# Catesby Business Park, Balby Carr, Doncaster, South Yorkshire:

an archaeological desk-based assessment Birmingham University Field Archaeology Unit Project No. 895 March 2002

Catesby Business Park, Balby Carr, Doncaster, South Yorkshire: an archaeological desk-based assessment

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#### Catesby Business Park, Balby Carr, Doncaster, South Yorkshire: an archaeological desk-based assessment

#### Summary

An archaeological desk-based assessment was carried out by Birmingham University Field Archaeology Unit of land at Catesby Business Park, Balby Carr, Doncaster, South Yorkshire (centred on NGR SE 5862 0058). The work was commissioned by B&Q PLC and was undertaken in advance of detailed planning approval for a retail development and construction of an associated access road. The available cartographic and documentary evidence was examined and the South Yorkshire Sites and Monuments Record was consulted.

The study area comprises 6.3 hectares of former agricultural land, currently pasture. There are no standing buildings or structures within the study area, and the only known below-ground remains within it are those of a late 19th/early 20th-century farm, Balby Carr Farm, situated in the northwest corner of the study area. However, the surrounding area is known through aerial photography, geophysical survey and archaeological excavation, to be rich in occupation sites dating to the late Iron Age and Romano-British periods, including enclosures and extensive 'brickwork' pattern field systems visible on aerial photographs as cropmarks. In the wider area there is a concentration of Romano-British pottery kiln sites and the Roman town of Danum (modern Doncaster) lies less than 3km to the north. Several finds of Roman-British pottery and coins have also been recovered in the vicinity of the study area.

It is thought that, during the Romano-British period, early attempts were made to drain Potteric Carr, of which Balby Carr is a part. Throughout the post-medieval (and possibly medieval) period, various attempts were made to drain the Carr by cutting long deep drains, still extant today.

Given the high concentration of cropmark sites, finds of Romano-British artefacts close to the study area, the proximity to the Roman town of Danum and the Roman-British pottery kilns sites in the surrounding area there is good potential for the existence of significant archaeological features and deposits within the study area, particularly remains dating to the Iron Age and Romano-British periods.

#### **1.0 Introduction**

An archaeological desk-based assessment was carried out by Birmingham University Field Archaeology Unit (BUFAU) of land at Catesby Business Park, Balby Carr, Doncaster, South Yorkshire (Fig. 1, hereafter referred to as the study area). The assessment was carried out on behalf of B&Q PLC in advance of detailed planning approval submitted to Doncaster Metropolitan Borough Council for the construction of a new retail store (Planning application number: 01/31/2567/P/FUL).

This assessment is the first stage of a programme of archaeological work recommended by South Yorkshire Archaeology Service (SYAS), of which this report forms the first stage, stages 2 and 3 being geophysical survey and a programme of trial-trenching (dependent on the results of stages 1 and 2) respectively. An aerial photographic assessment has also been carried out as part of the desk-based assessment and is the subject of a separate report to be found in Appendix 1, and briefly summarised in Section 7.0 below. The assessment adheres to the guidelines set down in the *Standard and Guidance for Archaeological Desk-Based Assessments* (Institute of Field Archaeologists 1999) and is in accordance with a brief prepared by SYAS (SYAS 2002).

#### 2.0 Location of study area and description (Fig. 2)

The study area is located approximately 3km southeast of Doncaster (centred on NGR SE 5862 0058). The main study area is bordered by a ditch running parallel to the White Rose Way in the east, the Division Drain to the south, which runs east-west across this area of the Carr, and arbitrary borders defined by the limits of the development site to the west and north. The study area covers an area of approximately 6.3 hectares and comprises two fields currently left as rough pasture and separated by a drainage ditch. The study area is fairly flat with a very slight gradual downward slope to the north, with a height of approximately 5m AOD.

#### 3.0 Objectives

The objective of this assessment was to determine the likely presence, survival and significance of any archaeological remains within the study area.

#### 4.0 Method

A site inspection of the study area was carried out in order to note current land-use and condition and to record any visible archaeological or historical features. The South Yorkshire Sites and Monuments Record (SMR), the primary source of known archaeological information for the county, was consulted: entries for at least 1km around the study area were considered. Historic maps, including the first three editions of the Ordnance Survey, and secondary sources such as local histories, were consulted at Doncaster Archives and Doncaster Library. Other secondary sources were consulted at the University of Birmingham library and at South Yorkshire Archaeology Service in the SMR searchroom.

#### 5.0 Geology and geotechnical information

The study area is underlain by Drift deposits consisting of alluvial clay. Below these are Solid Deposits comprising the Bunter Sandstone of the Permo-Triassic (British Geological Survey, 1:50,000 map sheet 88). Under these are Carboniferous rocks, including productive Coal Measures. The region also contains a number of glacial channels, one of which may cross the study area, although this is uncertain (Thomas and Callington, 2001). In 1951, a coal seam from was mined from Rossington Colliery beneath the Carr and terminated at a fault in 1953. Mining of other seams followed in the 1960's, which undermined parts of the Carr and caused subsidence, resulting in the flooding of Balby Carr. Three seams of coal have been worked at depths of between 770m and 830m, although coal-working stopped in 1984.

The geotechnical bore-hole and test pit logs are reproduced in Appendix 2 of this report. They confirm that alluvial clays cover almost the whole of the study area. Grey-brown sands were present beneath the alluvial clays in the northern part of the study area, at a depth of approximately 1.0-2.6m, below the present ground surface. Over the majority of the study area, a fine red-brown sand was encountered beneath the alluvial clay, at a depth of approximately 1.5m-8.0m, varying in places. The topsoil was found to range from 0.20-0.50m in depth. In the north of the study area the topsoil was generally brown clayey sand or sandy clay, while the in the south it was mainly orange-brown, desiccated, and clayey (Thomas and Callington, 2001). The topsoil in the south of the study area was underlain, in places, by dark brown-grey soils 0.55-0.70m thick, possibly indicating made ground.

A Bore-hole (BH8) located near the southern boundary of the study area, encountered a firm gravelly clay beneath 0.50m of topsoil, to a depth of 6.20m, overlying a clayey/silty sand thought to be Glacial. This deposit was also encountered in some of the trial pits in the southwest corner of the study area, and may relate to the existence of a glacial palaeochannel within the southern part of the study area.

#### 6.0 Site inspection (Plates 1-4)

A brief inspection of the study area was carried out in order to note current conditions and land-use, and to record any visible features of archaeological or historical interest. The study area was found to comprise rough grassland, which had been grazed by horses (Plates 3 and 4). The Division Drain, forming the southern boundary of the study area, was approximately 3m deep and was partly lined with small bushes and some silver birch trees. The eastern border of the study area comprised a wooden fence and a deep drain, with White Rose Way to the east, lined with small silver birch trees.

Three large drains almost met in the northwest corner of the study area; these probably joined each other at one time. One of these drains crossed the study area running northwest-southeast and was lined with small, planted silver birch trees (Plate 2). Just outside the study area, immediately to the east of the location of a proposed access road, were several slight ridges spaced roughly 7-8m apart running parallel with a southwest-northeast aligned drain. These ridges may possibly represent traces of ridge and furrow.

The site of the former Balby Carr Farm, which was built between 1854 and 1903 (Plate 1), is located in the northwest of the study area, immediately to the south of Balby Carr

Bank, within the proposed route of access road to be constructed as part of the proposed development. The remains of the farm consist of a rectangular earth platform approximately 1m high, covered in loose debris, mostly of 19th/20th-century brick rubble. Concrete foundations and a concrete manhole were visible at the south side of the platform, and there were two wooden fence posts in the southeast corner of the platform. A rough clinker track runs around and the outside of the platform, parallel to its southern and western edges. To the northwest, there is another rectangular carth platform, also about 1m high. This platform may have contained agricultural buildings or animal pens associated with the farm. To the south of this platform a dump of concrete rubble and felled tree stumps was noted.

#### 7.0 Aerial photographic assessment (Appendix 1)

The aerial photographic assessment (Cox, 2002) carried out for the purposes of this assessment did not identify any possible archaeological features within the study area. However, the study area is located between two groups of archaeological features, which lie over 500m away from it. The first group, to the north, on the former Doncaster airfield site, comprises marks in the grass suggesting the presence of linear features and possible enclosures probably associated with Romano-British settlement or a continuation of field systems, of probable Iron Age or Romano-British date, to the south. The second group, to the south, near the Beeston Plantation also contains evidence for former enclosures and linear features of probable Iron Age or Romano-British date.

To the immediate east of the study area, drainage and boundary features were observed, and a collection of pits of indeterminate date and function were recorded to the southwest. Although no archaeological features were identified within the study area itself, the features nearby were considered to provide context for the study area, which could facilitate modelling of previous land-use for the study area and its environs. The assessment, concluded that there was a likelihood that further archaeological evidence, not visible on aerial photographs, may be present within or around the study area, although its low-lying and wet condition may have precluded earlier settlement and landuse.

#### 8.0 Archaeological and historical background

#### 8.1 Prehistoric

A Bronze Age tripartite cinerary urn and pygmy incense cup were found about 1.5 km to the north-northwest of the study area (NGR SE 58 02; SMR 667). This has been restored and is kept at Doncaster Museum.

There are various cropmark sites in the area, known from aerial photographs. These are generally thought to date from the Iron Age or Romano-British period. Some of these sites will be mentioned in this report, but a full examination of available aerial photographs was carried out in the Aerial Photographic Assessment (Appendix 1). Although it is considered likely that the various sites identified from cropmark evidence were in use from the Iron Age into the Romano-British period, they are discussed below in the Romano-British section of the report.

#### 8.2 Romano-British (Figs. 3 & 4; Plate 5)

The area in which the study area is located is archaeologically important due to the presence of the Roman town of *Danum* (modern Doncaster) less than 3km to the north. It contained forts southeast of the River Don and a *vicus*, which probably lay further south. In the later Romano-British period, Doncaster was probably an important market town, bulk products such as pottery being carried on the river systems of the Humber basin (Parker, 1987). The products of pottery kilns at Rossington were probably exported to the military on the northern frontier. Doncaster is situated at the highest point on the Don which was navigable to coastal vessels, and also at a major road crossing.

The fort at Doncaster was established soon after 70AD and contained timber buildings and a cobbled road. It was abandoned after the construction of Hadrian's Wall, and rebuilt on a smaller scale, with a stone defensive wall, just before 160AD (Hey, 1979). Coin evidence shows that it was occupied until at least 390AD. The fort was superceded by an Anglo-Saxon *burh* and later a Norman castle.

There are various pottery kilns in the vicinity dating to the Roman period, particularly at Rossington to the southeast of the study area (see below). The area also lies in the midst of extensive 'brickwork' pattern field systems dating to the later prehistoric and early Roman period. These have been documented by Riley (1980), through aerial photography and they extend from North Nottinghamshire to South Yorkshire, being particularly concentrated on the Bunter sandstone geology. Many of the field systems appear to be associated with enclosures and other cropmark features. They are termed 'brickwork' pattern because they consist of many parallel boundaries dividing the land into long strips which are cut into rectangles by short cross boundaries (Riley, 1977). On the low-lying Loversall and Potteric Carr, Riley (1977) notes that these fields were of a slightly different morphology to elsewhere, being less regular.

There is abundant evidence of extensive drainage operations carried out during the Romano-British period on Hatfield Chase. These drainage systems apparently fell out of use during the succeeding centuries (Bunting *et al* 1971). No evidence for similar drainage operations has been recorded in the study area itself.

The closest recorded entry on the SMR to the study area is the find of a rim of a Romano-British urn (NGR SE 575 006, SMR 1869) discovered at Carr View Farm, about 1km to the west of the study area. Romano-British pottery has also been found to the southwest of the study area (NGR SK 578 992, SMR 1870) in a field between Long Walk Plantation and Loversall Park.

A cropmark enclosure of possible Romano-British date lies about 1km to the south of the study area, in Loversall parish (NGR SK 586 998, SMR 2134; Fig. 3). An Iron Age/Romano-British double-ditched enclosure (NGR SK 592 998, SMR 2135; Fig. 3), also visible as a cropmark, lies just to the east of SMR 2134. This contained a circular feature and other internal features, a droveway, and was intersected by possible field boundaries (Plate 5). The original caption for Plate 5, in Magilton (1977), states that the site 'lies adjacent to the M18 motorway route and will be destroyed by the St. Catherine's interchange.' Just to the southwest of SMR 2135 is another complex of cropmarks (NGR SK 579 996, SMR 2621). This area was fieldwalked in 1986 and a scatter of Romano-British, medieval and post-medieval pottery, slag, and a few flints were recorded. Another Iron Age/Romano-British cropmark complex (NGR SK 590 995, SMR 2663; Fig. 3) is situated about 1km south-southeast of the study area near Junction 3 of the M18 motorway. Approximately 1.5km southeast of the study area, on Potteric Carr, is a cropmark site comprising a triangular enclosure and a D-shaped enclosure (NGR SK 593 994, SMR 67; Fig. 3) that was destroyed by the construction of the M18. These were probably associated with cropmark SMR 2135.

A couple of isolated finds of Roman coins have been made in the area, which do not have grid-references (SMR 3313 and 3319). There is also a suggestion that a Roman Road went from a point near Rossington to the southeast of the site, and cut across Potteric Carr to Doncaster (Gilmour, 1954).

There are several Romano-British pottery kilns in the vicinity of the study area: at Rossington Bridge, which is a Scheduled Ancient Monument (SMR 1108) 4 km to the southeast of the study area, at Cantley 4 km to the northeast, at Auckley 6 km to the east and at Blaxton 8km to the northeast. The Rossington Bridge site consists of several hectares of Romano-British settlement and the most important known concentration of Romano-British pottery kilns in the region (Atkinson 1993). Waterlogging led to preservation of wood, oak posts and leather shoes on the site. Another smaller-scale kiln was found at Bessacarr to the east of the study area, associated with an enclosure set within the Romano-British 'brickwork' plan field system, common to this area (Atkinson and Merrony 1994). The surrounding landscape has been shown by aerial photography (Riley 1980) to contain many small enclosures set amongst extensive patterns of field boundaries. Traces of this field system have also been investigated to the northeast of Doncaster at Hatfield (Northern Archaeological Associates 1999).

An archaeological assessment was carried out of an area around Carr Lodge Farm (Cumberpatch *et al* ed. 1998), situated directly south of the study area, with its northern boundary formed by the Division Drain, the southern boundary of the current study area. The area lay on fen peat, which appeared to have been drained in the post-medieval period and subsequently used as farmland. It was clear that it had once been part of the extensive 'brickwork' pattern landscape in the area. Further aerial photographic assessment of this area revealed two ditched enclosures, observed to the west of Beeston Plantation, containing traces of pits and ditches, which may have been related to ditched field boundaries to the south (probably SMR 2134 or associated with this). A small

enclosure, which was visible in 1980 as a slight earthwork in a meadow just to the west of Beeston Plantation (NGR SK 587 998) was also noted by Riley (1980).

A geophysical survey was carried out just to the southeast of Junction 3 of the M18 (Belford, 1997), about 1km to the south-southeast of the study area (NGR SK 5899 9924). This confirmed previous cropmark evidence (SMR 2663, Fig. 3) and indicated the presence of a sub-rectangular enclosure, possibly associated with Iron Age or Romano-British settlement, and other major features which appeared to be field boundaries (Riley 1980), close to the M18 motorway.

Aerial photographic survey carried out in 1976 (Riley, 1977) demonstrated that the area to the south and east of Doncaster is rich in cropmark features (Fig. 4). Each dot depicted on Fig. 4 shows areas where cropmarks were visible, and continuous lines represent unproductive flights.

#### 8.3 Anglo-Saxon

At the time of the Domesday Book, Balby (the township lies to the northwest of the study area) belonged to the Manor of Hexthorpe (formerly Hextropc) and was held of William the Conqueror by Nigel de Fossard. It comprised two plough lands. The suffix *-by* derives from the commonest Old Norse term for a settlement (Gelling 1984), and *Balle* is an Old Danish personal name (Cumberpatch *et al* ed. 1998).

The name *carr* derives from the Norse *kjarr*, meaning marsh, and was a term used in much of the area covered by the Danelaw (Field 1993).

The name Loversall, the parish to the south of the study area, appeared in the Domesday Book as *Geureshale*, and probably derives from the Old English *Leofhere's Halh*, *halh* here meaning a little valley (Gelling 1984) or, more particularly, a piece of flat alluvial land beside a river (Cumberpatch *et al* ed. 1998), and *Leofhere* being a personal name.

Archaeological evidence for this period in the areas west of the Vale of York and Lower Trent Valley is notoriously obscure, as pottery is either very rare or entirely absent (Parker, 1987). However, historical references to Doncaster suggest its re-emergence as a town by the early 10th century after the Roman abandonment.

#### 8.4 Medieval

The Carr was a small part of the 190 000 acres of Hatfield Chase, the largest royal deer chase in the Realm. In 1347, the manor of Hatfield reverted to the crown and was declared a royal chase. After the Dissolution, Henry VIII enlarged it, and Potteric Carr lay within the Level of Hatfield Chase. At the time of the Norman Conquest, Hatfield Chase was mainly forested, although it is probable that parts of it were boggy. Permanent inundation took over in many parts of the Chase due to neglect of the natural drainage system and commercial tree felling. Deer-hunting became so difficult that the area

eventually fell from royal favour (Evans 1973). Leland, in about 1540, noted that the Carr was a largely impenetrable morass of bog and fen (Evans 1973).

Archaeological assessment carried out of the land directly south of the study area (Cumberpatch *et al* cd., 1998) observed faint traces of ridge and furrow to the south of the Division Drain, but concluded that, prior to drainage in the post-medieval period, the nature of the peaty soil probably dictated its use as pasture.

#### 8.5 Post-medieval (Figs. 5-10)

The study area lies within Potteric Carr, which contains different parts named Balby Carr, Loversall Carr, Wadworth Carr, High Ellers and Bessacar Carr. The whole, known as Potteric Carr, extends from Doncaster to Rossington in the south, and is about 6km by 6km. The name Potteric Carr, referred to as Potterye Carr in 1621, could be indicative of archaeological remains, perhaps related to possible finds of pottery during the early postmedieval or medieval periods given the antiquity of the name itself. However, it has been suggested that 'Pottery' is a corruption of 'Pawtry,' similar to the nearby township of Bawtry (Gilmour 1954).

A map of 'Potterick Carr,' surveyed by Saxton and Goodman and dating to 1616 (Fig. 5) shows the whole of Potteric Carr and The Old Eaa (a large expanse of water), and a line possibly representing the Division Drain. In 1616, Hugh Childers undertook to drain parts of the Carr, and built a dyke which drained into the Old Eaa Lake to the east of the study area, known as Childer's Drain. However, the project met with little success. The Old Eaa occupied about 100 acrcs in times of drought, but in times of flooding it extended over the whole carr system of the Potteric Carr basin (Bunting *et al.* 1971). The element *ea* derives from the Old English, meaning river and, on the whole, was used for watercourses of larger size than a *broc* or a *burna* (Gelling 1984). In the fenlands of eastern England, the word became *eau*, appearing to represent a combination of the Old English and Old Norse word  $a\Box$  with influence from the French *eau*. This may explain the spelling *Eaa*.

In 1621, an agreement refers to 'a greate wast called Potteryc Carr, now belonging to the Comons...out of which some employment may be made without damage to ye comoners, towarde ye mayntenance and supportacon of ye poore of ye sayd towne.' This was referring to the enclosure of a portion of the Carr ground to benefit the poor (Tomlinson 1887).

In 1626, another attempt at drainage was made by Cornclius Vermuyden, a Dutchman, who entered into a treaty to drain the whole of Hatfield Chase and its adjoining lands, and did succeed in draining and cultivating thousands of acres, but he was met with such a degree of opposition from the Commoners who relied on the fens for their livelihood, that he left the area in 1633.

In 1657, a Duck Decoy was set up to the north of the study area, on the north side of Balby Carr Bank.

Another attempt to drain the Carr was made in 1764 by John Smeaton, a civil engineer, who entered into an agreement with the Corporation of Doncaster. The Carr was entirely a bog, and subject to frequent inundations, until 1766, at which date a parliamentary act was procured for the drainage, division and enclosure of the land. Every freeholder in Doncaster, Balby, Lovershall, Wadworth, High Ellers and Cantley had a piece of land allotted to them which varied in size according to its location and the extent of the freeholder's property (Miller 1804). When enclosure was begun, three large drains were cut across the area - these were about 4m across and about 4 miles in length. Water from every part of the Carr drained into them and was carried off southwards to Rossington bridge to empty into the River Torne and thence into the Trent.

The 1771 Enclosure map of the Doncaster Carr (following the Act of 1765) (Fig. 6) shows the study area to be part of a large tract of land comprising 366 acres, belonging to the Mayor and Aldermen of the Corporation of Doncaster. The enclosure award describes the Division Dyke (which forms the southern boundary of the study area) as separating the township of Hextrop (now Hexthorpe) with Balby from Loversall. At this time, the Balby Carr Bank did not appear to extend right across the area and the land was open between the study area and the Decoy, into which fed various drains. Areas of carr land to the west of the study area were enclosed in variously-sized rectangular plots and tenanted by various people. The 'Old Ea' is depicted to the east.

In the 1770s, the land was characterised by a great increase in agricultural activity until, by the beginning of the 1780s, only the area around the Old Eaa and the Decoy remained unchanged. In 1790, the Old Eaa was drained and partially planted with trees and, in 1805, the Decoy was also planted.

Miller (1804) states that soon after the drainage and enclosure act was obtained he rented 65 acres of land on the Carr from the Corporation of Doncaster, and attempted to improve the land by paring and burning the soil. However, subsequent ploughing in preparation for a crop of rape led to the horses sinking into the bog up to their middles, and his men 'were often seen drawing their legs out of the bog with ropes.' Although his crop of rape was quite successful, attempts to grow wheat resulted in the production of only one sack from 10 acres. However, by the carly 19th century, the ground was much improved, the soil more compact, and good crops of rape, oats and wheat were produced from it. Some enclosures had also been sown with grass seed and provided good pasturage, especially for milk cows (Miller 1804).

Interestingly, Miller describes the soil as being a 'kind of peat earth, which manured more easily with sand or coal ashes than with farmyard dung. However, the geotechnical boreholes (Thomas and Callington, 2001) did not locate any peat deposits. It is possible that Miller was inaccurate in his description or had farmed land in a different part of the Carr where peat did exist, but it is also possible that a former peat layer has subsequently been eroded away by agriculture or other land use. This phenomenon has been noted at a site in Cambridgeshire at Block Fen (Jones 2002) where, during the post-Bronze Age period, the site flooded, allowing the formation of a peat deposit, which was present until artificial drainage in the late medieval and post-medieval periods when agricultural practices gradually degraded the deposit. Other deeper peat deposits still remained on the edges of the site. Peat is conducive to the preservation of organic archaeological and environmental remains, which can provide important information on the nature of the landscape and past environment.

The 1816 tithe plan of the township of Hextrope with Balby (Fig. 7) shows the study area to have been enclosed into fairly regular plots. Although the description is a little unclear in the tithe award, the large southern field appears to have been part of *Doncaster Field* and was owned by John Kirkby. Otherwise, it may have been known as *Carr Close*. The Mother Drain, running south of and parallel to Balby Carr Bank had been cut, although it was not named as such on the map.

The Great Northern Railway was constructed in 1849, and its route took it through the Old Eaa plantation and through the middle of the Decoy wood. This and additional railways carried coal trains from local collieries, and an area south of the railway was used for the deposition of colliery waste.

The First Edition Ordnance Survey for this area is quite early, dating to 1854 (Fig. 8). The Mother Drain, running south of and parallel to Balby Carr Bank, is now named as such. The field boundaries had changed only slightly since 1816, one being added and another removed. Trees appear to have been planted along the field boundaries, and a long, narrow plantation had been added to the west named The New Plantation, which met Balby Carr Bank in the north, and the Division Drain in the south.

An 1884 Drainage Plan of the area is drawn onto a map base composed of the 1854 Ordnance Survey and simply outlines the various drains in blue.

By 1903, the main change to the study area is that Balby Carr Farm had been built immediately to the south of Balby Carr Bank. It comprised a 'C'-shaped building, a long range with two wings, around a courtyard, and a further building to the east, all enclosed within a square plot of land against the New Plantation, which is depicted on the Ordnance Survey map of this date (Fig. 9) as being marshland. By 1930, an extra building and an open-sided building had been added to the farm, but no other mapped change had taken place within the study area (Fig. 10).

Major changes to the area came with the construction of the M18 motorway, which destroyed several cropmark sites, and the construction of White Rose Way.

#### 9.0 Conclusion and recommendations

Although no archaeological features or finds are recorded within the study area, it is clear that there is a high concentration of cropmark enclosures associated with extensive field systems dating to the Iron Age and/or Romano-British periods, within the vicinity of the study area. Given this high concentration of cropmark sites and recorded finds of Romano-British pottery close to the study area, the proximity to the Roman town of *Danum* and the Roman-British pottery kilns sites in the surrounding area, there is good potential for the existence of significant archaeological features and deposits within the study area. Frequent attempts at drainage of the Carr, subsequent use of the land for agriculture and the presence of the former Balby Carr Farm may have had some affect on any possible archaeological remains, possibly causing some truncation or disturbance.

The results of this assessment indicate it may be considered appropriate to carry out further archaeological evaluation by means of trial-trenching. The stage 2 geophysical survey may provide additional information which, together with this assessment, will provide sufficient information to enable a decision regarding further evaluation work, to be made. However, any decision on further evaluation work must rest with South Yorkshire Archaeology Service.

#### 10.0 Acknowledgements

This report was written by Sarah Watt and edited by Laurence Jones, who also managed the project. Thanks are due to the staff of Doncaster Archives, and we gratefully acknowledge the permission of Dr. Brian Barber, the Senior Archivist at Doncaster Archives, for his permission to reproduce maps used in this assessment.

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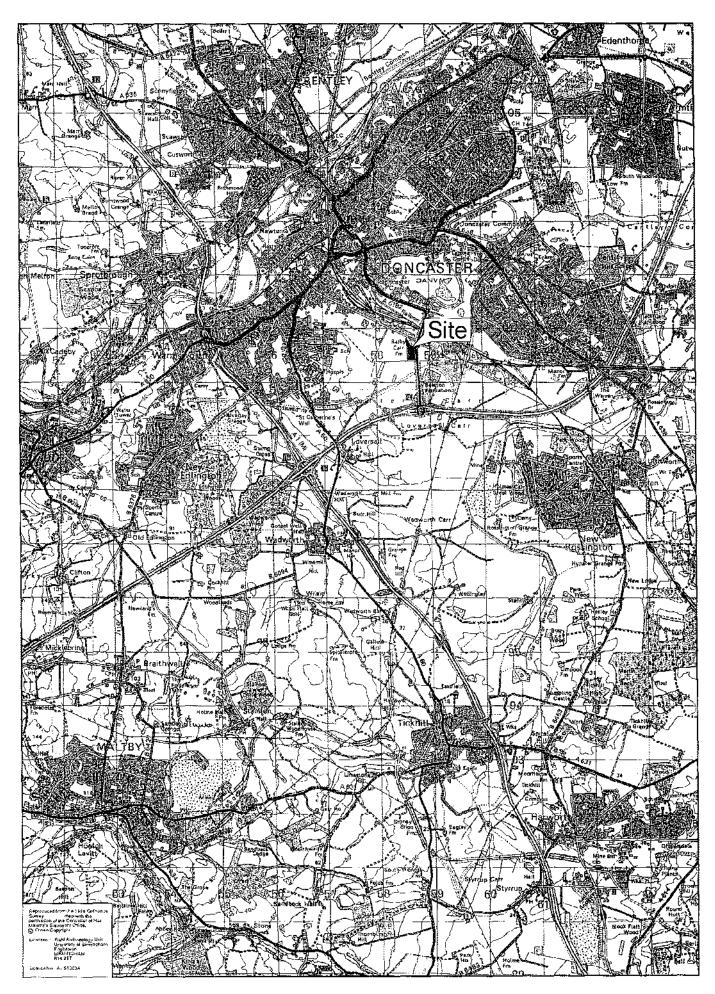
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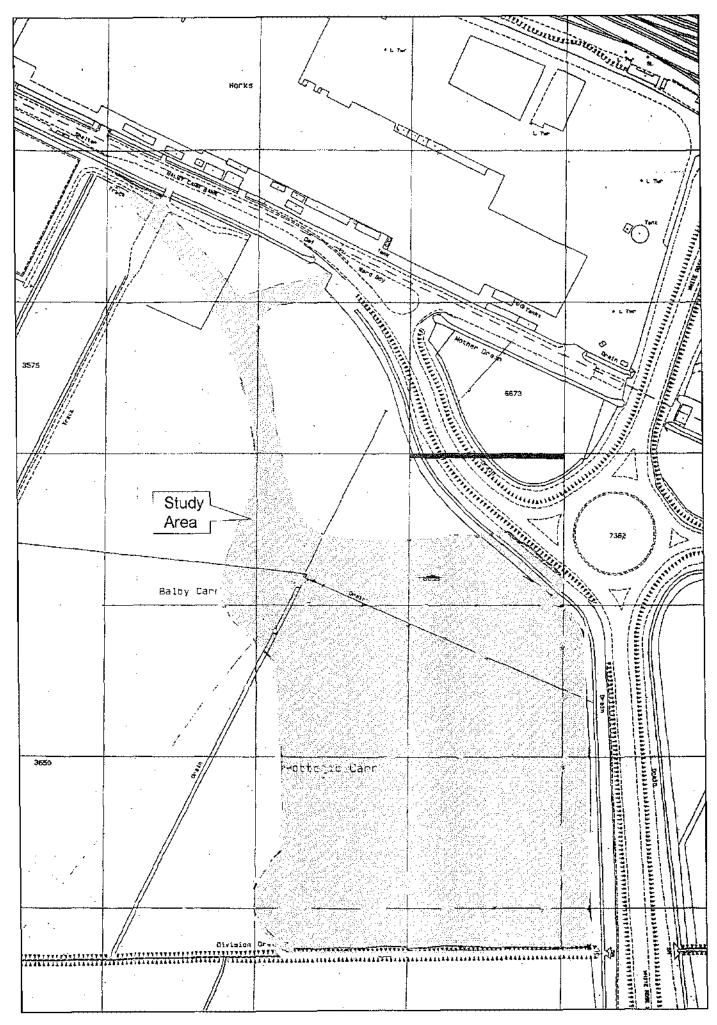
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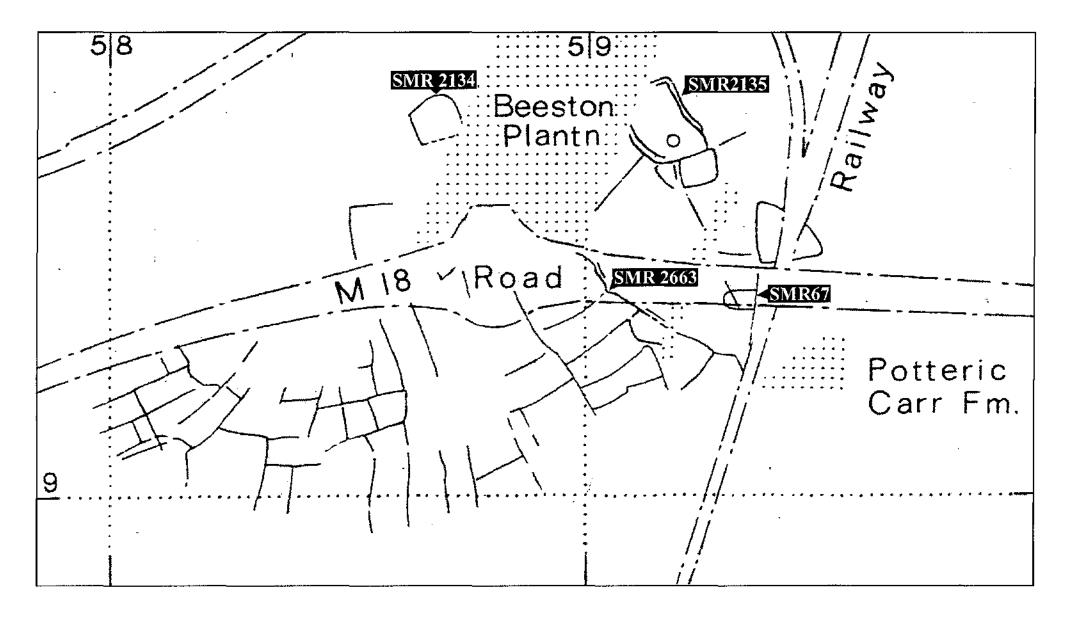
#### Maps

- 1616 A Copy of Pottrick Carr near Doncaster in the County of York taken in the month of August 1616 by Robert Saxton and William Goodman (Doncaster Archives DZ MD/224C).
- 1771 Enclosure Map (and Award) of the Doncaster Carr (Doncaster Archives).
- 1816 Tithe Plan of the Township of Hextrope with Balby in the Parish of Doncaster in the County of York (Joseph Colbeck).
- 1854 Ordnance Survey Sheet 285 NW (6" Doncaster Local Studies Library).

- 1884 Drainage plan of Potteric Carr (Doncaster Archives DY SIM/853) based on 1854 Ordnance Survey map. 1903 Ordnance Survey Sheet 285.5 (25", Doncaster Archives). 1930 Ordnance Survey Sheet 285.5 (25" reduced, Doncaster Archives).







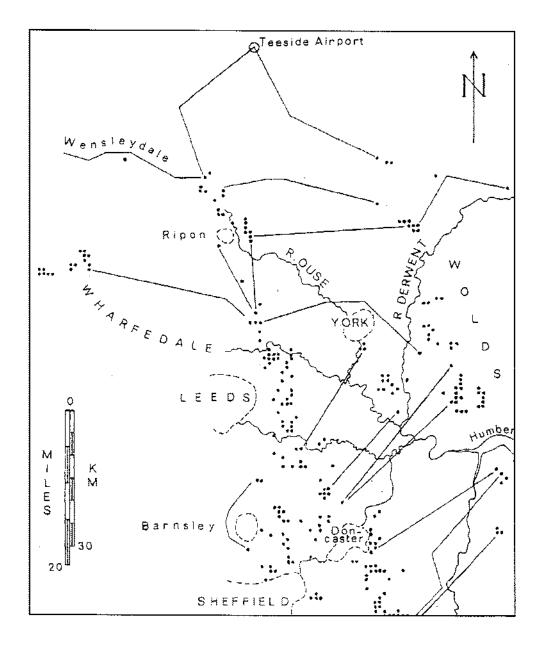


Fig.4

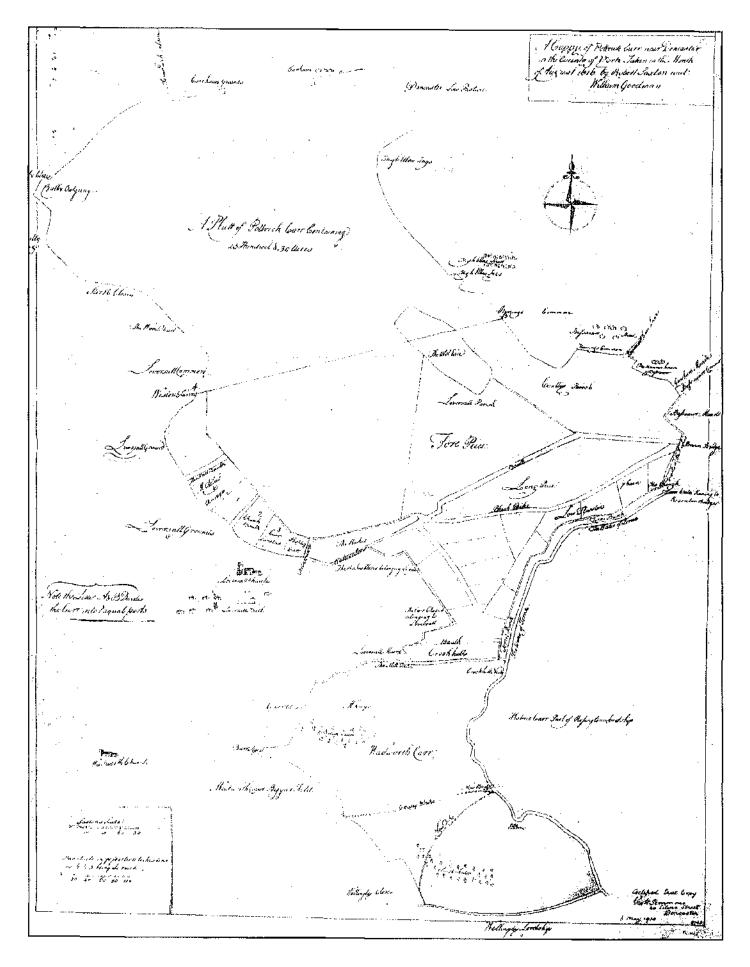


Fig.5 (1616 map)

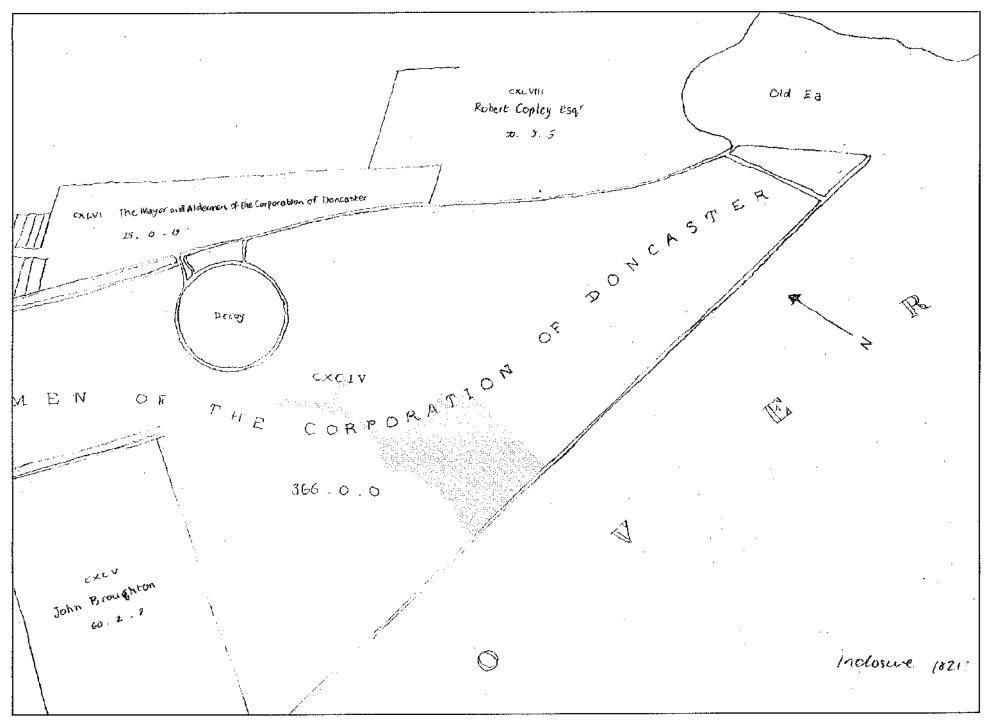


Fig.6 (1771 enclosure map)

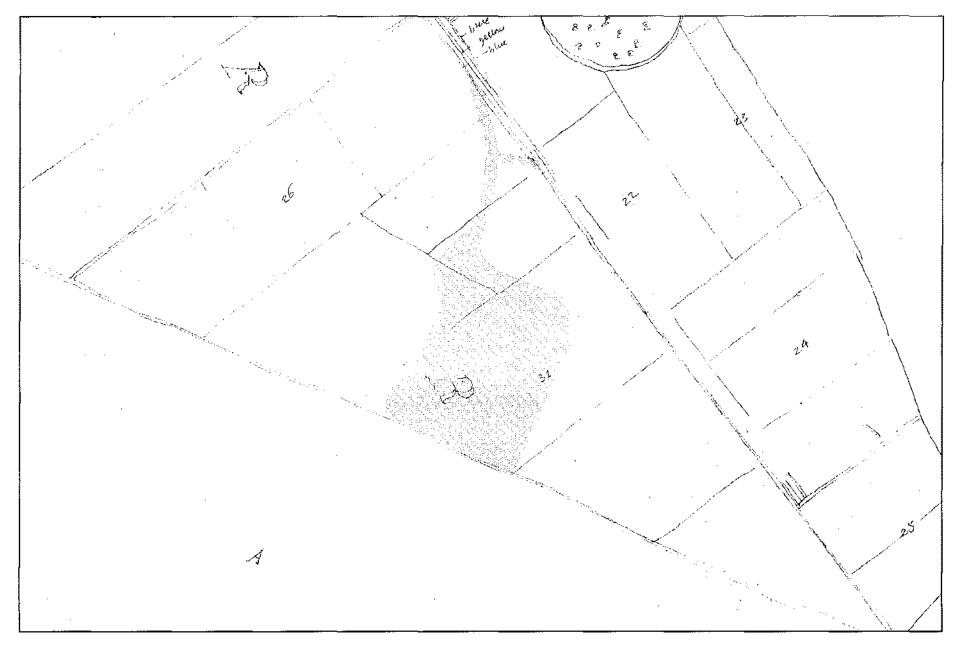


Fig.7 (1816 tithe map)

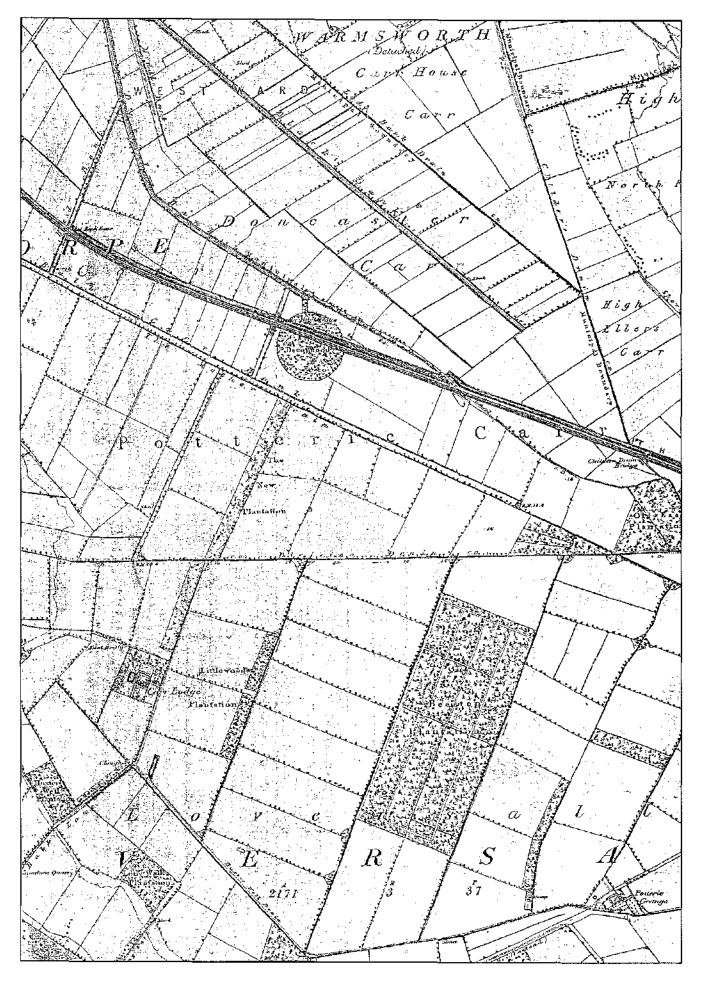


Fig.8 (o.s. 1856)

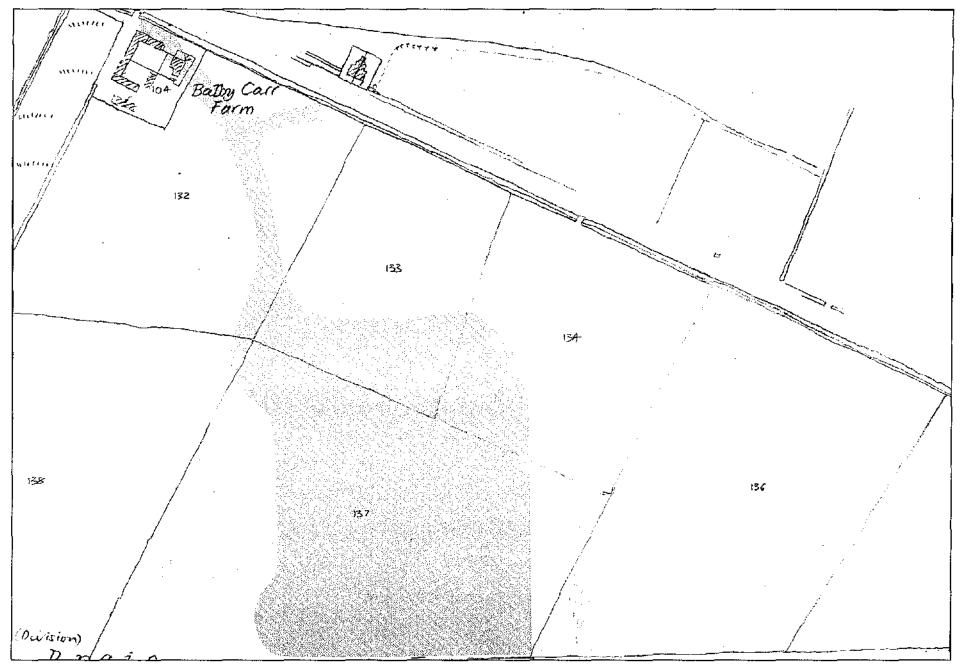


Fig.9 (o.s.1903)

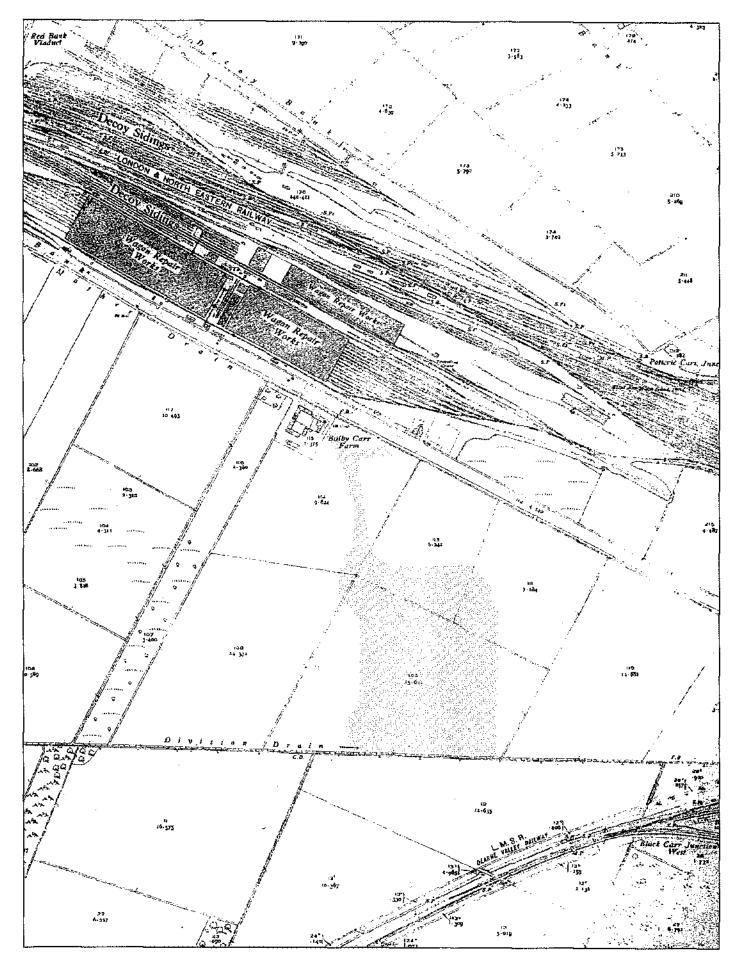


Fig.10 (o.s.1930)



Plate 1



Plate 2



Plate 3



Plate 4

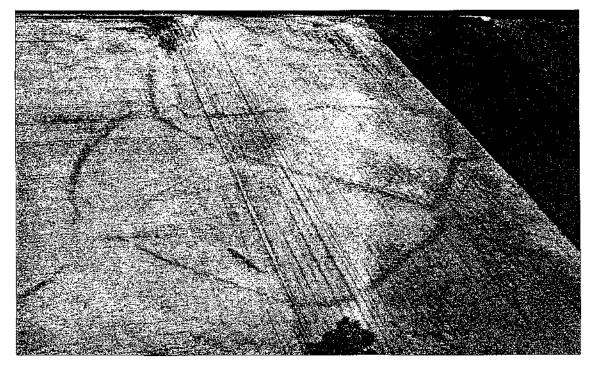


Plate 5

Appendix 1: Aerial Photographic Assessment

## AERIAL PHOTOGRAPHIC ASSESSMENT

BALBY CARR DONCASTER

SITE CENTRED SE 588005

CHRIS COX BA MA, MIFA

**MARCH 2002** 

.

## BALBY CARR, DONCASTER AERIAL PHOTOGRAPHIC ASSESSMENT FOR ARCHAEOLOGY

## **MANAGEMENT SUMMARY**

Chris Cox MA MIFA at CgMs Consulting undertook this assessment of aerial photographs under commission from the Birmingham University Field Archaeology Unit (BUFAU).

The assessment was completed in March 2002.

The object of the assessment was to identify and accurately map archaeological features visible on aerial photographs within the assessment area and a radius of 500m of the centre of the site.

- The site contained no visible archaeological evidence.
- A cut feature of uncertain date and origin was identified to the immediate east.
- Pits were seen to the immediate south and west.
- Drainage and boundary features were also seen adjacent to the site.
- Field systems and enclosures were observed within and around Beeston Plantation, Potteric Carr (to the south of the M18) and features were seen beneath grass runway 04/22 at the former Doncaster airfield. All these features lie over 500m from the centre of the site.

CONTENTS

- **1** INTRODUCTION
- 2 THE STUDY AREA, FIGURE 1
- **3 ARCHAEOLOGY FROM AERIAL PHOTOGRAPHS**
- 4 AERIAL PHOTOGRAPHS: TYPES AND SOURCES
- **5 INTERPRETATION AND MAPPING METHODOLOGY**
- 6 MAPS
- 7 RESULTS
- 8 CONCLUSION
- 9 REFERENCES
- **10 ACKNOWLEDGEMENTS**

#### **APPENDIX 1**

Aerial Photographs Consulted At the NMR

FIGURE 1 Archaeological Features adjacent to the Site

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## **1** INTRODUCTION

- 1.1 Chris Cox MA MIFA at CgMs Consulting undertook this assessment of aerial photographs under commission from the Birmingham University Field Archaeology Unit (BUFAU) in March 2002.
- 1.2 It was completed in accordance with the Local Authority brief for archaeological works over the site prior to development.
- 1.3 The object of the assessment was to identify and provide detailed and accurate mapping of archaeological features visible on aerial photographs within the study area.

## 2 THE STUDY AREA, Figure 1

## 2.1 Location

2.1.1 The site lies to the north of Junction 13 of the M18 at National Grid Reference SE 588 005 between Division Drain and Balby Carr Bank.

## 2.2 Soils and Geology

- 2.2.1 The study area lies on Glaciolacustrine clay of the Foggathorpe 2 soil association (SSEW 1983 classification712i). The clay interfaces with deep Fen Peat to its immediate east.
- 2.2.2 Groundwater is often controlled by drainage or pumping in such areas, as attested by the aerial photographs which were interpreted during this assessment.

## 2.3 Archaeology

2.3.1 The area lies within a rich archaeological landscape, which comprises Roman settlement and fortifications at Doncaster and a series of former field systems, and settlement remains, which were discovered during the 1970s and 1980s by the Late Dr D.N. Riley (1980). These systems, known collectively as the 'Brickwork fields' extend over the area of Sherwood Sandstone which lies to the south and east of New Rossington, Doncaster. These soils were easy to cultivate and provided a rich environment for earlier settlers. The remains of settlement and agriculture are seen as marks in growing crops caused by differential retention of soil moisture over buried features. Remains of former ditched enclosures may be seen on aerial photographs at the modern Becston Plantation to the south of the Site. Field systems are also in evidence at Potteric and Loversall Carrs to the south of the M18. The OS map also indicates a 'Potteric Carr' to the north of the site, which is not the area referred to above.

## 2.4 Land-use and condition

2.4.1 The area is low lying and damp. It exhibits the tones and textures associated with wetter environments when viewed from the air. The site drains into 'Mother Drain' to its immediate north via lesser-sized drainage ditches which double as boundaries. The land comprised part of Balby Carr Farm prior to the development of the M18 and its link road over the past decade, and was under a mixed arable and pastoral regime.

## **3 ARCHAEOLOGY FROM AERIAL PHOTOGRAPHS**

#### 3.1 The role of aerial photographic interpretation

- 3.1.1 Air photo interpretation provides a unique overview of landscape history and changes in land-use. It provides informed guidance for subsequent desk and ground-based investigations and complements cartographic and documentary research.
- 3.1.2 Information gained from aerial photographs cannot casily be detected by other means and the interpretation of contemporary and archival aerial photographs is thus an important component of multi-disciplinary archaeological investigation.
- 3.1.3 Interpretation of aerial photographs allows the accurate mapping of archaeological sites recorded as crop, grass or vegetation marks (caused by the differential growth of plants over buried features); soil marks (caused by differences in soil colour over ploughed buried features) and shadows cast by upstanding earthworks and features seen in relief. In this instance, features were seen as positive marks in crop and/or grass.

#### 3.2 Limitations of the data

- 3.2.1 Aerial photographic evidence is limited by seasonal, agricultural, meteorological and environmental factors which affect the extent to which either buried or upstanding archaeological features can be detected. It is thus advantageous to examine a range of photos taken under a variety of environmental conditions in order to build up a comprehensive interpretation of the archaeological landscape. The visibility of archaeological features may differ from year to year. Individual photographs often record only a small percentage of the actual extent of buried or upstanding features.
- 3.2.2 In this case, the photos showed the site and its environs under a good variety of environmental conditions.

# 4 AERIAL PHOTOGRAPHS: TYPES AND SOURCES

## 4.1 Types

- 4.1.1 Two types of aerial photograph are used for archaeological interpretation. Vertical aerial photographs are taken for general-purpose survey using a camera mounted inside a modified aircraft. The aircraft is flown on a pre-planned set of overlapping flight-lines which cover the survey area completely. The camera points straight towards the ground. The vertical viewpoint provides aerial photographic coverage from a fixed scale and constant 180° angles at the centre of each frame. The overlap between the areas covered by each consecutive frame is usually 60%. This overlap between frames enables the photo interpreter to study each pair of vertical photos under a stereoscope.
- 4.1.2 The stereoscope combines the two images to allow the interpreter to see one three-dimensional image of the ground surface. Vertical aerial photographs carry inherent distortions introduced by variations in perspective and ground height, but are essentially 'map-like' in appearance. They are generally taken for non-archaeological, civil and military purposes and form the basic data from which most modern maps are compiled. Vertical aerial photographs are a very useful source of archaeological data, particularly in areas where features survive as earthworks. They also constitute historical 'documents'.
- 4.1.3 Oblique aerial photographs are taken using a hand held camera by an aerial archaeologist to portray features which have been identified during specialist survey. These photos are extremely useful, but contain inherent perspective distortions, which must be accounted for in rectification and mapping procedures.
- 4.1.4 In this case, vertical aerial photographs taken for non-archaeological purposes between 1946 and 1992 and obliques taken between 1972 and 1994 provided all data for interpretation and mapping.

#### 4.2 Sources of data

4.2.1 Photographs were drawn from English Heritage National Monuments Record (NMR). All photographs listed on Coversearch number 39907 (12-02-02) were examined in detail. Photographs held at the Cambridge University Collection (Unit for Landscape Modelling) were also consulted. Sources held at SYAU were crosschecked.

## 5 INTERPRETATION AND MAPPING METHODOLOGY

- 5.1 Photographic interpretation, rectification and mapping were carried out following procedures defined by IFA Technical Paper Number 12. All photographs were closely examined, under 1.5x and 4x magnification and interpreted with the aid of a mirror stereoscope where appropriate.
- 5.2 Transparent interpretative overlays were prepared, from which archaeological and associated relevant data were scanned for rectification to the map base.
- 5.3 Interpreted features were rectified, where appropriate, by computer using orthophoto rectification software, AirPhoto 2.11. This software calculates values for the closeness of control point match between the photograph and an accurately surveyed digital map base. It utilises an initial plane surface mathematical rectification technique to match photo and map data. The mismatches were entirely acceptable for mapping to a base which was surveyed at 1:10000 scale.

## 6 MAPS

- 6.1 Aerial photographic data were rectified to two digital OS 1:10000 scale map tiles, SK59NE and SE50SE. The OS maps were used as a base for geo-referencing and presentation of the results in both digital and paper formats.
- 6.2 The mapping was produced using AutoCAD 2000 and may be exported as required subject to checking of complete data transfer and positional accuracy by the client.

# 7 **RESULTS Figure 1**

#### 7.1 Site Context

- 7.1.1 Photograph numbers OS 80116, 3-5 and 14-15, which were taken in July 1980 show the area very clearly. The wet nature of the soil is demonstrated by the uneven tones within the vegetation, and the darker toned soil within localised areas of peat.
- 7.1.2 Various photographs show the extensive areas of field boundaries and enclosures, which lie to the south of the site over 500m from its centre. These sites are well presented and analysed by the late Dr Riley (1980). None of these features are apparent within or immediately adjacent to the site.
- 7.1.3 However, aerial photographs taken in the 1940s show marks in the grass over the runways of the former Doncaster airfield to the north of the site. These marks indicate the presence of linear features and possible enclosures which pre-date the airfield, and are likely to be either associated with the Roman settlement or a continuation of the 'brickwork' field systems to the south which are in evidence at Potteric Carr.
- 7.1.4 The Site may have been unsettled and uncultivated in pre-modern times due to drainage difficulties, but did lie within an extensive landscape of fields and farmsteads. Beeston Plantation, which lies south of the site, contains evidence for former enclosures and linear features within the wooded area and its immediate environs (Riley 1980).

#### 7.2 The site and immediate environs

7.3 The following features were identified adjacent to the Site:

## <u>Feature A</u>

Location	Between Division Drain and Mother Drain
Photo number	OS/80116 005
NGR	SE588004

Drainage and former boundary features, which show as light-toned silted areas in darker-toned bare soil. These features are probably not of any great antiquity.

# Feature B

NGR	SE587003
Photo number	OS/89258 005
Location	Between Carr Lodge Drain and Black Carr Junction West

Pits, which show as darker-toned areas in soil and vegetation. These features may be anthropogenic, and possibly associated with settlement and farming remains to the immediate south at Beeston Plantation. However, they cannot be assigned a definite date or function from the aerial photographic evidence alone, and do not lie directly within the Site.

#### Feature C

NGR	SE589004
Photo number	MAL 17 77 215
Location	Between Division Drain, Mother Drain and Young Eaa Plantation.

A well defined cut feature, which shows as a differential mark in bare soil. This feature may form part of an enclosure, but is more likely to have comprised a former drainage or boundary feature of uncertain date.

7.4 It is likely that further archaeological evidence, which is not visible on aerial photographs due to environmental reasons, may be present within or adjacent to the study area, dependent upon the type of environment which prevailed in premodern periods.

#### 8 CONCLUSION

- 8.1 The study area contains no visible traces of archaeological features.
- 8.2 The immediate environs contain pits and a cut feature of uncertain origin. Drainage and boundary features are also in evidence.
- 8.3 The site lies between two foci of archaeological features to the north at the site of the former airport and to the South at Beeston Plantation and Potteric Carr. These features lie over 500m from the centre of the site, but provide context for the site to facilitate modelling its use and environs in pre-modern times.
- 8.4 The nature, condition and complexity of any deposits upon the site may be elucidated by geophysical survey and/or field evaluation in advance of construction as appropriate.
- 8.5 The wider area carries a very high potential for discovery of buried features and associated artefactual and ecofactual evidence, but the low-lying and wet condition of the site itself may have precluded pre-modern settlement and land-use within the precise locality.

## 9 REFERENCES

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## **10 ACKNOWLEDGEMENTS**

Thanks are due to:

Laurence Jones at BUFAU

Roy Sykes at SYAU

Library and archive staff at EH NMR and ULM

#### **APPENDIX 1**

# Aerial Photographs consulted at EH NMR

#### ENGLISH HERITAGE - NATIONAL MONUMENTS RECORD National Monuments Record - Air Photos Library

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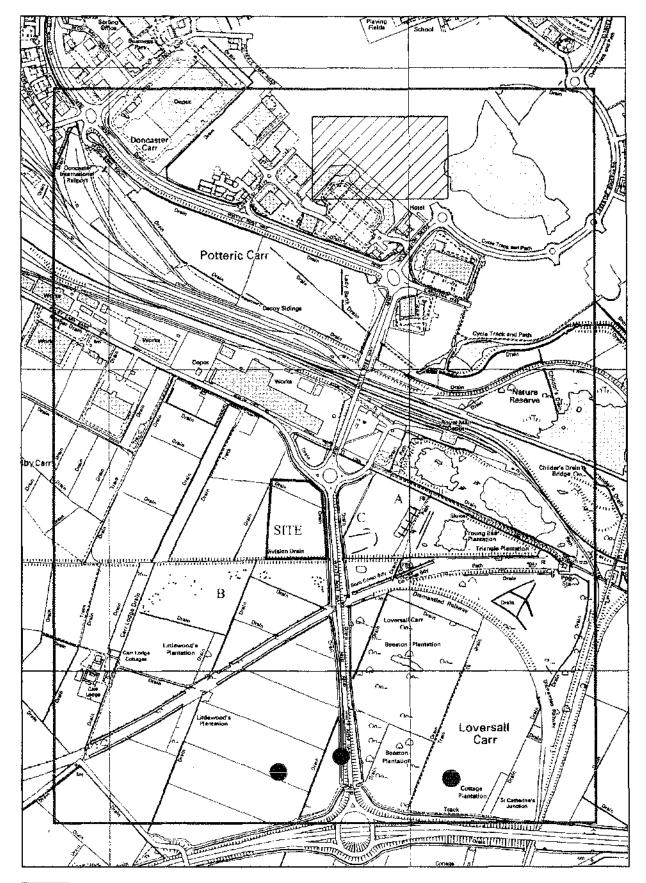
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Area examined

Possible extension to 'brickwork' field systems



Site

Enclosures and cut features associated with known 'brickwork' fields to South

- Cut features
- Drainage

Appendix 2: Bore-hole and test pit logs

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Watford Redfordshire WD	24 4AA		Client :	 88	Q plc								
Tel : 01923 81753 Fax : 01923 22851		l.	G.L. (mAO	D): 4.3	0	· ·	N Caord :	400618	.89	E Coord		\$58622	.29
			Date :	31/	05/2001	1	e <sub>fant∶</sub>	racked Exca	avator	Logged By	. L		nas
		··· · · · · · · · · · · · · · · · · ·		•									
									•				
									:				
SAMPLING		·····	GROUN			1	—-						
Depth (m)	Туре	Test Result	Legend	Level (mAOD)	Ref	Description	over TOPS	-01				Depth (m)	Water
				¥ 4.00				d browns C	LAY with so	ome to		0.30	
0.70 0.70 0.70	D D D	72, 86, 102kPa				much fi	ne sand.				-	-	
0.70											-	- -	
	ļ	Ē									ب ا ا	• - -	
				2.30		Crown					-	2.00	5 
2.50 2.50	DD			1.80		Grey m	edium SA	NU.			-	2.50	
2.50	D			<b>F</b> 			Endo	f Trial Pit at	2.50 m			-	
											-	-  -	
				<u>-</u>							-	- - -	
				- - -								-	
				F F							-	-	
				- - -							ľ	-	
SAMPLE/TEST			Comments :	Ī			Groundwate				Water	- Depths (л	ໍ <u>.</u> ນ
SAMPLE/TEST D - Small Dist B - Bu:k Samp W - Water Sar V - Vane Test I	rbed Sample e aple Result						Not enco	ountered, sa	ind was wet		trike	Leve	Flow
Water Strike		Water - Level	Stability :	Some colla	apse bei	low 2.0m.	<u> </u>						
													1

ROSCOE CAPITA	LIMITED		Project	Do	ncaste	ЭГ		Triaf Pit Numbe		<u> </u>
Hille House [32 St. Albans Ro	ad 🦽		Job Numbe	н L20	001J		· · ·	TP	3	
Watford Hertfordshire WD2	24 4AA		Çlient :	B&	Q plc		· · · · · · · · · · · · · · · · · · ·		-	
Fel : 01923 81753 Fax : 01923 22851		<b>Bersteinstein</b> ,	G.L. (mACC	D): 4.3	8		N Coord : 400562.13	E Coord :	458579	9.35
Scale : 1:59	·, · · · · · · · · · · · · · · · · · ·		Date :	31/	05/2001	1	Plant: Tracked Excavator	Logged By :	L. Thor	mas
		Test Result		D STRATA	Ref	Occution		· · · · · · · · · · · · · · · · · · ·		
Depth (m)	Туре		Legend	(mAOD) (-		Description Grass o			Cepih (m)	vvater
0.70 0.70 0.70		70, 70, 90kPa		4.08			stiff mottled browns friable CL e sand/silt	AY with a	0.30	:
				<b>3</b> .18		Brown	medium SAND with a little clay	to 1.7m.	1.20	
									2.30	
				F			End of Trial Pit at 2.30 m			
				н, , , , , , , , , , , , , , , , , , ,		:	End of Trial Pit at 2.30 m		in the second	
							End of Trial Pit at 2.30 m			
				T       I <t< td=""><td></td><td></td><td>End of Trial Pit at 2.30 m</td><td></td><td></td><td></td></t<>			End of Trial Pit at 2.30 m			
SAMPLE/TEST D - Small Dist	T KEY Inted Sample		Continents .				Groundwater : Seepage at base.	Wat	- - - - - - - - - - - - - - - - - - -	n)
SAMPLE/TESI D - Small Distu B - Bulk Samp W - Water Sar V - Vane Test Water Strike	TXEY Inted Sample le nple Result	- Water Lovel		Pit Stable.				W;3 Strike		m) Flow

132 Bit Algans Road Wardind Heriodottanice WO24 AA TH: C1923 B17537 Fax: C1923 2285'6     Image: L2001J     Image: L2001J     Image: L2001J       Cilled:     B&Q plc     Cilled:     B&Q plc     E Coard:     458653.6       Scale:     150     Date:     31/05/2001     Plant:     Tracked Excavator     Legged By:     L Thoma		Project Doncaster		Triz Pit Number
SAMPLING DATA         GROUND STRATA           Seen 120         Date:         31/05/2001         Perint:         Transfer         458633.           Sam 120         Date:         31/05/2001         Perint:         Transfer         Ligrand By:	Activity and a	Job Numiber : L2001J		TP 4
Part 6402 2001 *         OL (PACC)         4.38         NEwer         400521.04         Etherer         4586536           Base 132         Date         31/05/2001         Part Tracted Excevator         Lager 0;         L Thoma           SAMPLIND DATA         Date         31/05/2001         Part Tracted Excevator         Lager 0;         L Thoma           SAMPLIND DATA         GROUND STRATA         GROUND STRATA         Greateron         2000 min           Symptoid         Total         Test Renth         Lorent         State         36.3         Greateron         2000 min         0.30           0 80         D         32, 55, 90kPa         2.88         Torm methed browns CLAY         0.30         0.75         0.	Hertfordshire WD24 4AA	Client B&Q plc	<u> </u>	
SAMPLING DATA         GROUND STRATA           Dermit (n)         Tone         Test Result         Learner         Learner         Learner         Learner         Dermit (n)         Tone         Test Result         Description         Descrin         Description         Descri			N Coord : 400521.04	E Caard : 458653.68
Depth (m)     Type     Test Result     Legend     Level (mAOD)     Ref     Description     Description       0.70     V     32, 55, 90kPa     4.08     Grass over TOPSOIL     0.30       0.80     D     32, 55, 90kPa     3.63     Brown and grey medium SAND.     0.75       0.80     D     2.88     Brown fine to coarse SAND and fine to coarse sand and fine gravel bands.     1.50       1.78     1.98     1.78     Dark red medium SAND.     2.60	Scale 1:50	Date : 31/05/2001	Plant: Tracked Excavator	Legged By: L. Thomas
SAMPLETTEST KEY     Comments :     Groundwater :     Water Deaths (m)       D - Smail Disturbed Sample     Land drain at 0.5m in northwest     Seepage at 1.5m.     Strike     Level       W - Water Sample     corner of pit.     Strike     Level     Strike     Level	Depth (m) Type Test Result	Legend Level (mAOD) Ref Desci	Grass over TOPSOIL	
S-MAPL F/TEST XEY D - Small Disturbed Sample Land drain at 0.5m in northwest U - Water Sample Comments: Co	0.80 D	2.88	Brown fine to coarse SAND and fine to bunded GRAVEL with some black co and fine gravel bands. Dark red medium SAND.	to coarse oarse sand
Water Water Level Collanse of both sides balow 1 hm	0.80 D	2.88 Broad 1.98 1.78 C	Brown fine to coarse SAND and fine to bunded GRAVEL with some black co and fine gravel bands. Dark red medium SAND. End of Trial Pit at 2.60 m	1.50 to coarse parse sand 2.40 -2.60

ERA Holebase II Form updated by MRW 7/1/99

OSCOE CAPITA			Project -	Doncaste	er		Trial Pit Numb	t:"	
lille House 37 St. Albans Ro	oad		Jab Number :	L2001J			TP	<b>'</b> 5	
Vatford Iertfordshire WD2	24 4AA		Client :	B&Q plc		····			
el : 01923 81753 ax : 01923 22851		Şonrosona,	G.L. (mAQD) :	4.65		N Coerd . 400461.49	E Coord	458691	.26
Scale 1:50			Date :	31/05/200	+ 1	Plant Tracked Excavator	Logged By .	L. Thor	nas
SAMPLING	DATA		GROUND						
SAMPLING Depth (m)	DATA Type	. Test Result	Le	STRATA Nel NAOD) Ref	Description			Depit (m)	Wate
Depth (m)		Test Result	Legend (m	4.25	Grass o	ver TOPSOIL y-brown CLAY with some find d occasional pockets of find 1 gravel between 1.1 and 1.	ne to medium e to coarse 6m.	0.40	Wa
Depth (m) 0.60 0.60	Туре D V		Legend (m	2.75	Grass o Stiff gree sand an rounded		ne to medium e to coarse 6m.	- 0.40 - 1.90	Wat
Depth (m)	Туре		Legend (m	4.25	Grass o Stiff gree sand an rounded	y-brown CLAY with some find d occasional pockets of find f gravel between 1.1 and 1.		0.40	Wa
Depth (m) 0.60 0.60	Type D V		Legend (m	2.75	Grass o Stiff gree sand an rounded	y-brown CLAY with some find d occasional pockets of find f gravel between 1.1 and 1.		0.40 - 1.90 - 2.60	

ROSCOE CAPITI	A LIMITED		₽roject :	Dor	ncaster	······································	Triał Pit Numb	91	
Hille House 132 St. Albans R	Dad 🎢		Job Numbe	r: L20	01J	·	TP	' 6	
Wattord Hertfordshire WD	_	コイ	Cilent :	B&	Q plc	· · · · · · · · · · · · · · · · · · ·			
Tel : 01923 81755 Fax : 01923 2285		Anne and a	G.L. (mAOE	D): 4.95	5	N Coord : 400389.37	E Coord ;	458702	2.47
Scale : 1:50			Dale :	31/(	05/2001	Plant: Tracked Excavate	Di Logged By :	L. Thor	nas
SAMPLING	DATA		GROUN	D STRATA					·
Deptin (m)	Туре	Test Result	Legend	Level (mAOD)	Ref Descr	·		Depth (m)	Water
0.10	0	-		4.75	G	rass over light brown clayey TO	PSOIL.	0.20	
0.45 0.70 0.70	D D V	48, 56, 74kPa		4.40	I F	OSSIBLE MADE GROUND (ve own-black sand with some mea- bunded gravel and many rootlets irm mottled browns CLAY with some medium sand.	dium to coarse s). some to much fine	0.55	
1.50	D			 				1.30	
				<u>+</u> · · · ·	to to	ery suit inducated red-brown CL modium cond and a little fine to	AY with much fine	€ 1.50	-
					, từ	ery stiff indurated red-brown CL o medium sand and a little fine to ravel. End of Trial Pit at 1.50	AY with much fine coarse rounded ) m	1.50 1.50	-
					g	ery still indurated red-blowin CL medium sand and a little fine to ravel. End of Trial Pit at 1.50	AY with much find coarse rounded ) m	1.50 1.50 1.50	
3.60	D				g	ery still indurated red-blown CL medium sand and a little fine to ravel. End of Trial Pit at 1.50	AY with much find coarse rounded m		
3.60	D				g	ery still indurated red-blown CL medium sand and a little fine to ravel. End of Trial Pit at 1.50	AY with much find coarse rounded ) m	1.50 1.50 1.50	
			Comments :		g	End of ⊺rial Pit at 1.50	) m	1.50 1.50 1.50       	
3.60 SAMPLE/TES D · Small Dist B · Buik Sama W · Water San V · Vane Test ∑ Water	š KEY strbed Sample le πple Result	Water	Comments :		g	Groundwater . Not encountered.	) m	= 1.50	m) Flow

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ROSCOE CAPITA LIMITED	Project :	Doncaster			Trial Pit Number		
19 Se House 132 St. Albans Road	Job Number :	L2001J			TP	7	
Watford Herdfordshire WD24 4AA	Client :	B&Q plc	<u> </u>				
Tel : D1923 817537	G.L. (mAQD) ;	5.03	N Coord :	400385.22	E Coerd :	458617	7.84
Scale: 1:50	Date :	31/05/2001	Plant: Tra	cked Excavator	Logged By :	L. Thor	mas
SAMPLING DATA	GROUND S	·····				 	
SAMPLING DATA Depth (m) Type : Test Result	Legend (m/	AOD) Ref	Description	own sandy TOPSO		Depth (m)	Water
	Legend (m)	vel D-(	Description Grass over light brown POSSIBLE MADE many rootlets) Firm to stiff mottled friable CLAY with s occasional medium Becoming very stiff with a little medium	own sandy TOPSO GROUND (dark br I greys and browns ome fine to medium to coarse rounded findurated CLAY at to coarse sub-rour	rown sand wit	- 0.20	Water

ROSCOE CAPIT) Hille House		}	Project :	D	oncaste	r		Trial Pit Nu	mber	
132 St. Alpars Ro Watford	<i>—</i>		Job Number	L2	2001J		· · · · · · · · · · · · · · · · · · ·	TF	> 8	
Hertfordshire WD Te: 101923 81753	37	- <u> </u>	Client :	B	&Q pic					
Fax : 01923 2285	16		G.i. (mAOD	): 4.:	20		N Coord : 400532.03	E Coord :	45868	9.03
Scale 1:50	···		Date :	31	/05/2001		Plant: Tracked Excavator	Logged By	L. Tho	mas
	Ŷ.									
	DATA		GROUN	D STRATA						
epth (m)	DATA Type	Test Result	GROUNI Legend	D STRATA Level (mAOD)		Description			Ceșth (m)	
spth (m)	Туре	Test Result 94, 94, 108kPa	Légend	'Level		TOPS Stiff mo	ttled grey-brown locally friable		       	<u> </u>
50 50 50	Туре		Légend	Level (mAOD) 3.90		TOPS Stiff mo			       	<u> </u>
epth (m) 60 70 70	Type D D D D		Légend	Level (mAOD) 3.90		TOPS( Stiff mo Light b bands. Grey-b coarse	ttled grey-brown locally friable	al grey clay	0.30	
epth (m) 50 70 70 50 50	Type D D D D D D		Légend	Level (mAOO) 3.90 3.30 1. 1.80 1.80		TOPS( Stiff mo Light b bands. Grey-b coarse	ottled grey-brown locally friable rown fine SAND with occasion rown SAND and fine to mediu GRAVEL own fine to medium SAND.	al grey clay	0.30 0.90 2.40	
epth (m) 70 70 70	Type D D D D D D		Légend	Level (mAOO) 3.90 3.30 1. 1.80 1.80	'Ref	TOPS( Stiff mo Light b bands. Grey-b coarse	ottled grey-brown locally friable rown fine SAND with occasion rown SAND and fine to mediu GRAVEL own fine to medium SAND.	nal grey clay	0.30 0.90 2.40	

RÓSCOE CAPITA	CETIMIL		Project :	Do	ncaster			Trial Pit Num	bei	
Hille House 132 St. Albans Roa	ed 🍂		Job Number	L2	001J	· · · <u>· · · · · · · · · · · · · · · · </u>	<u></u> · ·	TF	<b>9</b>	
Watford Heitfordshire WD2	_	ーイ	Client :	B8	Q pic		·			
Tel : 01923 817537 Fax : 01923 22851(		Baragoran.	G.L. (mACD)	4.3	6	N Coo;d :	400552.08	E Coord :	458650.35	5
Scale : 1:50	<del>_</del> _		Date :	31/	05/2001	Piant: Tra	acked Excavator	Logged Sy .	L. Thomas	 S
	t			•						
SAMPLING		· ·	<u></u>							
	DATA		GROUNE	STRATA				· · · . <u>-</u>		
	DATA Туре	Test Result	GROUNE	) STRATA Level (mAOD)	Ref Descripti		· · · · · · · · · · · · · · · · · · ·	·	Depth (m) W4	/eter
		Test Result	Legend	Level	Ref Descripti	ss over dark bi grey and brow fine sand. y and brown fil asional black b	rown sandy clayey wn mottled friable ( ne SAND with a lift ands m SAND. Trial Pit at 3.00 m	CLAY with a	ЭерФ (m) W4 0.30 - 1.20 - 2.80 - 3.00	
Depth (m)	Type D D V V		Legend	Level (r=AOD) 3.16	Ref Descripti	ss over dark bi grey and brow fine sand. y and brown fil asional black b	wn mottled friable ( ne SAND with a lift ands m SAND. Trial Pit at 3.00 m	CLAY with a	- 1.20 - 1.20 - 3.00 - 3.00	Flow

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ERA Holebase il Form updated by MRW 7/1/99

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ROSCOE CAPITA	LIMITED		Project :	Dor	caster					Trial Pit	Numbe	r	
Hille House 132 St. Albans Ro	ad ad		Jab Number :	L20	01J					1 T	Ρ	10	)
Watford Hertfordshire WD2	24 4AA		Client :	B&(	2 pic						-		
fel : 01923 51753 Fax : 01923 22851			0.L. (mAOD) :	4.47	,		N Coord :	4005	69.37	E Coord		458614	.90
Scale : 1:50			Date :	31/0	5/2001		Plant: T	racked E	xcavator	Logged	Ey:	 L. Thon	nas
								·····					
								۰.					
									. •				
	3												
SAMPLING			GROUND									·	 
SAMPLING Depth (m)	DATA Type	Test Result	Legend	STRATA evel mAOD)	Ref D	)escription		av sandv				Depth (m)	Water
Depth (m)	Туре		Legend (I	evel	, Ref D	Dark bro						Depth (m)	Water
Depth (m)	Туре	Test Result 64, 88, 100kPa	Legend (I	evel mAOD)	Ref D	Dark bro				CLAY with		 	Water
			Legend (I	evel mAOD) 4.07	Ref D	Dark bro					12	0.40	Water
Depth (m)	Туре		Legend (I	evel mAOD)	Ref D	Dark bro Firm to s little fine	tiff brow sand an	n and gre d traces c	y mottled f rootlets.	CLAY with		 	Water
Depth (m)	Туре		Legend (I	evel mAOD) 4.07	Ref D	Dark bro Firm to s little fine	tiff brow sand an	n and gre d traces c	y mottled f rootlets.			0.40	Water
Depth (m)	Туре		Legend (I	evel mAOD) 4.07	Ref D	Dark bro Firm to s little fine	tiff brow sand an	n and gre d traces c	y mottled f rootlets.	CLAY with		0.40	Water
Depth (m)	Туре		Legend (I	evel mAOD) 4.07	Ref D	Dark bro Firm to s little fine	tiff brow sand an	n and gre d traces c	y mottled f rootlets.	CLAY with		0.40	Water
Depth (m)	Туре		Legend (I	evel mAOD) 4.07 3.17	Ref D	Dark bro Firm to s little fine Brown a clay ban	tiff brow sand an nd grey ds and c	n and gre d traces o fine SANI	y mottled of rootlets.	CLAY with		- 1.30	Water
Depth (m)	Туре		Legend (I	evel mAOD) 4.07	Ref D	Dark bro Firm to s little fine Brown a clay ban	tiff brow sand an nd grey ds and c	n and gre d traces o fine SANI foccasiona	y mottled of rootlets.	CLAY with asional gr of black sa		0.40	Water
Depth (m)	Туре		Legend (I	evel mAOD) 4.07 3.17	Ref D	Dark bro Firm to s little fine Brown a clay ban	tiff brow sand an nd grey ds and c	n and gre d traces o fine SANI foccasiona	y mottled of rootlets.	CLAY with asional gr of black sa		- 1.30	Water
Depth (m)	Туре		Legend (I	evel mAOD) 4.07 3.17	Ref D	Dark bro Firm to s little fine Brown a clay ban	tiff brow sand an nd grey ds and c	n and gre d traces o fine SANI foccasiona	y mottled of rootlets.	CLAY with asional gr of black sa		- 1.30	Water
Depth (m)	Туре		Legend (I	evel mAOD) 4.07 3.17	Ref D	Dark bro Firm to s little fine Brown a clay ban	tiff brow sand an nd grey ds and c	n and gre d traces o fine SANI foccasiona	y mottled of rootlets.	CLAY with asional gr of black sa		- 1.30	Water
Depth (m)	Туре		Legend (I	evel mAOD) 4.07 3.17		Dark bro Firm to s little fine Brown a clay ban	tiff brow sand an nd grey ds and c	n and gre d traces o fine SANI foccasiona	y mottled of rootlets.	CLAY with asional gr of black sa		- 1.30	Water
Depth (m) 0.60 0.60 0.60	Type D V		Legend ()	evel mAOD) 4.07 3.17	Ref D	Dark bro Firm to s little fine Brown a clay ban	tiff brow sand an ds and c wn fine t End c	n and gre d traces o fine SANI occasiona	y mottled of rootlets.	CLAY with asional gr of black sa	ey and.	- 0.40 - 1.30 - 3.00 - 3.10	
Depth (m) 0.60 0.60 0.60	Type D V		Legend (I	evel mAOD) 4.07 3.17 1.47 1.37		Dark bro Firm to s little fine Brown a clay ban	tiff brow sand an dg and c ds and c End c	n and gre d traces o fine SANI boccasiona	y mottled of rootlets.	CLAY with	ey and. wa	- 1.30	n)
Depth (m)	Type D D V V		Legend ()	evel mAOD) 4.07 3.17 1.47 1.37	ered at 0.7	Dark bro Firm to s little fine Brown a clay ban	tiff brow sand an dg and c ds and c wn fine t End c	n and gre d traces o fine SANI boccasiona	y mottled f rootlets. D with occ i pockets a SAND. at 3.10 m	CLAY with	ey and.	- 1.30	

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ERA Holebase || Form updated by MRW 7/1/99

IOSCOE CAPITA	LIM:TED		Project :	Do	ncaster				Trial Pit Numb	er	
lille House 32 St. Albans Roa	ad 🎜		Job Numbe	r: L20	001J		· · · · · · · · · · · · · · · · ·	····	TP	11	
Vationd Fertfordshire WG2	-	-4 K	Client :	8&	Q pic						
et : 01923 817537 ax : 01923 22851			G L. (mAOD	): 4.4	8	NC	pord : 40058	9.42	E Coord :	458573.(	01
Scale 1:50	<del>_</del>		Date -	31/	05/2001	Plan	Tracked Exc	avator	Logged By :	L. Thoma	
							,				
SAMPLING Depth (m)	DATA I'ype	Test Result	GROUN Legend	D STRATA Level (mAOD)	Ref Des	scription				Depth (m) V	 
		Test Result 80, 86, 91kPa	· · · · · · · · · · · · · · · · · · ·	Level	Ref Des	Dark brown	clayey sandy TC nottled brown ar nd/silt		AY with	Depth (m) V 0.45	 Nate:
Depth (m)	Гуре		· · · · · · · · · · · · · · · · · · ·	Level (mAOD)	Ref Des	Dark brown Firm to stiff r some fine sa Brown and c clay bands a		nd grey CL with occas yood fragm			 Wate:
Depth (m) 0.70 0.70 0.70	lype D D V		· · · · · · · · · · · · · · · · · · ·	Level (mAOD) 4.03 - - 2.98	Ref Des	Dark brown Firm to stiff r some fine sa Brown and c clay bands a	nottled brown ar nd/silt, rey fine SAND w nd occasional w	nd grey CL with occas yood fragm		0.45 E 1.50	
Depth (m) 0.70 0.70 0.70	lype D D V		· · · · · · · · · · · · · · · · · · ·	Level (mAOD) 4.03 - - 2.98	Ref Des	Dark brown Firm to stiff r some fine sa Brown and c clay bands a E	nottled brown ar nd/silt, rey fine SAND w nd occasional w	with occas with occas with occas with occas with occas with occas with occas	ional grey hents.	0.45 1.50 2.00 	

ROSCOE CAPITA L'MITED	Project :	Doncaste	г			Trial Pit Numbe		
Hille House 132 St. Albans Road	Job Number :	L2001J				TP	12	2
Walford Heitfordshire WD24 4AA	Client:	B&Q plc				1 		
Tel : 0:923 817537	G.L. (mAOD) :	4.33		N Coord :	400552.51	E Coord .	458554	1.92
:Scale ( 1: <b>5</b> 0	Date :	31/ <b>05/20</b> 01	1	Plant: Trac	ked Excavator	Logged By :	L. Thor	nas
				·				
SAMPLING DATA	GROUND ST	RATA			····			
Depth (m) Type Test Result	Legend (mAO		Description				Cepth (m)	Water
0.60 D 60, 66, 70kP 0.60 V	4. a 3.2 1.5 1.5 1.5	23	Grey a of grey	rey and brown to much fine s and brown fine y sandy clay a ed medium S/	and and many ro and and many ro to medium SAN nd occasional roc AND. rial Pit at 2.60 m		2.40	
SAMPLE/ITEST KEY D. Smalt Disturbed Sample B. Bulk Sample W. Water Sample V. Vane Test: Result Water Strike Water Level	Comments : Land drain en Stability : Colla	countered at			t base of pit.	Wa Strike	ter Depths (r	m) F:ow

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ROSCOE CAPITA			Project :	Dor	ncaste	r				it Pit Nomb		
Hille House 132 St. Albans Ro	cad		Job Number	L20	001J					TF	21 (	3
Walford Herfordshire WO			Client :	B&	Q plc							
Tel : 01923 81753 Fax : 01923 2285			G L. (mAOD)	): 4.37	7		N Coord :	400527.9	)1 <u>∈</u> c	Doord :	458594	4.04
Scale : 1:50			Date .	31/0	05/2001		Plant Tr	acked Excav	ator Log	7ged By '	L. Tho	nas
SAMPLING	) DATA		GROUNI	O STRATA								
SAMPLING Depth (m)	DATA Type	Test Result		Leve: (mAOD)	Ref	Description					Depth (m)	Water
· ·		Test Resuit 70, 72, 80kPa		Leve:	Ref	TOPSC Firm to some fi	stiff grey a ne sand ba own mediu	m SAND. Thai Pit at 2		with	Depth (m)	Water
Depth (m)	Type D V			Leve: (mAOD) 4.17 2.47	Ref	TOPSC Firm to some fi	stiff grey a ne sand ba own mediu End of	m SAND. Trial Pit at 2	.50 m		- 0.20	
Depth (m)	Type D D V V			Leve: (mAOD) 4.17 2.47		TOPSC Firm to some fi	stiff grey a ne sand ba own mediu End of	m SAND.	.50 m		- 0.20 - 1.90 - 2.50 	

ERA Holebase II Form updaled by MRW 7/1/99

ROSCOE CAPITA	A LIM:TED		Project :	Do	nçaster		Taal Pit Numb	Der	
Hille House 132 St. Albans Ro	and and		Job Namber .	L2(	001J		ĭ╡ <b>Ţ</b>	۲ <mark>۲ (</mark>	1
Watterd Hertfordshire WD	24 4AA	コイ	Ciieril :	B&	Q plc	<u> </u>		-	-
Tel : 01923 81753 Fax : 01923 2285			G.L. (mAOD)	. 4.5	3	N Coord . 400500.79	E Coord	45863(	).79
Scale: 1:50			Date :	31/	05/2001	Plant - Tracked Excavator	Logged By	L. Thor	nas
SAMPLING	DATA		GROUND	) STRATA					
SAMPLING Depth (m)	i DATA	Test Result	· · · · · · · · ·	) STRATA Level (mAOD)	Ref Descrip			Depih (m)	Water
<u> </u>	<u> </u>	Test Result	· · · · · · · · ·	Level	Da	ice k brown sandy clayey TOPSOIL ange-brown clayey to very clayey ND and fine to coarse sub-round		F 0.30	Water
Depth (m)	Туре	Test Result	Legend	Lovel (mAOD) 4.23	Da Ori SA	k brown sandy clayey TOPSOIL		1.60	Water
Depth (m)	Туре	Test Result	· · · · · · · · ·	Level (mAOD) 4.23	Da Ori SA	k brown sandy clayey TOPSOIL ange-brown clayey to very clayey ND and fine to coarse sub-round	fine to coarse led GRAVEL.	0.30	Waler
Depth (m)	DD	Test Result	Legend	Lovel (mAOD) 4.23	Da Ori SA	k brown sandy clayey TOPSOIL inge-brown clayey to very clayey ND and fine to coarse sub-round d-brown medium SAND. End of Trial Pit at 2.40 m	fine to coarse led GRAVEL.	1.60	
Depth (m)	Type D D D T XEY urbed Sample Me Result	Test Result	Legend	Lovel (mAOD) 4.23	Da Ori SA	k brown sandy clayey TOPSOIL inge-brown clayey to very clayey ND and fine to coarse sub-round d-brown medium SAND.	fine to coarse led GRAVEL.	0.30	

ROSCOE CAPITA	A CMITED		Project :	Dono	aster			Trial Pit	Number	,	
Hille ∺ouse I32 St. Albans Ro	cad 🖉		Job Number :	L200	1J			T	Ρ	15	5
Nationd Ientfordshire WD		-I C	Client :	B&Q	plc				-		-
el : 01923 81753 ax : 01923 2285		<u></u>	G.L. (mAOO) :	4.45		N Coord :	400466.40	E Coord	:	458657	7.39
Scale 1:50			Date .	31/05	/2001	Plant : Trac	ked Excavator	Logged (	Ву :	L. Thor	mas
SAMPLING Depth (m)	DATA Type	Test Result	GROUND S Legenci (m/	vei	Lef Description					Depth (iii)	Wate
	1	Test Result	Legend (m/	vei	Grass		vn sandy clayey rown CLAY wit			Depth (m)	Wat
Depth (m)	1	Test Result	Legenci (m/	AOD) R	Grass of Firm to mediur		rown CLAY wit little fine to coal				Wal
Depth (m)	Туре	Test Result	Legend (m/	4.15	Grass of Firm to mediur	stiff orange-b n sand and a own medium	rown CLAY wit little fine to coal	h much fine rse gravel.		- 0.30	Wal
Depth (m)	Туре	Test Result	Legend (m/	el AOD) R 4.15 3.45	Grass of Firm to mediur	stiff orange-b n sand and a own medium	rown CLAY wit little fine to coar SAND.	h much fine rse gravel.		1.00	Wat
Depth (m)	Type	Test Result	Legenc (m/	el AOD) R 4.15 3.45	Grass of Firm to mediur	stiff orange-b n sand and a own medium End of Tr	rown CLAY wit little fine to coal SAND.	h much fine rse gravel.	e to	2.40	
Depth (m)	Type	Test Result	Legend (m/	el AOD) R 4.15 3.45	Grass of Firm to mediur	stiff orange-b n sand and a own medium	rown CLAY wit little fine to coal SAND.	h much fine rse gravel.	e to	1.00	

ROSCOE CAPITA			Project :	Do	ncaste	er		<u> </u>	foal Pr	Number	<u> </u>	
Hille House 132 St. Albans Ro	ad _		Job Numbe		001J	<u> </u>	, <u>/* *</u>		- T	Ρ	16	3
Watford Hertfordshire WD	24 4AA		Client :	B&	Q plc				-	•		
Tel : 01923 81753 Fax - 01923 2255			G.L. (mAOI				N Coord :	400425.40	ECoon	 1 :	458675	5.08
			Date :		05/200	1	Piant: Tra	cked Excavator	Logged		L Thon	nas
		<u>_</u> _				<u>,</u>	n					
		·										
									<u> </u>			
SAMPLING	DATA	<u></u>	GROUN	D STRATA								
Depth (m)	Туре	Test Result	Legend	Level (mAOD)	Ref	Description					Depth (m)	Water
				4.57		1		sandy TOPSOIL,		·	0.30	
0.70 0.80 0.80	v D D	58, 70, 74kPa		بعبابعبيه		becomi with so	ange-brown i sand and i ng a very st me fine to c	i friable CLAY wit a little gravel to co iff red-brown and oarse gravel.	grey CLA	ie to Y	ور السار ما مراجع	
				an safa an								
				مار مار بر مار مار مار مار مار مار مار مار مار							and a second second	
				L H H H H H H H H H H H H H H H H H H H							- 	
2.60	ס			2.17			End of	Trial Pit at 2.70 m			2.70	-
				- - -	¢			(na) Fit at 2.70 h	I		-  -	
											Ę	
				- - -								
			ļ								1. F. I	
											r F	
	T KEY urbed Sample		Comments :	.i			Groundwater : Not encou	Intered.		Wate	Depths (n	 π);
SAMPLE/TES D - Small Dist B - Bulk Samp W - Water Sa V - Vane Test	ne mpie Result	( Minter)								Strike	Level	Flow
V Water Strike	⊻	/ Water - Leve:	Stability	Pit Stable.			l			··		<u> </u>

ROSCOE CAPITA	LIMITED		Project :	Do	ncaste	:Г		Triai Pit Nu	mber	
∺⊞e House 132 St. Albans Ro	ad 🎜		Jeb Numbe	r: L2(	D01J				D 17	7
Watford Hertfordshire WD2	24 4AA	71-	Client :	B&	Q plc					
Fel : 01923 81753 Fax : 01923 22851		Langer,	G.L. (mAOE	o): 5.02	2		N Coord : 400379.36	E Coerd	458659	 9.72
Scale : 1:50			Date :	01/	06/2001	1	Plant Rubber Duck	Logged By	L. Ther	 nas
SAMPLING	DATA		GROUN	D STRATA						
Depth (m)	рата <sub>Туре</sub>	Test Result	GROUN Legend	D STRATA	Ref	Description			Depth (m)	Water
		Test Result 78, 80, 80kPa	Legend	Level	Raf	Grass POSSI sand w gravel)	over brown clayey sandy T BLE MADE GROUND (di ith some fine to coarse su stiff mottled beige-brown ine sand/silt.	ark brown claye b-rounded	0.30	Water
Depth (m) 0.15 0.40 0.70	туре D D V		Legend	Level (mAOD) 4.72	Ref	Grass POSSI sand w gravel) Firm to much f	BLE MADE GROUND (di ith some fine to coarse su	ark brown claye b-rounded friable CLAY wi	0.30 0.65	Water
Depth (m) 0,15 0,40 0,70 1,00 1,00	туре D V D		Legend	Level (mAOD) 4.72 4.37	Raf	Grass POSSI sand w gravel) Firm to much f	BLE MADE GROUND (di ith some fine to coarse su stiff mottled beige-brown ine sand/silt.	ark brown claye b-rounded friable CLAY wi AY with a little fi d cobbles.	0.30 0.65	Water
Depth (m) 0,15 0,40 0,70 1,00 1,00	туре D V D		Legend	Level (mAOD) 4.72 4.37 3.42	Ref	Grass POSSI sand w gravel) Firm to much f	BLE MADE GROUND (di ith some fine to coarse su stiff mottled beige-brown ine sand/silt. iff brown-red and grey CL se sub-rounded gravel an	ark brown claye b-rounded friable CLAY wi AY with a little fi d cobbles.	0.30 0.65	Water
Depth (m) 0.15 0.40 0.70 1.00 1.00 2.60 2.00	туре D V D D		Legend	Level (mAOD) 4.72 4.37 3.42 2.02		Grass POSSI sand w gravel) Firm to much f	BLE MADE GROUND (di ith some fine to coarse su stiff mottled beige-brown ine sand/silt. iff brown-red and grey CL se sub-rounded gravel an	ark brown claye b-rounded friable CLAY wi AY with a little fi d cobbles.	0.30 0.65	
Depth (m) 0,15 0,40 0,70 1,00 1,00	Type		Legend	Level (mAOD) 4.72 4.37 3.42 2.02		Grass POSSI sand w gravel) Firm to much f	BLE MADE GROUND (di ith some fine to coarse su stiff mottled beige-brown ine sand/silt. iff brown-red and grey CL se sub-rounded gravel an End of Trial Pit at 3.0	ark brown ciaye b-rounded friable CLAY wi AY with a little fi d cobbles. 0 m	0.30 0.65 th 1.60 ne	

ERA Holebase II Form updated by MRW 7/1/99

ROSCOE CAPITA LIMITED	Project :	Doncast	er			Trial Pit Number		
Pille House 132 St. Albans Road	Jab Number :	L2001J				TP	18	}
Watford Hentforcshire WD24 4AA	Client :	B&Q plo	<u>-</u>	·				
Tei . 01923 817537 Fax : 01923 228516	G.L. (mAQD) :	4.98		N Coord :	400379.34	E Coord :	458 <b>5</b> 75	5.84
Scale : 1:50	Daté :	01/06/200	)1	Plant: Ru	bbe: Duck	Logged By -	L. Thon	nas
SAMPLING DATA           Depth (m)         Type         Test Result           0.70         V         60, 78, 98kPa           1.00         D         D	Legend (r	evel mAOD) Ref 4.68 4.38 3.38	POSS sand v gravel Firm to some	IBLE MADE with a little fin ). o stiff mottled to much fine	own clayey TOPSC GROUND (dark bi to coarse sub-rou brown and grey C to medium sand. ey CLAY with a little lers.	rown clayey unded	Depth (m)	Water
		2.28			Trial Pît at 2.70 m		re elemente de la companya de la com	
SAMPLE/TEST KEY D. Small Disturbed Sample B. Bulk Sample W. Water Sample V. Vane Test Result Z. 7 Water Strike	Comments Land drain	2.28	1       1 1 1 0.8m.	End of Groundwater Not enco		Wate	Depths (n	n)

ROSCOE CAPITA	LIMITED		Project :	Do	ncaste	er.		Tria: Fit Nember		
Hille House 132 St. Albans Roa	ad gate		Job Numbe	r L2t	001J			TP	19	)
Waiford Hertfordsbire WD2		コイ	Client .	B&	Q pic					
Tel : 01923 817537 Fax : 01923 22851		Examp.	G.L. (mAOC	»): 4.7	9		N Coard: 400419.48	E Coord ;	458570	).92
Scale : 1:50			Date :	01/	06/2001	1	Plant, Rubber Duck	Logged By :	 L. Thea	nas
SAMPLING	DATA		GROUN	D STRATA						
Cepth (m)	Тура	Test Result	Legend	Level (mACD)	Ref	Description			Oepth (m)	Water
0.20 0.60 0.60 0.60 2.50 2.50	0 20 20	66, 68, 90kPa		4.39		Firm to fine to r sand. Very sti gravel a	over TOPSOIL. stiff mottled orange-brown C nedium sand, locally becomi ff grey-brown mottled CLAY and cobbles.	with a little	0.40 1.20 2.20	
							End of Trial Pit at 3,00 n	I		

ROSCOE CAPITA LIMITED Hills Hause 132 SL Albans Road Watford			Project Doncaster				That Pit Number		
		Job Number :	L2(	L2001J			20	)	
Hertfordshire WD2	_		Client :	B&	Q pic	,,,,,,			
Tel: 0*923 817537		G.L. (mAOD) :	4.8	6	N Coord : 400418.85	E Coord :	458602	2.99	
Scale 1;50	· · · · · ·		-Date :	01/	06/2001	Plant: Rubber Duck	Logged By:	L. Thor	nas
SAMPLING	DATA		GROUND						
Cepth (m)	Туре	Test Result	Legend (r	evei mAQD)	Rel	Description Grass over TOPSOIL		Depth (m)	Water
Cepth (m) 0.60 0.70 0.70 1.20 1.50 1.50	Type	Test Result 78, 80, 88kPa >120kPa		evei	Ref		CLAY with a little boulders.	Depth (m)	Water
0.60 0.70 0.70 1.20 1.50 1.50		78, 80, 88kPa		evel nAOD) 4.56 4.06	Ref	Grass over TOPSOIL Firm to stiff grey-brown mottled Cl much fine to medium sand and m Very stiff brown and grey mottled fine to coarse gravel, cobbles and End of Trial Pit at 3.20	CLAY with a little boulders.	0.30	
0.60 0.70 0.70 1.20	V D D V D D D	78, 80, 88kPa	Legend	evel nAOD) 4.56 4.06	Ref	Grass over TOPSOIL Firm to stiff grey-brown mottled Cl much fine to medium sand and m Very stiff brown and grey mottled fine to coarse gravel, cobbles and	CLAY with a little boulders.	0.30	

OSCOE CAPITA	a limited		Project	Do	incaster				т	rial Pit Numb	)er	
∈ e House 32 St. Albans Re	uad 🖉		Job Number	L2	001J	<u> </u>		<b>_</b> _		TF	21 21	
Vatiord Iertfordshire WD	024 4AA		Client :	B8	Q plc				· ·-			
el : 01923 81753 ax : 01923 2265		Lannes.	G.L. (mAQC	»: 4.9	2		N Coord :	400412.9	4 E	Coord	458642	2.32
Scale 1 50			Date :	01/	06/2001		Plant RL	bber Duck		ogged By	L. Thor	nas
SAMPLING			· · ·	D STRATA	i							
SAMPLING Depth (Til)	G DATA Type	Test Result	GROUN Legerd	Level (mAOD)	Ref	Description Grass (	over dark b	rown clayey s	andy TOP	SOIL	Depth (m)	Water
	Туре 	Test Result 54, 108, 120kP	Legerd	Level	i	Grass of Firm to CLAY y grading rootlets	stiff orange with some to to a claye	rown clayey s e-brown and g o much fine to y sand locally, wn CLAY with d boulders.	grey mottle o medium with many	ed friable sand, y	F 0 30	Water
Depth (m)	Туре		Legerd	Level (mAOD) 4.62	i	Grass of Firm to CLAY y grading rootlets	stiff orange vith some t to a clayer ff grey-brov cobbles an	e-brown and g o much fine to y sand locally,	grey mottle o medium with many n a little to s	ed friable sand, y	0.30	
Cepth (5)	Ту́ре D V		Legerd	Level (mAOD) 4.62 3.92	i	Grass of Firm to CLAY y grading rootlets	stiff orange vith some t to a clayer ff grey-brow cobbles an End of	s-brown and g o much fine to y sand locally, wn CLAY with d boulders.	grey mottle o medium with many n a little to s	ed friable sand, y some	1.00	
Cepth (5)	Type D D V V		Legerd	Level (mAOD) 4.62 3.92	i	Grass of Firm to CLAY y grading rootlets	stiff orange vith some t to a clayer ff grey-brow cobbles an End of	s-brown and g o much fine to y sand locally, wn CLAY with d boulders.	grey mottle o medium with many n a little to s	ed friable sand, y some	0.30 - 1.00 - 3.40	

ROSCCE CAPITA UMITED		n	oncaste	 Эг					
Hille House	Project :					·····	Trial Pit Num		<b>ר</b>
132 St. Albans Road Watford	Job Numb		2001J					22	2
Hentfordshire W024 4AA	Client :	Ba	&Q plc						
Fax: 01823 228516	G.L. (mAC	(D): 4.	94		N Coord :	400412.68	E Coord :	458692	2.31
Scale : 7:50	Date :	01	1/06/200	1 ·	Plant; Ru	bber Duck	Logged By :	L. Tho	mas
SAMPLING DATA Depth (m) Type Test Result 0.50 V 60, 80, 96k	Legend	ID STRATA (mAOD)	Ref			sandy clayey TOF I brown friable CL dium sand gradin		Depth (m)	Water
1.00 D 1.00 D		2.14		Very st little to		brown variegated coarse sub-roun Trial Pit at 2.80 m		2.80	
		: 						• • •	
SAMPLE/TEST KEY D - Smalt Disturbed Sample	Comments ;				Groundwater Not encou	intered.	Ŵa	ter Depths (n	n)
SAMPLE/TEST KEY D . Small Disturbed Sample B . Bulk Sample W . Water Sample V . Vane Test Result Water Water Water Level	Comments ;				Groundwater Not encou	intered.	Wa		n) Flow

ROSCOE CAPITA LI	IMITED		Project :	Do	ncaste	r			Trial Fit Numbe		
Hille House 132 St. Albans Road	: •		Job Number	L2(	001J	·		,	TP	23	3
Watford Hertfordshire WD24	444	-17	Client :	B&	Q pic		<u></u> .				i
Tel : 01923 817537 Fax : 01923 226515		Azergen,	G.L. (mAQD	4.6	8		N Coord :	400442.25	E Caord	458638	3.52
Scale: 1:50	· . <u></u> ·		Date :	01/	06/2001		Plant: Rubl	ber Duck	Logged By	L. Thor	nas
SAMPLING D	DATA		GROUNI	D STRATA							
Depth (m)	Туре	Test Result	Legend	Level	Ref	Description			, <b></b> ,,	Depth (m)	Water
0.20				(mAOD) 	<u> </u>		ver dark grey	/-brown clayey	sandy		774.CI
0.60 0.70 D.70		68, 78, 86kPa		2.98					AY with some to	- 0.40 	
2.00 2.00	D			1.68	   	Red-bro	own medium			3.00	
	!							rial Pit at 3.00 r			
SAMPLE/TEST k D - Small Disturb H - Buik Sample W - Water Samp V - Vane Test Re Water Sirike	KEY Red Sample Isult V Ł	Valer evel	Comments : Stability :	Some colla	ipse bei	ow 2.4m.	Groundwater : Seepage at	2.4m.	Wa Strike	er Depths (r	r) Flow

ROSCOE CAPITA	LIMITED		Project	Dor	ncaster				Trial Pit I			
Hille House 132 St. Albans Ro	ad 🎜		Jab Number	L20	01J		···· <u>·</u> ·····	···	<b>T</b>	Ρ	24	ŀ
Watford Hertfordshire WD2	-		Client :	B&I	Q plc							
Tel : 01923 81753 Fax : C1923 22861		Zamana,	G.L. (mACD	): 4.55	5		N Coord :	400455.38	E Coord	:	458596	.8 <b>5</b>
Scale 1:50			Date :	01/0	06/2001		Plant: Rub	ber Duck	Lagged I	Ву.	L. Thon	nas
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	,										
			···			· · · · ·	<u></u>	·		. <u></u>	<u></u>	
SAMPLING	DATA		GROUN	D STRATA	·····		<u> </u>			·•	· · <u>-</u>	
SAMPi,ING Bepth (m)	DATA Type	Test Result	GROUN Legend	D STRATA Level (mAOD)	Ref I	Description				· · · · · · · ·	Depth (m)	Water
	۰ <u>۳</u>	Test Result 45, 62, 70kPa	Legend	Level	Ref	Grass		wn sandy TO n mottled friat o medium sai		 	Depth (m)	Water
Depth (m) 0.60	Type V		Legend	Level (mAOD)	Ref	Grass of Firm gr some to rootlets	ey and brow b much fine i	n mottled friat o medium sai	ble CLAY with nd and many	)		Water
Depth (m)	Туре	45, 62, 70kPa	Legend	Level (mAOD) 4.15	Ref	Grass of Firm gr some to rootlets Brown pockets	ey and brow o much fine i and grey fine s of grey and		ble CLAY with nd and many AND with ed clay.		C.40	Water
Depth (m) 0.60	Type V	45, 62, 70kPa	Legend	Level (mAOD) 4.15 3.55	Ref	Grass of Firm gr some to rootlets Brown pockets	ey and brow o much fine i and grey fine s of grey and own medium below 2.3 m	n mottled friat o medium sat to medium S i brown mottle	ole CLAY with and and many AND with ad clay. ars to increas		- C.40 - 1.00	Water
Depth (m) 0.60 1.10 1.20 1.20	V V D D	45, 62, 70kPa	Legend	Level (mAOD) 4.15 3.55 3.05	Ref	Grass of Firm gr some to rootlets Brown pockets	ey and brow o much fine f and grey fine s of grey and own medium below 2.3 m End of 1	n mottled friat o medium Sai brown mottle SAND; appe etres.	ole CLAY with and and many AND with ad clay. ars to increas	se in	1.00	
Depth (m) 0.60	V V D D	45, 62, 70kPa		Level (mAOD) 4.15 3.55 3.05	Ref	Grass of Firm gr some to rootlets Brown pockets	ey and brow o much fine f and grey fine s of grey and own medium below 2.3 m	n mottled friat o medium Sai brown mottle SAND; appe etres.	ole CLAY with and and many AND with ad clay. ars to increas	se in	1.00 1.50	

ROSCOE CAPITA 1	LIMITED		Project :	Do	ncaste	er	,			Trial Pit N	umber	
Hille House 132 St. Albans Roa	ad 🌆		Job Number	. L20				····		Т	P 2	5
Watterd Hertfordshire WD2	-		Client :	B&	Q plc							
Tel : 01923 817537 Fax : 01923 228514		Banniana,	G.L. (mAQD	); 4.5	 9		N Coord :	400456	.63	E Coord :	4585	58.35
Scale : 1:50		·····	Date :	01/	06/2001	1	Plant: R	ubber Duck		Logged By	, L. Th	0/mas
		<u> </u>			··		·		!	. <u> </u>	<u>-</u>	
			X									
SAMPLING	DATA		GROUN	D STRATA							•·	<b>_</b>
Depih (m)	Туре	Test Result	Legend	Level (mAOD)	Ref	Cescription			<u> </u>		Depth (	m) Water
				4.29				prown sandy			F 0.3	0
0.50 0.80		88, 96, 108kPa 68, 88, 94kPa		لے لے ل		Firm to	e to mediu	ind brown n m sand aлd	nottled CL many roo	AY with a otlets.		:
0.80 0.80 0.80						3						
		1		t ├ ├ 2.99				-			-1.6	<u></u>
2.00		!		, <b>Z.33</b> , <b>T</b>	l	Red-br	own medi	IM SAND.			'	
2.00 2.00												
	1			2.04			End o	f Trial Pit at	2.55 m	•••••••••••••••••••••••••••••••••••••••		5
			 :									
	ļ			F		E						Ì
											-	
											}-   	
				2-  		- -					- - -	
				-							ر	
SAMPLE/TEST D - Small Distur B - Bulk Sampa W - Water Sam V - Vare Test R	KEY rbed Sample		Comments :	1	.J	E	Groundwate Not enci	r: buntered.		··	Water Depth	s (m)
W - Water Sampa V - Vater Sam V - Vane Test R	e nple Result	Water								5	Strike Levi	el Flow
∑ Water Strike	T	Water Levei	Stability :	Collapse o	n both s	sides	1	-· <u></u>				·

ROSCOE CAP TA	N LIMITED		Project :	Doi	ncaster			Trial Pit Numb	001	
fille House 132 St. Albans Ro	oad 🆋		Job Number	L20	001J	, <u> </u>		TF	26	5
Vatiord tertfordshire WD	24 <b>4</b> AA		Client :	B&	Q plc		<u>-</u>			
'et : 01923 81753 'ax : 01923 2285			G.L. (mAOD)	4.7	 1		N Coord : 400428.54	E Coord :	458537	7.64
Scale: 1:50			Date :	01/(	06/2001	· .	Plant: Rubber Duck	Logged By :	L. Thor	nas
	÷									
SAMPLING	DATA		GROUNE	STRATA				· <u></u>	·	
SAMPLING Cepth (m)	DATA	Test Result		Level	Ref	Description			 Dερίh (m)	     Water
	· · · · · · · · · · · · · · · · · · ·	Test Résult		Levei (mAQQ)	Ref C		ver TOPSOIL.			 Water
	· · · · · · · · · · · · · · · · · · ·	Test Result 76, 82, 108kPa	Legend	Level	Ref C	Grass c	ver TOPSOIL. y and orange-brown CLAY w um sand and many rootlets.	/ith some fine	Depuh (m) 0.40	Water
Capth (m)	ј уре		Legend	Levei (mAOD) 4.31 3.21	Ref C	Grass of Stiff gre to medi				Water
Depth (m)	ј уре		Legend	Levei (mAOD) 4.31	Ref C	Grass of Stiff gre to medi	y and orange-brown CLAY w um sand and many rootlets.	asional	0.40	Wate
Depth (m) 0.70 0.70 0.70	DDVV		Legend	Levei (mAOD) 4.31 3.21	Ref	Grass of Stiff gre to medi	y and orange-brown CLAY w um sand and many rootlets. own medium SAND with occa s at top of unit. End of Trial Pit at 2.50 m	asional	0.40	
Depth (m)	DDVV		Legend	Levei (mAOD) 4.31 3.21	Ref	Grass of Stiff gre to medi	y and orange-brown CLAY w um sand and many rootlets. own medium SAND with occa s at top of unit.	asional	0.40	

ROSCOE CAPITA L	IMITEC		Project :	Dor	ncaste	r		· · · · · · · · · · · · · · ·	т	rial Pit Numbe		
Hille House 132 St. Albans Roa	d and a second		Job Nurtiper	L20	)01J		<b></b>	· · <del>· · ·</del>		TP	27	7
Wattord Hertfordshire WD24		47	Client	B&	Q plc		·	<u> </u>	······································			Í
Tel: 01923 817537 Fax: 01923 228516			G.L. (mAOD)	4.74	4		N Coord ;	400381.9	ЭЭ Е	Goord	458537	7.33
Scale: 1:50		i	Date -	01/0	06/2001		Plant R	ubber Duck	·	ogged By ·	L. Thor	nas –
SAMPLING [	DATA		GROUNE	O STRATA		. <u></u>	. <u> </u>					
Depth (m)	Туре	Test Result	Legend	Level (mAOD)	Ref	Cescription	<b>_</b> .	·. ·		· · · · · <u> </u>	Depih (m)	Water
0.50 1.00 1.00 1.00		80, 82, 94kPa		4.44		POSSI clay). Stiff mo to med	BLE MAD	sandy claye GROUND n CLAY with nd occasion	(dark brown some to m al black spe Y with a little	n sandy uch fine eckling.	0.30 - 0.70 - 1.70 - 2.80	
SAMPLE/TEST D - Small Distur B - Bulk Sample W - Waler Sam V - Vare Test R Water Strike	KEY bed Sample ple esuit Y	Vater	Comments : Stability :	Pit Stable,	_]	<u> </u>	Groundwate Not enco	buntered.		Wa Strike	ter Depths (r	Flow

ERA Holebase || Form updated by MRW 7/1/99

ROSCOE CAPITA I	UMITED		Project :	Dor	ncaster	r		Trial Pit &			
Hille House 132 St. Albans Roa	ad 🎜		Job Number -	L20	01J			<b>T</b>	Ρ	28	;
Watford Hertfordshite WD2		- 7	Client :	B&(	Q pic						
Tel: 01923 817537 Fax: 01923 228516			G.L. (mAOD)	4.47	Y		N Coord : 400492.69	E Coord	4	58569.	.14
Scale : 1:50			Date .	01/0	6/2001		Plant: Rubber Duck	Logged B	ay: L	. Thom	las
SAMPLING Depta (m)	DATA Type	Test Result		) STRATA Level (mago)	Ref	Description				Depih (m)	Water
	т	Test Result 74, 84, 96kPa	Legend	Level (mAOD) 4.12	Ref	Grass o	over dark brown sandy claye stiff grey-brown CLAY with r			0.35	Water
Depta (m)	Туре	· · ·	Legend	Levei (mAOO)	Ref	Grass o		nany roots.		-	Water
Deptn (m)	Type V	· · ·	Legend	Levei (mAOD) 4.12 		Grass of Firm to	stiff grey-brown CLAY with r own medium SAND.	nany roots.		0.35	

ERA Holebase II Form updated by MRW 7/1/99

ROSCOE CAPITA L. Hille House	IMITED		Project (	Dond	aster		Trizi Pit Nuncoe		_
132 St. A bans Road Natiford	d and a second s		Job Number	L200	1J		TP	-29	)
ertfordshire WD24		-	Client :	B&Q	plc		 ·		
el - 01923 817537 ax : 01923 228516		izana i	G.L. (mAOD	»: 4.45		N Coord : 400480.71	E Coord	458609	9.05
Scale 1.50			Date :	01/06	/2001	Plant: Rubber Duck	Logged By:	L. Thor	nas
	 ЭАТА		GROUNI	D STRATA			· · · · · · · · · · · · · · · · · · ·	···	
	ОАТА Туре	Test Result	GROUNI Legend	Leve	Ref Descrip			Depth (m)	Wa 
Deptin (m)	·	Test Result 72, 74, 100kPa	Legend	Leve:	Gra	tion ass over brown sandy clayey T in to stiff grey and brown CLAN coming much fine to medium s yey sand at base of unit.		Depth (rr)	Wa
Depth (m)	Туре		Legend	Leve: (mAOD) 4.05	Firr bec clay	ass over brown sandy clayey T		0,40 	WVa
SAMPLING D Depth (m) 0.60 1.00 1.00	Туре		Legend	Leve: (mAOD) 4.05	Firr bec clay	ass over brown sandy clayey T n to stiff grey and brown CLA coming much fine to medium s yey sand at base of unit	( with some and; becoming a	0.40	
Depth (m)	Туре V		Legend	Leve: (mAOD) 4.05	Firr bec clay	ass over brown sandy clayey T n to stiff grey and brown CLA coming much fine to medium s yey sand at base of unit. d-brown medium SAND.	( with some and; becoming a ) m	0,40 	

ROSCOE CAPITA	LIMITED		Project	Do	ncaste	r		Trial Pit Number		
Hille House 132 St. Albans Ro	ad 🎜		Job Number	L2	001J			TP	30	)
Watford Hertfordshire WO2		7	Client	B&	Q plc					
Fel : 01923 81753 Fax : 01923 22851			G.L. (mA00	): 4.4	0		N Coord : 400588.27	E Coord :	458626	5.39
Scale : 1:50			Date :	01/	06/2001		Plant : Rubber Duck	Logged By	L. Thor	nas
SAMPLING	DATA		GROUN	D STRATA		······································				
Depth (m)	Туре	Test Result	Legend	Level (mACD)	Ref	Description			Depth (m)	Water
0.50	V	78, 88, 96kPa		4.10		i.	over grey-brown sandy claye stiff grey-brown CLAY with n sand below 1.5m and mai		0.30	
1.00 1.00	DDD									
2.00 2.00	DD			2.60		Grey-b and silt	rown fine to medium SAND and occasional black sand	with a little clay bands.	- 1.80	
				1.40		Red-br	own medium SAND. End of Trial Pit at 3.00	m		
SAMPLECTEST O - Small Distu 8 - Buik Samp W - Water San V - Vane Test f	KEY Irbod Sample	· · ·	Comments .				Groundwater: Seepage at 1.8m.		er Deptins (r	
W - Water San V - Vane Test f	npie Result	Water Level	1					Strike	Level	Flow
Water Strike	<u> </u>	Level	Stability :	Collapse c	t both s	idee below	1 8m		-	···

	A LIMITED		Project :	Do	ncaster		Trial Pit Numbe	și,	
tille House 32 St. Albans Ro	oad		Job Number	L2	001J	······································	TP	31	
Vatiford Iortfordshire WD		<b>-   て</b> '	Client.	B&	Q plc		1		
al , 01923 81753 3x , 01923 22851		<b>3</b>	G.L. (mAOD	»: 4.3	2	N Coord 400631.66	⊊ Coord -	458638	95
Scale . 1:50		· · · -	Date :	01/	06/2001	Plant : Rubber Duck	Logged By	L. Thon	nas
SAMPLING	DATA	Test Result	GROUN	D STRATA	Ref Descri		· · · · · · · · · ·	י Dep(h (יה)	Water
·	·	Test Result		Levei (mAOD)	Ref Descri	ass over TOPSOIL and a single b	rick. (Made		Water
·	·	Test Result 70, 72, 74kPa	Legend	Level	Ref Descri	ass over TOPSOIL and a single b ound). m grey-brown mottled CLAY with nd and many rootlets.	some fine	Dep(n (m)	Wates
Depth (m)	Түре		Legend	Level (mAOD)	Ref Descri	ass over TOPSOIL and a single bound).	some fine	0.35	Wates
Depth (m)	Түре		Legend	Level (mAOD)	Ref Descri	ass over TOPSOIL and a single b ound). m grey-brown mottled CLAY with nd and many rootlets.	some fine lay and silt with a little w 2.5m.	0.35	Wate
Depth (m)	γpe		Legend	Level (mAOD) 3.97	Ref Descri	ass over TOPSOIL and a single b ound). Im grey-brown mottled CLAY with nd and many rootlets. rey-brown fine SAND with a little c coming grey fine to medium sand e to medium rounded gravel below	some fine lay and silt with a little w 2.5m.	1.50	Water
Depth (m)	Type V V		Legend	Level (mAOD) 3.97 2.82	Ref Descri	ass over TOPSOIL and a single b ound). Im grey-brown mottled CLAY with nd and many rootlets. Tey-brown fine SAND with a little c scoming grey fine to medium sand e to medium rounded gravel below End of Trial Pit at 3.00 m	some fine lay and silt with a little w 2.5m.	- 3.00	

	IMITED		Project :	Doi	ncaste	г	Tria. Pit Numb	er –	-
∺. e House 132 St. Albans Roa	d <b>A</b>		Job Number	. L20	01J		1 TF	, 32	2
Wattord Hertfordshire WO24		7	Client ;	B&	Q plc	· ·			
Tel : 01923 817537 Fax : 01523 226516			G.L. (mAOD)	: 4.34	4	N Coord. 400613.86	E Coord	458659	 9.30
Scale . 1:50	·	·	Date :	01/0	06/2001	Plant: Rubber Duck	Logged By:	L. Thor	mas —
SAMPLING [	DATA		GROUNE	) STRATA			<b></b>		
SAMPLING E	О́АТА 	Test Result	i td	) STRATA Level (mACD)	Ref	Description		Depto (m)	Water
	Туре	Test Result 92, 100, 106kP	Legend	Level	Ref	Description Grass over dark brown sandy claye Stiff brown and grey mottled CLAY becoming much below 1.6m, fine si rootlets.		0.40	Water
Depth (m)	Туре		Legend	Level (mAOD)	Ref	Grass over dark brown sandy claye	with some, and and many with a little fine	0.40	Water
Depth (m) 0.70 0.80 0.80	Type		Legend	Level (mACD) 3.94 1.84 1.54	Ref	Grass over dark brown sandy claye Stiff brown and grey mottled CLAY becoming much below 1.6m, fine si rootlets. Brown-grey fine to medium SAND v to medium rounded gravel. Red-brown medium SAND.	with some, and and many with a little fine	0.40 - 2.50 - 2.80 - 3.00	

ROSCOE CAPITA	LIMITEC		Project ;	Do	incaste	r		That Pit N			
Hille House 132 St. Albans Ro	ad 🎜		Job Number	L2	001J			T	Ρ	33	5
Wattord Hertfordseire WD2		- <b> </b>	Client	B&	Q plc						
Tel : 01923 81753 Fax : 01923 22851			G I. (mACE	»)· 4.2	9		N Coord : 400635.07	E Coard :	4	58548	.93
Scale : 1:50			Date :	04/	06/2001	···	Plant: Rubber Duck	Logged B	iy: L	. Thon	nas
		· · · ·									
SAMPLING Depth (m) 0.20 0.50 0.60 1.10 1.10 1.10	DATA Type D V D D V	Test Result 84, 88, 108kPa 66, 74, 80kPa		D STRATA [Level (mAOD) 3.99 3.59 1.69 1.19	Ref	Stiff ora	over dark brown clayey sand ange-brown and grey mottle stiff mottled brown CLAY w ttle fine sand.	ed CLAY. vith some silt	r 	Depth (m) 0.30 0.70 	Water
Depth (m) 0.20 0.50 0.60 0.60 1.10	Type D D D D V V V V	84, 88, 108kPa		Level (mAOD) 3.99 3.59 1.69	-1	Grass a Stiff ora	ange-brown and grey mottle stiff mottled brown CLAY w ttle fine sand. rown fine to medium SAND of black sand.	ed CLAY. vith some silt with occasic m		0.30	

ROSCOE CAPITA	LIMITED		Project :	Do	oncaste	er			Toat Pit Nomi	er	
Hille House 132 St. Albans Ros	ad 🍂		Job Number :	L2	001J				TF	<mark>)</mark> 3∠	4
Watford Hertfordshire WD2	24 4AA	JY	Client :	B8	Q plc						•
Tel 101923 817533 Fax : 01923 22851			G.L. (mAOD)	. 4.4	13		N Capid :	400598.68	 Ε Coord ·	45859	
Scale : <sup>1</sup> 1:50			Date :	04/	/06/200	1	Plant; Rul	ober Duck	Cogged By:	L. Tho	mas
			·								
SAMPLING	DATA	·	GROUND								
Depth (m)	Туре	Test Result		.evel mAOD)	Ref	Description				Depiti (m)	Water
1.00 1.20 2.00	V D	88, 96, 100kPa		4.18 2.73 1.83 1.33		Firm to Firm gr some s	stiff grey and ey and orang ilt and a little rown fine to r wn medium	wn clayey sandy d brown mottled ( ge-brown mottled fine sand. medium SAND bo SAND at the bas rial Pit at 3.10 m	CLAY.	1.70	
SAMP: E/TEST	KEY bed Sample	l	Comments :				Groundwate: : Seepage a	t 2 6m		ter Deptiis (r	n)
D - Small Distur											
SAMPLE/TEST I D - Small Disturi B - Buik Sample W - Water Sams V - Vane Test Ri V - Water Strike	ple esult	Vater evel					Seepage a	. 2.000.	Strike	Lever	Flow

ROSCOE CAPITA			Pro.ect	Doi	ncaste	т. —				Number		
Hille House 132 St. Albans Ro:	ad 🎜		Job Number	L.20	001J				T	Ρ	35	- -
Watford Hertfordshire WD2		-1 - (	Client	B&	Q plc			<u></u> .				
Tef. 01923 81753 Fax: 01923 22851			G.L. (mAOD)	): 4.44	4		N Coord ;	400637.20	E Coor		458607	.44
-Scale : 1:50			Date :	04/0	06/2 <b>0</b> 01		Plant: Ru	bber Duck	Logged	9y :	L. Thor	nas
		·										
SAMPLING	DATA		GROUNI	D STRATA								
Depth (m)	Туре	. Test Result	Legenc	Level (mAOD)	Ref	Description			<u> </u>		Jepth (m)	Water
0.70 0.70 0.70		62, 70, 84kPa		4.09 T				own clayey sar ⊱brown and gre a little fine sanc			- 0.35 - -	
		·		2.74		Firm of	ange-brow	n and grey CLA	Y with much	fine	- <b>1</b> .70	
				1.94	• •						<u>-</u> 2.50	
2.80 2.80				[ - - - - -		to med of blac mediur		medium SANI d gravel and od dium sand; bed the base. Trial Pit at 3.20		ckets xrown	- 3.20	
-						   					for the tank of the same	
				<u> </u>	<u> </u>	! ·					<u>F</u>	<u> </u>
SAMPLE/TEST D - Small Distu B - Bulk Sampl W - Water Sam V - Vane Test S	KEY arbed Sample e nple		Comments : A land dr 0.5m.	ain was en	rcounte	red at	Groundwater Not enco	untered.		Wati Strike	er Depthá (r Level	m) Fow
							1					
V - Vane (est) V Water Strike	Kesult <b>X</b>	Water Level	Stability :	Collapse of	f both s	ides below	2.5m				+	+

OSCOE CAPITA I	LIMITED		Project :	Do	oncaster				'it Numb		
liile House 32 St. Albans Roa	ad 🍠		Job Number	L2	001J				٢F	, 36	3
Vatford tertfordshire WD24		47	Çiient :	Bð	Q plc	- <u> </u>					
el : 01923 817537 ax : 01923 228516		Accordina.	G.L. (mACD)	 )· 4.4	2	N Coord :	400605.43	E Coc	rd :	458648	<u> </u>
Scale 1:50			Date :	04/	/06/2001	Plant: RU	bber Duck	Logge	¢ By :	L. Thor	nas
	٩										
SAMPLING	DATA		GROUNE	D STRATA	· · · ·	· ,		<u></u>			
SAMPLING I	DATA Type	Test Result	GROUNE	D STRATA Level (mAOD)	Ref Descrip						Water
		Test Result 64, 72, 74 kPa 43, 60, 66kPa		Level (mAOD) 4.22 3.52 2.22	Ref Descrip Gra Firr with Gra and occ Gra	ion iss over dark bi n brown and gr a little fine sar y and orange- ch clay and a li brown thinly la asional root ren asional root ren ds of black me nded fine to co dium SAND at	ey mottled slig id/silt and man prown mottled ttle silt with son aminated silty o mains.	htly friable C y rootlets. fine SAND v ne firm grey- lay with D with occa	vith blue	0.90	Water
Deptn (m)	Type D V D V V	64, 72, 74 kPa		Level (mAOD) 4.22 3.52	Ref Descrip Gra Firr with Gra and occ Gra	ess over dark bi n brown and gr a little fine sar ey and orange- ch clay and a li brown thinly la asional root ren ds of black me nded fine to co dium SAND at End of	ey mottled slig od/silt and man prown mottled tile silt with son aminated silty of mains. o medium SAN dum sand and arse gravel. Be the base of the Trial Pit at 3.2	htly friable C y rootlets. fine SAND with grey- lay with D with occa d a little to so ecoming red a pit.	LAY with blue siona ome -brow	0.90	
0.70 0.70 0.70 0.70 1.00	Type D V D V V	64, 72, 74 kPa		Level (mAOD) 4.22 3.52 2.22	Ref Descrip Gra Firr with Gra and occ Gra	ess over dark bi n brown and gr a little fine sar ey and orange-t ch clay and a li brown thinly k asional root ren asional root ren ds of black me nded fine to co dium SAND at	ey mottled slig od/silt and man prown mottled tile silt with son aminated silty of mains. o medium SAN dum sand and arse gravel. Be the base of the Trial Pit at 3.2	htly friable C y rootlets. fine SAND with grey- lay with D with occa d a little to so ecoming red a pit.	LAY with blue siona ome -brow	0.20 0.90 2.20 vn 3.20	

	<b>37</b>
Hertfordshire WD24 4AA         Client :         B&Q plc           Tel 01923 817537         G.L. (mACD)         4.31         N Coord         400599.51         E Coord :         4584	685.17
Fax: 01923 228516 G.L. (mACD) - 4.31 N Coord - 400599.51 E Coord : 458	686.17
Scale 1:50 Date 04/06/2001 Plant: Rubber Duck L.T	
	homas
SAMPLING DATA     GROUND STRATA       Desh (m)     Tore     TestReall     Leand     Mark       0.10     U     Grass over dark brown blayey sandy TOPSOL.     0.5       0.50     D     4.01     Firm to stiff orange-brown and grey frieble CLAY     0.5       0.60     D	20
	i
SAMPLE/ES7 KEY Comments : Groundwater : Water Depth	bs (m)
SAMPLE/TES7 KEY     Comments :     Groundwater       D - Small Disturbed Sample     Comments :     Seepage at 2.2m.       W - Water Sample     V - Vane Test Result     Strike	····-·

ROSCOE CAPITA	LIMITED		Project ;	Do	ncaste	······································		Trial Pit Number		
Hille House 132 St. Albans Ro	ad 🍂		Job Number	r: L20	001J	<del>_</del>		† TP	38	3
Wattord Hentfordshire WD2		47	Client.	B&	Q plc					
Fel : 01923 81753 Fax - 01923 22851		Securitoria.	G.L. (mACE	o): 4.3	1	N Coord :	400578.75	E Coordi :	458654	4.59
Scale 1:50	· ·		Date	04/	06/2001	Plant: Rul	bber Duck	Logged By :	L. Thar	mas
SAMPLING	DATA		GROUN	D STRATA	·				·	~ ~~
Deoth (m)	Туре	Test Result	Legend	Level (mAOD)	Ref	Description		,	Cepth (m)	Water
0.60	   v	70, 90, 104kPa		4.01		Grass over dark bro Firm to stiff grey an some silt and a little			<u>-</u> 0.30	
1.00 1.00 1.00		55, 56, 60kPa		3.41		Firm grey and brow sand/silt and occas	vn mottled CLAY ional root remains	with much fine s.	- <b>0.90</b>	
1.70 1.70				2.81 2.31		Firm grey and brow some silt.	in laminated orga	nic CLAY with	1,50 	1
				1.51		Grey-brown fine to Red-brown fine to			2,80	     
3.40 3.40	D			- - - - - - - - - - - - - - - - - - -		End of	Trial Pit at 3.40 m		3.40	
									7	1
~ ~						· ·				
SAMPLE/TEST D - Small Distu B - Buik Sampi W - Water Sam	r KEY rbed Sample ra nole		Comments :		   :	Groundwater Seepage r	at 2.0m.	·	r Depths (n	,
SAMPLE/TEST D - Small Distu B - Buik Samp W - Water Sam V - Vane Test F 27 Water Sinke	r KEY rbed Sample a nple Result	Water .evei				Groundwater Seepage a e from the surface.	at 2.0m.	Wate Strike	r Depths (n	n) Flow

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ROSCOE CAPITA	. (Mited		Project :	Dor	ncaster				İ	Trial Pit No	umber		
Hille House 132 St. Albans Ru	ad 🖉		Job Number	L20	01J					T	Ρ	39	)
Wallord Hertfordshive WD2	24 4AA	<b>-   K</b>	Client :	B&	Q pic			<u>-</u>	ئــــــ - <i>-</i> ا	: 			
Tei : 01 <i>9</i> 23 81753 Fax : 01923 22851			G.L. (mAOD		3	i N	Coord	400629		E Coord :		458586	6.27
Scale 1.50		<del>ن</del> ــــــــــــــــــــــــــــــــــــ	Date :	04/0	06/2001	PI	<sub>ant.</sub> Rบ	bber Duck	 	Logged By	<i>i</i> .	L. Thor	nas —
* •							,						
SAMPLING	DATA		GROUN	D STRATA					·				
Depth (m)	Туре	Test Result	Legend	Level (mAOD)	Ref	Description						Depth (m)	Water
<u>0.80</u>				3.98		Grass over	-dorly he					<b>.</b>	1
0.80 0.80 1.20		56, 70, 70kPa 55, 66, 72kPa		2.88		Firm grey a little becom occasional Stiff grey ar some silt Grey-browr black sand medium sa	nd orar ing mu root ma nd brow 1 fine to bands nd at th	nge-brown ch fine san Iterial. m laminate	d and sill d and sill d organi AND wit red-brow the pit.	C CLAY W	th	0.30 1.40 1.70	
			Comments :	2.58		Firm grey a little becom occasional Stiff grey ar some silt Grey-browr black sand medium sa	nd orar ing mu root ma nd brow 1 fine to bands nd at th	nge-brown ch fine san iterial medium S Becoming e base of	d and sill d and sill d organi AND wit red-brow the pit.	CLAY with t and very c CLAY wi	th nal	1.40 1.70	η)
0.80 0.80 1.20 1.20 Smal. Dist 3 - Sual. Dist 4 - Sual. Xamp W. Water San V - Vare Tes: 1 V - Vare Tes: 1 Viater	r KEY Isbed Sample le nple Result		Comments :	2.58		Firm grey a little becom occasional Stiff grey ar some silt Grey-browr black sand medium sa	nd orar ing mu root ma nd brow hine to bands nd at th	nge-brown ch fine san iterial medium S Becoming e base of	d and sill d and sill d organi AND wit red-brow the pit.	CLAY with t and very c CLAY wi h occasion wn fine to	th nal	3.30	n) Flow

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ROSCOE CAPITA I	LIMITED		Project -	Dor	ncaste	r			i Taial Pit i	umber		
Hille House 132 St. Albans Roa	ad 🖋		Jab Number	. L <b>2</b> 0	01J				Î <b>T</b>	Ρ	4(	)
Watford Hertfordshirs WD2-		-  X	Client :	B&(	Q plc			<u> </u>				
Tel : 01923 817537 Fax : 01923 228518			G.L. (mAOD)	): 4.35	5		N Coord :	400601.31	E Coord		458541	.18
Scale . 1:50			Date :	04/0	 )6/2001	1	Plant: RU	bber Duck	Logged E	ly ·	L. Thon	nas
SAMPLING	DATA		GROUNI	O STRATA								
Depth (m)	Туре	Test Result	Legend	Level (mAOD)	: Ref	Description					Depth (m)	Water
0.55	v	70, 76, 82kPa		4.05 .				own clayey sandy and grey CLAY w becoming much s vith occasional root			- 0.30 -	
1.00 1.00 1.00	0 V V	60, 70, 76kPa				sand be	low 1.2m v	vith occasional root	t remains.	C		
		1		- 2.85 - 2.55		Firm gr	ey and brow	vn laminated organ	ic CLAY	with	1.50	
						Brown a fine to o black sa	and grey fin coarse roun and layers v	e to medium SANI ded grave! and occ vith occasional clay	D with a lit casional y bands.	tle	4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
}	ļ			<u>-</u> 1.35		Red-bro	own with tu ttie clay and	rquoise fine to med	ium SAN	D	- 3.00 F	
3.40 3.40	· B		<u>223,232,232</u>	- 0.95			•	Trial Pit at 3.40 m			3.40	
SAMPLE/TEST D - Small Distur B - Bulk Sample W - Water Sam V - Vane Test R	KEY bed Sample		Comments :				Groundwater : Seepage	at 1.9m.			r Deptns (n	
W - Water Sam V - Vane Test R Wate: Strike	esult V	Water Level								Strike	Level	Flow
Strike	_•_ l	_eve:	Stability : (	Collapse of	both s	ides						

ROSCOE CAPITA			Project :	Do	ncaster	•			Trial Pit Number		
Hille House 132 St. Albans Ro	ad		Job Number :	L2(	001J				TP	41	
Nattord Hertfordshire WD2	24 4AA	-JY	Client :	B&	Q plc			· · · · · ·	ſ		
fel : 01923 81753 Fax : 01923 22851		Essenaria.	G.L. (mAOD)	4.7	ô		N Coord :	400475.89	E Coord	458548	1.08
Scale : 1:50			Date :	04/	06/2001		Piant ; RU	bber Duck	Logged By :	L. Thom	กลร
· ·											
SAMPLING	DATA		GROUNE	STRATA							
Depth (m)	Түре	Test Result		Levei (mACD)	Ref	Description				Depta (m)	Water
				4.36				own sandy clayey		0.40	
0.60	V	70, 78, 86kPa		-		Firm or to med	ange-brow ium sand a	n and grey CLAY wind many rootlets.	ith much fine		
0,80 0.80	D D			- 3.66						-1.10	
		2		-		Red-br	own mediu	m SAND.		L. L. L.	· :
				-						<b>ر ا</b> ر د	
2.40 2.40	D			- 2.36			End of	Trial Pit at 2.40 m		- 2.40	
			4		1					<i></i>	5
				-						ŕ	
				- - - - -						- - -	
										,	
										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
SAMPLETZS D - Small Dist	T KEY ucyed Sampis Ne		Comments : Land drai	nencoun	tered at	0.4m.		untered, sand wet.			······
SAMPLEITES D - Smail Distr 8 - Buik Samp W - Water Sar V - Vane Test ∑ Water ∑ Water	T KEY urbed Sample sle Result	Water Levei	Comments : Land drai	n encoun	tered at	0.4m.		: untered, sand wet.	Wa	<u> </u>	m)

ROSCOE CAPITA	LIMIED		Project :	Do	ncaste	er in the second	, · · ·		Trial P	il Numb	eł	
Hille House 132 St. Albans Ro	ac 🖉		Job Numbe	د L2	001J					٢P	) 42	2
Watford Henfordshire W02		-	Client :	B&	Q plc		•					
Tel : 01923 61753 Fax : 01923 22851			G.L. (mAOE	b): 4,4	2		N Coord :	400521,96	E Cas	rd :	458557	7.86
Scale : 1:50			Date :	04/	06/200	1	Plant R	ubber Duck	Logge	ofBy.	L. Thor	mas
SAMPLING	 DATA		GROUN	D STRATA								
Depth (m)	Туре	Test Result	Legend	Level (mACD)	Ref	Description					Cepth (m)	Water
0.70	D D	82, 88, 100kPa		4.22		Stiff bro much s Firm gr some s	wn and gr lit and som lit and bro lit own mediu	own clayey sa ey mottled CL e fine sand be m SAND. Trial Pit at 2.6	AY with some low 0.9m.	to	- 0.20 - 1.80 - 2.10 - 2.60	
SAMPLE/TEST D - Small Distu: B - Bulk Sample W - Water Sam V - Vane Test R	KEY bed Sample	<u> </u>	Comments : Pit termin	iated due to	) o instab	 ility.	Groundwater Not enco	untered			er Cepths (r	r —
W - Water Sam V - Vane Test R Water Stoke	pie esuit V	Vater evel								Strike	Level	Flow
	_		Stability : (	Collapse of	Doth S	aes.						

ERA Holebase II Form updated by MRW 7/1/99

ROSCOE CAPIT			Project :	[	Joncaste	ər					Borehole N	lumber	
Prospect House 20 Mellor Road Cheadle Hulme	F		Job Nun	nber: L	2001JA						1		
Cheshire SK8 5/			Client	E	B&Q pic						Sheet 1 a	of 1	
Tel: 0161 486 1 Fax: 0161 486 1		Rannan .	Start Da	te:	31/05/20	01	N Coord :		400519	9.97	E Coord ;	458	567,66
Method			Finish D	ate: (	)1/06/20(	01	G.L. (mLD	))	4.48	i	Driller :		
SAMPLING	DATA		GROL	IND STR	RATA				<b>-</b>				
Depth (m)	Туре	Test Result	Level (mLD)	Legend	Depth (m)	Description					/	Water	Standpipe
0.50-0.95	D	N=4	3.88		0.60	Firm	SOIL						
1.00-1.45	U	ļ	3.48		1.00		grey/brown			rganic (			
1.50-1.95	D	N=12	2.88		- 1.60								
2.00-2.45	D	N=11			-	Mediu SANE and s	im dense to D. Occasion ilty.	o very Ially fir	dense br ie and slij	own me ghtly cla	dium iyey		
2.50-2.95	D	N=8			-  -								
3.00-3.45	D	N=6			- - - -								
3.50-3.95	Ď	N=23			-  - -								
4.00-4.45	ס	N>50			- - -								
4.50-4.95	D	N>50			• • • •								
5.00-5.45	D	N>50	,			i   							
6.00-6.45	D	50/75mm											
7.00-7.45	D	50/75mm	-2.97		7.45		×						
							End of B	loreh	ole at 7.	45 m			
	l	<u> </u>			<u> </u>			loring P	rogress & \	Nater Oh	servation D	enths /	 m)
SAMPLE/TES D - Small Dist		le	REMARK Chisel		n 6.00m	to 7.00m	├──	ate	Strike	Level	Minutes	T	·
B - Bulk Sam U - Undisturb	ole		¦ 0,75 h	our. Ch	iselling fr	om 7.00n		05/2001	1,60	1.20	20	0.0	
W - Water Sa S - Standard	mple		7.45m	for 0.50	unour.		i L						
C - Cone Peri N - Penetratio	etration Test						]				. <u>.</u>	<u> </u>	
* - Partial Sea Cu - Undraine	ting Penetra	tion	l						aiselling		Water A	dded	Logged
		angus n° d					7		niseiting To	Hours	From	icea To	
Water S				-			-'						
Vater L	evel			Sca	le= 1:50								

ROSCCE CAPITA Prospect House	A LIMITED		Project :		Doncaste					 _  _	iorehole N	lumber	
20 Mellor Road Cheadle Hulme	ſ		Job Num	ber :	L2001JA					.	2		
Cheshire SK8 5A Tel : 0161 486 15			Client :		B&Q plc					-   s	Sheet 1	of 1	
Fax : 0161 486 15			Start Date	e :	01/06/20	D1	N Coord	; 	400547.	56 E	Coord :	458	581.66
Method :			Finish Da	ite :	04/06/20	D1	G.L. (ml	-D)	4.35		)riller :		
SAMPLING	DATA		GROU	ND ST	RATA								
Depth (m)	Туре	Test Result	Level (mLD)	Legend	Depth (m)	Description						Water	Standpipe
0.20	D					TOPS	SOIL						
0.50-0.95	D	N=4	3.75	<u> </u>	0.60			<u></u>					
1.00-1.45	U					. <b>Firm</b>	brown CL	ΑY			1		
1,50-1.95	D	N≓13	2.95 2.75		÷ - 1.40 - 1.60	Firm		n locally	slightly or	anic C	YAY		
2.00-2.45	D	N=10	2.10						dense brov				
			-	-	<u> </u>  -   <b>1</b>								
2,50-2.95	D	N=15			-  -  -								
[		N=16	-	- - -	<b>F</b> 						ļ		
3.50-3.95	D	N=31											
4.00-4.45	D	N>50											
4.50-4.95	D	N>50			م. م. م.								
5.00-5.45	D	87/150mm				; 							
			-1.15		- 5.50								
						Very	dense bro	wn fine I fine si	/medium S ub-rounded	AND v	vith		
6.00-6.45	D	50/75mm				,				g			
				-									1
	_		}		E								
7.00-7.45	D	50/75mm											
			-3.10		<u></u> 7.45	; ;		Porch	ole at 7.4	5 m			
								DUICI	ole at 7.4	U III			
				1									⊢   
							<b>-</b>					1	<u>   </u>
SAMPLE/TES D - Smail Dist	urbed Samp	de	REMARK		m 5.00m	to 6.00m	for [	Date	Progress & W	evel	r	Casin	
B - Bulk Samp U - Undisturbe	ed Sample (		0.50 h	our. Cl	hiselling fi	rom 6.00r		Q1/06/2001	1.60	1,40	20	0.0	
W - Water Sar S - Standard F	Penetration		1.00m	10F U.5	60 hour.		-		<u> </u>				
C - Cone Pete N - Penetratio	n Test 'N' V	aiue					ŀ		<u> </u>		<b> </b>		
* - Partiaí Seai Cu - Undraine							-		hiselling		Water A		Log
💟 Water St	trike						F	From	To I	Hours	Frem	To	By 
👿 Water Le	evel		ŀ	Sc	ale = 1:50		ŀ		<u> </u>	·	<u> </u>		

Prospect House         20 Mellor Road         Cheadle Hulme         Cheshire SK8 5AU         Tel : 0161 486 1521         Fax : 0161 486 1580         Method :         SAMPLING DATA         Depth (m)       Type         Test Result         0.20       D         0.50-0.95       D         1.00-1.45       U         1.50-1.95       B         N=16	Job Num Client : Start Da Finish D GROL Level (mLD) 3.89	te :	L2001JA B&Q plc 07/06/20 07/06/20 RATA Depth (m)	001		400506.i 4.49	B3 E Ccord	<del></del>	3619.44
Cheshire SK8 5AU         Tel : 0161 486 1521         Fax : 0161 486 1580         Method :         SAMPLING DATA         Depth (m)       Type         Test Result         0.20       D         0.50-0.95       D         1.00-1.45       U         1.50-1.95       B	Start Da Finish D GROL Level (mLD)	te : ate : JND STF	07/06/20 07/06/20 RATA Depth (m)	001 001 Description	G.L. (mLD)	<del>.</del>	83 E Coord	: 458	
Fax : 0161 486 1580         Method :         SAMPLING DATA         Depth (m)       Type         Test Result         0.20       D         0.50-0.95       D         1.00-1.45       U         1.50-1.95       B	Finish D GROL Level (mLD)	ate : JND STF	07/06/20 RATA Depth (m)	Description	G.L. (mLD)	<del>.</del>			
SAMPLING DATA           Depth (m)         Type         Test Result           0.20         D         0           0.50~0.95         D         N=7           1.00~1.45         U         1           1.50~1.95         B         N=16	GROU Level (mLD)	JND ST	Depth (m)	Description	i	4.49	Drilier :	Water	······································
Depth (m)         Type         Test Result           0.20         D         D           0.50~0.95         D         N=7           1.00-1.45         U         1.50-1.95	Level (mLD)		Depth (m)	-			······	Water	·· · · ·
0.20 D 0.50-0.95 D N=7 1.00-1.45 U 1.50-1.95 B N=16		Legend		-			-•	Water	
0.50-0.95 D N=7 1.00-1.45 U 1.50-1.95 B N=16	3.89		- 0.60	TOPS					Standpipe
1.00-1.45 U 1.50-1.95 B N=16	3.89		- - 0.60		SOIL		<u> </u>	+	
1.50-1.95 B N=16	-	노크		Firm	grey/brown CL		·		
	1		- - - -	F THUIS	grey brown Cc	A1			
	2.99		1.50					J .SZ	
_1.50 D	2.79	1 × ×	1.70		n clayey silty fir				
2.00-2.45 D N=14	-		- - 	Mediu fine/m	Im dense to ve redium and me	ery dense brow edium SAND	۷Ŋ		
2.50-2.95 D N=16			-  -						
3.00-3.45 D 96/225mm	-		- - - -						
3.50-3.95 D N>50			- - -						
4.00-4.45 D N>50	-		- - - -					   	
4.50-4.95 D N>50			- - 						
5.00-5.45 D N>50	-	1	- - 						
			- - -						
6.00-6.45 D N>50			-						
	-		- 						
		]	- - -						
7.00-7.45 D 110/225mn	n	1	-						
			-						
									· · .
8.00-8.45 D 50/75mm	-	1	-		Continue	d next sheet	t		
		:							
					Boring	Progress & Wat	er Observation	 Depths ()	
D - Small Disturbed Sample		ing fron		to 3,50m f	or Date	Strike Lev		s Casin	
B - Bulk Sample U - Undisturbed Sample (& Blows)	0.50 hc	our. Chi	selling fr	om 7.00m	to 01/06/2001	1.50 2	2.00 20	0.0	0.00
W - Water Sample S - Standard Penetration Test	8.00m 1 8.00m 1			hiselling fi	DM pt/06/2001	2.70 2	40 20	0.0	00.0
C - Cone Penetration Test N - Penetration Test 'N' Value			ngut.						
" - Partial Seating Penetration Cu - Undrained Shear Strength kPa					:				
_					From	Chiselling	Water		Logged
Water Strike							ours From	To	By
Vater Level	1	Scale	e = 1:50				<b></b>		

		······································	Project : Doncaster								Borehole Number			
Prospect House 20 Mellor Road			Job Num	ber: I					<del>,</del>		3		1	
Cheadle Hulme Cheshire SK8 5/			Client :		B&Q plc			<u></u>	\.		Sheet 2	of 2		
Tel : 0161 486 1 Fax : 0161 486 1			Start Date	e: (	07/06/20	01	N Cod		40050	)6.83	E Coord :		619 44	
Method :	······································		Finish Da		07/06/20				4.49	; · · ·				
·		· · · · · · · · · · · · · · · · · · ·	·····				G.L. (	mLD) 		,	Driller :			
SAMPLING					KATA	·		<u></u>			<b>_</b> ,			
Depth (m)	Туре	Test Result	Level (mLD)	Legend	Depth (m)	Description						Water	Standpipe	
8.00-8.45	D	50/75mm	-3.96		8.45	Mediu fine/m	im dens iedium a	e to ven and med	r dense b ium SAN	rown D				
							End of	f Boreh	ole at 8	.45 m				
		i	-		- -									
					-									
			-											
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			• 			<u> </u>				<u></u>	i 			
SAMPLE/TES D - Small Distu		e	REMARKS		1300m+	o 3.50m f		Boring P Date	Progress & '	Water Obs	ervation £ Minutes	······		
B - Bulk Samp U - Undisturbe	le d Sampie (8		0.50 ho	ur. Chi	selling fro	om 7.00m	to	67/06/2:01	1.50	2.00	20	0.00		
W - Water San S - Standard P	nple enetration T	est	8.00m f 8.00m f	or 0,75 or 1,00	nour. Ch hour.	niselling fr	om	07/06/2001	2.70	2.40	20	0.0	0.00	
C - Cone Pene N - Penetration	n Test 'N' Va	kie			·					- · · <u>· · ·</u>		<u> </u>	<u>+</u>	
<ul> <li>^ - Partial Seat</li> <li>Cu - Undraine:</li> </ul>			Chiselling								Water A	ided	Logged	
∑ Water Str	rike					From	To	Hours	From	To	- 5y			
Vater Le	vel		Scale = 1:50						· ·	<u> </u>				
Ļ			1						1		L	1.		

	ALIMITED		Project :		Doncaste	er					Borehole	Number	
Prospect House 20 Mellior Road Cheadle Huime	ſ		mu/ dot	ber :	L2001JA		<b>-</b>				4		
Cheshire SK8 5/ Tel: 0161 486 1		7	Client :		B&Q pic						Sheet 1	of 1	
Fax: 0161 486 1			Start Date	e :	06/06/20	01	N Coo	rd:	40047	1.44	E Coord :	458	583.13
Nethod :			Finish Da	ite :	06/06/20	01	G.L. (n	nLO)	4.70		Driller :		
SAMPLING			GROU	ND STI	RATA		<u>_</u>						
Depth (m)	Туре	Test Result	Level (mLD)	Legend	Depth (m)	Description						Water	Standpipe
0.20	D					TOPS organ	OIL ove	rlying fir	m brown	locally s	lightly		
0.50-0.95	D	N=4	-		-				• .				
1.00-1.45	U		-										
1.50-1.95	D	N=12	3.30		- - -	Mediu	m dens	e to very	dense b	rown me	edium		
2.00-2.45	D'	 N=33	_			SAND	). Finer i	n parts.					
2.50-2.95	D	N>50			- - - -								
	,	77/150mm											
3.50-3.95	D	86/150mm											
4.00-4.45	Đ	50/75mm	_		-							!	
4,50-4.95	D	50/75mm	-		- - - -								
			-0.30		5.00			Darah	ole at 5	00			┝╺┣╧╝
		j						DOIGU	ole al 5.	.00 m.			
		,											
			_	Ę	-								
				-									
			-										
		1		-									
			[ _	-	- - - -								
SAMPLE/TES			REMARKS	_i	·	<u> </u>		Boring F	Progress &	Water Ob	servation (	) Depths (i	- <u>-</u> -
D - Small Distu B - Bulk Sampl	rbed Sampl	e	Chiselli	ng fror		to 3.50m f		Date	Strike	Levei	Minutes	Casing	Sealed
U - Undisturbe	d Sample (&	Blows)	0.50 ho   4.00m f	ur. Chi for 0.50	selling fr ) hour, Cl	om 3.50m hiselling fr	to om	06/56/2001	2.00	1,50	20	0.0	0.00
S - Standard P C - Cone Pene	enetration T	est	4.00m t	o 4.50i	m for 0.5	0 hour.	-				<b> </b>	+	
N Penetration	i Test'N Va		0.50 ho		11 4.5UM I	lo 5.00m f	ur l				<u> </u>	+	·
Cu - Undrained									hiselling		Water A		Logged
🕎 Water Str								From	Το	Hours	From	To	By
Water Le	vel			Scal	e= 1:50		-						
			L				l		Ι		l		ļ ·

rospect House	A L(MITED		Project :		Doncaste	er					Borehole N	lumber	
O Mellor Road			Job Num	ber:							5		
Cheadle Hulme Cheshire SK8 5A	-		Client :		B&Q plc						Sheet 1 (	of 2	
fel : 0161 486 15 fax : 0161 486 15			Start Date	e :	07/06/20	01	N Coord	: •	40046	8.84	E Coord :	4586	611.29
Method :			Finish Da	ate :	08/06/20	01	G.L., (ml	.D)	4.54		Driller :		
SAMPLING	DATA		GROU	ND ST	RATA								
Depth (m)	Туре	Test Result	Level (mLD)	Legend	Depth (m)	Description					<b>\</b> !	Nater	Standpipe
0.20	D						SOL		•		;		
0.50-0.95	D	N≃4	3.94		0.60	 							
1.00-1.45	UB		-			¦ Firm 	grey/brow	n slight	ly sandy	CLAY	·		- R
1.50-1.95	D	N=13	3.04		1.50	Med	ium dense ium SAND	to very	dense b	rown fin	e and		
2.00-2.45	D	N=15	-		<u>i</u> . L <del>1</del> <del>1</del>	l mea.	IUM SAND					$\nabla$	
2.50-2.95	D	N=21											
3.00-3.45	D	N=12											
3.50-3.95	D	N=40											
4.00-4.45	D	N=46											
4.50-4.95	D	N>50				!					ļ		
5.00-5.45	D	N=47											
6.00-6.45	D	77/150mm			والمستخدين والمراجع والمستعم والمستعم والمستعم والمستعم والمستعم والمستعم والمستعم والمستعم والمستعم والمستعم و								
7.00-7.45	D	89/150mm										~	
8.00-8.45	D	83/150mm					Cont	inued	next sh	leet			
			REMARK	·				Boring f	Progress &	Water Ob	servation D	)epths (i	
SAMPLE/TES D • Small Dist	urbed Sam	ple	Chisell	ling fro	m 6.00m	to 7.00m	ı for	Date	Strike	Level	Minutes	Casin	g Seale
U - Undisturbe W - Water Sar	3 - Bulk Sample 3 - Undisturbed Sample (& Blows) N - Water Sample 3 - Standard Penetration Test			Chiselling from 6.00m to 7.00m for 0.75 hour. Chiselling from 7.00m to 8.00m for 0.75 hour.					2.00	1.50	20	0.0	0 0.
C - Cone Pene N - Penetratio	stration Tes	t					ŀ			<u>\</u>		· 	)
- Partial Seat	ing Penetra	ation						c	hiselling	<u> </u>	Water A	dded	Log
					Ļ			Hours	From				
💎 Water SI			1					From	To	nours	From	To	By

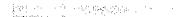
ROSCOE CAPIT	A LIMITEO	)	Project :		Doncaste	er			<u> </u>	ļ	Borehole	Number	
Prospect House 20 Mellor Road	ø		Job Num	iber;	 L2001JA				·		6		
Cheadle Hulme Cheshire SK8 5A	-		Client :		B&Q pic	···-					Sheet 1	of 2	
Tel : 0161 486 1 Fax : 0161 486 1		Bronness.	Start Dat	e:	06/06/20	01	N Co	orđ :	4004	50.07	E Coord :	458	564.26
Method :			Finish Da	ate :	07/06/20	01	G.L. (	(mLD)	4.62		Driller :	· · · · · ·	
SAMPLING	DATA		GROU	ND STI	RATA		F	·					
Depth (m)	Туре	Test Result	Level (mLD)	Legend	Depth (m)	Description						Water	Standpipe
0.20	D	1	· - 			TOPS	SOIL						
0.50-0.95	D	N=9			 -								
1.00-1.45	U		3.82		0.80	Firm	brown s	lightly sa	indy CLA	Y			
1.50-1.95	D	N=15	3.22		1,40	Modi						T	
0.00.0.45	-	N OF			-	fine/m	ini uena iedium	SAND	y dense b	n d wn			
2.00-2.45	D	N=35	-		- - · -								- 18
2.50-2.95	D	N>50			-								
3.00-3.45	D	N>50			- - -								
3.00-3.40	U	N~50	_		-  -								
3.50-3.95	D	N>50	-	-	-								
4.00-4.45	D	N>50											
4.50-4.95	D	N>50			-								
5.00-5.45	D	N>50			-								
	-				-								
					-								
6.00-6.45	D	113/225mm			- -								
			-		-								-
					- - -								
7.00-7.45	D	84/150mm			-								
					-								
			-		-								
8.00-8.45	Ð	88/150mm	_				Cor	ntinued	next sh	eet			
				<u> </u>									
SAMPLE/TEST D - Small Distu	rbed Samp	le	REMARKS Chiselli		1 6.00m t	o 7.00m f	or	Boring : Date	Strike	Water Ob Level	servation C Minutes		
B - Bulk Sample C - Undisturbed	d Sample (8	Blows)		ur. Chi	selling fro	om 7.00m		96/96/2001	2.50	1.50	20	0.00	· ·
W - Water Sam S - Standard Pe C - Cone Penet	enetration T		0.00111	UF 1.00	muur.			ļ	ļ				
N - Penetration	Test 'N' Va	lue							i		<u> </u>	<u> </u>	
Cu - Undrained								L	hiselling	·	Water A		Logge
∑ Water Stri				_	4.50			From	To	Hours	From	To	By
Water Lev	/ei			Scal	e= 1:50								_

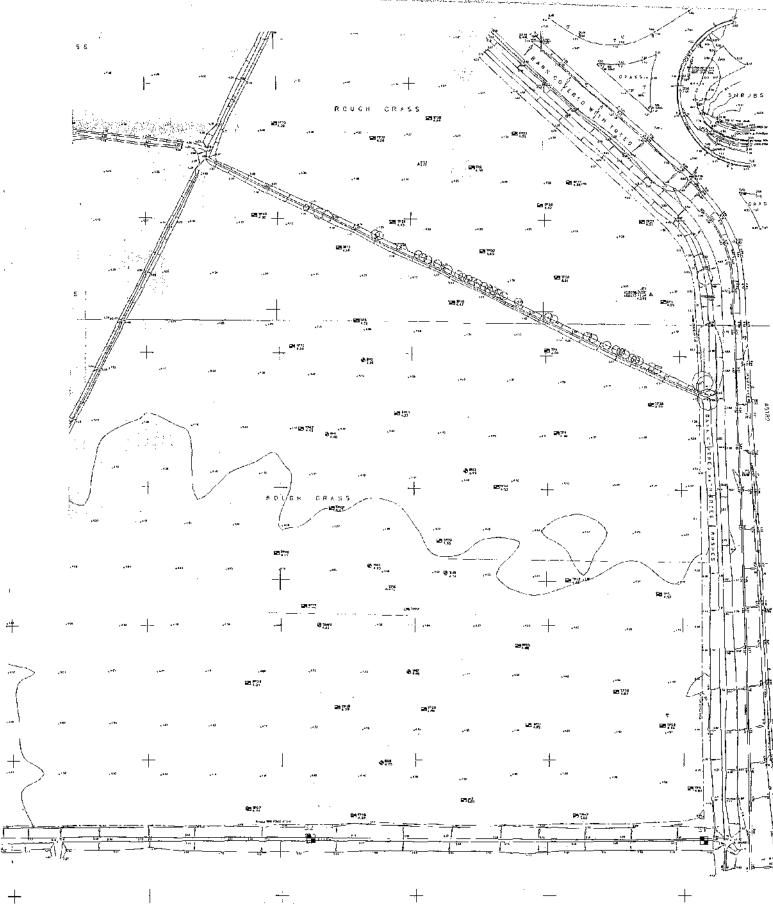
ROSCOE CAPIT			Project :	-	Doncast	er 🚽		·			Borehole Number			
Prospect House 20 Meilor Road Cheadle Huime	6		Job Num	iber :	L2001JA						6			
Cheshire SK8 5/ Tel : 0161 485 1	_	7	Client :		B&Q plc						Sheet 2	2 of 2		
Fax: 0161 486 1			Start Dat	ie :	06/06/20	01	N Coo	ord :	40045	50.07	E Coord	458	3564	4.26
Method			Finish Di	ate :	07/06/20	01	G.L. (	տԼD)	4.62		Driller :			
SAMPLING	DATA		GROU	ND ST	RATA		L		· · · · ·				_	
Depth (m)	Туре	Test Result	Level (mLD)	Legend	Depth (m)	Description				•• • <b>•</b> •		Water	Sta	ndpipe
8.00-8.45	D	88/150mm	-3.83		8.45	Mediu fine/n	um dens nedium (	e to very SAND	dense b	rown			- <u> </u>	
			-0.00	- <u>615</u> -3 <u>155</u>  	-  - 		End o	f Boreh	ole at 8	.45 m			ł	
			-	-	- -								! 	
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SAMPLE/TES'		2	REMARKS			- 7		· ·	Progress &	· · · · · ·				
<ul> <li>D - Small Distu</li> <li>B - Bulk Samp</li> <li>U - Undisturbe</li> </ul>	le		0.75 ho	ur. Chi	iselling fr	:o 7.00m t om 7.00m	ror i ato	Date	Strike 2.50	Level	Minutes 20	Casin	<u> </u>	Sealed - <u></u> 0.00
W - Water San S - Standard P	nple		8.00m f	for 1.00	) hour.							· i	· +	
C - Cone Pene N - Penetration	tration Test											- \		
* - Partial Seati Cu - Undrained	ing Penetrati	ion						c	hiselling	L <u></u> .	Water A	dded	_	Logged
Water Str								From	To	Hours	From	То	1	By
Water Le				Sca	le= 1:50									
L		<u> </u>	L						<u> </u>			:		

ROSCOE CAPIT			Project : DonCaster Bareha										
Prospect House 20 Mellor Road	ø		Job Num	iber :	L2001JA	_ <b>_</b>					7		
Cheadle Hulme Cheshire SK8 5/ Tel : 0161 486 1	-		Client :	<u> </u>	B&Q pic						Sheet 1	of 1	
Fax: C161 485 1			Start Dat	e :	05/06/20	01	N Coo	ord :	4004	32.69	E Coord :	458	597,51
Method :	- <u> </u>		Finish Da	ate :	05/06/20	01	G.L. (	mLD)	4.68		Driller :	·	
SAMPLING	DATA		GROU	ND ST	RATA					<u> </u>			<u> </u>
Depth (m)	Туре	Test Result	Level (mLD)	Legend	Depth (m)	Description			<u> </u>	<b>-</b> ·		Water	Standpipe
0.20	D		 		d	TOPS	OIL	····			—· _— · ¦		<u>↓</u>
0.50-0.95	В	N=3	3.98		0.70	 		. <u> </u>					
1.00-1.45	U		-		₩ 	Firm ç	jrey/bro	wn sligh	tly sandy	CLAY			
1.50-1.95	В	N=19	3,28		1.40	Mediu	m dens		medium	lonarse	SAND	<b>_</b>	
1.50	D	1.00	2.88		1.80				medium / sub-an				
2.00-2.45	В	N=32	-			Mediu Mediu firm re	im dens im SAN	e to very D with o	y dense fi ccasiona ity clay	ne/medi I thin pai	um and i rtings of	$\Box$	
2.50-2.95	В	N>50						n very ar	ity Gay				
3.00-3.45	B	N=31	_										
3.50-3.95	В	N>50		-									
4.00-4.45	В	N=45											
4.50-4.95	В	N≃49											
5.00-5.45	D	96/225mm	_										
													÷ .
6.00-6.45	D	N>50											
		i		-									
				-							ļ		
7.00-7.45	D	122/225mm											
			0.77										
		l	-2.77	- <u>1</u>	날 <b>7.45</b>		End o	f Borel	ole at 7	45 m	• • • • • • • • • • • • • • • • • • • •		
				-	-					.40			
				1									
		· 			<u> </u>			Boring	Progress &	Water Oh	servation F	enthe /r	<u> </u>
SAMPLE/TES D - Small Distu	urbed Samp	le	REMARKS Chiselli		m 5.00m t	:o 6.00m f	ior :	Date	Strike	Level	Minutes		
B - Buik Sampi U - Undisturbe	d Sample (å	& Blows)		ur. Ch	iselling fr	om 6.00m		05/05/2001	2.00	1.50	20	0.0	
W - Water San S - Standard P	enetration 1		: 7,00m T	010.7	o nour.								
N - Penetration	C - Cone Penetration Test N - Penetration Test 'N' Value * - Partial Secting Penetration											<u> </u>	
<ul> <li>Partial Seat</li> <li>Cu - Undrained</li> </ul>			Chiselfing								Water A	dded	Logged
∖	rike		From To Hours							Hours	From	To	- ' 8y
Water Le			Scale = 1:50								··{·	 	
		-1 h., M(2) A( - 7/1/00	<u> </u>									<u> </u>	

ROSCOE CAPIT. Prospect House	A LIMITED		Project :	·	Doncaste	). 				Borehole	Number	
0 Mellor Road Cheadle Hulme	ø		Job Nun	nber :	L2001JA			<b>1</b>	 	8		
Cheshire SK8 5A Tel : 0161 486 15		<u> </u>	Client :		B&Q plc					Sheet 1	of 2	
Fax : 0151 486 1			Start Da	te :	04/06/20	01	N Coord :	4003	98.89	E Coord :	458	587,27
Method :			Finish D	ate :	04/06/20	01	G.L. (mLD)	4.75	.  -ــ -ــــــــــــــــــــــــــــــــ	Driller :		<u>.</u>
SAMPLING	DATA	·	GROU	IND STI	RATA		1	·	<u> </u>			_ <b>.</b>
Depth (m)	 Туре	Test Result	Levei (mLD)	Legend	Depth (m)	Description	·			· · ·	Water	Standpip
0.20	D	+		-		TOPS	SOIL				·	<u>-</u> [
0.50-0.95	D	N=7	4.25		0.50	Firm f	o stiff brown C	AV with	abundar			
1.00-1.45	U		-			and o	ccasional med ngular gravel	ium sub-r	ounded.	n inte /		
1.50-1.95	D	N=18			-							
2.00-2.45	U											
2.50-2.95	D	N=15		┶┶┶┶┶┶┶┶┶ ┥┨╏╏╏╏╎┇ ╏╏╏┚╏╏╎┇	•    							
3.00-3.45	U											
3,50-3.95	D	N=15										
4.00-4.45	U				• • •							
4.50-4.95	D	N=19										
5.00-5.45	U	!								i		
5.50	D											
6.00-6.45	B	 N=13	-1.45		6.20							
7.00-7.45	B	N=19				Mediu fine/m silty.	≀m dense to ve ledium SAND.	ry dense Occasion	brown ally claye	ey and		
8.00-8.45	В	N>50					Continue	d next sl	neet			
SAMPLE/TEST		<u>:</u>	REMARK	⊥ \$		! 	Boring	Progress &	Water Ot	Servation E	epths (r	n)
D - Small Distur 8 - Bulk Sample	3						Date	Strike	Level	Minutes	+	· · ·
U - Undisturbed W - Water Sam S - Standard Pe C - Cone Penet	ple enetration T ration Test	est	ł				04/05/2301	6.40	3.70	20	0.0	
N - Penetration * - Partial Seatin Cu - Undrained	ng Penetrat	ion						Chiselling		Water A	dided	
😾 Water Stri	ke						From	To	Hours	From		By
$\bigvee$ Water Level Scale = 1:50					e = 1:50		<b>-</b>	-	<u> </u>			

ROSCOE CAPIT			Project : Doncaster								Borehole Number			
Prospect House 20 Mellor Road Cheadlo Hulme	ſ		Job Numi	ber :	L2001JA				<b></b>		8			
Cheshire SK8 5. Tef : 0161 486 1			Client :		B&Q pic						Sheet 2	of 2		
Fax : 0161 486			Start Date		04/06/20		N Co	ord :	40039	8.89	E Coord :	4585	37.27	
Method :			Finish Da	te :	04/06/20	01	G.L. (	(mLD)	4.75		Driller :			
SAMPLING	G DATA		GROU	ND ST	RATA									
Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	1					Water S	landpipe	
8.00-8.45	В	N>50				Media fine/n silty.	um dens nedium	se to very SAND. C	dense b Occasiona	rown ally clayey	y and			
9.00-9.45	В	50/75mm										 		
10.00	D.		-5.25		E 10.00			<b>.</b>						
1							End of	Boreho	bie at 10	0.00 m	f			
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SAMPLE/TES			REMARKS						Progress &					
D - Small Dist B - Bulk Samp U - Undisturbe	le							Date 04/05/2001	Strike 6.40	Leve! 3,70	Minutes 20	Casing 0.00	Sealed 0,00	
W - Water Sar S - Standard F	nple		ĺ						· -					
C - Cone Pen∉ N - Penetratiot	etration Test n Test 'N' Va	lue	I :					<u>}</u> _						
- Partial Seat Cu - Undraine	ing Penetrat	ion						- c	hiselling		Water Ad	dded	Logged	
✓ Water St	rike							From	To	Hours	From	То	Ву	
👿 Water Le				Sca	!e≈ 1:50			· · · · · · · · · · · · · · · · · · ·				†	·   ·  _	
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CATESBY BUISNESS PARK