown to black, ashy, silt	>3m	>1m	0.2m	Modern
2003	Made ground	sand Firm to stiff, mid brown grey, silt sand clay with frequent modern demolition rubble	>3m	>1m	0.25m	Modern
2004	Made ground	Firm, mid yellow brown, coarse sand gravel with moderate chalk and demolition rubble	>2m	>1m	0.3m	Modern
2005	Made ground	Friable, very dark grey brown to black, sand silt	>2m	>1m	0.05m	Post-Medieval
2006	Made ground	Friable, mid grey brown, sand silt with occasional small CBM fragments	>2m	>1m	0.05m	Post-Medieval
2007	Alluvium?	Friable, mid brown, sand silt with occasional small, sub-angular flint pebbles	>1m	>0.6m	0.55m	Holocene
2008	Alluvium	Firm, mid brown grey, silt clay	>1m	>0.6m	0.3m	Holocene
2009	Pseudo peat?	Soft, very dark grey brown to black, laminated organic silt with frequent vegetation	>1m	>0.6m	0.85m	Holocene
2010	Alluvium	Firm, light, slightly yellow, grey silt, upward fining with occasional organics	>1m	>0.6m	>1.05m	Holocene
TP21 (4	lm x 1m)					
2100	Concrete	Modern reinforced concrete	>4m	>1m	0.25m	Modern
2101	Made ground	Friable, very dark grey brown/black/mid red brown silt sand with demolition rubble	>4m	>1m	0.13m	Modern
2102	Asphalt	Buried asphalt surface	>3m	>1m	0.12m	Modern
2103	Made ground	Very firmly compacted, mixed modern demolition rubble	>3m	>1m	0.45m	Modern
2104	Made ground	Firm, very dark grey/black, ashy sand and demolition rubble	>3m	>1m	0.1m	Modern
2105	Made ground	Firm, mid brown, clay silt with moderate, small sub- rounded stones and	>2m	>1m	0.25m	Post-Medieval

	7	occasional CBM fragments				
2106	Made ground	Firm, mottled mid red/grey brown clay silt with occasional charcoal fragments	>1m	>0.6m	0.35m	Post-Medieval?
2107	Alluvium	Firm, banded, mid orange brown fine sand and da5r4k brown silt clay	>1m	>0.6m	0.65m	Holocene
2108	Terrace Gravel?	Firm, light yellow brown silt/sand/gravel	>1m	>0.6m	>1.3m	Pleistocene?
TP22 (3	3.5m x 1m)					
2200	Surface deposit	Loose vegetation, gravel and CBM fragments	>3.5m	>1m	0.15m	Modern
2201	Made ground	Heavily compacted, dark grey brown sand silt with moderate demolition rubble	>3.5m	>1m	0.25m	Modern
2202	Made ground	Heavily compacted, mixed modern demolition rubble	>3m	>1m	0.3m	Modern
2203	Made ground	Firm, very dark grey brown silt with frequent demolition rubble	>3m	>1m	0.1m	Modern
2204	Made ground	Firm, mid yellow brown, gravelly clay	>3m	>1m	0.1m	Modern
2205	Made ground	Firm, white chalk (redeposited)	>2m	>1m	0.3m	Modern
2206	Made ground	Friable, black sand silt with hydrocarbon odour	>2m	>1m	0.1m	Modern
2207	Made ground	Firm, mid brown silt with occasional small to medium, sub-rounded to sub-angular flints and occasional charcoal fragments	>1m	>0.6m	0.55m	Post-Medieval?
2208	Natural chalk	Firm, light orange brown to white, flinty chalk	>1mj	>0.6m	>1.25m	Cretaceous
TP23 (3	.5m x 0.8m)					
2300	Topsoil	Friable, dark brown, mossy, sand silt	>3.5m	>0.8m	0.08m	Modern
2301	Made ground	Friable, mid brown sand silt with moderate demolition rubble, brick dust and chalk fragments	>3.5m	>0.8m	0.27m	Modern
2302	Made ground	Firm, mid orange brown sand gravel with occasional CBM fragments	>3m	>0.8m	0.15m	Modern
2303	Made ground	Firm, mid brown silt with frequent modern demolition rubble	>3m	>0.8m	0.3m	Modern
2304	Made ground	Slightly friable, banded redeposited chalk and mid brown silt with modern inclusions, including plastics	>2m	>0.8m	0.6m	Modern
2305	Made ground	Friable, mid to dark brown sand silt with occasional small CBM fragments	>1m	>0.8m	0.4m	Post-Medieval?
2306	Natural?	Friable, light grey/light grey brown, chalky silt	>1m	>0.6m	0.55m	Cretaceous?
2307	Natural chalk	Firm white chalk	>1m	>0.6m	>0.55m	Cretaceous
TP24 (3	3m x 0.8m)					
2400	Topsoil	Friable, dark brown sand silt	>3m	>0.8m	0.08m	Modern
2401	Made ground	Slightly friable demolition rubble in a silt sand, brick dust matrix	>3m	>0.8m	0.36m	Modern
2402	Made ground	Firm, light, slightly pinkish brown sand silt with frequent demolition rubble	>2m	>0.8m	0.56m	Modern

2403	Made ground	Firm, light pinkish brown and white silt with very frequent chalk and modern demolition rubble	>2m	>0.8m	0.5m	Modern
2404	Natural chalk	Firm white chalk	>2m	>0.8m	>1.7m	Cretaceous
TP25 (3	3.5m x 0.8m)					
2500	Topsoil	Friable, dark brown, mossy sand silt	>3.5m	>0.8m	0.08m	Modern
2501	Made ground	Friable, light brown grey sand silt with modern demolition rubble	>3.5m	>0.8m	0.27m	Modern
2502	Made ground	Friable, mid brown grey sand silt with moderate modern demolition rubble	>3m	>0.8m	0.45m	Modern
2503	Made ground	Very firm, pale pink/white chalk and demolition rubble, becoming light grey brown with depth	>2m	>0.8m	0.4m	Modern
2504	Natural chalk	Firm white chalk	>2m	>0.8m	>0.8m	Cretaceous
CP2						
2700	Made ground	Slightly friable, very dark grey, silt sand with coal waste	-	-	0.8m	Modern
2701	Redeposited alluvium	Firm, mid brown to mid bluish grey, silt clay	-	-	2.7m	Modern
2702	Redeposited alluvium	Stiff, mid brown clay	-	-	0.2m	Modern
2703	Made ground	Friable, black, ashy, silt sand	-	-	0.5m	Modern Pleistocene
2704	Terrace gravel	Slightly friable, light yellow brown, coarse sand gravel	-	-	2.3m	
2705	Natural	Firm, white, natural chalk	-	-	>8.5m	Cretaceous
RH3						
3800	Made ground	Very firmly compacted, very dark grey to black, silt sand coal waste	-	-	0.6m	Modern
3801	Made ground	Firm, sand gravel with frequent large stone and slag fragments	-	-	1.2m	Modern
3802	Made ground	Firm, very dark grey brown, clay silt	-	-	0.2m	Modern
3803	Redeposited alluvium	Stiff, mid grey brown clay	-	-	1.6m	Modern
3804	Made ground	Friable, very dark grey to black, ashy, silt sand	-	-	1.1m	Modern
3805	Terrace gravel	Firm, light yellow brown, coarse sand gravel	-	-	1.3m	Pleistocene
3806	Natural	Firm, white chalk	-	-	>34m	Cretaceous
RH7 (2.7n	n x 1m)					
4200	Concrete	Modern reinforced concrete	>2.7m	>1m	0.65m	Modern
4201	Made ground	Firmly compacted modern demolition rubble	>2m	>1m	0.35m	Modern
4202	Made ground	Slightly friable, very dark grey to black sand silt with demolition rubble	>2m	>1m	0.25m	Modern
4203	Made ground	Friable, mid brown silt sand with occasional brick fragments	>1m	>0.6m	0.132m	Modern
4204	Made ground	Slightly friable, very dark grey to black sand silt with demolition rubble	>1m	>0.6m	0.72m	Modern
4205	Made ground	Friable, mid brown silt sand with occasional brick fragments. Probable basement infill	>1m	>0.6m	>0.3m	Modern

/S1						
4300	Car park surface	Friable, dark grey brown, silt sand with frequent roots and coarse, sub-angular gravel	-	-	0.05m	Modern
4301	Made ground	Moderately compact, black ashy sand	-	-	0.15m	Modern
4302	Made ground	Moderately compact, light grey brown sand gravel with slag fragments	-	-	0.4m	Modern
4303	Made ground	Moderately compact, black sand gravel with slag fragments	-	-	0.1m	Modern
4304	Made ground	Firm, mixed dark grey/mid orange brown clay with CBM and wood fragments	-	-	1.5m	Modern
4305	Made ground	Stiff, mottled, mid grey/orange brown clay	-	-	0.8m	Modern
4306	Made ground	Stiff, very light grey/white chalky clay	-	-	0.25m	Modern
4307	Made ground	Stiff, mid brown clay	-	-	0.1m	Post-Medieval?
4308	Made ground	Friable, very dark grey to black, sand silt with occasional CBM fragments	-	-	0.25m	Post-Medieval?
4309	Made ground	Firm, mid brown grey, clay silt with occasional organics and small, sub- angular stone fragments	-	-	0.2m	Post-Medieval?
4310	Made ground	Stiff, mid red brown clay silt with occasional small sub- angular flint and chalk fragments	-	-	0.2m	Post-Medieval?
4311	Made ground	Firm, very dark grey/black clay silt	-	-	0.15m	Post-medieval?
4312	Terrace gravel?	Firm, chalky gravel	-	-	0.1m	Pleistocene?
4313	Terrace gravel?	Firm, mid orange brown silt clay	-	-	0.15m	Pleistocene?
4314	Terrace gravel?	Firm, light yellow brown, chalky gravel	-	-	0.2m	Pleistocene?
4315	Terrace gravel?	Hard, mid orange brown, coarse sand gravel	-	-	>0.9m	Pleistocene?
WS2						
4400	Asphalt	Modern asphalt surface	-	-	0.1m	Modern
4401	Made ground	Firmly compacted, mixed modern demolition rubble	-	-	0.3m	Modern
4402	Asphalt	Buried asphalt surface	-	-	0.1m	Modern
4403	Made ground	Firm, very dark grey brown, silt sand with frequent CBM fragments	-	-	1m	Modern
4404	Made ground	Firm, mid brown clay silt with CBM fragments	-	-	0.27m	Modern
4405	Made ground	Firm, very dark brown organic silt with occasional CBM fragments	-	-	0.93m	Post-Medieval?
4406	Alluvium?	Slightly friable, mid yellow brown, gravelly sand	-	-	0.2m	Holocene?
4407	Alluvium?	Friable, mixed, mottled light grey brown/grey silt sand with moderate small, sub- rounded stones	-	-	0.4m	Holocene?
4408	Alluvium?	Firm, mid yellow brown, slightly clay, gravelly sand	-	-	0.8m	Holocene?
4409	Alluvium?	Firm, light yellow brown, clay sand with frequent gravel	-	-	0.4m	Holocene?
4410	Alluvium?	Firm chalky gravel	-	-	>1m	Holocene?

	Т	Variably compacted, very	1	1	1	Modern
4500	Made ground	dark grey/black, ashy sand and clinker with frequent	-	-	0.8m	modern
	-	slag fragments				
		Large, sub-rounded stone				Modern
4501	Made ground	and slag fragments in a sand matrix	-	-	1m	
		Firm, mixed mid red				Modern
4502	Made ground	brown/very dark grey	-	-	1.75m	
	0	brown/mid brown grey, silt clay with CBM fragments				
		Firm, dark brown to very				Holocene?
4503	Alluvium?	dark grey brown, silt clay	-	-	0.75m	
	/	with moderate small, sub- rounded chalk fragments			0.11 0.111	
		Very firm, light yellow				Holocene/Pleistocene?
4504	Alluvium/Terrace gravel?	brown, coarse, silt sand	-	-	>1.2m	
	graver	gravel				
WS4						
4600	Concrete	Modern reinforced concrete	-	-	0.6m	Modern
		Firmly compacted, mid red				Post-Medieval?
4601	Made ground	brown, silt clay with frequent angular flint gravel	-	-	0.8m	
		Firm, dark brown. Clay silt				Post-Medieval
4602	Made ground	with occasional CBM	-	-	1m	
		fragments				
		Firm, mid orange brown, sand silt with moderate,				Holocene
4603	Alluvium	medium, sub-rounded	-	-	0.9m	
		pebbles				
4604	Alluvium	Slightly friable, light grey brown, silt sand with		_	1m	Holocene
4004	Alluvium	frequent angular flint gravel	-	-		
4605	Alluvium	Firm, light grey brown, silt	_	-	0.5m	Holocene
4606	Natural	clay Firm, chalky gravel	-		>0.7m	Cretaceous?
4000 WS5	Naturai	r init, charky graver	-	-	20.7111	
W35	1		1	1	1	I
		Variably compacted, mixed modern demolition rubble.				Modern
4700	Made ground	Refusal at 1.5m bpgl,	-	-	>1.5m	
	John go the	asbestos at base, core			_	
		abandoned				
WS6						
4800	Asphalt	Modern asphalt surface	-	-	0.15m	Modern
		Heavily compacted, mixed				Modern
4801	Made ground	mid brown silt clay and chalk gravel	-	-	0.3m	
		Friable, very dark grey to				Modern
4802	Made ground	black, silt sand with cinder	-	-	0.35m	
		and CBM fragments				Deat Mediaval2
		Slightly friable, mid grey brown silt with chalk flecks,				Post-Medieval?
4803	Made ground	small CBM fragments and	-	-	0.45m	
		ash				
4804	Alluvium?	Firm, mid red brown clay with occasional chalk flecks	-	-	0.35m	Holocene
4805	Alluvium?	Firm, slightly sand, silt clay	-	-	0.2m	Holocene
4806	Alluvium	with occasional chalk flecks Friable, mid grey brown,	-	<u> </u>	0.2m	Holocene
.000		coarse sand			0.2111	Helenere
		Firm, mid grey brown silt clay with occasional small				Holocene
4807	Alluvium	to medium sub-angular	-	-	0.35m	
		flints				
4808	Alluvium	Friable, mid red brown, coarse, gravelly sand	-	-	0.35m	Holocene
1900	Alluvium	Friable, light yellow brown	1	1	0.15m	Holocene
4809	Alluvium	sand	-	-	0.15m	

4810	Alluvium	Firm, mid grey sand silt	-	-	0.15m	Holocene
4811	Alluvium	Firm, mid grey brown, chalky, silt clay	-	-	0.15m	Holocene
4812	Alluvium	Friable, mid red/yellow brown, chalky gravel	-	-	0.45m	Holocene
4813	Alluvium	Firm, mid grey, chalky, clay, gravelly silt with sand bands	-	-	>1.95m	Holocene
WS7	•	·				·
4900	Asphalt	Modern asphalt surface	-	-	0.12m	Modern
4901	Made ground	Firmly compacted, modern demolition rubble	-	-	0.48m	Modern
4902	Concrete	Buried concrete slab	-	-	0.2m	Modern
4903	Made ground	Slightly friable, dark brown, silt, gravelly sand with CBM fragments	-	-	0.2m	Modern
4904	Made ground	Firm, mid brown, clay silt with occasional small CBM and charcoal fragments	-	-	0.7m	Post-Medieval?
4905	Alluvium?	Firm, very dark grey brown silt with very frequent, small, sub-rounded white stones and occasional medium, sub-angular flints	-	-	0.3m	Holocene
4906	Terrace Gravel?	Very firm, mid orange brown, coarse sand gravel/gravelly sand. Core refusal at 2.9m bpgl	-	-	>0.9m	Pleistocene?
WS8	•			1	1	
5000	Gravel surface	Modern gravel surface with variably compacted, mixed modern demolition rubble bedding	-	-	0.65m	Modern
5001	Made ground	Firm, mid brown silt clay with moderate small, sub- rounded stones and CBM fragments	-	-	0.05m	Post-Medieval?
5002	Alluvium	Slightly friable, very light grey brown to grey, chalky sand gravel, becoming cleaner with depth	-	-	1.14m	Holocene
5003	Alluvium	Firm, very light grey brown, fine sand silt	-	-	0.28m	Holocene
5004	Alluvium	Bands of firm, mid red brown sand and very light grey brown silt clay	-	-	0.38m	Holocene
5005	Alluvium	Firm, mid orange brown sand silt with occasional medium, sub-angular flints	-	-	0.3m	Holocene
5006	Alluvium	Firm, light grey brown silt clay, becoming mid brown with depth	-	-	1.1m	Holocene
5007	Alluvium	Stiff, dark grey clay	-	-	0.6m	Holocene
5008	Natural Chalk	Firm, white chalk	-	-	>1m	Cretaceous
WS9						
5100	Asphalt	Modern asphalt surface	-	-	0.1m	Modern
5101	Made ground	Variably compacted, mixed modern demolition rubble	-	-	0.35m	Modern
5102	Made ground	Firm, mid brown clay silt with occasional small, sub- angular flints, charcoal and CBM fragments	-	-	0.25m	Post-Medieval?
5103	Made ground?	Firm, white/light yellow grey, blocky, redeposited chalk and chalk gravel	-	-	0.3m	Post-Medieval?
5104	Alluvium	Firm, mid brown clay silt with moderate small to	_	-	0.4m	Holocene

		medium, sub-rounded to sub-angular stones and chalk blocks				
5105	Natural Chalk	Firm, white chalk	-	-	>4.1m	Cretaceous
WS10						
5200	Asphalt	Modern asphalt surface	-	-	0.1m	Modern
5201	Made ground	Heavily compacted, mixed modern demolition rubble	-	-	0.2m	Modern
5202	Made ground	Firm, mid grey brown clay silt with frequent small chalk nodules and moderate CBM fragments	-	-	0.4m	Post-Medieval?
5203	Made ground	Slightly friable, very dark grey brown to black, sandy silt with chalk and CBM fragments	-	-	0.5m	Post-Medieval?
5204	Alluvium?	Firm, mid brown clay silt with occasional small, sub- rounded to sub-angular stones and chalk flecks	-	-	0.35m	Holocene
5205	Alluvium?	Firm, light grey brown silt with frequent chalk flecks and moderate small, sub- angular flint fragments	-	-	1.75m	Holocene?
5206	Natural Chalk	Firm, white chalk	-	-	>2.2m	Cretaceous
WS11	•					
5300	Modern surface	Loose vegetation, gravel and CBM fragments	-	-	0.15m	Modern
5301	Made ground	Heavily compacted, light brown sandy silt with demolition rubble	-	-	0.15m	Modern
5302	Made ground	Heavily compacted, mixed modern demolition rubble	-	-	0.7m	Modern
5303	Made ground	Firm, mid grey brown clay silt with frequent medium, sub-rounded chalk blocks, occasional CBM fragments and charcoal	-	-	0.7m	Post-Medieval?
5304	Alluvium	Banded, firm, light red/grey brown silt clay with occasional chalk flecks	-	-	1.5m	Holocene
5305	Natural Chalk	Firm, white chalk	-	-	>2.3m	Cretaceous
WS12						
5400	Topsoil	Friable, mid brown clay silt	-	-	0.1m	Modern
5401	Made ground	Slightly friable, light grey brown clay silt with very frequent chalk fragments and moderate CBM	-	-	0.3m	Modern
5402	Made ground	Firm, dark grey brown clay silt with moderate CBM fragments and occasional small, sub-rounded to sub- angular flints	-	-	0.3m	Post-Medieval?
5403	Made ground	Firm, mid brown clay silt with occasional small, sub- angular stones and small CBM fragments	-	-	0.65m	Post-Medieval?
5404	Natural Chalk	Slightly friable, blocky and gravelly chalk becoming solid with depth	-	-	>4.15m	Cretaceous
WS13		· · · · · · · · · · · · · · · · · · ·			·	
5500	Modern rubble	Firmly compacted, mixed modern demolition rubble	-	-	0.5m	Modern
5501	Made ground	Firm, very dark grey brown, slightly ashy silt	-	-	0.1m	Modern

5502	Made ground	Firm, redeposited chalk in a dark brown, sand silt matrix	-	-	0.7m	Post-Medieval?
5503	Made ground	Firm, dark grey brown silt with moderate CBM and charcoal fragments	-	-	0.5m	Post-Medieval
5504	Natural Chalk	Firm, white, blocky chalk	-	-	>3.7m	Cretaceous
WS14						
5600	Basement infill	Variable compacted, mixed modern demolition rubble	-	-	2.7m	Modern
5601	Concrete floor	Probable concrete basement floor – core refusal at this level	-	-	-	Modern
WS15						
5700	Topsoil	Friable, very dark brown sand silt with frequent roots	-	-	0.15m	Modern
5701	Made ground	Firm, mid grey brown sand silt with moderate roots	-	-	0.1m	Modern
5702	Made ground	Variably compacted, mid grey brown sand silt with moderate demolition rubble	-	-	0.25m	Modern
5703	Made ground	Firm, mid grey brown sand silt with frequent chalk and demolition rubble	-	-	0.4m	Modern
5704	Alluvium?	Firm, light yellow brown silt clay with frequent, coarse, sub-angular flint gravel, becoming dark brown with depth, then mid brown	-	-	0.85m	Holocene?
5705	Alluvium?	Firm, mid orange brown, coarse gravelly sand	-	-	0.45m	Holocene?
5706	Alluvium?	Firm, light grey brown clay silt with occasional small, sub-rounded to sub- angular stones	-	-	0.45m	Holocene?
5707	Alluvium?	Slightly friable, light grey brown silt with frequent small, sub-angular chalk and flint fragments	-	-	0.65m	Holocene?
5708	Alluvium?	Firm, light grey brown clay silt with occasional small, sub-rounded to sub- angular stones. Very stony at base	-	-	0.55m	Holocene?
5709	Alluvium?	Slightly friable, light grey brown silt with frequent small, sub-angular chalk and flint fragments	-	-	0.65m	Holocene?
5710	Alluvium	Firm, light yellow brown, fine silt sand	-	-	0.4m	Holocene
5711	Abraded chalk?	Very firm, light yellow brown, chalky silt with frequent coarse, sub- angular flint gravel	-	-	0.35m	Cretaceous?
5701	Natural Chalk	Firm, white chalk	-	-	>0.25m	Cretaceous

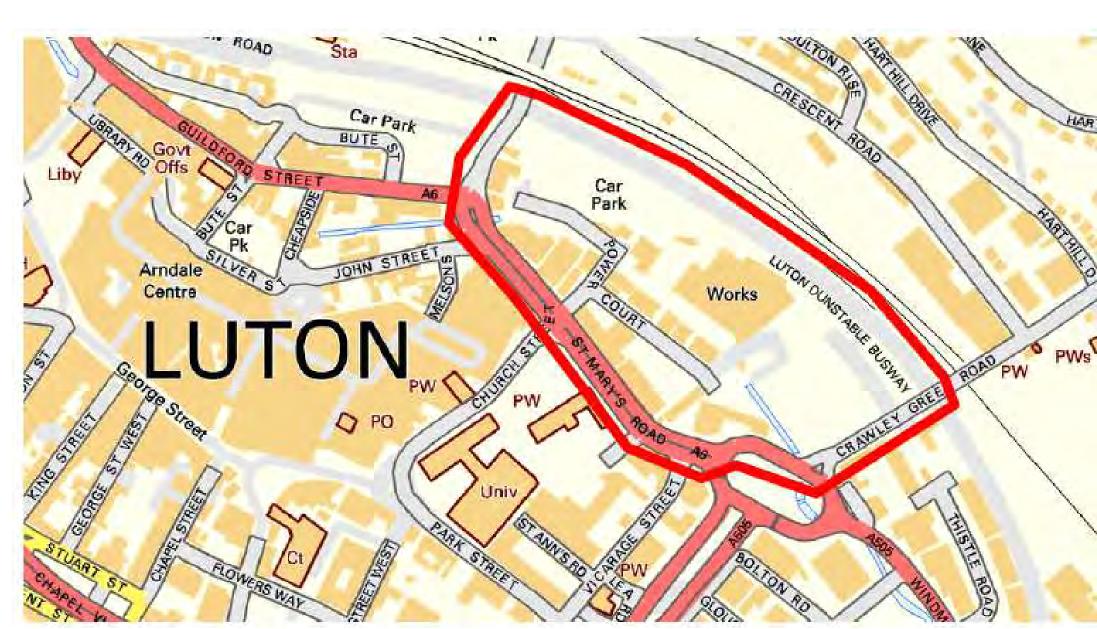
APPENDIX B: FINDS CONCORDANCE

Context	Category	Description	Fabric Code	Count	Weight (g)	Spot-date
504	Modern glass	Bottle		1	479	LC19-EC20
1010	Post-medieval/modern ceramic building material	Brick		1	1487	Post-medieval
1202	Modern ceramic building material	Wall tile		2	965	Modern
1503	Post-medieval pottery Modern glass Post-medieval ceramic building material	Creamware Vessel Flat roof tile, brick	CRM	1 1 3	20 2 185	C19-C20
1604	Post-medieval ceramic building material	Brick		1	90	Post-medieval

APPENDIX C: OASIS REPORT FORM

PROJECT DETAILS	Device Operat Offen Listers Devite relation						
Project name Short description	Power Court Site, Luton, Bedfordshi During February 2017, Cotswold						
Short description	archaeological watching during geotechnical investigations Power Court, Luton, Bedfordshire. The geotechnical investigation comprised the machine excavation of trial pits, cable-percuss coring and window sampling. The work was commissioned by 20 Developments (Luton) Ltd on behalf of Luton Town Football C and was carried out in order to inform a planning application Luton Borough Council (LBC; the local planning authority) for new football stadium with ancillary stadium related facilities, alc with residential and community/commercial development, hotel a infrastructure.						
	infrastructure. Previous archaeological investigations to the south of the site har revealed evidence of medieval and post-medieval activity, the former associated with a 13 th century castle (known as Fulk of Breaute's Castle). Based on these investigations it had be suggested that evidence for medieval occupation may har extended into the southern part of the site. However, much of the site had undergone extensive modification and multiple phases redevelopment during the later post-medieval period. Monitoring the geotechnical interventions revealed that despite much of the site having been disturbed by phases of redevelopment, earling deposits survived in some areas. In lower-lying areas, pseudo-per and alluvial deposits were sealed beneath recent materials and overlay Terrace Gravel and Cretaceous Chalk deposits. In other areas, post-medieval and undated anthropogenic deposits were encountered lying between natural deposits and modern materials.						
Project dates	ground. 6th February 2017 to 27th February	2017					
Project type	Watching Brief	2011					
Previous work	Desk-based assessment (CA 2016)						
Future work	Yes						
Monument type							
Significant finds	None						
PROJECT LOCATION	•						
Site location	Power Court, Luton, Bedfordshire						
Study area	6.9ha						
Site co-ordinates	TL 09603 21263						
PROJECT CREATORS	•						
Name of organisation	Cotswold Archaeology (CA)						
Project Brief originator	Martin Oake						
Project Design (WSI) originator	CA						
Project Manager	Michelle Collings (CA)						
Project Supervisor	Peter Boyer (CA)						
PROJECT ARCHIVE							
Accession no.	tbc	Content					
Physical	Luton Culture	Pottery, glass, pottery, brick, tile, animal bone					
Paper	Luton Culture Borehole sheets, trench sheets, context sheets, drawings						
Digital	Bedfordshire HER Report, digital photos, survey data						
BIBLIOGRAPHY							
CA (Cotswold Archaeology) 2017 Power C typescript report 17086	Court Site, Luton, Bedfordshire: Arch	naeological Watching Brief. CA					

APPENDIX D: DEPOSIT MODELLING AND CORE LOGS



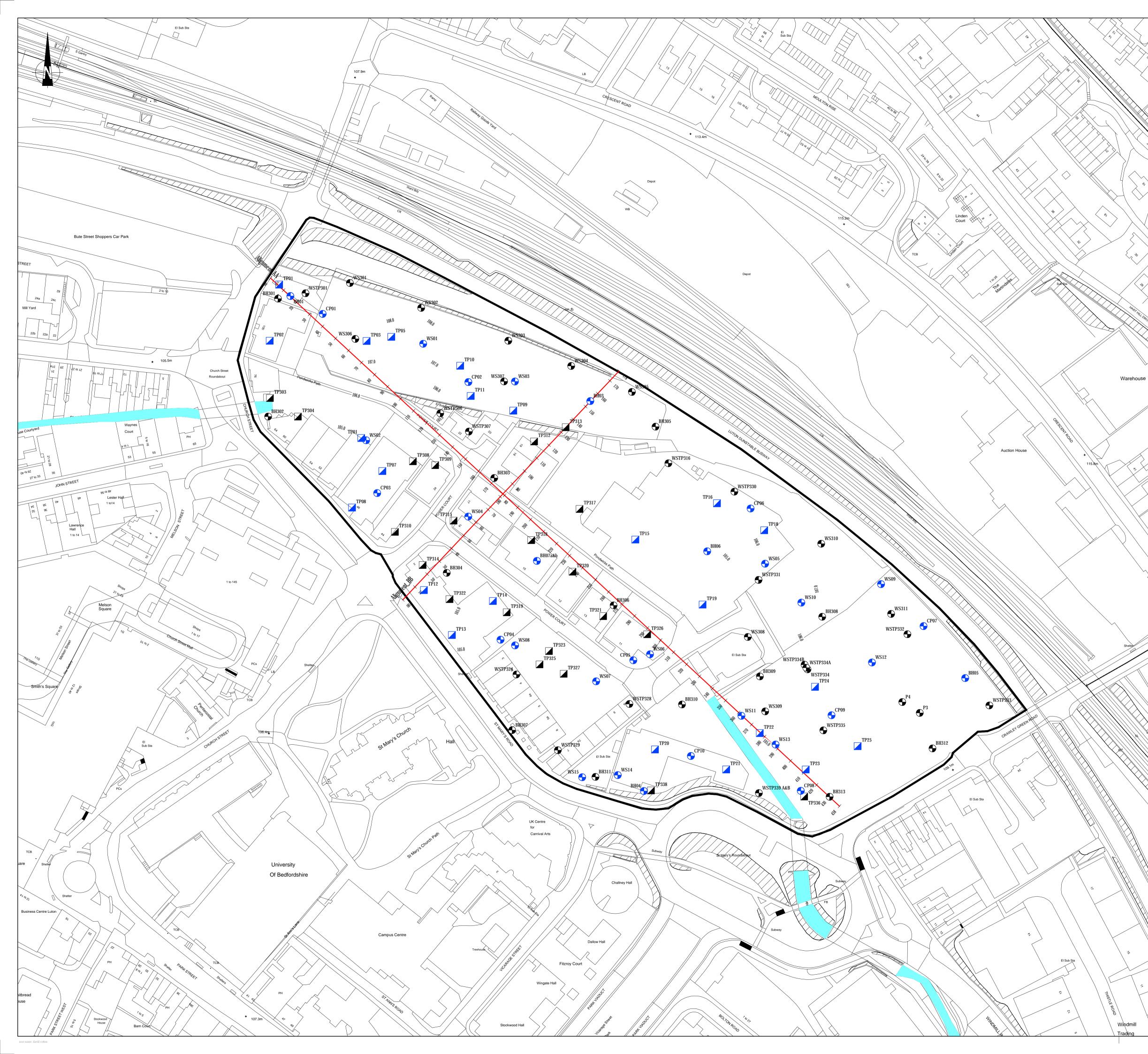


Luton Town Football Club Powercourt, Luton

Phase 1 Ground Condition Assessment Site Location Plan

© Peter Brett Associates LLP

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Approved by	JA
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Client LUTON TOWN FOOTBALL CLUB

POWER COURT, LUTON

PHASE 1 GROUND CONDITION ASSESSMENT: SUMMARY OF PRINCIPLE POTENTIAL SOURCES OF CONTAMINATION FROM CURRENT AND HISTORICAL LAND USES (REFER TO SECTION 4.5 IN REPORT TEXT FOR DETAIL)

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CAMBRIDGE Tel: 01223 882000

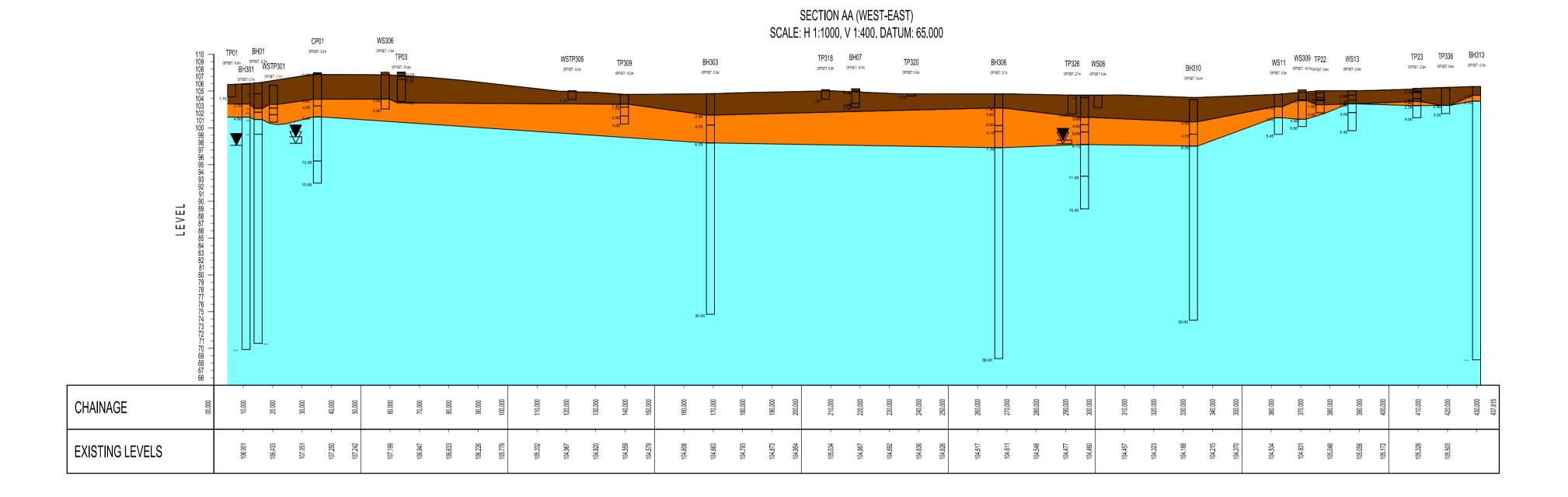


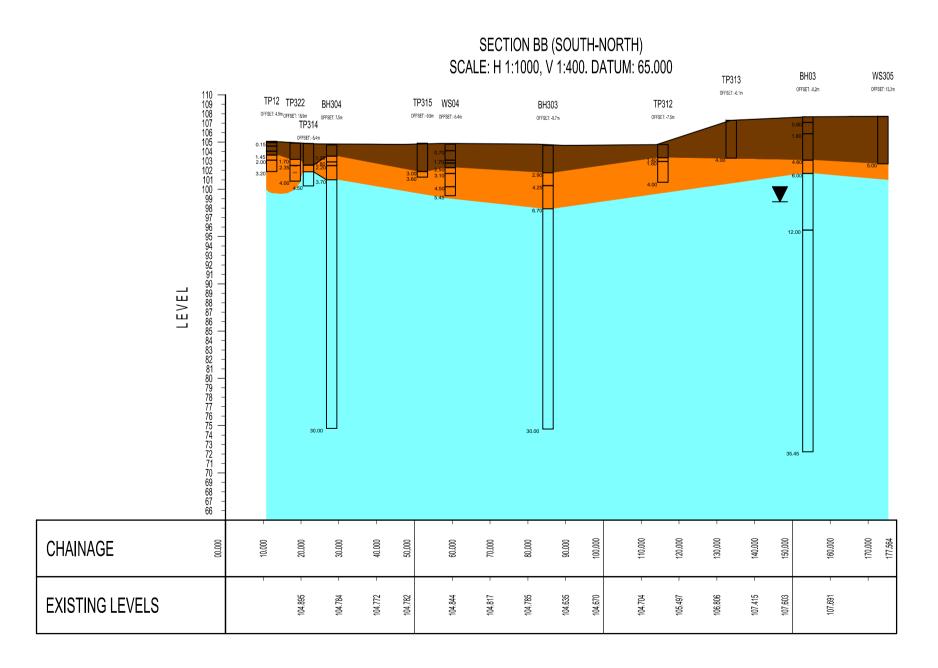
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FIGURE 3

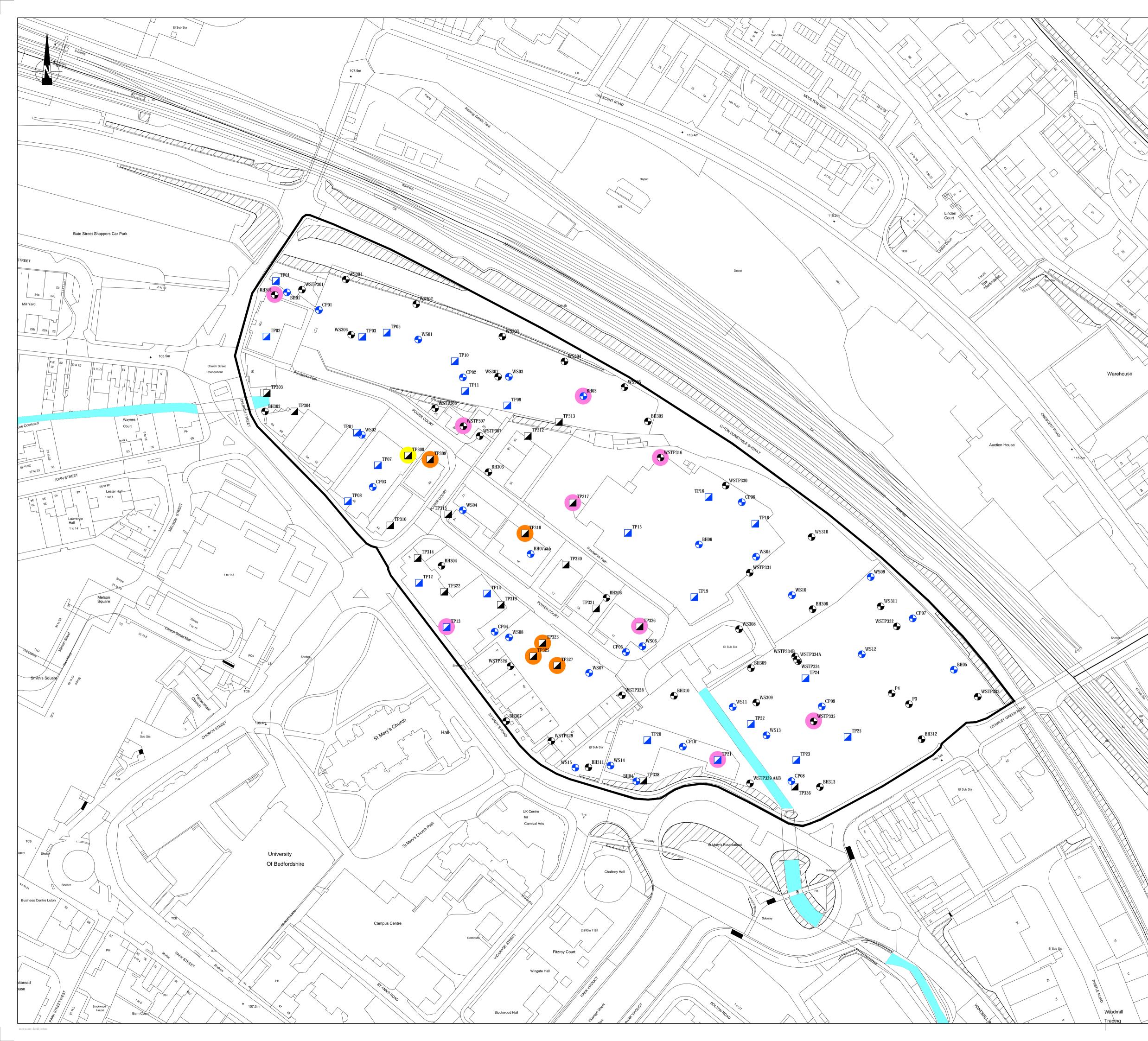
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user name: jamie austin

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					DNTAMIN				
	GREA	<b>ATEF</b>	R THA	N ASS	ESSMEN	T CR	ITE	RIA	
	Client					-			
Μ.	LUTO		NWC						
	FOOT	ΓBAL	.L				Y		
	CLUB	3			<b>P</b>				
	Date of 1st Issue 08.06.2		Designed JA	Drawn GC/davco				222	
	A1 Scale		Checked	Approved	the	fices throu e UK and E	Europe		
	1:100 Drawing Numbe		OB	JA Revisior		<b>.peterb</b> Brett Ass			
	-	GUF	RE 5	-		CAMBRID 1: 01223 88	GE		



Site: Luton Po	ower Court	Job No: GTS-17-900
Client Peter Br	ett Associates LLP	
Engineer N/a		

Hole ID	Hole Type	National Grid Eastings	National Grid Northing	Ground Level (mAOD)	Completion Depth (mbgl)	Completion Depth (mAOD)	
BH01	Cable Percussion Borehole	509480.92	221465.09	106.13	35.45	70.68	
BH03	Cable Percussion Borehole	509650.05	221405.90	107.68	35.45	72.23	
BH04	Cable Percussion Borehole	509680.27	221186.09	103.99	35.45	68.54	
BH05	Cable Percussion Borehole	509861.46	221249.76	109.31	35.00	74.31	
BH06 BH07	Cable Percussion Borehole	509715.98	221321.22 221315.80	104.57 105.31	16.00 2.00	88.57 103.31	
BH07 BH07a	Cable Percussion Borehole Cable Percussion Borehole	509619.94 509619.94	221315.80	105.31	2.00	103.31	
BH07b	Cable Percussion Borehole	509619.94	221315.80	105.31	2.50	102.81	
CP01	Cable Percussion Borehole	509499.12	221455.02	107.49	15.00	92.49	
CP02	Cable Percussion Borehole	509581.29	221416.60	107.65	15.45	92.20	
CP03	Cable Percussion Borehole	509529.89	221354.04	104.62	15.45	89.17	
CP04	Cable Percussion Borehole	509599.42	221271.37	104.84	15.45	89.39	
CP05	Cable Percussion Borehole	509674.32	221259.80	104.43	15.45	88.98	
CP06	Cable Percussion Borehole	509740.43	221345.35	105.69	3.14	102.55	
CP07	Cable Percussion Borehole	509837.97	221279.04	109.27	15.45	93.82	
CP08	Cable Percussion Borehole	509786.08	221228.81	106.12		106.12	
CP09	Cable Percussion Borehole	509768.74	221186.22	105.40	6.50	98.90	
CP10	Cable Percussion Borehole	509706.78	221205.84	104.14	15.45	88.69	
TP01	Trial Pit	509474.62	221471.57	105.91	1.70	104.21	
TP02	Trial Pit	508346.21	197735.45	106.07	1.30	104.77	
TP03	Trial Pit	509523.92	221439.76	107.58	4.00	103.58	
TP05	Trial Pit	509537.85	221442.08	107.64	4.00	103.64	
TP07	Trial Pit	509532.82	221366.42	104.69	3.60	101.09	
TP08	Trial Pit	509515.72	221345.88	104.63	1.10	103.53	
TP09	Trial Pit	509606.64	221400.49	107.65	3.50	104.15	
TP10	Trial Pit	509576.69	221425.79	107.62	4.00	103.62	
TP11	Trial Pit	509582.65	221408.77	107.60	3.80	103.80	
TP12	Trial Pit	509556.25	221299.36	105.08	3.20	101.88	
TP13	Trial Pit	509572.03	221274.03	105.06	4.00	101.06	
TP14	Trial Pit	509595.14	221293.20	105.29	0.30	104.99	
TP15	Trial Pit	509675.47	221327.83	104.62	4.00	100.62	
TP16	Trial Pit	509721.48	221348.28	104.67	4.00	100.67	
TP18	Trial Pit	509748.14	221333.08	106.33	1.30	105.03	
TP19	Trial Pit	509713.39	221291.18	104.62	1.90	102.72	
TP20	Trial Pit	509686.54	221209.52	104.18	4.00	100.18	
TP21	Trial Pit	509726.7	221198.26	104.20	3.60	100.60	
TP22	Trial Pit	509745.63	221218.74	105.04	3.00	102.04	
TP23	Trial Pit	509771.54	221198.23	105.38	4.00	101.38	
TP24	Trial Pit	509776.8	221244.82	106.02	4.00	102.02	
TP25	Trial Pit	509800.81	221211.39	106.24	3.00	103.24	
WS01	Window Sample Borehole	509555.82	221438.19	107.50	5.45	102.05	
WS02	Window Sample Borehole	509523.65	221383.79	104.84	5.45	99.39	
WS03	Window Sample Borehole	509607.54	221416.92	107.68	5.45	102.23	
WS04	Window Sample Borehole	509581.24	221340.78	104.78	5.45	99.33	
WS05	Window Sample Borehole	509748.61	221314.22	105.96	5.45	100.51	
WS06	Window Sample Borehole	509683.72	221263.16	104.41	1.50	102.91	
WS07 WS08	Window Sample Borehole	509653.34	221247.93	104.53	2.90	101.63 99.41	
WS08 WS09	Window Sample Borehole	509607.62	221268.19 221302.70	104.86	5.45 5.45	103.05	
WS09 WS10	Window Sample Borehole Window Sample Borehole	509813.99 509769.07	221302.70	108.50 106.37	5.45	103.05	
WS10 WS11	Window Sample Borehole	509735.28	221292.29	106.37	5.45	99.12	
WS11 WS12	Window Sample Borehole	509735.28	221228.49	104.57	5.45	102.63	
WS12 WS13	Window Sample Borehole	509754.52	221238.30	105.07	5.45	99.62	
WS13 WS14	Window Sample Borehole	509665.53	221212.50	103.07	2.87	101.32	
	Window Sample Borehole	509645.5	221193.87	104.13	5.45	98.76	

## Summary of Exploratory Holes

		GROUNE		OLOGY		Во	oreho	le R	eco	rd			BH01		Sheet 1 of s
C		Norfo	oad, King k, PE34 3 1553 817	BAF	Project:		Luton	Power	Court						
	1	www.groun			Project I	D:	GTS-1	7-900							
Client:	Peter B	rett Assc	ociates L	.LP	Enginee	r:	Z. Bell	а					round Level: oordinates:	509	6.13mAOD 9480.92(E) 1465.09(N)
	D					Depth	O.D.	Sa	mple Te	est	SPT	/CPT	Remarks and T Results	est	Installations
	De	scription			Legen	(m)	Level (m)	Туре	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	SPT/HV/PP PID (p	pm)	
Gravel is an	wn sandy GRAVE gular to sub-angul							D1	0.00						-
concrete. [MADE GRC	DUND]							B1 D2 ES1	0.50 0.50 0.50	1.00 0.50					
						F		D3	1.20		1.20	Dry	N=14		
Yellowish br	own slightly grave		ravel is sub	-angular to		1.50	104.63	B2	1.50	2.00			(1,1/1,1,4,8) (C)		-
	fine to coarse bri					F		D4 ES2	1.50 1.50	1.50					
								D5	2.00		2.00	Dry	N=6 (1,1/1,1,2,2) (S)		
						F		B3 D6	2.50 2.50	3.00					
						£		ES3 D7	2.50 3.00	2.50	3.00	Dry	N=9		_
						E		Di	3.00		3.00	Diy	(2,2/2,2,2,3) (S)		-
	llow slightly sandy b-angular to round					3.50	102.63	B4 D8	3.50 3.50	4.00					
chalk. [ALLUVIUM]						4.00	102.13	ES4	4.00	4.00	3.00	Dry	N=22		
medium. Gra	se whiteish browr avel is sub-angula				ł								(3,3/4,5,6,7) (S)		
reworked ch [ALLUVIUM]								D9	4.50						-
gravelly SIL	s CHALK compos Г. Gravel is angula ALK SUBGROUP]	ar fine to coa					101.13	D10	5.00		3.00	Dry	N=8 (1,1/2,2,2,2) (S)		
								B5	6.00	7.00					
															-
(Grade Dm)	S CHALK compos		creamy wh	ite SILT.		7.00	99.13	D11	7.00		3.00	Dry	N=10 (1,1/2,3,2,3) (S)		
	ALK SUBGROUP]	1													
Liala		ole continued		olling						tor Ct-	ke - Ge	noral			
Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Depth Top (m	Duration (mins)	Date	147	Water Stril		Standing 1	lime (min		ding Lev	rel (m) Casing Dept	:h (m)	Depth Sealed (m
200mm	35.00m	35.00m	0.00	01:00	09-02-20	זונ	8.50		2	20		8.50	3.00		
Dates:	Start: 09/	02/2017	End:	10/02/2017	Remarks	S:									
Plant:	Dando 2000				1. Inspectio	n pit han							ory hole advanced		
Drilled By:	G. Gordan														
Logged By:	J. Tomalin		Status:	FINAL											
Checked By:	G.Dav		Rev:	2											
chooked by.	5.6dy		1101.	2											

		GROUNE		OLOGY		Во	oreho	le R	есо	rd			BH01		Sheet 2 of 5
		Maple R Norfo	oad, King k, PE34 3 1553 817	s Lynn BAF	Project:		Luton I	Power	Court			1			
	11	www.grour			Project ID	<b>)</b> :	GTS-1	7-900							
Client:	Peter I	Brett Asso	ociates L	.LP	Engineer	:	Z. Bella	a					round Level: oordinates:	509	6.13mAOD 9480.92(E) 9465.09(N)
	D	escription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base (m)	SPT Casing Depth	/CPT Water Depth	Remarks and Results		Installations
								D12 D13 B6 D14	9.00 12.00 15.00 15.00	17.00	9.00	9	N=15 (3,3/4,4,3) (S) N=17 (3,3/4,5,4,4) (S) N=50 (4,4/10,11,15, 14) (S)		······································
Hole	Bore Diameter D	hole continued		selling					Wa	ater Stri	ke - Ge	neral			
	Hole Depth (m) 35.00m		Depth Top (m)	) Duration (mins) 01:00	Date 09-02-20		Water Strik 8.50			ime (min	s) Stand	ding Lev 8.50	rel (m) Casing De 3.00		Depth Sealed (m)
	55.0011	50.0011					0.00		Z			5.00			
200mm															
200mm	Start: 09	9/02/2017	End:	10/02/2017			d due fre-	a around		1 20	bal 2 E	volorat	ny hole advanced	Lucina	
200mm Dates:	Start: 09 Dando 2000	9/02/2017	End:	10/02/2017	1. Inspection	pit han	nd dug fron o a depth c	n ground of 35.45n	level to n bgl. 3.	1.20m Explora	bgl 2. E: itory hol	xplorato e backf	ory hole advanced filled with bentonit	l using o e upon	cable percussive completion.
200mm Dates: Plant:		9/02/2017	End:	10/02/2017	1. Inspection	pit han	nd dug fron o a depth c	n ground of 35.45n	level to n bgl. 3.	1.20m Explora	bgl 2. E: tory hol	xplorato e backt	ory hole advanced filled with bentonit	l using o e upon	cable percussive completion.
200mm Dates: Plant: Drilled By:	Dando 2000	9/02/2017	End: Status:		1. Inspection	pit han	nd dug fron o a depth c	n ground of 35.45n	level to n bgl. 3.	1.20m Explora	bgl 2. E: itory hol	xplorato e backf	ory hole advanced filled with bentonit	l using o e upon	cable percussive

		GROUNE		OLOGY		Bo	reho	le R	eco	rd			BH01		Sheet 3 of 5
Ŀ		Maple R Norfo	oad, King k, PE34 3 1553 817	s Lynn 3AF 657	Project:		Luton		Court	t		I			1
		www.grour		Jgy.co.uk	Project	ID:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	LP	Enginee	er:	Z. Bell	a					round Level: pordinates:	509	6.13mAOD 9480.92(E) 1465.09(N)
							O.D.	50	mple Te	act	ерт	/CPT	Remarks and		Installations
	De	scription			Legen	d Depth (m)	Level (m)	Туре	Depth Top (m)	Depth	Casing Depth	Water Depth	Results SPT/HV/PP PID ()	opm)	Installations
								D15	18.00		18.00	9	N=21 (4,4/5,5,5,6) (S)		
								В7	20.00	21.00					
								D16	21.00		21.00	9	N=50 (5.5/9,15,15,1 1) (S)		
						ĽE rE									
						E E-		545			0.1.00	~			
- -		ble continued		olling		· · · · · · · · · · · · · · · · · · ·		D17	24.00		1 24.00				
Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Depth Top (m	) Duration (mins	) Date		Water Stri	ke (m)	Standing 1	Time (min	ke - Ge s) Stand	ding Lev	el (m) Casing Dep	th (m)	Depth Sealed (m
200mm	35.00m	35.00m	0.00	01:00	09-02-2	017	8.50		2	20		8.50	3.00		
	<b>.</b>				Remark	e.									
Dates:		02/2017	End:	10/02/2017	1. Inspection	on pit har	d dug fror	n ground	level to	1.20m	bgl 2. E	xplorate	ory hole advanced	using	cable percussive
Plant:	Dando 2000				arilling tech	iniques to	o a depth o	of 35.45n	n <b>bg</b> l. 3.	Explora	itory hol	e backf	illed with bentonite	e upon	completion.
Drilled By:	G. Gordan		<b>e</b> ( )												
Logged By:	J. Tomalin		Status:	FINAL											
Checked By:	G.Day		Rev:	2											

		GROUNE		OLOGY		Вс	reho	le R	есо	rd			BH01		Sheet 4 of 5
		Maple R Norfo	oad, King k, PE34 3 1553 817	is Lynn 3AF	Project:		Luton I	Power	Court			I			
		www.grour			Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	.LP	Engineer	:	Z. Bella	а					round Level: oordinates:	509	6.13mAOD 9480.92(E) 1465.09(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base (m)	SPT/ Casing Depth	CPT Water Depth	Remarks and Results SPT/HV/PP PID (p		Installations
								B8	25.00	26.00			N=44 (10,10/15,10, 10,9) (S)		
								D18	27.00		27.00	9	N=51 (8,8/9,12,15, 15) (S)		
								B9 D19	30.00 30.00	31.00	30.00	9	N=50 (10,10/12,14, 16,8) (S)		
	Boreh	ole continued													-
	Diameter De	etail	Chis	selling							ke - Ge				1
Diameter (mm) 200mm	Hole Depth (m) 35.00m	Casing Depth (m) 35.00m	Depth Top (m 0.00	01:00	Date 09-02-20	17	Water Strik 8.50			īme (min :0	s) Stand	ling Lev 8.50	vel (m) Casing Dep 3.00		Depth Sealed (m)
Dates:	Start: 09/	02/2017	End:	10/02/2017	Remarks	:									
Plant:	Dando 2000	52/2017	L.10.		1. Inspection	n pit har	d dug fron	n ground of 35.45n	level to n bal. 3	1.20m Explore	bgl 2. E: itory hol	kplorate e backt	ory hole advanced filled with bentonite	using upon	cable percussive completion.
Drilled By:	G. Gordan				sig tooili				. ~gi. 0.			2.5400			
	J. Tomalin		Status:	ΓΙΝΔΙ											
Logged By: Checked By:			Rev:	FINAL											
Shecked by.	G.Day		Rev.	2											

		GROUND	) TECHN	DLOGY		Вс	oreho	le R	eco	rd			BH01		Sheet 5 of 8
		Maple Ro Norfo	oad, King k, PE34 3	s Lynn BAF	Project	:	Luton	Power	Cour	t		1			
	1	Tel: 0 www.groun	1553 8170 Idtechnolo		Project	ID:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	LP.	Engine	er:	Z. Bell	а					round Level: oordinates:	509	6.13mAOD 9480.92(E) 1465.09(N)
	De	scription			Leger	nd Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth	SPT Casing Depth	/CPT Water Depth	Remarks and Results SPT/HV/PP PID (	Fest	Installations
	Borehole con	mpleted at 35	5.450m				70.68	D20 B10	33.00	35.00	33.00	9	N=47 (12,12/15,10, 10,12) (S) N=50 (12,12/15,15, 10,10) (S)		
Hole	Diameter De	otail	Chis	elling					W	ater Stri	l ke - Ge	neral			
Diameter (mm) 200mm	Hole Depth (m) 35.00m	Casing Depth (m) 35.00m		Duration (mins)	Dat 09-02-		Water Stri 8.50		Standing -				rel (m) Casing Dep 3.00		Depth Sealed (m
Dates:	Start: 09/	02/2017	End:	10/02/2017	Remarl										
Plant:	Dando 2000				1. Inspect drilling tec	ion pit har hniques t	nd dug from o a depth	m ground of 35.45r	d level to m bgl. 3.	1.20m Explora	bgl 2. E atory hol	xplorate e back	ory hole advanced filled with bentonite	using upon	cable percussive completion.
Drilled By:	G. Gordan					-			-		-				
Logged By:	J. Tomalin		Status:	FINAL											
	G.Day		Rev:	2											

		GROUND	TECHN	OLOGY		Во	reho	le R	eco	rd			BH03		Sheet 1 of
		Maple Ro Norfol		s Lynn 3AF	Project:		Luton	Power	Court			I			
	w	Iel: 01 ww.groun			Project I	D:	GTS-1	7-900							
Client:	Peter Bro	ett Asso	ciates L	.LP	Enginee	r:	Z. Bell	а					round Level: pordinates:	509	7.68mAOD 9650.05(E) 1405.90(N)
						Depth	O.D.	Sa	mple Te	est	SPT	CPT	Remarks and T Results		Installations
	Des	cription			Legen	d Depth (m)	Level (m)	Туре	Depth Top (m)	Depth Base	Casing Depth	Water Depth	SPT/HV/PP PID (p	pm)	
subangular f	indy fine to coarse ine to coarse flint. I					ŧ		D1 B1 D2	0.00 0.10 0.30	(m) 0.60					
[MADE GRO	-		<u> </u>			0.60	107.08	ES1 B2	0.30	0.30 1.20					_
coarse SANI	sh black GRAVEL a D. Gravel is angula es are angular brick UND1	r to rounde	d fine to c	oarse flint ar	nd			D3 ES2	0.60 0.60	0.60					
[	0							D4	1.20		1.00	Dry	N=11 (1,1/2,3,3,3) (C)		
Soft grey, loc	ally mottled reddis	h brown, si	ilty CLAY. I	Locally with		1.80	105.88	B3 D5	1.80 1.80	2.40					-
some black o [MADE GRO	organic silt.	,						ES3 D6	1.80 2.00	1.80	2.00	Dry	N=7 (1,1/1,2,2,2) (S)		
								D7	2.50						
								D8	3.00		3.00	Dry	N=8 (1,1/1,2,2,3) (S)		
								D9	3.50						
								D10	4.00		4.00	Dry	N=10 (1,1/2,2,3,3)		
						ŧ							(S)		
	vish brown silty sar subangular fine to				el	4.60	103.08	D11 B4 ES4	4.50 4.60 4.60	5.00 4.60					
[ALLUVIUM]				~				D12	5.00		4.50	Dry	N=32 (3,3/6,8,9,9) (S)		
	CHALK compose					6.00	101.68	B5 D13	6.00 6.00	7.00					-
angular to su	ibangular. Ciria Gra LK SUBGROUP]		,												
								D14	7.00		4.50	Dry	N=7 (2,2/1,2,2,2)		
													(S)		
		e continued			<u> </u>	Γ		D15	8.00						
Hole Diameter (mm)	Diameter Det Hole Depth (m)			Duration (mins)	Date		Water Stril	ke (m)	Wa Standing T		ke - Ger s) Stand		el (m) Casing Dent	th (m)	Depth Sealed (m
150mm 200mm	35.00m 11.00m	33.00m 11.00m	0.00	01:30	07-02-20	017	9.00			:0		9.00	4.50		
Dates:	Start: 16/0	2/2017	End:	20/02/2017	Remarks	S:									
Plant:	Dando 2000												ory hole advanced filled with bentonite		
Drilled By:	G. Gordan														
Logged By:	G. Day		Status:	FINAL											
	G.Day		Rev:	2											

		GROUND	TECHN	OLOGY		Во	oreho	le R	eco	rd			BH03	Sheet 2 of
			oad, King k, PE34 3 1553 817	BAF	Project:		Luton I	Power	Court					
	<b>1</b>	vww.groun			Project ID	<b>)</b> :	GTS-1	7-900						
Client:	Peter Bi	rett Asso	ciates L	LP	Engineer	:	Z. Bella	a					round Level: oordinates:	107.68mAOD 509650.05(E) 221405.90(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base (m)	SPT Casing Depth	/CPT Water Depth	Remarks and Te Results SPT/HV/PP PID (pp	Installations
weak, mediu cobbles throu	s CHALK compose im density angular ughout. Ciria Grac ALK SUBGROUP]	r to subangu je Dc	llar with rir	lasts are nded flint			95.68	D16 B6 D17	9.00 10.00 12.00	11.00	4.50	Dry	N=9 (2,2/3,2,2,2) (S) N=17 (2,2/4,4,4,5) (S) N=23 (3,3/4,5,6,8) (S)	
Holo	Boreho Diameter De	ble continued		selling					10/6	tor Stri	ke - Ge	noral		
Diameter (mm)	Hole Depth (m)	Casing Depth (m)	Depth Top (m	) Duration (mins)			Water Stril		Standing 1	"ime (min		ding Lev		n (m) Depth Sealed (n
150mm 200mm	35.00m 11.00m	33.00m 11.00m	0.00	01:30	07-02-20	17	9.00		2	:0		9.00	4.50	
				20/02/2017	Remarks	:		1			-1		I	1
Dates:	Start: 16/0	02/2017	End:	20/02/2011										
Dates: Plant:	Start: 16/0 Dando 2000	02/2017	End:	20/02/2011	1. Inspection drilling techn	pit han iques to	nd dug from o a depth o	n ground of 35.45n	level to n bgl. 3.	1.20m Explor	bgl 2. E: atory ho	xplorato le back	ory hole advanced u filled with bentonite	using cable percussive upon completion.
		02/2017	End:	20/02/2017	1. Inspection drilling techn	pit han iques to	nd dug fron o a depth o	n ground of 35.45n	level to n bgl. 3.	1.20m Explor	bgl 2. E: atory ho	xplorato le back	ory hole advanced u filled with bentonite	ising cable percussive upon completion.
Plant:	Dando 2000		End: Status:		1. Inspection drilling techn	pit han iques to	nd dug fron o a depth o	n ground of 35.45n	l level to n bgl. 3.	1.20m Explor	bgl 2. E: atory ho	xplorato le back	ory hole advanced u filled with bentonite	ising cable percussive upon completion.

	G	ROUND TECHNO	DLOGY		Bo	reho	le R	eco	rd			BH03		Sheet 3 of 5
		Maple Road, King Norfok, PE34 3 Tel: 01553 8176	s Lynn AF	Project:		Luton I	Power	Court	:		I			
	ww	w.groundtechnolo		Project II	D:	GTS-1	7-900							
Client:	Peter Bret	tt Associates L	LP	Enginee	<u>.</u>	Z. Bella	а					round Level: oordinates:	509	7.68mAOD 9650.05(E) 1405.90(N)
	Desc	ription		Legenc	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks and T Results	est	Installations
						(,			(m)	Depti	Dopin			-
					1_ 1_ +									
					1_ 1- 1-									
							D19	18.00		18.00	9	N=41 (6.6/9.10.10		
					1_ 1_ 1_							N=41 (6,6/9,10,10, 12) (S)		
					1_ 1									
					1_ +- +-									
							B8	20.00	21.00					
							D20	21.00		21.00	10.1	N=50 (8,8/10,12,14 ,14)		
												(S)		
					- - -									-
														-
	Borehole o	continued						24.00		24.00				-
	Diameter Deta	il Chis	elling							ke - Ge				1
Diameter (mm) 150mm 200mm	35.00m 3	sing Depth (m)         Depth Top (m)           33.00m         0.00           11.00m         0.00	Duration (mins) 01:30	Date 07-02-20	)17	Water Strik 9.00	ke (m) 5	Standing 1 2	rime (min ?0	s)   Stand	ding Lev 9.00	rel (m) Casing Dep 4.50	<u>th (m)</u>	Depth Sealed (m)
Dates:	Start: 16/02/	/2017 End:	20/02/2017	Remarks	n pit har	id dua fron	n ground	level to	1.20m	bgl 2. E	xplorate	ory hole advanced	usina	cable percussive
Plant:	Dando 2000			drilling techr	niques to	a depth o	of 35.45n	n bgl. 3.	Explor	atory ho	ble back	filled with bentonite	e upon	completion.
Drilled By:	G. Gordan													
Logged By:	G. Day	Status:												
Checked By:	G.Day	Rev:	2											

		GROUNE		OLOGY		Во	oreho	le R	eco	rd			BH03		Sheet 4 of 5
[ -		Maple R Norfo	oad, King k, PE34 3 1553 817	s Lynn 3AF	Project:		Luton I	Power	Court	:		I			
	V V	www.groun			Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Assc	ociates L	LP	Engineer		Z. Bella	а					round Level: pordinates:	509	7.68mAOD 9650.05(E) 405.90(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base (m)	SPT/ Casing Depth	CPT Water Depth	Remarks and T Results SPT/HV/PP PID (p		Installations
								B9	25.00	26.00			N=42 (3,3/4,8,15,1 5) (S)		
								D22	27.00		27.00	15	N=49 (4,4/8,10,16, 15) (S)		
								B10 D23	30.00 30.00	31.00	30.00	15	N=54 (8,8/9,10,15, 20) (S)		
Hole	Diameter De	ble continued		selling					\٨/-	ater Stri	ke - Gei	neral			
Diameter (mm)	Hole Depth (m)	Casing Depth (m)	Depth Top (m	) Duration (mins)			Water Stril		Standing 1	lime (min		ling Lev		th (m)	Depth Sealed (m
150mm 200mm	35.00m 11.00m	33.00m 11.00m	0.00	01:30	07-02-20	17	9.00		2	20		9.00	4.50		
Dates:	Start: 16/	02/2017	End:	20/02/2017	Remarks	:									
		5212011		20/02/2011	1. Inspection	n pit han	id dug from	n ground	l level to	1.20m	bgl 2. Ex	kplorate	ory hole advanced filled with bentonite	using o	completion
Plant:	Dando 2000				uning tech	iiques to	a ueptn (	ภ	n ndi. 3.	Explor	αισι γ ΠΟ	ie Dack		= upon	completion.
Drilled By:	G. Gordan		_												
Logged By:	G. Day		Status:	FINAL											

		GROUND		OLOGY		Bo	oreho	le R	eco	rd			BH03		Sheet 5 of 5
( -	ir -	Maple Ro Norfo	oad, King k, PE34 3	s Lynn BAF	Project:		Luton	Power	Court	t					
	1	ww.groun	1553 817 Idtechnolo	anu an ulu	Project I	D:	GTS-1	7-900							
Client:	Peter Br	ett Asso	ociates L	.LP	Enginee	r:	Z. Bell	а					round Level: oordinates:	50	7.68mAOD 9650.05(E) 1405.90(N)
	Des	scription			Legend	d Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth	SPT Casing Depth	/CPT Water Depth	Remarks and Results		Installations
	Borehole corr	npleted at 35	5.450m				72.23	D24	33.00	35.00	33.00	15	N=58 (8,8/11,15,15, 17) (S) N=85 (8,8/15,20,15 .35) (S)		
Hole	Diameter Def	tail	Chis	selling					Wa	ater Stri	ke - Ge	neral			
Diameter (mm) 150mm 200mm		Casing Depth (m) 33.00m 11.00m		) Duration (mins) 01:30	Date 07-02-20	017	Water Strii 9.00		Standing ⁻ 2	Γime (min 20	s) Stand	ding Lev 9.00	rel (m) Casing De 4.50		Depth Sealed (m
Dates: Plant: Drilled By:	Start: 16/0 Dando 2000 G. Gordan	)2/2017	End:	20/02/2017	Remarks 1. Inspectio drilling tech	n pit har	nd dug fror o a depth o	m ground of 35.45r	l level to n bgl. 3.	1.20m Explor	bgl 2. E	xplorate le back	ory hole advancec	l using te upor	cable percussive
,	G. Day		Status:												

		GROUND	TECHN	OLOGY		Во	reho	le R	eco	rd			BH04		Sheet 1 of 5
C		Maple Ro Norfo		s Lynn BAF	Project:		Luton I	Power	Court			I			
	v	vww.groun		av co uk	Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ciates L	.LP	Engineer	:	Z. Bella	а					round Level: pordinates:	509	3.99mAOD 9680.27(E) 1186.09(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base	SPT/ Casing Depth	CPT Water Depth	Remarks and Results		Installations
subangular fi tarmac fragm [MADE GRO Dark brownis	h black sandy cla subangular fine to	and brick. F naterial. iyey fine to o	requent til	e, pottery an		0.50	103.49	B1 D1 ES1 D2 ES2	0.00 0.00 0.30 0.50 0.50	(m) 0.50 0.30 0.50					
								D3 D4	1.20				N=4 (1,1/1,1,1,1) (S) N=23		
						2.20	101.79	B2 ES3 D5	2.20 2.20 2.50	3.00 2.20			(3,375,5,6,7) (S)		
								B3 D6 ES4	3.00 3.00 3.00	3.50 3.00			N=12 (4,4/5,3,2,2) (S)		
fine to mediu and grey. [GLACIO-FLI	andy gravelly SIL m flint and chalk. UVIAL DEPOSITS CHALK compose	Finer fraction	on is yellov	vish brown E]		-3.50 	100.49 99.99	D7 D8	3.50 4.00				N=4 (1,1/1,1,1,1)		
Structureless Clasts are ex	LK SUBGROUP] CHALK compose tremely weak, me	ed of white s edium densi	sandy grav ty, white, a	elly SILT.		4.50	99.49	D9	4.50				(S)		
	Ciria Grade Dm ILK SUBGROUP]							B4 D10	5.00 5.00	6.00			N=5 (1,1/1,1,1,2) (S)		
								D11	6.00						
								D12	7.00				N=9 (1,111,2,3,3) (S)		
Hole	Boreho Diameter De	le continued		elling					\٨/ح	ater Stri	ke - Ger	neral			
Diameter (mm)	Hole Depth (m) 35.00m			Duration (mins)	Date 16-02-20		Water Strik 5.00		Standing 1				rel (m) Casing Dep 4.50		Depth Sealed (m)
	55.00m	55.0011	0.00	01.00	10-02-20	.7	5.00		2	0		5.00	4.50		
Dates:	Start: 16/	02/2017	End:	20/02/2017	Remarks	:					1		I		1
Plant:	Dando 2000				drilling techr	iques to							ory hole advanced led with 50mm HE		
Drilled By:	G. Gordan				client require		-		-		-				·
Logged By:	G. Day		Status:	FINAL											
Checked By:	G Dav		Rev:	2											

		GROUND		OLOGY		Во	reho	le R	eco	rd			BH04		Sheet 2 of 5
( -			k, PE34 3	BAF	Project:		Luton I	Power	Court	:					
	1	vww.groun	1553 817 dtechnolo		Project II	D:	GTS-1	7-900							
Client:	Peter Bi	rett Asso	ciates L	.LP	Engineer	:	Z. Bella	a					round Level: oordinates:	509	3.99mAOD 9680.27(E) 1186.09(N)
	Des	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base (m)	SPT/ Casing Depth	VCPT Water Depth	Remarks and Results SPT/HV/PP PID (	Test	Installations
								D13 B5	9.00	11.00			N=10 (1,1/2,2,3,3) (S)		
								D14	12.00				N=14 (1,1/2,3,4,5) (S)		
COBBLES. ( rounded. Rin white. Ciria g	CHALK compose Clasts are weak, n Ided angular to su grade Dc. ALK SUBGROUP]	nedium den bangular fli	sity, white,	angular to	ty,	- - - - - - - - - - - - - - - - - - -	88.99	B6 D15	15.00 15.00	16.00			N=19 (1,1/3,4,5,7) (S)		
		le continued								1. 6:					
Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Depth Top (m	Belling	Date		Water Strik	(m)			ke - Gei s) Stanc	ling Lev	rel (m) Casing Dep		Depth Sealed (m)
150mm	35.00m	33.00m	0.00	01:00	16-02-20		5.00			0		5.00	4.50		
Dates:	Start: 16/0	02/2017	End:	20/02/2017	Remarks	:							I		1
			L.10.	20/02/2011	1. Inspection	n pit han	d dug fron	n ground	level to	1.20m	bgl 2. Ex	kplorate	ory hole advanced led with 50mm HD	using	cable percussive
Plant:	Dando 2000				client require	ements.	a uepin C	n 55.00N	i uyi. 3.			ଟ ମାରାଧା	ieu with Suffiffi HL	n- ⊑ Sta	anupipe as per
Drilled By:	G. Gordan		_												
Logged By:	G. Day		Status:												
Checked By:	G.Day		Rev:	2											

		GROUND	TECHN	OLOGY		Во	oreho	le R	есо	rd			BH04		Sheet 3 of 5
l C		Maple Ro Norfo	oad, King k, PE34 3 1553 817	is Lynn 3AF 657	Project: Project II	<u>п</u> .	Luton F		Court	:		1			
Client:	Peter B	rett Asso	ciates I	_LP	Engineer		Z. Bella						round Level: oordinates:	50	3.99mAOD 9680.27(E) 1186.09(N)
	De	scription			Legeno	Depth (m)	O.D. Level (m)	Saı _{Type}	Depth Top (m)	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks and Results	Test	Installations
		Die continued						D16 B7 D17	18.00 20.00 21.00	(m) 21.00			N=28 (1,1/4,8,8,8) (S) N=26 (2,2/3,5,10,8) (S)		
	Diameter De		Chi	selling							ke - Ge				
Diameter (mm) 150mm	Hole Depth (m) 35.00m	Casing Depth (m) 33.00m	Depth Top (m 0.00	) Duration (mins) 01:00	Date 16-02-20	)17	Water Strik 5.00	<u>se (m)   S</u>		<u>rime (min</u> 20	s) Stand	ding Lev 5.00	rel (m) Casing Dep 4.50	<u>xin (m)</u>	Depth Sealed (m)
Dates:	Start: 16/	02/2017	End:	20/02/2017	Remarks	s:							I		1
	Dando 2000		2.10.	_0.0E/E017	1. Inspection	n pit har	nd dug fron	n ground	level to	1.20m Explore	bgl 2. E	xplorate	ory hole advanced led with 50mm HD	using	cable percussive
Plant:					client require	ements.		, 55.001	າ ມຽເ. ວ.			o nistdi	ica with outfille HL	n i Stà	אייטאיאב אפו
Drilled By:	G. Gordan		01.1												
Logged By:	G. Day		Status:												
Checked By:	G.Day		Rev:	2											

		GROUND		OLOGY		Bo	oreho	le R	есо	rd			BH04		Sheet 4 of 5
E		Maple Ro Norfo	oad, King k, PE34 3 1553 817	is Lynn 3AF 657	Project: Project II	ר.	Luton I GTS-1		Court	:		1			
Client:	Peter B	rett Asso	ciates L	_LP	Engineer		Z. Bella						round Level: oordinates:	509	3.99mAOD 9680.27(E) 1186.09(N)
	De	scription			Legenc	Depth (m)	O.D. Level (m)	Sa	Depth Top (m)	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks and T Results	est	Installations
								88	25.00	(m) 26.00		Jopan	N=39 (7.7/9,9,10,11 ) (S)		
								D19	27.00				N=50 (5.5/10,15,15 ,10) (S)		
								B9 D20	30.00 30.00	31.00			50 (12,12/15,15, 20,) (S)		
11-1		ble continued													
Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Depth Top (m	Selling			Water Strik	<u>ke (m)</u>	Standing 1	lime (min	ke - Ge s) Stan	ding Lev	vel (m) Casing Dep	th (m)	Depth Sealed (m)
150mm	35.00m	33.00m	0.00	01:00	16-02-20	)17	5.00			20		5.00	4.50	/	
Dates:	Start: 16/	02/2017	End:	20/02/2017	Remarks	5:									
		5212011	LIIU.	2010212011	1. Inspection	n pit har	nd dug fron	n ground	level to	1.20m	bgl 2. E	xplorate	ory hole advanced lled with 50mm HD	using	cable percussive
Plant:	Dando 2000				client require			7 JJ.UUN	າ ມ <u>ິ</u> ງເ. ວ.		аогу ПО	ଟ ମାହାସା	ieu wiui suititti HD	ni Slê	andhihe as hei
Drilled By:	G. Gordan		<b>.</b>												
Logged By:	G. Day		Status:	FINAL											
Checked By:	G.Day		Rev:	2											

		GROUND TECHN	OLOGY	E	Boreh	ole F	Reco	ord			BH04		Sheet 5 of
C	лг –	Maple Road, King Norfok, PE34 Tel: 01553 817 ww.groundtechnol	gs Lynn 3AF 7657	Project: Project ID:		n Powe -17-900		t		1			_1
Client:	Peter Bre	ett Associates	LLP	Engineer:	Z. B						round Level: oordinates:	509	.99mAOD 680.27(E) 186.09(N)
	Desc	cription		Legend De (n	pth n) O.D Leve	el	ample T Depth Top (m)	Depth	SPT Casing Depth	/CPT Water Depth	Remarks and Te Results SPT/HV/PP PID (pp	est	Installations
	Borehole completed at 35.000m         Image: Solution of the second sec				.00 68.9	D21	33.00	35.00			50 (12.12/15.20, 15.) (S)		
Hole	Diameter Deta	ail Chi	sellina				W	ater Str	ike - Ge	neral			
Diameter (mm) 150mm	Hole Depth (m) Ca	asing Depth (m) Depth Top (n 33.00m 0.00	01:00	Date 16-02-2017		Strike (m) .00	Standing	Time (mir 20	is) Stand	ding Lev 5.00	rel (m) Casing Depth 4.50	<u>ı (m)</u>	Depth Sealed (m
Dates: Plant: Drilled By: Logged By:	Start: 16/02 Dando 2000 G. Gordan G. Day	2/2017 End: Status:	20/02/2017 FINAL	Remarks: 1. Inspection pit drilling technique client requiremen	es to a dep	rom groun th of 35.00	d level to im bgl. 3.	o 1.20m . Explora	bgl 2. E: atory hol	xplorato e instal	bry hole advanced u led with 50mm HDP	sing c E star	able percussive
Checked By:		Rev:											

	GROUND	TECHNOL	DGY		Во	reho	le R	eco	rd			BH05		Sheet 1 of
	Maple Ro Norfo	oad, Kings L k, PE34 3AF 1553 817657	ynn	Project:		Luton	Power	Court			I			
		dtechnology	oo uk	Project II	D:	GTS-1	7-900							
Client:	Peter Brett Asso	ciates LLF	0	Engineer	:	Z. Bell	а					round Level: pordinates:	509	9.31mAOD 9861.46(E) 249.76(N)
	Description			Legend	Depth (m)	O.D. Level (m)	Sai _{Type}		Depth Base	SPT/ Casing	Water	Remarks and T Results		Installations
Whiteish bro angular to si [MADE GRO	wn slightly silty fine to coarse ub-angular flint, brick and rewe DUND]	GRAVEL. Gra orked chalk.	avel is			(11)	B1 D1	Top (m) 0.00 0.00	(m) 1.00	Depth	Depth			
							D2 B2	0.50	1.50					
slightly grave chalk. (Grad	s CHALK composed of extren elly SILT. Gravel is angular to e Dm) ALK SUBGROUP]				1.20	108.11	D3	1.20			Dry	N=9 (1,1/2,2,2,3) (S)		
-							D4	2.00			Dry	N=8 (1,1/2,2,2,2) (S)		
							D5	2.50						
						105.81	D6 D7	3.00			Dry	N=8 (1,1/2,2,2,2) (S)		
gravelly SIL (Grade Dc).	s CHALK composed of extren [. Gravel is angular to sub-ang ALK SUBGROUP]	nely weak crea	amy white chalk.				D8	4.00			Dry	N=9 (2,2/2,2,2,3)		
							D9	4.50				(S)		
							B3 D10	5.00 5.00	6.00		Dry	N=11 (2,2/3,3,2,3) (S)		
							D11	6.00						
							D12	7.00			Dry	N=7 (2,2/3,2,1,1) (S)		
Liala	Borehole continued Diameter Detail		inc					۱۸/-	tor Ct-	ke - Gei	oorol			
Diameter (mm)	Hole Depth (m) Casing Depth (m)	Chisel	ration (mins)	Date		Water Stril		Standing 1	"ime (min	s) Stand	ling Lev	el (m) Casing Dept	h (m)	Depth Sealed (m
150mm	35.00m 33.00m	0.00	01:00	21-02-20	17	8.50	)	2	:0		8.50			
Dates:	Start: 21/02/2017	End: 22/	02/2017	Remarks	:									
		LIIU. 22/	0212011	1. Inspection	n pit han							bry hole advanced u illed with bentonite		
Plant:	Dando 2000			anning techr	iiques ((	a ueptii (	JI JJ.UUIT	າ ມ <b>ູ</b> ງເ. ວ.	Explora	nory (10)	e Dacki		apon	ະບາກຸມເບເບໃ.
Drilled By:	G. Gordan	Status: F												
Logged By:		Status: F												
Checked By:	G.Day	Rev:	2											

		GROUNE	) TECHN	OLOGY		Во	oreho	le R	eco	rd			BH0	5	Sheet 2 of
( -	- 7	Maple R Norfo	oad, King k, PE34 3 1553 817	ls Lynn 3AF	Project:		Luton I	Power	Court	:					
	1	www.grour			Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	_LP	Engineer	-	Z. Bella	а					round Level: pordinates:	509	9.31mAOD 9861.46(E) 1249.76(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base (m)	SPT/ Casing Depth	CPT Water Depth	Remarks and Results		Installations
								D13 B4	9.00	11.00		Dry	N=10 (2,2/3,3,3,1) (S) N=22 (3,3/4,5,6,7) (S)		
								B5 D15	15.00 15.00	16.00		15	N=26 (4,4/5,6,7,8) (S)		
11-1		ole continued									ka C				
Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Depth Top (m	Selling			Water Stril		Standing 1	lime (min:	ke - Ger s) Stand	ing Lev	el (m) Casing D	epth (m)	Depth Sealed (m
150mm	35.00m	33.00m	0.00	01:00	21-02-20	)17	8.50		2	20		8.50			
Dates:	Start: 24/	02/2017	End:	22/02/2017	Remarks	5:									
Dates:		0212011	Enu.	2210212011	1. Inspection	n pit han	d dug fron	n ground	l level to	1.20m	bgl 2. Ex	plorato	ory hole advance	d using	cable percussive
Plant:	Dando 2000				anning techr	iques to	a depth o	טט.ככ וי	n bgi. 3.	⊏xpiora		= Dackt	illed with benton	ne upon	completion.
Drilled By:	G. Gordan														
	M Cmith		Status:	FINAL											
Logged By:	M. Smith		oluluo.												

		GROUND	) TECHN(	OLOGY		Во	reho	le R	eco	rd			BH05		Sheet 3 of 5
G	- 7	Maple Ro Norfo Tel: 0	oad, King k, PE34 3 1553 817	s Lynn 3AF 657	Project:		Luton I	Power	Court			I			-
	W	/ww.groun	dtechnolo	ogy.co.uk	Project II	D:	GTS-1	7-900							
Client:	Peter Br	ett Asso	ciates L	LP	Engineer	:	Z. Bella	a					ound Level: pordinates:	509	9.31mAOD 9861.46(E) 249.76(N)
	Des	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks and Results	est	Installations
										(m)	Deput	Deput			
								D16	18.00			18	N=23 (3,3/4,5,7,7) (S)		
								B6	20.00	21.00					
								D17	21.00			21	79 (9.9/15,35,29 .) (S)		
								— D18—	24.00						
Holo	Diameter Det	le continued tail		selling						ator Ctri	ke - Ge	neral			
Diameter (mm)	Hole Depth (m)	Casing Depth (m)	Depth Top (m	) Duration (mins)	Date		Water Strik	e (m)	Standing T	ime (min		ding Lev	el (m) Casing Dep	th (m)	Depth Sealed (m)
150mm	35.00m	33.00m	0.00	01:00	21-02-20	17	8.50		2	0		8.50			
Dates:	Start: 21/0	)2/2017	End:	22/02/2017	Remarks	:									<u> </u>
		1212011		2210212011	1. Inspection	pit han	d dug fron	n ground	level to	1.20m	bgl 2. E	xplorato	bry hole advanced	using o	cable percussive
Plant:	Dando 2000				drilling techn	iques to	o a depth c	of 35.00n	n bgl. 3.	⊢xplora	itory hol	e backf	illed with bentonite	upon	completion.
Drilled By:	G. Gordan														
Logged By:	M. Smith		Status:	FINAL											
1	G.Day		Rev:	2	1										

		GROUNE		OLOGY		Во	reho	le R	eco	rd			BH05		Sheet 4 of 5
		Maple R Norfo	oad, King k, PE34 3 1553 817	is Lynn BAF	Project:		Luton I	Power	Court	t		I			
		vww.grour			Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	.LP	Enginee	r:	Z. Bella	a					round Level: oordinates:	509	9.31mAOD 9861.46(E) 1249.76(N)
	De	scription			Legeno	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth	SPT/ Casing Depth	CPT Water Depth	Remarks and T Results SPT/HV/PP PID (p		Installations
								87	25.00	26.00			N=50 (12,12/20,10, 10,10) (S)		
								D19	27.00			27	N=60 (12,12/15,15, 15,15) (S)		
								88 D20	30.00 30.00	31.00		30	79 (9,9/16,34,29 .) (S)		
		ble continued			<u>                                   </u>	-			1	I	I				
Hole Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Chis	) Duration (mins)	Date		Water Strik	(e (m)			ke - Ger s) Stand		rel (m) Casing Don	th (m)	Depth Sealed (m
150mm	35.00m	33.00m	0.00	01:00	21-02-20		8.50			20		8.50		<u> (111)</u>	
Dates:	Start: 21/	02/2017	End:	22/02/2017	Remarks	s:									
Plant:	Dando 2000				1. Inspection	n pit han niques to	d dug fron	n ground of 35.00n	l level to n bal. 3	1.20m Explore	bgl 2. Ex	plorate backt	ory hole advanced filled with bentonite	using o	cable percussive
								-0.001	- 9 0.						
Drilled By:	G. Gordan		Statuce												
Logged By:	M. Smith		Status:												
Checked By:	G.Day		Rev:	2											

	G	ROUND TECH	NOLOGY		Во	reho	le R	eco	rd			BH05		Sheet 5 of
		Maple Road, Kir Norfok, PE34	ngs Lynn F3AF	Project:		Luton	Power	Court	t		I			
	ww	Tel: 01553 81 w.groundtechno		Project II	D:	GTS-1	7-900							
Client:	Peter Bre	tt Associates	LLP	Engineer	<u>.</u>	Z. Bell	a					round Level: pordinates:	509	9.31mAOD 9861.46(E) 1249.76(N)
	Desc	ription		Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth	SPT/ Casing Depth	CPT Water Depth	Remarks and Results SPT/HV/PP PID (;	Test	Installations
	Borehole completed at 35.000m					74.31	D21 B9	33.00	35.00		33	66 (12,12/20,26, 20,) (S)		
Hole										ke - Ger				
Diameter (mm) 150mm		sing Depth (m) Depth Top 33.00m 0.00	(m) Duration (mins) 01:00	) Date 21-02-20		Water Stri 8.50			Time (min 20	s) Stand	ing Lev 8.50	el (m) Casing Dep	th (m)	Depth Sealed (m
Dates: Plant: Drilled By:	Start: 21/02 Dando 2000 G. Gordan		22/02/2017	1. Inspection	n pit han	d dug fror a depth o	n ground of 35.00r	l level to n bgl. 3.	0 1.20m Explora	bgl 2. Ex atory hole	plorato e backf	bry hole advanced illed with bentonite	using e upon	cable percussive completion.
Logged By:	M. Smith	Status	: FINAL											

	GROUN	D TECHNOLOG	GΥ		Во	reho	le R	есо	rd			BH06		Sheet 1 of 2
	Maple F Norfe	Road, Kings Lyn ok, PE34 3AF )1553 817657	n	Project:		Luton	Power	Court						
	www.grou	ndtechnology.co	o.uk	Project II	D:	GTS-1	7-900							
Client:	Peter Brett Ass	ociates LLP		Engineer	:	Z. Bell	а					round Level: pordinates:	509	.57mAOD 715.98(E) 321.22(N)
	Description		1	Legend	Depth (m)	O.D. Level (m)	Туре	Depth Top (m)	Depth Base (m)	SPT Casing Depth	VCPT Water Depth	Remarks and T Results SPT/HV/PP PID (p		Installations
	lly slightly silty fine to mediu unded fine to coarse flint, br UND]						D1 B1 D2 ES1 D3	0.00 0.40 0.50 0.50 1.20	1.00					
						100.07	B2 D4 ES2	2.00 2.00 2.00	2.50 2.00		Dry	N=6 (1,1/1,1,2,2) (S)		
medium. [ALLUVIUM]					2.50	102.07	D5 D6	2.50			Dry	N=8		-
SILT. Gravel	S CHALK composed of weak is angular fine to coarse flint ALK SUBGROUP]		avelly			101.07	B3 D7 ES3	3.50 3.50 3.50	4.00 3.50		5.9	(1,1/2,2,2,2) (S)		
							D8 D9	4.00			Dry	N=10 (1,1/2,2,3,3) (S)		
(Grade Dm)	s CHALK composed of weak	creamy white SI	LT.			99.57	D10	5.00			Dry	N=10 (1,1/3,2,2,3) (S)		
							D11	6.00						
							D12	7.00			Dry	N=9 (1,1/2,2,2,3) (S)		
	Borehole continued.													
Diameter (mm)	Diameter Detail Hole Depth (m) Casing Depth (m)		on (mins)	Date		Water Stril		Standing 1	"ime (min	ke - Ge s) Stand	ling Lev		h (m)	Depth Sealed (m)
150mm	16.00m 16.00m		3:00 1:00	14-02-20		8.50			20		8.50	4.50		
Dates: Plant:	Start: 14/02/2017	End: 14/02			n pit han							bry hole advanced		
				Summing Coolin			0.001	əgi. ə.			U DUCKI		apont	
Drilled By: Logged By:	G. Gordan J. Tomalin	Status: FIN	IAL											
	G.Day	Rev:	2											

		GROUND	) TECHN	OLOGY		Во	oreho	le R	eco	rd			BH06		Sheet 2 of 2
	л <b>г</b>	Maple Ro Norfo Tel: 01	oad, King k, PE34 3 1553 817	ls Lynn 3AF 657	Project:		Luton F	Power	Court	:		I			
		www.groun	dtechnolo	ogy.co.uk	Project ID	):	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	_LP	Engineer		Z. Bella	а					round Level: pordinates:	509	4.57mAOD 9715.98(E) 1321.22(N)
					<u> </u>		O.D.	Sa	mple Te	est	SPT/		Remarks and		Installations
	De	scription			Legend	Depth (m)	Level (m)	Туре	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	Results SPT/HV/PP PID (	ppm)	
	Borehole completed at 16.000m							В4 D14	9.00	13.00		7.5	N=11 (1,1/2,2,3,4) (S) N=13 (1,1/2,2,4,5) (S) N=17 (1,1/3,4,4,6) (S)		
					<u>ı _ı _ı </u>	<u>• 16.00</u>	88.57		1	1					
Hole Diameter (mm)	Diameter De Hole Depth (m)		Chis Depth Top (m	Duration (mins)	Date		Water Strik	(e (m)			ke - Gen s) Standi		el (m) Casing Der	oth (m)	Depth Sealed (m
150mm	16.00m	16.00m	0.00 1.00	03:00 01:00	14-02-20		8.50			20		8.50	4.50		
Dates:	Start: 14/	02/2017	End	14/02/2017	Remarks										<u> </u>
Dates:		02/2017	End:	11/02/2011	1. Inspection	n pit han	d dug fron	n ground	l level to	1.20m	bgl 2. Ex	plorato	bry hole advanced	using	cable percussive
Plant:	Dando 2000				ariling techn	iques to	) a depth c	ot 16.00n	n bgl. 3.	Explora	tory hole	e backf	illed with bentonite	3 upon	completion.
Drilled By:	G. Gordan														
Loggod Dy:	J. Tomalin		Status:	FINAL											
Logged By:															

		GROUND				Вс	oreho	le R	eco	rd			BH07		Sheet 1 of
( -		Maple Ro Norfo	k, PE34 3	BAF	Project:		Luton	Power	Court	t					
	1 v	vww.groun	1553 8170 dtechnolo		Project	ID:	GTS-1	7-900							
Client:	Peter B	rett Asso	ciates L	LP	Enginee	er:	Z. Bell	a					round Level: oordinates:	50	5.31mAOD 9619.94(E) 1315.80(N)
	De	scription			Legen	d Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base	SPT. Casing Depth	/CPT Water Depth	Remarks and Results	Test	Installations
Brown grave sub-angular Concrete sla [MADE GRC		gravelly SA , brick and r	ND. Grave	el is angular concrete.	to			B1 D2	0.50 1.20	(m) 0.50	1.20	Deptn	N=14 (6,6/4,4,3,3) (C)		
	Borehole co	mpleted at 2.	000m				103.31								
	Diameter De			elling							ke - Ge				
Diameter (mm) 150mm	Hole Depth (m) 2.00m	Casing Depth (m) 1.20m	Depth Top (m)	Duration (mins)	Date	2	Water Stri	ke (m)	Standing 1	Time (min	s) Stand	ding Lev	rel (m) Casing Dep	oth (m)	Depth Sealed (m
Dates: Plant: Drilled By: Logged By:	13/02/2017 FINAL	1. Inspection	on pit har iniques t	o a depth	of 2.00m	bgl, whe	1.20m ere refu	bgl 2. E sal occu	xplorato	ory hole advanced	using 3. Exp	cable percussive			
	G.Day		Rev:	2											

		GROUND	TECHN	OLOGY		Bo	oreho	le R	eco	rd			BH07	'a	Sheet 1 of 1
			oad, King k, PE34 3 1553 817(	BAF	Project:		Luton	Power	Cour	t		1			
	¶∎ v	www.groun			Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	.LP	Engineer		Z. Bell	а					round Level pordinates:	50	05.31mAOD 09619.94(E) 21315.80(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks an Results		Installations
[MADE GRO Brown grave subangular fl	lly fine to medium int, brick and rein s description).	gravelly SA	ND. Grave	el is angular rete slab at	to	0.30	105.01			(m)	bopar	Doput			
	Borehole co	mpleted at 2.	.000m				103.31								
	Diameter De		Chis	elling						ater Stri					
Diameter (mm) 150mm	Hole Depth (m) 2.00m	Casing Depth (m) 2.00m	Depth Top (m)	Duration (mins)	Date		Water Stri	ke (m)	Standing [*]	Time (min	s) Stand	ding Lev	el (m) Casing D	epth (m	) Depth Sealed (m
Dates: Plant: Drilled By: Logged By:	Plant: Dando 2000 Drilled By: G. Gordan						o a depth o	of 2.00m	bgl, wh	ere refu	sal occu	irred on	ory hole advance concrete slab. 3 upon completior	3. Explo	g cable percussive oratory hole logged
Checked By:			Rev:	2											

		GROUND		OLOGY		Bo	oreho	le R	leco	rd			BH0	7b	Sheet 1 of
( -			k, PE34 3	BAF	Project:		Luton	Power	Cour	t					L
	1 v	vww.groun	1553 817 Idtechnolo		Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	.LP	Engineer		Z. Bell	а					round Leve pordinates	: 50	05.31mAOD 09619.94(E) 21315.80(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks a Resul		Installations
Reinforced c [MADE GRO	oncrete (Drillers d	lescription).				E			,	(m)					_
Brown grave subangular f	lly fine to medium lint, brick and rein s description). UND]		rrete. Conc			2.50	105.01								
						-									_
	Diameter De			selling						ater Stri					
Diameter (mm) 150mm	Hole Depth (m) 2.50m	Casing Depth (m) 2.50m	Depth Top (m)	) Duration (mins)	Date		Water Stri	ke (m)	Standing ⁻	Time (min	s) Stand	ding Lev	el (m) Casing	Depth (m	Depth Sealed (m
Dates: Plant: Drilled By:	Start: 13/ Dando 2000 G. Gordan	02/2017			drilling techr	n pit har niques t	o a depth	of 2.50m	bgl, whe	ere refu	sal occu	irred on	ory hole advan concrete stru ntonite upon c	cture. 3. E	g cable percussive Exploratory hole
Logged By:	G. Gordon		Status:												
Checked By:	G.Day		Rev:	2											

		GROUNE	D TECHN	OLOGY		Во	reho	le R	eco	rd			CP01		Sheet 1 of 2
		Maple R Norfo	Road, King ok, PE34 3 1553 817	js Lynn 3AF	Project:		Luton I	Power	Court			1			
		www.grour			Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates I	_LP	Enginee	r:	Z. Bella	а					round Level: pordinates:	50	7.49mAOD 9499.12(E) 1455.02(N)
	Da	scription			Legend	Depth	O.D. Level	Sa	mple Te	est	SPT	/CPT	Remarks and Results	Test	Installations
		scription			Legend	(m)	(m)	Туре	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	SPT/HV/PP PID	(ppm)	
content. Grav concrete. Co		ubangular f	fine to coar	rse brick and		0.10	107.39	B2 ES1	0.40 0.50	0.80 0.60					
[MADE GRO	UND]							D3	1.00	1.45	1.00	Dry	N=3 (1,1/1,1,0,1) (S)		
								B4	1.50	2.00					
								D5	2.20	2.30	2.00	Dry	N=2 (1,0/1,0,1,0) (S)		
								D7	2.50	2.60					-
						ES6 D8	2.90 3.00	3.00 3.45	2.50	Dry	N=8 (1,2/2,2,2,2) (S)				
Firm grey an	d yellowish browr gular to subangula	n slightly gra	avelly sligh	tly sandy SIL	C X + X . X +	3.60	103.89	D9 D10	3.50 3.70	3.50 3.80					
[ALLUVIUM]	Julai to subangula							B12 D11 ES13	4.00 4.00 4.00	4.50 4.45 4.10	4.00	Dry	N=20 (3,3/3,5,6,6) (S)		
subangular fi	ghtly gravelly slighting to medium flin	htly sandy S it.	SILT. Grave	el is angular t		¥-4.50 ; >−	102.99								
[ALLUVIUM]								B14	5.00	5.50	5.00	4.9	N=28 (4,5/5,7,8,8) (C)		
extremely we	CHALK compose eak, medium dens ed flint cobbles thr	sity, white a	ngular to s	ubangular wi	th	6.00	101.49	D15	6.00	6.45	6.00	5.9	N=23 (3,6/5,5,6,7) (S)		
	LK SUBGROUP]			Din.				B16	6.50	6.90					
								D17	7.00	7.10					
	Boreho	ole continued				<u></u>		D18	8.00	8.45	6.00	Dry			
Hole	Diameter De Hole Depth (m)	Casing Depth (m)		selling	Date		Water Stril	(e) (m)			ke - Gei		el (m) Casing De	oth (m)	Denth Sealed (~)
150mm	15.00m	15.00m	, σοριττύρ (Π	, paration (mins)	09-02-20		9.60			<u>ime (min</u> :0	Stand	8.70	9.00		Depui Sealeu (m)
Dates:	Start: 09/	02/2017	End:	09/02/2017	Remarks	) S:									
Plant:	Dando 2000	5212011	LIIU.	55,02,2017	1. Inspection	n pit han							bry hole advanced with 50mm HDPE		
Drilled By:	Matthew Earl				as per client						,			onit	The standpipe
-															
Logged By:	J. Tomalin		Status:	FINAL											

		GROUND	) TECHN	OLOGY		Во	reho	le R	есо	rd			CP01		Sheet 2	of 2
(-		Tel: 0	k, PE34 3 1553 817	3AF 657	Project:		Luton I	Power	Court			I				
	V	vww.groun	dtechnol	ogy.co.uk	Project II	D:	GTS-1	7-900								
Client:	Peter B	rett Asso	ociates L	_LP	Engineer		Z. Bella	а					round Level: oordinates:	509	7.49mAOI 9499.12(E 1455.02(N	)
						Denth	O.D.	Sa	mple Te	est	SPT/	CPT	Remarks and Results		Installation	
	De	scription			Legend	(m)	Level (m)	Туре	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	SPT/HV/PP PID (	ppm)		
Clasts are we rinded angula Dc.	Structureless CHALK composed of silty GRAVEL and COBBL Clasts are weak medium density, angular to subangular with rinded angular to subangular flint cobbles throughout. Ciria Gr Dc. [WHITE CHALK SUBGROUP]						95.49	B19 D20 D21 D22 B26 D23 D24 D25	8.70 9.50 10.00 10.90 12.00 12.00 13.00 14.00	9.00 9.60 10.45 11.10 13.00 12.45 13.20 14.45	9.00	9	N=12 (2,2/2,3,3,4) (S) N=15 (2,2/3,4,4,4) (S) N=21 (2,2/5,5,6,5) (S) N=15 (2,2/3,3,4,5) (S)			
Hole	Diameter De	tail	Chi	selling					Wa	ater Stri	ke - Ger	neral				
Diameter (mm) 150mm	Hole Depth (m) 15.00m		Depth Top (m	) Duration (mins)	Date 09-02-20		Water Strik 9.60		Standing 1				rel (m) Casing Dep 9.00		Depth Sealed	(m)
	13.00111	13.0011			09-02-20		9.00		2	U		0.70	9.00			
Dates:	Start: 09/0	02/2017	End:	09/02/2017	Remarks	:									1	
Plant:	Dando 2000				1. Inspection	n pit han	d dug from	n ground of 15m bo	level to al. 3. Ex	1.20m	bgl 2. Ex y hole in	plorato stalled	ory hole advanced with 50mm HDPE	using of monitor	cable percuss	sive be
Drilled By:	Matthew Earl				as per client	s require	ements		,^		,,				0 opi	
Logged By:	J. Tomalin		Status:	ΓΙΝΔΙ												
Checked By:	G.Day		Rev:	2												

			) TECHN			BO	reho	le R	eco	rd			CP02		Sheet 1 of
C		Maple R Norfo	oad, King k, PE34 3 1553 817	s Lynn 3AF 657	Project: Project II	D:	Luton I GTS-1		Court			I			1
Client:	Peter B	rett Asso	ociates L	.LP	Enginee	r:	Z. Bella	a					round Level: cordinates:	509	7.65mAOD 9581.29(E) 1416.60(N)
	Da				Legend	Depth	O.D.	Sa	mple Te	est	SPT/	CPT	Remarks and Results	est	Installations
		scription				(m)	Level (m)	Туре	Depth Top (m)	Depth Base (m) 0.30	Casing Depth	Water Depth	SPT/HV/PP PID (p	pm)	_
to medium.	ick slightly sandy Gravel is angular t ced concrete and PUND]	to sub-round	ded fine to		ne			D1 B1 D2 D3	0.00 0.30 0.30 0.50	0.30 0.80 0.50 0.80					
	ick slightly gravel	ly CLAY. Gra	avel is ang	ular fine to		0.80	106.85	B2 D4	0.80 0.80	1.20 1.20					-
coarse flint a [MADE GRO Soft to firm b		htly sandy (		t is fine		1.20	106.45	D5	1.20	1.50	1.20	Dry	2 (1,1/1,1,,)		
[ALLUVIUM]	0	nuy sanuy c		i is inte.				B3 D6	1.50 1.50	2.00 2.00			(S)		
								D7	2.00	2.50	2.00	Dry	2 (1,1/,1,,1) (S)		
						D8	2.50	3.00							
						D9	3.00	3.50	3.00	Dry	N=4 (1,1/1,1,1,1)				
Firm brownis [ALLUVIUM]	m brownish orange mottled CLAY. LLUVIUM]					3.50	104.15	B4 D10	3.50 3.50	4.00 4.00			(S)		
								D11	4.00	4.50	4.00	Dry	N=7 (1,1/2,1,2,2)		
							100.45	B5	4.20	5.00			(S)		
	nish white slightly gular to sub-round					4.50	103.15	D12 D13	4.50 5.00	5.00 6.50	4.50	Dry	N=35 (4,4/8,7,10,1 0) (S)		
Structureless	s CHALK compos	red of very c	reamy whi			- - - - - - - - - - - - - - - - - - -	101.15	B6	6.50	7.00					
SILT. Gravel chalk. Rare c	is angular to sub- cobbles of angula	-angular fine r flint. Grade	e to coarse	flint and				D14	6.50	7.00					
[WHITE CHA	ALK SUBGROUP					D15	7.00	8.00		Dry	N=8 (1,1/2,2,2,2) (S)				
	Poroh	ole continued				- - - 8.00-	99.65		8.00	9.00					
Hole	Diameter De		Chis	selling					Wa	ater Stri	ke - Gei	neral			
Diameter (mm) 150mm	Hole Depth (m) 15.00m	Casing Depth (m) 4.50m	Depth Top (m 0.00	01:00	Date 06-02-20 06-02-20		Water Strik 1.20 10.50		2	<u>"ime (min</u> :0 :0	s) Stand	ling Lev 1.20 10.50	el (m) Casing Dep 4.50	th (m)	Depth Sealed (n
Datas:	Start: 000	102/2017	Endi	06/02/2017	Remarks										
Dates: Plant:	Start: 06/ Dando 2000	/02/2017	End:	00/02/2017	1. Inspection	n pit han							bry hole advanced led with 50mm HD		
Drilled By:	G. Gordan				standpipe a				~ <del>y</del> ı. 0.			2			
Logged By:	M. Smith		Status:	FINAL											
l .			Rev:	2											

		GROUNE				Во	oreho	le R	есо	rd			CP02		Sheet 2 of
C		Norfo	oad, King k, PE34 3 1553 817 idtechnolo	3AF 657	Project: Project II	D:	Luton F		Court						1
Client:	Peter B	rett Asso	ociates L	.LP	Engineer		Z. Bella	a					round Level: oordinates:	509	7.65mAOD 9581.29(E) 1416.60(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base	SPT/C Casing Depth	CPT Water Depth	Remarks and T Results	est	Installations
(Grade Dm)	S CHALK compos ALK SUBGROUP]		creamy wh	iite SILT.				D17	9.00	(m) 10.00		Dry	N=9		
								D18	10.00	11.00		2.,	(1,1/2,2,2,3) (S)		
								D19	11.00	12.00		10	N=12 (1,1/2,3,3,4) (S)		
								D20	12.00	13.00					
								D21	13.00	14.00		10	N=12 (2,2/3,4,2,3) (S)		
								B7 D22	14.00 14.00	15.00 15.00					
	Borehole co	mpleted at 1	5.450m			   15.45 	92.20					9	N=16 (3,3/4,3,5,4) (S)		
Holo	Diamotor Do	tail	Chir	olling	I		JJ			tor Stri	ke - Gen	orol			
Diameter (mm) 150mm	Diameter De Hole Depth (m) 15.00m	) Duration (mins) 01:00	Date 06-02-20	17	Water Strik 1.20	ie (m)	Standing T		s) Standi		rel (m) Casing Dept	h (m)	Depth Sealed (n		
TJUIIII	13.0011	4.50m	0.00	01.00	06-02-20		10.50			0		10.50	4.50		
Dates:	Start: 06/	02/2017	End:	06/02/2017	Remarks	s:									1
Plant:	Dando 2000		LIIU.	50,0212011	1. Inspection	n pit han	d dug fron	n ground	level to	1.20m Explore	bgl 2. Ex	plorate	ory hole advanced led with 50mm HD	using (	cable percussive
					standpipe as							motal		. <u> </u>	
Drilled By:	G. Gordan M. Smith		Status:												
Logged By:															
Checked By:	G.Day		Rev:	2											

		GROUND	) TECHN	OLOGY		Bo	oreho	le R	eco	rd			CP03		Sheet 1 of
		Maple Ro Norfo	oad, King k, PE34 3	ls Lynn 3AF	Project:		Luton	Power	Court	t		1			
	V	Tel: 0 vww.groun	1553 817 Idtechnolo		Project	ID:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	_LP	Enginee	er:	Z. Bell	а					round Level: oordinates:	509	4.62mAOD 9529.89(E) 1354.04(N)
						Danth	O.D.	Sa	mple Te	est	SPT	/CPT	Remarks and		Installations
	De	scription			Legen	nd Depth (m)	Level (m)	Туре	Depth Top (m)	Depth Base	Casing Depth	Water Depth	Results	pm)	
description p [MADE GRO Soft dark bro to subangula	UND] s CHALK with frec rovided. (Drillers UND] whish black sand ar fine to coarse fli	description)	CLAY. Grav			0.25	104.37 104.22	ES1 D2	0.50 0.60	(m) 0.60 0.70					
[MADE GRO	נטאוטי							D3	1.20	1.65	1.20	Dry	N=10 (2,2/2,2,2,4)		-
						E.		D4 ES5	1.60 1.60	1.70 1.70			(S)		
	se yellowish brow avel is angular to					1.90	102.72	D6 D7	1.90 2.00	2.00 2.45	1.50	Dry	N=13 (2,4/4,3,4,2) (S)		
	LACIO-FLUVIAL DEPOSITS - MID PLEISTOCENE]				××××			B8	2.50	3.00					
					××××			D9	3.00	3.45	3.00	Dry	N=21 (3,4/5,4,6,6) (S)		
					× × ×			B11	3.50	4.00					
								D12	4.00	4.45	4.00	Dry	N=28 (2,4/6,6,8,8) (S)		
					× × × × × ×			D13	4.60	4.70					
					× × ×		99.32	D14	5.00	5.45	5.00	Dry	N=6 (1,0/1,1,2,2) (S)		
GRAVEL. Cla subrounded throughout.	S CHALK composi asts are weak, me with angular to su Matrix is silty, whit ALK SUBGROUP]	edium densi brounded ri e. Ciria Gra	ity, angular	to	y   1   1   1   1   1   1   1   1   1		59.52	B15	5.50	6.00					
								D16	6.50	6.60					
								D17	7.00	7.45	7.00	Dry	N=3 (1,0/0,1,1,1) (S)		
	Borehole continued							D18	8.00	8.10					
	Diameter De	selling							ike - Gei				<b>D</b> <i>u</i> <b>c</b>		
Diameter (mm) 150mm	Hole Depth (m) 15.00m	Casing Depth (m) 15.00m	vepth l'op (m	) Duration (mins)	Date 10-02-2		Water Strii 7.30			<u>Fime (min</u> 20	s) Stand	ding <u>Lev</u> 7.00	rel (m) Casing Dep 7.00	<u>ເກ (m)</u>	Depth Sealed (n
	0				Remark	·e.									
Dates:		02/2017	End:	13/02/2017	1. Inspection	on pit har							ory hole advanced		
Plant:	Dando 2000				drilling tech standpipe				n bgl. 3.	Explora	atory hol	e instal	led with 50mm HD	PE mo	onitoring
Drilled By: Logged By:	Matthew Earl G. Day		Status:	FINAL											
,															

		GROUND	) TECHN	OLOGY		Вс	reho	le R	eco	rd			CP03		Sheet 2 of 2
C		Maple Ro Norfo Tel: 0 www.groun	k, PE34 3 1553 817	3AF 657	Project:		Luton I		Court			I			
Client:		rett Asso			Project I Enginee		GTS-1 Z. Bella						round Level: oordinates:	50	4.62mAOD 9529.89(E) 1354.04(N)
	De	scription			Legen	d Depth	O.D. Level		mple Te	Depth	SPT. Casing	CPT Water	Remarks and Results	Fest	Installations
						(11)	(m)	Туре	Top (m)	Base (m)	Depth	Depth	SPT/HV/PP PID (p	opm)	
								D19	9.00	9.45	9.00	7	N=15 (3,4/4,4,3,4) (S)		
								B20	9.50	10.00					
								D21	10.40	10.50					
								D22	11.00	11.45	10.70	7	N=19 (4,4/4,4,5,6) (S)		
								D23	12.00	12.10					
								D24	13.00	13.45	13.00	4.5	N=48 (5,5/10,11,12, 15) (S)		
								B25	14.00	14.50					
								D26	15.00	15.45	15.00	4.7	N=36 (3,3/6,8,10,1 2) (S)		
	Borehole co	mpleted at 15	5.450m			^{□□} <u>1</u> 5.45 - -	89.17								<u>** . * * * * * * * * * * * * * * * * * </u>
						<u> </u>									
Hole Diameter (mm)	Diameter De Hole Depth (m)		Chis	Selling	Date		Water Strik	re (m)			ke - Ge		vel (m) Casing Dep	th (m)	Denth Sealed (~
150mm	15.00m	15.00m		, isolation (mills)	10-02-2		7.30			:0	-, start	7.00	7.00		
Data	Otant: 10	02/2047		12/02/02/17	Remark	s.									
Dates:		02/2017	End:	13/02/2017	1. Inspectio	on pit har	d dug fron	n ground	l level to	1.20m	bgl 2. E	plorate	ory hole advanced	using	cable percussive
Plant:	Dando 2000				drilling tech standpipe a				n ogl. 3.	⊢xplora	nory hol	e instal	lled with 50mm HD	PE mo	onitoring
Drilled By:	Matthew Earl		Stature												
Logged By:	G. Day		Status:												
Checked By:	G.Day		Rev:	2	1										

		GROUNE		OLOGY		Во	reho	le R	eco	rd			CP04		Sheet 1 of 2
G	, v	Maple R Norfo	oad, King k, PE34 3 1553 817	s Lynn BAF 657	Project: Project I	D:	Luton I GTS-1		Court			1			
Client:	Peter Bi	rett Asso	ociates L		Enginee		Z. Bella						round Level: oordinates:	509	4.84mAOD 9599.42(E) 1271.37(N)
	De	oorintion			Legend	Depth	O.D. Level	Sa	mple Te	est	SPT	CPT	Remarks and T Results	est	Installations
		scription				(m)	(m)	Туре	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	SPT/HV/PP PID (p	pm)	
	slightly sandy si angular to sub-a ND]							B1	0.30	0.70					
	slightly sandy sandy is angular fine to					€ €	104.14	B2 ES3	0.70 0.90	1.20 1.00					
	IAL DEPOSITS				× × ×			_00	1.20	1.65	0.00	Dry	N=7		_
					× × ×			B5	1.50	2.00		,	(1,2/1,2,2,2) (S)		-
						بالمربية إيرار		ES6 B8 D7	1.90 2.00 2.00	2.00 2.50 2.45	2.00	Dry	N=6 (1,2/2,1,1,2) (S)		
					$\times$ $\times$ $\times$ $\times$ $\times$ $\times$ $\times$			B9 ES11	2.70 2.70	3.00 2.80					
rounded fine to	htly gravelly CL coarse chalk. /IAL DEPOSITS					3.00	101.84	B12 D10	3.00 3.00	3.50 3.45	1.70	Dry	N=10 (1,1/2,2,2,4) (S)		
					· · · · · · · · · · · · · · · · · · ·			B14	3.80	4.00					_
(Grade Dm)	CHALK compose K SUBGROUP]		creamy wh	ite SILT.		[→] 	100.84	B15 D13	4.00 4.00	4.50 4.45	4.00	Dry	N=26 (1,5/7,7,6,6) (S)		
								D16	5.00	5.45	5.00	Dry	N=16 (1,2/4,4,4,4) (S)		
low cobble con	CHALK composs tent. Cobbles a K SUBGROUP]	re angular i					98.84	D17	6.00	6.45	6.00	Dry	N=12 (1,3/3,3,3,3) (S)		
	Boreho	ble continued				r L		D18	8.00	8.45	8.00	Dry			
	iameter De			selling							ke - Ge				
Diameter (mm) F 150mm	lole Depth (m) 15.45m	Casing Depth (m) 15.00m	Depth Top (m	) Duration (mins)	Date		Water Strik	ke (m)	Standing 1	īme (min	s) Stand	ling Lev	rel (m) Casing Dep	th (m)	Depth Sealed (m)
Dates: S	Start: 15/0	02/2017	End:	16/02/2017	Remarks	s:									
	Dando 2000		L.10.		1. Inspectio	n pit han							ory hole advanced led with 50mm HD		
	Shaun Whitem	ian			standpipe a				5.51		,				5
-	л. Smith		Status:	FINAL											
Checked By: (			Rev:	2											
GHEGREG BY. (	J.Day		Rev:	2											

		GROUNE		OLOGY		Bo	oreho	le R	eco	rd			CP04		Sheet 2	of 2
C		Norfo	oad, King k, PE34 3 1553 817 idtechnolo	8AF 657	Project: Project II	D:	Luton I GTS-1		Court	t						
Client:	Peter Bi	rett Asso	ociates L	LP	Engineer		Z. Bell	а					round Level: oordinates:	50	4.84mAOI 9599.42(E 1271.37(N	)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth	SPT. Casing Depth	/CPT Water Depth	Remarks and Results SPT/HV/PP PID (	Test	Installation	
Structuraliza		ite SILT			94.84	B20 D19	10.00	10.50	10.00	7.2	N=14 (1,3/3,3,4,4) (S) N=12					
(Grade Dm)	S CHALK compose		creamy wh	ite SILT.				D19	10.00	10.45			N=12 (1/2,3,3,4) (S)			
								D21	12.00	12.45	12.00	7.2	N=20 (2,4/4,4,6,6) (S)			
								B23 D22	14.00 14.00	14.50 14.45	14.00	7	N=23 (3,6/6,6,5,6) (S)			
	Borehole cor	npleted at 15	5.450m			  15.45 	89.39	D24	15.00	15.45	15.00	7.3	N=24 (3,3/5,6,6,7) (S)			
	<u> </u>		<u> </u>		1	1										
Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Chis Depth Top (m)	Belling	Date		Water Stril	ke (m)	Wa   Standing		ke - Ge s) Stand		vel (m) Casing Dep	oth (m)	Depth Sealed	(m)
150mm	15.45m	15.00m														
Dates:	Start: 15/0	02/2017	End:	16/02/2017	Remarks	;									I	
Plant:	Dando 2000				1. Inspection	n pit har niques to	d dug fror	n ground of 15.45r	l level to n bgl. 3.	1.20m Explora	bgl 2. E	xplorate e insta	ory hole advanced lled with 50mm HE	using DPE m	cable percuss	ive
Drilled By:	Shaun Whitem	an			standpipe as				. <u>.</u>		,					
Logged By:	M. Smith		Status:	ΓΙΝΔΙ												
Checked By:	G.Ddy		Rev:	2												

		GROUNE	) TECHN	OLOGY		Во	reho	le R	eco	rd			CP05		Sheet 1 of
		Maple R Norfo	oad, King k, PE34 3	s Lynn BAF	Project:		Luton	Power	Court			I			<u>    l                                </u>
	v	Tel: 0 vww.groun	1553 817 Idtechnolo		Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	.LP	Engineer	r:	Z. Bell	а					round Level: pordinates:	50	4.43mAOD 9674.32(E) 1259.80(N)
	De	scription			Legend	Depth	O.D. Level	Sa	mple Te	est Depth	SPT/		Remarks and Results		Installations
Reinforced C						(m)	(m)	Туре	Depth Top (m)	Base (m)	Casing Depth	Water Depth	SPT/HV/PP PID (p	ipm)	
Gravel angul	prownish grey silty lar to subrounded bbble content of a	fine to coar	se flint cor			0.30	104.13	B1 ES2 B4	0.50 1.00 1.20	1.20 1.10 1.70	0.00	Dry	3 (1,1/1,1,1)		
								D3 B7 D6 ES8	1.20 2.00 2.00 2.00	1.65 2.50 2.45 2.10	2.00	Dry	(S) N=6 (1,2/2,2,1,1) (S)		
calcareous S fine and med	se yellowish brow SAND and GRAVI Jium flint and chal UVIAL DEPOSITS	EL. Gravel i k.	s angular t	o subangula	n	3.00	101.43	B10 D9 ES11	3.00 3.00 3.00	3.50 3.45 3.10	3.00	Dry	N=11 (1,2/2,3,3,3) (S)		
SAND. Grav	se yellowish brow el is angular to su UVIAL DEPOSITS	bangular fir	ne to coars	e flint.		4.00	100.43	B14 D12 ES13	4.00 4.00 4.00	4.50 4.45 4.10	4.00	Dry	N=21 (2,3/5,6,5,5) (S)		
calcareous s fine to coars	se yellowish brow SAND and GRAVI e flint and chalk. UVIAL DEPOSITS	EL. Gravel i	s angular t	o subangula			99.43	B16 D15	5.00 5.00	5.50 5.45	5.00	Dry	N=30 (3,6/7,8,7,8) (S)		
silt, gravel is	white structureles angular fine to co				y T	6.70	97.73	B17 D18	6.70 7.00	7.00	7.00	6.2	N=20		
weak. Ciria ( [WHITE CHA	ALK SUBGROUP]								1.00	1.40	1.00	0.2	(S) (S)		
Hole	Diameter De	ole continued		selling					Wa	ater Stri	ke - Gei	neral			
Diameter (mm) 150mm	Hole Depth (m) 15.45m	Casing Depth (m) 15.00m		) Duration (mins)	Date 13-02-20	)17	Water Stri 6.60		Standing 1				el (m) Casing Dep 6.60	th (m)	Depth Sealed (n
Dates: Plant: Drilled By:	Start: 13/ Dando 2000 Shaun Whitem	02/2017 nan	End:	14/02/2017		n pit han							bry hole advanced illed with bentonite		
Logged By:	M. Smith		Status:	FINAL											
Checked By:	G.Day		Rev:	2											

		GROUNE	) TECHN	OLOGY		Во	reho	le R	eco	rd			CP05		Sheet 2 of 2
		Maple R Norfo	oad, King ok, PE34 3	s Lynn BAF	Project:		Luton	Power	Court	t		I			
		Iel: 0 www.grour	1553 817 ndtechnolo		Project I	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	.LP	Enginee	r:	Z. Bell	а					round Level: pordinates:	509	4.43mAOD 9674.32(E) 259.80(N)
	De	scription			Legend	d Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth	SPT/ Casing Depth	CPT Water Depth	Remarks and T Results SPT/HV/PP PID (p		Installations
								D19	9.00	9.45	9.00	7	N=20 (1,3/3,5,6,6) (S)		
angular fine	n white structurele to coarse weak gr ALK SUBGROUP]	ravel. Ciria		l of silty			93.43	D20	11.00	11.45	11.00	7.3	N=14 (1,2/3,3,4,4) (S)		
								D21	13.00	13.45	13.00	6.8	N=14 (1,2/2,2,4,6) (S)		
								B22	14.00	14.50					
	Borehole cor	mpleted at 15	5.450m				88.98	D23	15.00	15.45	15.00	6.9	N=18 (1,1/4,4,5,5) (S)		
Hole	Diameter De	tail	Chis	selling	1				Wa	ater Stri	ı ke - Gei	heral			
Diameter (mm) 150mm	Hole Depth (m) 15.45m	Casing Depth (m)		) Duration (mins	) Date 13-02-20	017	Water Stril 6.60		Standing 1				rel (m) Casing Dep 6.60	th (m)	Depth Sealed (m)
Dates: Plant: Drilled By:	Start: 13/ Dando 2000 Shaun Whitem	02/2017 nan	End:	14/02/2017	1. Inspectio	n pit han	d dug fror o a depth o	n ground of 15.45n	l level to n bgl. 3.	1.20m Explora	bgl 2. Ex	kplorate e backt	bry hole advanced filled with bentonite	using o	cable percussive
Logged By:	M. Smith		Status:												
Checked By:	G.Day		Rev:	2											

		GROUND T	rechno	LOGY		Во	reho	le R	eco	rd			CP06		Sheet 1 of
C	а <b>г</b>	Maple Roa Norfok,	ad, Kings PE34 3/ 553 8176	Lynn AF   57	Project: Project II	D:	Luton I GTS-1		Court	t		I			
Client:	Peter Br	rett Assoc	iates Ll	_P	Engineer	- <u>-</u>	Z. Bell	a					round Level: pordinates:	509	5.69mAOD 740.43(E) 345.35(N)
	Des	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base	SPT/ Casing Depth	CPT Water Depth	Remarks and T Results SPT/HV/PP PID (p		Installations
	ick slightly gravelly sub-rounded fine /UND]							B1	0.50	(m) 1.20					
Brownish bla rounded fine [MADE GRC	ick slightly gravelly to coarse flint, bri UND]	y CLAY. Grave ck and rework	el is angul ked chalk.	ar to sub-		1.20	104.49	ES2 B4 D3	1.00 1.20 1.20	1.10 1.70 1.65	0.00	Dry	3 (1,/1,,1,1) (S)		
Creamy whit is angular to [MADE GRC	e sandy gravelly S sub-rounded fine UND]	SILT. Sand is f to coarse flint	fine to mee t and rewo	dium. Grave rked chalk.		2.00	103.69	D5 B8 ES6	2.00 2.10 2.10	2.45 2.60 2.20	2.00	Dry	2 (1,/1,,1,) (S)		
medium. Gra		ub-angular fir	ne to coar			3.00 3.14 - - - - - - - - - - - - -	102.69 102.55	D7	3.00	3.14	3.00	Dry	50 (25 for 75mm/50 for 65mm) (S)		
	Diameter De		Chise	elling Duration (mins)	Dete						ke - Ge			4h. ()	Death Cealed (a
Diameter (mm) 150mm	Hole Depth (m) 3.10m	Casing Depth (m) D	3.00	02:00	Date		Water Stril	<u>ve (m)</u>	Janaing	nine (min	s) Stand	ing Lev		<u>ui (m)</u>	Depth Sealed (n
Dates: Plant: Drilled By:	Start: 14/0 Dando 2000 Shaun Whitem		End: 1			n pit han							bry hole advanced led with bentonite		
Logged By:	M. Smith	S	Status:	FINAL											
	G.Day		Rev:	2											

		GROUND	) TECHN	OLOGY		Во	reho	le R	eco	rd			CP07		Sheet 1 of 2
		Maple Ro Norfo Tel: 01	oad, King k, PE34 3 1553 817	s Lynn 3AF 657	Project:		Luton I	Power	Court			1			
	v	www.groun	dtechnolo	ogy.co.uk	Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	.LP	Engineer	1	Z. Bella	а					round Level: pordinates:	50	9.27mAOD 9837.97(E) 1279.04(N)
						Denth	O.D.	Sa	mple Te	est	SPT/	CPT	Remarks and		Installations
	De	scription			Legend	(m)	Level (m)	Туре	Depth	Depth Base	Casing	Water	Results	(mac	
	gravelly clayey fin				ar 💥	╪──	(11)	B1 D1	Top (m) 0.00 0.00	(m) 0.60 0.50	Depth	Depth	- · · · ·		-231-23
geotextile / fa	r fine to coarse fli abric material.	nt, brick and	d tarmac. F	Rare		ŧ		ES1	0.30	0.30					
[MADE GRO Soft yellowis [ALLUVIUM]	UND] h white sandy SIL	.T. (Probably	y reworked	l chalk)		0.60	108.67	D2 B2 ES2	0.50 0.60 0.60	1.20 1.50 0.60					
						<u>*</u>									
					(* * * * * * * * * *	<u>}_</u>		D3	1.20	2.00		Dry	N=4 (1,1/1,1,1,1) (S)		
					× × × × ×	¦⊢ ⊁							(3)		_
					$(\times \times \times \times)$	ž Ž									_
						2.20	107.07	D4	2.00	2.50		Dry	N=5 (1,1/1,1,1,2) (S)		_
Clasts are ex	CHALK compose tremely weak, low	w to medium	n density, v	white with	իքրքր	1		D5	2.50	3.00					-
cobbles throu	sh brown staining ughout. Ciria Grac	de Dm	subangula	ar. Rinded fli	nt <u> '  '</u>	ł		20	2.00	0.00					_
WHITE CHA	LK SUBGROUP]					E		D6	3.00	3.50		Dry	N=5		_
													(1,1/1,1,1,2) (S)		-
						È.		D7	3.50	4.00					_
															_
						<u>}-</u>		D8	4.00	4.50		Dry	N=6 (1,1/1,1,2,2)		
						F							(S)		
						Ē		D9	4.50	5.00					-
						É.		D10	5.00	6.00		Dry	N=8		_
						ŧ							(1,1/1,2,2,3) (S)		-
						1									_
						F									_
						₽ ₽		D11	6.00	7.00					
															_
															_
						+		D12	7.00	0.00		Der	N=17		-
						F		512	7.00	8.00		Dry	N=17 (2,2/4,4,3,6) (S)		
						F									
						ŧ									
	Boreho	ole continued				-		D13	8.00	9.00					-
	Diameter De			selling				,			ke - Ger				
Diameter (mm) 150mm	Hole Depth (m) 15.45m	Casing Depth (m) 15.00m	Depth Top (m 0.00	) Duration (mins) 00:45	Date 23-02-20	)17	Water Strik 8.50			ime (min 0	s) Stand	ing Lev 8.50	el (m) Casing Dep 1.50		Depth Sealed (m
Dates:	Start: 23/	02/2017	End:	23/02/2017		n pit han							ory hole advanced		
Plant:	Dando 2000					niques to	o a depth o	of 15.45n					led with 50mm HD		
Drilled By:	G. Gordan														
Logged By:	G. Day		Status:	FINAL											
Checked By:	G.Day		Rev:	2											

		GROUND	) TECHN	OLOGY		Во	reho	le R	eco	rd			CP07		Sheet 2 of 2
C		Maple Ro Norfo	oad, King k, PE34 3 1553 817	is Lynn 3AF 657	Project:		Luton I		Court	t		1			
		ww.groun		ogy.co.uk	Project II	D:	GTS-1	7-900						4.00	07
Client:	Peter B	rett Asso	ciates L	_LP	Engineer	-	Z. Bella	а					round Level: oordinates:	509	9.27mAOD 9837.97(E) 279.04(N)
					Legend	Depth	O.D.	Sa	mple Te	est	SPT/0	CPT	Remarks and T Results		Installations
	De	scription			Legend	(m)	Level (m)	Туре	Depth Top (m)	Depth Base (m)		Water Depth	SPT/HV/PP PID (pp	om)	
								D14	9.00	10.00		7.5	N=18 (2,2/5,4,4,5) (S)		
								D15	10.00	11.00					
								D16	11.00	12.00		9.5	N=29 (3,3/7,7,7,8) (S)		
								D17	12.00	13.00					
								D18	13.00	14.00		9.5	50 (12,12/35,15, ,) (S)		
								D19	14.00	15.00					
	Borehole co	mpleted at 15	5.450m			- - - - - - - - - - - - - - - - - - -	93.82					9.5	N=43 (5,5/9,9,10,1 5) (S)		
		4 - 11		11:	I	L	<u> </u>			L					
Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Depth Top (m	Duration (mins)	Date		Water Stril		Standing -	Time (min	ike - Gen s) Standi	ng Lev		h (m)	Depth Sealed (m
150mm	15.45m	15.00m	0.00	00:45	23-02-20	17	8.50		2	20		8.50	1.50		
Dates:	Start: 23/	02/2017	End:	23/02/2017	Remarks										
Dates: Plant:	Dando 2000	02/2017	ENU.	23/02/2017	1. Inspection	n pit han	d dug from	n ground	l level to	1.20m	bgl 2. Exp	olorate	ory hole advanced u led with 50mm HDI	using (	cable percussive
	G. Gordan				standpipe as				oyı. J.			mold			
Drilled By: Logged By:	G. Day		Status:	ΓΙΝΔΙ											
	-														
Checked By:	G.Day		Rev:	2											

	GRO		DLOGY		Во	reho	le R	есо	rd			CP08		Sheet 1 of 2
C	Ma	ple Road, King Norfok, PE34 3 Tel: 01553 817 groundtechnolo	s Lynn 8AF 657	Project: Project II	D:	Luton I GTS-1		Court			I			-1
Client:	Peter Brett	Associates L	LP	Engineer		Z. Bella						round Level: pordinates:	509	5.40mAOD 9768.74(E) 1186.22(N)
					Donth	O.D.	Sa	mple Te	est	SPT	CPT	Remarks and Results		Installations
	Descrip	tion		Legend	(m)	Level (m)	Туре	Depth Top (m)	Depth Base	Casing Depth	Water Depth	SPT/HV/PP PID (p	pm)	
cobble conte brick and cha [MADE GRO		rounded fine to r brick fragments	coarse flint s.	N KARA	0.50	104.90			(m)					
gravelly CLA	ght brown and greyish Y. Gravel is angular to s th rare brick fragments. UND]	subrounded fine	to coarse flir	nt			B1 ES2	0.70 0.70	1.10 0.80					
slightly sand	CHALK composed of y SILT. Gravel is angula	n to subangular f	ine to coars		1.20 −	104.20	B4 D3	1.20 1.20	1.60 1.65	0.00	Dry	4 (1,/1,,1,2) (S)		
Dm	very weak. From 3.00n	1 becoming weal	c. Ciria Grad				B5 ES6	1.60 1.80	2.00 1.90					
				┝┶┲┸┲ ┟┲╺┲	ŧ.		D7	2.00	2.45	2.00	Dry	N=14 (1,1/2,4,4,4)		
					-  		B8 ES11	2.20 2.30	2.70 2.40			(S)		
							В9	2.70	3.00					
							D10	3.00	3.45	3.00	Dry	N=11 (1,2/2,2,3,4) (S)		
							D12	4.00	4.45	4.00	Dry	N=10 (1,1/1,2,3,4) (S)		
							D13	5.00	5.45	4.00	Dry	N=7 (1,1/1,2,2,2) (S)		
							W3 D14	5.90 6.00	6.45	6.00	Dry	N=9 (1,1/1,2,2,4) (S)		
								8.00	8.60	7.50	<u> </u>			
Hole	Borehole cont		elling				D4	8.00	8.45	ke - Gei				
Diameter (mm)	Hole Depth (m) Casing I	Depth (m) Depth Top (m)	Duration (mins)	Date	17	Water Strik		Standing 1	"ime (min	s) Stand	ling Lev		th (m)	Depth Sealed (m
150mm 150mm		00m 60m		17-02-20 21-02-20		6.00 7.00			:0 :0		5.08 5.90	6.00 7.00		
Dates:	Start: 21/02/20	17 End:	17/02/2017	Remarks	:									1
Plant:	Dando 2000	בות.		1. Inspection	n pit han							ory hole advanced led with 50mm HD		
Drilled By:	Shaun Whiteman			standpipe as				5		,				J
Logged By:	J. Tomalin	Status:	FINAL											

Structureless CHALK com weak GRAVEL. Clasts are subangular. Ciria Grade D [WHITE CHALK SUBGRO	GROUN	GROUND TECHN	OLOGY	В	oreho	le R	есо	rd			CP08		Sheet 2 of 2
Structureless CHALK com weak GRAVEL. Clasts are subangular. Ciria Grade D [WHITE CHALK SUBGRC Borehol Borehol	Maple F Norf Tel:	Maple Road, King Norfok, PE34 3 Tel: 01553 817 www.groundtechnole	s Lynn 3AF 657	Project: Project ID:	Luton GTS-1		Court	:					1
weak GRAVEL. Clasts are subangular. Ciria Grade D [WHITE CHALK SUBGRC Borehol Borehol Diameter (mm) Hole Depth ( 150mm 6.50m	Peter Brett Ass	Peter Brett Associates L	.LP	Engineer:	Z. Bell	а					round Level: oordinates:	509	.40mAOD 768.74(E) 186.22(N)
weak GRAVEL. Clasts are subangular. Ciria Grade D [WHITE CHALK SUBGRC Borehol Borehol Diameter (mm) Hole Depth ( 150mm 6.50m	Description	Description		Legend Dep (m)	th Level (m)	Sai _{Type}	Depth Top (m)	Depth Base (m)	SPT/ Casing Depth	CPT Water Depth	Remarks and Te Results SPT/HV/PP PID (pp		Installations
Hole Diameter Diameter (mm) Hole Depth ( 150mm 6.50m	ts are weak, mediur ade Dc.	ALK composed of silty angular to s Slasts are weak, medium density ar Grade Dc. SUBGROUP]			0 93.40	D5 D6 B2	10.00	10.45	10.00	6.00	N=5 (1,1/1,1,2,1) (S) N=6 (2,3/1,2,2,1) (S) N=7 (2,1/1,1,3,2) (S)		
Diameter (mm)Hole Depth (150mm6.50m	prehole completed at 7	Borehole completed at 14.950m			5 90.45	D7	14.50	14.95	14.50	6.00	N=13 (2,3/3,4,3,3) (S)		
Diameter (mm)Hole Depth (150mm6.50m	eter Detail	ameter Detail Chie	selling				Wa	ater Stri	ke - Ger	neral			
	epth (m) Casing Depth (r 0m 15.00m	e Depth (m) Casing Depth (m) Depth Top (m 6.50m 15.00m	) Duration (mins)	Date 17-02-2017 21-02-2017	Water Stri 6.00 7.00	)	Standing 1 2		s) Stand		rel (m) Casing Depth 6.00 7.00	ו (m) ו	Depth Sealed (m)
Dates: Start: Plant: Dando 200 Drilled By: Shaun Wh Logged By: J. Tomalin Checked By: G.Day	n Whiteman nalin	ndo 2000 aun Whiteman Tomalin Status:		Remarks: 1. Inspection pit had drilling techniques standpipe as per c	to a depth	of 14.95n	level to bgl. 3.	1.20m Explora	bgl 2. Ex atory hole	plorato e instal	ory hole advanced u led with 50mm HDP	ising c PE mo	able percussive nitoring

		GROUNE	) TECHN	OLOGY		Во	oreho	le R	eco	rd			CP09		Sheet 1 of
G		Norfo	oad, King k, PE34 ( 1553 817 ndtechnole	3AF 657	Project: Project II	D:	Luton I GTS-1		Court	t		1			
Client:	Peter B	rett Asso	ociates L	LP	Engineer	1	Z. Bell	а					round Level: cordinates:	509	6.12mAOD 9786.08(E) 1228.81(N)
	De	scription			Legend	Depth	O.D. Level		mple Te	Depth	SPT/ Casing	CPT Water	Remarks and Results		Installations
Prick bardcov	e. (Drillers descr	intion)				,	(m)	Type B1	Top (m)	Base (m) 0.50	Depth	Depth	SPT/HV/PP PID (p	opm)	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
[MADE GRO	UND]	. ,				0.30	105.82								
[MADE GRO	illers description UND]	).				Ł		B2	0.50	1.20					
	wn silty very grav ular fine to coars				•	0.70	105.42								
(IMADE GRO		T some vel	lowish brow	wn staining	-/	1.10	105.02	B3 D11	1.20 1.20	1.80 1.65	0.00	Dry	N=12 (2,3/3,3,3,3)		_
	ay pockets 1 cm					<u>}</u> ↓1.60	104.52						(S)		
Firm brownis	h grey sandy clay chalk and brick.	. Gravel is a	angular to	subangular		ŧ									
[MADE GRO						+	400.00	B4 D12	2.00 2.00	2.60 2.45	0.00	Dry	N=7 (2,2/2,1,2,2)		_
	ngish brown grave bangular fine to c			Gravel is		2.20	103.92						(S)		
	vn and brownish				$-\frac{1}{1}$	2.70	103.42								_
coarse and e	a gravely silt. Gi xtremely weak. L	ow nodular				<b>F</b>		B5 D13	3.00 3.00	3.60 3.45	1.50	Dry	N=7 (1,1/2,2,1,2)		_
Structureless	LK SUBGROUP	ed as yellow			── <del>│┬╵┬╵</del>	-3.20	102.92						(S)		
fine to coarse	eous gravelly SA flint and chalk.		l is angular	to subangul	ar <u> </u>		102.42								-
Structureless	LK SUBGROUP CHALK compos	ed of a grav				-3.70	102.42					_			_
and GRAVEL	n density, angula , Clasts becomes	s weak to ve		ally a SAND		Ē		B6 D14	4.00 4.00	4.60 4.45	1.50	Dry	N=6 (2,/1,1,2,2) (S)		
[WHITE CHA	LK SUBGROUP					ŧ									_
						1									_
						E_		B7	5.00	5.60	3.00	Dry	N=9		_
								D15	5.00	5.45			(3,2/2,2,3,2) (S)		
						1									
						ł		W10	5.70					ſ	_
						₹ ₩		D16	6.00	6.45	6.00	4.00	N=6 (2,1/1,2,1,2)		_
													(S)		
															-
						F									
						Ē								T	_
						È									_
						Ł									-
	Borehr	ble continued				-		B8	8.00	8.60	8.00	4.00			-
Hole	Diameter De			selling				D17	8.00 Wa	8.45 ater Stri	ke - Ge	neral			
Diameter (mm) 150mm	Hole Depth (m) 13.80m	Casing Depth (m) 14.50m		) Duration (mins)	Date 22-02-20	)17	Water Stril 7.00			Time (min 20	s) Stand	ling Lev 5.70	el (m) Casing Dep 1.50	th (m)	Depth Sealed (n
									_			-			
					Demonst										
Dates:	Start: 22/	02/2017	End:	23/02/2017		n pit han							ory hole advanced		
Plant:	Dando 2000												filled with bentonit		
Drilled By:	G. Gordan														
Logged By:	J. Tomalin		Status:	FINAL											
Checked By:	G Dav		Rev:	2											

		GROUNE		OLOGY		Во	reho	le R	есо	rd			CP09	Sheet 2 of 2
C	λΓ .	Norfo	oad, King ok, PE34 3 1553 817 ndtechnolo	8AF 657	Project:		Luton		Court			I		
Client:		rett Asso			Project I Enginee		GTS-1 Z. Bell						oordinates: 5	106.12mAOD 509786.08(E) 221228.81(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	mple Te	Depth Base	SPT/ Casing Depth	CPT Water Depth	Remarks and Tesi Results SPT/HV/PP PID (ppm)	t Installations
										(m)	Deput	Берит	N=5 (1,1/2,1,1,1) (S)	
								D18	10.00	10.45	10.00	4.00	N=7 (3,2/2,2,1,2) (S)	
								D19	12.00	12.45	12.00	5.00	N=7 (1,1/1,2,2,2) (S)	
								B9	13.50	14.50				
	Borehole co	mpleted at 14	4.950m			         	91.17	D20	14.50	14.95	13.80	5.00	N=11 (3,3/2,3,3,3) (S)	
						-								
Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Chis Depth Top (m	Belling			Water Stril		Standing 1	ïme (min	ke - Ger s) Stand	ling Lev	vel (m) Casing Depth (r	m) Depth Sealed (m)
150mm	13.80m	14.50m			22-02-20		7.00		2	0		5.70	1.50	
Dates: Plant: Drilled By:	Start: 22/ Dando 2000 G. Gordan	02/2017	End:	23/02/2017	1. Inspectio	n pit han	d dug fror a depth o	n ground of 14.95n	level to n bgl. 3.	1.20m Explor	bgl 2. Exactly ho	kplorato le back	bry hole advanced usin filled with bentonite up	ng cable percussive pon completion.
Logged By:	J. Tomalin		Status:	FINAL										
Checked By:	G.Day		Rev:	2										

		GROUNE	D TECHN	OLOGY		Bo	oreho	le R	eco	rd			CP10		Sheet 1 of 2
		Norfo	koad, King ok, PE34 3 1553 817	BAF	Project:		Luton	Power	Court						1
	1	www.grour			Project I	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ociates L	_LP	Enginee	r:	Z. Bell	а					oordinates:	5097	.14mAOD 706.78(E) 205.84(N)
	De	scription			Legend	Depth (m)	O.D. Level (m)	Sa _{Type}	Depth Top (m)	Depth Base (m)	SPT/ Casing Depth	CPT Water Depth	Remarks and Te Results SPT/HV/PP PID (pp)		Installations
angular fine	UND] wn silty fine to coa to coarse brick. M					0.20	103.94								
[MADE GRO Reddish grey is angular fin [MADE GRO	/ish brown silty gr e to coarse ash b	avelly fine for the formation of the for	to coarse S and flint.	AND. Grave	ī (	0.60	103.54	B1 ES2	0.70	1.20 1.10					
					n	1.20	102.94	B4 D3	1.20 1.20	1.70 1.65	0.00	Dry	2 (1,/,1,,1) (S)		
								B6 D5 ES10	2.00 2.00 2.00	2.50 2.45 2.10	1.70	Dry	4 (1,/1,,1,2) (S)		
to coarse flin	n sandy slightly of the sandy slightly of th				$\hat{\mathbf{x}}$	2.80	101.34	B7 D8	2.80 3.00	3.00 3.45	3.00	Dry	N=9 (1,/1,1,3,4)		
	se light brown and ND. Gravel is and k.						100.94	B9	3.20	3.70			(S) (S)		
Yellowish bro	own silty very grav	velly fine to	coarse SA	ND Gravel is		×	99.74	D11 B12	4.00 4.40	4.45 4.80	4.00	Dry	N=25 (2,7/7,6,6,6) (S)		
angular fine ( [ALLUVIUM] Brownish wh gravel is ang	to coarse flint. ite structureless ( ular to subangula	CHALK. Col	mposed of	a gravelly sil	× × ×	4.80	99.34	D13	5.00	5.45	5.00	Dry	N=11 (2,2/2,3,3,3)		
	becoming white.							B14	5.20	5.70			(S)		
								D15	7.00	7.45	7.00	4	N=8 (1,2/2,2,2,2)		
													(S)		
		ole continued													
Hole Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)		) Duration (mins)	Date		Water Stri	ke (m)	Wa Standing T		ke - Gei s) Stand		el (m) Casing Denth	ı (m)   [	Depth Sealed (m
150mm	15.45m	15.00m			2010		Ou				, san			<u>,,</u>	(iii
Datas:	Start: 40	02/2017	Endi	16/02/2017	Remarks	s:									
Dates:		02/2017	End:	10/02/2017	1. Inspectio	n pit har							bry hole advanced u		
Plant:	Dando 2000				unning tech	inques to	o a depth (	UI 15.45N	n ugi. 3.	⊂xpiora	nory nol	e Dacki	illed with bentonite u	upon c	unpletion.
Drilled By: Logged By:	Shaun Whitem J. Tomalin	nan	Status:	FINAL											
Checked By:	G.Day		Rev:	2											

		GROUND	) TECHN	OLOGY		Во	oreho	le R	есо	rd			CP10		Sheet 2 of 2
	лг	Maple Ro Norfo		js Lynn 3AF	Project:		Luton	Power	Court	:		1			
		www.groun	dtechnol	ogy.co.uk	Project II	D:	GTS-1	7-900							
Client:	Peter B	rett Asso	ciates I	_LP	Enginee	r:	Z. Bell	а					round Level: oordinates:	509	l.14mAOD 9706.78(E) 205.84(N)
						Denth	O.D.	Sa	mple Te	est	SPT	/CPT	Remarks and T Results	est	Installations
	De	scription			Legend	(m)	Level (m)	Туре	Depth Top (m)	Depth Base (m)	Casing Depth	Water Depth	SPT/HV/PP PID (p	pm)	
gravel is and 13.00m beco 10.0m. Dc	e structureless Cl jular to subangula oming white. Mode	ar fine to coa erate chemic	irse and w	eak. From			94.14	D16 B17 D18 D19 B20	9.00 10.00 11.00 13.00	9.45 10.50 11.45 13.45 14.50	9.00	<ul><li>4.2</li><li>7.5</li><li>6.5</li></ul>	N=9 (1,2/1,2,3,3) (S) N=12 (1,3/3,2,3,4) (S) N=13 (3,3/3,3,3,4) (S)		
	Borehole co	mpleted at 15					88.69	D21	15.00	15.45	15.00	7.3	N=21 (2,4/5,5,6,5) (S)		
Hole Diameter (mm)	Diameter De Hole Depth (m)	Casing Depth (m)	Chis Depth Top (m	Selling	Date		Water Stri	ke (m) 📑	Wa Standing T		ke - Ge s) Stand		vel (m) Casina Dep	th (m)	Depth Sealed (m)
150mm	15.45m	15.00m													
Dates:	Start: 16/	/02/2017	End:	16/02/2017	Remarks	s:									
Plant:	Dando 2000				1. Inspection	n pit har	d dug fror	n ground of 15.45n	level to n bal. 3	1.20m Explora	bgl 2. E	xplorate e backt	ory hole advanced filled with bentonite	using o	cable percussive
Drilled By:	Shaun Whitem	nan							- 9 0.		, 1101				
Logged By:	J. Tomalin		Status:	FINAL											
Checked By:			Rev:	2											

									1		
	GROUND TECHNOLOGY		Т	rial	Pit F	Rec	corc	l		TP Sheet	
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Luto	on Power	r Cou	rt				
)	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	6-17-900	)					
Client:	Peter Brett Associates LLP	Eng	ineer:			Z. E	Bella		Ground Le		105.91 509474.62
Orientation of Tria	l Pit:	Length:	1.5	0 Wid	ith: 0.60	0 C	Depth:	1.70			221471.57
	Description	Legend	Depth (m)	O.D. Level (m)	Wate	er	Sar		Remar		Test Results PID (ppm)
fine to coarse content. Grave to coarse brick limestone and angular to sub [MADE GROU			1.70	104.21			В 1	0.20			
						١٨	/ater Level	Observations			
Date:	15/02/2017		Date		Wate	er Strike			ïme (Mins)	Sta	nding Level (m)
Plant:	JCB 3CX										
Logged By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun	dwate	er Rema	arks	١	lo Grou	undwater E		d	
Checked By:	Remar	rks			e te	excavat erminat	or to a dep ted due to	ed using m oth of 1.70n collapsing with arising	n bgl. hole c		
		Hole S	stabilit	У		ι	Jnstabl	e			

	GROUND TECHNOLOGY		Т	rial	Pit Re	cord			<b>P02</b> et 1 of 1
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Lutor	Power Co	ourt			
	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS-	17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Level Coordinates	106.07 508346.21
Orientation of Trial	l Pit:	Length	3.0		n: 0.60	Depth:	1.00		197735.45
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Top (m) Depth (m)	Remarks ar	nd Test Results PID (ppm)
Reinforced cor [MADE GROU				105.87			(11)		
subrounded fin is angular to su concrete, limes siltstone. [MADE GROU At 0.50m bgl: con 500mm thick.	n sandy angular to ne to coarse GRAVEL. Gravel ubrounded fine to coarse flint, stone, sandstone and <u>ND]</u> <u>ncrete obstruction approximately</u> <u>al Pit completed at 1.000m</u>	- - - - - - - - -	0.20	105.07		D 1	0.40		
Date:	15/02/2017		Date		Water Stri		Observations Standing T	ime (Mins)	Standing Level (m)
Plant: Logged By:	JCB 3CX	Group		er Remar					סנפווטווע בפעפו (ווו)
Checked By:	M. Smith Rev: 2	Remai		, rondi		1. Trial p excavat terminat concrete	oit excavat or to a dep ted as coul	ed using mech oth of 1.00mbgl d not penetrate on 3. Trial pit b opletion.	. 2. Trial pit e through
		Hole S	stabilit	y		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	corc			<b>P03</b> et 1 of 1
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Lutor	n Power Co	ourt			
5	Tel: 01553 817657 www.groundtechnology.co.uk	•		GTS	-17-900				
Client:	Peter Brett Associates LLP		ineer:			Bella		Ground Level Coordinates	107.58 509523.92
Orientation of Tria	al Pit:	Length:	2.5	0 Widt	h: 0.60	Depth:	4.00	Demortice of	221439.76
	Description	Legend	Depth (m)	Level (m)	Water	Type Ref	Depth Top (m) Depth Base (m)	SPT/HV/PP	nd Test Results PID (ppm)
is angular to s brick, chalk an [MADE GROU Orange sandy GRAVEL. Gra fine to coarse [MADE GROU Dark greyish b coarse GRAVE subrounded fin coke, [MADE GROU Soft to firm ligt orange sandy angular to sub flint and sands [MADE GROU	ne to coarse GRAVEL. Gravel subrounded fine to coarse flint, ind sandstone. JND] v slightly clayey fine to coarse vel is angular to subrounded flint. JND] black sandy clayey fine to EL. Gravel is angular to ne to coarse flint, brick, clinker, JND] ht green mottled cream and gravelly CLAY. Gravel is brounded fine to coarse brick, stone.		0.10 0.45 0.55 1.00	107.48 107.13 107.03 106.58		ES 1 B 2 D 3	0.30 0.50 1.50 2.50		
Date:	20/02/2017		Date		Water Str		Observations Standing T	ime (Mins)	Standing Level (m)
Plant:	JCB 3CX		Duit						
Logged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun	dwate	er Remai	rks	No Grou	undwater E	ncountered	
		Remar	rks			excavat	or to a dep	ed using mech th of 4.00m bo ing's upon cor	gl. 2. Trial pit
		Hole S	stabilit	у		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	cord	1		<b>ГР05</b> eet 1 of 1
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Luto	n Power Co	ourt			
M	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	-17-900			1	
Client:	Peter Brett Associates LLP		ineer:		Z.	Bella		Ground Level Coordinates	107.64 509537.85
Orientation of Tria	l Pit:	Length:	2.5	0 Widt	h: 0.60	Depth:	4.00		221442.08
	Description	Legend	Depth (m)	Level (m)	Water	Type Ref	Depth Top (m) Depth Base (m)	SPT/HV/PP	IND (ppm)
coarse SAND. subrounded fir coal, coke and [MADE GROU Light grey sand Gravel is angu medium siltsto clinker. [MADE GROU Firm light oran silty slightly gra	black very gravelly fine to Gravel is subangular to he to coarse flint, sandstone, clinker. ND] dy fine to medium GRAVEL. lar to subangular fine to ne, sandstone, coke and ND] ge mottled cream and green avelly CLAY. Gravel is angular fine to medium brick and flint.		0.10	107.54 107.14 106.54		B 1 ES 2 B 3	0.30 0.50 0.30 0.40 0.60 0.70		
	becoming more gravelly.		3.80	103.84		D 5	3.00		
Firm dark grey [ALLUVIUM]	ish green sandy CLAY.								
	al Pit completed at 4.000m	~~	4.00	103.64		- D 6	4.00		
Date:	20/02/2017		Date		Water Str		Observations Standing T	ime (Mins)	Standing Level (m)
Plant:	JCB 3CX								
₋ogged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun		er Rema	rks	1. Trial p excavat	oit excavat or to a dep	incountered ed using mech th of 4.00m b ing's upon col	gl. 2. Trial pit
		Hole S	tabilit	y		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	corc	1	s	<b>TP07</b> heet 1 of 1
		Projec	t:	Lutor	n Power Co	ourt			
M	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS-	17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Leve Coordinates	el 104.69 509532.82
Orientation of Tria	al Pit:	Length	2.5		n: 0.60	Depth:	3.60		221366.42
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Top (m)	Remarks SPT/HV/PP	and Test Results PID (ppm)
Gravel is angu flint, chalk, bri [MADE GROU Soft dark brov CLAY. Gravel coarse of mixe	JND] sandy fine to coarse GRAVEL. ular to rounded fine to coarse ick limestone and concrete. JND] whish black sandy gravelly is angular to rounded fine to ed lithology (including brick, bal and clinker).		0.20	104.49 104.29		B 1 ES 2	0.30		
			1.40	103.29		D 3	1.50		
Firm dark grey gravelly SILT. [ALLUVIUM]	yish black very organic slightly		2.00	102.69		D 4	2.50		
very organic fi angular to sub and shell frag [ALLUVIUM] Green mottled SAND. Grave to medium cha [ALLUVIUM]	n grey mottled white gravelly ine to medium SAND. Gravel is prounded fine to coarse flint ments. d white very gravelly fine I is angular to subrounded fine alk, flint and shell fragments.	× × × ×	2.70 3.00 3.60	101.99 101.69 101.09		D 5	3.50		
Date:	17/02/2017		Date		Water Stri		Observations Standing T	ime (Mins)	Standing Level (m)
Plant:	JCB 3CX								
∟ogged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun Remai		er Remar		1. Trial excavat	pit excavat	ed using me oth of 3.60m l ing's upon co	bgl. 2. Trial pit
		Hole S	stabilit	y		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	cord			<b>P08</b> eet 1 of 1
		Projec	t:	Lutor	n Power Co	urt			
<b>5</b>	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	-17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Level Coordinates	104.63 509515.72
Orientation of Tria	al Pit:	Length	2.5		h: 0.60	Depth:	1.10		221345.88
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Depth Base (m)	Remarks a	nd Test Results PID (ppm)
Reinforced Co [MADE GROU			0.25	104.38					
Gravel is fine subrounded fl [MADE GROU At 0.30m bgl: co side of pit Brown clayey Gravel is angu coarse of mixe limestone). [MADE GROU	JND] ncrete beam running across long gravelly fine to coarse SAND. ular to subrounded fine to ed lithology (brick, concrete,		0.55	104.08		B 1 ES 2	0.70 0.80		
Date: Plant: Logged By: Checked By:	16/02/2017 JCB 3CX Z. Bella Status: FINAL M. Smith Rev: 2	Groun Remai	ŕks	er Remai	Water Strik	No Grou 1. Trial p ground encount	bit dug with level to 1.1 ering susp	ncountered	n. 2. Trial pit

	GROUND TECHNOLOGY		Т	rial	Pit Re	corc	1		<b>ГР09</b> eet 1 of 1
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Luto	n Power Co	urt			
	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	-17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Level Coordinates	107.65 509606.64
Orientation of Trial F	Pit:	Length	2.5		h: 0.60	Depth:	3.50		221400.49
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Top (m) Depth Base (m)	Remarks a	IND Test Results
coarse GRAVEL subangular fine [MADE GROUN Dark greyish bla coarse SAND. C subangular fine [MADE GROUN Medium dense o very gravelly fin angular to subar and coke. [MADE GROUN Structureless CI white gravelly S weak (Reworker [MADE GROUN Soft green mottl silty gravelly CL subangular fine brick. [MADE GROUN	and brown sandy fine to Gravel is angular to to coarse limestone (type 1). ID] ack very gravelly fine to Gravel is angular to to coarse brick. ID] dark greyish black sandy e to coarse SAND. Gravel is ngular fine to coarse coal ID] HALK Composed of greyish ILT. Clasts are extremely d material). ID] led orangish brown and red AY. Gravel is angular to to medium chalk, flint and		0.10 0.25 0.90 1.70 2.00 3.50	107.55 107.40 106.75 105.65 105.65		В 1 ES 2 D 3	0.50		
Date: Plant:	16/02/2017 JCB 3CX		Date		Water Strik		Observations Standing T	ime (Mins)	Standing Level (m)
Logged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun Rema		er Rema		1. Trial ground reaching	pit dug with level to 3.5 g completio	0m bgl and te	excavator from rminated upon al pit backfilled
		Hole S	stabilit	У		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	cord	2		TP10 Sheet 1 of 2
	Maple Road, Kings Lynn Norfolk, PE34 3AF Tel: 01553 817657	Projec	t:	Luto	n Power Co	urt			
)	www.groundtechnology.co.uk	Projec	t ID:	GTS	-17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Lev Coordinates	
Orientation of Tria	l Pit:	Length	2.5		h: 0.60	Depth:	4.00		221425.79
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sai	Depth Top (m) Depth Base (m)	Remarks	s and Test Results PID (ppm)
subangular to shingle), flint, g [MADE GROU Dark greyish b GRAVEL. Grav fine to coarse brick and flint. [MADE GROU Dark orange m clayey GRAVE subrounded fir limestone, cha [MADE GROU Dark greyish b fine to coarse subangular fin ferrous metal, [MADE GROU Dark to firm gre cream sandy s	ND]         black sandy fine to coarse         vel is angular to subrounded         coal, coke, clinker, siltstone,         ND]         CHALK, composed of silty         L. Clasts are weak medium         in to subangular.         ND]         nottled grey and brown sandy         E. Gravel is angular to         ne to coarse flint, brick,         ilk, siltstone and sandstone.         ND]         black angular to subangular         GRAVEL. Gravel is angular to         e to coarse coal, coke, slag,         flint and chalk.         IND]         een mottled red, orange and         slightly gravelly CLAY. Gravel         to subrounded fine to medium		0.05 0.30 0.45 0.65 0.80	107.57 107.32 107.17 106.97 106.82		ES 1 ES 2 B 3 ES 4	0.20 0.40 0.50 0.70		
Black and whit GRAVEL. Grav fine to coarse siltstone. [MADE GROU Firm dark gree is fine to media	te sandy fine to coarse vel is angular to sub rounded brick, limestone, flint and		3.20 3.80 4.00	104.42 103.82 <del>103.62</del>		ES 6	3.30		
						Water Leve	I Observations		
Date:	15/02/2017		Date		Water Strik	(m)	Standing T	ime (Mins)	Standing Level (m)
Plant:	JCB 3CX								
Logged By:	Z. Bella Status: FINAL	Groun	dwate	r Rema	rks	No Gro	undwater E	ncountered	
Checked By:	M. Smith Rev: 2	Remai	rks			1. Trial excavat	pit excavat for to a dep	ed using me	echanical bgl. 2. Trial pit
		Hole S	stabilit	у		Stable			

Client: Per Orientation of Trial Pit: D brick, flint, chalk an [MADE GROUND]	Tel: 01553 817657 www.groundtechnology.co.uk eter Brett Associates LLP Description nd coal.	Eng Length:	t ID: ineer: 2.5	GTS		Bella		Ground Level	2 2 of 2
Client: Per Orientation of Trial Pit: D brick, flint, chalk an	www.groundtechnology.co.uk eter Brett Associates LLP Description nd coal.	Eng Length:	ineer: 2.5 Depth	0 Wid	Z.			Ground Level	407.00
Orientation of Trial Pit: D brick, flint, chalk an	Description	Length:	2.5 Depth	0 Wid				Ground Level	407.00
D brick, flint, chalk an [MADE GROUND]	nd coal.		Depth		th: 0.60			Coordinates	107.62 509576.69
brick, flint, chalk an	nd coal.	Legend				Depth:	4.00	Development	221425.79
[MADE GROUND]	/		(11)	Level (m)	Water		Depth Top (m)	Remarks an	d Test Results PID (ppm)
Plant: JC	M. Smith Rev: 2	Ground Remar	'ks	r Rema	Water Stri	No Grou 1. Trial p excavato	oit excavate for to a dep	me (Mins) S incountered ed using mech th of 4.00m bg ing's upon com	I. 2. Trial pit

GROUND TECHNOLOGY		T	rial	Pit Re	corc	1		<b>TP11</b> neet 1 of 1
Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	ct:	Luto	n Power Co	ourt			
Tel: 01553 817657 www.groundtechnology.co.u	^k Projec	t ID:	GTS	-17-900				
Client: Peter Brett Associates LLP	Enç	gineer	:	Z.	Bella		Ground Leve Coordinates	l 107.60 509582.65
Orientation of Trial Pit:	Length	: 2.5		h: 0.60	Depth:	3.80		221408.77
Description	Legend	Depth (m)	O.D. Level (m)	Water	Type Ref	Depth Depth Base (m)	SPT/HV/PP	and Test Results PID (ppm)
Light brown silty sandy fine GRAVEL. Gravel is angular to subrounded fine flint, claystone and sandstone. [MADE GROUND] Dark greyish black silty very sandy slightly clayey fine to coarse GRAVEL. Gravel is subangular to rounded flint, brick, sandstone, siltstone. [MADE GROUND] Orange sandy clayey fine to coarse GRAVEL. Gravel is angular to subangular fine to coarse flint and limestone. [MADE GROUND] Structureless CHALK composed of white and cream GRAVEL. Clasts are weak low to medium density angular to subangular. [MADE GROUND] Brown silty clayey sandy fine to coarse GRAVEL with medium cobble content. Gravel is angular to subrounded fine to coarse brick, flint and sandstone. [MADE GROUND] Soft to firm light green mottled orange sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to medium flint, brick and sandstone. [MADE GROUND]		0.10 0.50 1.10 1.30 1.50	107.50 107.10 106.50 106.10 106.10		ES 1 B 2 D 3	0.50		
Date:         20/02/2017           Plant:         JCB 3CX		Date		Water Stri		Observations Standing T	ime (Mins)	Standing Level (m)
Logged By: Z. Bella Status: FINAL	Grour	Idwate	er Rema	rks	No Grou	undwater E	Incountered	
Checked By: M. Smith Rev: 2	Rema	rks			excavat	or to a dep	ed using meo th of 3.80m t ing's upon co	ogl. 2. Trial pit
	Hole S	Stabilit	ty		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	corc	1		<b>TP12</b> eet 1 of 1
		Projec	t:	Lutor	n Power Co	urt			
	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	-17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Level Coordinates	509556.25
Orientation of Tria	al Pit:	Length	3.0		h: 0.60	Depth:	3.20		221299.36
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Depth Base (m)	Remarks a	and Test Results PID (ppm)
Gravel is angu coarse brick, f coal, coke and [MADE GROL Soft to firm da gravelly CLAY subrounded fir coke, glass, lir [MADE GROL Soft to firm da slightly gravell subrounded fir metal and she [MADE GROL Orange clayey fine to coarse subrounded fir [GLACIOFLUV PLEISTOCEN Orange clayey Gravel is angu coarse flint [GLACIOFLUV PLEISTOCEN	JND]         gravelly fine to coarse SAND.         ular to subrounded fine to         flint, slate, tiles, sandstone,         d concrete.         JND]         rk brown sandy slightly         C Gravel is angular to         ne to coarse brick, flint, coal,         mestone and concrete.         JND]         rk greyish brown sandy         ly CLAY. Gravel is angular to         ne to coarse flint, brick, bone,         ell fragments.         JND]         y sandy angular to subrounded         GRAVEL. Gravel is angular to         ne to coarse flint.         viAL DEPOSITS - MID-         IE]         y gravelly fine to coarse SAND.         ular to subrounded fine to         viAL DEPOSITS - MID-		0.15 0.50 1.05 1.45 2.00	104.93 104.58 104.03 103.63 103.08		ES 1 D 3 ES 4 D 5	0.30		
Date: Plant:	20/02/2017 JCB 3CX		Date		Water Strik		Observations Standing T	ime (Mins)	Standing Level (m)
Logged By:	Z. Bella Status: FINAL	Groun	dwate	er Rema	rks	No Grou	undwater E	incountered	
Checked By:	M. Smith Rev: 2	Rema	rks			excavat couldn't	or to a dep be advanc	ed due to co	hanical gl, where hole mpacted soils. 2. upon completion
		Hole S	Stabilit	ly		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	corc	1		<b>TP13</b> Sheet 1 of 1
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	:t:	Lutor	Power Co	ourt		1	
$\mathbf{M}$	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS-	17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Le Coordinate	
Orientation of Tria	al Pit:	Length	: 3.0		n: 0.60	Depth:	4.00		221274.03
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Depth Base (m)	Remar SPT/HV/PP	ks and Test Results PID (ppm)
coarse SAND. angular to sub asphalt covered [MADE GROL] Multi-coloured GRAVEL. Gra subrounded bu limestone, coar [MADE GROL] Soft brown mc CLAY. Gravel subangular bri [MADE GROL] Firm desiccate CLAY. Gravel subrounded fli [GLACIOFLU] PLEISTOCEN Firm light oran Gravel is fine to subrounded fli [GLACIOFLU] PLEISTOCEN Firm light oran Gravel is fine to subrounded fli [GLACIOFLU] PLEISTOCEN	IND]         black very gravelly fine to         Gravel is fine to coarse         irounded limestone, brick, flint,         ad coal and coke.         IND]         sandy fine to coarse         vel is fine to coarse angular to         rick, slag, sandstone, flint,         al and concrete.         IND]         ottled orange sandy gravelly         is fine to coarse angular to         rick, coal, flint and coke.         IND]         ottled orange gravelly silty         is fine to medium angular to         nt, chalk and shell fragments.         /IAL DEPOSITS - MID-         E]         v sandy fine GRAVEL. Gravel         um angular to subrounded         /IAL DEPOSITS - MID-         E]         rge sandy gravelly CLAY.         to medium angular         nt and chalk.         /IAL DEPOSITS - MID-         E]		0.10 0.40 0.60 1.30 2.10 2.50	104.96 104.46 104.46 103.76 102.96 102.56		ES 1 B 2 ES 3	0.30 0.50 1.50 3.50		
Date:	20/02/2017		Date		Water Stri		Observations Standing T	ime (Mins)	Standing Level (m)
Plant:	JCB 3CX								~ ( )
Logged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun Rema		er Remar	ks		undwater E pit excavat		
			-			excavat	or to a dep	th of 4.00n	n bgl. 2. Trial pit completion.
		Hole S	Stabilit	у		Stable			

$\bigcirc$	GROUND TECHNOLOGY		Т	rial	Pit R	ecord			<b>ГР14</b> eet 1 of 1
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Luto	n Power C	Court			
	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	-17-900				
Client:	Peter Brett Associates LLP		ineer			Z. Bella		Ground Level Coordinates	509595.14
Orientation of Tria	al Pit:	Length			th: 0.60	Depth:	0.30 nple Test		221293.20 and Test Results
	Description	Legend	Depth (m)	Level (m)	Water	Type Ref	Depth Depth	SPT/HV/PP	PID (ppm)
Reinforced co [MADE GROU									
	rial Pit completed at 0.300m			104.99					
Date:	20/02/2017		Date		Water S	Water Level Strike (m)	Observations Standing T	ime (Mins)	Standing Level (m)
Plant: Logged By:	JCB 3CX Z. Bella Status: FINAL	Groun	dwate	er Rema	Irks	No Ori	un du		
Checked By:	M. Smith Rev: 2	Rema				1. JCB u concrete	unable to b e. Concrete	incountered reak through was reinforc ninated at 0.3	ed with 10mm+
		Hole S	Stabilit	y		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	corc	1		<b>ГР15</b> eet 1 of 1
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Lutor	n Power Co	ourt			
	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	-17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Level Coordinates	104.62 509675.47
Orientation of Trial	Pit:	Length	3.0		h: 0.60	Depth:	4.00		221327.83
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Top (m) Depth Base (m)	Remarks a	nd Test Results PID (ppm)
Reinforced con [MADE GROUN									
Concrete pad. [MADE GROUN			0.20	104.42					
is fine to coarse	n sandy gravelly CLAY. Gravel e angular to subrounded alk, flint, limestone, coal and ND]		0.50 0.60	104.12 104.02		ES 1	0.70		
Dark brownish coarse GRAVE angular to suba slate, ferrous m [MADE GROUN	black very sandy fine to L. Gravel is fine to coarse angular brick, flint, glass, netal and limestone. ND]		1.40	103.22		В 2	1.10		
fine to medium	dy gravelly CLAY. Gravel is angular to subrounded flint, d shell fragments.					ES 3	1.50		
Soft dark grey o [ALLUVIUM]	organic sandy CLAY.		2.20	102.42		D 4	2.50		
sandy gravelly weak, low dens orangish brown subangular. (Gi [WHITE CHAL	( SUBGROUP]		3.10 4.00	101.52		D 5	3.50		
	15/02/2017						Observations		
Date: Plant:	15/02/2017 JCB 3CX		Date		Water Stri		Standing T	ime (Mins)	Standing Level (m)
Logged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun		er Rema	rks	1. Trial excavat	oit excavat or to a dep	Encountered ed using mecl oth of 4.00m by ing's upon cor	gl. 2. Trial pit
		Hole S	stabilit	У		Stable			

GROUND TECHNOLOGY		Т	rial	Pit Re	corc	1		<b>P16</b> eet 1 of 1
Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Luto	n Power Co	ourt			
Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	6-17-900				
Client: Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Level Coordinates	104.67 509721.48
Orientation of Trial Pit:	Length:	2.5		lth: 0.60	Depth:	4.00		221348.28
Description	Legend	Depth (m)	O.D. Level (m)	Water	Type Ref	Depth Top (m) Depth (m)	SPT/HV/PP	nd Test Results PID (ppm)
Reinforced Concrete. [MADE GROUND]			101.07					
Dense brownish black very sandy fine to coarse GRAVEL. Gravel is angular to subrounded fine to coarse brick, flint, concrete, coal, coke and slag. [MADE GROUND]	-	0.30	104.37		В 1	0.40		
Soft brown sandy gravelly CLAY . Gravel is angular to subrounded fine to medium brick, flint with occasional shell fragments. [MADE GROUND]		0.90	103.77		ES 2	1.00		
Structureless CHALK Composed of off white sandy gravel. Clasts are weak to medium density, with some angular to subangular fine to coarse gravel sized flint. (Grade Dc) [WHITE CHALK SUBGROUP]		1.45	103.22		ES 3	2.00		
Structureless CHALK Composed of off white gravel. Clasts are weak to very weak chalk.		2.50	102.17			2.00		
Gravel is angular to subangular flint. (Grade Dc) [WHITE CHALK SUBGROUP]								
Trial Pit completed at 4.000m		4.00	100.67					
Date: 16/02/2017		Date		Water Str		Observations Standing T	ime (Mins)	Standing Level (m)
Plant: JCB 3CX		2010			- \/			<b></b>
Logged By: Z. Bella Status: FINAL Checked By: M. Smith Rev: 2	Groun		er Rema	arks			Encountered	excavator from
	terna				ground	level to 4.0	00m bgl 2. Tria completion.	
	Hole S	stabilit	y		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	corc			<b>TP18</b> Sheet 1 of 1
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Lutor	n Power Co	ourt			
$\mathbf{M}$	Tel: 01553 817657 www.groundtechnology.co.uk	-			-17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Lev Coordinates	
Orientation of Trial	Pit:	Length:	2.5		h: 0.60	Depth:	1.30		221333.08
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Top (m) Depth Base (m)	Remarks	s and Test Results PID (ppm)
and some sand to subangular f concrete. Cobb brick, flint, cond brick wall fragm size. [MADE GROUN	LES, with occasional boulders dy GRAVEL. Gravel is angular fine to coarse brick, slag and bles are angular to subangular crete and slag. Boulders are nents up to 50 x 70 x 20 cm in ND] al Pit completed at 1.300m		1.30	105.03		ES 2	1.00		
Date: Plant:	16/02/2017 JCB 3CX		Date		Water Stri		Observations Standing T	ime (Mins)	Standing Level (m)
Logged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun	dwate	r Rema	ŕks	No Grou	undwater E	Encountered	
UNCONCU DY.		Remar	ks			ground at 1.30n	level to 1.3 n bgl due to s of trial pil	0m bgl. 2. T o stability is	I excavator from rial pit terminated sues affecting backfilled with
		Hole S	tabilit	у		Unstabl	e		

GROUND TECHNOLOGY		Т	rial	Pit Re	ecord	ł	S	<b>TP19</b> neet 1 of 1
	Projec	t:	Luto	n Power C	ourt			
Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	-17-900				
Client: Peter Brett Associates LLP	Engineer:		Z	. Bella		Ground Leve Coordinates	I 104.62 509713.39	
Orientation of Trial Pit:	Length	2.5		h: 0.60	Depth:	1.90	1	221291.18
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Depth Base (m)		and Test Results PID (ppm)
Reinforced concrete. [MADE GROUND] Brown slightly clayey sandy GRAVEL, with a high cobble content. Gravel is angular to subrounded fine to coarse mixed anthropogenic material (brick, concrete, glass etc.). [MADE GROUND] At 0.70m bgl: brick wall exposed on side wall of trial pit. Trial Pit completed at 1.900m	- 	0.40	104.22		ES 1 B 2 D 3	0.50		
	- - - - - - - - - - - - - - - - - - -							
Checked By: M. Smith Rev: 2	Groun		er Rema	Water St	trike (m) No Grou 1. Trial ground at 1.90r	pit dug with level to 1.9 n bgl due to g progress	Encountered n mechanical 00m bgl. 2. Tr o sidewall sta	Standing Level (m) excavator from ial pit terminated ability issues Trial pit backfilled
	Hole S	Stabilit	У		Unstabl	e		

	GROUND TECHNOLOGY		Т	rial	Pit Re	corc	ł		<b>TP20</b> eet 1 of 1
		Projec	:t:	Luto	n Power Co	ourt			
	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	-17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z.	Bella		Ground Level Coordinates	104.18 509686.54
Orientation of Tri	al Pit:	Length	Length: 3.0		th: 0.60	Depth:	4.00		221209.52
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Top (m)	Remarks a	and Test Results PID (ppm)
MADE GROU Dark greyish GRAVEL. Gra subrounded b metal, slate, s [MADE GROU Brown and or is fine to med brick, flint, co [MADE GROU Soft brown sa fine to coarse chalk, and co [MADE GROU Soft dark grey with abundan fine to coarse chalk and she	UND] gravelly fine to coarse SAND. UND] black mottled orange sandy avel is fine to coarse angular to orick, coke, chalk, flint, slag, sandstone, limestone and coal. UND] range sandy GRAVEL. Gravel ium angular to subangular al, coke and clinker. UND] andy gravelly CLAY. Gravel is a angular to rounded flint, brick, al. Re reworked natural. UND] yish black sandy gravelly CLAY, t organic material. Gravel is a angular to subrounded flint, ell fragments. VIAL DEPOSITS - MID-		0.15 0.30 0.85 1.25 1.80	104.03 103.88 103.33 102.93 102.38		ES 1 B 2	0.50 0.80		
SAND. Grave to rounded ch [GLACIOFLU PLEISTOCEN	VIAL DEPOSITS - MID- NE]		3.00	101.18		D 4	2.60		
	Trial Pit completed at 4.000m		4.00	100.10		Water Leve	l Observations		
Date: Plant:	20/02/2017 JCB 3CX		Date		Water Stri		Standing T	ime (Mins)	Standing Level (m)
Logged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun Rema		er Rema	rks	1. Trial ground	pit dug with level to 4.0		excavator from al pit backfilled
		Hole S	Stabilit	у		Stable			

GROUND TECHNOLOGY		Т	rial	Pit Re	cord	1		<b>TP21</b> Sheet 1 of 1
	Projec	t:	Luto	n Power Cou	urt			
Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	5-17-900				
Client: Peter Brett Associates LLP	Eng	ineer:		Z. I	Bella		Ground Le	
Orientation of Trial Pit:	Length	2.5		th: 0.60 I	Depth:	3.60		221198.26
Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Depth Base (m)	SPT/HV/PF	PID (ppm)
Reinforced concrete [MADE GROUND] Orange gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse brick, clinker, coke, coal, flint, concrete [MADE GROUND] Orange mottled black and grey sandy COBBLES, with some gravel. Cobbles are angular to subangular brick and concrete. Gravel is angular to subrounded fine to coarse brick, concrete and flint. With some anthropogenic material such as slag, coal, coke, clinker and metal. [MADE GROUND] Soft to firm orange very sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse flint and brick. [MADE GROUND] Soft brown mottled orange silty slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse SAND. Soft brown mottled orange silty slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to medium flint. [ALLUVIUM] <i>From 1.70m bgl: 50mm band of fine to coarse SAND.</i> Soft brown mottled orange silty slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to medium flint. [ALLUVIUM] Cream mottled orange clayey silty gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse flint (possible natural material). [ALLUVIUM]		0.15 0.50 1.05 1.30 1.75 2.30	104.05 103.70 103.15 102.90 102.45 101.90		ES 1 B 2 ES 3 D 4	0.60 1.00 1.50 2.50 3.60		
Date: 20/02/2017	_					Observations		
Plant: JCB 3CX		Date		Water Strike	e (m)	Standing T	ïme (Mins)	Standing Level (m)
Logged By: Z. Bella Status: FINAL Checked By: M. Smith Rev: 2	Groun	dwate	er Rema	ırks	No Grou	undwater E	Encountere	d
	Remai	rks		1	excavat trial pit v	or to a dep was termin pit backfille	oth of 3.60r ated due to	nechanical n bgl, where the o sidewall collapse. ing's upon
	Hole S	stabilit	y		Unstabl	e		

GROUND TECHNOLOGY	,	T	rial	Pit Re	corc	ł		<b>TP22</b> Sheet 1 of 1
Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	ct:	Lutor	n Power Co	ourt			
Tel: 01553 817657 www.groundtechnology.co.	^{ik} Projec	ct ID:	GTS	-17-900				
Client: Peter Brett Associates LLP	Enç	gineer	:	Z.	Bella		Ground Lev Coordinates	s 509745.63
Orientation of Trial Pit:	Length	1: 2.5	0 Widt	h: 0.60	Depth:	3.00		221218.74
Description	Legend	Depth (m)	Level (m)	Water	Sar	Depth Depth Top (m) Depth Base (m)	SPT/HV/PP	s and Test Results PID (ppm)
Light grey sandy angular to subrounded fine to coarse GRAVEL. Gravel is angular to subrounded fine to coarse flint, brick, sandstone. With anthropogenic material such as slag, metal and glass. [MADE GROUND] Orange COBBLES, with some sandy Gravel Cobbles are angular to subangular brick and concrete. Gravel is angular to subangular fine to medium brick and concrete. [MADE GROUND] From 0.40m bgl: 300mm wide beam across width of trial pit and tiled floor exposed Structureless CHALK, composed of white mottled grey silty GRAVEL. Clasts are extremely weak medium density. [MADE GROUND] Black very sandy fine to coarse GRAVEL. Gravel is angular to subangular fine to coarse slag, coke and clinker. [MADE GROUND] Firm brown sandy silty gravelly CLAY. Grave is angular to subrounded fine to medium brick, chalk, flint and coal. [MADE GROUND] Light brown clayey sandy fine to coarse GRAVEL. Gravel is angular to subrounded fine to coarse flint and chalk. [ALLUVIUM]		0.30	104.74 104.14 103.84 103.74 103.14		ES 1 ES 3 D 4	0.30		
Date:         22/02/2017           Plant:         JCB 3CX		Date		Water Stri		I Observations Standing T	ime (Mins)	Standing Level (m)
Logged By: Z. Bella Status: FINA	Grour	Idwate	er Rema	rks	No Gro	undwater E		ł
Checked By: M. Smith Rev: 2	Rema	rks			excavat	for to a dep		echanical n bgl 2. Trial pit completion.
	Hole S	Stabili	ty		Stable			

$\frown$	GROUND TECHNOLOGY		Т	rial	Pit Re	corc			<b>P23</b> et 1 of 1
		Projec	t:	Lutor	n Power Co	ourt			
	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS	·17-900				
Client:	Peter Brett Associates LLP	Eng	ineer:		Z	. Bella		Ground Level Coordinates	105.38 509771.54
Orientation of Trial	Pit:	Length	2.5		n: 0.60	Depth:	4.00		221198.23
	Description	Legend	Depth (m)	O.D. Level (m)	Water	Sar	Depth Depth Base (m)	Remarks ar	Id Test Results PID (ppm)
angular to subr coke, clinker, si [MADE GROUI Orange slightly SAND. Gravel to coarse flint at [MADE GROUI From 0.40m bgl: 3 trial pit and tiled fl Soft brown san angular to subr coal, slag, glas [MADE GROUI Off white claye; Gravel is angul coarse brick, cl [MADE GROUI Soft brown silty Gravel is angul coarse flint and [MADE GROUI Soft brown mot Gravel is angul coarse flint and [ALLUVIUM] Structureless C GRAVEL. Clast angular to subr [WHITE CHALK	<ul> <li>clayey gravelly fine to coarse is angular to subrounded fine and brick.</li> <li>ND]</li> <li>300mm wide beam across width of bor exposed</li> <li>dy gravelly CLAY. Gravel is rounded fine to coarse brick, s and slate.</li> <li>ND]</li> <li>y sandy gravelly CHALK.</li> <li>lar to subrounded fine to halk and flint.</li> <li>ND]</li> <li>/ slightly gravelly CLAY.</li> <li>lar to subrounded fine to d brick.</li> <li>ND]</li> <li>/ slightly gravelly CLAY.</li> <li>lar to subrounded fine to d brick.</li> <li>ND]</li> <li>/ ar to subrounded fine to d brick.</li> <li>ND]</li> <li>/ ar to subrounded fine to d brick.</li> <li>ND]</li> <li>/ ar to subrounded fine to d brick.</li> <li>ND]</li> </ul>		0.35 0.50 0.60 1.40 1.80 2.35	105.03 104.88 104.78 103.98 103.58 103.03					
Date:	17/02/2017		Date		Water Str		Observations Standing Ti	me (Mins)	Standing Level (m)
Plant:	JCB 3CX					. /			<b>J</b>
Logged By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun	dwate	er Remai	ks	No Gro	undwater E	ncountered	
Should by.	WI. CHINET INCV. Z	Rema	rks			excavat	or to a dep	ed using mech th of 4.00m bg ing's upon con	I. 2. Trial pit
		Hole S	stabilit	у		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	cord			<b>ГР24</b> eet 1 of 1
		Projec	t:	Lutor	n Power Co	ourt			
	Tel: 01553 817657 www.groundtechnology.co.uk	Projec	t ID:	GTS-	17-900				
Client:	Peter Brett Associates LLP		ineer:		Z.	Bella		Ground Level Coordinates	106.02 509776.80
Orientation of Trial	Pit:	Length:	3.0	0 Widtl	n: 0.60	Depth:	4.00		221244.82
	Description	Legend	Depth (m)	Level	Water	Type Ref	Depth Depth Base (m)	SPT/HV/PP	nd Test Results PID (ppm)
high cobble cor subrounded fin chalk, flint, slat limestone. [MADE GROUI loose light brown gravel is fine to co fragmentsmalodor Off white mottle to coarse SANI subrounded fin metal and slate [MADE GROUI Structureless C sandy gravel. C density angular	slightly gravelly fine to coarse silt, barse flint and brick rous black staining ed brown clayey gravelly fine D. Gravel is angular to e to coarse chalk, flint, brick, e.		1.20	(m) 104.82 104.62		B 1 ES 2 ES 3	0.40 0.60 1.20		
	al Pit completed at 4.000m		4.00	102.02		Water Level	Observations	J	
Date: Plant:	17/02/2017 JCB 3CX		Date		Water Stri		Standing Ti	ime (Mins)	Standing Level (m)
Logged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun		er Remar	ks	1. Trial p depth of	oit excavate	incountered ed from grour 2. Trial pit bac pletion.	
		Hole S	Stabilit	У		Stable			

	GROUND TECHNOLOGY		Т	rial	Pit Re	cord			<b>P25</b> eet 1 of 1
	Maple Road, Kings Lynn Norfolk, PE34 3AF	Projec	t:	Luto	n Power Co	ourt		. 316	
	Tel: 01553 817657 www.groundtechnology.co.uk	-		GTS	-17-900				
Client:	Peter Brett Associates LLP		ineer:			Bella		Ground Level Coordinates	106.24 509800.81
Orientation of Trial	l Pit:	Length:	2.5	0 Widt	h: 0.60	Depth:	3.00	Demerlus e	221211.39
	Description	Legend	Depth (m)	Level (m)	Water	Type Ref	Depth Top (m) Depth (m)	SPT/HV/PP	nd Test Results PID (ppm)
CLAY. Gravel is coarse brick, c anthropogenic	n mottled white sandy gravelly s angular to subrounded fine halk and flint. Contains other material such as glass, coal, fragments and metal. ND]					ES 1	0.50		
Gravel is angu coarse brick, c [MADE GROU	-		0.80	105.44		В 2	1.00		
GRAVEL. Clas density, angula	CHALK composed of silty its are very weak, medium ar to subangular (Grade Dc). K SUBGROUP]		1.20	105.04		D 3	1.50		
Tri	al Pit completed at 3.000m		3.00	103.24		D 4	3.00		
		- - - - - - - -							
Date:	17/02/2017		Date		Water Stri		Observations Standing Ti	ime (Mins)	Standing Level (m)
Plant:	JCB 3CX								
Logged By: Checked By:	Z. Bella Status: FINAL M. Smith Rev: 2	Groun	dwate	er Rema	rks	No Grou	undwater E	ncountered	
Should by	Will Grand Trov. Z	Remar	rks			excavat	or to a dep	ed using mech th of 3.00m bo ing's upon cor	gl. 2. Trial pit
		Hole S	stabilit	у		Stable			

	GROUND TE	CHNOLOGY	V	Nind	dow	Sa	m	ple	Rec	cord		WS01	Sheet 1 of 2
	Maple Road, Norfolk, F	Kings Lynn E34 3AF	Projec	et:	Lu	ton F	ow	ver Co	ourt			1	
	(01553)	817657	Projec	t ID:	GT	S-17	7-90	00					
Client: Peter I	Brett Associates	LLP	Engine	eer:	Z.	Bella	1					Ground Level: Coordinates:	107.50 509555.82 221438.19
					O.D.		Sa	mple Te	est	SPT	CPT	Remarks and Test	Installations
	Description		Legend	Depth (m)	Level		Ref	Dopth	Denth	Casing	Water	Results SPT/HV/PP (PID	
GRAVEL. Grave	ck sandy fine to co I is angular to sub e, brick, coal, coke D]	angular fine to		-	(m)	В		0.10	0.50	Depth	Depth	(ppm	
From	0.60m bgl: becomin	g more sandy.		+									_
Soft orange mot gravelly CLAY. G	tled yellow and gre Gravel is angular to brick, flint, coal ar	een sandy subangular		- 0.70	106.80	B	2	0.80	1.10	0.00	Dry	2 (1,/,1,,1)	
							4	1.20	2.00		,		
	red sandy slightly r to subrounded fi D]			- 2.20	105.30	DL	56	2.00 2.00	2.45 3.00	0.00	Dry	3 (1,/1,,1,1)	
GRAVEL. Clasts density. [MADE GROUN		nd medium		3.00	104.50		7 8	3.00 3.00	3.45 4.00	0.00	Dry	4 (1./1.,1.2)	
						D	9	4.00	4.45	0.00	Dry	N=10 (1,1/2,2,3,3)	
				4.40	103.10	L	10	4.00	5.00	0.00	Diy	N=10 (1, 1/2,2,0,0)	
	orange sandy fine I is angular to sub chalk.												
,	'Borehole continued'		<u></u>	9	I							<u> </u>	
Diameter	Drive Records To (m)	Sample Recovery		Date		Depth	Strik	ke		_evel Obs		s Standing Level (m)	Casing Depth (m)
102 87 77 67	2.00 3.00 4.00 5.00	100% 100% 100% 100%						-		<u> </u>	/		
Dates: Start:	21/02/2017 E	nd: 21/02/2017	Remar	ks:				I				1	1
Plant: Hand Drilled By: Mark	tools+Dando Terr Lane	ier	1. Insp using c	ection continu	ious dy	nami	ic s	amplir	ng tech	nnique	s to a	nbgl 2. Exploratory depth of 5.45mbgl 3 o groundwater enco	<ol> <li>Exploratory</li> </ol>
Logged By: Z. Be Checked By: G.Day		Status: FINAL Rev: 2											

		GROUND TE	CHNOLOGY	V	Vind	dow	Sar	np	ole	Rec	cord		WS01	Sheet 2 of 2
		Maple Road, Norfolk, P	Kings Lynn	Projec	:t:	Lut	on Po	owe	er Co	urt				
		(01553)	817657	Projec	t ID:	GT	S-17-	.90	0					
Client:	Peter I	Brett Associates	LLP	Engine	eer:	Z. E	Bella						Ground Level: Coordinates:	107.50 509555.82 221438.19
		Description		Legend	Depth (m)	O.D. Level (m)	Туре		Depth Top (m)	est Depth Base	SPT. Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PIL (ppr	
[ALLUV	IUM]				· • • • • • • • • • • • • • • • • • • •			11	5.00	(m) 5.45	0.00	Dry	N=22 (6,6/4,6,6,6)	
	Bor	ehole completed at 5.450	m	<u></u>	  	102.05								
					- - - -									
					- - -									
					- - - -									
					_ _ _ _									
					- - 									-
					_									-
Diam 10 87 77 67	2 7 7	Drive Records To (m) 2.00 3.00 4.00 5.00	Sample Recovery 100% 100% 100% 100%	]]	Date		Depth S	trike			_evel Obs ng Time (		ns Standing Level (m)	Casing Depth (m)
Dates: Plant: Drilled By Logged E	y: Mark	tools+Dando Terri Lane		1. Insp using c	ection continu	ious dy	namic	; sa	mplin	g tech	nique	s to a	hbgl 2. Exploratory depth of 5.45mbgl o groundwater enco	<ol><li>Exploratory</li></ol>
Checked By:	G.Da	у	Rev: 2											

	GROUND TEC		V	Vinc	dow	Sa	m	ple	Red	cord		WS02	Sheet 1 of 2
	Maple Road, K Norfolk, PE	Kings Lynn	Project	:	Lu	ton F	Pow	ver Co	ourt			1	
	(01553) 8	17657	Project	ID:	GI	S-1	7-90	00					
Client: Peter	Brett Associates LI	_P	Engine	er:	Z.	Bella	a					Ground Level: Coordinates:	104.84 509523.65 221383.79
	Description		Legend	Depth (m)	O.D. Leve (m)	I	Sar	Depth Top (m)	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PID (ppn	Installations
Gravel is angula	ayey fine to coarse G ir to subrounded fine stone, glass, coal an ments.	to coarse		-0.10 - - - - - - - - -	104.74	BES	1 2 12	0.00	(m) 0.50 1.20 0.80				
				- - - - -		DL	3 4	1.20 1.20	1.65 2.00	0.00	Dry	N=11 (2,3/3,3,2,3)	
Dark brown grav angular to subro brick. [MADE GROUN	velly organic SILT. G ounded fine to coarse D]	ravel is a flint and		-2.00 - - - -	102.84		5 6 13	2.00 2.00 2.50	2.45 3.00 2.70	0.00	Dry	N=5 (1,2/1,1,2,1)	
gravelly fine to c	ight orangish brown coarse SAND. Grave ne to coarse flint.			- 2.70 - - - - - - -	102.14	DL	7 8	3.00 3.00	3.45 4.00	0.00	Dry	N=19 (1,1/3,3,6,7)	
	ight orangish brown GRAVEL. Gravel is			 - - - - - - -4.50 -	100.34	DL	9 10	4.00 4.00	4.45 5.00	0.00	Dry	N=24 (5,7/6,6,7,5)	
I	'Borehole continued'												
Diameter 102 97 87 77	Drive Records           To (m)           2.00           3.00           4.00           5.00	Sample Recovery 100% 100% 100% 100%	Da	ate		Depth	Strik	ie I		Level Ob: ng Time (		IS Standing Level (m)	Casing Depth (m)
Dates: Start: Plant: Dand Drilled By: Mark Logged By: Z. Be Checked By: G.Da	o Terrier+Hand tools Lane Ila Sta		1. Inspe break of samplin	ection ut har g tech vater	d stan nnique monito	ding s to a	2.E ade	xplora pth of	atory h 5.45n	ole ad	vance Explo	m bgl, with help of e ed using continuous pratory hole installed irements. 4. No gro	dynamic I with gas and

		GROUND TE		\	Nind	wob	Sa	mp	ole	Rec	cord		WS02	Sheet 2 of 2
C	1	Maple Road, Norfolk, P (01553)	Kings Lynn E34 3AF 817657	Projec Projec			on P S-17			ourt			1	
Client:	Peter I	Brett Associates	LLP	Engin	eer:	Z. 6	Bella						Ground Level: Coordinates:	104.84 509523.65 221383.79
		Description		Legend	Depth (m)	O.D. Level (m)	Туре	Def	Depth	Depth Base (m)	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PIC	
[ALLUV Structur silty and very we Matrix is	ictureless CHALK composed of creamy wh rangular to subangular GRAVEL. Clasts ard weak, creamy white. Frequent flint gravel. rix is creamy white. (Grade Dc) <u>ITE CHALK SUBGROUP]</u> Borehole completed at 5.450m		L. Clasts are t flint gravel.		5.45	99.84	D	11	5.00	5.45	0.00	Dry	N=14 (4,3/3,3,4,4)	
					-									
										Wotor '	Level Ob:	on of		
Diam 10 9 8 7	)2 7 7	Drive Records To (m) 2.00 3.00 4.00 5.00	Sample Recovery 100% 100% 100% 100%		Date		Depth S	Strike			Level Ob:		IS Standing Level (m)	Casing Depth (m)
Dates: Plant: Drilled By Logged E Checked By:		o Terrier+Hand too Lane Ila S		1. Insp break o sampli	ection out har ng tecl lwater	d stand hniques monito	ding 2 s to a	. Ex dep	cploration of	tory h 5.45m	iole ad 1bgl 3.	vance Explo	n bgl, with help of e ed using continuous pratory hole installed irements. 4. No gro	dynamic d with gas and

	GROUND TE	CHNOLOGY	Wind	dow	ı Sa	m	nple	Rec	cord		WS03	Sheet 1 of 2
	Maple Road, Norfolk, P	Kings Lynn	Project:	L	uton I	Pov	wer Co	ourt				
$\mathbf{M}$	(01553)		Project ID:	G	TS-1	7-9	000					
Client: F	Peter Brett Associates	LLP	Engineer:	Z	. Bella	a					Ground Level: Coordinates:	107.68 509607.54 221416.92
	Description		Legend Depth (m)	O.D Leve	el	Sa e Re	ample T	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PID (ppm)	Installations
GRAVEL. coarse coa [MADE GF loose l	sh black sandy fine to co Gravel is angular to sub- al, coke and slag. ROUND] ight brown slightly gravelly silt, gravel is fine to coarse fragmentsmalodorous	angular fine to fine to coarse flint and brick			B	1	0.00	(m) 0.30 1.00				
				106.5	L	3	0.80	1.20				
Gravel is a	prownish grey sandy gra angular to subrounded fir limestone, clinker and s ROUND]	ne to coarse			D L ES	4 5 13	1.20 1.20 1.50	1.65 2.00 1.70	0.00	Dry	N=7 (1,/2,1,2,2)	
angular to	e sandy gravelly silty CL subrounded fine to coar I, clinker, concrete, limes ROUND]	se brick, flint,		105.9	08	6 7	2.00 2.00	2.45 3.00	0.00	Dry	3 (1./.2,1.)	
					D	14 8 9	2.70 3.00 3.00	3.45 4.00	0.00	Dry	5 (1,/1,,2,2)	
				400.0	D	15 10 11		4.45 5.00	0.00	Dry	N=18 (1,2/4,4,4,6)	
medium G	-		4.30	103.3		16	4.70	5.00				
	'Borehole continued' Drive Records							Water	Level Ob	servation	ns.	
Diameter 117 117 102 87 77		Sample Recovery 25% 100% 100% 100% 100%	Date		Depth	n Stri	ike		ng Time (		Standing Level (m)	Casing Depth (m)
Dates:	Start: 21/02/2017 Er	nd: 21/02/2017	Remarks:								1	
Plant: Drilled By: Logged By:	Dando Terrier+360 track tools Mark Lane		1. Inspection break out har sampling tecl	rd sta hniqu	nding es to a	2. a de	Explor epth of	atory l 5.45n	nole ao nbgl 3.	lvanco Explo	n bgl, with help of execution bgl, with help of execution below bratery hole installed irements. 4 No grout	dynamic with gas and
Checked By:	G.Day	Rev: 2	Chebuniereu									

	GROUND TE	CHNOLOGY	N	Nind	dow	Sar	npl	e F	Rec	ord		WS03	Sheet 2 of 2
( -	Maple Road, Norfolk, P	Kings Lynn	Projec	et:	Lut	on Po	wer	Cou	ırt			1	
	(01553)		Projec	t ID:	GT	S-17-	900						
Client:	Peter Brett Associates	LLP	Engine	eer:	Z. E	Bella						Ground Level: Coordinates:	107.68 509607.54 221416.92
	Description		Legend	Depth (m)	O.D. Level (m)	Type		e Tes	t Depth Base (m)	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PID (ppm	Installations
	Borehole completed at 5.450	m		- - - - - - - - - - - - - - - - - - -	102.23	D	2 5.	.00	5.45	0.00	Dry	N=29 (3,6/7,6,8,8)	
	Drive Records							V	Nater I	_evel Obs	servation		
Diam 11 11 10 8 7	To (m)           7         1.20           7         2.00           92         3.00           7         4.00	Sample Recovery 25% 100% 100% 100% 100%	C	Date		Depth S	trike			ig Time (		Standing Level (m)	Casing Depth (m)
-	Dando Terrier+360 track tools y: Mark Lane	nd: 21/02/2017 ked JCB + Hand Status: FINAL Rev: 2	1. Insp break o sampli	ection out har ng tecl lwater	d stand hniques	tingl 2 to a o	. Exp depth	lorat of 5	ory h .45m	nole ac nbgl 3.	lvanc Explo	m bgl, with help of e ed using continuous pratory hole installed irements. 4 No grou	dynamic I with gas and

	GROUND TE	CHNOLOGY	Wind	dov	/ Sa	am	ple	Red	cord		WS04	Sheet 1 of 2
	Maple Road, Norfolk, P	Kings Lynn E34 3AF	Project:	L	uton	Po۱	wer Co	ourt			1	
	(01553)	817657	Project ID:	G	TS-1	7-9	00					
Client: Peter I	Brett Associates	LLP	Engineer:	Z	. Bell	а					Ground Level: Coordinates:	104.78 509581.24 221340.78
				0.0	).	Sa	ample T	est	SPT	CPT	Remarks and Test	
	Description		Legend Depth (m)	Lev (m		be Re	Depth	Depth Base	Casing Depth	Water Depth	Results SPT/HV/PP PID (ppn	,
Reinforced Conc [MADE GROUN					В	1	0.00	<u>' (m)</u> 0.60				
			0.70	104.0	18 B ES D D	6 12 2	0.70 0.70 1.20 1.20	1.20 0.80 1.65 1.65	0.00	Dry	N=6 (2,1/2,1,1,2)	
	gravelly fine to co		1.70	103.0	L E	3	1.20 1.20	2.00 2.00 1.70				
brick and flint.	r to subrounded fi D] y gravelly CLAY, w	/		102.7	78 D D D	4 5	2.00 2.00 2.00 2.00	3.20 2.45 2.45 3.00	0.00	Dry	N=11 (2,1/3,2,3,3)	
Gravel is angula brick, chalk and [MADE GROUN Stiff orangish bro	r to subrounded fin flint	ne to coarse	2.50	102.2			2.00	3.00				
PLEISTOCENE] Medium dense li fine to coarse SA subrounded fine	ight orangish brow AND. Gravel is an to coarse flint. AL DEPOSITS - N	n silty gravelly gular to	3.10	101.6	58 L L	7	3.00 3.00 3.00 3.00	3.45 3.45 4.00 4.00	0.00	Dry	N=21 (4,5/5,5,5,6)	
0.0				100.2	D D L L	9 10	4.00 4.00 4.00 4.00	4.45 4.45 5.00 5.00	0.00	Dry	N=10 (2,4/3,2,3,2)	
	sandy gravelly SIL ngular fine to medi		× × × × × × × × = × × × × ×									
	Borehole continued'		E STANGAN (SVI)	1	Ð		4.80	5.00				
Diameter	Drive Records To (m)	Sample Recovery	Date		Dept	h Str	ike		Level Obs ng Time (		ns Standing Level (m)	Casing Depth (m)
102 97 87 77	2.00 3.00 4.00 5.00	100% 100% 100% 100%										
Dates: Start:	24/02/2017 Ei	nd: 24/02/2017	Remarks:									·
Drilled By: Mark		er	using continu	ious o I with	lynan gas a	nic s and	samplii ground	ng tech dwater	nnique: monite	s to a oring s	mbgl 2. Exploratory depth of 5.45mbgl 3 standpipe as per clie	<ol> <li>Exploratory</li> </ol>
Logged By: Z. Be ^{Checked} G Day		Status: FINAL		, <del>4</del> .1	u yn	Jun	מיימוכו	CHOUL				
By: G.Da	у	Rev: 2										

	GROUND TE		V	Vind	dow	Sar	nple	e Red	cord		WS04	Sheet 2 of 2
(-	Maple Road, Norfolk, P	Kings Lynn	Projec	:t:	Lut	on Po	wer (	Court				
	(01553)		Projec	t ID:	GT	S-17-	900					
Client:	Peter Brett Associates	LLP	Engine	eer:	Z. 6	Bella					Ground Level: Coordinates:	104.78 509581.24 221340.78
	Description		Legend	Depth (m)	O.D. Level (m)	S Type	ample	th Depth	SPT. Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PID (ppm	
[GLACIO PLEISTO	PFLUVIAL DEPOSITS - M DCENE]	IID				D 1 D 1	0 5.00 1 5.00	) 5.45	0.00	Dry	N=13 (2,2/4,3,3,3)	
	Borehole completed at 5.450	m	<u>×.×.×.×</u>	5.45 	99.33							
				- - -								
				-								
				-								
				_								
				_								
				- - -								
				-								
				-								
				_								
								14/24-				
Diamet 102 97 87 77		Sample Recovery 100% 100% 100% 100%		Date		Depth S	rike		<u>Level Obs</u>		IS Standing Level (m)	Casing Depth (m)
Dates:	Start: 24/02/2017 Er	nd: 24/02/2017	Remar	ks:								
	Hand tools+Dando Terri Mark Lane		using c hole in:	continu stalled	ous dy with ga	namic as anc	samp I groui	ling tecl	hnique monite	s to a pring s	nbgl 2. Exploratory l depth of 5.45mbgl 3 standpipe as per clie	. Exploratory
Logged By Checked By:	y: Z. Bella S G.Day	Status: FINAL Rev: 2	. equile			9.001	anati					

	GROUND TE	CHNOLOGY	Wind	dov	v Sa	am	nple	Red	cord		WS05	Sheet 1 of 2
	Maple Road, Norfolk, P	Kings Lynn	Project:	L	uton	Po۱	wer Co	ourt			1	
	(01553)		Project ID:	C	STS-1	7-9	900					
Client: Peter	Brett Associates	LLP	Engineer:	Z	. Bell	а					Ground Level: Coordinates:	105.96 509748.61 221314.22
	Description		Legend Depth (m)	O.I Lev (m	el	Sa De Re	ample T Depth Top (m)	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PID (ppm	
Reinforced Conc [MADE GROUN					BES	1	0.00 0.10	/ (m) 0.20 0.20				
			0.70	105.			0.70	1.20				
becc	oming slig <u>htly gravell</u>	y and organic.				4	1.20 1.20 1.50	1.65 2.00	0.00	Dry	N=6 (2,1/2,1,2,1)	
Gravel is angula	gravelly fine to co ir to subrounded fi			104.		£						
	D] y gravelly CLAY. G ounded fine to coar		2.00	103.	96 D	5 6	2.00 2.00	2.45 3.00	0.00	Dry	N=11 (3,4/3,3,3,2)	
[MADE GROUN Stiff orangish bro	D] own sandy gravelly prounded fine to m		2.50	103.	46	7	3.00 3.00	3.45 4.00	0.00	Dry	N=24 (3,3/5,5,7,7)	
Medium dense li fine to coarse S/ subrounded fine [ALLUVIUM]	ight orangish brow AND. Gravel is an to coarse flint.	n silty gravelly gular to	3.10 	102.	86	0	3.00	4.00				
Soft light brown	sandy gravelly SIL	T. Gravel is	4.50	101.	46		4.00 4.00	4.45 5.00	0.00	Dry	N=23 (3,5/6,6,6,5)	
angular to subar	ngular fine to medi	um flint.	× × × × – * × × × × – × × × ×									
	'Borehole continued' Drive Records							Water	Level Obs	servation	ns	
Diameter 102 97 87 77	To (m)           2.00         3.00           4.00         5.00	Sample Recovery 100% 100% 100% 100%	Date		Dept	h Str	ike		ng Time (		Standing Level (m)	Casing Depth (m)
Dates: Start:	24/02/2017 Ei	nd: 24/02/2017	Remarks:	I							1	1
Plant: Hand Drilled By: Mark Logged By: Z. Be		er Status: FINAL	using continu	ious I with	dynan gas a	nic s and	samplii ground	ng tech dwater	nnique monite	s to a pring s	mbgl 2. Exploratory l depth of 5.45mbgl 3 standpipe as per clie	<ol> <li>Exploratory</li> </ol>
Checked G.Da By:		Rev: 2										

	*	GROUND TE		N	Nind	dow	San	nple	Rec	cord		WS05	Sheet 2 of 2
		Maple Road, Norfolk, P	Kings Lynn	Projec	et:	Lut	on Po	wer C	ourt				
		(01553)		Projec	t ID:	GT	S-17-	900					
Client:	Peter I	Brett Associates	LLP	Engine	eer:	Z. E	Bella					Ground Level: Coordinates:	105.96 509748.61 221314.22
		Description		Legend	Depth (m)	O.D. Level (m)	S Type F	ample	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PID (ppm	Installations
[ALLUVI	UM]						D 1	1 5.00	<u>,, (m)</u>	0.00	Dry	N=14 (4,3/3,3,5,3)	
	Bore	ehole completed at 5.450	n		*5.45   	100.51							
					- - -								
					- - -								
					-								
					-								
					- - -								
					- - -								
		Drive Records		I		1			Water	Level Obs	Servation		
Diame 102 97 87 77	2	To (m)           2.00         3.00           4.00         5.00	Sample Recovery 100% 100% 100% 100%	C	Date		Depth St	rike		ng Time (		Standing Level (m)	Casing Depth (m)
Dates:	Start:	24/02/2017 Er	nd: 24/02/2017	Remar	ks:								
Plant: Drilled By:	: Mark			using o	continu stalled	ous dy with ga	namic as and	sampli groun	ng tech dwater	nnique monite	s to a oring :	nbgl 2. Exploratory l depth of 5.45mbgl 3 standpipe as per clie	<ol> <li>Exploratory</li> </ol>
Logged By Checked By:	y: Z. Bel G.Day		tatus: FINAL Rev: 2										

		GROUND TE		V	Vind	dow	Sa	am	ple	Red	cord		WS06	Sheet 1 of
G	Г	Maple Road, Norfolk, P	Kings Lynn E34 3AF	Projec	:t:	Lu	iton	Pov	ver Co	ourt			1	
		(01553)	017037	Projec	t ID:	G	TS-1	7-9	00					
Client:	Peter I	Brett Associates	LLP	Engine	eer:	Z.	Bell	а					Ground Level: Coordinates:	104.41 509683.72 221263.16
						O.D.		52	mple T	oct	SDT	/CPT	Remarks and Test	
		Description		Legend	Depth (m)	Leve (m)		e Re	Dopth	Depth	Casing	Water Depth	Results SPT/HV/PP PIC	
cobble co concrete.	ontent. ( Grave concrete	silty sandy GRAVI Cobbles are angula I is angular fine to e with rare coal. D]	ar brick and				DL	2	0.00 1.20 1.20	) (m) 0.60 1.65 1.65	1.00	Dry	N=8 (3,2/2,1,1,4)	
														_
	Bore	ehole completed at 1.650	m	******	1.65	102.76	5							_
					_									
					_									_
					_									_
					_									_
					F									
					L									
					_									
					-									
					_									
					-									
					F									
					F									
					F									
					_									
		Drive Records								Water	Level Ob	servatior	IS	
Diamete 102		To (m) 1.50	Sample Recovery 100%		Date		Dept	h Stril	ke	Standi	ng Time (	mins)	Standing Level (m)	Casing Depth (m)
102														
Dates:	Start:	24/02/2017 Er	nd: 24/02/2017	Remar	ks:								1	1
Plant:	Dand	o Terrier+Hand too	bls	1. Insp	ection	pit ha	nd d	ug fr	om gr	ound l	evel to	1.20	mbgl 2. Exploratory	hole advanced
Drilled By:				using c termina	ontinu ated di	ious d ue to e	ynan encou	nic s unte	amplii ring p	ng tecl ossible	nnique asbes	s to a stos fr	depth of 1.50m bgl, agment. 3. Explora	where hole was tory hole
Logged By	: Z. Bel	lla S	status: FINAL	packfill	ed wit	n bent	onite	e upo	on cor	npletio	n 4. N	o grou	Indwater encounter	ea.
Checked By:	G.Da	y	Rev: 2											

	GROUND TE	CHNOLOGY	V	Nine	dow	Sa	m	ple	Rec	cord		WS07	Sheet 1 of 1
	Maple Road, Norfolk, P		Projec	et:	Lut	on F	ow	ver Co	ourt				
	(01553)	817657	Projec	t ID:	GT	S-17	7-9(	00					
Client: F	Peter Brett Associates	LLP	Engine	eer:	Z. E	Bella	I					Ground Level: Coordinates:	104.53 509653.34 221247.93
	Description		Legend	Depth (m)	Lever		Sai	mple Te	est Depth		CPT	Remarks and Test Results	Installations
Reinforce	d concrete				(m)	Туре	Ref	Depth Top (m)	Base (m)	Casing Depth	Water Depth	SPT/HV/PP (pp)	
[MADE GI Red COBI	ROUND] BLES, with some sandy to subrounded fine to co			0.15	104.38	в	1	0.20	0.50				
is angular	BLES, with some sandy to subrounded fine to co coke and clinker.			-0.80 - -1.00	103.73 103.53	В	2 3	0.80	1.00 1.20				-
[MADE GI Soft to firm coarse an	ROUND] n sandy gravelly CLAY. O gular to subrounded flint ker, concrete, sandstone.	, brick, coal,				D	9 4 5	1.10 1.20 1.20	1.65 2.00	0.00	Dry	N=4 (1,/1,1,1,1)	
angular to shell fragn [GLACIO- PLEISTO( Dense ora	FLUVIAL DEPOSITS - M CENE] Inge clayey sandy fine to	rse flint and		1.80	102.73 102.53	DL	6 7	2.00 2.00	2.45 2.60	0.00	Dry	N=24 (1,3/4,6,7,7)	
coarse flin	FLUVIAL DEPOSITS - N	1ID		2.90	101.63	D	8	2.60	2.90	0.00	Dry	51 (10,14/51 for 150mm)	
				-									
				- - -									
				- 									
				-									
Diamete	Drive Records r To (m)	Sample Recovery	C	Date		Depth	Strik	e		_evel Obs		s Standing Level (m)	Casing Depth (m)
102 87	2.00 2.60	100% 100%		-							-1		
Dates:	Start: 22/02/2017 Er	nd: 22/02/2017	Remar	ks:									
Plant: Drilled By: Logged By:	Hand tools+Dando Terri Excavator Mark Lane		1. Insp through technic Explora	ection h hard ques to atory h	strata 2 o a dept ole bac	2. Ex h of	plo 2.6	ratory 0m bg	hole a I, whe	idvanc re refu	ed us sal oo	mbgl, with help of e. ing continuous dyna ccurred on hard stra oletion. 4. No groun	amic sampling ata. 3.
Checked By:	G.Day	Rev: 2	encour	ntered									

	GROUND TE	CHNOLOGY	N	Nind	dow	ı Sa	Im	ple	Rec	cord		WS08	Sheet 1 of 2
Gr	Maple Road, Norfolk, P (01553)	Kings Lynn E34 3AF	Projec Projec			uton F		ver Co	ourt				
Client: Peter E	Brett Associates	LLP	Engine			Bella						Ground Level: Coordinates:	104.86 509607.62 221268.19
	Description		Legend	Depth (m)	O.D Leve	el	Sai	mple Te	Depth Base	SPT Casing Depth	CPT Water Depth	Remarks and Test Results SPT/HV/PP PIL (ppr	
sandy clayey fine angular to suban	WEL, overlying da e to coarse GRAV ngular fine to coars er, limestone and r D]	EL. Gravel is se brick, coal,				B B B	1 2 3	0.30	(m) 0.30 0.50 0.70				
				- 0.70	104.1		4 5 6	0.70	1.00 1.20 1.65	0.00	Dry	N=26 (3,4/6,7,6,7)	
Gravel is angular flint.	STOCENE] light brown sandy slightly gravelly very sil /. Gravel is angular to subangular fine flin				103.5	6 L		1.20	2.00		,		
Soft light brown s CLAY. Gravel is a	ft light brown sandy slightly gravelly very silty AY. Gravel is angular to subangular fine flint. ACIO-FLUVIAL DEPOSITS - MID				103.0		8 9	2.00 2.00	2.45 3.00	0.00	Dry	N=21 (2,2/3,8,6,4)	
thinly spaced bar Gravel angular to	ly slightly gravelly nds of fine to coar o subangular fine t AL DEPOSITS - M	se sand. to coarse flint.		3.10 	101.7	6 ^D	10 11	3.00 3.00	3.45 4.00	0.00	Dry	N=12 (2,2/3,3,3,3)	
				4.00 	100.8	6 D	12 13	4.00 4.00	4.45 5.00	0.00	Dry	N=18 (2,2/4,4,4,6)	
'	Borehole continued'												
Diameter 102 87	Drive Records           Diameter         To (m)         Sample Recover           102         2.00         100%           87         3.00         100%		C	Date		Depth	Strik	(e		_evel Obs ng Time (		s Standing Level (m)	Casing Depth (m)
77 67	4.00 5.00	100% 100%											
Dates: Start:	22/02/2017 Er	nd: 22/02/2017	Remar	ks:									
Plant: Hand Drilled By: Mark Logged By: Z. Bel		er Status: FINAL	using	continu	ious c	lynam	ic s	amplin	ng tech	nnique	s to a	nbgl 2. Exploratory depth of 5.45mbgl i groundwater enco	<ol><li>Exploratory</li></ol>
Checked G.Day By:		Rev: 2											

		GROUND TE		V	Vind	dow	Sar	npl	e R	ec	ord		WS08	Sheet 2 of 2
		Maple Road, Norfolk, P	Kings Lynn	Projec	:t:	Lut	on Po	wer	Court	t			1	
	1	(01553)	817657	Projec	t ID:	GT	S-17-	900						
Client:	Peter	Brett Associates	LLP	Engine	eer:	Z.	Bella						Ground Level: Coordinates:	104.86 509607.62 221268.19
		Description		Legend	Depth (m)	O.D. Level (m)	S Type I	ample Ref Dep Top	pth De	epth ase (m)	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PIC (ppn	Installations
	Bor	ehole completed at 5.450	m		   5.45	99.41	D 1	4 5.0		.45	0.00	Dry	N=24 (6,6/7,6,5,6)	
					- - - - - -									
					 - - -									
					- -  -									
					-									
					-									
		Drive Records							\٨/-	ater I	evel Obs	servation	 DS	
Diam 10 87 77 67	12 7 7	To (m)           2.00         3.00           4.00         5.00	Sample Recovery 100% 100% 100% 100%	C	Date		Depth Si	rike			g Time (		Standing Level (m)	Casing Depth (m)
Dates:	Start:	22/02/2017 Fr	nd: 22/02/2017	Remar	ks:								1	1
Plant: Drilled By	Hand y: Mark	tools+Dando Terri Lane	er	1. Insp using c	ection continu	ious dy	namic	samp	oling t	tech	nique	s to a	mbgl 2. Exploratory depth of 5.45mbgl 3 o groundwater enco	<ol><li>Exploratory</li></ol>
Logged E Checked By:	By: Z. Be G.Da		itatus: FINAL Rev: 2											

		GROUND TE	CHNOLOGY	Wine	dow	Sa	Im	ple	Red	ord		WS09	Sheet 1 of 2
6	Г	Maple Road, Norfolk, P	Kings Lynn E34 3AF	Project:	Lu	ton I	Pow	er Co	ourt			1	
		(01553) 8	817657	Project ID:	G	rs-1	7-90	00					
Client:	Peter I	Brett Associates I	LLP	Engineer:	Z.	Bella	a					Ground Level: Coordinates:	108.50 509813.99 221302.70
					O.D.		Sar	mple Te		SPT	/CPT	Remarks and Test	Installations
		Description		Legend Depth (m)	Leve (m)	I I	e Ref	Denth	Depth	Casing Depth	Water Depth	Results SPT/HV/PP PID (ppm	
Tarmac				0.10	108.40	)			(11)				
	orown ha	ardcore type 1	/										
Firm brov	wn sligh	tly gravelly CLAY.		0.45	108.0		1 2	0.45 0.55	0.55 0.70				_
angular f		oarse flint, brick an D1	id concrete.	0.70	107.80								-
Stiff yello	owish br	own sandy slightly		× × × × _ ( × × × × )		D	3 4	0.80 0.90	0.90				
chalk wit		r to subangular fine int.	e to medium				-	0.30				N=30 (3,9/5,8,9,8)	
[ALLUVI	UM]			( × × × ≻ × × × × −		D	5	1.20	1.65				-
Structure	eless CH	ALK composed of	firm to stiff	1.30	107.20								_
yellowish	n white s	andy gravelly SILT	. Gravel is										_
subangu	lar (Ciria	lensity, white and a a Grade Dm).			106.80								_
Verticial Structure		SUBGROUP] IALK composed of	firm to stiff				_						_
creamy v	white gra	avelly SILT. Gravel	is very weak,			D	7 8	1.90 2.00	2.00 2.45			N=10 (1,3/2,2,3,3)	
		e and angular. A lit Rare 1cm - 2cm br											_
pockets	(Ciria G	Grade Dm).											-
IMHILE	CHALK	SUBGROUP]											
													-
													-
						D	10	3.00	3.45			N=10 (2,2/10 for	
												245mm)	_
													-
													_
													_
													-
						D	12	4.00	4.45			N=8 (1,2/2,2,2,2)	_
				┟╌╷┟╌╷╎┝╴ ┍┎╌╖┎╌╖┝									_
													-
	-	Borehole continued' Drive Records							Water	_evel Obs	servation	 15	
Diame 102		To (m) 2.00	Sample Recovery 100%	Date		Depth	ı Strik	e		ig Time (		Standing Level (m)	Casing Depth (m)
87 77		3.00 4.00	100% 100%										
67		4.00 5.00	100%										
Deta	01.1	07/00/00/7	4. 07/00/00/7	Damasat									
Dates:	Start:		id: 27/02/2017		nithe	od 4.		om ~-	01104		1 00	mbal 2 Evolorator	holo advanced
Plant:		tools+Dando Terri	er									mbgl 2. Exploratory depth of 5.45mbgl 3	
Drilled By:	: M Lar	ne										o groundwater enco	
Logged By	y: J. Ton	nalin S	tatus: FINAL										
Checked By:	G.Day	y	Rev: 2										

		GROUND TE		V	Vind	dow	San	nple	Rec	cord	WS09	Sheet 2 of 2
(-		Maple Road, Norfolk, P	Kings Lynn	Projec	:t:	Lut	on Po	wer Co	ourt		1	
	$\mathbb{1}$	(01553)		Projec	t ID:	GT	S-17-9	900				
Client:	Peter	Brett Associates	LLP	Engine	eer:	Z. I	Bella				Ground Level: Coordinates:	108.50 509813.99 221302.70
		Description		Legend	Depth (m)	O.D. Level (m)	S Type F	ample T Ref Depth Top (m		SPT/CPT Casing Water Depth Depth	Remarks and Test Results SPT/HV/PP PID (ppm	
	Bor	ehole completed at 5.450	m			103.05	D 14	4 5.00	5.45		N=10 (1,2/2,2,3,3)	
					- - - -							
					- - - -							
					- - - -							
					- - -							
 10 8 7 6	)2 7 7	Drive Records To (m) 2.00 3.00 4.00 5.00	Sample Recovery 100% 100% 100% 100%	]	Date		Depth St	rike		Level Observatior ng Time (mins)	is Standing Level (m)	Casing Depth (m)
Dates: Plant: Drilled By Logged B Checked By:		tools+Dando Terri ne nalin S	nd: 27/02/2017 er Status: FINAL Rev: 2	1. Insp using c	ection continu	ious dy	namic	sampli	ng tech	nniques to a	nbgl 2. Exploratory f depth of 5.45mbgl 3 o groundwater encou	. Exploratory

	GROUND TE	CHNOLOGY	V	Vind	dow	ı Sa	m	ple	Rec	cord		WS10	Sheet 1 of 2
Gr	Maple Road, Norfolk, P	Kings Lynn E34 3AF	Projec	t:	L	uton F	Pov	ver Co	ourt			1	
	(01553)	817657	Projec	t ID:	G	TS-1	7-9	00					
Client: Peter E	Brett Associates	LLP	Engine	eer:	Z	. Bella	a					Ground Level: Coordinates:	106.37 509769.07 221292.29
					0.0	).	Sa	mple Te	est	SPT	/CPT	Remarks and Test	Installations
	Description		Legend	Depth (m)	Leve (m)	əl	e Re	f Depth	Depth Base	Casing	Water Depth	Results SPT/HV/PP PID	
Reinforced conc						B	1	¹ Top (m) 0.00	(m) 0.30	Depth	Depth	(ppm	
[MADE GROUNI Firm brown sand	D] ly gravelly CLAY. 0	Gravel is		0.15	106.2		2	0.30	0.70				
	unded fine to coar coal and clinker.						2	0.00	0.70				
•	from 0.70m sl	ightly gravelly		-		В	3	0.70	1.20				_
						ES	13	0.80	1.00				
Soft to firm light	brown sandy sligh	thy gravelly		_ 1.30	105.0	07 D	4 9	1.20 1.20	1.65 2.00	0.00	Dry	N=9 (1,2/3,3,2,1)	
CLAY. Gravel is a	angular to subang			-		ES	14	1.50	1.70				-
and flint. [ALLUVIUM]													_
				-									_
						D	5 10	2.00 2.00	2.45 3.00	0.00	Dry	N=16 (3,2/3,4,5,4)	
Soft to firm light l	brown sandy grave			- 	104.1	-		2.00	0.00				_
Gravel is angular	r to subangular fin			-									_
chalk and flint. [ALLUVIUM]													_
				-									_
				-									
				-		L	6 11	3.00 3.00	3.45 4.00	0.00	Dry	N=7 (2,2/2,2,2,1)	
Structuralaga Ch	IALK composed of	forcomywhite		- -3.30	103.0	17							
gravelly SILT. Cla	asts are very weak	k, creamy											
coarse flint grave	ar to subangular. F el. (Grade Dm)	requent fine to		-									
[WHITE CHALK	SUBGROUP]			-									
				-		DL	7 12	4.00 4.00	4.45 5.00	0.00	Dry	N=9 (3,3/2,3,2,2)	
								1.00	0.00				
				- -									
				-									
				_									
	Borehole continued' Drive Records									Level Obs			
Diameter 102	To (m) 2.00	Sample Recovery 100%		)ate		Depth	Stril	ke	Standir	ng Time (	mins)	Standing Level (m)	Casing Depth (m)
97 87 77	3.00 4.00	100% 100%											
77	5.00	100%											
Dates: Start:	23/02/2017 Er	nd: 23/02/2017	Remar	ks:									
Plant: Dando	o Terrier+Hand too	bls										mbgl 2. Exploratory I	
Drilled By: Mark	Lane		hole in	stalled	l with	gas a	nd g	ground	water	monito	oring s	depth of 5.45mbgl 3 standpipe as per clie	
Logged By: Z. Bel		Status: FINAL	require	ments	s. 4. N	o grou	und	water	encou	ntered			
Checked By: G.Day		Rev: 2											

		GROUND TE		١	Nind	dow	Sa	mp	ole	Rec	cord		WS10	Sheet 2 of 2
( -		Maple Road, Norfolk, P	Kings Lynn	Projec	et:	Lut	on P	owe	r Co	urt			1	
	1	(01553)		Projec	t ID:	GT	S-17	-900	)					
Client:	Peter I	Brett Associates	LLP	Engin	eer:	Z. E	Bella						Ground Level: Coordinates:	106.37 509769.07 221292.29
		Description		Legenc	Depth (m)	O.D. Level (m)	Туре	Def	ple Te Depth Top (m)	Depth Base (m)	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PIC (ppr	
	Bore	ehole completed at 5.450	m		- 5.45	100.92	D	8	5.00	5.45	0.00	Dry	N=13 (2,3/3,4,3,3)	
					_									
      	)2 7 7	Drive Records To (m) 2.00 3.00 4.00 5.00	Sample Recovery 100% 100% 100% 100%	]	Date		Depth S	Strike			_evel Ob: ng Time (		15 Standing Level (m)	Casing Depth (m)
Dates: Plant: Drilled B Logged B Checked		o Terrier+Hand too Lane Ila S	nd: 23/02/2017 ols otatus: FINAL Rev: 2	1. Insp using o hole in	ection continu stalled	ous dy	namio as an	: sar d gro	nplin ound	g tech water	nnique monite	s to a oring s	mbgl 2. Exploratory depth of 5.45mbgl a standpipe as per clie	<ol><li>Exploratory</li></ol>

	GROUND TE		V	Vind	dov	v Sa	Im	ple	Rec	cord		WS11	Sheet 1 of 2
Gr	Maple Road, Norfolk, Pl (01553) 8	Kings Lynn E34 3AF	Projec	t:	L	uton I	Pow	ver Co	ourt			1	
	(01553) 8	517057	Projec	t ID:	G	TS-1	7-90	00					
Client: Peter B	Brett Associates I	LLP	Engine	eer:	Z	. Bella	a					Ground Level: Coordinates:	104.57 509735.28 221228.49
					0.0	).	Sai	mple Te	est	SPT	/CPT	Remarks and Test	Installations
	Description		Legend	Depth (m)	Lev (m	el	e Ref	Denth	Depth Base	Casing Depth	Water Depth	Results SPT/HV/PP PID (ppm	
Gravel is fine to c		subrounded			(	B	1 2 13	0.50 0.50 0.60	(m) 0.50 1.00 0.80		Dopui	()))	
				-		В	3	1.00	1.20				
						B D L	5 4 5	1.20 1.20 1.20	2.00 1.65 2.00	0.00	Dry	N=4 (2,3/1,1,1,1)	
							5 14	1.20	1.70				
Gravel is fine to c	ange gravelly san coarse angular to s			- - 1.70 -	102.8	37							
flint. [ALLUVIUM]						DL	6 7	2.00 2.00	2.45 3.00	0.00	Dry	2 (1,/,1,1,)	
				-		D	15	2.80	3.00				
mottled orange sa	ALK composed of andy GRAVEL. Gr subrounded flint SUBGROUP]	ravel is fine to			101.3	37 D	8 9 16	3.00 3.00 3.80	3.45 4.00 4.00	0.00	Dry	N=13 (4,4/3,3,3,4)	
						DL	10 11	4.00 4.00	4.45 5.00	0.00	Dry	N=11 (1,3/2,3,3,3)	
'E	Borehole continued' Drive Records						-1/-	4.80	5.80	Level Obs	envation		
Diameter 102 102 87 77	To (m)           2.00         3.00           4.00         5.00	Sample Recovery 100% 100% 100% 100%	D	Pate		Depth	Strik	e		ng Time (		Standing Level (m)	Casing Depth (m)
Dates: Start:	22/02/2017 En	nd: 22/02/2017	Remar	ks:									
Plant: Dando Drilled By: Mark L Logged By: Z. Bell		ls tatus: FINAL	using c	ontinu stalled	ious o I with	lynam gas a	ic s nd g	amplin ground	ng tech water	nnique monite	s to a oring s	mbgl 2. Exploratory depth of 5.45mbgl 3 standpipe as per clie	<ol> <li>Exploratory</li> </ol>
Checked G.Day By:	,	Rev: 2											

		GROUND TE		\	Nind	dow	San	nple	Red	cord		WS11	Sheet 2 of 2
( -		Maple Road, Norfolk, P	Kings Lynn	Projec	et:	Lut	on Po	wer C	ourt			1	
	1	(01553)		Projec	t ID:	GT	S-17-9	900					
Client:	Peter I	Brett Associates	LLP	Engin	eer:	Z. I	Bella					Ground Level: Coordinates:	104.57 509735.28 221228.49
		Description		Legend	Depth (m)	O.D. Level (m)	Si Type R	ample ⁻	Depth	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PID (ppn	Installations
	Bor	ehole completed at 5.450	n			99.12	D 1:	2 5.00	5.45	0.00	Dry	N=4 (1,1/1,1,1)	
					_								
				l									
	)2 )2 7	Drive Records           To (m)           2.00           3.00           4.00           5.00	Sample Recovery 100% 100% 100% 100%		Date		Depth Sti	rike		Level Ob: ng Time (		IS Standing Level (m)	Casing Depth (m)
Dates: Plant: Drilled B Logged E Checked By:		o Terrier+Hand too Lane Ila S	ld: 22/02/2017 ls tatus: FINAL Rev: 2	1. Insp using c	ection continu stalled	ous dy with ga	namic as and	sampli groun	ing tech dwater	nnique monite	s to a oring s	mbgl 2. Exploratory depth of 5.45mbgl 3 standpipe as per clie	<ol> <li>Exploratory</li> </ol>

	GROUND TE	CHNOLOGY	Wind	dow	Sa	m	ple	Rec	cord		WS12	Sheet 1 of 2
Gr	Maple Road, Norfolk, P	Kings Lynn E34 3AF	Project:	Lu	ton F	Pow	er Co	ourt			1	
	(01553)	817657	Project ID:	GT	S-1	7-90	00					
Client: Peter I	Brett Associates	LLP	Engineer:	Z.	Bella	a					Ground Level: Coordinates:	108.08 509808.89 221258.56
				O.D.		Sar	nple Te	est	SPT	CPT	Remarks and Test	Installations
	Description		Legend Depth (m)	Leve (m)		Ref	Depth	Depth Base	Casing	Water	Results SPT/HV/PP PID	
is angular to sub	rey sandy gravelly rounded fine to cc granite, ash , clinke D]	arse brick,			B	1	0.30	(m) 0.70 0.50	Depth	Depth	(ppm	
	y slightly gravelly ( rounded fine to m D]		0.70	107.38	B	2	0.70	1.20	0.00	Dry	N=5 (2,2/1,2,1,1)	
silty angular to s very weak, crear	IALK composed o ubangular GRAVE ny white and angu e flint gravel (Grad SUBGROUP]	L. Clasts are		106.73	Ē	8	1.20	2.00		D, y		
white gravelly SI	IALK composed o LT. Clasts are very d angular to subar le Dm)	/ weak,		105.78	DL	4 9	2.00 2.00	2.45 3.00	0.00	Dry	N=12 (1,2/4,3,3,2)	
[WHITE CHALK					DL	5 10	3.00 3.00	3.45 4.00	0.00	Dry	N=10 (1,2/2,2,3,3)	
					DL	6 11	4.00 4.00	4.45 5.00	0.00	Dry	N=9 (2,3/3,2,2,2)	
	Borehole continued'							Mater		onation		
Diameter 102 97 87 77	Drive Records To (m) 2.00 3.00 4.00 5.00	Sample Recovery 100% 100% 100% 100%	Date		Depth	Strik	e		Level Obs		IS Standing Level (m)	Casing Depth (m)
Drilled By: Mark Logged By: Z. Be	o Terrier+Hand too Lane Ila S	Status: FINAL	1. Inspection using continu	ous dy with g	nam as ai	ic sa nd g	amplir Iround	ng tech water	nnique: monito	s to a pring s	nbgl 2. Exploratory l depth of 5.45mbgl 3 standpipe as per clie	<ol> <li>Exploratory</li> </ol>
		Rev: 2										

		GROUND TE	CHNOLOGY	١	Nind	dow	Sar	nple	Red	cord		WS12	Sheet 2 of 2
(-		Maple Road, Norfolk, P	Kings Lynn	Projec	et:	Lut	on Po	wer C	ourt			1	
	1	(01553)		Projec	t ID:	GT	S-17-	900					
Client:	Peter I	Brett Associates	LLP	Engin	eer:	Z. E	Bella					Ground Level: Coordinates:	108.08 509808.89 221258.56
		Description		Legenc	Depth (m)	O.D. Level (m)	Type	ample Ref Depti	h Depth	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PIE (ppr	Installations
	Bor	ehole completed at 5.450	m		- - - - - - - - - - - - - - - - - - -	102.63	D 7	5.00		0.00	Dry	N=9 (2,3/2,2,2,3)	
		Drive Records							Water	Level Ob	servation	าร	
Diam 10 9 8 7	)2 7 7	To (m)           2.00         3.00           4.00         5.00	Sample Recovery 100% 100% 100% 100%	[	Date		Depth S	rike		ng Time (		Standing Level (m)	Casing Depth (m)
		o Terrier+Hand too Lane	nd: 23/02/2017 ols Status: FINAL	1. Insp using o hole in	ection continu stalled	ious dy	namic as anc	sampl I groun	ing tecl dwater	nnique monite	s to a oring :	mbgl 2. Exploratory depth of 5.45mbgl 3 standpipe as per clie	<ol> <li>Exploratory</li> </ol>
Checked By:	G.Day	у	Rev: 2										

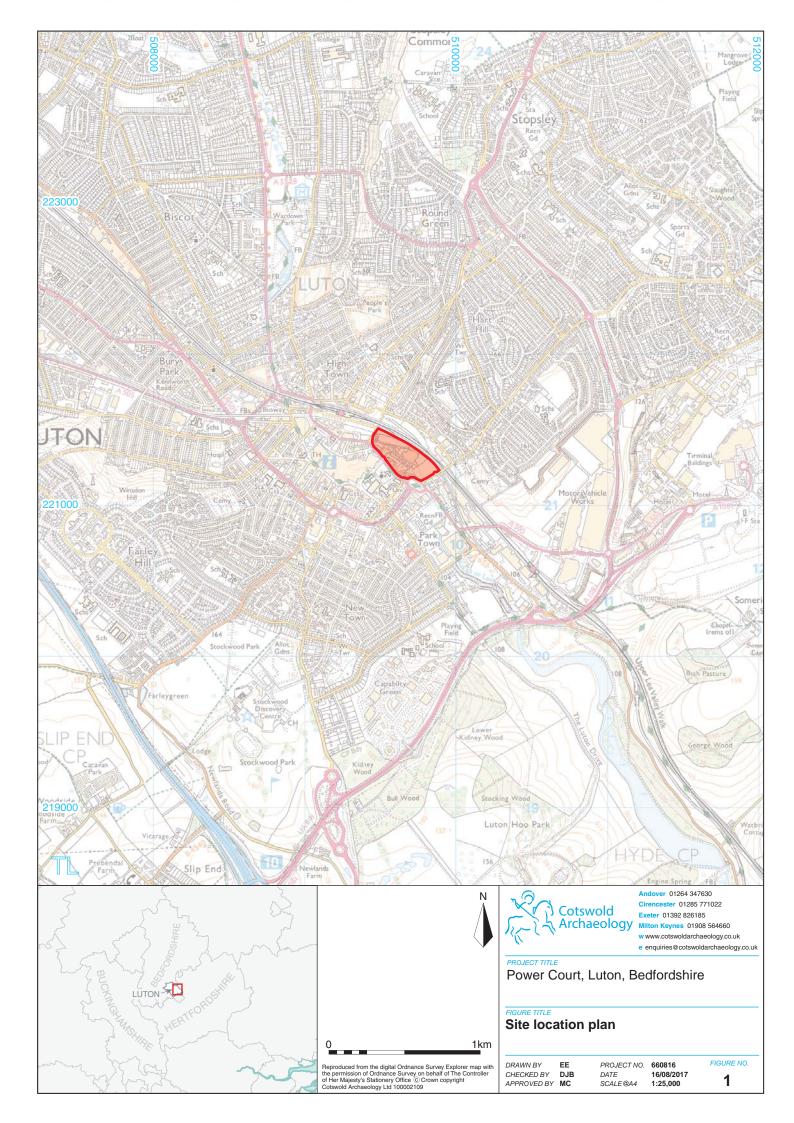
	GROUND TE	CHNOLOGY	۱	Nind	dow	Sa	m	ple	Red	cord		WS13	Sheet 1 of 2
	Maple Road, Norfolk, P	Kings Lynn	Projec	ot:	Lu	iton I	ow	ver Co	ourt			1	
	(01553)		Projec	ct ID:	G	TS-1	7-90	00					
Client: Peter I	Brett Associates	LLP	Engin	eer:	Z.	Bella	a					Ground Level: Coordinates:	105.07 509754.52 221212.30
	Description		Legenc	Depth (m)	O.D. Leve (m)		Sai	mple To	Depth Base	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PIL (ppr	Installations
is angular to sub concrete, coal, g	fine to coarse GR rounded fine to co ranite, flint, limest glass fragments a D]	arse brick, one and		-		В	1	0.00	<u>(m)</u> 0.60				
	lly calcareous SIL ⁻ Igular fine to coars D]			0.60	104.47	ES	2 12 3	0.60 0.70	1.20 0.90 1.65	0.00	Dry	N=5 (1,1/1,1,1,2)	
Gravel is angula brick, flint and co [MADE GROUN	D]	ne to coarse		- 1.30 	103.73	7	4	1.20	2.00		,		
and orangish bro extremely weak,	IALK composed o own gravelly SILT. creamy white ang with frequent flin SUBGROUP]	Clasts are Jular to				DL	56	2.00 2.00	2.45 3.00	0.00	Dry	N=26 (4,4/5,5,6,10)	
gravelly SILT. Cla	IALK composed o asts are extremely igular chalk with fr	weak, white		     	102.0	7 D	7 8	3.00 3.00	3.45 4.00	0.00	Dry	N=4 (1,1/1,1,1,1)	
[WHITE CHALK	SUBGROUP]					ES	13	3.50	3.70				
						DL	9 10	4.00 4.00	4.45 5.00	0.00	Dry	3 (1,2/1,,1,1)	
•	Borehole continued'											_	
Diameter 102 97 87 77	Drive Records           To (m)           2.00           3.00           4.00           5.00	Sample Recovery 100% 100% 100% 100%		Date		Depth	n Strik	(e		<u>Level Ob</u> ng Time (		15 Standing Level (m)	Casing Depth (m)
Dates: Start:	23/02/2017 Fr	nd: 23/02/2017	Remar	·ks:									
	o Terrier+Hand too Lane		1. Insp using o	ection continu stalled	ious d with g	ynam gas a	nd g	amplir ground	ng tech Iwater	nnique monite	s to a oring s	mbgl 2. Exploratory depth of 5.45mbgl 3 standpipe as per clie	<ol><li>Exploratory</li></ol>
Checked G.Day By:	y	Rev: 2											

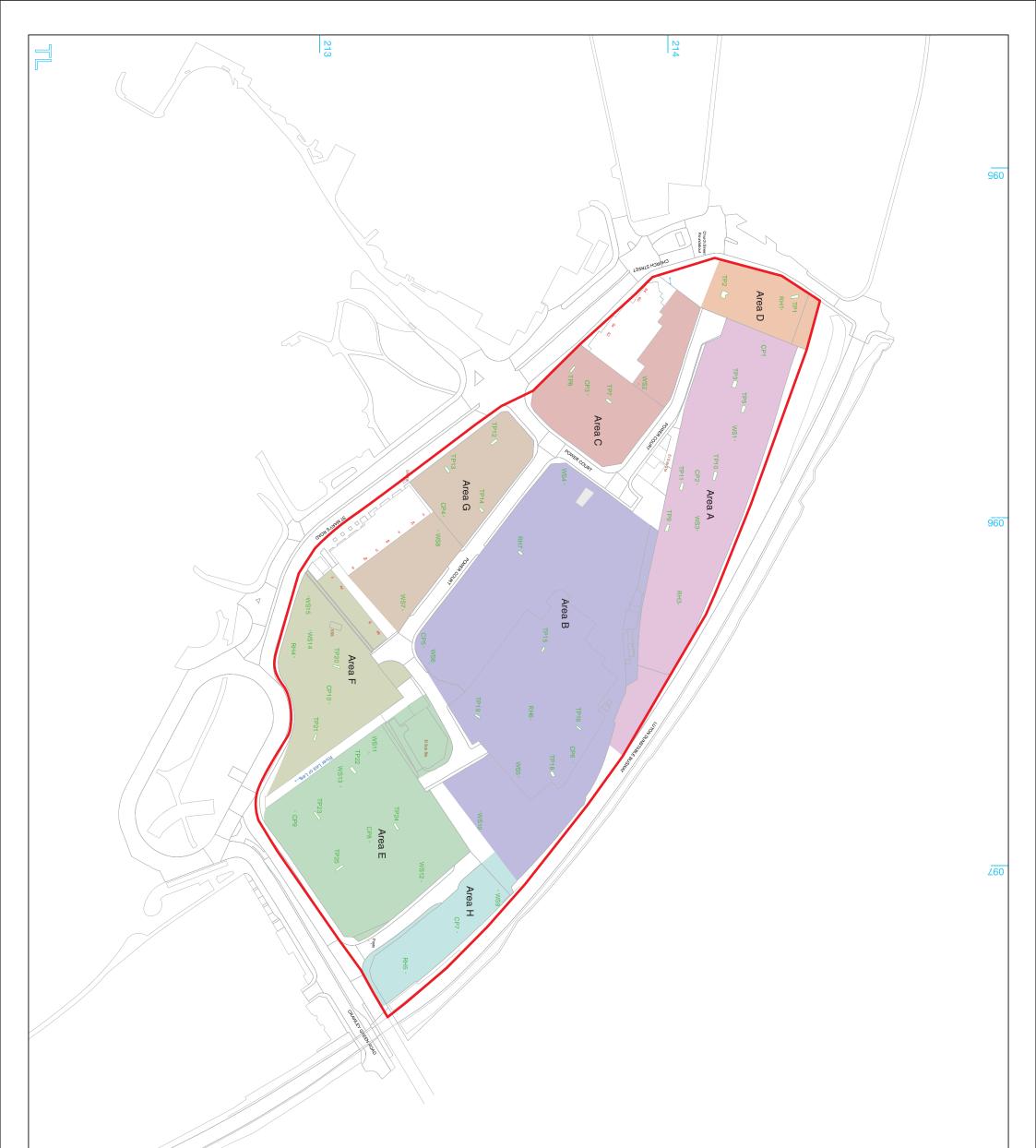
		GROUND TE	CHNOLOGY	V	Vind	dow	Sar	np	le	Rec	cord		WS13	Sheet 2 of 2
(-		Maple Road, Norfolk, P	Kings Lynn	Projec	:t:	Lut	on Po	wei	r Co	urt			1	
	1	(01553)		Projec	t ID:	GT	S-17-	900	)					
Client:	Peter I	Brett Associates	LLP	Engine	eer:	Z. E	Bella						Ground Level: Coordinates:	105.07 509754.52 221212.30
		Description		Legend	Depth (m)	O.D. Level (m)	Type		Depth	Depth Base (m)	SPT Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PID (ppm	
						99.62	D 1	11	5.00	5.45	0.00	Dry	N=6 (2,1/2,2,1,1)	
	Bon	ehole completed at 5.450	m		- - - - - - -	00.02								
					- - - -									
					- - - -									
					-									
					- - - -									
					_									
10 9	57	Drive Records To (m) 2.00 3.00 4.00 5.00	Sample Recovery 100% 100% 100% 100%	]	Date		Depth S	trike			_evel Obs		ns Standing Level (m)	Casing Depth (m)
	Start: Dand y: Mark By: Z. Be G.Da	o Terrier+Hand too Lane Ila S	nd: 23/02/2017 ols Status: FINAL Rev: 2	1. Insp using c hole in	ection continu stalled	ous dy	namic as anc	san gro	nplin ound	g tecł water	nnique monite	s to a oring s	mbgl 2. Exploratory l depth of 5.45mbgl 3 standpipe as per clie	<ol> <li>Exploratory</li> </ol>

	GROUND TE	CHNOLOGY	١	Nind	dow	Sa	m	ple	Rec	cord	l	WS14	Sheet 1 of
	Maple Road, Norfolk, P	Kings Lynn	Projec	ct:	Lut	on F	Pow	ver Co	ourt			1	
	(01553)		Projec	t ID:	GT	S-1	7-90	00					
Client: Peter I	Brett Associates	LLP	Engin	eer:	Z.	Bella	1					Ground Level: Coordinates:	104.19 509665.53 221195.08
						1						Remarks and Test	
	Description		Legend	Depth (m)	O.D. Level (m)		Sar Ref	Depth Top (m)	Depth Base	Casing Depth	Vater Depth	Results SPT/HV/PP PIC (ppn	
GRAVEL, with m are angular brick		tent. Cobbles rete. Gravel is		-			1	0.10	0.60				
Medium dense g coarse SAND ar content. Cobbles	preyish brown sligh ad GRAVEL, with r s are angular brick ent concrete. Rare	nedium cobble and concrete.		-0.60	103.59	B	3 2 4	0.60 0.70 1.00	1.00 0.80 1.45				
plastic. [MADE GROUN						L	5	1.20	2.00	0.00	Dry	N=32 (7,6/7,8,10,7)	
SAND and GRA	rey slightly silty fir VEL. Gravel is and with frequent brick	gular fine to			102.59								
[MADE GROUN						B D L	8 6 7	2.00 2.00 2.00	2.70 2.45 2.70	0.00	Dry	N=15 (3,3/3,4,4,4)	
Possible concret		m		2.70	101.49 101.32	В	9	2.70	2.87	0.00	Dry	50 (3,6/50 for 20mm)	
				-									
				- - -									
				-									
				_									
	Drive Records								Water	Level Ob	servation	 NS	
Diameter 102 87	To (m) 2.00 2.70	Sample Recovery 100% 70%	]	Date		Depth	Strik	e		ng Time (		Standing Level (m)	Casing Depth (m)
Dates: Start:	22/02/2017 -	nd: 22/02/2017	Rema	ke									
				-	pit har	nd du	a fr	om an	ound l	evel to	1 20	mbgl 2. Exploratory	hole advanced
Plant: Hand Drilled By: Mark	tools+Dando Terri Lane		using o	continu stalled	ous dy with g	nam as ai	ic sa nd g	amplir Iround	ng tech Iwater	nnique monite	s to a oring s	depth of 5.45mbgl 3 standpipe as per clie	<ol> <li>Exploratory</li> </ol>
Logged By: J. Ton	nalin S	Status: FINAL	require	- nents	. <del>т</del> . INO	grul	an i U V	Mater	CIICOU	nereu	•		
Checked G.Day By:	y	Rev: 2											

GROUND TECHNOLOGY Maple Road, Kings Lynn Norfolk, PE34 3AF (01553) 817657 Client: Peter Brett Associates LLP Description Soft brown sandy gravelly fine to coarse CLAY. Gravel is angular to subrounded fine to coarse flint and brick. [MADE GROUND]	Project Project Engin Legence	eer:	GT	ton F		ver Co	ourt				
(01553) 817657 Client: Peter Brett Associates LLP Description Soft brown sandy gravelly fine to coarse CLAY. Gravel is angular to subrounded fine to coarse flint and brick.	Engin	eer:		[S-1]	7_0						
Description Soft brown sandy gravelly fine to coarse CLAY. Gravel is angular to subrounded fine to coarse flint and brick.			Z.		1-50	00					
Soft brown sandy gravelly fine to coarse CLAY. Gravel is angular to subrounded fine to coarse flint and brick.	Legend	Denth		Bella	a					Ground Level: Coordinates:	104.21 509645.50 221193.87
Soft brown sandy gravelly fine to coarse CLAY. Gravel is angular to subrounded fine to coarse flint and brick.	Legend		O.D.		Sa	mple T	est	SPT	/CPT	Remarks and Test Results	Installations
Gravel is angular to subrounded fine to coarse flint and brick.		(m)	Leve (m)		e Ref	iop (iii)	(111)	Casing Depth	Water Depth	SPT/HV/PP PID (ppm	
		-	400.04	В	1	0.00	0.40				
Firm brown mottled white sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse flint, chalk and brick fragments. [MADE GROUND]		-0.40  	103.81	ES	2 13	0.40 0.50	0.90 0.70				
		-		D	3	0.90	1.10				
Soft to firm orangish brown sandy gravelly CLAY.		1.40	102.81	DL	4 5	1.20 1.20	1.65 2.00	0.00	Dry	N=10 (2,2/2,2,3,3)	
Gravel is angular to subrounded fine to coarse flint and chalk. [GLACIO-FLUVIAL DEPOSITS - MID		* 									
PLEISTOCENE] Medium dense orange clayey sandy fine to medium GRAVEL. Gravel is angular to subrounded fine to medium flint.		1.90	102.31	D L	6 7	2.00 2.00	2.45 3.00	0.00	Dry	N=11 (2,3/3,3,2,3)	
[GLACIO-FLUVIAL DEPOSITS - MID PLEISTOCENE] Soft light orange silty gravelly CLAY. Gravel is angular to subangular fine to medium flint and											
chalk. [GLACIO-FLUVIAL DEPOSITS - MID	× × ×	2.90	101.31								
Medium dense orange clayey sandy fine to medium GRAVEL. Gravel is angular to subangular fine to medium flint and chalk. [GLACIO-FLUVIAL DEPOSITS - MID PLEISTOCENE]		3.30	100.91	DL	8 9	3.00 3.00	3.45 4.00	0.00	Dry	N=7 (4,5/2,1,2,2)	
Soft light orange silty gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. [GLACIO-FLUVIAL DEPOSITS - MID PLEISTOCENE] Medium dense light orange silty gravelly fine to		3.80	100.41								
including consecting finite to angular to subrounded fine to medium flint. [GLACIO-FLUVIAL DEPOSITS - MID PLEISTOCENE]			00.74	DL	10 11	4.00 4.00	4.45 5.00	0.00	Dry	N=11 (5,3/2,3,3,3)	
Medium dense creamy yellow silty gravelly fine to coarse SAND. Gravel is angular to	× · × × × · × × · ×	*-4.50 *- *-	99.71								
'Borehole continued' Drive Records							Water	_evel Obs	servation	 NS	
Diameter         To (m)         Sample Recover           102         2.00         100%           87         3.00         100%           77         4.00         100%           77         5.00         100%	/	Date		Depth	Strik	ke		ig Time (		Standing Level (m)	Casing Depth (m)
Dates: Start: 21/02/2017 End: 21/02/2017	/ Rema	rks:				[					l
Plant: Dando Terrier+Hand tools Drilled By: Mark Lane	using hole in	continu Istallec	ious dy	/nam jas ai	ic s nd g	amplir ground	ng tech Iwater	nique: monito	s to a pring s	mbgl 2. Exploratory I depth of 5.45mbgl 3 standpipe as per clie	. Exploratory
Logged By: Z. Bella Status: FINAL ^{Checked} G.Day Rev: 2 By:			. −r. INC	, 910t		TUG	Shoou	noreu	•		

	GROUND TEC		V	Vind	wob	San	nple	Rec	cord		WS15	Sheet 2 of 2
	Maple Road, Norfolk, Pl	Kings Lynn	Projec	t:	Lut	on Po	wer Co	ourt				
	(01553) 8	317657	Projec	t ID:	GT	S-17-9	900					
Client:	Peter Brett Associates I	_LP	Engine	eer:	Z. E	Bella					Ground Level: Coordinates:	104.21 509645.50 221193.87
	Description		Legend	Depth (m)	O.D. Level (m)	Sa Type R	ample T _{ef Depth Top (m}		SPT. Casing Depth	/CPT Water Depth	Remarks and Test Results SPT/HV/PP PID (ppm	
	lar fine to medium flint. -FLUVIAL DEPOSITS - M DCENE]	ID				D 12	5.00	5.45	0.00	Dry	N=16 (3,7/4,4,4,4)	
	Borehole completed at 5.450r	n		5.45 	98.76							
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Diamat	Drive Records	Somelo De		)atc		Jonth Of	iko		Level Obs			Cooing Dorth (m)
Diamet 102	2.00	Sample Recovery 100%	L	Date	'	Depth Str	INC	Stanuli	ng Time (	111115)	Standing Level (m)	Casing Depth (m)
87 77 77	3.00 4.00 5.00	100% 100% 100%										
Dates:	Start: 21/02/2017 En	d: 21/02/2017	Remar	ks:							I	I
Plant:	Dando Terrier+Hand too	ls	1. Insp	ection	pit han	d dug i	rom gi	round I	evel to	1.20	mbgl 2. Exploratory	hole advanced
Drilled By:	Mark Lane		hole in: require	stalled	with ga	as and	ground	dwater	monito	oring s	depth of 5.45mbgl 3 standpipe as per clie	<ul> <li>Exploratory</li> </ul>
Logged By	/: Z. Bella S	tatus: FINAL	require	ments	. <del>4</del> . INO	ground	waler	encou		-		
Checked By:	G.Day	Rev: 2										

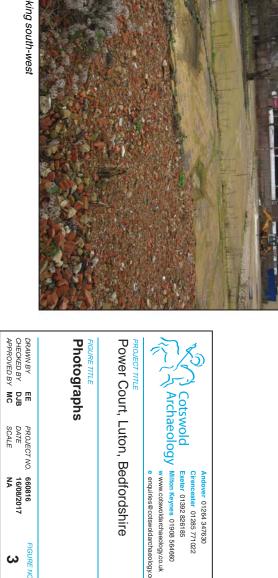




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PROJECTNO. 660816 DATE 16/08/2017 SCALE®A3 1:2000	Borehole locations	Luton, Bedfordshire	Andover 01264 347630 Cirencester 01285 771022 Exeter 01392 826185 Milton Keynes 01908 564660 w www.cotswoldarchaeology.co.uk e enquiries@cotswoldarchaeology.co.uk	0 100m 1:2000 Reproduced fram the digital Ordnance Survey Explorer map with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office © Crown copyright Cotswold Archaeology Ltd 100002 f09	Site boundary Evaluation trench	
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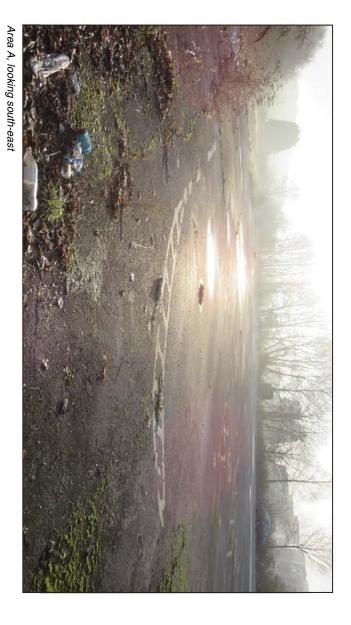


FIG ω S



Area B, looking east







Area D, looking north



Area F, looking south-east



FIGURE NO.	660816 16/08/2017 NA	PROJECT NO. 660816 DATE 16/08/2 SCALE NA	MC BE	DRAWN BY EE CHECKED BY DJB APPROVED BY MC
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Area H, looking north-north-west



Coring RH3, looking south-east





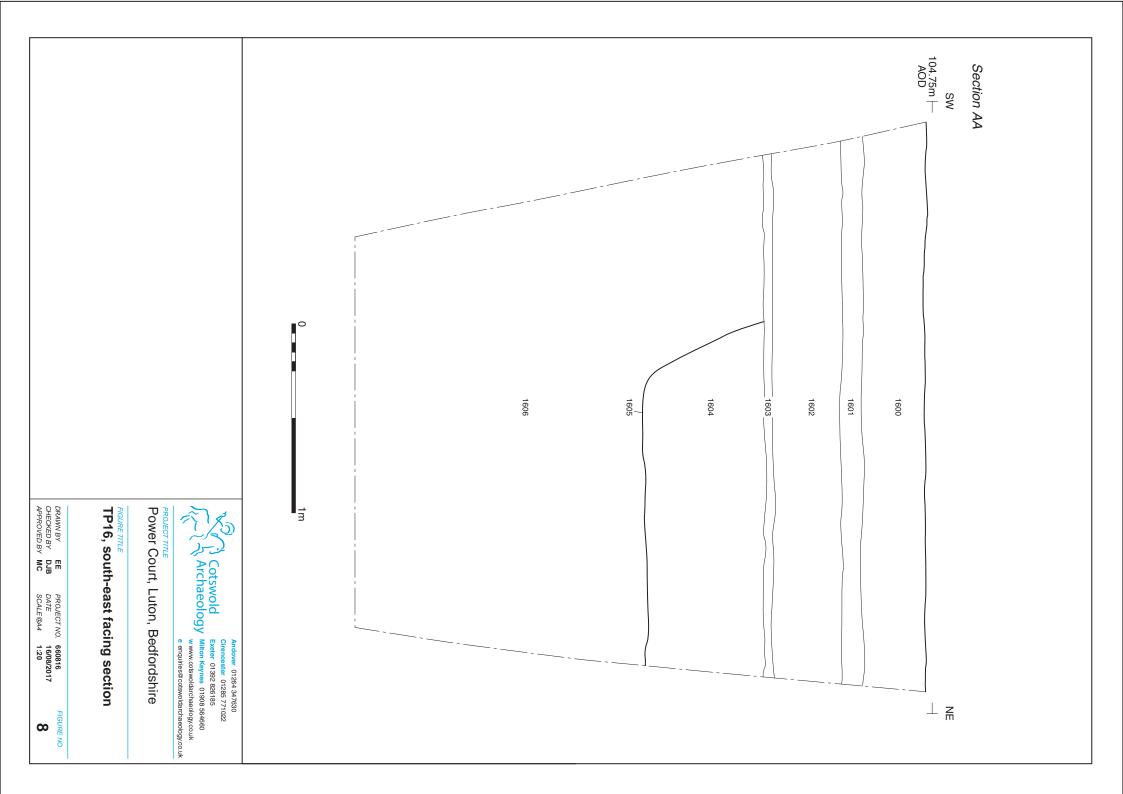
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771022	Cirencester 01285 771022		)	
1630	Andover UI264 34/630			)

TP13, looking south-east (0.5m scale)



Upper part of TP5, looking north-east (0.5m scale)





TP22, looking north-west (0.5m scale)





10



TP20, looking north-east (0.5m scale)



## **Andover Office**

Stanley House Walworth Road Andover Hampshire SP10 5LH

t: 01264 347630

## **Cirencester Office**

Building 11 Kemble Enterprise Park Cirencester Gloucestershire GL7 6BQ

t: 01285 771022

## **Exeter Office**

Unit 53 Basepoint Business Centre Yeoford Way Marsh Barton Trading Estate Exeter EX2 8LB

t: 01392 826185

## Milton Keynes Office

41 Burners Lane South Kiln Farm Milton Keynes Buckinghamshire MK11 3HA

t: 01908 564660

