

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

**an archaeological desk-based
assessment**

Birmingham University Field Archaeology Unit
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**Catesby Business Park, Balby Carr, Doncaster, South Yorkshire:
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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 the outside of the platform, parallel to its southern and western edges. To the northwest, there is another rectangular earth 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 land-use.

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 superseded 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 driveway, 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 Hextrope) 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 Pottery Carr in 1621, could be indicative of archaeological remains, perhaps related to possible finds of pottery during the early post-medieval 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 acres 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 *aǫ* with influence from the French *eau*. This may explain the spelling *Eaa*.

In 1621, an agreement refers to 'a greate wast called Pottery 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 Cornelius 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 early 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

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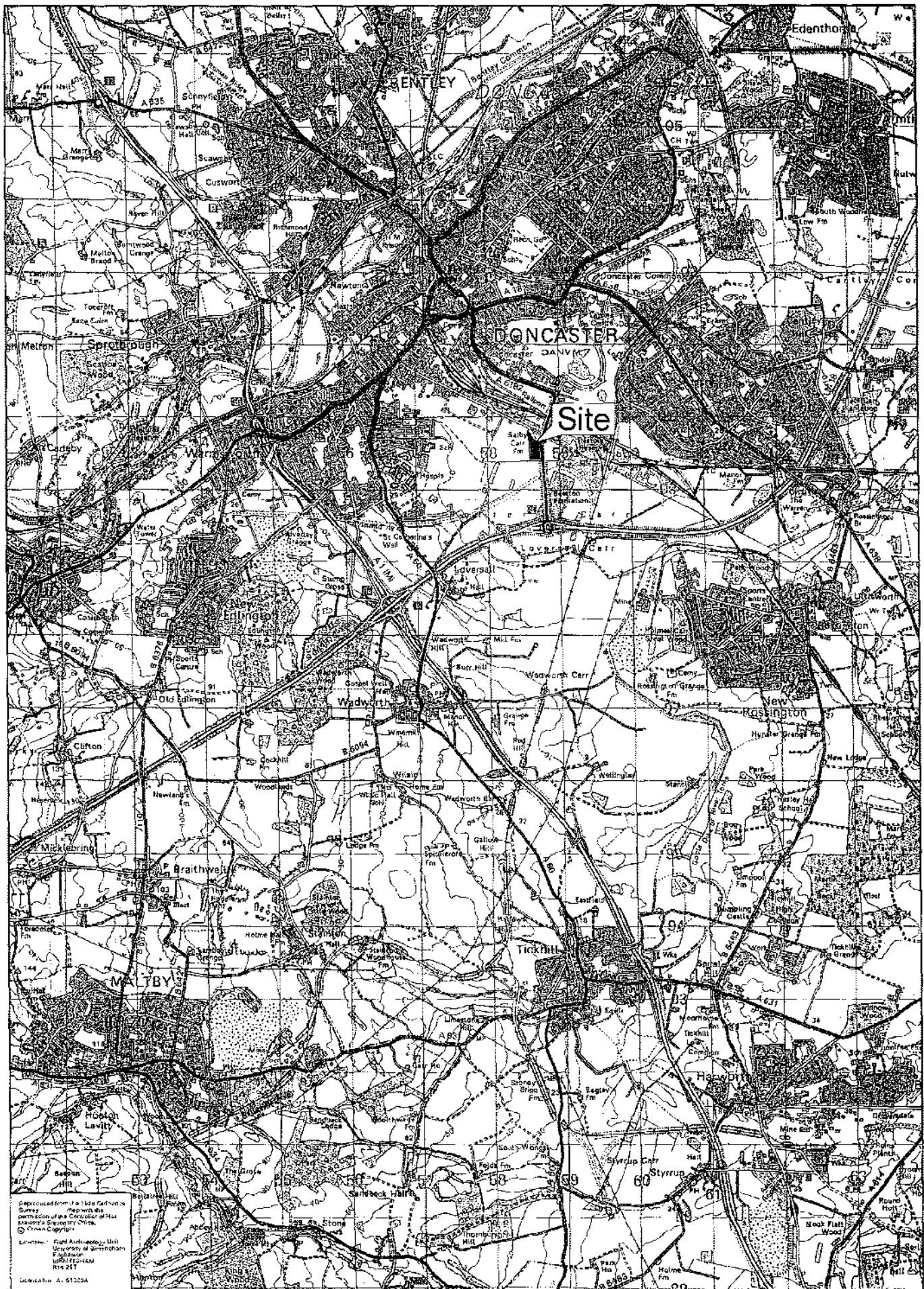
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Maps

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- 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.
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Fig.1

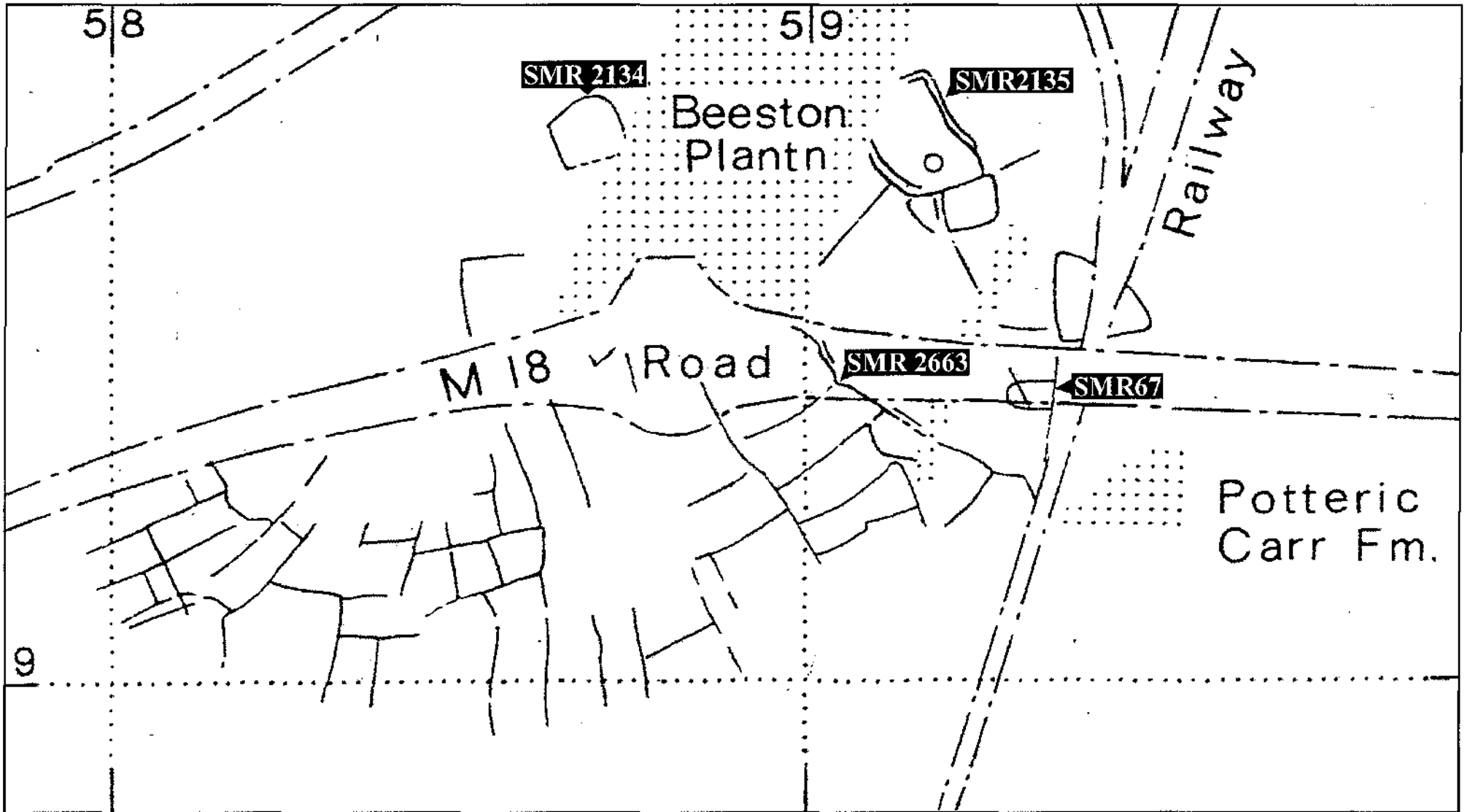


Fig.3

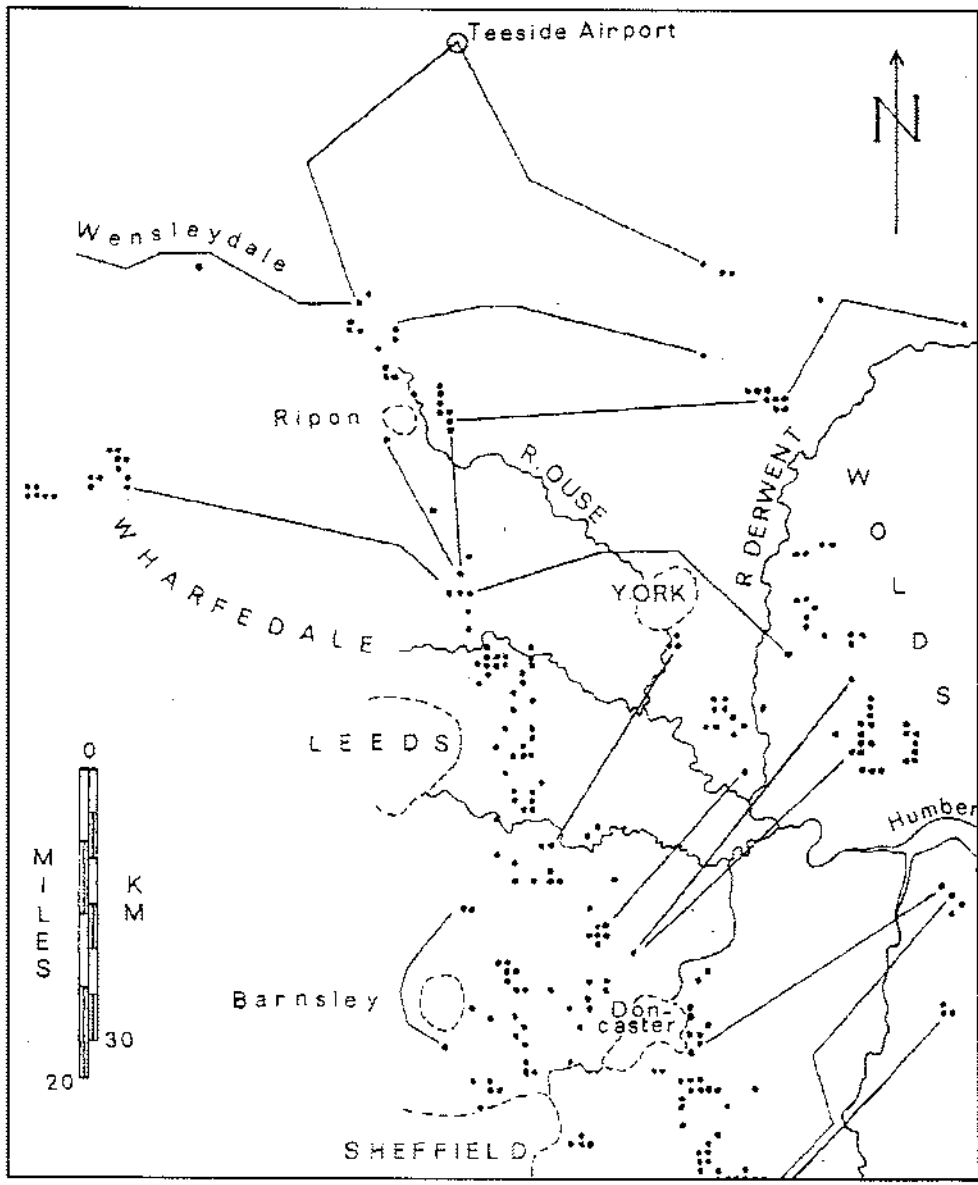


Fig.4

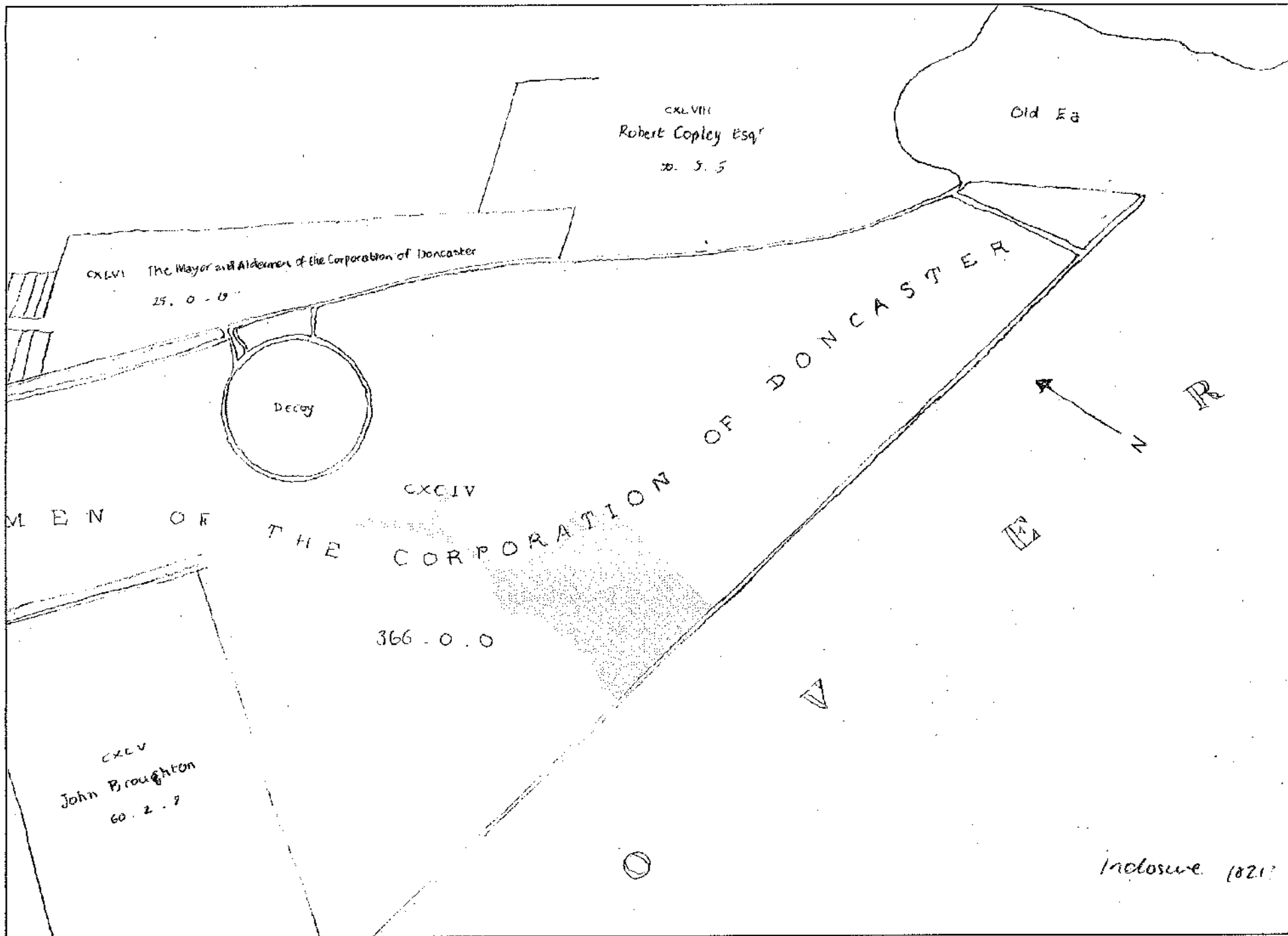


Fig.6 (1771 enclosure map)

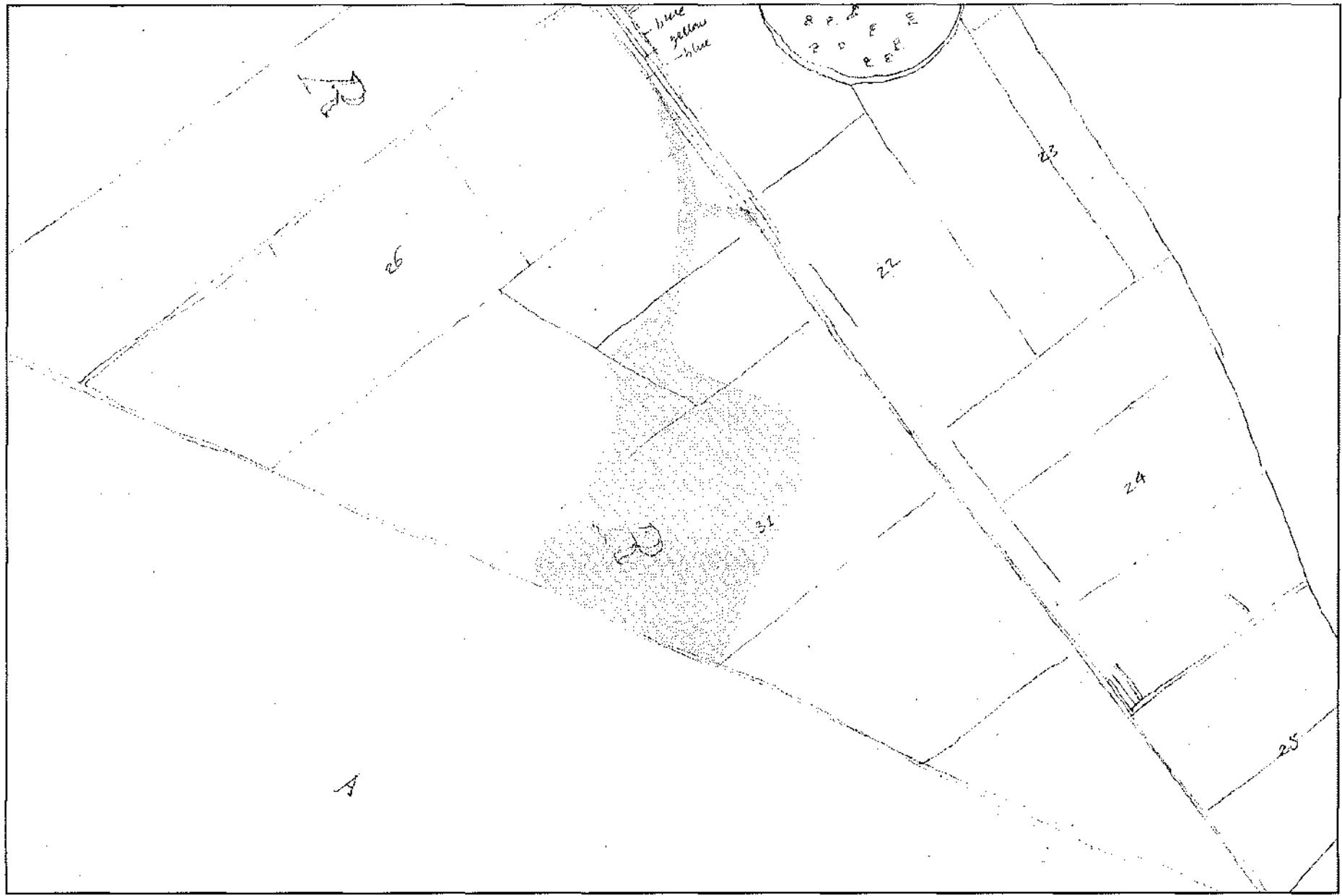


Fig.7 (1816 tithe map)

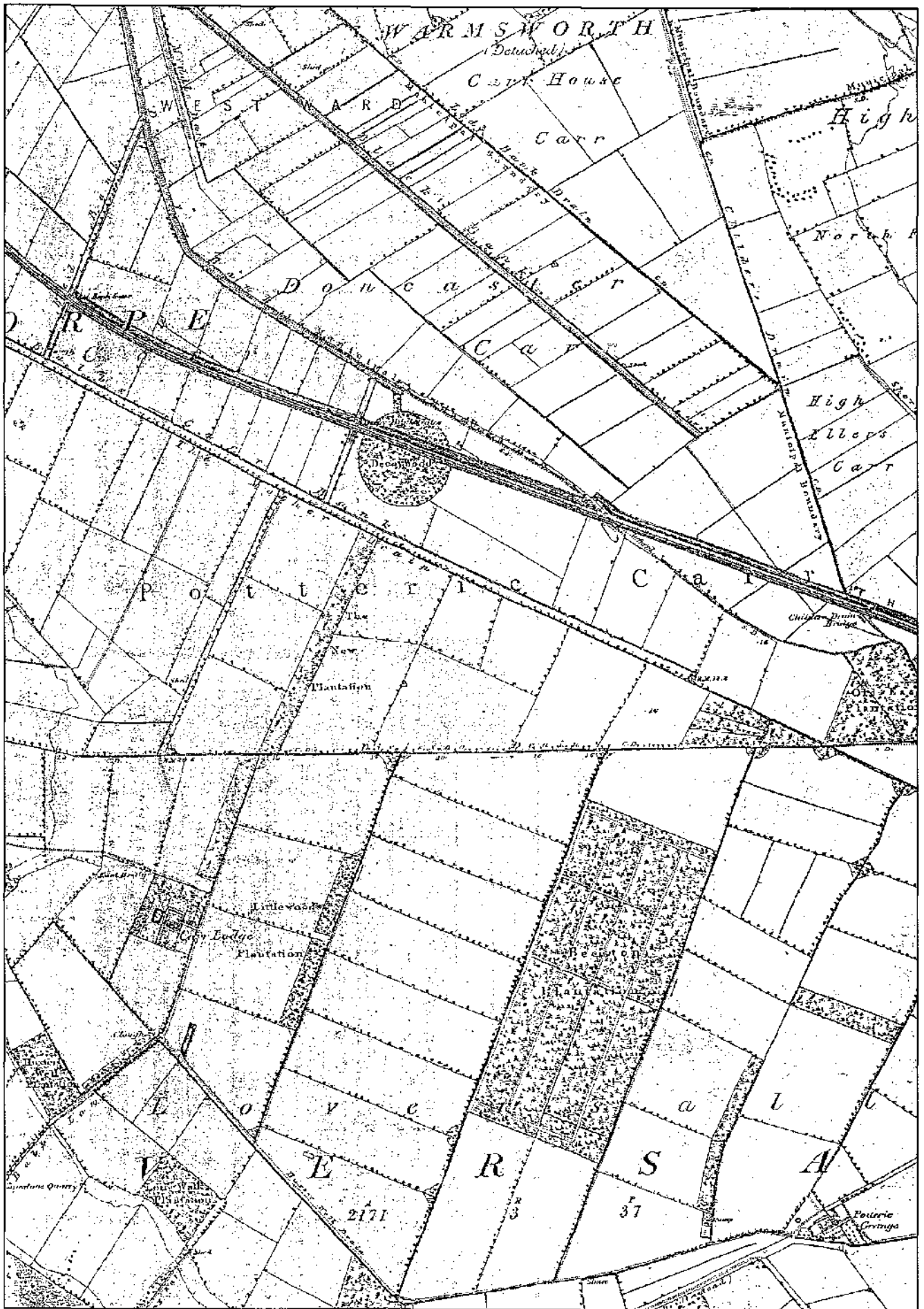


Fig.8 (o.s. 1856)

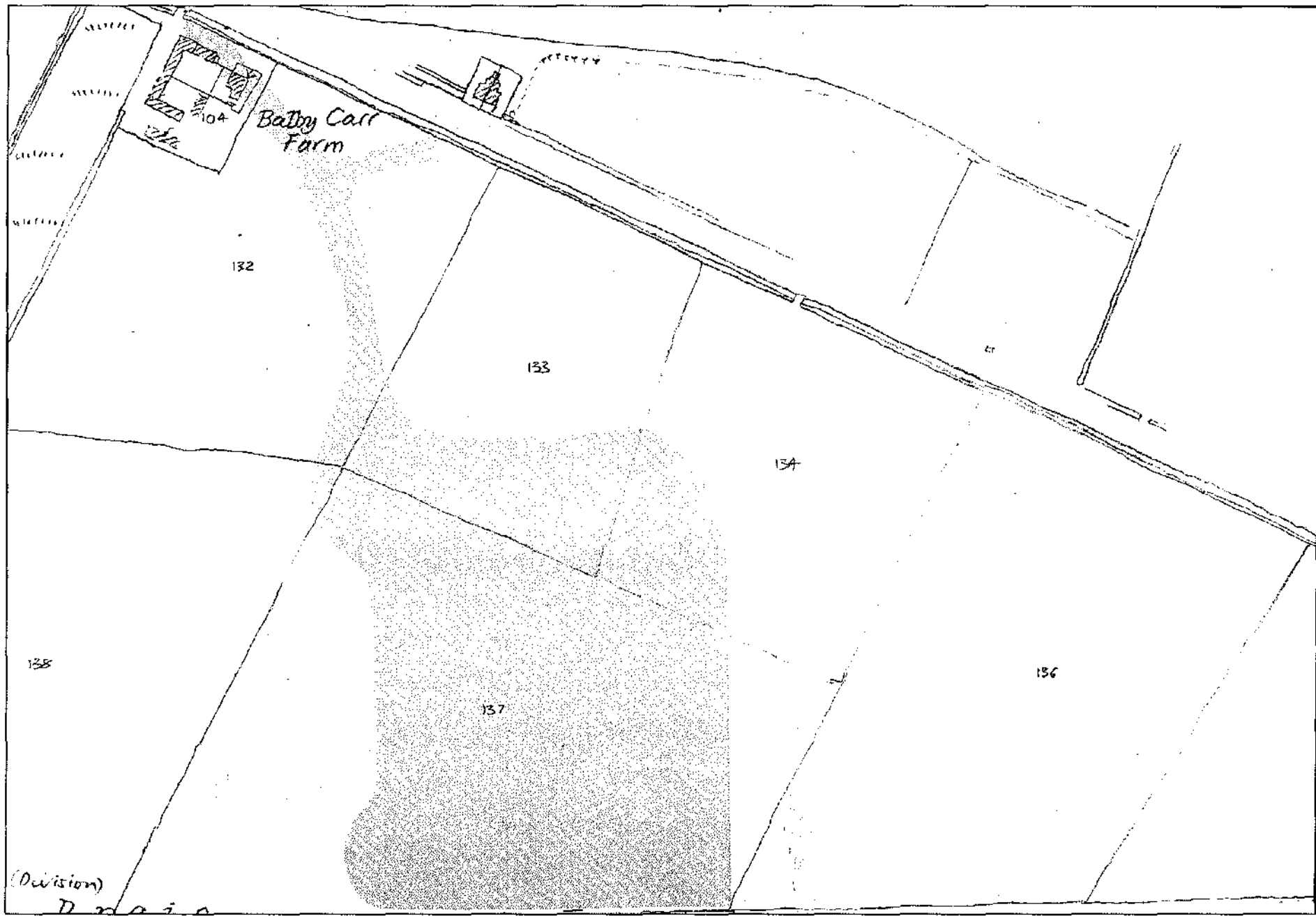


Fig.9 (o.s.1903)

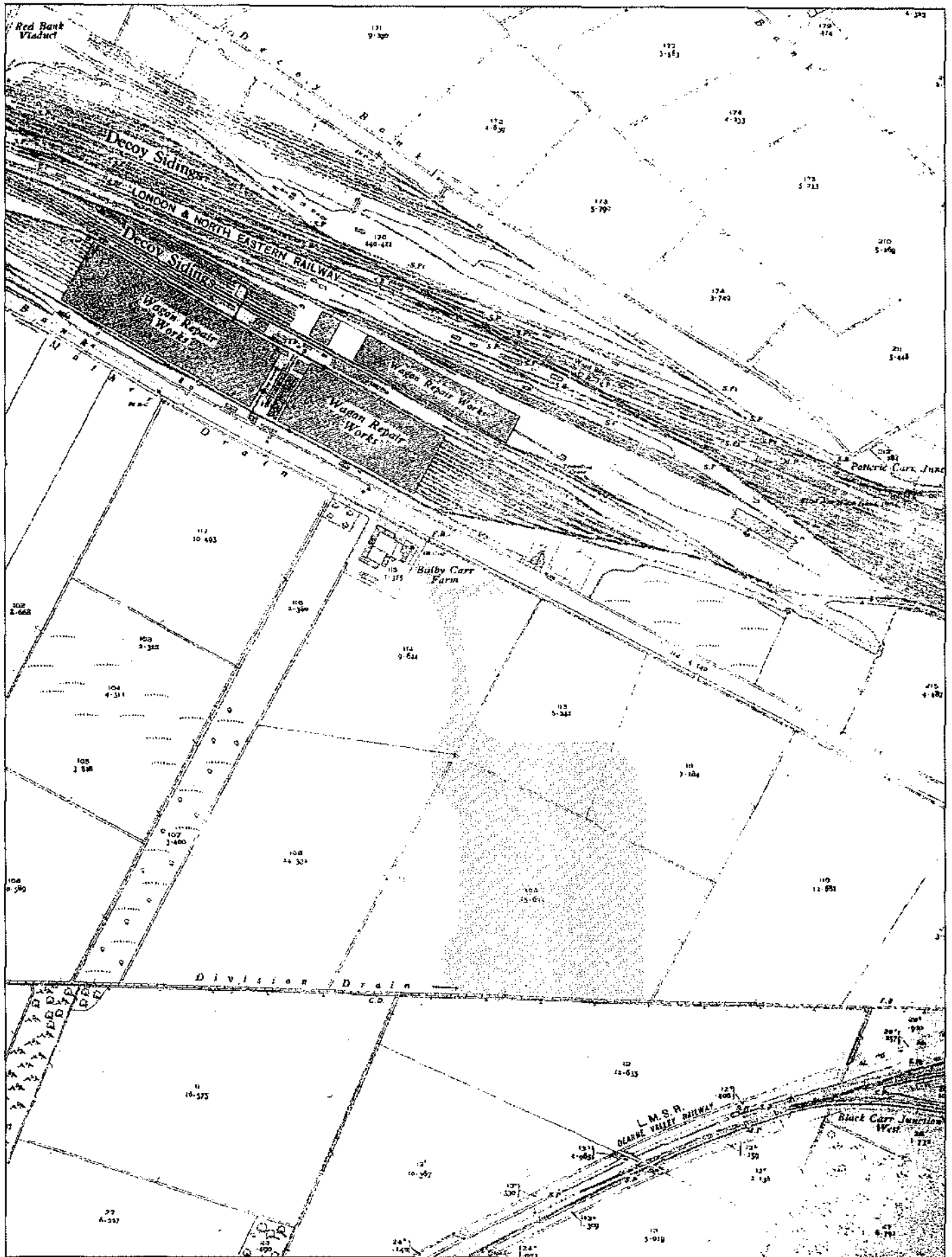


Fig 10 (o.s. 1930)



Plate 1



Plate 2

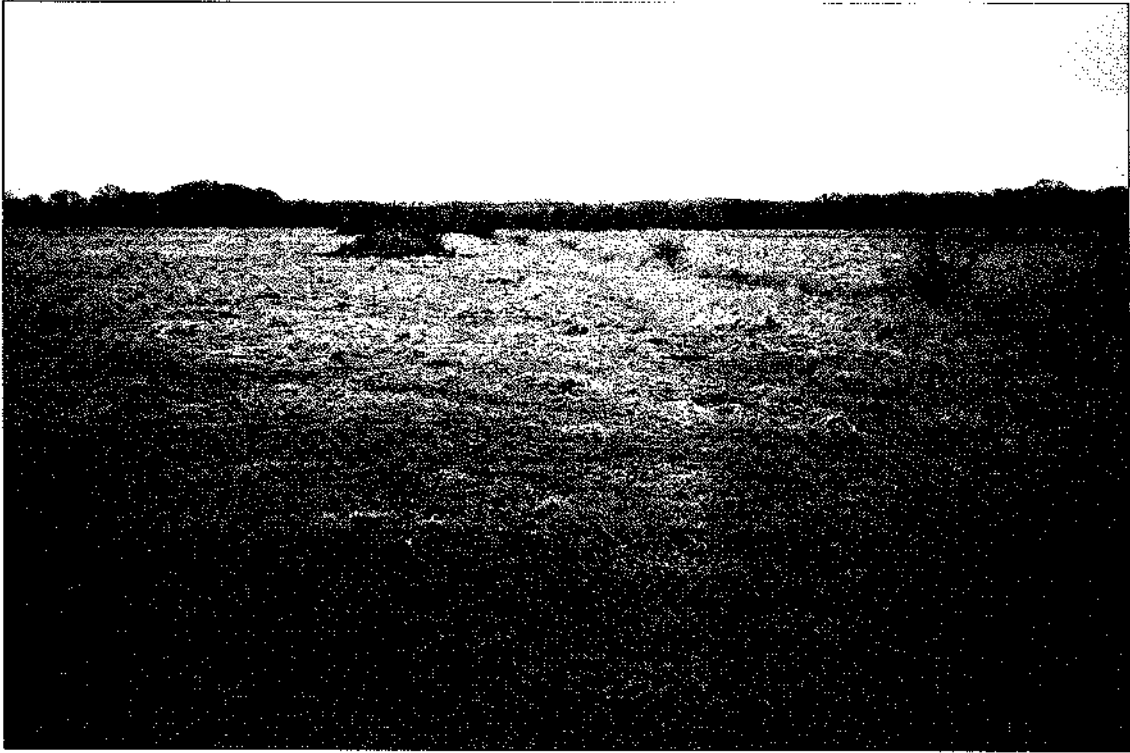


Plate 3

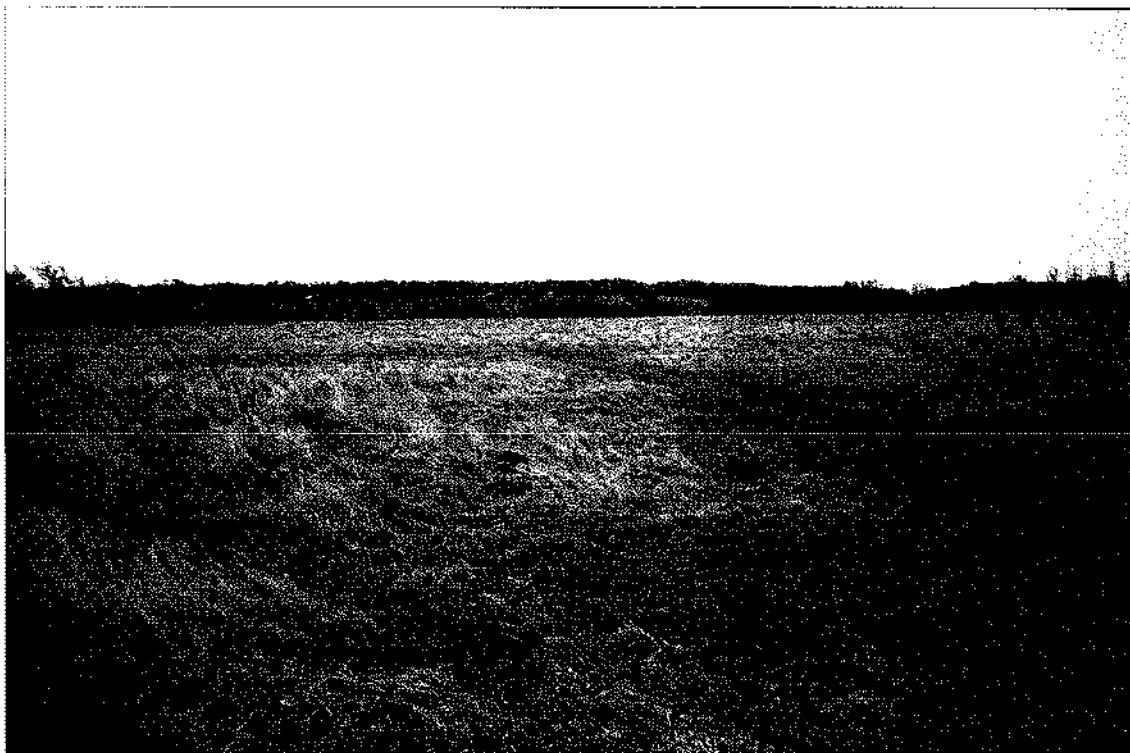


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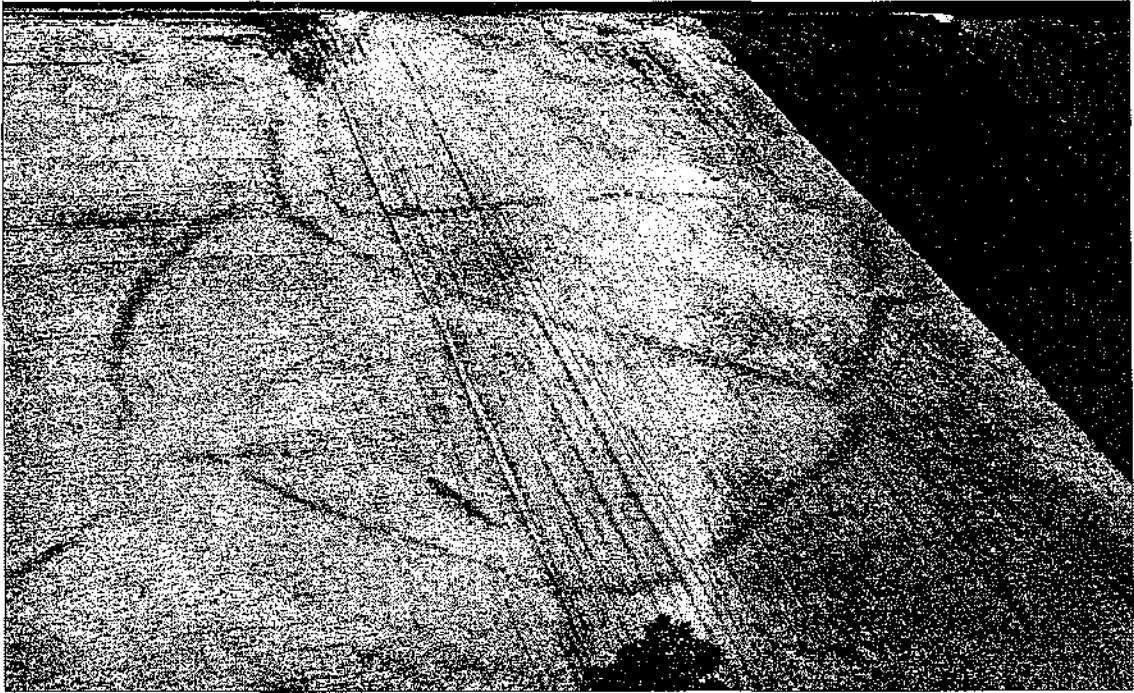


Plate 5

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 Bceston 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 classification 712i). 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 Beoston 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 easily 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 ortho-photo 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. Becston 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:

Feature A

NGR SE588004

Photo number OS/80116 005

Location Between Division Drain and Mother Drain

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.

BALBY CARR AIR PHOTO INTERPRETATION

- 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 pre-modern 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 Becston 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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Soils of England & Wales Sheet 1 Northern
England, 1:250000. Soil Survey of England
& Wales

10 ACKNOWLEDGEMENTS

Thanks are due to:

Laurence Jones at BUFAU

Roy Sykes at SYAU

Library and archive staff at EH NMR and ULM

BALBY CARR AIR PHOTO INTERPRETATION

APPENDIX 1

Aerial Photographs consulted at EH NMR

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

Summary report for vertical coversearch

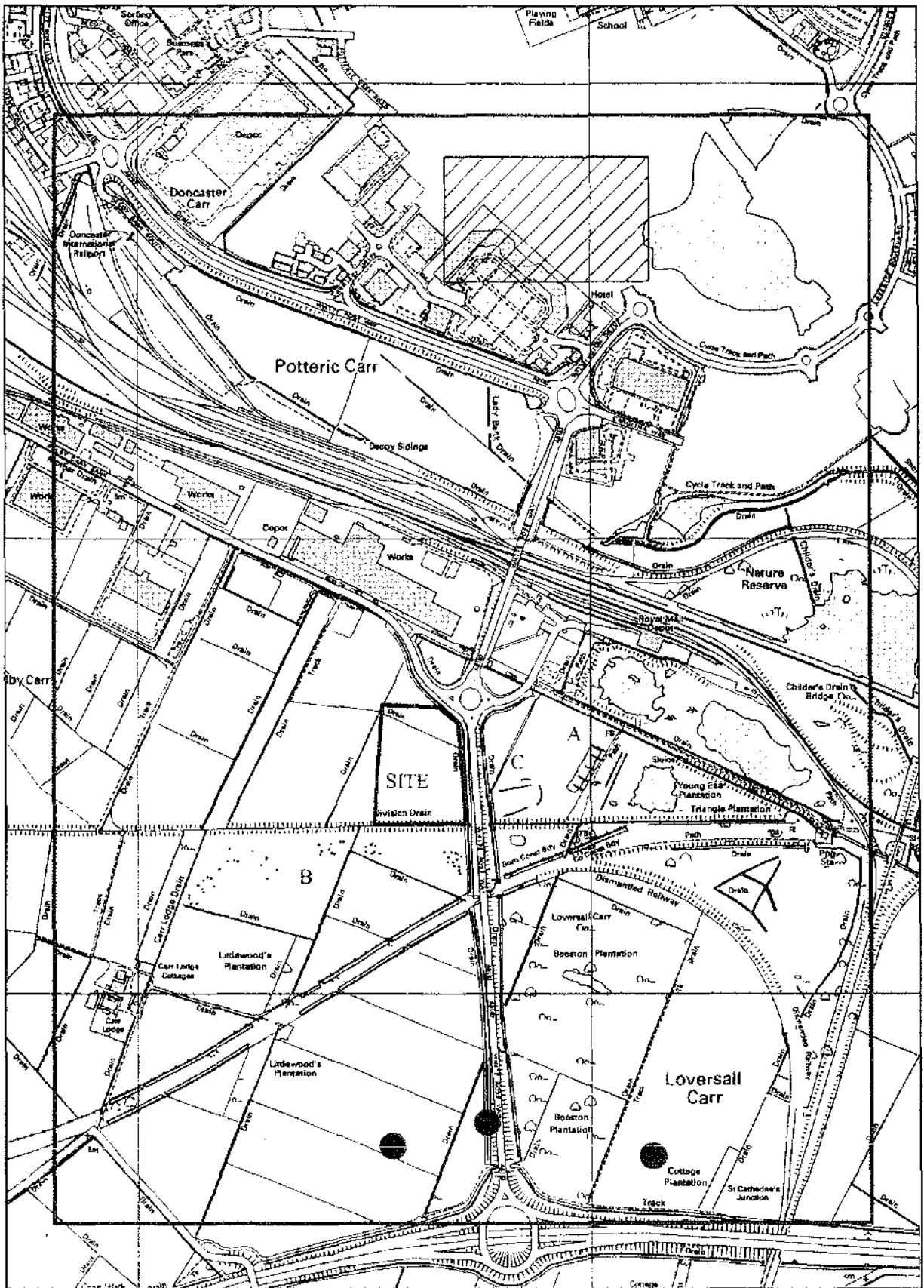
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58/1891	3879	F21	80	82	P	SE578003	SE591004	14-OCT-1955	1	B	5666	36.00	BW87	MOD	CRW
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





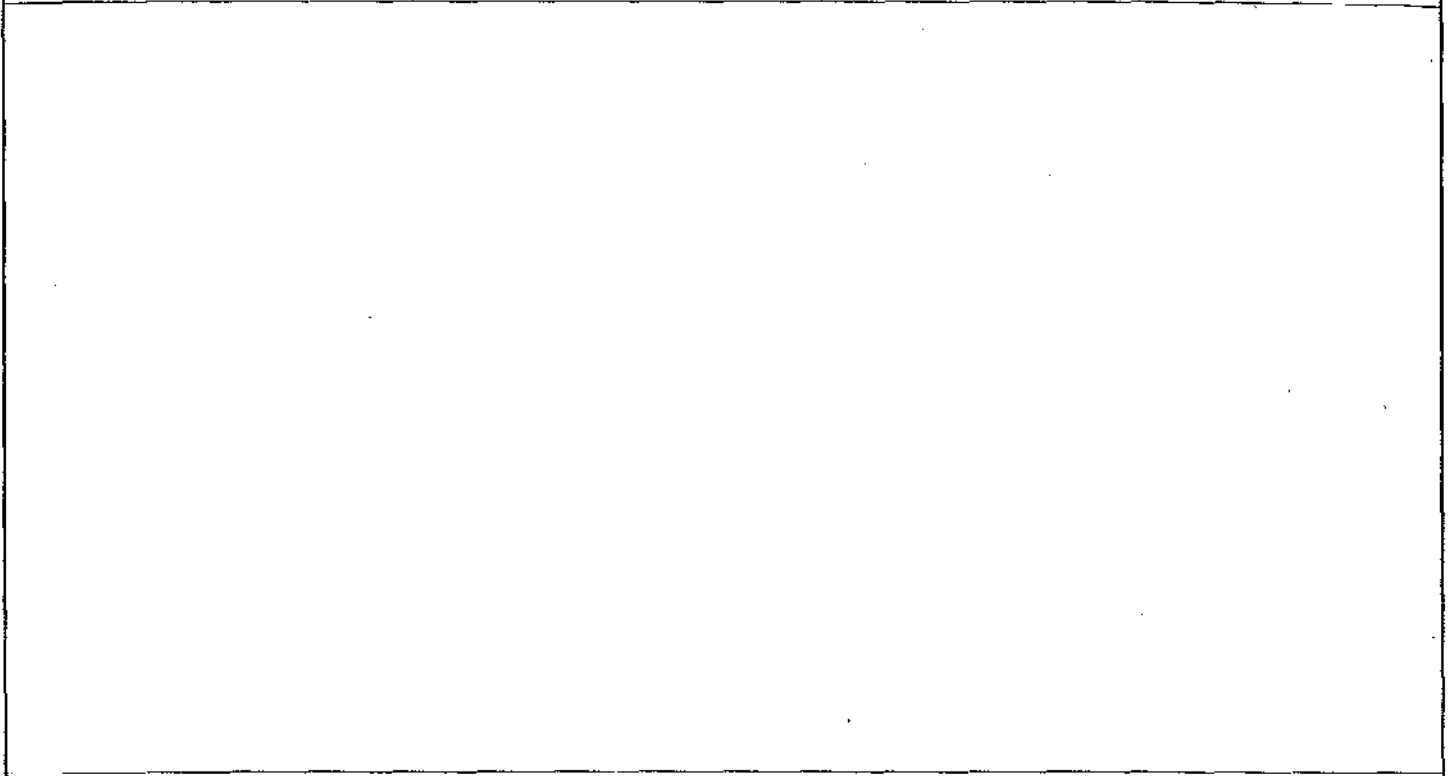
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-  Possible extension to 'brickwork' field systems
-  Site
-  Enclosures and cut features associated with known 'brickwork' fields to South
-  Cut features
-  Drainage


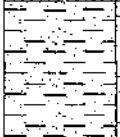
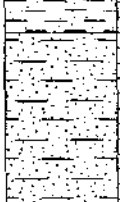
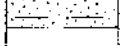





FIGURE 1

Appendix 2: Bore-hole and test pit logs

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		Job Number: L2001J	TP 1	
		Client: B&Q plc		
G.L. (mAOD): 4.29	N Coord: 400518.89	E Coord: 458693.97		
Scale: 1:50	Date: 31/05/2001	Plant: Tracked Excavator	Logged By: Lucy Thomas	



SAMPLING DATA			GROUND STRATA				Depth (m)	Water
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.80	D D V	60, 66 74kPa		3.89		Grass over TOPSOIL.	0.40	
0.80						Firm mottled brown CLAY with some fine sand/silt.		
1.00								
				2.79		Grey-brown fine to medium SAND with a little clay.	1.50	
2.80	D D			1.49		End of Trial Pit at 2.89 m	2.80	
2.80				1.49			2.80	

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result
 Water Strike
 Water Level

Comments: _____
 Groundwater Seepage at 2.1m.
 Water Depths (m)

Strike	Level	Flow

 Stability: Some collapse below 2.1m.

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 Fax: 01923 228516



Project: Doncaster

Job Number: L2001J

Client: B&Q plc

G.L. (mAOD): 4.30

N Coord: 400618.89

Trial Pit Number:

TP 2

E Coord: 458622.29


Scale: 1:50


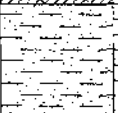
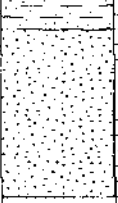


Date: 31/05/2001

Plant: Tracked Excavator

Logged By: L. Thomas

SAMPLING DATA			GROUND STRATA											
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water						
				4.00		Grass over TOPSOIL.	0.30							
0.70 0.70 0.70	D D V	72, 86, 102kPa				Firm to stiff mottled browns CLAY with some to much fine sand.								
				2.30		Grey medium SAND.	2.00							
2.50 2.50	D D			1.80		End of Trial Pit at 2.50 m	2.50							
SAMPLE/TEST KEY D - Small Disturbed Sample S - Bulk Sample W - Water Sample V - Vane Test Result Water Strike			Comments:		Groundwater: Not encountered, sand was wet.		Water Depths (m)							
			Stability: Some collapse below 2.0m.				<table border="1"> <thead> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Strike	Level	Flow				
Strike	Level	Flow												

ROSCOE CAPITA LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel : 01923 817537 Fax : 01923 228516		Project: Doncaster		Trial Pit Number	
		Job Number: L2001J		TP 3	
		Client: B&Q plc			
		G.L. (mAOD): 4.38	N Coord: 400562.13	E Coord: 458579.35	
Scale: 1:50	Date: 31/05/2001	Plant: Tracked Excavator	Logged By: L. Thomas		

SAMPLING DATA			GROUND STRATA						
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water	
0.70	D D V	70, 70, 90kPa		4.08		Grass over TOPSOIL.	0.30		
0.70				3.18		Firm to stiff mottled browns friable CLAY with a little fine sand/silt.	1.20		
0.70				2.08		Brown medium SAND with a little clay to 1.7m.	2.30		
						End of Trial Pit at 2.30 m			
SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level			Comments:		Groundwater: Seepage at base.		Water Depths (m)		
Stability: Pit Stable.							Strike	Level	Flow

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Project: **Doncaster**

Job Number: **L2001J**

Client: **B&Q plc**

G.L. (mAOD): **4.38**

N Coord: **400521.04**

Trial Pit Number

TP 4

E Coord: **458653.68**

Scale: **1:50**

Date: **31/05/2001**

Plant: **Tracked Excavator**

Legged By: **L. Thomas**

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.70	V D D	32, 55, 90kPa		4.08		Grass over TOPSOIL	0.30	
0.80				3.63		Soft to firm mottled browns CLAY.	0.75	
0.80				2.88		Brown and grey medium SAND.	1.50	
				1.98		Brown fine to coarse SAND and fine to coarse rounded GRAVEL with some black coarse sand and fine gravel bands.	2.40	
				1.78		Dark red medium SAND.	2.60	
						End of Trial Pit at 2.60 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result




Comments: **Land drain at 0.5m in northwest corner of pit.**



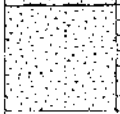
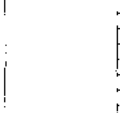
Groundwater: **Seepage at 1.5m.**



Water Depths (m)


Strike	Level	Flow

Stability: **Collapse of both sides below 1.5m.**



ROSCOE CAPITA LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel : 01923 817537 Fax : 01923 228516		Project: Doncaster		Trial Pit Number:	
		Job Number: L2001J		TP 5	
		Client: B&Q plc			
		G.L. (mAOD): 4.65	N Coord: 400461.49	E Coord: 458691.26	
Scale: 1:50	Date: 31/05/2001	Plant: Tracked Excavator	Logged By: L. Thomas		


SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.60 0.60	D V	>120kPa		4.25		Grass over TOPSOIL	0.40	
						Stiff grey-brown CLAY with some fine to medium sand and occasional pockets of fine to coarse rounded gravel between 1.1 and 1.6m.		
				2.75		Red-brown medium SAND.	1.90	
2.60 2.60	D D			2.05		End of Trial Pit at 2.60 m	2.60	

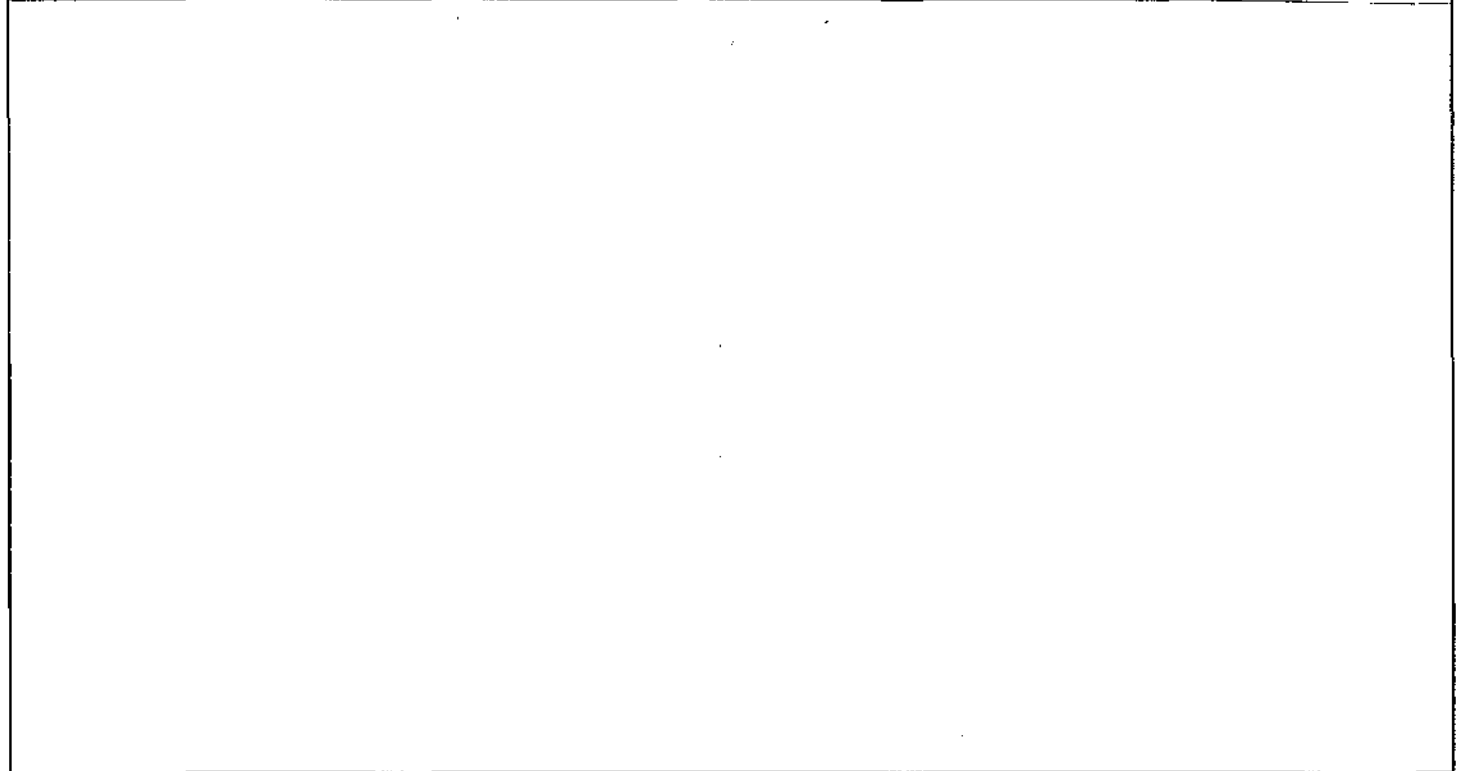
SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments:	Groundwater: Not encountered.	Water Depths (m)		
	Stability: Some collapse below 1.5m.			Strike	Level

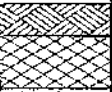
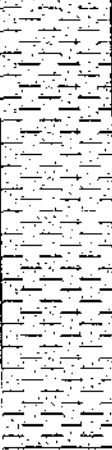
ROSCOE CAPITA LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel : 01923 817537 Fax : 01923 228516		Project: Doncaster	Trial Pit Number: TP 6	
		Job Number: L2001J		
		Client: B&Q plc		
		G.L. (mAOD): 4.95	N Coord: 400389.37	E Coord: 458702.47
Scale: 1:50	Date: 31/05/2001	Plant: Tracked Excavator	Logged By: L. Thomas	



SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.10	D	48, 56, 74kPa		4.75		Grass over light brown clayey TOPSOIL.	0.20	
0.45	D			4.40		POSSIBLE MADE GROUND (very dark brown-black sand with some medium to coarse rounded gravel and many rootlets).	0.55	
0.70	D			3.65		Firm mottled browns CLAY with some to much fine to medium sand.	1.30	
0.70	V			3.45		Very stiff indurated red-brown CLAY with much fine to medium sand and a little fine to coarse rounded gravel.	1.50	
1.50	D					End of Trial Pit at 1.50 m		
3.60	D							

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments:	Groundwater: Not encountered.	Water Depths (m)		
	Stability: Pit Stable.			Strike	Level

ROSCOE CAPITA LIMITED The House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel: 01923 817537 Fax: 01923 228515		Project: Doncaster		Trial Pit Number	
		Job Number: L2001J		TP 7	
		Client: B&Q plc			
		G.L. (mAOD): 5.03	N Coord: 400385.22	E Coord: 458617.84	
Scale: 1:50	Date: 31/05/2001	Plant: Tracked Excavator	Logged By: L. Thomas		



SAMPLING DATA			GROUND STRATA					Depth (m)	Water
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description			
0.60	V D	45, 86, 100kPa		4.83		Grass over light brown sandy TOPSOIL.	0.20		
0.70				4.48		POSSIBLE MADE GROUND (dark brown sand with many rootlets)	0.55		
				1.53		Firm to stiff mottled greys and browns locally friable CLAY with some fine to medium sand and occasional medium to coarse rounded gravel. Becoming very stiff indurated CLAY around 1.5m with a little medium to coarse sub-rounded gravel.	3.50		
						End of Trial Pit at 3.50 m			

SAMP. & TEST KEY D - Small Dist. bed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments:	Groundwater: Not encountered.	Water Depths (m)		
	Stability: Pit Stable.			Strike	Level

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Project: Doncaster

Trial Pit Number

Job Number: L2001J

TP 8

Client: B&Q plc

G.L. (mAOD): 4.20

N Coord: 400532.03

E Coord: 458689.03

Scale: 1:50

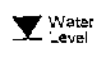
Date: 31/05/2001

Plant: Tracked Excavator

Logged By: L. Thomas

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.10	D			3.90		TOPSOIL	0.30	
0.60	V	94, 94, 108kPa		3.30		Stiff mottled grey-brown locally friable CLAY.	0.90	
0.70	D					Light brown fine SAND with occasional grey clay bands.		
1.50	D			1.80			2.40	
1.50	D			1.50		Grey-brown SAND and fine to medium with a little coarse GRAVEL.	2.70	
2.80	D			1.40		Red-brown fine to medium SAND.	2.80	
						End of Trial Pit at 2.80 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result
 Water Strike



Comments:

 Stability: Collapse of both sides below 1.6m.

Groundwater:
Not encountered, sand was wet.

Water Depths (m)		
Strike	Level	Flow

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Project: Doncaster

Job Number: L2001J

Client: B&Q plc

G.L. (mAOD): 4.36

N Coord: 400552.08

Trial Pit Number

TP 9

E Coord: 458650.35


Scale: 1:50


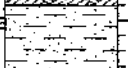
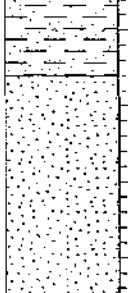
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

Plant: Tracked Excavator


Logged By: L. Thomas

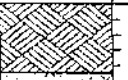

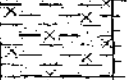
SAMPLING DATA			GROUND STRATA											
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water						
				4.06		Grass over dark brown sandy clayey TOPSOIL.	0.30							
0.70 0.70 0.70	D D V	58, 72, 88kPa				Firm grey and brown mottled friable CLAY with a little fine sand.	1.20							
				3.16		Grey and brown fine SAND with a little silt and occasional black bands								
				1.56			2.80							
				1.36		Red-brown medium SAND.	3.00							
						End of Trial Pit at 3.00 m								
<p>SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result Water Strike Water Level</p>			<p>Comments:</p>		<p>Groundwater: Not encountered.</p>		<p>Water Depths (m)</p> <table border="1"> <thead> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Strike	Level	Flow			
Strike	Level	Flow												
			<p>Stability: Collapse of both sides below 1.7m.</p>											



ROSCOE CAPITA LIMITED Hille House 132 St Albans Road Watford Hertfordshire WD24 4AA Tel: 01923 317537 Fax: 01923 228516		Project: Doncaster	Trial Pit Number TP 10	
		Job Number: L2001J		
		Client: B&Q plc		
G.L. (mAOD): 4.47		N Coord: 400569.37	E Coord: 458614.90	
Scale: 1:50	Date: 31/05/2001	Plant: Tracked Excavator	Logged By: L. Thomas	

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.60	D	64, 88, 100kPa		4.07		Dark brown clayey sandy TOPSOIL.	0.40	
0.60	D					Firm to stiff brown and grey mottled CLAY with a little fine sand and traces of rootlets.		
0.60	V				3.17			1.30
				1.47		Brown and grey fine SAND with occasional grey clay bands and occasional pockets of black sand.	3.00	
				1.37		Red-brown fine to medium SAND.	3.10	
						End of Trial Pit at 3.10 m		

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments: Land drain encountered at 0.7m.	Groundwater: Not encountered, sand wet.	Water Depths (m)							
	Stability: Both sides collapsed below 2.0m.	<table border="1"> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	Strike	Level	Flow					
Strike	Level	Flow								

ROSCOE CAPITA LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel: 01823 817537 Fax: 01823 228516		Project: Doncaster		Trial Pit Number:	
		Job Number: L2001J		TP 11	
		Client: B&Q plc			
		G.L. (mAOD): 4.48	N Coord: 400589.42	E Coord: 458573.01	
Scale: 1:50	Date: 31/05/2001	Plant: Tracked Excavator	Logged By: L. Thomas		

SAMPLING DATA			GROUND STRATA					Depth (m)	Water
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description			
0.70	D D V	80, 86, 91kPa		4.03		Dark brown clayey sandy TOPSOIL.	0.45		
0.70				2.98		Firm to stiff mottled brown and grey CLAY with some fine sand/silt.			
0.70				2.48		Brown and grey fine SAND with occasional grey clay bands and occasional wood fragments.			
2.00	D D			2.48		End of Trial Pit at 2.00 m	2.00		
2.00									


SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result
 Water Strike
 Water Level



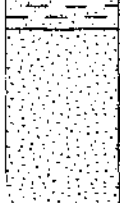
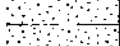
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

 Stability: **Pit Stable.**

Groundwater: **Groundwater rose to 1.7m after 1 hour.**

Water Depths (m)		
Strike	Level	Flow

ROSCOE CAPITA LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel: 01923 817537 Fax: 01923 228516		Project: Doncaster	Trial Pit Number	
		Job Number: L2001J	TP 12	
		Client: B&Q plc		
		G.L. (mAOD): 4.33	N Coord: 400552.51	E Coord: 458554.92
Scale: 1:50	Date: 31/05/2001	Plant: Tracked Excavator	Logged By: L. Thomas	

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.60	D D V	60, 66, 70kPa		4.13		TOPSOIL	0.20	
0.60				3.23		Firm grey and brown mottled friable CLAY with some to much fine sand and many rootlets.	1.10	
0.60				1.93		Grey and brown fine to medium SAND with bands of grey sandy clay and occasional root material.	2.40	
				1.73		Pink-red medium SAND.	2.60	
						End of Trial Pit at 2.60 m		

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments: Land drain encountered at 0.25m.	Groundwater: Seepage at base of pit.	Water Depths (m)		
	Stability: Collapse of one side below 1.5m.			Strike	Level

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Project: Doncaster

Job Number: L2001J

Client: B&Q plc

G.L. (mAOD): 4.37

N Coord: 400527.91

Trial Pit Number

TP 13

E Coord: 458594.04

Scale: 1:50

Date: 31/05/2001

Plant: Tracked Excavator

Logged By: L. Thomas

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
				4.17		TOPSOIL	0.20	
0.60	D D V	70, 72, 80kPa				Firm to stiff grey and brown mottled CLAY with some fine sand bands and many rootlets.		
0.60								
0.60								
				2.47		Red-brown medium SAND.	1.90	
				1.87		End of Trial Pit at 2.50 m	2.50	

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result

Water Strike Water Level

Comments:

Stability: Collapse of both sides below 1.5m.

Groundwater: Not encountered, sand was wet.

Water Depths (m)

Strike	Level	Flow

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 Fax: 01923 228516



Project: Doncaster

Job Number: L2001J

Client: B&Q plc

G.L. (mAOD): 4.53

N Coord: 400500.79

Trial Pit Number

TP 14

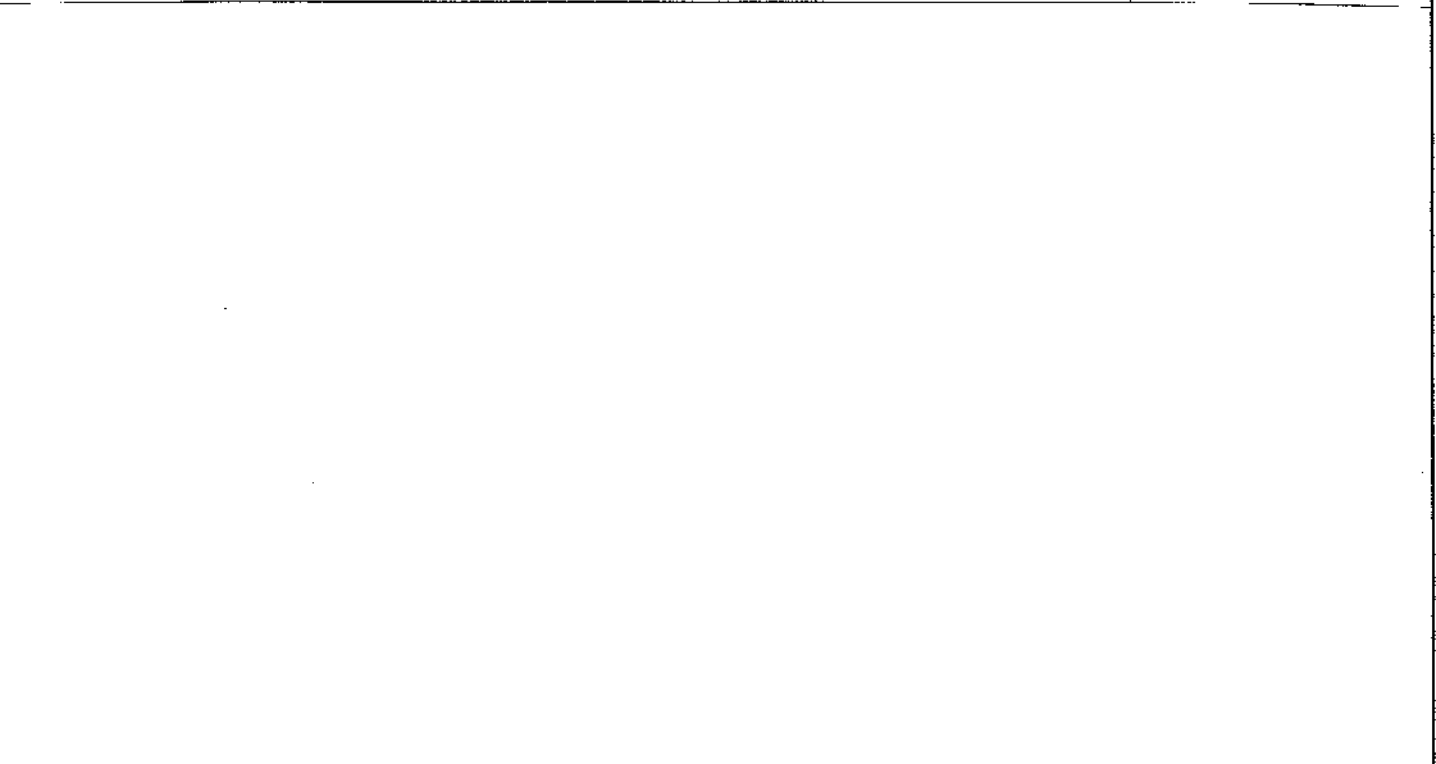
E Coord: 458630.79

Scale: 1:50

Date: 31/05/2001

Plant: Tracked Excavator

Logged By: L. Thomas



SAMPLING DATA			GROUND STRATA							
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water		
0.70	D			4.23		Dark brown sandy clayey TOPSOIL.	0.30			
0.70	D					Orange-brown clayey to very clayey fine to coarse SAND and fine to coarse sub-rounded GRAVEL.				
				2.93			1.60			
				2.13		Red-brown medium SAND.				
						End of Trial Pit at 2.40 m	2.40			
			Comments:			Groundwater: Seepage at 1.6m.		Water Depths (m)		
								Stroke	Level	Flow
			Stability: Collapse of both sides below 1.6m.							

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 S - Bulk Sample
 W - Water Sample
 V - Vane Test Result
 Water Strike
 Water Level

RGSCOE CAPITAL LIMITED

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Fax : 01923 228516



Project: **Doncaster**

Job Number: **L2001J**

Client: **B&Q plc**

G.L. (mAO): **4.45**

N Coord: **400466.40**

Trial Pit Number

TP 15

E Coord: **458657.39**

Scale: 1:50


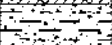
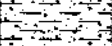
Date: **31/05/2001**

Plant: **Tracked Excavator**

Logged By: **L. Thomas**

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAO)	Ref	Description	Depth (m)	Water
1.00	D			4.15		Grass over dark brown sandy clayey TOPSOIL.	0.30	
				3.45		Firm to stiff orange-brown CLAY with much fine to medium sand and a little fine to coarse gravel.	1.00	
				2.05		Red-brown medium SAND.	2.40	
						End of Trial Pit at 2.40 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 S - Bulk Sample
 W - Water Sample
 V - Vane Test Result

 Water Strike
 Water Level


Comments :




Stability: **Pit Stable.**

Groundwater: **Seepage at 2.1m.**

Water Depths (m)

Strike	Level	Flow

ROSCOE CAPITA LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel : 01923 817537 Fax : 01923 228516		Project : Doncaster	Final Pit Number	
		Job Number : L2001J	TP 16	
		Client : B&Q plc		
		G.L. (mAOD) : 4.87	N Coord : 400425.40	E Coord : 458675.08
Scale : 1:50	Date : 31/05/2001	Plant : Tracked Excavator	Logged By : L. Thomas	

SAMPLING DATA			GROUND STRATA											
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water						
0.70 0.80 0.80	V D D	58, 70, 74kPa		4.57		Grass over brown sandy TOPSOIL.	0.30							
2.60	D			2.17		Firm orange-brown friable CLAY with much fine to medium sand and a little gravel to cobble size, becoming a very stiff red-brown and grey CLAY with some fine to coarse gravel.	2.70							
						End of Trial Pit at 2.70 m								
SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike			Comments : Stability Pit Stable.		Groundwater : Not encountered.		Water Depths (m) <table border="1"> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>		Strike	Level	Flow			
Strike	Level	Flow												

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Project : Doncaster

Job Number : L2001J

Client : B&Q plc

G.L. (mAOD) : 5.02

N Coord : 400379.36

Trial Pit Number

TP 17

E Coord : 458659.72


Scale : 1:50


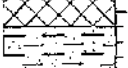

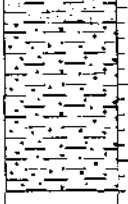
Date : 01/06/2001



Plant : Rubber Duck

Logged By : L. Thomas

SAMPLING DATA			GROUND STRATA											
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water						
0.15	D			4.72		Grass over brown clayey sandy TOPSOIL.	0.30							
0.40	D			4.37		POSSIBLE MADE GROUND (dark brown clayey sand with some fine to coarse sub-rounded gravel).	0.65							
0.70	V	78, 80, 80kPa				Firm to stiff mottled beige-brown friable CLAY with much fine sand/silt.								
1.00	D			3.42			1.60							
1.00	D					Very stiff brown-red and grey CLAY with a little fine to coarse sub-rounded gravel and cobbles.								
2.00	D			2.02			3.00							
2.00	D					End of Trial Pit at 3.00 m								
SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result Water Strike Water Level			Comments : No groundwater collected in hole after 2 hours. Stability : Pit Stable.			Groundwater : Seepage at 1.9m. Water Depths (m) <table border="1"> <thead> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Strike	Level	Flow			
Strike	Level	Flow												

ROSCOE CAPITA LIMITED File House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel: 01923 817537 Fax: 01923 228516		Project: Doncaster	Trial Pit Number	
		Job Number: L2001J	TP 18	
		Client: B&Q plc		
G.L. (mAOD): 4.98	N Coord: 400379.34	E Coord: 456576.84		
Scale: 1:50	Date: 01/06/2001	Plant: Rubber Duck	Logged By: L. Thomas	

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.70	V	60, 78, 98kPa		4.68		Grass over light brown clayey TOPSOIL.	0.30	
1.00	D			4.38		POSSIBLE MADE GROUND (dark brown clayey sand with a little fine to coarse sub-rounded gravel).	0.60	
1.00	D			3.38		Firm to stiff mottled brown and grey CLAY with some to much fine to medium sand.	1.60	
				2.28		Very stiff brown-grey CLAY with a little gravel, cobbles and boulders.	2.70	
						End of Trial Pit at 2.70 m		

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments: Land drain encountered at 0.8m.	Groundwater: Not encountered.	Water Depths (m) <table border="1"> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	Strike	Level	Flow			
Strike	Level	Flow							
Stability: Pit Stable.									

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Project: Doncaster

Trial Pit Number:

Job Number: L2001J

TP 19

Client: B&Q plc

G.L. (m.AOD): 4.79

N Coord: 400419.48

E Coord: 458570.92

Scale: 1:50

Date: 01/06/2001

Plant: Rubber Duck

Logged By: L. Thomas

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (m.AOD)	Ref	Description	Depth (m)	Water
0.20	D			4.39		Grass over TOPSOIL.	0.40	
0.60	D	66, 68, 90kPa				Firm to stiff mottled orange-brown CLAY with much fine to medium sand, locally becoming a clayey sand.		
0.60	D							
0.60	V							
				3.59		Very stiff grey-brown mottled CLAY with a little gravel and cobbles.	1.20	
				2.59		Red-brown medium SAND.	2.20	
2.50	D			1.79		End of Trial Pit at 3.00 m	3.00	
2.50	D							

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result



Comments:

Groundwater: Seepage at base of pit.

Water Depths (m)

Strike	Level	Flow

Stability: Collapse of both sides below 2.2m.

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Project: Doncaster

Job Number: L2001J

Client: B&Q plc

G.L. (mAOD): 4.86

N Coord: 400418.85

Trial Pit Number

TP 20

E Coord: 458602.99

Scale: 1:50

Date: 01/06/2001

Plant: Rubber Duck

Logged By: L. Thomas

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
				4.56		Grass over TOPSOIL	0.30	
0.60	V	78, 80, 88kPa		4.06		Firm to stiff grey-brown mottled CLAY with some to much fine to medium sand and many rootlets.	0.80	
0.70	D							
0.70	D							
1.20	V	>120kPa		1.66		Very stiff brown and grey mottled CLAY with a little fine to coarse gravel, cobbles and boulders.	3.20	
1.50	D							
1.50	D							
						End of Trial Pit at 3.20 m		

SAMPLE/TEST KEY
 D - Small D stirred Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result

Water Strike Water Level


Comments:



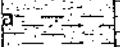
Stability: Pit Stable.

Groundwater: Not encountered.

Water Depths (m)

Strike	Level	Flow

ROSCOE CAPITA LIMITED R. e House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel : 01923 817537 Fax : 01923 226516 	Project : Doncaster	Trial Pit Number	
	Job Number : L2001J	TP 21	
	Client : B&Q plc		
	G.L. (mAOD) : 4.92	N Coord : 400412.94	E Coord : 458642.32
Scale : 1:50	Date : 01/06/2001	Plant : Rubber Duck	Logged By : L. Thomas

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
				4.62		Grass over dark brown clayey sandy TOPSOIL.	0.30	
0.80 0.80 0.80	D D V	54, 108, 120kPa		3.92		Firm to stiff orange-brown and grey mottled friable CLAY with some to much fine to medium sand, grading to a clayey sand locally, with many rootlets.	1.00	
				1.52		Very stiff grey-brown CLAY with a little to some gravel, cobbles and boulders.	3.40	
						End of Trial Pit at 3.40 m		

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments :	Groundwater : Not encountered.	Water Depths (m)		
	Stability : Pit Stable.			Strike	Level

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Project : **Doncaster**

Trial Pit Number

Job Number : **L2001J**

TP 22

Client : **B&Q plc**

G.L. (mAOD) : **4.94**

N Coord : **400412.68**

E Coord : **458692.31**

Scale : 1:50

Date : **01/06/2001**

Plant : **Rubber Duck**

Logged By : **L. Thomas**

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.50	V	60, 80, 96kPa		4.64		Grass over brown sandy clayey TOPSOIL.	0.30	
1.00	D			4.04		Firm to stiff mottled brown friable CLAY with some to much fine to medium sand grading to a clayey sand locally.	0.90	
1.00	D			2.14		Very stiff grey and brown variegated CLAY with a little to some fine to coarse sub-rounded gravel.	2.80	
						End of Trial Pit at 2.80 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result



Comments :

Groundwater : **Not encountered.**

Water Depths (m)

Strike	Level	Flow

Stability : **Pit Stable.**

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Project: Doncaster

Job Number: L2001J

Client: B&Q plc

G.L. (mAOD): 4.68

N Coord: 400442.25

Date: 01/06/2001

Plant: Rubber Duck

Trial Pit Number

TP 23

E Coord: 458638.52

Logged By: L. Thomas

Scale: 1:50

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.20	D			4.28		Grass over dark grey-brown clayey sandy TOPSOIL.	0.40	
0.60	V	68, 78, 86kPa				Firm to stiff grey-brown mottled CLAY with some to much fine to medium sand.		
0.70	D							
0.70	D							
				2.98		Red-brown medium SAND.	1.70	
2.00	D							
2.00	D							
				1.68			3.00	
						End of Trial Pit at 3.00 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result

Water Strike
 Water Level


Comments:


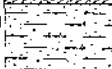

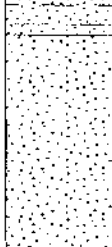
Groundwater:
 Seepage at 2.4m.



Water Depths (m)


Strike	Level	Flow


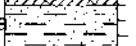
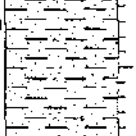
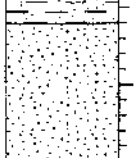
Stability: Some collapse below 2.4m.



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		Job Number: L2001J	TP 24	
		Client: B&Q plc		
G.L. (mAOD): 4.55	N Coord: 400455.38	E Coord: 458596.85		
Scale: 1:50	Date: 01/06/2001	Plant: Rubber Duck	Logged By: L. Thomas	


SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.60	V	45, 62, 70kPa		4.15		Grass over dark brown sandy TOPSOIL.	0.40	
1.10	V	30, 42, 54kPa		3.55		Firm grey and brown mottled friable CLAY with some to much fine to medium sand and many rootlets.	1.00	
1.20	D			3.05		Brown and grey fine to medium SAND with pockets of grey and brown mottled clay.	1.50	
1.20	D			1.55		Red-brown medium SAND; appears to increase in density below 2.3 metres.	3.00	
						End of Trial Pit at 3.00 m		

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments:	Groundwater: Seepage at 2.4m.	Water Depths (m)		
	stability: Both sides collapsing.			Strike	Level


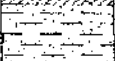
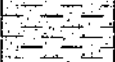

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		Job Number: L2001J		
		Client: B&Q plc		
		G.L. (mAOD): 4.59	N Coord: 400456.63	E Coord: 458558.35
Scale: 1:50	Date: 01/06/2001	Plant: Rubber Duck	Logged By: L. Thomas	



SAMPLING DATA			GROUND STRATA				Depth (m)	Water
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description		
0.50	V	88, 96, 108kPa		4.29		Grass over dark brown sandy clayey TOPSOIL.	0.30	
0.80	D	68, 88, 94kPa				Firm to stiff grey and brown mottled CLAY with a little fine to medium sand and many rootlets.		
0.80	D							
0.80	V							
				2.99			1.60	
2.00	D					Red-brown medium SAND.		
2.00	D			2.04			2.55	
						End of Trial Pit at 2.55 m		

SAMPLE TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments:	Groundwater: Not encountered.	Water Depths (m)		
	Stability: Collapse on both sides.			Strike	Level

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		Job Number : L2001J		TP 26	
		Client : B&Q plc			
G.L. (mAOD) : 4.71		N Coord : 400428.54	E Coord : 458537.64		
Scale : 1:50		Date : 01/06/2001	Plant : Rubber Duck	Logged By : L. Thomas	



SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.70	D D V	76, 82, 108kPa		4.31		Grass over TOPSOIL.	0.40	
0.70						Stiff grey and orange-brown CLAY with some fine to medium sand and many rootlets.		
0.70						3.21		Red-brown medium SAND with occasional boulders at top of unit.
				2.21		End of Trial Pit at 2.50 m	2.50	

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments :	Groundwater : Seepage at 2.2m.	Water Depths (m)		
	Stability : Collapse of both sides below 2.2m.			Strike	Level

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Project: **Doncaster**

Trial Pit Number

TP 27

Job Number: **L2001J**

Client: **B&Q plc**

G.L. (mAOD): **4.74**

N Coord: **400381.99**

E Coord: **458537.33**

Scale: 1:50

Date: **01/06/2001**

Plant: **Rubber Duck**

Logged By: **L. Thomas**

SAMPLING DATA			GROUND STRATA				Depth (m)	Water
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.50	D			4.44		Grass over brown sandy clayey TOPSOIL.	0.30	
1.00	V	80, 82, 94kPa		4.04		POSSIBLE MADE GROUND (dark brown sandy clay).	0.70	
1.00	D			3.04		Stiff mottled brown CLAY with some to much fine to medium sand and occasional black speckling.	1.70	
1.00	D			1.94		Very stiff grey and brown CLAY with a little gravel, cobbles and boulders.	2.80	
						End of Trial Pit at 2.80 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result



Comments:

Groundwater:

Not encountered.

Water Depths (m)

Strike	Level	Flow

Stability: **Pit Stable.**

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Project:	Doncaster		Trial Pit Number:	TP 28			
Job Number:	L2001J						
Client:	B&Q plc						
G.L. (m AOD):	4.47	N Coord:	400492.69	E Coord:	458569.14		
Scale:	1:50	Date:	01/06/2001	Plant:	Rubber Duck	Logged By:	L. Thomas

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (m AOD)	Ref	Description	Depth (m)	Water
0.60 0.70 0.70	V	74, 84, 96kPa		4.12		Grass over dark brown sandy clayey TOPSOIL.	0.35	
						Firm to stiff grey-brown CLAY with many roots.		
				3.37			1.10	
				2.87		Red-brown medium SAND.	1.60	
						End of Trial Pit at 1.60 m		

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result Water Strike Water Level	Comments: Pit terminated due to instability.	Groundwater: Seepage at 1.3m.	Water Depths (m)		
	Stability: Collapse of both sides from ground level.			Stake	Level

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Project: **Doncaster**

Job Number: **L2001J**

Client: **B&Q plc**

G.L. (mAOD): **4.45**

N Coord: **400480.71**

Trial Pit Number

TP 29

E Coord: **458609.05**


Scale: **1:50**

Date: **01/06/2001**


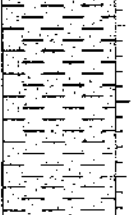
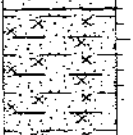
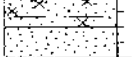

Plant: **Rubber Duck**



Logged By: **L Thomas**

SAMPLING DATA			GROUND STRATA												
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water							
0.60	V	72, 74, 100kPa		4.05		Grass over brown sandy clayey TOPSOIL.	0.40								
1.00						Firm to stiff grey and brown CLAY with some becoming much fine to medium sand; becoming a clayey sand at base of unit.	1.40								
1.00				3.05		Red-brown medium SAND.	2.40								
				2.05		End of Trial Pit at 2.40 m									
SAMPLE/TEST KEY S - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result Water Level Strike			Comments:			Groundwater: Seepage at 1.6m.		Water Depths (m)							
			Stability: Collapse of both sides below 1.4m.			<table border="1"> <thead> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Strike	Level	Flow					
Strike	Level	Flow													

ROSCOE CAPITA LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel : 01923 817537 Fax : 01923 228516		Project: Doncaster	Trial Pit Number	
		Job Number: L2001J	TP 30	
		Client: B&Q plc		
		G.L. (mAOD): 4.40	N Coord: 400588.27	E Coord: 458626.39
Scale: 1:50	Date: 01/06/2001	Plant: Rubber Duck	Logged By: L. Thomas	



SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.50	V	78, 88, 96kPa		4.10		Grass over grey-brown sandy clayey TOPSOIL.	0.30	
1.00 1.00	D D					Firm to stiff grey-brown CLAY with some fine to medium sand below 1.5m and many rootlets.		
2.00 2.00	D D			2.60		Grey-brown fine to medium SAND with a little clay and silt and occasional black sand bands.	1.80	
				1.60		Red-brown medium SAND.	2.80	
				1.40		End of Trial Pit at 3.00 m	3.00	

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments:	Groundwater: Seepage at 1.8m.	Water Depths (m)							
	Stability: Collapse of both sides below 1.8m.	<table border="1"> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	Strike	Level	Flow					
Strike	Level	Flow								

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Project: **Doncaster**

Trial Pit Number

TP 31

Job Number: **L2001J**

Client: **B&Q plc**

G.L. (mAOD): **4.32**

N Coord: **400631.66**

E Coord: **458638.95**

Scale: **1:50**

Date: **01/06/2001**

Plant: **Rubber Duck**

Logged By: **L. Thomas**

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.70	V	70, 72, 74kPa		3.97		Grass over TOPSOIL and a single brick. (Made ground).	0.35	
				2.82		Firm grey-brown mottled CLAY with some fine sand and many rootlets.	1.50	
				1.32		Grey-brown fine SAND with a little clay and silt becoming grey fine to medium sand with a little fine to medium rounded gravel below 2.5m.	3.00	
						End of Trial Pit at 3.00 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result




Comments:


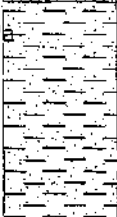



Groundwater:
Seepage at 1.6m.



Water Depths (m)

Strike	Level	Flow

Stability: **Collapse of both sides.**

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		Job Number: L2001J		
		Client: B&Q plc		
		G.L. (mAOD): 4.34	N Coord: 400613.86	E Coord: 458659.30
Scale: 1:50	Date: 01/06/2001	Plant: Rubber Duck	Logged By: L. Thomas	

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
				3.94		Grass over dark brown sandy clayey TOPSOIL.	0.40	
0.70 0.80 0.80	V D D	92, 100, 106kPa				Stiff brown and grey mottled CLAY with some, becoming much below 1.6m, fine sand and many rootlets.		
2.00 2.00	D D			1.84			2.50	
				1.54		Brown-grey fine to medium SAND with a little fine to medium rounded gravel.	2.80	
				1.34		Red-brown medium SAND.	3.00	
						End of Trial Pit at 3.00 m		

SAMPLE TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Sample  Water Level	Comments:	Groundwater: Not encountered.	Water Depths (m)		
	Stability: Collapse of both sides.			Strike	Level

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Project: Doncaster

Trial Pit Number

TP 33

Job Number: L2001J

Client: B&Q plc

G.I. (mAOO): 4.29

N Coord: 400635.07

E Coord: 458548.93

Date: 04/06/2001

Plant: Rubber Duck

Logged By: L. Thomas

Scale: 1:50

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAOO)	Ref	Description	Depth (m)	Water
0.20	D			3.99		Grass over dark brown clayey sandy TOPSOIL.	0.30	
0.50	V	84, 88, 108kPa		3.59		Stiff orange-brown and grey mottled CLAY.	0.70	
0.60	D							
0.60	D							
1.10	D	66, 74, 80kPa				Firm to stiff mottled brown CLAY with some silt and a little fine sand.		
1.10	V							
1.10	V							
				1.69			2.60	
				1.19		Grey-brown fine to medium SAND with occasional bands of black sand.	3.10	
						End of Trial Pit at 3.10 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result



Comments

Groundwater:
 Seepage at 2.6m.

Water Depths (m)

Strike	Level	Finw

Stability: Collapse of both sides.

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Project: Doncaster

Job Number: L2001J

Client: B&Q plc

G.L. (mAOD): 4.43

N Coord: 400598.68

Trial Pit Number

TP 34

E Coord: 458593.18

Scale: 1:50

Date: 04/06/2001

Plant: Rubber Duck

Logged By: L. Thomas

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
				4.18		Grass over dark brown clayey sandy TOPSOIL.	0.25	
1.00	V	88, 96, 100kPa				Firm to stiff grey and brown mottled CLAY.		
1.20	D							
				2.73		Firm grey and orange-brown mottled CLAY with some silt and a little fine sand.	1.70	
2.00	D							
				1.83		Grey-brown fine to medium SAND becoming red-brown medium SAND at the base of the pit.	2.60	
				1.33			3.10	
						End of Trial Pit at 3.10 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result




Comments:

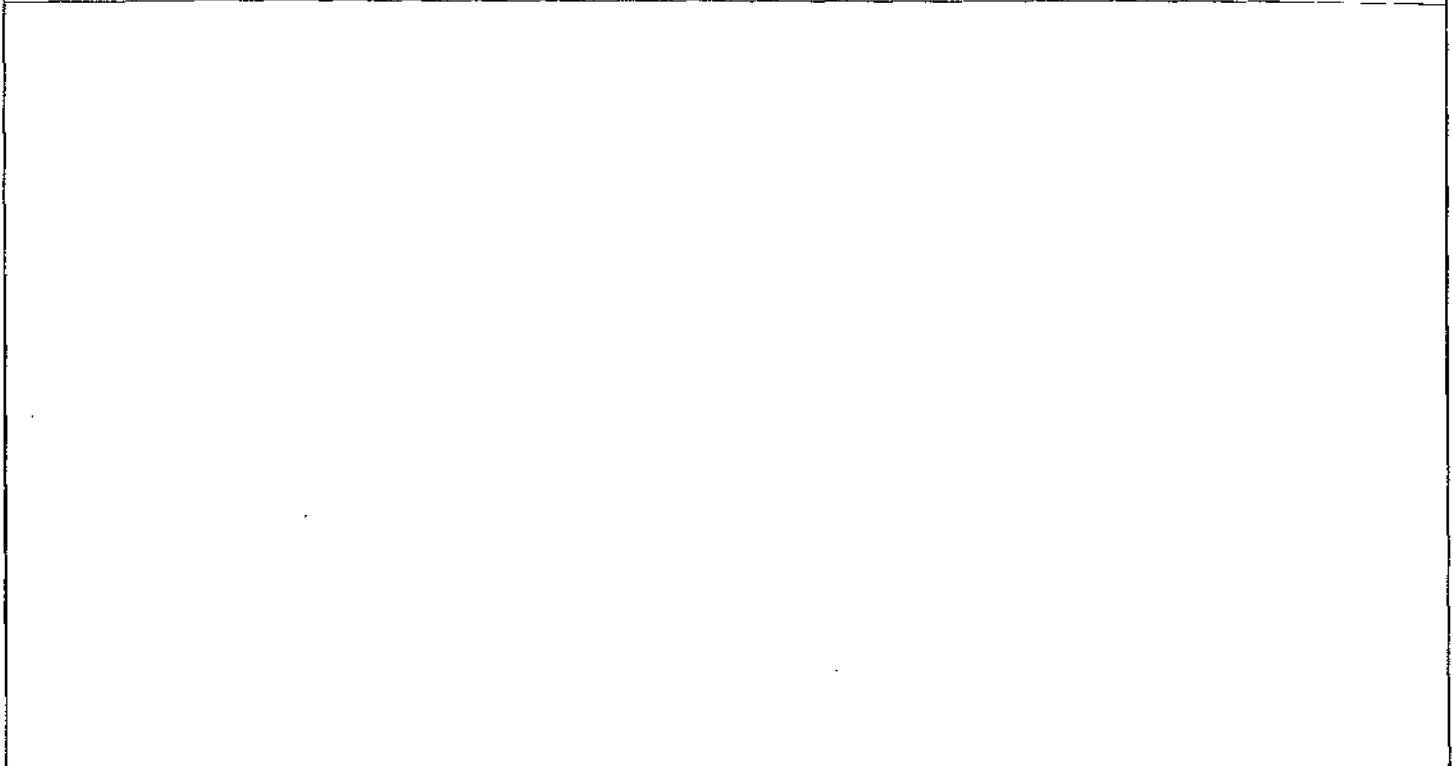
Groundwater:
 Seepage at 2.6m.


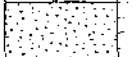
Water Depths (m)



Strike Level Flow

Stability: Collapse of both sides below 2.6m.

RSCOE CAPITAL LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel. 01923 817537 Fax. 01923 228516		Project: Doncaster	Trial Pit Number:	
		Job Number: L2001J	TP 35	
		Client: B&Q plc		
		G.L. (mAOD): 4.44	N Coord: 400637.20	E Coord: 458607.44
Scale: 1:50	Date: 04/06/2001	Plant: Rubber Duck	Logged By: L. Thomas	



SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.70	D D V	62, 70, 84kPa		4.09		Grass over dark brown clayey sandy TOPSOIL.	0.35	
0.70				Firm to stiff orange-brown and grey mottled CLAY with some silt and a little fine sand.		1.70		
0.70				Firm orange-brown and grey CLAY with much fine sand and silt.		2.50		
2.80	D D			1.94		Grey-brown fine to medium SAND with a little fine to medium rounded gravel and occasional pockets of black fine to medium sand; becoming red-brown medium SAND at the base.	2.50	
2.80				1.24		End of Trial Pit at 3.20 m	3.20	

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result
 Water Strike
 Water Level


Comments: **A land drain was encountered at 0.5m.**


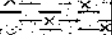
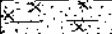


Groundwater: **Not encountered.**

Water Depths (m)

Strike	Level	Fow

Stability: **Collapse of both sides below 2.5m.**

ROSCOE CAPITAL LIMITED Hills House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel: 01923 817537 Fax: 01923 228916		Project: Doncaster	Trial Pit Number	
		Job Number: L2001J	TP 36	
Client: B&Q plc		G.L. (mAOD): 4.42	N Coord: 400605.43	E Coord: 458648.20
Scale: 1:50	Date: 04/06/2001	Plant: Rubber Duck	Logged By: L. Thomas	

SAMPLING DATA			GROUND STRATA											
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water						
				4.22		Grass over dark brown clayey sandy TOPSOIL.	0.20							
0.70	D D V D D V	64, 72, 74 kPa		3.52		Firm brown and grey mottled slightly friable CLAY with a little fine sand/silt and many rootlets.	0.90							
0.70														
0.70														
1.00			43, 60, 66kPa		2.22		Grey and orange-brown mottled fine SAND with much clay and a little silt with some firm grey-blue and brown thinly laminated silty clay with occasional root remains.	2.20						
1.00														
1.00														
1.00														
				1.22		Grey-brown fine to medium SAND with occasional bands of black medium sand and a little to some rounded fine to coarse gravel. Becoming red-brown medium SAND at the base of the pit.	3.20							
						End of Trial Pit at 3.20 m								
SAMPLE TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike			Comments:		Groundwater: Seepage at 1.8m.		Water Depths (m)							
			Stability: Pit Stable.				<table border="1"> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	Strike	Level	Flow				
Strike	Level	Flow												

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Project: **Doncaster**

Job Number: **L2001J**

Client: **B&Q plc**

G.L. (mAOD): **4.31**

N Coord: **400599.51**

Trial Pit Number

TP 37

E Coord: **458686.17**

Scale: 1:50

Date: **04/06/2001**

Plant: **Rubber Duck**

Logged By: **L. Thomas**

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.10	D			4.01		Grass over dark brown clayey sandy TOPSOIL.	0.30	
0.50	V	64, 78, 80kPa				Firm to stiff orange-brown and grey friable CLAY with much silt and a little fine sand.		
0.60	D							
0.60	D							
1.10	V	66, 68, 78kPa		3.31		Grey and orange-brown fine SAND/SILT with much clay.	1.00	
1.30	D							
1.30	D							
				2.11		Grey-brown fine to medium SAND.	2.20	
				1.51		Red-brown medium SAND.	2.80	
				1.21			3.10	
						End of Trial Pit at 3.10 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result



Comments:

Groundwater:
 Seepage at 2.2m.

Water Depths (m)

Strike	Level	Flow

Stability: Collapse of both sides below 2.2m.

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Project: Doncaster

Trial Pit Number

Job Number: L2001J

TP 38

Client: B&Q plc

G.L. (mAOD): 4.31

N Coord: 400578.75

E Coord: 458654.59

Scale: 1:50

Date: 04/06/2001

Plant: Rubber Duck

Logged By: L. Thomas

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.60	V	70, 90, 104kPa		4.01		Grass over dark brown clayey sandy TOPSOIL.	0.30	
1.00	D	55, 56, 60kPa		3.41		Firm to stiff grey and brown mottled CLAY with some silt and a little fine sand.	0.90	
1.00	D			2.81		Firm grey and brown mottled CLAY with much fine sand/silt and occasional root remains.	1.50	
1.00	V			2.31		Firm grey and brown laminated organic CLAY with some silt.	2.00	
1.70	D			1.51		Grey-brown fine to medium SAND.	2.80	
1.70	D			0.91		Red-brown fine to medium SAND.	3.40	
3.40	D					End of Trial Pit at 3.40 m		
3.40	D							

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result



Comments:

Groundwater:
 Seepage at 2.0m.

Water Depths (m)

Strike	Level	Flow

Stability: Collapse of one side from the surface.

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Project: Doncaster

Trial Pit Number

Job Number: L2001J

TP 39

Client: B&Q plc

G.L. (mAOD): 4.28

N Coord: 400629.72

E Coord: 458586.27

Scale: 1:50

Date: 04/06/2001

Plant: Rubber Duck

Logged By: L. Thomas

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
				3.98		Grass over dark brown sandy clayey TOPSOIL.	0.30	
0.80	D D V V	56, 70, 70kPa				Firm grey and orange-brown mottled CLAY with a little becoming much fine sand and silt and very occasional root material.		
0.80								
0.80								
1.20		55, 66, 72kPa		2.88			1.40	
				2.58		Stiff grey and brown laminated organic CLAY with some silt.	1.70	
						Grey-brown fine to medium SAND with occasional black sand bands. Becoming red-brown fine to medium sand at the base of the pit.		
				0.98				
						End of Trial Pit at 3.30 m	3.30	

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 W - Water Sample
 V - Vane Test Result




Comments:


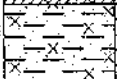
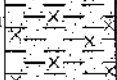
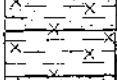
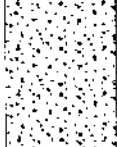
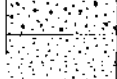

Groundwater:



Water Depths (m)


Strike	Level	Flow

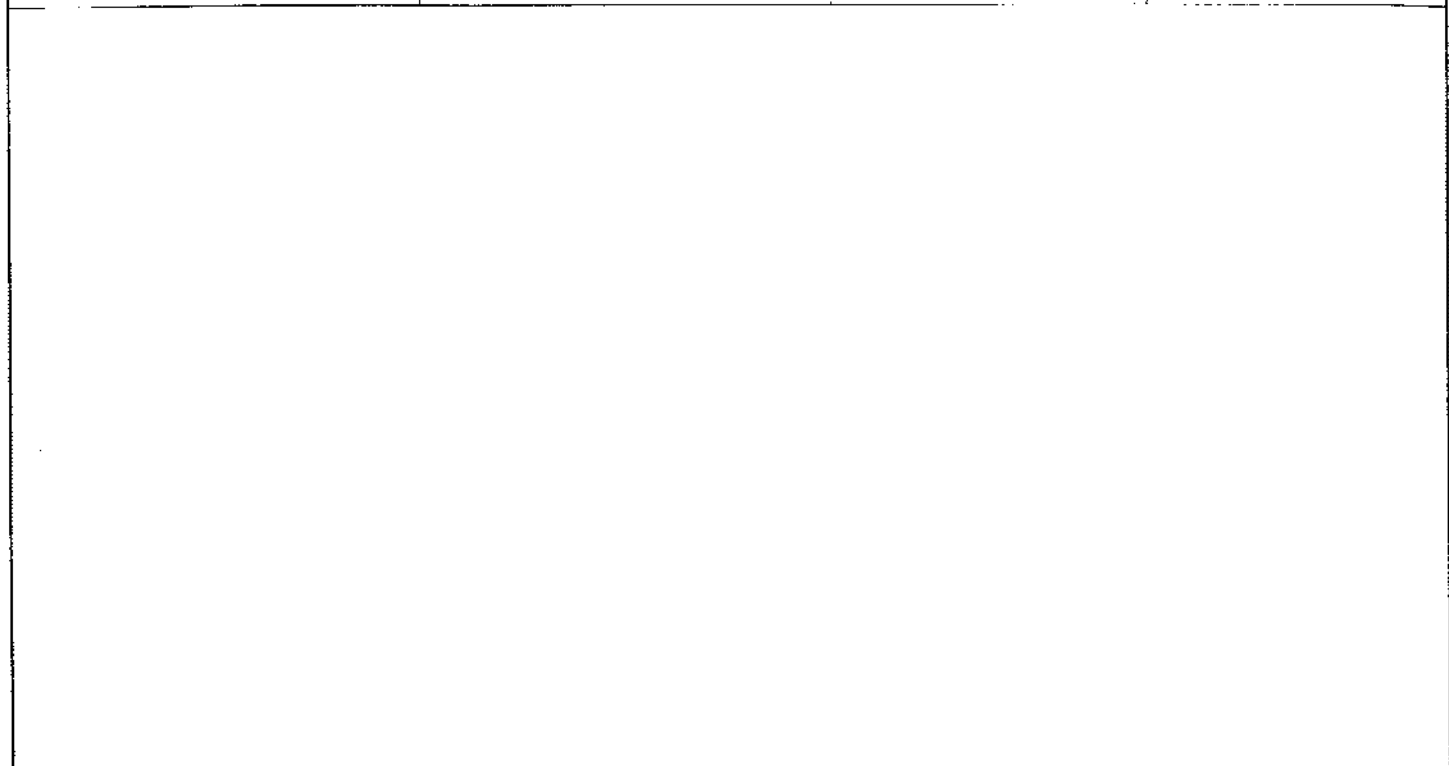
Stability: Collapse of one side.



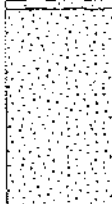
ROSCOE CAPITA LIMITED Hille House 132 St Albans Road Watford Hertfordshire WD24 4AA Tel: 01923 817537 Fax: 01923 228518		Project: Doncaster	Trial Pit Number TP 40	
		Job Number: L2001J		
		Client: B&Q plc		
		G.L. (mAOD): 4.35	N Coord: 400601.31	E Coord: 458541.18
Scale: 1:50	Date: 04/06/2001	Plant: Rubber Duck	Logged By: L. Thomas	



SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.55	V	70, 76, 82kPa		4.05		Grass over dark brown clayey sandy TOPSOIL.	0.30	
1.00	D	60, 70, 76kPa				Firm orange-brown and grey CLAY with a little fine sand and some silt, becoming much silt and fine sand below 1.2m with occasional root remains.		
1.00	D							
1.00	V							
				2.85		Firm grey and brown laminated organic CLAY with some silt.	1.50	
				2.55				1.80
						Brown and grey fine to medium SAND with a little fine to coarse rounded gravel and occasional black sand layers with occasional clay bands.		
				1.35				3.00
3.40	D			0.95		Red-brown with turquoise fine to medium SAND with a little clay and silt.	3.40	
3.40	D					End of Trial Pit at 3.40 m		


SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments:	Groundwater: Seepage at 1.9m.	Water Depths (m)		
	Stability: Collapse of both sides			Strike	Level


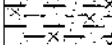
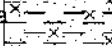
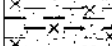
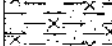
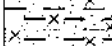
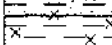
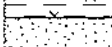

ROSCOE CAPITA LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WD24 4AA Tel : 01923 817537 Fax : 01923 228516		Project : Doncaster	Trial Pit Number	
		Job Number : L2001J	TP 41	
		Client : B&Q plc		
		G.L. (mADD) : 4.76	N Coord : 400475.89	E Coord : 458548.08
Scale : 1:50	Date : 04/06/2001	Plant : Rubber Duck	Logged By : L. Thomas	






SAMPLING DATA			GROUND STRATA					Depth (m)	Water
Depth (m)	Type	Test Result	Legend	Level (mADD)	Ref	Description	Depth (m)	Water	
0.60	V	70, 78, 86kPa		4.36		Grass over dark brown sandy clayey TOPSOIL.	0.40		
0.80 0.80	D D			3.66		Firm orange-brown and grey CLAY with much fine to medium sand and many rootlets.	1.10		
2.40 2.40	D D			2.36		Red-brown medium SAND.	2.40		
						End of Trial Pit at 2.40 m			

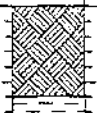











SAMPLE TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments : Land drain encountered at 0.4m.	Groundwater : Not encountered, sand wet.	Water Depths (m)				
	Stability : Collapse of both sides from ground level.	<table border="1"> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	Strike	Level	Flow		
Strike	Level	Flow					



ROSCOE CAPITAL LIMITED Hille House 132 St. Albans Road Watford Hertfordshire WC24 4AA Tel : 01923 617537 Fax : 01923 228516		Project : Doncaster		Trial Pit Number	
		Job Number : L2001J		TP 42	
		Client : B&Q plc			
		G.L. (mAOD) : 4.42	N Coord : 400521.96	E Coord : 458557.86	
Scale : 1:50	Date : 04/06/2001	Plant : Rubber Duck	Logged By : L. Thomas		


SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Legend	Level (mAOD)	Ref	Description	Depth (m)	Water
0.70	V	82, 88, 100kPa		4.22		Grass over dark brown clayey sandy TOPSOIL.	0.20	
1.00	D					Stiff brown and grey mottled CLAY with some to much silt and some fine sand below 0.9m.		
1.00	D							
								
								
				2.62			1.80	
				2.32		Firm grey and brown laminated organic CLAY with some silt.	2.10	
						Red-brown medium SAND.		
				1.82			2.60	
						End of Trial Pit at 2.60 m		

















SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample W - Water Sample V - Vane Test Result  Water Strike  Water Level	Comments : Pit terminated due to instability.	Groundwater : Not encountered.	Water Depths (m) <table border="1"> <thead> <tr> <th>Strike</th> <th>Level</th> <th>Flow</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Strike	Level	Flow			
Strike	Level	Flow							
Stability : Collapse of both sides.									

ROSCOE CAPITA LIMITED Prospect House 20 Mellor Road Cheadle Hulme Cheshire SK8 5AU Tel : 0161 486 1521 Fax : 0161 486 1580		Project : Loncaster	Borehole Number	
		Job Number : L2001JA	1	
		Client : B&Q plc	Sheet 1 of 1	
		Start Date : 31/05/2001	N Coord : 400519.97	E Coord : 458567.66
Method :	Finish Date : 01/06/2001	G.L. (mLD) 4.48	Driller :	

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	Water	Standpipe
0.50-0.95	D	N=4	3.88		0.60	TOPSOIL		
1.00-1.45	U		3.48		1.00	Firm grey/brown CLAY		
1.50-1.95	D	N=12	2.88		1.60	Firm grey/brown locally slightly organic CLAY	▼	
2.00-2.45	D	N=11				Medium dense to very dense brown medium SAND. Occasionally fine and slightly clayey and silty.	▽	
2.50-2.95	D	N=8						
3.00-3.45	D	N=6						
3.50-3.95	D	N=23						
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	50/75mm						
7.00-7.45	D	50/75mm						
			-2.97		7.45	End of Borehole at 7.45 m		

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample U - Undisturbed Sample (& Blows) W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value * - Partial Seating Penetration Cu - Undrained Shear Strength kPa  Water Strike  Water Level	REMARKS Chiselling from 6.00m to 7.00m for 0.75 hour. Chiselling from 7.00m to 7.45m for 0.50 hour. Scale = 1:50	Boring Progress & Water Observation Depths (m)					
		Date	Strike	Level	Minutes	Casing	Sealed
		31/05/2001	1.60	1.20	20	0.00	0.00
Chiselling			Water Added		Logged		
From	To	Hours	From	To	By		

ROSCOE CAPITA LIMITED Prospect House 20 Mellor Road Cheadle Hulme Cheshire SK8 5AU Tel : 0161 486 1521 Fax : 0161 486 1580		Project : Doncaster	Borehole Number	
		Job Number : L2001JA	2	
		Client : B&Q plc	Sheet 1 of 1	
Method :		Start Date : 01/06/2001	N Coord : 400547.56	E Coord : 458581.66
		Finish Date : 04/06/2001	G.L. (mLD) 4.35	Driller :

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	Water	Standpipe
0.20	D					TOPSOIL		
0.50-0.95	D	N=4	3.75		0.60	Firm brown CLAY		
1.00-1.45	U							
1.50-1.95	D	N=13	2.95		1.40	Firm grey/brown locally slightly organic CLAY	▼	
			2.75		1.60	Medium dense to very dense brown SAND	▽	
2.00-2.45	D	N=10						
2.50-2.95	D	N=15						
		N=16						
3.50-3.95	D	N=31						
4.00-4.45	D	N>50						
4.50-4.95	D	N>50						
5.00-5.45	D	87/150mm						
			-1.15		5.50	Very dense brown fine/medium SAND with very occasional fine sub-rounded gravel		
6.00-6.45	D	50/75mm						
7.00-7.45	D	50/75mm						
			-3.10		7.45	End of Borehole at 7.45 m		


SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 U - Undisturbed Sample (& Blows)
 W - Water Sample
 S - Standard Penetration Test
 C - Cone Penetration Test
 N - Penetration Test 'N' Value
 * - Partial Seating Penetration
 Cu - Undrained Shear Strength kPa
















▽ Water Strike
 ▼ Water Level



REMARKS
 Chiselling from 5.00m to 6.00m for 0.50 hour. Chiselling from 6.00m to 7.00m for 0.50 hour.


Scale = 1:50

Boring Progress & Water Observation Depths (m)					
Date	Strike	Level	Minutes	Casing	Sealed
01/06/2001	1.60	1.40	20	0.00	0.00
Chiselling			Water Added		Logged By
From	To	Hours	From	To	

ROSCOE CAPITA LIMITED Prospect House 20 Mellor Road Cheadle Hulme Cheshire SK8 5AU Tel : 0161 486 1521 Fax : 0161 486 1580		Project : Doncaster		Borehole Number
		Job Number : L2001JA		3
		Client : B&Q plc		Sheet 1 of 2
		Start Date : 07/06/2001	N Coord : 400506.83	E Coord : 458619.44
Method :	Finish Date : 07/06/2001	G.L. (mLD) 4.49	Driller :	


SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	Water	Standpipe
0.20	D					TOPSOIL		
0.50-0.95	D	N=7	3.89		0.60	Firm grey/brown CLAY		
1.00-1.45	U							
1.50-1.95	B	N=16	2.99		1.50			
1.50	D		2.79		1.70	Brown clayey silty fine SAND	▽	
2.00-2.45	D	N=14				Medium dense to very dense brown fine/medium and medium SAND	▽	
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						
6.00-6.45	D	N>50						
7.00-7.45	D	110/225mm						
8.00-8.45	D	50/75mm				Continued next sheet		

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample U - Undisturbed Sample (& Blows) W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value * - Partial Sealing Penetration Cu - Undrained Shear Strength kPa  Water Strike  Water Level	REMARKS Chiselling from 3.00m to 3.50m for 0.50 hour. Chiselling from 7.00m to 8.00m for 0.75 hour. Chiselling from 8.00m for 1.00 hour. Scale = 1:50	Boring Progress & Water Observation Depths (m)																													
		<table border="1"> <thead> <tr> <th>Date</th> <th>Strike</th> <th>Level</th> <th>Minutes</th> <th>Casing</th> <th>Sealed</th> </tr> </thead> <tbody> <tr> <td>07/06/2001</td> <td>1.50</td> <td>2.00</td> <td>20</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>07/06/2001</td> <td>2.70</td> <td>2.40</td> <td>20</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						Date	Strike	Level	Minutes	Casing	Sealed	07/06/2001	1.50	2.00	20	0.00	0.00	07/06/2001	2.70	2.40	20	0.00	0.00						
		Date	Strike	Level	Minutes	Casing	Sealed																								
07/06/2001	1.50	2.00	20	0.00	0.00																										
07/06/2001	2.70	2.40	20	0.00	0.00																										
<table border="1"> <thead> <tr> <th colspan="3">Chiselling</th> <th colspan="2">Water Added</th> <th>Logged</th> </tr> <tr> <th>From</th> <th>To</th> <th>Hours</th> <th>From</th> <th>To</th> <th>By</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Chiselling			Water Added		Logged	From	To	Hours	From	To	By																	
Chiselling			Water Added		Logged																										
From	To	Hours	From	To	By																										



ROSCOE CAPITA LIMITED Prospect House 20 Mellor Road Cheadle Hulme Cheshire SK8 5AU Tel : 0161 486 1521 Fax : 0161 486 1580		Project : Doncaster	Borehole Number	
		Job Number : L2001JA	3	
		Client : B&Q plc	Sheet 2 of 2	
Start Date : 07/06/2001	N Coord : 400506.83	E Coord : 458619.44		

Method :	Finish Date : 07/06/2001	G.L. (mLD) 4.49	Driller :
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SAMPLING DATA	GROUND STRATA
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Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	Water	Standpipe
8.00-8.45	D	50/75mm	-3.96		8.45	Medium dense to very dense brown fine/medium and medium SAND		
						End of Borehole at 8.45 m		

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 U - Undisturbed Sample (& Blows)
 W - Water Sample
 S - Standard Penetration Test
 C - Cone Penetration Test
 N - Penetration Test 'N' Value
 * - Partial Seating Penetration
 Cu - Undrained Shear Strength kPa

 Water Strike
 Water Level

REMARKS
 Chiselling from 3.00m to 3.50m for 0.50 hour. Chiselling from 7.00m to 8.00m for 0.75 hour. Chiselling from 8.00m for 1.00 hour.

Scale = 1:50

Boring Progress & Water Observation Depths (m)					
Date	Strike	Level	Minutes	Casing	Sealed
07/06/2001	1.50	2.00	20	0.00	0.00
07/06/2001	2.70	2.40	20	0.00	0.00
Chiselling			Water Added		Logged
From	To	Hours	From	To	By

ROSCOE CAPITA LIMITED

Prospect House
20 Mallor Road
Cheadle Hulme
Cheshire SK8 5AU
Tel: 0161 486 1521
Fax: 0161 486 1580



Project : Doncaster

Job Number : L2001JA

Client : B&Q plc

Start Date : 06/06/2001

N Coord : 400471.44

Borehole Number

4

Sheet 1 of 1

E Coord : 458583.13

Method :

Finish Date : 06/06/2001

G.L. (mLD) 4.70

Driller :

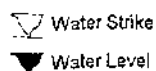
SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	Water	Standpipe
0.20	D					TOPSOIL overlying firm brown locally slightly organic CLAY		
0.50-0.95	D	N=4						
1.00-1.45	U							
1.50-1.95	D	N=12	3.30		1.40			
2.00-2.45	D	N=33				Medium dense to very dense brown medium SAND. Finer in parts.	▼	
2.50-2.95	D	N>50					▽	
		77/150mm						
3.50-3.95	D	86/150mm						
4.00-4.45	D	50/75mm						
4.50-4.95	D	50/75mm						
			-0.30		5.00			
						End of Borehole at 5.00 m.		

SAMPLE/TEST KEY

- D - Small Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample (& Blows)
- W - Water Sample
- S - Standard Penetration Test
- C - Cone Penetration Test
- N - Penetration Test 'N' Value
- * - Partial Seating Penetration
- Cu - Undrained Shear Strength kPa



REMARKS

Chiselling from 3.00m to 3.50m for 0.50 hour. Chiselling from 3.50m to 4.00m for 0.50 hour. Chiselling from 4.00m to 4.50m for 0.50 hour. Chiselling from 4.50m to 5.00m for 0.50 hour.

Scale = 1:50

Boring Progress & Water Observation Depths (m)

Date	Strike	Level	Minutes	Casing	Sealed
06/06/2001	2.00	1.50	20	0.00	0.00
Chiselling			Water Added		Logged
From	To	Hours	From	To	By

ROSCOE CAPITA LIMITED
 Prospect House
 20 Mellor Road
 Cheadle Hulme
 Cheshire SK8 5AU
 Tel : 0161 486 1521
 Fax : 0161 486 1580



Project: Doncaster

Job Number: L2001JA

Client: B&Q plc

Start Date: 07/06/2001

N Coord: 400468.84

Borehole Number

5

Sheet 1 of 2

E Coord: 458611.29

Method:

Finish Date: 08/06/2001

G.L. (mLD) 4.54

Driller:

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	Water	Standpipe
0.20	D					TOPSOIL		
0.50-0.95	D	N=4	3.94		0.60			
1.00-1.45	UB					Firm grey/brown slightly sandy CLAY		
1.50-1.95	D	N=13	3.04		1.50			
2.00-2.45	D	N=15				Medium dense to very dense brown fine and medium SAND		
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						
5.00-5.45	D	N=47						
6.00-6.45	D	77/150mm						
7.00-7.45	D	89/150mm						
8.00-8.45	D	83/150mm						

Continued next sheet

SAMPLE/TEST KEY
 D - Small Disturbed Sample
 B - Bulk Sample
 U - Undisturbed Sample (& Blows)
 W - Water Sample
 S - Standard Penetration Test
 C - Cone Penetration Test
 N - Penetration Test 'N' Value
 * - Partial Seating Penetration
 Cu - Undrained Shear Strength kPa

▽ Water Strike
 ▼ Water Level

REMARKS
 Chiselling from 6.00m to 7.00m for 0.75 hour. Chiselling from 7.00m to 8.00m for 0.75 hour.

Scale = 1:50

Boring Progress & Water Observation Depths (m)

Date	Strike	Level	Minutes	Casing	Sealed
07/06/2001	2.00	1.50	20	0.00	0.00
Chiselling			Water Added		Logged
From	To	Hours	From	To	By

ROSCOE CAPITA LIMITED
 Prospect House
 20 Mellor Road
 Cheadle Hulme
 Cheshire SK8 5AU
 Tel : 0161 486 1521
 Fax : 0161 486 1580



Project : **Doncaster**

Borehole Number

Job Number : **L2001JA**

6

Client : **B&Q plc**

Sheet 1 of 2

Start Date : **06/06/2001**

N Coord : **400450.07**

E Coord : **458564.26**

Method :

Finish Date : **07/06/2001**

G.L. (mLD) **4.62**

Driller :

SAMPLING DATA

GROUND STRATA

Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	Water	Standpipe
0.20	D					TOPSOIL		
0.50-0.95	D	N=9	3.82		0.80	Firm brown slightly sandy CLAY		
1.00-1.45	U							
1.50-1.95	D	N=15	3.22		1.40	Medium dense to very dense brown fine/medium SAND		
2.00-2.45	D	N=35						
2.50-2.95	D	N>50						
3.00-3.45	D	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	D	88/150mm						

Continued next sheet

SAMPLE/TEST KEY
 D - Small Disturbed Sample
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 W - Water Sample
 S - Standard Penetration Test
 C - Cone Penetration Test
 N - Penetration Test 'N' Value
 * - Partial Seating Penetration
 Cu - Un drained Shear Strength kPa


Water Strike
 Water Level

REMARKS
 Chiselling from 6.00m to 7.00m for 0.75 hour. Chiselling from 7.00m to 8.00m for 1.00 hour.


Scale = 1:50



Boring Progress & Water Observation Depths (m)


Date	Strike	Level	Minutes	Casing	Sealed
06/06/2001	2.50	1.50	20	0.00	0.00
Chiselling			Water Added		Logged
From	To	Hours	From	To	
					By




ROSCOE CAPITA LIMITED Prospect House 20 Mellor Road Cheadle Hulme Cheshire SK8 5AU Tel : 0161 486 1521 Fax : 0161 486 1580		Project : Doncaster		Borehole Number	
		Job Number : L2001JA		6	
		Client : B&Q plc			
		Start Date : 06/06/2001		N Coord : 400450.07	E Coord : 458564.26
Method :		Finish Date : 07/06/2001		G.L. (mLD) 4.62	
Driller :					



SAMPLING DATA	GROUND STRATA
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Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	Water	Standpipe
8.00-8.45	D	88/150mm	-3.83		8.45	Medium dense to very dense brown fine/medium SAND		
						End of Borehole at 8.45 m		


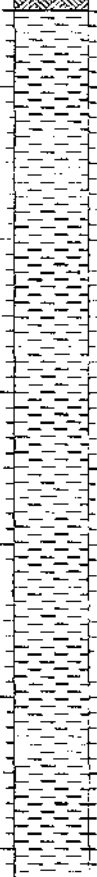
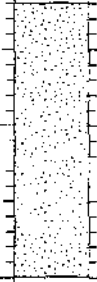
SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample U - Undisturbed Sample (& Blows) W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value * - Partial Seating Penetration Cu - Undrained Shear Strength kPa  Water Strike  Water Level	REMARKS Chiselling from 6.00m to 7.00m for 0.75 hour. Chiselling from 7.00m to 8.00m for 1.00 hour. Scale = 1:50	Boring Progress & Water Observation Depths (m)					
		Date	Strike	Level	Minutes	Casing	Sealed
		06/06/2001	2.50	1.50	20	0.00	0.00
Chiselling			Water Added		Logged		
From	To	Hours	From	To	By		



ROSCOE CAPITA LIMITED Prospect House 20 Mellor Road Cheadle Hulme Cheshire SK8 5AU Tel : 0161 486 1521 Fax : 0161 486 1580		Project : Doncaster		Borehole Number
		Job Number : L2001JA		7
		Client : B&Q pic		Sheet 1 of 1
		Start Date : 05/06/2001	N Coord : 400432.69	E Coord : 458597.51
Method :	Finish Date : 05/06/2001	G.L. (mLD) 4.68	Driller :	

SAMPLING DATA			GROUND STRATA					
Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description	Water	Standpipe
0.20	D					TOPSOIL		
0.50-0.95	B	N=3	3.98		0.70	Firm grey/brown slightly sandy CLAY		
1.00-1.45	U							
1.50-1.95	B	N=19	3.28		1.40			
1.50	D		2.88		1.80	Medium dense brown medium/coarse SAND and fine sub-rounded / sub-angular GRAVEL	▼	
2.00-2.45	B	N=32				Medium dense to very dense fine/medium and medium SAND with occasional thin partings of firm red/brown very silty clay	▽	
2.50-2.95	B	N>50						
3.00-3.45	B	N=31						
3.50-3.95	B	N>50						
4.00-4.45	B	N=45						
4.50-4.95	B	N=49						
5.00-5.45	D	96/225mm						
6.00-6.45	D	N>50						
7.00-7.45	D	122/225mm						
			-2.77		7.45	End of Borehole at 7.45 m		

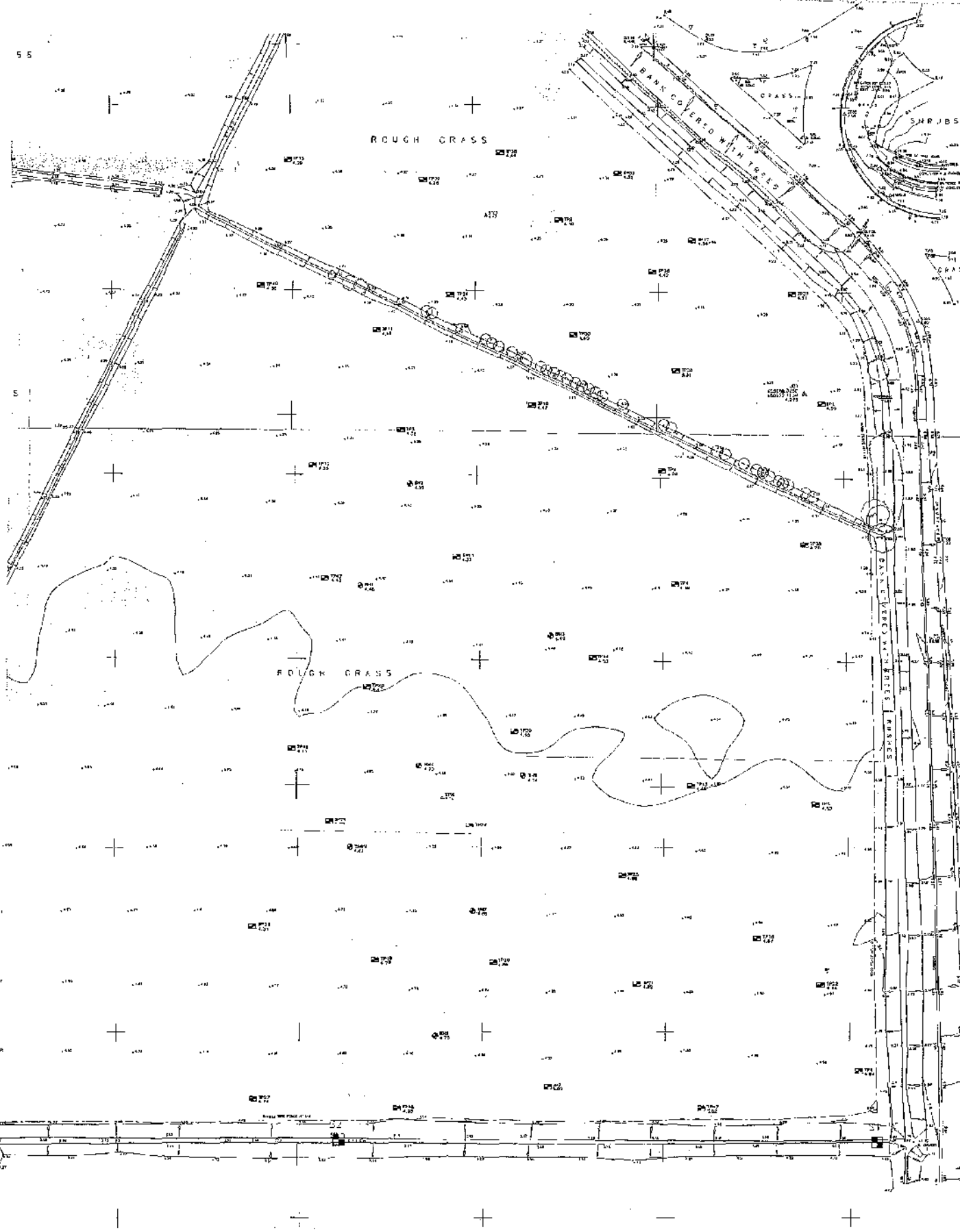
SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample U - Undisturbed Sample (& Blows) W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value * - Partial Seating Penetration Cu - Unconfined Shear Strength kPa  Water Strike  Water Level	REMARKS Chiselling from 5.00m to 6.00m for 0.50 hour. Chiselling from 6.00m to 7.00m for 0.75 hour. Scale = 1:50	Boring Progress & Water Observation Depths (m)					
		Date	Strike	Level	Minutes	Casing	Sealed
		05/06/2001	2.00	1.50	20	0.00	0.00
Chiselling			Water Added		Logged		
From	To	Hours	From	To	By		

ROSCOE CAPITA LIMITED Prospect House 20 Mellor Road Cheadle Hulme Cheshire SK8 5AU Tel : 0161 486 1521 Fax : 0161 486 1580		Project : Doncaster		Borehole Number	
		Job Number : L2001JA		8	
		Client : B&Q plc		Sheet 1 of 2	
		Start Date : 04/06/2001	N Coord : 400398.89	E Coord : 458587.27	
Method :	Finish Date : 04/06/2001	G.L. (mLD) 4.75	Driller :		

SAMPLING DATA			GROUND STRATA					Water	Standpipe
Depth (m)	Type	Test Result	Level (mLD)	Legend	Depth (m)	Description			
0.20	D					TOPSOIL			
0.50-0.95	D	N=7	4.25		0.50	Firm to stiff brown CLAY with abundant fine and occasional medium sub-rounded / sub-angular gravel			
1.00-1.45	U								
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								
5.50	D								
6.00-6.45	B	N=13	-1.45		6.20	Medium dense to very dense brown fine/medium SAND. Occasionally clayey and silty.			
7.00-7.45	B	N=19							
8.00-8.45	B	N>50				Continued next sheet			

SAMPLE/TEST KEY D - Small Disturbed Sample B - Bulk Sample U - Undisturbed Sample (& Blows) W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value * - Partial Seating Penetration Cu - Undrained Shear Strength kPa  Water Strike  Water Level	REMARKS <p style="text-align: center;">Scale = 1:50</p>	Boring Progress & Water Observation Depths (m)																																															
		<table border="1"> <thead> <tr> <th>Date</th> <th>Strike</th> <th>Level</th> <th>Minutes</th> <th>Casing</th> <th>Sealed</th> </tr> </thead> <tbody> <tr> <td>04/06/2001</td> <td>6.40</td> <td>3.70</td> <td>20</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Date	Strike	Level	Minutes	Casing	Sealed	04/06/2001	6.40	3.70	20	0.00	0.00													<table border="1"> <thead> <tr> <th colspan="3">Chiselling</th> <th colspan="2">Water Added</th> <th>Logged</th> </tr> <tr> <th>From</th> <th>To</th> <th>Hours</th> <th>From</th> <th>To</th> <th>By</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Chiselling			Water Added		Logged	From	To	Hours	From	To	By										
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Site Plan - Catesby Business Park



CATESBY BUSINESS PARK