

NATURAL ENVIRONMENT RESEARCH COUNCIL

INSTITUTE OF GEOLOGICAL SCIENCES

Report No. 74/14

ASSESSMENT OF BRITISH SAND AND GRAVEL RESOURCES No. 12

The sand and gravel resources of the country around Gerrards Cross, Buckinghamshire

*Description of parts of 1 : 25 000 resource sheets SU 98, SU 99, TQ 08
and TQ 09*

H. C. Squirrell, BSc, PhD

with contributions by C. E. Corser, BSc

London: Her Majesty's Stationery Office 1974

The Institute of Geological Sciences was formed by the incorporation of the Geological Survey of Great Britain and the Museum of Practical Geology with Overseas Geological Surveys and is a constituent body of the Natural Environment Research Council

© Crown copyright 1974

It is recommended that reference to this report be made in the following form:

SQUIRRELL, H. C. 1974. The sand and gravel resources of the country around Gerrards Cross, Buckinghamshire: Description of parts of 1 : 25 000 resource sheets SU 98, SU 99, TQ 08 and TQ 09. *Rep. Inst. Geol. Sci.*, No.74/14. 169 pp.

ISBN 0 11 880710 2

PREFACE

It has become increasingly clear in recent years that an assessment of resources of many minerals should be undertaken. This is the eleventh report of the Mineral Assessment Unit which was set up in May 1968 to undertake such work. It describes the resources of sand and gravel of 143.5 km² of country shown on the accompanying 1:25 000 resource sheet.

This survey is concerned with assessing sand and gravel resources on a regional scale at the indicated level; the deposits are not outlined completely nor their grade established throughout. The work may be regarded as the application to large areas of methods used commercially for evaluating reserves on small sites. It may also be regarded as an extension of geological mapping by providing information about the thickness and quality of deposits.

The survey was conducted by Dr H. C. Squirrell, assisted by Mr J. A. Gray, Mr A. R. Clayton, Mr P. Robson and Mr C. E. Corser as field officers who supervised the drilling and sampling programme. Mr Corser helped in the preparation of data for this publication. The work is based on a geological survey at 1:10 560 in 1902-1920 by Mr J. A. Howe, Mr R. L. Sherlock, Mr A. H. Noble and Mr C. N. Bromhead, and revised by Dr Squirrell in 1971.

Mr J. W. Gardner, CBE (Land Agent) was responsible for negotiating access to land for drilling. The ready cooperation of landowners and tenants in this work is gratefully acknowledged.

Financial support for the survey was provided by the Department of the Environment.

Kingsley Dunham
Director

Institute of Geological Sciences
Exhibition Road
South Kensington
London SW7 2DE
1 January 1974

Any enquiries concerning this report may be addressed to Head, Mineral Assessment Unit, Institute of Geological Sciences, Exhibition Road, London SW7 2DE

CONTENTS

| | Page |
|---|------|
| INTRODUCTION | 1 |
| Aims and Limitations | 1 |
| Procedure | 2 |
| The Map | 3 |
| DESCRIPTION OF THE GERRARDS CROSS AREA | 3 |
| General | 3 |
| Topography | 4 |
| Geology | 4 |
| Composition of the Sand and Gravel Deposits | 7 |
| Results | 9 |
| Notes on Resource Blocks | 9 |
| Sand in the Reading Beds | 17 |
| List of Quarries | 20 |
| REFERENCES | 20 |
| APPENDIX A: ASSESSMENT PROCEDURE | 21 |
| APPENDIX B: CLASSIFICATION AND DESCRIPTION OF SAND AND GRAVEL | 22 |
| APPENDIX C: BOREHOLE RECORDS | 27 |
| Explanation | 27 |
| List of Assessment Boreholes | 29 |
| The Records - SU 98 | 31 |
| TQ 09 | 99 |
| TQ 08 | 108 |
| SU 99 | 140 |

ILLUSTRATIONS

| | | |
|---------|--|-----------|
| Fig. 1. | Sketch-map showing the location of the Gerrards Cross area and the position of the resource block boundaries | 4 |
| Fig. 2. | Particle size distribution for the assessed thickness of sand and gravel in resource blocks A to I | 8 |
| Fig. 3. | Example of resource block assessment: statement and calculation | 23 |
| Fig. 4. | Example of resource block assessment: map of a fictitious block | 24 |
| Fig. 5. | Diagram to show the descriptive categories used in the classification of sand and gravel | 26 |
| Map | The sand and gravel resources of the Gerrards Cross area | In pocket |

TABLES

| | | |
|----------|---|----|
| Table 1: | Classification of mapped deposits | 6 |
| Table 2. | Summary of statistical results | 10 |
| Table 3. | Data from assessment boreholes: block A | 11 |
| Table 4. | Data from assessment boreholes: block B | 12 |
| Table 5. | Data from assessment boreholes: block C | 13 |
| Table 6. | Data from assessment boreholes: block D | 15 |

| | Page |
|---|------|
| Table 7. Data from assessment boreholes: block E | 15 |
| Table 8. Data from assessment boreholes: block F | 16 |
| Table 9. Data from assessment boreholes: block G | 16 |
| Table 10. Data from assessment boreholes: block H | 18 |
| Table 11. Data from assessment boreholes: block I | 18 |
| Table 12. The thickness and mean grading percentages of Reading Beds sands proved in assessment boreholes | 19 |
| Table 13. Classification of gravel, sand and fines | 25 |

Summary

The geological maps of the Institute of Geological Sciences, pre-existing borehole information, and 143 boreholes drilled for the Mineral Assessment Unit form the basis of the assessment of sand and gravel resources in the Gerrards Cross area, Buckinghamshire.

All deposits in the area which might be potentially workable for sand and gravel (mineral) have been investigated geologically and a simple statistical method has been used to estimate the volume. The reliability of the volume estimates is given at the 95 per cent confidence level.

The mineral-bearing ground shown on the 1:25 000 map is divided into resource blocks, each ideally containing approximately 10 km² of sand and gravel. For each block the mineral-bearing area, the mean thickness of overburden and mineral, and the mean grading are given and the geomorphology and geology of the deposits described.

The position of the boreholes and exposures, the geology and topography and the outlines of the blocks are shown on the accompanying map. Detailed borehole data are given.

Sommaire

Les cartes géologiques de l'Institute of Geological Sciences, les renseignements sur des trous de sonde qui existaient déjà, et 143 trous de sonde, forés pour le Mineral Assessment Unit, constituent la base de l'évaluation des ressources en sable et en gravier dans la région de Gerrards Cross, Buckinghamshire.

Tous les dépôts dans la région, qui présentent la possibilité d'exploitation pour le sable et le gravier (minéral) ont été étudiés du point de vue géologique, et on s'est servi d'une méthode statistique simple pour en évaluer le volume. Les évaluations de volume sont tenues d'être à 95% exactes.

Le terrain minéralisé montré à la carte 1:25 000 est divisés en blocs de ressources, chacun d'eux avant idéalement environ 10 km² de sable et de gravier. On donne pour chaque bloc l'étendue minéralisée, l'épaisseur moyenne de recouvrement et de minéral, et la gradation moyenne. On décrit la géomorphologie et la géologie des dépôts.

La situation des trous de sonde et des affleurements, la géologie et la topographie, et la configuration des blocs sont montrés sur la carte. Des données détaillées des trous de sonde sont données.

Zusammenfassung

Die geologischen Karten von der Institute of Geological Sciences, die vorher existierende information in Bezug auf Bohrlöchern, und 143 Bohrlöcher, die für das Mineral Assessment Unit gemacht waren, bilden den Grund für die Einschätzung der Sand- und Schotter-mittel im Gerrards Cross Gebiet, Buckinghamshire.

Man hat im Gebiet alle Ablagerungen, die möglich bearbeitbar für Sand und Schotter (Mineral) sind, geologisch untersucht, und man hat auch eine einfache statistische Methode benutzt, um das Volumen zu schätzen. Man gibt die Zuverlässigkeit der Volumenschätzungen mit 95% Vertrauensgrenzwerten.

Man teilt den mineralhaltigen Grund auf der 1:25 000 Karte in Mittelsblöcke, wovon jeder idealisch ungefähr 10 km² von Sand und Schotter einschliesst.

Für jeden Block gibt man das mineralhaltige Gebiet, die Durchschnittsdicke von Überlastung und Mineral und die Durchschnittsklassifizierung. Man beschreibt auch die Geomorphologie und Geologie der Ablagerung.

Man zeigt die Lage von den Bohrlöchern und Aufschlüssen, die Geologie und Topographie, auch die Skizzen von den Blöcken auf der Begleitkarte. Man gibt ausführliche Bohrlöcherdaten.

The sand and gravel resources of the country around Gerrards Cross, Buckinghamshire

Description of parts of 1 : 25 000 resource sheets SU 98, SU 99, TQ 08 and TQ 09

H. C. SQUIRRELL¹, BSc, PhD

Introduction

AIMS AND LIMITATIONS

National resources of many of the 'bulk' or 'industrial' minerals may seem so large that stocktaking is unnecessary, but the demand for land for all purposes and for minerals is intensifying. In contrast with other developments of land there may be little or no choice of area for the working of minerals and in the case of low-price materials such as sand and gravel transport costs will be an important factor. Whereas the economic benefit of using land for many other purposes can be assessed, hitherto little has been known of the potential value, on a regional scale, of any mineral resources which may be present. An important aim of the work is to improve the factual background against which planning policies can be decided (Archer, 1969; Thurrell, 1971).

Sand and gravel, considered together as naturally occurring aggregate, was selected as the bulk mineral demanding the most urgent attention, particularly in the south-east of England, where about half the national output is won and very few sources of alternative aggregates are available. Following a short feasibility project, initiated in 1966 by the Ministry of Land and Natural Resources, the Mineral Assessment Unit began systematic surveys on a regional scale in Essex, Suffolk, and Norfolk in May 1968. This work is being supported by the Department of the Environment (which incorporates the former Ministry of Housing and Local Government and the Ministry of Public Building and Works) and is being undertaken with the cooperation of the Sand and Gravel Association of Great Britain (SAGA). The detail is at the 'indicated' level, a term introduced in the United States in connection with the estimation of national mineral resources. The level is that 'for which tonnage and grade are computed partly from specific measurements, samples, or production data and partly from projection for a reasonable distance on geologic evidence. The sites available for inspection, measurement, and sampling are too

widely or otherwise inappropriately spaced to permit the mineral bodies to be outlined completely or the grade established throughout'. (Anon., 1948, p. 15).

The survey is therefore concerned not with the estimation of reserves (which can only be assessed in the light of particular or existing economic considerations), but rather with resources, which include deposits not currently exploitable but having a foreseeable use. Clearly, the social and economic criteria used to decide whether a deposit may be workable at some time in the future cannot be rigorously defined. After discussion with the industry, the following arbitrary physical criteria were adopted for this survey:

- a. the deposit should average at least 1 m (3.3 ft) in thickness.
- b. the ratio of overburden to sand and gravel should be no more than 3:1.
- c. the proportion of fines (that is, particles passing 1/16 mm (approximately No. 200 mesh B.S. sieve)) should not exceed 40 per cent.

Ground below 80 ft (24.4 m) from the surface is seldom explored, this being taken as the likely maximum working depth under most circumstances. It follows that boreholes are drilled no deeper than 60 ft (18.3 m) if they are still in overburden.

A deposit of sand and gravel that broadly fulfils the above criteria is considered to be 'potentially workable' and is assessed as 'mineral'. It is recognised that small parts of such a deposit may not satisfy all the requirements.

The volume and chief characteristics of sand and gravel within defined but relatively large areas, referred to as resource blocks, are assessed. Ideally, each resource block contains roughly 10 km² of sand and gravel.

The consequent limitation of the use to which the results can be put must be emphasised. The assessments of quantity and composition apply to the resource block as a whole.

Valid conclusions cannot be drawn about the mineral in parts of a block, except in the

¹Institute of Geological Sciences, 199 Knightsbridge, London SW7 1DZ

immediate vicinity of the actual sample points.

It follows that reserves, which are accurately demarcated areas of economically workable mineral, must be proved by the customary detailed exploration undertaken by the industry. However, the information provided about the resource blocks in an area may assist in the selection of the best targets for such commercial exploration and evaluation.

Thus the work can be regarded as the statistically controlled application to large areas of methods similar to those applied by industry to establish the existence of workable reserves on a relatively small site, and also as an extension of conventional geological mapping techniques, which delineate (with varying degrees of accuracy, depending, for example, on the presence of cover) the areal extent of deposits.

PROCEDURE

Trial and error during preliminary studies showed that for the complex and variable glacial deposits of East Anglia and Essex, an absolute minimum of five sample-points evenly distributed across the sand and gravel are needed to provide a worthwhile statistical assessment, but that, ideally, there should be no fewer than ten. Sample-points are any points for which there exists adequate information about the nature and thickness of the deposit and, apart from the holes drilled during the survey, may include exposures and other boreholes. In particular, the cooperation of sand and gravel operators has ensured that boreholes have not been drilled where reliable information was already available. Such data are held confidentially by the Institute and cannot be disclosed, although they may have been used in the calculations.

The mineral shown on each 1:25 000 sheet is divided into resource blocks. The arbitrary size selected, 10 km², is a compromise to meet the aims of the survey and to provide sufficient sample-points in each block. As far as possible the block boundaries are determined by geological boundaries; for example, wherever practicable glacial and river terrace gravels are separated. Otherwise division is by arbitrary lines, which may bear no relationship to the geology. The blocks are drawn provisionally before drilling begins.

A reconnaissance of the ground is carried out to establish whether there are any exposures, and inquiries are made to ascertain what borehole information is available. Borehole sites are then selected to provide an even pattern of sample-points at a density of approximately one per square kilometre. Ideally the distribution should be unbiased with respect to the geology,

to ensure that the data obtained are representative of any broad trend in the variation in thickness or grading, as this will govern spot values.

However, because broad trends are independently overlaid by smaller scale variations, characteristically random in form, it is unnecessary to adhere to a square grid pattern. Thus such factors as ease of access and the need to minimise disturbance to land and the public have been taken into account in siting the holes; at the same time it has been necessary to guard against the possibility that ease of access (that is, the positions of roads and farms) may reflect particular geological conditions, which may bias the drilling results. The built-up areas of Gerrards Cross, Chalfont St Peter, Beaconsfield, Slough and Burnham have been avoided, but otherwise in siting the boreholes and in the subsequent calculations, no account is taken of any factors, for example, roads, villages and areas of high agricultural and landscape value, which might stand in the way of sand and gravel being exploited. The estimate of total volume of sand and gravel therefore bears no simple relationship to the amount that could be extracted in practice.

Ideally the drilling machine employed should be capable of providing a continuous sample representative of all unconsolidated deposits, so that the in-situ grading can be determined, if necessary, to a depth of 100 ft (30 m) at a diameter of about 8 in (200 mm), and beneath different types of overburden. It should be reliable, quiet, mobile and relatively small (so that it can be moved to sites of difficult access) and it should be fast. Although uncased continuous flight power augers can meet these requirements in some ground, they fail below the water table in some clay-free sand and gravel when the mineral does not stay on the flights or when the borehole caves. On the area covered by this sheet, shell and auger rigs were used exclusively. During conventional shell and auger operations water is added to facilitate the drilling of sand and gravel-bearing deposits lying above the water table, but the samples recovered are highly disturbed and suffer loss of some of the fine fraction (clay and silt). For the special requirements of this survey the rigs were modified in such a way that the deposits could be drilled without the addition of water, with the result that samples obtained from above the water table were practically undisturbed and representative of the in situ grading, thus satisfying one of the most important aims of the survey.

A continuous series of bulk samples is taken throughout the thickness of sand and gravel. Ideally, samples are composed exclusively of the whole of the material previously occupying the space defined by the hole's ideal dimensions, as determined by the internal diameter of the casing and the thickness penetrated. A new

sample is commenced whenever there is an appreciable lithological change within the sand and gravel, or for every 1 m (3.3 ft) depth. The samples are despatched in heavy-duty polythene bags to a laboratory for grading. Care is taken to discard, as far as possible, material which has caved, or been pumped from the bottom of a hole. The samples sent for analysis each weigh 60-100 lb (27-45 kg). The grading procedure is based on BS 1377 (Anon., 1967). Random checks are made on the accuracy of the laboratory grading.

All data, including mean grading analysis figures calculated for the total thickness of the mineral, are entered on standard record sheets, abbreviated copies of which are reproduced in Appendix C. Detailed records may be consulted at the appropriate offices of the Institute, upon application to the Director.

The method used in estimating the volume of mineral and other statistics for each of the resource blocks is described in Appendix A and the results are quoted on p.10.

THE MAP

The sand and gravel resource map is folded into the pocket at the end of this report. The base map is the Ordnance Survey 1:25 000 Outline Edition in grey, on which the topography is shown by contours in green, the geological data in black and the mineral resource information in shades of red.

Geological Data

The geological boundary lines, symbols, etc. shown are taken from the geological map of the area, which was originally surveyed at the scale of 1:10 560 in 1902-1920, and recently amended in the light of present-day information. Borehole data, which include the stratigraphic relations and mean particle size distribution of the sand and gravel samples collected during the survey, are also shown.

The geological boundaries are regarded as the best interpretation of the information available at the time of survey. However, it is inevitable, particularly with glacial deposits (such as those included in this area) which change rapidly vertically and laterally, that local irregularities or discrepancies will be revealed by some boreholes (for example, at borehole 98 NE 112). These are taken into account in the assessment of resources (see below and Appendix A).

Mineral Resource Information

For assessment purposes the map is divided into areas of mineral and areas where sand and gravel is either not potentially workable or absent. (For definitions of 'mineral' and 'potentially workable' see page 1).

The mineral is subdivided into areas where it crops out and areas where it is present in continuous (or almost continuous) spreads beneath overburden. The whole area of exposed sand and gravel as mapped is considered as mineral, although there may be small patches where sand and gravel is not present or is not potentially workable.

Beneath overburden mineral may be continuous (or almost continuous) or discontinuous. The recognition of these categories is subjective, depending on the importance attached to the proportion of boreholes which did not find potentially workable sand and gravel and the distribution of barren boreholes within a block. The mineral is described as 'almost continuous' if it is present in 75 per cent or more of the boreholes in a resource block. The 'discontinuous' category has not been recognised on the present sheet.

Areas where bedrock crops out, where boreholes indicate absence of sand and gravel beneath cover and where sand and gravel beneath cover is interpreted to be not potentially workable are uncoloured on the map. Where appropriate the relevant criterion is noted. In such areas it is assumed that mineral is absent except in infrequent and relatively minor patches which can neither be outlined nor assessed quantitatively in the context of this survey.

The area of exposed sand and gravel is measured from the mapped geological boundary lines.

Description of the Gerrards Cross Area

GENERAL

The area assessed (Fig. 1) covers 143.5 km² (about 55 square miles) of country around Gerrards Cross, Buckinghamshire, of which 116 km² are gravel bearing, that is, 81 per cent. Gerrards Cross is situated 34 km north-west of London, and 9 km north of Slough. The principal objective of this work was to assess the mineral content of the Glacial Sand and Gravel of the area, but it proved convenient also to include an area of Thames terrace deposits lying to the north of Slough (Block I), and the undifferentiated terraces, Alluvium and Dry Valley Deposits around Denham (Block E). The Thames terraces to the west of Slough, to the west of the River Thames and in the Wye Valley will be described in a later report embracing the Thames Valley from Windsor to west of Marlow. No assessment of the Alluvium of the Colne Valley has been made because extensive tracts have either been worked out (see resource sheet), or built over, and only relatively small unexplored potentially workable areas remain. The valley has been an important source of aggregate for many years and a rough estimate suggests that some 13 million m³ of

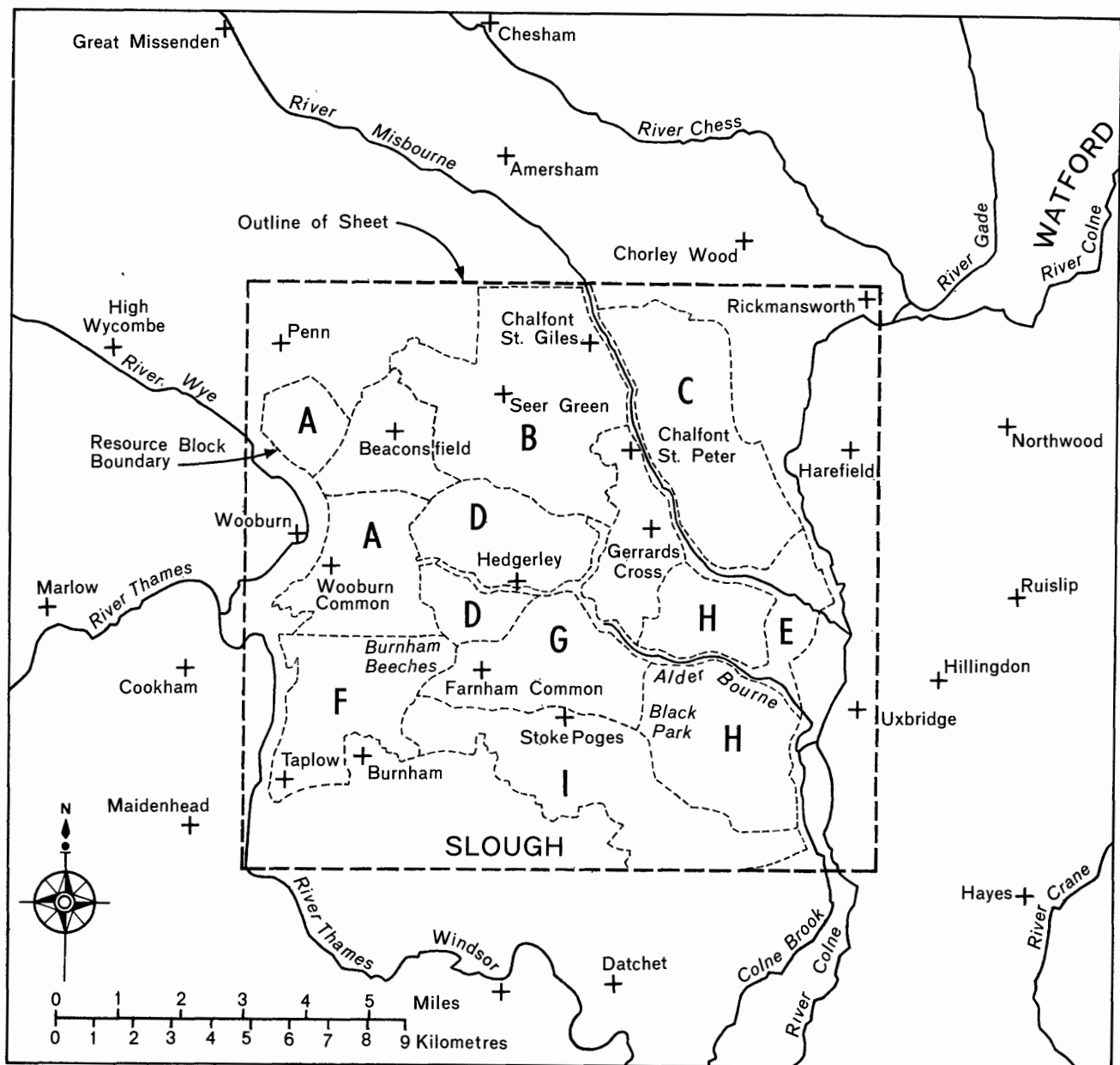


Fig. 1. Sketch-map showing the location of the Gerrards Cross area and the position of the resource block boundaries

sand and gravel have been extracted from the area. Other parts not assessed include the built up areas of Beaconsfield, Slough, Gerrards Cross, Uxbridge and Harefield.

During the course of the survey it was discovered that the Reading Beds contain substantial thicknesses of sand of possible commercial value. This sand has not been included in the mineral assessed statistically, but is discussed separately on p. 17.

TOPOGRAPHY

The area is bounded in the east by the Colne Valley, and in the west by the valleys of the Thames and its tributary, the Wye. The intervening, mainly drift-covered, ground rises gradually from under 30 m (100 ft) in the south to over 122 m (400 ft) in the north. The area

is deeply dissected by numerous valleys, in many of which the underlying solid formations are exposed. The valleys, most of which run southwards or eastwards, are either dry, particularly in the Chalk country, or occupied by misfit streams only. The main streams are the Misbourne and Alderbourne, which drain into the Colne.

GEOLOGY

The area around Gerrards Cross was first surveyed for the Geological Survey on the scale of six inches to one mile by J.A. Howe, R.L. Sherlock, A.H. Noble and C.N. Bromhead during the period 1902-1920, and the Beaconsfield (255) Sheet, and its memoir (Sherlock and Noble, 1922), were published in 1922. During the course of the present survey the drift and solid geological lines were amended by H.C. Squirrell and a new edition of the Beaconsfield Sheet was published in 1974.

The deposits of the area are classified as shown in Table 1, where they are listed, as far as possible, in order of increasing age.

Solid Deposits

The solid rocks range from near the base of the Upper Chalk, through the Reading Beds into the lower part of the London Clay. Their structure is simple; the beds, which are almost free of faults, dip gently, usually between 2° and 6°, towards the south-east. Thus the Chalk crops out in the north, north-west and west, the Reading Beds generally in the central part of the area and the London Clay in the south-east.

The borehole results of the survey have enabled the subdrift boundaries of these formations to be more accurately drawn than hitherto. It has been shown, for example, that the subdrift outcrops of the Reading Beds are not as extensive as previously thought. Previous workers apparently experienced difficulty in distinguishing some of the more clayey drift deposits from the Reading Beds, so that, in some parts of the region areas of Reading Beds were shown where Chalk is, in fact, the bedrock. This is apparent to the north of Burnham [930 830]¹, to the east and north of Seer Green [965 920] and in the Chalfont Common-Newland Park [010 940] area. The position of the subdrift boundary between the Reading Beds and London Clay has also been amended in several places. Under the Boyn Hill Terrace in the Stoke Poges [980 840] area the junction runs as much as 1600 m farther east than was previously shown and minor corrections have been made in the Alderbourne Valley [030 850].

The Upper Chalk is over 90 m thick and consists of thickly bedded white chalk with irregular bands of black flint nodules. In the boreholes the chalk was soft and putty-like at the contact with overlying sands and gravels, but became firmer with depth. The Upper Chalk is unconformably overlain by the Reading Beds, 11 to 17 m thick, at the base of which is usually found the Bullhead Bed, a characteristic dark brown clay containing abundant coarse and cobble-size black flints. This bed is usually thin, generally less than 2 m, and is thought to be a weathering product of the Chalk. Above the Bullhead Bed the Reading Beds fall into two broad subdivisions. The lower, usually 2 to 5 m thick, but reaching 7 m locally, consists dominantly of thick beds of sand with thin clay bands and lenticles at irregular intervals, and rare layers of gravel. The sand is buff to brown, uniformly fine to medium grained, uncemented, and generally appears to be virtually free of clay impurities.

¹ National Grid References in this publication lie within the 100 kilometre square SU or TQ

The upper subdivision of the Reading Beds, 9 to 16 m thick, consists of silty and sandy clays, with a few thin bands of clayey sand. The clays are characteristically mottled in various colours, the most common being brown, grey, green, red and yellow. In the past the clays were widely used in the production of bricks and tiles.

The conformably overlying London Clay consists of stiff, bluish-grey clay, which is silty in parts and sandy at the base. When weathered it is brown, usually in the uppermost 1 m only. The junction with the Reading Beds was seen in boreholes 98 SE 45 and 98 NE 111; in both boreholes the sharp change from the bluish-grey silty and sandy clays of the London Clay to the variegated clays of the Reading Beds was easily recognised.

Drift Deposits

The Recent and Pleistocene deposits containing potentially workable sand and gravel include Alluvium, Dry Valley Deposits, River Terrace Deposits, and Glacial Sand and Gravel. No sand and gravel is present in either the River Brickearth or the Clay-with-flints. The small patches of drift classified as Pebbly Clay and Sand lie outside the area assessed, though they may contain mineral as defined in this report.

Small patches of Clay-with-flints are present in the north-west of the area, particularly around Penn. These deposits are considered (Sherlock and Noble, 1922) to be of glacial origin, the till of an ice sheet which advanced from the west or north-west. Clay-with-flints consists of silty and sandy clay containing varying proportions of angular to rounded pebbles, mainly of flint, and some quartzite. The clays are variegated, usually brown, reddish-brown and yellow. A thickness of 4.2 m was proved in borehole 99 SW 3 and 2.3 m in 99 SW 4.

Pebble Clay and Sand is found along the northern margin of the map, but outside the assessed mineral area. It is composed of well rounded flint pebbles in a matrix of either clay or sand, and, according to Sherlock and Noble (1922), it either underlies the Clay-with-flints or passes laterally into it. Sherlock and Noble considered Pebbly Clay and Sand to be the more gravelly part of a till derived from the Reading Beds, which they distinguished from Glacial Sand and Gravel that contains, in addition to flint, sandstone and quartzite pebbles.

Covering the Taplow Terrace, River Brickearth is a silty and/or sandy clay, which may contain scattered pebbles of fine to medium flint. In colour it is usually buff, brown or grey.

By far the larger part of the Gerrards Cross

Table 1. Classification of mapped deposits

DRIFT

| | | |
|------------------------|---|----------------------------|
| Recent and Pleistocene | Alluvium Dry Valley Deposits River Terrace Deposits, undifferentiated River Brickearth Flood Plain Terrace Taplow Terrace Boyn Hill Terrace | } Terraces of River Thames |
| | Glacial Sand and Gravel, including undifferentiated Head Pebbly Clay and Sand Clay-with-flints | } Glacial |

SOLID

| | |
|------------|-----------------------------|
| Eocene | London Clay Reading Beds |
| Cretaceous | Upper Chalk |

area is covered by drift, which, for the purposes of this report, is embraced within the term Glacial Sand and Gravel (including undifferentiated Head). The deposits lie above the level of the highest generally acknowledged terrace of the Thames, the Boyn Hill Terrace, found in the south of this area, and to the south-east of the extensive spreads of Clay-with-flints and associated Pebbly Clay and Sand lying to the north and north-west of Beaconsfield. Sherlock and Noble (1922) believed these deposits to be of fluvio-glacial origin, a sheet of outwash carried by meltwater streams issuing from ice to the west and north-west. The position of these deposits to the south-east of the Clay-with-flints (till), and their considerable thickness variations, support this view.

In complete contrast however, Hare (1947), following his detailed geomorphological study of the Beaconsfield-Slough area, suggested that the sands and gravels are terrace deposits of the Thames, which originally flowed from Bourne End eastwards through Rickmansworth and Watford. This was first suggested by White (1899) and Wooldridge (1938) who traced a terrace feature above the Boyn Hill Terrace at Burnham, that he correlated with his Winter Hill Terrace of areas to the west. Hare recognised eight terrace surfaces at different levels, the uppermost four lying higher than the Boyn Hill Terrace, based largely on surface form rather than the presence or thickness of drift deposits. Incongruously, extensive gravel-covered areas are not assigned to any of the eight terraces. Nevertheless, there is substantial evidence for the series of sand and

gravel terraces rising from Slough to Beaconsfield shown on Hare's map and this obtains some support from the general similarity of the grading in block I (Taplow and Boyn Hill terraces) with the Glacial Sand and Gravel of, for example, blocks F, G and H (Table 2). Further detailed geological mapping, combined with the borehole information now available including results of the present survey, might resolve the outstanding difficulties.

In the context of this mineral assessment survey the area, thickness and composition of the sands and gravels is more important than their mode of deposition. It was, therefore, expedient to base the survey on the existing geological maps, which reflect the views of Sherlock and Noble, although amendments were made to delimit more accurately the sand and gravel-bearing deposits.

Variable deposits, here called Head, mask the glacial sands and gravels in places. They vary from clay with scattered flint pebbles to gravel with clay and are probably solifluction deposits. As it is impossible to draw meaningful boundaries around these patches of Head they have to be included within the Glacial Sand and Gravel on the geological map, though they cannot be classified within even the broadest definition of such a deposit. Their presence is indicated by the additional note 'including undifferentiated Head'. Where Head has been recognised in boreholes it is classified separately in the log, for example, borehole 09 SW 28 (see Appendix C).

Where Head contains a predominance of

gravel bound by a matrix of clay, that may be associated with silt and sand, it is known as hoggin. This material is useful in the construction of roads, for sub-bases and embankments and considerable amounts have been worked in this area. From an engineering point of view the most important constituent of hoggin is the clay, which needs to occur in only small quantities (possibly as little as 10 per cent of the whole deposit) to bind the other components into an intractable mass, though larger quantities of clay (40 per cent or even more) would most likely provide satisfactory material. In this report the two components that comprise the fines fraction, clay and silt, are not distinguished separately and thus the quoted fines percentages may be made up of all silt, or all clay, or any combination of both. Consequently it is not apparent where clay is present, but it has been observed that as a general rule the higher the fines content the more likely it is for the deposit to contain clay and thus have the characteristics of a hoggin.

The Glacial Sand and Gravel consists mainly of ill-sorted sands and gravels, with a fines fraction that is usually less than 12 per cent. The proportions of sand and gravel vary considerably from sand virtually free of gravel to gravel almost free of sand. Overall, however, the largest proportion of the deposit is generally gravel, with sand and fines in subordinate amounts. In thickness the glacial deposits vary considerably, from less than 1 m to a maximum of just over 21 m, but average around 5 m.

The valley deposits consist dominantly of Alluvium and River Terrace Deposits and to a small extent of Dry Valley Deposits. The Thames terrace area north of Slough (block I) is occupied mainly by the Boyn Hill Terrace, although the Taplow Terrace is also present. The overburden on the sands and gravels of the former is usually less than 1 m thick, but the Taplow Terrace is concealed by River Brickearth, up to 4.4 m thick. Like the Glacial Sand and Gravel these terrace deposits consist largely of poorly sorted, water-lain sands and gravels and their silt and clay content is not significantly different (Table 2).

The undifferentiated terraces (those not correlated into a river terrace system) of block E at Denham are deposits of the River Colne and its tributary the Misbourne. The associated Alluvium of the Misbourne and Alderbourne lies slightly lower topographically and forms the present-day flood-plain level. Upstream from Fulmer [999 857] the Alluvium of the Alderbourne gives way to virtually

identical Dry Valley Deposits, so named because at the present day the Chalk valley they occupy is dry. These terrace deposits, Alluvium and Dry Valley Deposits are grouped together in the assessment calculations, for they can be regarded as a single deposit, the infilling of a valley system that previously had a base level considerably lower than at present. Also, despite their differing geological classifications, they have similar grading characteristics.

COMPOSITION OF THE SAND AND GRAVEL DEPOSITS

The potentially workable sand and gravel of the country around Gerrards Cross falls into two main categories, namely, the river deposits and the glacial deposits.

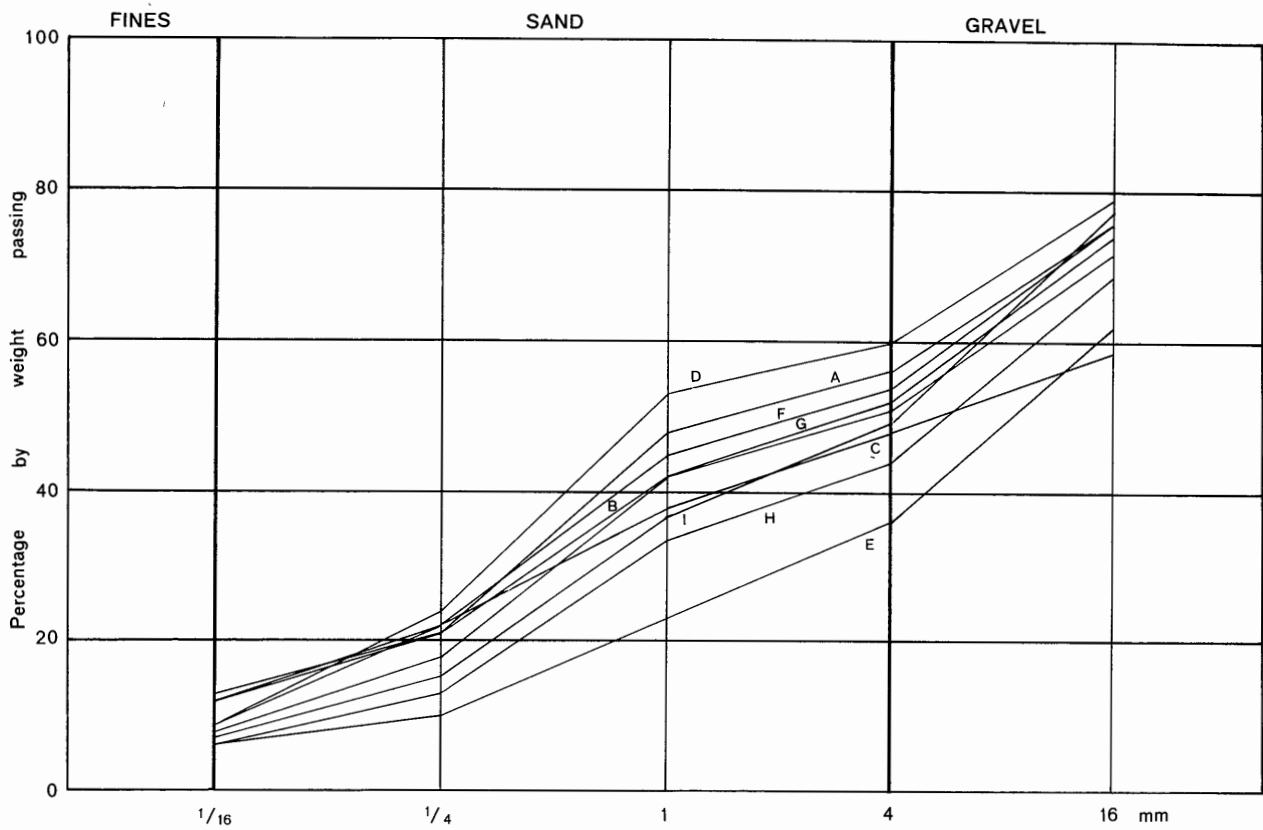
River Deposits

The river deposits include Alluvium, terrace gravels and Dry Valley Deposits; they are present in blocks E and I. The gravel fraction, which accounts for a mean of 64 per cent in block E and 51 per cent in block I, consists dominantly of angular to rounded, fine to coarse flint with some well rounded, fine to medium vein quartz and quartzite, with rare limestone pebbles. The sand, 30 to 50 per cent of the deposit, is predominantly subrounded quartz, with flint common in the coarser fraction. The fines, which usually account for less than 10 per cent of the deposit, average around 6 per cent. In general the fines decrease with depth, but the proportions of both the gravel and sand show no significant vertical changes. No significant lateral trend or pattern can be recognised in the variations in the proportions of these fractions.

Glacial Deposits

The glacial deposits consist entirely of Glacial Sand and Gravel with undifferentiated Head, and are present in the other seven blocks. The gravel, which comprises 40 to 56 per cent of the deposit, is dominantly subangular to well rounded, fine to coarse flint with some, usually well rounded, fine to medium vein quartz and quartzite. The sand, 38 to 51 per cent of the deposit, is mainly of subrounded quartz and flint, the latter commonly being predominant in the coarse fraction. The proportion of fines is highest in the north and north-west of the area, where it is around 12 per cent, decreasing to the south and south-east to a minimum of 6 per cent. In general, more fines occur in the uppermost parts of boreholes, but this is not such a distinct feature as in the river deposits.

A comparison of the mean grading percentages of the nine mineral blocks (A to I, Table 2) show some interesting features. The percentages of fines in the river deposits are similar, 6 per cent in block E and 7 per cent in block I, and it is significant that they are closely comparable with those of the glacial deposits of blocks D, F,



| Resource Block | Percentage by weight passing | | | | |
|----------------|------------------------------|--------|------|------|-------|
| | 1/16 mm | 1/4 mm | 1 mm | 4 mm | 16 mm |
| A | 12 | 21 | 48 | 56 | 76 |
| B | 13 | 21 | 42 | 51 | 72 |
| C | 12 | 22 | 38 | 48 | 69 |
| D | 9 | 24 | 53 | 60 | 79 |
| E | 6 | 10 | 23 | 36 | 62 |
| F | 9 | 22 | 45 | 54 | 76 |
| G | 8 | 18 | 42 | 52 | 74 |
| H | 6 | 13 | 34 | 44 | 69 |
| I | 7 | 15 | 37 | 49 | 77 |

Fig. 2. Particle size distribution for the assessed thickness of sand and gravel in resource blocks A to I

G and H (6 to 9 per cent). The similarity adds weight to Hare's belief that terraces of the Thames exist above the generally accepted highest terrace, the Boyn Hill. The three most northerly blocks, A, B and C, have a fines content of 12 per cent or over, a feature suggesting that the deposits in that area are more likely to have had a glacial origin.

Contrary to expectations the percentages of sand and gravel in the two blocks made up of river deposits (blocks E and I) are markedly different and block E is exceptional in that it contains more gravel and less sand than any other block. The sand content of block E is 12 per cent lower than of block I and 8 per cent lower than any of the other blocks, while conversely the gravel content of block E is 13 per cent higher than of block I and 8 per cent higher than any of the other blocks. The grading figures of the sand and gravel fractions also show that there is essentially little difference between the river deposits of block I and the glacial deposits, a fact which further supports Hare's view that they may have had a common genesis.

RESULTS

The statistical results are summarised in Table 2. Fuller grading particulars are shown in Fig. 2 and Tables 3 to 11. All limits quoted in this report have been calculated at the 95 per cent confidence level.

Accuracy of Results

For the nine resource blocks in this area the accuracy of the results at the 95 per cent confidence level (that is, the probability that nineteen times out of twenty the true volume present lies within the given limits) varies between 19 per cent and 42 per cent. It should be remembered, however, that the true values are more likely to be nearer the figure estimated than either of the limits. Moreover, it is probable that roughly the same percentage limits would apply for the estimate of volume of a much smaller parcel of ground (say 200 acres) containing similar sand and gravel deposits if the results from the same number of sample points (as provided by, say, ten boreholes) were used in the calculation. Thus, if closer limits are needed for quotation of reserves of part of a block, it can be expected that data from more than ten sample points are required, even if the area were quite small. This point can be illustrated by considering the whole of the potentially workable sand and gravel (as already defined) in the area. The volume (510 million m³) can be estimated to limits of ± 10 per cent at the 95 per cent confidence level, by a calculation based on the data from as many as 130 sample points spread across the nine resource blocks.

However, it must again be emphasised that the quoted volume of sand and gravel has no simple relationship with the amount that could be extracted in practice, for no allowance has been made in the calculations for any restraints (such as existing buildings or roads) on the use of land for mineral working.

NOTES ON RESOURCE BLOCKS

Block A

This block is in two parts; by far the larger part, lying south of Beaconsfield, is almost entirely covered by Glacial Sand and Gravel with undifferentiated Head, which overlies Reading Beds. In the smaller area, to the north-west of Beaconsfield, only patches of Glacial Sand and Gravel remain, on Chalk. The Glacial Sand and Gravel forms mainly gently sloping ground rising from about 300 ft in the south to 400 ft in the north-west. Sand and gravel has been worked fairly extensively near Sniggs Wood [905 918], but the scattering of other workings have been on a small scale only.

The assessment of resources is based on information from 17 Mineral Assessment Unit boreholes and three other records. The mean thickness of the mineral is 7.1 m; it ranges from 1.1 m in borehole 98 NW 56 to 15.2 m in borehole 98 NW 58. The estimated volume of the mineral is 80 million m³ ± 27 per cent at the 95 per cent confidence level. The thickness of the overburden averages 1.0 m, and varies from nil in borehole 98 NW 43 and 98 NW 53 to 4.8 m in borehole 98 NW 58. The overburden is thicker than 1.0 m in only five boreholes, namely 98 NW 56 in the extreme south-east, 99 SW 7 near Forty Green and 98 NW 42, 58 and 59 grouped together just south of Beaconsfield. In each case the overburden is soil overlying Head, the latter being clay containing a small proportion of sand and gravel. From the evidence of boreholes 98 NW 42, 58 and 59 there appears to be a fairly extensive cover of Head overlying the Glacial Sand and Gravel in the Overs Farm area, the exact limits of which cannot be ascertained from the limited information available.

The fines content of the mineral over most of the area ranges from a mean of 7 per cent in boreholes 98 NW 38 and 98 NW 59 to 17 per cent in borehole 98 NW 37. Exceptionally, it increases to 25 per cent in the extreme south-east (borehole 98 NW 56) and to 26 per cent in the north-west (borehole 99 SW 2); it falls to only 4 per cent in borehole 99 SW 7. Where the fines content is in the higher part of its range and is dominantly clay, rather than silt, the mineral is a characteristic hoggin. The proportion of sand ranges widely, from 25 per cent in borehole 98 NW 37 to as much as 66 per cent in borehole 98 NW 56. Over most of the

Table 2. Summary of statistical results

| Resource block | Area | | Mean Thickness | | | | Volume of mineral | | | | Mean grading percentage | | |
|-----------------|-----------------|---------|----------------|-----|---------|----------------|------------------------|-------------------------|--|------------------------------|-------------------------|------|--------|
| | Block | Mineral | Overburden | | Mineral | | million m ³ | million yd ³ | Limits at the 95 per cent confidence level | | Fines | Sand | Gravel |
| | | | m | ft | m | ft | | | ±% | ± Vol million m ³ | | | |
| km ² | km ² | m | ft | m | ft | m ³ | yd ³ | ±% | million m ³ | -1/16 mm | -4 +1/16 mm | +4mm | |
| A | 14.0 | 11.3 | 1.0 | 3.5 | 7.1 | 23.5 | 80 | 105 | 27 | 22 | 12 | 44 | 44 |
| B | 24.1 | 18.0 | 2.2 | 7.0 | 4.2 | 14.0 | 76 | 99 | 42 | 32 | 13 | 38 | 49 |
| C | 18.5 | 13.6 | 1.3 | 4.5 | 3.4 | 11.0 | 46 | 60 | 37 | 17 | 12 | 36 | 52 |
| D | 14.6 | 10.1 | 0.7 | 2.5 | 4.4 | 14.5 | 44 | 58 | 19 | 8 | 9 | 51 | 40 |
| E | 9.0 | 9.0 | 1.0 | 3.5 | 5.7 | 18.5 | 51 | 66 | 26 | 13 | 6 | 30 | 64 |
| F | 12.4 | 11.8 | 0.6 | 2.0 | 4.2 | 14.0 | 50 | 65 | 41 | 21 | 9 | 45 | 46 |
| G | 12.8 | 10.6 | 0.6 | 2.0 | 4.4 | 14.5 | 47 | 61 | 19 | 9 | 8 | 44 | 48 |
| H | 19.6 | 14.4 | 0.9 | 3.0 | 3.2 | 10.5 | 46 | 60 | 33 | 15 | 6 | 38 | 56 |
| I | 18.5 | 17.1 | 1.9 | 6.0 | 4.1 | 13.5 | 70 | 92 | 21 | 15 | 7 | 42 | 51 |
| A to I | 143.5 | 115.9 | 1.1 | 3.5 | 4.5 | 15.0 | 510 | 667 | 10 | 51 | | | |

area the proportion of gravel ranges from 32 to 62 per cent in boreholes 98 NW 60 and 98 NW 43 respectively, though it falls to only 25 per cent in borehole 99 SW 2 and is as low as 9 per cent in borehole 98 NW 56. To the south of Beaconsfield the percentage of gravel increases in a westerly direction, and has been found to be always over 50 per cent in the western part of the block, mainly at the expense of the sand content rather than the fines. The mean grading for the block is fines 12 per cent, sand 44 per cent, gravel 44 per cent.

Block B

This block is subdivided by a deeply cut valley running north-west to south-east through Long Bottom [968 909]. The valley, now dry, exposes a wide tract of solid rocks and is floored by Dry Valley Deposits which have not been assessed as their outcrop is so narrow. To the north-east and south-west of the valley an extensive covering of Glacial Sand and Gravel with undifferentiated Head is underlain largely by Chalk; Reading Beds are present in the south. The drift surface slopes gently southwards, falling from about 470 ft in the north to 250 ft in the south. Sand and gravel has been worked on a small scale.

The assessment of resources is based on information from 23 Mineral Assessment Unit boreholes and two other records. The

mineral has a mean thickness of 4.2 m, ranging from nil in five boreholes (99 SW 10, 99 SE 4, 99 SE 11, 99 SE 15 and 98 NE 112) to 11.2 m in borehole 99 SE 22. The estimated volume of mineral is 76 million m³ ± 42 per cent. The overburden in the mineral-bearing boreholes averages 2.2 m in thickness, ranging from nil in borehole 255/68 to 7.0 m in borehole 99 SE 23. The overburden is Head, which is irregularly distributed.

The fines content of the mineral ranges from 7 per cent in borehole 99 SE 7 to 18 per cent in borehole 99 SE 3; the proportion is less than 10 per cent in only three of the 15 boreholes which proved mineral. The two highest figures (17 and 18 per cent) are from boreholes in the north of the block, but otherwise there is no significant trend to the variations. The volume of sand varies widely from 27 per cent in borehole 99 SE 12 to 51 per cent in borehole 99 SE 5, but is usually between 34 and 44 per cent. The proportion of gravel commonly exceeds 45 per cent and reaches 59 per cent in boreholes 99 SE 20. The lowest reading, 33 per cent, was recorded in borehole 99 SE 23.

The mean grading for the block is fines 13 per cent, sand 38 per cent, gravel 49 per cent.

Block C

The extensive mineral-bearing drift deposits

Table 3. Data from assessment boreholes: block A

| Borehole No. | Recorded thickness | | Mean grading percentage | | | | | |
|--------------|--------------------|----------------|-------------------------|--------------------------------|-----------------------------|-------------|-------------|---------------|
| | Mineral (m) | Overburden (m) | Fines | Fine sand | Medium sand | Coarse sand | Fine gravel | Coarse gravel |
| | | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | -4+ 1mm | -16+ 4mm | +16mm |
| 98 NW 37 | 4.2 | 0.3 | 17 | 4 | 11 | 10 | 26 | 32 |
| 98 NW 38 | 7.0 | 0.2 | 7 | 8 | 18 | 10 | 21 | 36 |
| 98 NW 39 | 5.6 | 0.2 | 14 | 7 | 12 | 9 | 25 | 33 |
| 98 NW 42 | 7.8 | 2.0 | 11 | 9 | 16 | 9 | 24 | 31 |
| 98 NW 43 | 5.2 | 0 | 11 | 6 | 12 | 9 | 23 | 39 |
| 98 NW 44 | 8.3 | 0.4 | 10 | 8 | 21 | 10 | 23 | 28 |
| 98 NW 47 | 7.2 | 0.8 | 16 | 6 | 24 | 8 | 23 | 23 |
| 98 NW 48 | 9.0 | 0.2 | 9 | 21 | 21 | 6 | 19 | 24 |
| 98 NW 49 | 9.1 | 0.1 | 11 | 13 | 27 | 6 | 17 | 26 |
| 98 NW 53 | 7.1 | 0 | 9 | 14 | 28 | 12 | 18 | 19 |
| 98 NW 56 | 1.1 | 2.0 | 25 | 29 | 35 | 2 | 5 | 4 |
| 98 NW 58 | 15.2 | 4.8 | 15 | 8 | 30 | 7 | 21 | 19 |
| 98 NW 59 | 7.2 | 1.4 | 7 | 9 | 41 | 8 | 19 | 16 |
| 98 NW 60 | 13.2 | 0.8 | 8 | 8 | 44 | 8 | 18 | 14 |
| 99 SW 2 | 3.8 | 0.2 | 26 | 8 | 35 | 6 | 10 | 15 |
| 99 SW 5 | 10.3 | 0.2 | 14 | 4 | 24 | 8 | 20 | 30 |
| 99 SW 7 | 3.2 | 1.9 | 4 | 13 | 41 | 5 | 14 | 23 |

of this block, Glacial Sand and Gravel with undifferentiated Head, lie on the divide between the Misbourne Valley in the west and the Colne Valley, tributaries of which have dissected the plateau-like area in the east. The gently sloping drift surface falls from a maximum of about 375 ft in the north to under 225 ft in the south-east. The Glacial Sand and Gravel overlies either Chalk, mainly in the north, or Reading Beds. Sand and gravel is being exploited in a pit [018 914] near Chalfont St Peter; other workings have been on a much smaller scale.

The assessment of resources is based on information from 14 Mineral Assessment Unit boreholes and 19 other records. The thickness of the mineral, mean 3.4 m, varies from nil in boreholes 09 SW 27 and 08 NW 101 to 8.8 m in borehole 09 SW 30. The estimated volume of mineral is 46 million m³ \pm 37 per cent.

The overburden averages 1.3 m and ranges from 0.2 m in borehole 09 SW 30 to 3.5 m in boreholes 09 SW 28 and 08 NW 105. It is

thickest in the central part of the block, where it has been classified as Head, but the exact limits of the deposit are not known.

The fines show a wide variation, from 5 per cent in borehole 08 NW 111 to 20 per cent in borehole 08 NW 105. The proportion of sand generally ranges between 30 and 40 per cent, only falling lower, to 26 per cent, in borehole 09 SW 28, and rising exceptionally to 53 per cent in borehole 09 SW 33. Over most of the block the gravel fraction lies within the range 45 to 55 per cent. In borehole 09 SW 33 the proportion is unusually low, only 37 per cent, and in boreholes 08 NW 111 and 09 SW 28 the percentages reach 60 and 65 respectively.

The mean grading for the block is fines 12 per cent, sand 36 per cent, gravel 52 per cent.

Block D

This block is divided into two unequal parts by a deep, east-west dry valley, Dormey Bottom, which is floored by Dry Valley Deposits included

Table 4. Data from assessment boreholes: block B

| Borehole No. | Recorded thickness | | Mean grading percentage | | | | | |
|--------------|--------------------|----------------|-------------------------|--------------------------------|-----------------------------|-------------|-------------|---------------|
| | Mineral (m) | Overburden (m) | Fines | Fine sand | Medium sand | Coarse sand | Fine gravel | Coarse gravel |
| | | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | -4+1mm | -16+4mm | +16mm |
| 99 SE 3 | 6.9 | 3.4 | 18 | 10 | 10 | 11 | 21 | 30 |
| 99 SE 4 | Absent | - | - | - | - | - | - | - |
| 99 SE 5 | 6.4 | 5.6 | 7 | 18 | 26 | 7 | 17 | 25 |
| 99 SE 6 | 2.0 | 3.0 | 12 | 10 | 24 | 8 | 18 | 28 |
| 99 SE 7 | 3.0 | 0.1 | 7 | 9 | 22 | 5 | 13 | 44 |
| 99 SE 8 | 2.8 | 0.2 | 10 | 8 | 18 | 23 | 8 | 33 |
| 99 SE 9 | 5.6 | 0.4 | 11 | 11 | 23 | 7 | 17 | 31 |
| 99 SE 10 | 9.7 | 5.1 | 15 | 9 | 13 | 8 | 22 | 33 |
| 99 SE 11 | Absent | - | - | - | - | - | - | - |
| 99 SE 12 | 4.0 | 3.0 | 17 | 4 | 10 | 13 | 23 | 33 |
| 99 SE 13 | 3.3 | 3.7 | 10 | 10 | 15 | 11 | 20 | 34 |
| 99 SE 14 | 1.4 | 2.9 | 14 | 7 | 16 | 11 | 26 | 26 |
| 99 SE 15 | Absent | - | - | - | - | - | - | - |
| 99 SE 19 | 9.8 | 0.1 | 10 | 10 | 14 | 12 | 22 | 32 |
| 99 SE 20 | 3.2 | 0.2 | 13 | 6 | 11 | 11 | 23 | 36 |
| 99 SE 21 | 5.0 | 0.6 | 14 | 7 | 30 | 11 | 21 | 17 |
| 99 SE 22 | 11.2 | 5.0 | 15 | 3 | 29 | 8 | 26 | 19 |
| 99 SE 23 | 5.5 | 7.0 | 17 | 3 | 39 | 8 | 20 | 13 |
| 99 SE 24 | 2.2 | 0.3 | 15 | 0 | 26 | 10 | 27 | 22 |
| 99 SW 10 | Absent | - | - | - | - | - | - | - |
| 98 NE 112 | Absent | - | - | - | - | - | - | - |
| 98 NE 117 | 6.5 | 0.2 | 9 | 10 | 17 | 9 | 25 | 30 |
| 98 NE 122 | (a) 1.0 (b) 2.1 | 2.3 | 18 11 | 9 5 | 19 31 | 7 8 | 27 22 | 20 23 |

in block E. Numerous smaller dry valleys dissect the area, some of which have cut through the drift to expose the underlying solid rocks. The extensive Glacial Sand and Gravel with undifferentiated Head mainly overlies Reading Beds, but Chalk is present below the mineral near Hyde Farm [959 893] and London Clay in the south-east of the block. The gently sloping drift surface falls from around 335 ft in the north-west to 275 ft in the south-east. The only large scale workings [975 885], west of Bulstrode Park, are currently being extended to the north-west.

The assessment of resources is based on information from 11 Mineral Assessment Unit boreholes and 19 other records. The thickness of the mineral averages 4.4 m; the boreholes show that the mineral is usually between 2 and 7 m thick, but in borehole 98 NE 123 near Hyde Farm 16.7 m were recorded, the solid rock (Chalk) being struck at 21.2 m below the surface. This exceptionally thick deposit is probably part of the infilling of a deep concealed valley which existed before the deposition of the glacial deposits. This might run towards the north-east, as suggested by the conjectured subdrift junction of

Table 5. Data from assessment boreholes: block C

| Borehole No. | Recorded thickness | | Mean grading percentage | | | | | |
|--------------|--------------------|----------------|-------------------------|--------------------------------|-----------------------------|-------------|-------------|---------------|
| | Mineral (m) | Overburden (m) | Fines | Fine sand | Medium sand | Coarse sand | Fine gravel | Coarse gravel |
| | | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | -4 + 1mm | -16 + 4mm | +16mm |
| 09 SW 25 | 2.7 | 0.7 | 19 | 12 | 11 | 7 | 16 | 35 |
| 09 SW 26 | Absent | - | - | - | - | - | - | - |
| 09 SW 27 | Absent | - | - | - | - | - | - | - |
| 09 SW 28 | 7.0 | 3.5 | 9 | 7 | 9 | 10 | 23 | 42 |
| 09 SW 29 | 2.9 | 0.6 | 18 | 7 | 11 | 10 | 22 | 32 |
| 09 SW 30 | 8.8 | 0.2 | 8 | 9 | 18 | 10 | 25 | 30 |
| 09 SW 31 | 7.0 | 3.0 | 15 | 14 | 16 | 8 | 20 | 27 |
| 09 SW 32 | 2.8 | 1.5 | 14 | 4 | 14 | 13 | 25 | 30 |
| 09 SW 33 | 2.0 | 2.5 | 10 | 11 | 34 | 8 | 14 | 23 |
| 08 NW 101 | Absent | - | - | - | - | - | - | - |
| 08 NW 105 | 3.5 | 3.5 | 20 | 10 | 20 | 5 | 19 | 26 |
| 08 NW 106 | 4.3 | 0.4 | 11 | 11 | 16 | 13 | 24 | 25 |
| 08 NW 110 | 3.0 | 0.3 | 8 | 5 | 25 | 9 | 25 | 28 |
| 08 NW 111 | 5.0 | 0.4 | 5 | 5 | 18 | 12 | 26 | 34 |

the Reading Beds and Chalk shown on the resource map. The estimated volume of the mineral in this block is 44 million m³ ± 19 per cent. The overburden usually consists only of soil and subsoil, but Head, the exact limits of which are not known, was proved east of Hyde Farm where it attains a thickness of 4.5 m and in boreholes 98 NE 105 and 255/56.

The fines vary within relatively narrow limits, from 4 per cent in borehole 98 NE 107 to 13 per cent in boreholes 98 NE 121 and 98 NE 104. The proportion of sand is everywhere more than 40 per cent, but exceeds 60 per cent only in borehole 98 NE 124 where it is unusually high at 76 per cent. Gravel ranges between 34 per cent in borehole 98 NE 123 to 51 per cent in borehole 98 NE 105, except that in borehole 98 NE 124 there is only 15 per cent.

The mean grading for the block is fines 9 per cent, sand 51 per cent, gravel 40 per cent.

Block E

This block is drawn to include the terrace gravels of the Rivers Colne and Misbourne, the Alluvium of the Misbourne and Alderbourne, and the Dry Valley Deposits of the higher part of the Alderbourne Valley (including Dormey

Bottom). In the Misbourne Valley almost all of the Alluvium and terrace gravels lie on Chalk; in the Alderbourne Valley, as would be expected, the Dry Valley Deposits rest on Chalk and the Alluvium overlies Reading Beds. Workings have been only on a very small scale.

The assessment of resources is based on information from 13 Mineral Assessment Unit boreholes and 18 other records. The mineral has a mean thickness of 5.7 m and ranges widely from only 1.4 m in borehole 08 NW 18 to 12.5 m in borehole 255/21f; no particular lateral trend can be recognised. The estimated volume of the mineral is 51 million m³ ± 26 per cent. The thickness of the overburden, which is normally only soil and subsoil, averages just under 1.0 m, and is nowhere more than 2.3 m. The fines content of the mineral is consistently low, generally being between 3 and 8 per cent and does not exceed 11 per cent. The proportion of sand is not less than 25 per cent, except in borehole 08 NW 107 where it falls to 16 per cent, and is nowhere greater than 34 per cent. The percentage of gravel generally ranges between 57 and 68 per cent except in borehole 08 NW 107, where it is 78 per cent.

It is notable that the proportions of fines,

sand and gravel normally fall within narrower limits than in the other blocks (except block I), and that the deposits have similar grading characteristics throughout the area whatever their geological classification. This is also true vertically, as best illustrated by the grading of the ten samples from the 11.1 m of mineral in borehole 98 NE 106; the fines range between only 4 and 8 per cent, the sand between 29 and 37 per cent and the gravel between 59 and 66 per cent.

The mean grading for the block is fines 6 per cent, sand 30 per cent, gravel 64 per cent.

Block F

Glacial Sand and Gravel, locally overlain by undifferentiated Head, covers almost all of the block, and overlies Reading Beds or Chalk. Dissection by streams has exposed the solid rocks over small areas in Gulley Wood [917 853], to the north and west of Burnham and in a deep dry valley along the eastern margin of the block. The drift forms flat, or gently sloping ground, lying mainly between 170 and 290 ft. Only very small quantities of mineral have been worked for local use.

The assessment of resources is based on information from 11 Mineral Assessment Unit boreholes and 14 other records. The mean thickness of the mineral is 4.2 m, and it ranges from 1.0 m in borehole 98 SW 22 to 11.3 m in borehole 98 NW 51. The estimated volume of the mineral is 50 million m³ ± 41 per cent. The overburden averages 0.6 m, and varies from nil in boreholes 98 SW 23 and 98 NW 45 to 2.5 m in borehole 98 SW 26. Overburden with a thickness greater than 1.0 m was recorded only in the south-west where, in boreholes 98 SW 26 and 98 SW 22, it is a dense brown clay, containing only scattered flint pebbles, classified as Head, which has been used locally for brick-making.

The fines content of the mineral ranges from 2 to 12 per cent except in borehole 98 SW 24 where it reaches 17 per cent. Generally speaking the upper part of the mineral contains a higher proportion of fines than the lower, so that the uppermost beds are hoggin-like. The sand ranges from 32 to 53 per cent by weight and the gravel varies between 37 and 55 per cent, being over 50 per cent along the western margin of the block and in the north-east. The mean grading for the block is fines 9 per cent, sand 45 per cent, gravel 46 per cent.

Block G

The mineral, Glacial Sand and Gravel with undifferentiated Head, rests on London Clay in the centre and east and on Reading Beds elsewhere. The gently undulating topography slopes from nearly 300 ft in the north-west to just over

200 ft in the south and south-east; a few small streams have cut through the drift to expose the solid rocks below. Sand and gravel has been dug on a fairly large scale in Hedgerley Park [976 866], and currently is being worked at the Pickeridge [985 859], but elsewhere workings have been on a much smaller scale for local use.

The assessment of resources is based on information from 10 Mineral Assessment Unit boreholes and 10 other records. The mineral has a mean thickness of 4.4 m and over most of the area varies within fairly narrow limits from 2.0 m in borehole 98 SE 35 to 6.8 m in borehole 255/244. Mineral is absent only in borehole 98 SE 37, drilled near the edge of the mapped deposit. The estimated volume of the mineral is 47 million m³ ± 19 per cent. The overburden is usually less than 1.0 m thick, exceeding this figure only in two boreholes, 98 SE 41 and 98 NE 115, where local developments of Head, 1.4 m and 2.9 m thick respectively, overlie the mineral.

Fines commonly constitute 8 per cent or less, but 12 and 13 per cent were proved in boreholes 98 SE 44 and 98 NE 116 respectively, and 17 per cent in borehole 98 SE 41. Generally the fines content is higher in the eastern than the western part of the block. The proportion of sand varies widely between 30 per cent in borehole 98 SE 33 to 59 per cent in borehole 98 SE 44, but usually falls within the range 36 to 51 per cent. Over most of the area the percentage of gravel ranges between 42 and 53, but falls in the east to only 29 in borehole 98 SE 44 and rises to 66 in borehole 98 SE 33 in the west.

The mean grading for the block is fines 8 per cent, sand 44 per cent, gravel 48 per cent.

Block H

This block is divided by the Alderbourne Valley, which is floored by alluvial deposits included in block E. Except in the extreme north the Glacial Sand and Gravel with undifferentiated Head is underlain by London Clay. The surface of the drift slopes gently southwards, from about 260 ft in the north to around 150 ft in the south, and is dissected by several streams, some of which have exposed the underlying solid rocks. Sand and gravel has been dug extensively near Hollybush [022 862], but otherwise workings have been on a small scale only.

The assessment of resources is based on information from 14 Mineral Assessment Unit boreholes and 6 other records. The mineral has a mean thickness of 3.2 m, with a maximum recorded thickness of 6.6 m in borehole 08 SW 13. No mineral is present in boreholes 08 SW 18 and 08 SW 22 at Iver Heath, where Head, and less than 1.0 m of Glacial Sand and Gravel respectively overlie the London Clay. The estimated volume

Table 6. Data from assessment boreholes: block D

| Borehole No. | Recorded thickness | | Mean grading percentage | | | | | |
|--------------|--------------------|----------------|-------------------------|--------------------------------|-----------------------------|-------------|-------------|---------------|
| | Mineral (m) | Overburden (m) | Fines | Fine sand | Medium sand | Coarse sand | Fine gravel | Coarse gravel |
| | | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | -4+1mm | -16+4mm | +16mm |
| 98 NE 104 | 3.0 | 0.1 | 13 | 8 | 29 | 9 | 14 | 27 |
| 98 NE 105 | 4.5 | 2.2 | 7 | 11 | 22 | 9 | 25 | 26 |
| 98 NE 107 | 5.6 | 0.3 | 4 | 17 | 20 | 9 | 22 | 28 |
| 98 NE 109 | Absent | - | - | - | - | - | - | - |
| 98 NE 110 | 6.4 | 0.4 | 8 | 14 | 22 | 6 | 18 | 32 |
| 98 NE 111 | 4.9 | 0.1 | 6 | 16 | 35 | 8 | 19 | 16 |
| 98 NE 121 | 5.0 | 0.5 | 13 | 19 | 24 | 6 | 23 | 15 |
| 98 NE 123 | 16.7 | 4.5 | 10 | 17 | 33 | 6 | 18 | 16 |
| 98 NE 124 | 2.8 | 0.2 | 9 | 16 | 56 | 4 | 8 | 7 |
| 98 NW 52 | 2.9 | 0.6 | 11 | 13 | 25 | 14 | 18 | 19 |
| 98 NW 54 | 4.0 | 0.2 | 11 | 9 | 24 | 8 | 21 | 27 |

Table 7. Data from assessment boreholes: block E

| Borehole No. | Recorded thickness | | Mean grading percentage | | | | | |
|--------------|--------------------|----------------|-------------------------|--------------------------------|-----------------------------|-------------|-------------|---------------|
| | Mineral (m) | Overburden (m) | Fines | Fine sand | Medium sand | Coarse sand | Fine gravel | Coarse gravel |
| | | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | -4+1mm | -16+4mm | +16mm |
| 08 NW 99 | 2.1 | 0.3 | 7 | 3 | 10 | 12 | 33 | 35 |
| 08 NW 102 | 8.9 | 1.1 | 3 | 3 | 13 | 15 | 27 | 39 |
| 08 NW 107 | 4.5 | 2.3 | 6 | 1 | 4 | 11 | 35 | 43 |
| 08 NW 112 | 8.4 | 1.1 | 10 | 5 | 15 | 13 | 28 | 29 |
| 08 NW 113 | 9.0 | 1.5 | 8 | 2 | 12 | 14 | 32 | 32 |
| 08 NW 114 | 5.0 | 0.4 | 6 | 5 | 11 | 12 | 24 | 42 |
| 08 NW 115 | 6.1 | 0.8 | 6 | 6 | 16 | 12 | 25 | 35 |
| 98 NE 106 | 11.1 | 1.4 | 5 | 5 | 16 | 11 | 21 | 42 |
| 98 NE 118 | 5.3 | 0.2 | 11 | 5 | 12 | 13 | 24 | 35 |
| 98 NE 125 | Absent | - | - | - | - | - | - | - |
| 99 SE 16 | 5.6 | 0.3 | 5 | 4 | 10 | 13 | 25 | 43 |
| 99 SE 17 | 7.7 | 0.2 | 6 | 4 | 11 | 15 | 24 | 40 |
| 99 SE 18 | 7.5 | 0.2 | 5 | 3 | 11 | 15 | 26 | 40 |

Table 8. Data from assessment boreholes: block F

| Borehole No. | Recorded thickness | | Mean grading percentage | | | | | |
|--------------|--------------------|----------------|-------------------------|--------------------------------|-----------------------------|-------------|-------------|---------------|
| | Mineral (m) | Overburden (m) | Fines | Fine sand | Medium sand | Coarse sand | Fine gravel | Coarse gravel |
| | | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | -4 + 1mm | -16 + 4mm | +16mm |
| 98 SW 22 | 1.0 | 1.2 | 8 | 13 | 19 | 7 | 23 | 30 |
| 98 SW 23 | 3.4 | 0 | 10 | 10 | 15 | 10 | 21 | 34 |
| 98 SW 24 | 3.0 | 0.4 | 17 | 8 | 8 | 16 | 28 | 23 |
| 98 SW 25 | 2.7 | 0.3 | 8 | 16 | 25 | 11 | 15 | 25 |
| 98 SW 26 | 3.7 | 2.5 | 7 | 6 | 31 | 12 | 23 | 21 |
| 98 SW 27 | 2.5 | 0.4 | 2 | 5 | 28 | 12 | 23 | 30 |
| 98 SW 28 | 7.5 | 0.1 | 10 | 22 | 22 | 9 | 18 | 19 |
| 98 NW 40 | 2.6 | 0.2 | 12 | 12 | 15 | 9 | 20 | 32 |
| 98 NW 45 | 6.0 | 0 | 6 | 11 | 26 | 9 | 23 | 25 |
| 98 NW 51 | 11.3 | 0.1 | 12 | 14 | 27 | 9 | 20 | 18 |
| 98 NW 57 | 4.6 | 0.1 | 7 | 7 | 23 | 9 | 25 | 29 |

Table 9. Data from assessment boreholes: block G

| Borehole No. | Recorded thickness | | Mean grading percentage | | | | | |
|--------------|--------------------|----------------|-------------------------|--------------------------------|-----------------------------|-------------|-------------|---------------|
| | Mineral (m) | Overburden (m) | Fines | Fine sand | Medium sand | Coarse sand | Fine gravel | Coarse gravel |
| | | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | -4 + 1mm | -16 + 4mm | +16mm |
| 98 NE 108 | 4.8 | 0.4 | 5 | 14 | 22 | 12 | 26 | 21 |
| 98 NE 115 | 5.0 | 2.9 | 5 | 9 | 24 | 9 | 25 | 28 |
| 98 NE 116 | 5.1 | 0.1 | 13 | 9 | 18 | 10 | 24 | 26 |
| 98 NE 119 | 5.6 | 0.9 | 7 | 11 | 30 | 10 | 21 | 21 |
| 98 NE 120 | 4.6 | 0 | 8 | 7 | 21 | 12 | 32 | 20 |
| 98 SE 33 | 6.2 | 0.3 | 4 | 5 | 14 | 11 | 28 | 38 |
| 98 SE 35 | 2.0 | 0.3 | 7 | 8 | 31 | 9 | 23 | 22 |
| 98 SE 37 | Absent | - | - | - | - | - | - | - |
| 98 SE 41 | 4.5 | 1.4 | 17 | 6 | 21 | 9 | 23 | 24 |
| 98 SE 44 | 4.6 | 0.1 | 12 | 14 | 39 | 6 | 17 | 12 |

of mineral is 46 million m³ ± 33 per cent. The overburden is generally less than 1.0 m thick, but in a few places there are developments of Head, for example, 3.4 m in borehole 08 SW 7 and 3.5 m in borehole 08 NW 104. The exact extent of the Head is not known.

The fines content of the mineral is usually 10 per cent or less, but it is higher in two boreholes, the recorded maximum being 19 per cent, in 08 NW 104. The percentage of sand is usually between 30 and 50 per cent and is higher in only one borehole, 08 SW 7, where it is 64 per cent. The proportion of gravel usually ranges between 46 and 62 per cent, but is as low as 26 per cent in borehole 08 SW 7 and 31 per cent in 08 NW 104 and as high as 66 per cent in borehole 08 NW 103.

The mean grading for the block is fines 6 per cent, sand 38 per cent, gravel 56 per cent.

Block I

Extending east-west for over 3 miles, this block is bounded to the south by the urban area of Slough, and to the north by the back-slope of the Boyn Hill Terrace. The mineral is composed entirely of the Boyn Hill and Taplow Terrace deposits of the River Thames, predominantly the former. The similarity of the sands and gravels of the two terraces is such that they may be regarded as one mineral deposit. The terrace deposits are underlain by Reading Beds in the west and London Clay in the east. Sand and gravel has been dug on a commercial scale at several places in both terraces; in 1971 there were active workings at Bottom Walton [945 834], Middle Green [004 801] and Sawyers Green [016 802].

The assessment of resources is based on information from 20 Mineral Assessment Unit boreholes and 29 other records. The mean mineral thickness is 4.1 m, ranging up to 9.1 m in borehole 255/185. Less than 1.0 m of sand and gravel is present in one borehole only, 98 SE 38, at Stoke Poges. In borehole 98 SE 43 the mineral is divided into a lower part, 1.3 m thick, and an upper part, 2.6 m thick, by 1.2 m of clay containing a few pebbles. The estimated volume of mineral is 70 million m³ ± 21 per cent.

The sand and gravel of the Taplow Terrace is everywhere covered by an overburden of River Brickearth, which is invariably thicker than 1.0 m and reaches a maximum of 4.4 m in borehole 08 SW 16. The average thickness of the Brickearth is 2.6 m. The overburden of the Boyn Hill Terrace is commonly less than 1.0 m thick, but there are local unmapped patches of either Brickearth or Head, that reach a thickness of 2.2 m in borehole 98 SE 34.

The fines content in the 19 boreholes from which samples were collected ranges from 3 to only 11 per cent, except in borehole 98 SE 45 where it increases to 19 per cent, indicating a widespread consistency in the nature of the

deposit. Similarly, the proportion of sand generally has a small range, between 36 and 45 per cent, exceeded only in one borehole, 98 SE 34, near Farnham Royal, where it is 51 per cent. The proportion of gravel ranges from 38 per cent in borehole 98 SE 45 to 59 per cent in the lower part of the mineral in borehole 98 SE 43. The mean grading for the block is fines 7 per cent, sand 42 per cent, gravel 51 per cent.

SAND IN THE READING BEDS

The beds of sand in the lower subdivision of the Reading Beds fall within the definition of mineral, but they have not been included in the above assessments because a comprehensive investigation would have necessitated an unjustified amount of drilling through the Reading Beds clays. However, where sands were found to underlie gravel-bearing deposits closely, drilling was continued in order to investigate their grading characteristics, as they are used commercially for making mortars, for example, in the quarry [975 885] west of Bulstrode Park.

At an early stage in the investigations two deep boreholes, 98 SE 45 [9979 8369] and 98 NE 111 [9649 8680] were sunk to prove the thickness and stratigraphical position of the sands. Both penetrated the London Clay and thick (up to 9.4 m) Reading Beds clays to prove 3.0 m+ of sand in a single bed in borehole 98 SE 45 and 3.3 m in three beds in borehole 98 NE 111. In both boreholes the sand is predominantly fine grained and is associated with 30 and 42 per cent of silt respectively, high percentages by comparison with other samples. Twelve other boreholes encountered the sands at the base of the Reading Beds and showed that locally they thicken and become coarser grained, particularly in the north-west. The evidence is incomplete because drilling was normally stopped before the base of the Reading Beds was reached, but the existing information proves that the sands are up to 6.7 m in thickness (in borehole 99 SW 4): the data is given in Table 12.

Grading analyses were obtained of 49 samples of Reading Beds sands; the results are given separately in the borehole records (Appendix C). The mean grading of the 49 samples is fines 14 per cent, fine sand 49 per cent, medium sand 35 per cent, coarse sand 1 per cent, gravel 1 per cent. Thus most of the deposit is fine to medium sand and it is notable that no sample contained more than 2 per cent of coarse sand. The small gravel fraction is most commonly present in the top of the sand, and is probably the result of contamination from the overlying gravel deposits during drilling operations. In one borehole however, 98 NW 60, the rare occurrence of a thin bed (10 mm) of fine to medium flint gravel was noted at 5.3 m below the top of the sand. The fines fraction is predominantly of silt, with clay occurring in very small amounts only.

Table 10. Data from assessment boreholes: block H

| Borehole No. | Recorded thickness | | Mean grading percentage | | | | | |
|--------------|--------------------|----------------|-------------------------|--------------------------------|-----------------------------|-------------|-------------|---------------|
| | Mineral (m) | Overburden (m) | Fines | Fine sand | Medium sand | Coarse sand | Fine gravel | Coarse gravel |
| | | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | -4+1mm | -16+4mm | +16mm |
| 08 SW 6 | 5.0 | 0.4 | 4 | 12 | 26 | 10 | 23 | 25 |
| 08 SW 7 | 1.4 | 3.4 | 10 | 22 | 36 | 6 | 19 | 7 |
| 08 SW 8 | 5.0 | 0.7 | 5 | 8 | 29 | 9 | 23 | 26 |
| 08 SW 12 | 6.6 | 0.8 | 3 | 7 | 19 | 9 | 22 | 40 |
| 08 SW 13 | 6.6 | 0.8 | 6 | 5 | 20 | 12 | 31 | 26 |
| 08 SW 14 | 1.4 | 0.5 | 14 | 4 | 27 | 9 | 23 | 23 |
| 08 SW 17 | 5.5 | 0.6 | 7 | 6 | 20 | 11 | 22 | 34 |
| 08 SW 18 | Absent | - | - | - | - | - | - | - |
| 08 SW 19 | 1.8 | 0.6 | 9 | 7 | 24 | 11 | 23 | 26 |
| 08 SW 21 | 3.0 | 0.8 | 7 | 5 | 16 | 10 | 25 | 37 |
| 08 SW 22 | Absent | - | - | - | - | - | - | - |
| 08 NW 103 | 3.2 | 0.2 | 2 | 4 | 18 | 10 | 26 | 40 |
| 08 NW 104 | 1.3 | 3.5 | 19 | 3 | 34 | 13 | 19 | 12 |
| 08 NW 108 | 3.1 | 0.4 | 10 | 5 | 13 | 13 | 27 | 32 |

Table 11. Data from assessment boreholes: block I

| Borehole No. | Recorded thickness | | Mean grading percentage | | | | | |
|--------------|--------------------|----------------|-------------------------|--------------------------------|-----------------------------|-------------|-------------|---------------|
| | Mineral (m) | Overburden (m) | Fines | Fine sand | Medium sand | Coarse sand | Fine gravel | Coarse gravel |
| | | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | -4+1mm | -16+4mm | +16mm |
| 98 SE 34 | 2.2 | 2.2 | 7 | 15 | 29 | 7 | 18 | 24 |
| 98 SE 36 | 2.7 | 0.6 | 10 | 14 | 20 | 10 | 24 | 22 |
| 98 SE 38 | Absent | - | - | - | - | - | - | - |
| 98 SE 39 | 2.0 | 1.8 | 7 | 8 | 20 | 11 | 27 | 27 |
| 98 SE 40 | 3.1 | 2.1 | 11 | 9 | 17 | 13 | 27 | 23 |
| 98 SE 42 | 7.4 | 0.2 | 5 | 9 | 24 | 12 | 25 | 25 |
| 98 SE 43 | (a) 2.6 (b) 1.3 | 1.7 | 3 4 | 8 5 | 20 23 | 11 9 | 20 26 | 38 33 |
| 98 SE 45 | 1.4 | 1.1 | 19 | 30 | 12 | 1 | 7 | 31 |
| 98 SE 46 | 5.4 | 0.6 | 8 | 4 | 27 | 7 | 33 | 21 |
| 98 SE 47 | 5.1 | 3.6 | 6 | 4 | 22 | 16 | 26 | 26 |
| 98 SE 48 | 4.8 | 0.3 | 4 | 5 | 25 | 11 | 30 | 25 |
| 98 SW 29 | 5.2 | 0.2 | 9 | 11 | 23 | 11 | 45 | 1 |
| 98 SW 30 | 4.0 | 0.2 | 7 | 7 | 22 | 11 | 26 | 27 |

| | | | | | | | | |
|----------|-----|-----|----|----|----|----|----|----|
| 08 SW 9 | 6.2 | 0.7 | 4 | 6 | 25 | 13 | 24 | 28 |
| 08 SW 10 | 6.6 | 3.0 | 4 | 5 | 22 | 14 | 25 | 30 |
| 08 SW 11 | 4.0 | 2.2 | 6 | 6 | 14 | 16 | 32 | 26 |
| 08 SW 15 | 6.7 | 0.7 | 11 | 7 | 20 | 15 | 27 | 20 |
| 08 SW 16 | 3.4 | 4.4 | 5 | 6 | 23 | 15 | 24 | 27 |
| 08 SW 20 | 2.9 | 0.6 | 9 | 13 | 20 | 12 | 26 | 20 |
| 08 SW 24 | 4.3 | 0.2 | 7 | 7 | 23 | 12 | 30 | 21 |

Table 12. The thickness and mean grading percentages of Reading Beds sands proved in assessment boreholes

| Borehole No. | Thickness proved (m) | Mean grading percentage | | | | |
|--------------|----------------------|-------------------------|--------------------------------|-----------------------------|-------------------|---------------|
| | | Fines | Fine sand | Medium sand | Coarse sand | Gravel |
| | | -1/16mm | $-\frac{1}{4} + 1/16\text{mm}$ | $-1 + \frac{1}{4}\text{mm}$ | $-4 + 1\text{mm}$ | $+4\text{mm}$ |
| 98 NW 40 | 3.0 | 11 | 45 | 43 | 1 | 0 |
| 98 NW 48 | 2.7+ | 12 | 83 | 4 | 1 | 0 |
| 98 NW 53 | 0.9+ | 18 | 62 | 14 | 2 | 4 |
| 98 NW 60 | 6.0+ | 9 | 20 | 68 | 2 | 1 |
| 98 SW 27 | 1.9 | 3 | 21 | 75 | 1 | 0 |
| 98 SW 30 | 4.3 | 11 | 61 | 25 | 1 | 2 |
| 98 SE 36 | 4.5 | 5 | 43 | 50 | 1 | 1 |
| 98 SE 38 | 5.5 | 8 | 67 | 23 | 2 | 0 |
| 98 SE 45 | 3.0+ | 30 | 56 | 12 | 2 | 0 |
| 98 NE 111 | 3.3 | 42 | 55 | 2 | 1 | 0 |
| 98 NE 117 | 1.8 | 6 | 52 | 41 | 1 | 0 |
| 99 SE 15 | 3.3 | 10 | 25 | 60 | 1 | 4 |
| 99 SW 4 | 6.7 | 20 | 23 | 55 | 2 | 0 |
| 09 SW 33 | 5.1 | 8 | 74 | 17 | 1 | 0 |

LIST OF QUARRIES

In 1972 six sand and gravel quarries were known to be operational, and workings in five quarries had been discontinued. A list of active and disused quarries is given below in Table 13.

Table 13. List of quarries

| Location | Grid Reference |
|------------------------|----------------|
| Active | |
| Bottom Walton | 945 834 |
| West of Bulstrode Park | 975 885 |
| The Pickeridge | 985 859 |
| Near Chalfont St Peter | 018 914 |
| Middle Green | 004 801 |
| Sawyers Green | 016 802 |
| Disused | |
| Hollybush | 022 862 |
| Near Penn | 905 918 |
| Hedgerley Park | 976 866 |
| Gallions Lane | 994 833 |
| Near Iver | 035 802 |

References

- ALLEN, V. T. 1936. Terminology of medium-grained sediments. Rep. Natn. Res. Coun. Wash. 1935-1936. App. 1, Rept. Comm. on sedimentation, pp. 18-47.
- ANON. 1948. Mineral Resources of the United States. Bur. M. Geol. Surv., pp. 14-17. (Washington, D. C.: Public Affairs Press).
- 1967. BS 1377: Methods of testing soils for civil engineering purposes. (London: British Standards Institute) 234 pp.
- ARCHER, A. A. 1969. Background and problems of an assessment of sand and gravel resources in the United Kingdom. Proc. 9th Commonw. Min. Metall. Congr. 1969, Vol. 2, Mining and Petroleum Geology, pp. 495-508. (London: The Institution of Mining and Metallurgy).
- 1970a. Standardisation of the size classification of naturally occurring particles. Geotechnique, Vol. 20, pp. 103-107.
- 1970b. Making the most of metrication. Quarry Mgrs' J., Vol. 54, No. 6. pp. 223-227.
- ATTERBERG, A. 1905. Die rationelle Klassifikation der Sande und Kiese. Chem. Z., Vol. 29, pp. 195-198.
- HARE, F. K. 1947. The geomorphology of a part of the Middle Thames. Proc. Geol. Ass., Vol. 58, pp. 294-339.
- LANE, E. W. and others. 1947. Report of the sub-committee on sediment terminology. Trans. Am. Geophys. Un., Vol. 28, pp. 936-938.
- PETTIJOHN, F. J. 1957. Sedimentary Rocks, 2nd Ed. (London: Harper and Row).
- SHERLOCK, R. L. 1924. The superficial deposits of South Buckinghamshire and South Hertfordshire and the old course of the Thames. Proc. Geol. Ass., Vol. 35, pp. 1-28.
- and NOBLE, A. H. 1922. The geology of the country around Beaconsfield. Mem. Geol. Surv. G. B.
- THURRELL, R. G. 1971. The assessment of mineral resources with particular reference to sand and gravel. Quarry Mgr's J., Vol. 55, pp. 19-25.
- TWENHOFEL, W. H. 1937. Terminology of the fine-grained mechanical sediments. Rep. Natn. Res. Coun. Wash. 1936-1937. App. 1, Rept. Comm. on sedimentation, pp. 81-104.
- UDDEN, J. A. 1914. Mechanical Composition of clastic sediments. Bull. Geol. Soc. Am., Vol. 25, pp. 655-744.
- WENTWORTH, C. K. 1922. A scale of grade and class terms for clastic sediments. J. Geol., Vol. 30, pp. 377-392.
- 1935. The terminology of coarse sediments. Bull. Natn. Res. Coun. Wash., No. 98, pp. 225-246.
- WHITE, H. J. O. 1899. On the origin of the High Level Gravel with Triassic debris adjoining the valley of the Upper Thames. Proc. Geol. Ass., Vol. 15, pp. 157-174.
- WILLMAN, H. B. 1942. Geology and mineral resources of the Marseilles, Ottawa and Streater quadrangles. Bull. Illinois State Geol. Surv. 66, pp. 343-344.
- WOOLDRIDGE, S. W. 1938. The glaciation of the London Basin and the evolution of the Lower Thames drainage system. Q. J. Geol. Soc. Lond., Vol. 94, pp. 627-667.

Appendix A: Assessment Procedure

1. Within a resource block, a statistical assessment is made for a sampled area of mineral greater than 2 km² and containing a minimum of five evenly-spaced boreholes.
2. If the sampled area of mineral is between 0.25 and 2 km² and contains one or two suitably sited boreholes an inferred assessment is made. An inferred assessment may also be attempted for any area where the deduced mineral content is small and which consequently has not been sampled by boreholes. No specific level of accuracy is claimed for such subjective assessments.
3. No assessment is attempted for an area of mineral less than 0.25 km².

Statistical Assessment

4. The simple methods used in the calculations are consistent with the amount of data provided by the survey. Conventional confidence limits (that is, the tolerance on the estimate or the range within which the result falls) are calculated at the two-sided 95 per cent confidence level, that is, there is a 2½ per cent or 1 in 40 chance that the result exceeds the stated upper limit and a corresponding 2½ per cent chance that it is less than the stated lower limit.
5. The volume estimate (V) for the sampled mineral in a given block is the product of the two variables, the sampled areas (A) and the mean thickness (l) calculated from the individual thicknesses at the sample points. The standard deviations for these variables are related such that

$$S_V = \sqrt{S_A^2 + S_l^2} \dots\dots\dots (1)$$

where S_V, S_A and S_l are the standard deviations for volume, area and mean thickness, expressed as proportions of V, A and l, respectively.

6. The above relationship may be transposed such that

$$S_V = S_l \sqrt{[1 + (\frac{S_A}{S_l})^2]} \dots\dots\dots (2)$$

From this it can be seen that as $(\frac{S_A}{S_l})$ tends to 0, S_V tends to S_l. If, therefore, the standard deviation for area is small with respect to that for mean thickness, the standard deviation for volume approximates to that for mean thickness.

7. Given that the number of approximately

evenly spaced sample points in the sampled area is n, with mineral thickness measurements l₁, l₂, ... l_n, then the best estimate of mean thickness, $\bar{l} =$

$$\frac{\sum(l_1 + l_2 \dots l_n)}{n}$$

For groups of closely spaced boreholes a discretionary weighting factor may be applied to avoid bias (see note on weighting below). The standard deviation for mean thickness, S_l expressed as a proportion of the mean thickness is given by

$$S_l = \frac{1}{\bar{l}} \sqrt{\frac{\sum(l - \bar{l})^2}{(n - 1)}} \text{ where } l \text{ is any}$$

value in the series l₁ to l_n.

8. The sampled area A in each resource block is coloured pink on the map. Wherever possible, calculations relate to the mineral within mapped geological boundaries (which may not necessarily correspond to the limits of a deposit). Generally, therefore, the only error in determining the area is the negligible planimetering error and S_A is 0. Where the area is not defined by a mapped boundary, that is, where the boundary is inferred (and the distinctive symbol is used), experience suggests that S_A is small relative to S_l.

The relationship

$$\frac{S_A}{S_l} \leq \frac{1}{3} \text{ is assumed in all cases.}$$

It follows from equation (2) that

$$S_l \leq S_V \leq 1.05 S_l \dots\dots\dots (3)$$

9. The two-sided 95 per cent confidence limits, L_l, for the estimate of mean thickness of mineral in the sampled area, for values of n between 5 and 20, may be expressed in absolute units.

$$\bar{l} \pm (t \times S_l \times \bar{l}),$$

or as a percentage

$$\bar{l} \pm (t \times S_l \times 100) \text{ per cent}$$

where t is Student's t at the two-sided 95 per cent confidence level for (n - 1) degrees of freedom and is evaluated by reference to statistical tables. In applying Student's t it is assumed that the measurements are distributed normally.

10. Values of t at the two-sided 95 per cent confidence level for values of n up to 20 are set out below:

| n | t | n | t |
|----|--------|----|-------|
| 1 | ∞ | 11 | 2.228 |
| 2 | 12.706 | 12 | 2.201 |
| 3 | 4.303 | 13 | 2.179 |
| 4 | 3.182 | 14 | 2.160 |
| 5 | 2.776 | 15 | 2.145 |
| 6 | 2.571 | 16 | 2.131 |
| 7 | 2.447 | 17 | 2.120 |
| 8 | 2.365 | 18 | 2.110 |
| 9 | 2.306 | 19 | 2.101 |
| 10 | 2.262 | 20 | 2.093 |

(From Table 12, *Biometrika Tables for Statisticians*, Volume 1, Second Ed. Cambridge University Press, 1962).

The value of t, 1.96, when n is infinity is used when n is greater than 20.

11. In calculating the two-sided 95 per cent confidence limits for volume, L_V , the following inequality corresponding to (3) is applied:

$$L_1 \leq L_V \leq 1.05 L_1$$

12. In summary, for values of n between 5 and 20, L_V is calculated as

$$\frac{1.05 \times t}{\bar{l}} \times \sqrt{\frac{\sum (l - \bar{l})^2}{n(n-1)}} \times 100 \text{ per cent}$$

and when n is greater than 20, as

$$\frac{1.05 \times 1.96}{\bar{l}} \times \sqrt{\frac{\sum (l - \bar{l})^2}{n(n-1)}} \times 100 \text{ per cent}$$

13. An illustration of the procedures outlined above is given in Figs. 3 and 4, where a volume estimate with confidence limits at the 95 per cent level of confidence is derived from fictitious data.

Inferred Assessments

14. If the sampled area of mineral in a resource block is between 0.25 km² and 2 km² an assessment is inferred based on geological and topographical information usually supported by the data from one or two suitably sited boreholes. The volume of mineral is calculated as the product of the sampled area, chosen from interpretation of field data as in the statistical assessment, and the judged average mineral thickness. Confidence limits are not calculated.
15. In some cases in addition to the sampled area of mineral a resource block includes an area left uncoloured on the map, generally based on interpretation of mapping and sample data. On occasions some mineral

may be present in such areas and an assessment is made on the basis of the average mineral thickness deduced from exposures and any other evidence available.

Note on Weighting

16. The thickness of a deposit at any point in a sampled area may be governed solely by the position of the point in relation to a broad trend. However, most sand and gravel deposits in addition exhibit a random pattern of local, and sometimes considerable, variation in thickness.
17. Thus, in estimating mean thickness of sand and gravel from a number of data points in a sampled area only the use of simple weighting factors is justified, and the distribution of data points need be only approximately regular. In practice, equal weighting can often be applied to thicknesses at all data points within the sampled area. If, however, there is a distinctly unequal distribution of points, the thicknesses must be weighted to avoid the bias this creates. Weighting factors are determined by first dividing the sampled area into broad zones, to each of which a value roughly proportional to its area is assigned. This value is then shared between the data points within the zone.

Appendix B: Classification and Description of Sand and Gravel

The terminology commonly used by geologists when describing sedimentary rocks (Wentworth, 1922) is not entirely satisfactory for the purposes of this Report. For example, Wentworth proposed that a deposit should be described as a 'gravelly sand' when the proportion of sand is greater than that of gravel which must exceed 10 per cent, fines and oversize materials (that is, with diameter greater than 64 mm) being less than 10 per cent. Because deposits containing more than 10 per cent fines (material less than 1/16 mm) are not embraced by this system a modified binary classification based on Willman (1942) has been adopted.

For the purposes of assessing resources of sand and gravel a classification should take account of economically important characteristics of the deposit, in particular the absolute content of fines and the ratio of sand to gravel.

When the fines content exceeds 40 per cent the material is considered to be not potentially workable and falls outside the definition of mineral. Deposits which contain 40 per cent fines or less are classified primarily on the ratio of sand to gravel and qualified in the light of the fines content, as follows: less than 10 per cent fines—no qualification; 10 per cent or more, but less than 20 per cent fines—'clayey'; 20 to 40 per cent fines—'very clayey'.

The term 'clay' (as written, with single quote marks), is used to describe all material passing

BLOCK CALCULATION

1:25 000 Sheet } Fictitious
Block }

| | |
|-------------------------------|---|
| Area | Volume |
| Block: 11.08 km ² | Overburden: 21 million m ³ |
| Mineral: 8.32 km ² | Mineral: 38 million m ³ |
| Thickness | 95 per cent confidence limits of the estimate of mineral volume |
| Overburden: 2.5 m | Percentage: ± 53 per cent |
| Mineral: 4.5 m | Units of volume: ± 20 million m ³ |

| Thickness estimate (l = thickness) Measurements in metres | | | | | | |
|--|-------------|---------------------------|----------|---------------------------|----------|--|
| Sample point | Weighting w | Overburden | | Mineral | | Remarks |
| | | lo | wlo | lm | wlm | |
| SE 14 | 1 | 1.5 | 1.5 | 5.2 | 5.2 | MAU Boreholes |
| SE 18 | 1 | 3.3 | 3.3 | nil | - | |
| SE 20 | 1 | nil | - | 2.1 | 2.1 | |
| SE 22 | 1 | 0.7 | 0.7 | 9.3 | 9.3 | |
| SE 23 | 1 | 6.2 | 6.2 | 5.7 | 5.7 | |
| SE 24 | 1 | 4.3 | 4.3 | 6.5 | 6.5 | |
| SE 17 | 1/2 | 1.2 | 1.6 | 4.2 | 3.9 | |
| 123/45 | 1/2 | 2.0 | | 3.6 | | |
| 1 | 1/4 | 2.4 | 2.5(25)* | 3.4 | 3.6(25)* | Close group of four boreholes (commercial) |
| 2 | 1/4 | 4.5 | | 0.8 | | |
| 4 | 1/4 | 0.4 | | 4.3 | | |
| 5 | 1/4 | 2.8 | | 6.0 | | |
| Totals | Σw = 8 | Σwlo = 20.1(25)* | | Σwlm = 36.3(25)* | | |
| Averages | | l _o = 2.5(16)* | | l _m = 4.5(41)* | | |

Calculation of Confidence Limits

| l | (l - l̄) | (l - l̄) ² |
|----------------|--------------------------------|-----------------------|
| 5.2 | 0.7 | 0.49 |
| nil | 4.5 | 20.25 |
| 2.1 | 2.4 | 5.76 |
| 9.3 | 4.8 | 23.04 |
| 5.7 | 1.2 | 1.44 |
| 6.5 | 2.0 | 4.00 |
| 3.9 | 0.6 | 0.36 |
| 3.6 | 0.9 | 0.81 |
| Σl = 36.3 (25) | Σ(l - l̄) ² = 56.15 | |
| n = 8 | | |
| l̄ = 4.5 (41) | | |
| ≈ 4.5 | | |

n = 8
t = 2.365

$$L_V = 1.05 \frac{t}{\bar{l}} \sqrt{\frac{\sum(l - \bar{l})^2}{n(n-1)}} \times 100$$

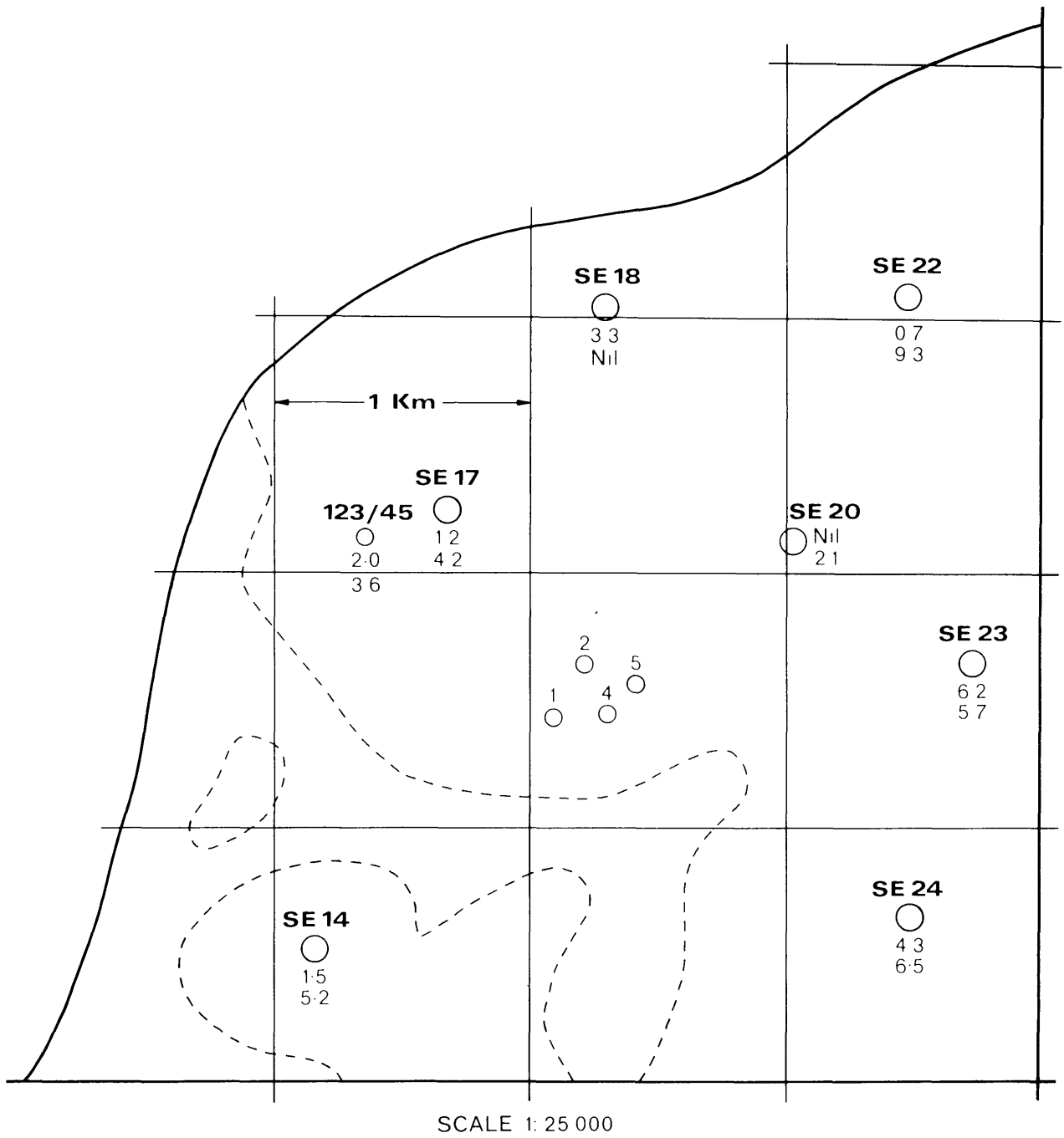
$$= 1.05 \times \frac{2.365}{4.541} \sqrt{\frac{56.15}{8 \times 7}} \times 100$$

$$= 54.77$$

≈ 55%

* The figures in brackets are additional decimal places used only in the calculation of confidence limits.

Fig. 3. Example of resource block assessment: statement and calculation



SE 17

- M. A. U. borehole
- Other boreholes
- 1.2 — Overburden } Thickness in metres
- 4.2 — Mineral }

—— Boundary of resource block - - - - Boundary of sand and gravel deposit

Fig. 4. Example of resource block assessment: map of a fictitious block

1/16 mm. Thus it has no mineralogical significance and includes particles falling within the size limits of silt. Wherever the term clay does not appear in single quotation marks the normal meaning applies.

The ratio of sand to gravel defines the boundaries between Sand, Pebbly Sand, Sandy Gravel and Gravel (at 19:1, 3:1 and 1:1).

Thus it is possible to classify the mineral into one of twelve descriptive categories (see Fig. 5). The procedure is as follows.

1. Classify according to ratio of sand to gravel.
2. Describe fines.

For example, a deposit grading: gravel, 11 per cent; sand, 70 per cent; fines, 19 per cent is classified as 'clayey' pebbly sand. This short description is included in the borehole log (see Note 10, p.28).

Many differing proposals exist for the classification of the grain size of sediments (Atterberg, 1905; Udden, 1914; Wentworth, 1922; Wentworth, 1935; Allen, 1936; Twenhofel, 1937; Lane and others, 1947). As Archer (1970 a, b) has emphasised, there is a pressing need for a simple metric scale acceptable to both scientific and engineering interests, for which the class limit sizes correspond closely with certain marked changes in the natural properties of mineral particles. For example, there is an important change in the degree of cohesion between particles at about the 1/16 mm size, which approximates to the generally accepted boundary between silt and sand. In this and other respects the system shown in Table 13, used in this report, is satisfactory. It is based on Udden's geometric scale and a simplified form of Wentworth's terminology.

The fairly wide intervals in the scale are consistent with the general level of accuracy of the quantitative assessments of the resource blocks. Three sizes of sand are recognised, fine ($-1/4 + 1/16$ mm), medium ($-1 + 1/4$ mm) and coarse ($-4 + 1$ mm). The boundary at 16 mm distinguishes a range of finer gravel ($-16 + 4$ mm), often characterised by abundance of worn tough pebbles of vein quartz, from coarser ranges often of notably different average composition. The boundary at 64 mm distinguishes pebbles from cobbles. The term 'gravel' is used loosely to denote both pebble-sized and cobble-sized material.

The size distribution of borehole samples is determined by sieve analysis, and is presented by the laboratory as logarithmic cumulative curves (see, for example, British Standard 1377:67). In this report the grading is tabulated on the borehole record sheets (Appendix C), the intercepts corresponding with the simple geometric scale 1/16 mm, 1/4 mm, 1 mm, 4 mm, 16 mm, and so on as required. Original sample grading curves are available for reference at the appropriate office of the Institute.

Each bulk sample is described, subjectively, by a geologist at the borehole site. Being based on visual examination, the description of the grading is inexact, the accuracy depending on the experience of the observer. The descriptions recorded are modified, as necessary, when the laboratory results become available for inclusion in Appendix C.

The relative proportions of the rock types present in the gravel fraction are indicated by use of the

words 'and' or 'with'. For example, 'flint and quartz' indicates very approximate equal proportions with neither constituent accounting for less than about 25 per cent of the whole; 'flint with quartz' indicates that flint is dominant and quartz, the accessory rock type, comprises 5 to 25 per cent of the whole. Where the accessory material accounts for less than 5 per cent of the whole, but is still readily apparent, the phrase 'with some' has been used. Rare constituents are referred to as 'trace'.

The terms used in the field to describe the degree of rounding of particles—which is concerned with the sharpness of the edges and corners of a clastic fragment and not the shape—(after Pettijohn, 1957) are as follows.

Angular: showing little or no evidence of wear; sharp edges and corners.

Subangular: showing definite effects of wear. Fragments still have their original form but edges and corners begin to be rounded off.

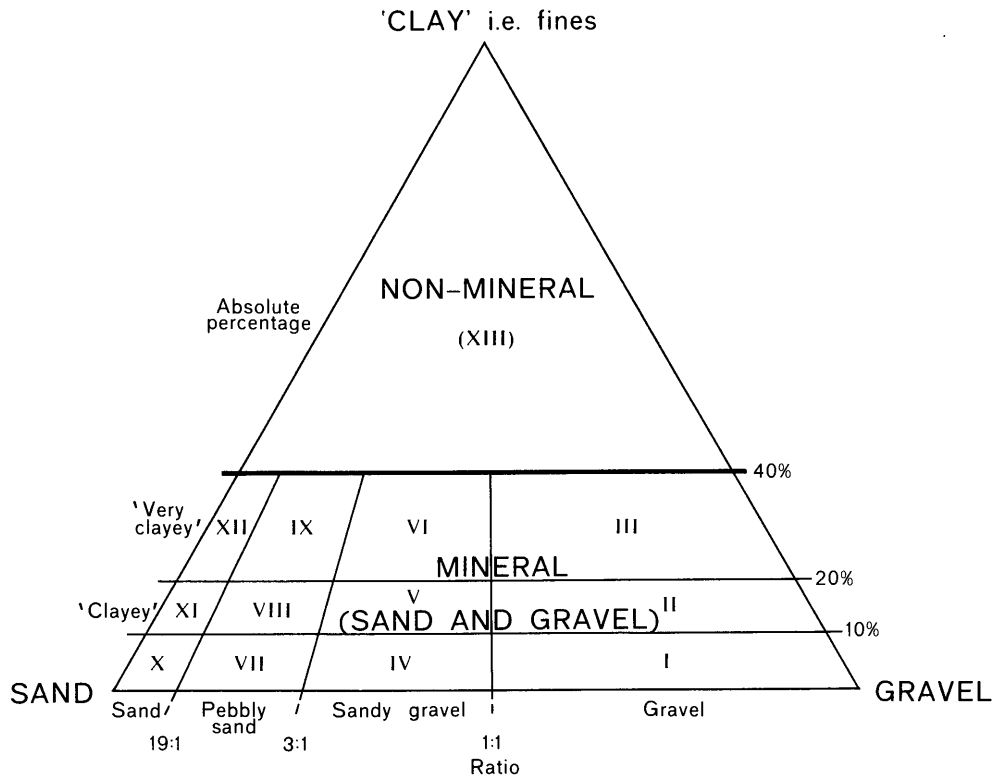
Subrounded: showing considerable wear. The edges and corners are rounded off to smooth curves. Original grain shape is still distinct.

Rounded: original faces almost completely destroyed, but some comparatively flat surfaces may still remain. All original edges and corners have been smoothed off to rather broad curves. Original shape is still apparent.

Well-rounded: no original faces, edges or corners left. The entire surface consists of broad curves; flat areas are absent. The original shape is suggested by the present form of the grain.

Table 13. Classification of gravel, sand and fines

| Size limits | Designation | Qualification | Primary classification |
|-------------|--------------------------|---------------|------------------------|
| 64 mm | Cobble | | Gravel |
| 16 mm | Pebble | Coarse | |
| 4 mm | | Fine | |
| 1 mm | Sand | Coarse | Sand |
| 1/4 mm | | Medium | |
| 1/16 mm | | Fine | |
| | Fines (silt and clay) | | Fines |



- | | | | |
|--------------------|----------------------------|---|---------|
| I | Gravel | } | MINERAL |
| II | 'Clayey' gravel | | |
| III | 'Very clayey' gravel | | |
| IV | Sandy gravel | | |
| V | 'Clayey' sandy gravel | | |
| VI | 'Very clayey' sandy gravel | | |
| VII | Pebbly sand | | |
| VIII | 'Clayey' pebbly sand | | |
| IX | 'Very clayey' pebbly sand | | |
| X | Sand | | |
| XI | 'Clayey' sand | | |
| XII | 'Very clayey' sand | | |
| (XIII) NON-MINERAL | | | |

Fig. 5. Diagram to show the descriptive categories used in the classification of sand and gravel

5. Groundwater Conditions.

Two kinds of entry are made: either the level at which groundwater was encountered is given in metres above Ordnance Datum or, where no groundwater was encountered, this is stated.

6. Type of Drill and Date of Drilling.

Modified shell and auger rigs were used in this survey. The type of machine, the external diameter of the casing used, and the month and year of the completion of the borehole are stated.

7. Overburden, Mineral, Waste and Bedrock.

Overburden is any material other than mineral which occurs between the ground surface and the top of the mineral.

Mineral is defined as sand and gravel which, as part of a deposit, falls within the arbitrary definition of potentially workable material (see p.1).

Waste is any material other than mineral or overburden occurring above bedrock.

Bedrock is the formation, rock type, country rock or rock-head, below which potentially workable sand and gravel will not be found.

Thicknesses are given in metres and feet.

8. The plus sign (+) indicates that the base of the deposit was not reached during drilling.

The borehole log

9. Geological Classification.

A geological classification of the strata encountered in drilling is given whenever possible. (For an explanation of the terms used see p. 5).

10. Lithological Description.

When mineral is recorded a general description based on the mean grading characteristics is followed by more detailed particulars. (For explanation of conventions see Appendix B). A description of other rock types is based on visual field examination.

11. Depth.

The figures relate to depths from surface to base of the strata recorded on the log.

Grading information

12. Sampling.

A continuous series of bulk samples is taken throughout the thickness of sand and gravel. A new sample is commenced whenever there is an appreciable lithological change within the sand and gravel, or for every 1 m of depth (see also p.2).

13. Grading Results.

The limits are as follows: gravel, +4 mm; sand, -4+1/16 mm; fines, -1/16 mm.

14. Exceptionally, the results of the grading of a sample are not available, but an attempt has been made to give grading information by comparing the grading and field descriptions of adjacent samples with the sample in question. Such estimates are shown in square brackets.

15. Mean Grading.

The mean grading for the mineral thickness is the mean of the individual sample gradings, but where the thicknesses of mineral represented by the samples are not constant each grading result is first weighted by its relative thickness.

The results are given for the three main classes, gravel, sand and fines, and for the smaller ranges within these classes.

Note:

- 1) All measurements were made in metres. Approximate imperial conversions appear in brackets.
- 2) Imperial conversions of measurements of the depth and thickness of beds have been rounded off to the nearest 0.5 ft, because a more detailed quotation would imply a higher order of accuracy than could be justified by the original figures. Where the figures have been rounded in this way there may be an apparent slight discrepancy between the sum of the thicknesses and the depths as recorded.

LIST OF ASSESSMENT BOREHOLES

| Borehole No. by sheet quadrant | Grid Reference | Borehole No. | Grid Reference |
|--------------------------------|----------------|------------------|----------------|
| 98 NW 37 | SU 9186 8738 | 98 NE 104 | SU 9579 8980 |
| (pp. 31-51) 38 | 9106 8687 | (pp. 52-73) 105 | 9505 8826 |
| 39 | 9183 8634 | 106 | 9609 8711 |
| 40 | 9148 8552 | 107 | 9574 8674 |
| 42 | 9254 8865 | 108 | 9579 8568 |
| 43 | 9287 8788 | 109 | 9643 8972 |
| 44 | 9273 8662 | 110 | 9630 8770 |
| 45 | 9278 8532 | 111 | 9649 8680 |
| 47 | 9355 8880 | 112 | 9742 8976 |
| 48 | 9359 8724 | 114 | 9711 8744 |
| 49 | 9359 8633 | 115 | 9730 8623 |
| 51 | 9370 8512 | 116 | 9743 8552 |
| 52 | 9462 8864 | 117 | 9924 8910 |
| 53 | 9402 8810 | 118 | 9903 8838 |
| 54 | 9481 8744 | 119 | 9828 8581 |
| 56 | 9460 8645 | 120 | 9919 8570 |
| 57 | 9478 8565 | 121 | 9749 8775 |
| 58 | 9293 8911 | 122 | 9835 8954 |
| 59 | 9350 8938 | 123 | 9602 8933 |
| 60 | 9421 8931 | 124 | 9867 8848 |
| | | 125 | 9931 8631 |
| 98 SE 33 | 9553 8461 | 98 SW 22 | 9083 8259 |
| (pp. 74-91) 34 | 9535 8383 | (pp. 92-100) 23 | 9168 8477 |
| 35 | 9647 8440 | 24 | 9130 8390 |
| 36 | 9660 8355 | 25 | 9173 8305 |
| 37 | 9735 8464 | 26 | 9248 8389 |
| 38 | 9730 8364 | 27 | 9358 8432 |
| 39 | 9718 8285 | 28 | 9389 8318 |
| 40 | 9789 8166 | 29 | 9449 8418 |
| 41 | 9836 8477 | 30 | 9475 8337 |
| 42 | 9825 8338 | | |
| 43 | 9882 8262 | | |
| 44 | 9944 8489 | | |
| 45 | 9979 8369 | | |
| 46 | 9947 8244 | | |
| 47 | 9984 8136 | | |
| 48 | 9990 8308 | | |
| 09 SW 25 | TQ 0054 9409 | 09 SW 29 | TQ 0151 9369 |
| (pp. 101-104) 26 | 0037 9327 | (pp. 105-109) 30 | 0127 9267 |
| 27 | 0080 9239 | 31 | 0149 9168 |
| 28 | 0088 9133 | 32 | 0147 9037 |
| | | 33 | 0238 9023 |

| Borehole No. by sheet quadrant | Grid Reference | Borehole No. | Grid Reference |
|--------------------------------------|----------------|-----------------|----------------|
| 08 NW 98 | TQ 0071 8757 | 08 SW 6 | TQ 0054 8416 |
| (pp. 110-127) 99 | 0061 8548 | (pp. 128-145) 7 | 0050 8327 |
| 100 | 0057 8528 | 8 | 0093 8243 |
| 101 | 0134 8921 | 9 | 0097 8173 |
| 102 | 0134 8833 | 10 | 0106 8068 |
| 103 | 0177 8701 | 11 | 0019 8049 |
| 104 | 0102 8647 | 12 | 0138 8487 |
| 105 | 0231 8936 | 13 | 0147 8325 |
| 106 | 0239 8801 | 14 | 0160 8215 |
| 107 | 0272 8752 | 15 | 0166 8113 |
| 108 | 0269 8671 | 16 | 0163 8053 |
| 109 | 0225 8504 | 17 | 0287 8432 |
| 110 | 0333 8961 | 18 | 0216 8290 |
| 111 | 0349 8873 | 19 | 0272 8161 |
| 112 | 0394 8760 | 20 | 0286 8020 |
| 113 | 0371 8648 | 21 | 0367 8378 |
| 114 | 0363 8517 | 22 | 0357 8296 |
| 115 | 0448 8690 | 23 | 0356 8113 |
| | | 24 | 0008 8227 |
| 99 SE 3 | 9528 9276 | 99 SW 2 | 9062 9139 |
| (pp. 146-167) 4 | 9536 9206 | (pp. 168-176) 3 | 9123 9263 |
| 5 | 9509 9086 | 4 | 9122 9178 |
| 6 | 9690 9232 | 5 | 9132 9049 |
| 7 | 9641 9180 | 6 | 9236 9213 |
| 8 | 9618 9087 | 7 | 9224 9142 |
| 9 | 9771 9264 | 8 | 9344 9270 |
| 10 | 9733 9148 | 9 | 9314 9214 |
| 11 | 9694 9040 | 10 | 9475 9286 |
| 12 | 9806 9323 | | |
| 13 | 9841 9269 | | |
| 14 | 9818 9128 | | |
| 15 | 9866 9042 | | |
| 16 | 9922 9354 | | |
| 17 | 9970 9258 | | |
| 18 | 9983 9165 | | |
| 19 | 9895 9140 | | |
| 20 | 9927 9000 | | |
| 21 | 9821 9198 | | |
| 22 | 9633 9406 | | |
| 23 | 9673 9319 | | |
| 24 | 9739 9387 | | |

THE RECORDS

SU 98 NW 37 9186 8738 Farm Wood, Hedsor

Surface level (+99.1m) +325 ft Overburden 0.3m (1.0 ft)
 Water struck at (+95.9m) Mineral 4.2m (14.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 1.0m+(3.5 ft +)
 February 1971

| | | Thickness | Depth |
|----------------------------|---|------------------|-----------------|
| | | m (ft) | m (ft) |
| | Soil, gravelly | 0.3 (1.0) | 0.3 (1.0) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, subangular to well rounded flint with quartz and quartzite. Scattered cobbles of flint. Sand: medium and coarse with fine quartz; clayey and silty, particularly in upper 3.0m, reddish brown | 4.2 (14.0) | 4.5 (15.0) |
| Reading Beds | Clay, reddish brown to brownish red, streaked pale green and bright red. Carbonaceous streaks common | 1.0+ (3.5+) | 5.5 (18.0) |

| | | | | Depth below | Fines | Percentage | | |
|--------|----|-----------------------|---|-------------|-----------|------------|--------|----|
| | % | mm | % | surface (m) | | Sand | Gravel | |
| Gravel | 58 | +16 | : | 32 | 0.3 - 1.3 | 19 | 21 | 60 |
| | | -16+4 | : | 26 | 1.3 - 2.3 | 19 | 12 | 69 |
| | | | : | | 2.3 - 3.3 | 21 | 35 | 44 |
| Sand | 25 | -4+1 | : | 10 | 3.3 - 4.5 | 8 | 34 | 58 |
| | | -1+ $\frac{1}{4}$ | : | 11 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : | 4 | | | | |
| Fines | 17 | -1/16 | : | 17 | | | | |

Surface level (+96.9 m) +318 ft
 Water struck at (+90.9 m)
 Shell and auger (modified), 6-inch (152 mm) diam.
 September 1970

Overburden 0.2 m (0.5 ft)
 Mineral 7.0 m (23.0 ft)
 Bedrock 0.8 m + (2.5 ft +)

| | | Thickness | | Depth | | | | |
|-------------------------|--|-----------------------|--------|-------|-------------------------|-------|-----------------|--------|
| | | m | (ft) | m | (ft) | | | |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) | | | |
| Glacial Sand and Gravel | Gravel: fine to coarse, with trace of cobbles, subangular to sub-rounded flint with a little quartz and quartzite Sand: medium with coarse and fine quartz and some flint and quartzite; clayey bands, reddish brown to brown | 7.0 | (23.0) | 7.2 | (23.5) | | | |
| Reading Beds | Clay, yellowish brown with streaks of red and greenish grey | 0.8+ | (2.5+) | 8.0 | (26.0) | | | |
| | | % | mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
| Gravel | 57 | +16 | : | 36 | 0.2 - 1.2 | 6 | 22 | 72 |
| | | -16+4 | : | 21 | 1.2 - 2.2 | 8 | 32 | 60 |
| | | -4+1 | : | 10 | 2.2 - 3.2 | 10 | 40 | 50 |
| Sand | 36 | -1+ $\frac{1}{4}$ | : | 18 | 3.2 - 4.2 | 10 | 40 | 50 |
| | | - $\frac{1}{4}$ +1/16 | : | 8 | 4.2 - 5.2 | 8 | 37 | 55 |
| | | | | | 5.2 - 6.2 | 6 | 35 | 59 |
| Fines | 7 | -1/16 | : | 7 | 6.2 - 7.2 | 3 | 42 | 55 |

Surface level (+95.4 m) +313 ft
 Water not struck
 Shell and auger (modified), 6 inch (152 mm) diam.
 September 1970

Overburden 0.2 m (0.5 ft)
 Mineral 5.6 m (18.5 ft)
 Bedrock 0.2 m + (0.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|--|---------------------|-----------------|
| | Soil | 0.2 (0.5) | 0.2 (0.5) |
| Glacial Sand and Gravel | 'Clayey' gravel, with a band of clay and scattered flints at 3.2 to 3.8 m Gravel: fine to coarse, subangular to well rounded flint with a trace of well rounded quartz and quartzite Sand: medium with coarse and fine quartz with some flint; very clayey in parts, grey or brown | 5.6 (18.5) | 5.8 (19.0) |
| Reading Beds | Clay, yellowish brown with coloured streaks | 0.2+ (0.5+) | 6.0 (19.5) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|------|-------------------------|-------|-----------------|--------|
| Gravel | 58 | +16 | : 33 | 0.2 - 1.2 | 10 | 21 | 69 |
| | | -16+4 | : 25 | 1.2 - 2.2 | 23 | 15 | 62 |
| | | -4+1 | : 9 | 2.2 - 3.2 | 10 | 28 | 62 |
| Sand | 28 | -1+ $\frac{1}{4}$ | : 12 | 3.2 - 3.8 | Clay | | |
| | | - $\frac{1}{4}$ +1/16 | : 7 | 3.8 - 4.8 | 16 | 44 | 40 |
| Fines | 14 | -1/16 | : 14 | 4.8 - 5.8 | 11 | 30 | 59 |

Surface level (+87.8m) +288 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Overburden 0.2m (0.5 ft)
 Mineral 2.6m (8.5 ft)
 Bedrock 3.7m+ (12.0 ft +)

| | | Thickness | | Depth | | | | |
|---|---|-----------|-------------------------|-------|-----------------|--------|--|--|
| | | m | (ft) | m | (ft) | | | |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) | | | |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, with some cobbles, subangular to sub-rounded flint with traces of subrounded to well rounded quartz and quartzite Sand: medium with fine and coarse quartz and some flint; very clayey in parts | 2.6 | (8.5) | 2.8 | (9.0) | | | |
| Reading Beds | Sand, clayey in parts, with a few thin carbonaceous layers. Medium grained mainly subrounded quartz; yellowish brown to medium brown | 3.0 | (10.0) | 5.8 | (19.0) | | | |
| | Clay, reddish brown | 0.7+ | (2.5+) | 6.5 | (21.5) | | | |
| | % mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel | | |
| Gravel | 52 +16 : 32 | 32 | 0.2 - 1.2 | 11 | 40 | 49 | | |
| | -16+4 : 20 | 20 | 1.2 - 2.2 | 12 | 32 | 56 | | |
| | | | 2.2 - 2.8 | 12 | 39 | 49 | | |
| Sand | 36 -4+1 : 9 | 9 | | | | | | |
| | -1+1/4 : 15 | 15 | | | | | | |
| | -1/4+1/16 : 12 | 12 | | | | | | |
| Fines | 12 -1/16 : 12 | 12 | | | | | | |
| Sand in the Reading Beds (not included in the assessment) | | | | | | | | |
| Gravel | 0 +16 : 0 | 0 | 2.8 - 3.8 | 10 | 90 | 0 | | |
| | -16+4 : 0 | 0 | 3.8 - 4.8 | 14 | 86 | 0 | | |
| | | | 4.8 - 5.8 | 9 | 91 | 0 | | |
| Sand | 89 -4+1 : 1 | 1 | | | | | | |
| | -1+1/4 : 43 | 43 | | | | | | |
| | -1/4+1/16 : 45 | 45 | | | | | | |
| Fines | 11 -1/16 : 11 | 11 | | | | | | |

Surface level (+100.9m) +331 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Overburden 2.0m(6.5 ft)
 Mineral 7.8m (25.5 ft)
 Bedrock 0.7m+ (2.5 ft +)

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| Head | Clay, sandy, brown, a few thin bands of sand with scattered flint pebbles | 2.0 | (6.5) | 2.0 | (6.5) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, with trace of cobbles, subangular to well rounded flint with subrounded to well rounded quartz and quartzite Sand: medium with fine and coarse quartz, flint and quartzite; clayey throughout, brown | 7.8 | (25.5) | 9.8 | (32.0) |
| Reading Beds | Clay, red and yellowish brown, with traces of green sand | 0.7+ | (2.5+) | 10.5 | (34.5) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------|------|-------------------------|-------|-----------------|--------|
| Gravel | 55 | +16 | : 31 | 2.0 - 3.0 | 21 | 20 | 59 |
| | | -16+4 | : 24 | 3.0 - 4.0 | 9 | 26 | 65 |
| | | -4+1 | : 9 | 4.0 - 5.0 | 11 | 36 | 53 |
| Sand | 34 | -1+1/4 | : 16 | 5.0 - 5.4 | 9 | 41 | 50 |
| | | -1/4+1/16 | : 9 | 5.4 - 6.0 | 16 | 77 | 7 |
| | | | | 6.0 - 7.0 | 5 | 37 | 58 |
| Fines | 11 | -1/16 | : 11 | 7.0 - 8.0 | 11 | 35 | 54 |
| | | | | 8.0 - 9.0 | 7 | 33 | 60 |
| | | | | 9.0 - 9.8 | 8 | 30 | 62 |

Surface level (+100.9m) +331 ft

Water not struck

Shell and auger (modified), 6 inch (152mm) diam.
September 1970

Mineral 5.2m (17.0 ft)

Bedrock 0.3m + (1.0 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-------------------------|--------|------------|--------|
| | | m | (ft) | m | (ft) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse with trace of cobbles, subangular to subrounded flint with some subrounded to well rounded quartz and quartzite. Sand: medium with coarse and fine quartz with flint; clayey throughout, brown | 5.2 | (17.0) | 5.2 | (17.0) |
| Reading Beds | Clay, yellow and brown | 0.3+ | (1.0+) | 5.5 | (18.0) |
| | | Depth below surface (m) | | Percentage | |
| | % mm % | Fines | Sand | Gravel | |
| Gravel | 62 +16 : 39 -16+4 : 23 | 0.0 - 1.0 No sample | | | |
| | | 1.0 - 2.0 12 | | 28 | 60 |
| | | 2.0 - 3.0 9 | | 30 | 61 |
| | | 3.0 - 4.0 10 | | 30 | 60 |
| Sand | 27 -1+1/4 : 12 -1/4+1/16 : 6 | 4.0 - 5.2 14 | | 19 | 67 |
| Fines | 11 -1/16 : 11 | | | | |

Surface level (+95.7m) +314 ft
 Water struck at (+89.3m)
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Overburden 0.4m (1.5 ft)
 Mineral 8.3m (27.0 ft)
 Bedrock 0.3m+ (1.0 ft +)

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| Glacial Sand and Gravel | Gravel | 0.4 | (1.5) | 0.4 | (1.5) |
| | Gravel: medium to coarse, with trace of cobbles, angular to well rounded flint with subrounded to well rounded quartz and quartzite Sand: medium with coarse and fine quartz with flint; clayey in upper part, brown to reddish brown | 8.3 | (27.0) | 8.7 | (28.5) |
| Reading Beds | Clay, yellowish brown, with coloured streaks | 0.3+ | (1.0+) | 9.0 | (29.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 51 | +16 | : 28 | 0.4 - 1.4 | 17 | 28 | 55 |
| | | -16+4 | : 23 | 1.4 - 2.4 | 24 | 30 | 46 |
| | | | | 2.4 - 3.4 | 8 | 75 | 17 |
| Sand | 39 | -4+1 | : 10 | 3.4 - 4.4 | 10 | 33 | 57 |
| | | -1+ $\frac{1}{4}$ | : 21 | 4.4 - 5.4 | 9 | 28 | 63 |
| | | - $\frac{1}{4}$ +1/16 | : 8 | 5.4 - 6.4 | 8 | 42 | 50 |
| Fines | 10 | | | 6.4 - 7.4 | 2 | 33 | 65 |
| | | -1/16 | : 10 | 7.4 - 8.4 | 2 | 42 | 56 |
| | | | | 8.4 - 8.7 | No sample | | |

Surface level (+64.6m) +212 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Mineral 6.0m (19.5 ft)
 Bedrock 0.5m + (1.5 ft +)

| | | Thickness | Depth |
|-------------------------|--|-------------|------------|
| | | m (ft) | m (ft) |
| Glacial Sand and Gravel | Gravel Gravel: fine to coarse, trace of cobbles, sub-angular to subrounded flint with quartz and quartzite Sand: medium with coarse and fine quartz with flint; a little clay, brown | 6.0 (19.5) | 6.0 (19.5) |
| Upper Chalk | Chalk | 0.5+ (1.5+) | 6.5 (21.5) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------|------|-------------------------|-------|-----------------|--------|
| Gravel | 48 | +16 | : 25 | 0.0 - 1.0 | 6 | 39 | 55 |
| | | -16+4 | : 23 | 1.0 - 2.0 | 5 | 53 | 42 |
| | | | | 2.0 - 3.0 | 6 | 65 | 29 |
| Sand | 46 | -4+1 | : 9 | 3.0 - 4.0 | 5 | 45 | 50 |
| | | +1+1/4 | : 26 | 4.0 - 5.0 | 6 | 38 | 56 |
| | | -1/4+1/16 | : 11 | 5.0 - 6.0 | 5 | 36 | 59 |
| Fines | 6 | -1/16 | : 6 | | | | |

Surface level (+95.4m) +313 ft Overburden 0.8m (2.5 ft)
 Water not struck Mineral 7.2m (23.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 1.5m + (5.0 ft +)
 February 1971

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil and subsoil | 0.5 | (1.5) | 0.5 | (1.5) |
| Head | Clay, silty, reddish brown, with scattered fine to coarse flint and quartz pebbles | 0.3 | (1.0) | 0.8 | (2.5) |
| Glacial Sand and Gravel | 'Clayey gravel, with two bands of silty clay at 3.1 to 3.6m and 4.6 to 5.0m Gravel: fine to coarse subangular to well rounded flint with a trace of quartz Sand: medium with coarse and fine quartz with a trace of flint; clayey in upper 2.2m, brown to reddish brown | 7.2 | (23.5) | 8.0 | (26.0) |
| Reading Beds | Sand, with a few clay lenses, yellow | 0.3 | (1.0) | 8.3 | (27.0) |
| | Clay, with interbedded bands of sand, yellow to reddish brown | 0.7 | (2.5) | 9.0 | (29.5) |
| | Sand, greenish yellow, with reddish brown and pale green clay at base | 0.5+ | (1.5+) | 9.5 | (31.0) |

| | % | mm | : | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|---|----|-------------------------|-----------|-----------------|--------|
| Gravel | 46 | +16 | : | 23 | 0.8 - 1.6 | 29 | 28 | 43 |
| | | -16+4 | : | 23 | 1.6 - 2.1 | 24 | 22 | 54 |
| | | | | | 2.1 - 3.1 | 16 | 52 | 32 |
| Sand | 38 | -4+1 | : | 8 | 3.1 - 3.6 | Clay | | |
| | | -1+ $\frac{1}{4}$ | : | 24 | 3.6 - 4.6 | 21 | 57 | 22 |
| | | - $\frac{1}{4}$ +1/16 | : | 6 | 4.6 - 5.0 | Clay | | |
| Fines | 16 | | | | 5.0 - 6.0 | 9 | 26 | 65 |
| | | | | | 6.0 - 7.0 | 9 | 20 | 71 |
| | | | | | 7.0 - 7.3 | 13 | 17 | 70 |
| | | | | | 7.3 - 7.9 | 13 | 74 | 13 |
| | | | | | 7.9 - 8.0 | No sample | | |

Surface level (+96.6m) +317 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Overburden 0.2m (0.5 ft)
 Mineral 9.0m (29.5 ft)
 Bedrock 2.8m + (9.0 ft +)

| | | Thickness | | Depth | |
|--|--|-------------------------|-----------|------------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Glacial Sand and Gravel | Sandy gravel Gravel: fine to coarse, with trace of cobbles, angular to subrounded flint with some quartzite Sand: fine and medium with coarse quartz and some flint; slightly clayey, mainly brown | 9.0 | (29.5) | 9.2 | (30.0) |
| Reading Beds | Clay, light brown, with bands of sand | 0.1 | (0.5) | 9.3 | (30.5) |
| | Sand, fine to medium grained, slightly clayey | 2.7+ | (9.0+) | 12.0 | (39.5) |
| | | Depth below surface (m) | | Percentage | |
| | % mm % | Fines | Sand | Gravel | |
| Gravel | 43 +16 : 24 -16+4 : 19 | 0.2 - 1.2 | 4 | 32 | 64 |
| | | 1.2 - 2.2 | 10 | 31 | 59 |
| | | 2.2 - 3.2 | 14 | 24 | 62 |
| | | 3.2 - 4.2 | 6 | 34 | 60 |
| Sand | 48 -1+1/4 : 21 -1/4+1/16 : 21 | 4.2 - 5.2 | 8 | 56 | 36 |
| | | 5.2 - 6.2 | No sample | | |
| | | 6.2 - 7.2 | 6 | 48 | 46 |
| Fines | 9 -1/16 : 9 | 7.2 - 8.2 | 7 | 74 | 19 |
| | | 8.2 - 9.2 | 15 | 85 | 0 |
| Sand in the Reading Beds (not included in the assessment) | | | | | |
| Gravel | 0 +16 : 0 -16+4 : 0 | 9.3 - 10.3 | 7 | 93 | 0 |
| | | 10.3 - 11.3 | 20 | 80 | 0 |
| | | 11.3 - 12.0 | 9 | 91 | 0 |
| Sand | 88 -4+1 : 1 -1+1/4 : 4 -1/4+1/16 : 83 | | | | |
| Fines | 12 -1/16 : 12 | | | | |

Surface level (+93.9m) +308 ft Overburden 0.1m (0.5 ft)
 Water struck at (+89.9m) Mineral 9.1m (30.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 2.6m + (8.5 ft +)
 March 1971

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) |
| Glacial Sand and Gravel | 'Clayey' sandy gravel Gravel: fine to coarse subangular to sub-rounded flint with a little quartzite Sand: medium with fine and coarse quartz and flint; clayey, brown | 9.1 | (30.0) | 9.2 | (30.0) |
| Reading Beds | Clay, sandy, soft, brown, with black streaks | 2.6+ | (8.5+) | 11.8 | (38.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|-------|-------------------------|------------|--------|----|
| % | mm | % | Fines | | Sand | Gravel | |
| Gravel | 43 | +16 | : 26 | 0.1 - 1.1 | 13 | 27 | 60 |
| | | -16+4 | : 17 | 1.1 - 2.1 | 10 | 22 | 68 |
| | | | | 2.1 - 3.2 | 16 | 39 | 45 |
| Sand | | -4+1 | : 6 | 3.2 - 4.2 | 18 | 80 | 2 |
| | 46 | -1+ $\frac{1}{4}$ | : 27 | 4.2 - 5.0 | 11 | 80 | 9 |
| | | - $\frac{1}{4}$ +1/16 | : 13 | 5.0 - 6.0 | 5 | 31 | 64 |
| | | | | 6.0 - 7.0 | 5 | 40 | 55 |
| Fines | 11 | -1/16 | : 11 | 7.0 - 8.0 | 5 | 59 | 36 |
| | | | | 8.0 - 9.2 | 17 | 37 | 46 |

Surface level (+65.8m) +216 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 March 1971

Overburden 0.1m (0.5 ft)
 Mineral 11.3m (37.0 ft)
 Bedrock 0.1m + (0.5 ft +)

| | | Thickness | | Depth | | | | |
|-------------------------|---|-----------------------|--------|-------------------------|-------------|------|--------|----|
| | | m | (ft) | m | (ft) | | | |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) | | | |
| Glacial Sand and Gravel | 'Clayey' sandy gravel, with a band of sandy silt and some gravel at 6.5 to 7.5m Gravel: fine to coarse, with trace of cobbles, angular to rounded flint with quartz and quartzite Sand: medium with fine and coarse quartz and flint; brown, grey, yellow or green; clayey in parts | 11.3 | (37.0) | 11.4 | (37.5) | | | |
| Upper Chalk | Chalk | 0.1+ | (0.5+) | 11.5 | (37.5) | | | |
| | | | | Depth below surface (m) | Percentage | | | |
| | | % | mm | % | Fines | Sand | Gravel | |
| Gravel | 38 | +16 | : | 18 | 0.1 - 1.1 | 17 | 38 | 45 |
| | | -16+4 | : | 20 | 1.1 - 2.1 | 20 | 39 | 41 |
| | | -4+1 | : | 9 | 2.1 - 3.1 | 11 | 29 | 60 |
| Sand | 50 | -1+ $\frac{1}{4}$ | : | 27 | 3.1 - 4.1 | 15 | 40 | 45 |
| | | - $\frac{1}{4}$ +1/16 | : | 14 | 4.1 - 5.1 | 9 | 41 | 50 |
| | | | | | 5.1 - 5.5 | 10 | 45 | 45 |
| Fines | 12 | -1/16 | : | 12 | 5.5 - 6.5 | 23 | 77 | 0 |
| | | | | | 6.5 - 7.5 | Silt | | |
| | | | | | 7.5 - 8.5 | 5 | 65 | 30 |
| | | | | | 8.5 - 9.5 | 7 | 70 | 23 |
| | | | | | 9.5 - 10.5 | 6 | 69 | 25 |
| | | | | | 10.5 - 11.4 | 7 | 35 | 58 |

Surface level (+93.6m) +307 ft Overburden 0.6m (2.0 ft)
 Water not struck Mineral 2.9m (9.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.5m + (1.5 ft +)
 September 1970

| | | Thickness | | Depth | | |
|-------------------------|---|-------------------------|--------|------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Soil | 0.6 | (2.0) | 0.6 | (2.0) | |
| Glacial Sand and Gravel | 'Clayey' sandy gravel Gravel: fine to coarse subangular to well rounded flint, with some subrounded to well rounded quartz and quartzite Sand: medium with coarse and fine mainly quartz with a little flint; clayey in parts, brown and grey | 2.9 | (9.5) | 3.5 | (11.5) | |
| Reading Beds | Clay, yellowish brown with red and green mottling | 0.5+ | (1.5+) | 4.0 | (13.0) | |
| | | Depth below surface (m) | | Percentage | | |
| | % mm : | | | Fines | Sand | Gravel |
| Gravel | 37 +16 : 19 | 0.6 - 1.6 | | 5 | 40 | 55 |
| | -16+4 : 18 | 1.6 - 2.4 | | 19 | 47 | 34 |
| | -4+1 : 14 | 2.4 - 3.0 | | 15 | 78 | 7 |
| Sand | 52 -1+1/4 : 25 | 3.0 - 3.5 | | 8 | 43 | 49 |
| | -1/4+1/16 : 13 | | | | | |
| Fines | 11 -1/16 : 11 | | | | | |

Surface level (+94.2m) +309 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Mineral 7.1m (23.5 ft)
 Bedrock 0.9m + (3.0 ft +)

| | | Thickness | Depth |
|-------------------------|--|-------------|------------|
| | | m (ft) | m (ft) |
| Glacial Sand and Gravel | Sandy gravel Gravel: fine to coarse angular to subrounded flint, with some subrounded to well rounded quartz and quartzite Sand: medium with fine and coarse quartz and some flint; clayey in parts, brown | 7.1 (23.5) | 7.1 (23.5) |
| Reading Beds | Sand, clayey | 0.9+ (3.0+) | 8.0 (26.0) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 37 | +16 | : 19 | 0 - 1.0 | 15 | 25 | 60 |
| | | -16+4 | : 18 | 1.0 - 1.3 | 7 | 30 | 63 |
| | | | | 1.3 - 2.5 | 12 | 31 | 57 |
| Sand | 54 | -4+1 | : 12 | 2.5 - 3.5 | 14 | 82 | 4 |
| | | -1+ $\frac{1}{4}$ | : 28 | 3.5 - 4.5 | 4 | 81 | 15 |
| | | - $\frac{1}{4}$ +1/16 | : 14 | 4.5 - 5.5 | 5 | 80 | 15 |
| Fines | 9 | -1/16 | : 9 | 5.5 - 6.5 | 6 | 44 | 50 |
| | | | | 6.5 - 7.1 | 7 | 40 | 53 |
| Sand in the Reading Beds (not included in the assessment) | | | | | | | |
| Gravel | 4 | +16 | : 0 | 7.1 - 8.0 | 18 | 78 | 4 |
| | | -16+4 | : 4 | | | | |
| Sand | 78 | -4+1 | : 2 | | | | |
| | | -1+ $\frac{1}{4}$ | : 14 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 62 | | | | |
| Fines | 18 | -1/16 | : 18 | | | | |

SU 98 NW 54 9481 8744 Harehatch Lane, Hedgerley

Surface level (+92.0m) +302 ft

Water not struck

Shell and auger (modified), 6 inch (152mm) diam.

September 1970

Overburden 0.2m (0.5 ft)

Mineral 4.0m (13.0 ft)

Bedrock 0.3m + (1.0 ft +)

| | | | | Thickness | Depth | | |
|-------------------------|--|---------------------|------|------------------------|---------------------------------|----|----|
| | | | | m (ft) | m (ft) | | |
| Soil | | | | 0.2 (0.5) | 0.2 (0.5) | | |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse subangular to sub-rounded flint, with a little well rounded quartz and quartzite Sand: medium with coarse and fine quartz and some flint; clayey below 1.9m, brown. | | | 4.0 (13.0) | 4.2 (14.0) | | |
| Reading Beds | Clay, yellow brown | | | 0.3+ (1.0+) | 4.5 (15.0) | | |
| | % | mm | % | Depth below surface(m) | Percentage Fines Sand Gravel | | |
| Gravel | 48 | +16 | : 27 | 0.2 - 1.2 | 13 | 52 | 35 |
| | | -16+4 | : 21 | 1.2 - 2.2 | 12 | 38 | 50 |
| | 41 | -4+1 | : 8 | 2.2 - 3.2 | 9 | 37 | 54 |
| | | -1+ $\frac{1}{4}$ | : 24 | 3.2 - 4.2 | 8 | 38 | 54 |
| Sand | - | $\frac{1}{4}$ +1/16 | : 9 | | | | |
| | | | | | | | |
| Fines | 11 | -1/16 | : 11 | | | | |

Surface level (+83.2m) +273 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 March 1971

Overburden 2.0m (6.5 ft)
 Mineral 1.1m (3.5 ft)
 Bedrock 1.9m + (6.0 ft +)

| | | Thickness | | Depth | | | | |
|-------------------------|---|-------------------------|--------|-------|-----------------|--------|--|--|
| | | m | (ft) | m | (ft) | | | |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) | | | |
| Head | Sand, clayey, with scattered subangular to rounded flint pebbles | 0.5 | (1.5) | 0.8 | (2.5) | | | |
| | Clay, sandy, mottled orange and grey, with bands and lenses of angular to rounded flint and quartz pebbles | 1.2 | (4.0) | 2.0 | (6.5) | | | |
| Glacial Sand and Gravel | 'Very clayey' pebbly sand Gravel: fine to medium subangular to rounded flint and quartz Sand: medium and fine with coarse quartz and some flint; yellow to brown, clayey in parts | 1.1 | (3.5) | 3.1 | (10.0) | | | |
| Reading Beds | Clay, sandy, yellow and brown; thin bands of grey sand | 1.9 | (6.0+) | 5.0 | (16.5) | | | |
| | | Depth below surface (m) | | Fines | Percentage Sand | Gravel | | |
| Gravel | 9 +16 : 4 -16+4 : 5 | 2.0 - 3.1 | | 25 | 66 | 9 | | |
| Sand | 66 -4+1 : 2 -1+ $\frac{1}{4}$: 35 - $\frac{1}{4}$ +1/16 : 29 | | | | | | | |
| Fines | 25 -1/16 : 25 | | | | | | | |

Surface level (+80.2m) +263 ft Overburden 0.1m (0.5 ft)
 Water struck at (+78.2m) Mineral 4.6m (15.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.3m + (1.0 ft +)
 October 1970

| | | Thickness | | Depth | | | | |
|-------------------------|---|-------------------------|--------|------------|--------|-------------------|--|--|
| | | m | (ft) | m | (ft) | | | |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) | | | |
| Glacial Sand and Gravel | Gravel, with a band of clay with flints at 1.8 to 2.0m Gravel: fine to coarse, with trace of cobbles, subangular to well rounded flint with some quartz and quartzite Sand: medium with coarse and fine quartz and some flint; light brown to reddish brown | 4.6 | (15.0) | 4.7 | (15.5) | | | |
| Reading Beds | Clay, light brown, mottled green | 0.3+ | (1.0+) | 5.0 | (16.5) | | | |
| | % mm % | Depth below surface (m) | | Percentage | | Fines Sand Gravel | | |
| Gravel | 54 +16 : 29 -16+4 : 25 | 0.1 - 1.1 | | 12 | 38 | 50 | | |
| | | 1.1 - 1.8 | | 7 | 48 | 45 | | |
| | | 1.8 - 2.0 | | Clay | | | | |
| | | 2.0 - 3.0 | | 9 | 45 | 46 | | |
| Sand | 39 -1+1/4 : 23 -1/4+1/16 : 7 | 3.0 - 4.0 | | 2 | 30 | 68 | | |
| | | 4.0 - 4.7 | | 1 | 39 | 60 | | |
| Fines | 7 -1/16 : 7 | | | | | | | |

Surface level (+108.9m) +346 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1971

Overburden 4.8m (16.0 ft)
 Mineral 15.2m (50.0 ft)
 Bedrock 2.8m + (9.0 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.8 | (2.5) | 0.8 | (2.5) |
| Head | Clay, with traces of gravel Clay: brown, slightly silty, with some fine to coarse sand, trace of bedding Gravel: fine to medium subangular to subrounded flint | 4.0 | (13.0) | 4.8 | (16.0) |
| Glacial Sand and Gravel | 'Clayey' sandy gravel Gravel: fine to coarse subangular to well-rounded flint with traces of well rounded quartz, quartzite and green and brown sandstone Sand: predominantly medium with fine and coarse quartz with flint; variably clayey, brown | 15.2 | (50.0) | 20.0 | (65.5) |
| Reading Beds | Clay, brown | 0.2 | (0.5) | 20.2 | (66.5) |
| | Sand, medium grained quartz, clayey lenses, brown | 1.0 | (3.5) | 21.2 | (69.5) |
| | Clay, brown | 0.1 | (0.5) | 21.3 | (70.0) |
| | Clay, dark brown, with coarse black flints | 1.5+ | (5.0+) | 22.8 | (75.0) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|-------|-------------------------|------------|--------|----|
| % | mm | % | Fines | | Sand | Gravel | |
| Gravel | 40 | +16 | : 19 | 4.8 - 5.8 | 39 | 17 | 44 |
| | | -16+4 | : 21 | 5.8 - 6.8 | 22 | 28 | 50 |
| Sand | 45 | -4+1 | : 7 | 6.8 - 7.8 | 18 | 31 | 51 |
| | | $-1 + \frac{1}{4}$ | : 30 | 7.8 - 8.8 | 17 | 27 | 56 |
| | | $-\frac{1}{4} + 1/16$ | : 8 | 8.8 - 10.0 | 21 | 19 | 60 |
| | | | | 10.0 - 11.2 | 10 | 37 | 53 |
| Fines | 15 | | | 11.2 - 12.2 | 15 | 71 | 14 |
| | | | | 12.2 - 13.2 | 12 | 71 | 17 |
| | | | | 13.2 - 14.2 | 13 | 70 | 17 |
| | | | | 14.2 - 14.9 | 8 | 52 | 40 |
| | | | | 14.9 - 15.9 | 10 | 63 | 27 |
| | | | | 15.9 - 16.9 | 12 | 43 | 45 |
| | | | | 16.9 - 17.9 | 10 | 52 | 38 |
| | | | | 17.9 - 18.9 | 6 | 58 | 36 |
| | | 18.9 - 20.0 | 6 | 35 | 59 | | |

Surface level (+101.2m) + 332 ft Overburden 1.4m (4.5 ft)
 Water not struck Mineral 7.2m (23.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 1.7m + (5.5 ft +)
 November 1971

| | | Thickness | | Depth | | | | |
|-------------------------|--|-----------|--------|-------|-------------------------|-----------------------|----|--------|
| | | m | (ft) | m | (ft) | | | |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) | | | |
| Head | Clayey sand, with scattered angular to subrounded fine to medium flint, with a little well rounded quartz; rusty brown | 1.2 | (4.0) | 1.4 | (4.5) | | | |
| Glacial Sand and Gravel | Sandy gravel Gravel: fine to coarse angular to well rounded flint with a little well rounded quartz and quartzite Sand: predominantly medium with coarse and fine quartz; clayey in parts, rusty brown | 7.2 | (23.5) | 8.6 | (28.0) | | | |
| Reading Beds | Clay, sandy, grey to buff | 1.2 | (4.0) | 9.8 | (32.0) | | | |
| | Sand, medium grained, slightly clayey, olive green | 0.5+ | (1.5+) | 10.3 | (34.0) | | | |
| | | % | mm | % | Depth below surface (m) | Percentage Fines Sand | | Gravel |
| Gravel | 35 | +16 | : 16 | 19 | 1.4 - 2.4 | 8 | 51 | 41 |
| | | | | | 2.4 - 3.0 | 6 | 90 | 4 |
| | | | | | 3.0 - 3.6 | 5 | 94 | 1 |
| Sand | 58 | -4+1 | : 8 | 41 | 3.6 - 4.6 | 10 | 59 | 31 |
| | | | | | 4.6 - 5.6 | 7 | 43 | 50 |
| | | | | | 5.6 - 6.6 | 7 | 41 | 52 |
| | | | | | 6.6 - 7.0 | 8 | 44 | 48 |
| Fines | 7 | -1/16 | : 7 | 9 | 7.0 - 7.7 | 5 | 67 | 28 |
| | | | | | 7.7 - 8.6 | 6 | 51 | 43 |

Surface level (+91.1m) +299 ft Overburden 0.8m (2.5 ft)
 Water not struck Mineral 13.2m(43.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 6.0m + (19.5 ft +)
 October 1971

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.6 | (2.0) | 0.6 | (2.0) |
| Head | Clay, brown and silty | 0.2 | (0.5) | 0.8 | (2.5) |
| Glacial Sand and Gravel | Sandy gravel, with sandy clay containing traces of flint between 1.0m and 2.6m, and brown clay between 8.0m and 8.5m Gravel: fine to coarse with occasional cobbles, subangular to well-rounded flint with quartz and quartzite Sand: medium with fine and coarse subrounded to sub-angular quartz and flint; clayey, brown | 13.2 | (43.5) | 14.0 | (46.0) |
| Reading Beds | Sand, predominantly medium with fine, brown to buff | 5.0 | (16.5) | 19.0 | (62.5) |
| | Sand, predominantly medium with fine, brown to buff; band of fine to medium flint gravel, 10mm thick, at 19.3m | 1.0+ | (3.5+) | 20.0 | (65.5) |

| | | | | Depth below surface (m) | Percentage | | |
|-------------|----|-----------------------|------|-------------------------|------------|------|--------|
| | % | mm | % | | Fines | Sand | Gravel |
| Gravel | 32 | +16 | : 14 | 0.8 - 1.8 | 9 | 42 | 49 |
| | | -16+4 | : 18 | 1.8 - 2.6 | Clay | | |
| | | | | 2.6 - 4.0 | 12 | 83 | 5 |
| Sand | 60 | -4+1 | : 8 | 4.0 - 5.0 | 8 | 52 | 40 |
| | | -1+ $\frac{1}{4}$ | : 44 | 5.0 - 6.0 | 8 | 64 | 28 |
| | | - $\frac{1}{4}$ +1/16 | : 8 | 6.0 - 7.0 | 7 | 45 | 43 |
| Fines | 8 | -1/16 | : 8 | 7.0 - 8.0 | 9 | 44 | 47 |
| | | | | 8.0 - 8.5 | Clay | | |
| | | | | 8.5 - 9.5 | 19 | 79 | 2 |
| | | | | 9.5 - 9.7 | 3 | 97 | 0 |
| | | | | 9.7 - 10.0 | 7 | 92 | 1 |
| | | | | 10.0 - 11.0 | 6 | 53 | 41 |
| | | | | 11.0 - 12.0 | 6 | 60 | 34 |
| 12.0 - 13.0 | 6 | 30 | 64 | | | | |
| 13.0 - 14.0 | 1 | 39 | 60 | | | | |

/continued

SU 98 NW 60 continued

Sand in the Reading Beds
(not included in the assessment)

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|---------------------|------|----------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 1 | +16 | : 0 | 14.0 - 15.0 | 10 | 88 | 2 |
| | | -16+4 | : 1 | 15.0 - 16.0 | 14 | 84 | 2 |
| | | | | 16.0 - 17.0 | 12 | 88 | 0 |
| Sand | 90 | -4+1 | : 2 | 17.0 - 18.0 | 5 | 95 | 0 |
| | | $-1+\frac{1}{4}$ | : 68 | 18.0 - 19.0 | 4 | 95 | 1 |
| | | $-\frac{1}{4}+1/16$ | : 20 | 19.0 - 20.0 | 10 | 88 | 2 |
| | | | | | | | |
| Fines | 9 | -1/16 | : 9 | | | | |

Surface level (+101. 8m) +334 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 0. 1m (0. 5 ft)
 Mineral 3. 0m (10. 0 ft)
 Bedrock 0. 9m + (3. 0 ft +)

| | | Thickness | | Depth | | | |
|-------------------------|--|-----------------------|---------|-------------|-------------------------|----|----|
| | | m | (ft) | m | (ft) | | |
| | Soil | 0. 1 | (0. 5) | 0. 1 | (0. 5) | | |
| Glacial Sand and Gravel | 'Clayey' sandy gravel, with a band of very clayey sand with a little gravel at 0. 7 to 1. 4m Gravel: fine to coarse subangular to subrounded flint, and some quartz and quartzite Sand: medium with coarse and fine quartz and a little flint; brown, clayey | 3. 0 | (10. 0) | 3. 1 | (10. 0) | | |
| Reading Beds | Clay, stiff, mottled buff and grey | 0. 9+ | (3. 0+) | 4. 0 | (13. 0) | | |
| | | % | mm | % | | | |
| | | | | | Depth below surface (m) | | |
| | | | | | Percentage | | |
| | | | | | Fines Sand Gravel | | |
| Gravel | 41 | +16 | : 27 | 0. 1 - 0. 7 | 16 | 30 | 54 |
| | | -16+4 | : 14 | 0. 7 - 1. 4 | Clay | | |
| | | -4+1 | : 9 | 1. 4 - 2. 4 | 12 | 47 | 41 |
| Sand | 46 | -1+ $\frac{1}{4}$ | : 29 | 2. 4 - 3. 1 | 13 | 56 | 31 |
| | | - $\frac{1}{4}$ +1/16 | : 8 | | | | |
| Fines | 13 | -1/16 | : 13 | | | | |

Surface level (+89.3m) +293 ft Overburden 2.2m (7.0 ft)
 Water struck at (+85.3m) Mineral 4.5m (15.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 1.3m + (4.5 ft +)
 September 1970

| | | Thickness | | Depth | | | | |
|-------------------------|--|-----------------------|--------|-------------------------|--------|-----------------|--------|--|
| | | m | (ft) | m | (ft) | | | |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) | | | |
| Head | Clay, grey, soft | 0.4 | (1.5) | 0.7 | (2.5) | | | |
| | Clay, with some gravel | 1.5 | (5.0) | 2.2 | (7.0) | | | |
| Glacial Sand and Gravel | Gravel | 4.5 | (15.0) | 6.7 | (22.0) | | | |
| | Gravel: fine to coarse, with a few cobbles, subangular to sub-rounded flint and some quartz and quartzite Sand: medium with fine and coarse quartz and some flint; brown, clayey throughout | | | | | | | |
| Reading Beds | Clay, sandy, brown | 1.3+ | (4.5+) | 8.0 | (26.0) | | | |
| | % | mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel | |
| Gravel | 51 | +16 | : 26 | 2.2 - 3.2 | 12 | 48 | 40 | |
| | | -16+4 | : 25 | 3.2 - 4.2 | 7 | 43 | 50 | |
| Sand | 42 | -4+1 | : 9 | 4.2 - 5.2 | 4 | 41 | 55 | |
| | | -1+ $\frac{1}{4}$ | : 22 | 5.2 - 6.2 | 6 | 39 | 55 | |
| | | - $\frac{1}{4}$ +1/16 | : 11 | 6.2 - 6.7 | [6 | 39 | 55] | |
| Fines | 7 | -1/16 | : 7 | | | | | |

Surface level (+63.7m) +209 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 1.4m (4.5 ft)
 Mineral 11.1m (36.5 ft)
 Bedrock 0.5m+ (1.5 ft +)

| | | Thickness | | Depth | | |
|---------------------|--|-------------------------|--------|-------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Soil | 1.4 | (4.5) | 1.4 | (4.5) | |
| Dry Valley Deposits | Gravel Gravel: fine to coarse with trace of cobbles, subangular to sub-rounded flint with some fine to medium quartz and quartzite Sand: medium with coarse and fine quartz and a little flint; brown, slightly clayey | 11.1 | (36.5) | (12.5) | (41.0) | |
| Upper Chalk | Chalk | 0.5+ (1.5+) | | 13.0 (42.5) | | |
| | | Depth below surface (m) | | Percentage | | |
| | % mm % | | | Fines | Sand | Gravel |
| Gravel | 63 +16 : 42 | 1.4 - 2.4 | | 4 | 32 | 64 |
| | -16+4 : 21 | 2.4 - 3.4 | | 4 | 30 | 66 |
| | | 3.4 - 4.4 | | 4 | 30 | 66 |
| | -4+1 : 11 | 4.4 - 5.4 | | [4 | 30 | 66] |
| Sand | 32 -1+ $\frac{1}{4}$: 16 | 5.4 - 6.4 | | 5 | 30 | 65 |
| | - $\frac{1}{4}$ +1/16 : 5 | 6.4 - 7.4 | | 4 | 35 | 61 |
| | | 7.4 - 8.4 | | 6 | 29 | 65 |
| Fines | 5 -1/16 : 5 | 8.4 - 9.4 | | 6 | 32 | 62 |
| | | 9.4 - 10.4 | | 4 | 37 | 59 |
| | | 10.4 - 11.4 | | 5 | 33 | 62 |
| | | 11.4 - 12.5 | | 8 | 32 | 60 |

Surface level (+92.0m) +302 ft
 Water struck at (+89.2m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 0.3m (1.0 ft)
 Mineral 5.6m (18.5 ft)
 Bedrock 0.6m + (2.0 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|----------------------------|---|---------------------|-----------------|
| | Soil | 0.3 (1.0) | 0.3 (1.0) |
| Glacial Sand and Gravel | Gravel: Gravel: fine to coarse, with trace of cobbles, subangular to subrounded flint and some sub- rounded quartz and quartzite Sand: medium and fine with coarse flint, quartz and quartzite; brown | 5.6 (18.5) | 5.9 (19.5) |
| Reading Beds | Clay, brown, tenaceous, with coloured streaks | 0.6+ (2.0+) | 6.5 (21.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|----------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 50 | +16 | : 28 | 0.3 - 1.3 | 11 | 42 | 47 |
| | | -16+4 | : 22 | 1.3 - 2.3 | 7 | 35 | 58 |
| | | | | 2.3 - 3.3 | 4 | 47 | 49 |
| Sand | 46 | - $\frac{1}{4}$ +1 | : 9 | 3.3 - 4.3 | 3 | 66 | 31 |
| | | -1+ $\frac{1}{4}$ | : 20 | 4.3 - 5.3 | 0 | 34 | 66 |
| | | - $\frac{1}{4}$ +1/16 | : 17 | 5.3 - 5.9 | 1 | 53 | 46 |
| Fines | 4 | -1/16 | : 4 | | | | |

Surface level (+79.2m) +260 ft
 Water struck at (+75.2m)
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

Overburden 0.4m (1.5 ft)
 Mineral 4.8m (16.0 ft)
 Bedrock 0.3m + (1.0 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|------------|-------------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.4 | (1.5) | 0.4 | (1.5) |
| Glacial Sand and Gravel | Sandy gravel Gravel: fine to coarse with trace of cobbles, subangular to well rounded flint with quartzite Sand: medium with fine and coarse quartz; reddish brown, clayey in parts | 4.8 | (16.0) | 5.2 | (17.0) |
| Reading Beds | Clay, mottled red and brown at top, grey and silty below | 0.3+ | (1.0+) | 5.5 | (18.0) |
| | | | | Percentage | |
| | % mm : | | | Fines | Sand Gravel |
| Gravel | 47 +16 : 21 | 0.4 - 1.4 | | 15 | 48 37 |
| | -16+4 : 26 | 1.4 - 2.4 | | 8 | 43 49 |
| | | 2.4 - 3.4 | | 10 | 43 47 |
| | -4+1 : 12 | 3.4 - 4.4 | | 8 | 40 52 |
| Sand | 48 -1+1/4 : 22 | 4.4 - 5.2 | | 9 | 38 53 |
| | -1/4+1/16 : 14 | | | | |
| Fines | 5 -1/16 : 5 | | | | |

SU 98 NE 109 9643 8972 Lower Pyebushes, Beaconsfield

Surface level (+83.8m) +275 ft

Waste 7.8 m (25.5 ft)

Water not struck

Bedrock 0.2 m + (0.5 ft +)

Shell and auger (modified), 6 inch (152mm) diam.

October 1970

| | | Thickness | | Depth | |
|----------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Glacial Sand and Gravel | Clay, with traces of gravel | 0.6 | (2.0) | 0.8 | (2.5) |
| | Clay, brown, with medium to coarse sand and fine to medium flint and quartzite gravel | 0.8 | (2.5) | 1.6 | (5.5) |
| | Clay, brown, with some gravel and traces of sand | 1.2 | (4.0) | 2.8 | (9.0) |
| | Sand, clayey, with traces of gravel | 0.5 | (1.5) | 3.3 | (11.0) |
| | Clay, brown, sandy, with traces of black, carbonaceous material | 4.5 | (15.0) | 7.8 | (25.5) |
| Upper Chalk | Chalk | 0.2+ | (0.5+) | 8.0 | (26.0) |

Surface level (+92.4m) +303 ft
 Water struck at (+88.9m)
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Overburden 0.4m (1.5 ft)
 Mineral 6.4m (21.0 ft)
 Bedrock 0.7m + (2.5 ft)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.4 | (1.5) | 0.4 | (1.5) |
| Glacial Sand and Gravel | Gravel, with a band of clay with some gravel at 0.70 to 1.70m Gravel: fine to coarse with trace of cobbles, subangular to subrounded flint with subrounded quartz and quartzite Sand: medium with fine and coarse quartz and flint; clayey, particularly in upper part, brown | 6.4 | (21.0) | 6.8 | (22.5) |
| Reading Beds | Clay, silty with traces of sand; brownish yellow with coloured streaks | 0.7+ | (2.5+) | 7.5 | (24.5) |

| | | | | Depth below surface (m) | Percentage | | | | | |
|--------|----|-------|-------|-------------------------|------------|------|--------|-----------|----|----|
| | % | mm | % | | Fines | Sand | Gravel | | | |
| Gravel | 50 | +16 | : 32 | 0.4 - 0.7 | 19 | 31 | 50 | | | |
| | | | -16+4 | : 18 | | | | 0.7 - 1.7 | | |
| Sand | 42 | -4+1 | : 6 | 1.7 - 2.2 | 14 | 35 | 51 | | | |
| | | | | 2.2 - 2.7 | | | | 19 | 29 | 52 |
| | | | | 2.7 - 3.7 | | | | 8 | 45 | 47 |
| | | | | 3.7 - 4.7 | | | | 4 | 41 | 55 |
| Fines | 8 | -1/16 | : 8 | 4.7 - 5.7 | 6 | 43 | 51 | | | |
| | | | | 5.7 - 6.8 | | | | 1 | 29 | 70 |

Surface level (+91.1m) +299 ft Overburden 0.1m (0.5 ft)
 Water struck at (+88.1m) Mineral 4.9m (16.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 26.0m+ (85.5 ft)
 October 1970

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|---------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) |
| Glacial Sand and Gravel | Sandy gravel Gravel: fine to coarse with rare cobbles, subangular to well rounded flint with some quartzite Sand: medium with fine and coarse quartz, silty and clayey in parts; brown | 4.9 | (16.0) | 5.0 | (16.5) |
| London Clay | Clay, stiff, bluish grey, sandy towards base | 9.2 | (30.0) | 14.2 | (46.5) |
| Reading Beds | Clay, stiff, green, purplish brown and brown | 6.3 | (20.5) | 20.5 | (67.5) |
| | Silt, brown | 1.5 | (5.0) | 22.0 | (72.0) |
| | Clay, brown | 1.6 | (5.5) | 23.6 | (77.5) |
| | Sand, fine grained, light brown | 1.0 | (3.5) | 24.6 | (80.5) |
| | Silt, light brown, sandy | 1.0 | (3.5) | 25.6 | (84.0) |
| | Clay, silty in parts, brown | 2.4 | (8.0) | 28.0 | (92.0) |
| | Sand, pale green | 2.1 | (7.0) | 30.1 | (98.5) |
| | Band of small flints | 0.1 | (0.5) | 30.2 | (99.0) |
| | Sand, olive green | 0.2 | (0.5) | 30.4 | (100.0) |
| | Flints, fine to coarse, in a matrix of olive green clay (Bullhead Bed) | 0.6+ | (2.0+) | 31.0 | (101.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--|----|-----------------------|------|-------------------------|------------|------|--------|
| | % | mm | % | | Fines | Sand | Gravel |
| Gravel | 35 | +16 | : 16 | 0.1 - 1.0 | 14 | 31 | 55 |
| | | -16+4 | : 19 | 1.0 - 2.0 | 11 | 57 | 32 |
| | | | | | 2.0 - 3.0 | 9 | 50 |
| Sand | 59 | -4+1 | : 8 | 3.0 - 4.0 | 1 | 67 | 32 |
| | | -1+ $\frac{1}{4}$ | : 35 | 4.0 - 5.0 | 4 | 81 | 15 |
| | | - $\frac{1}{4}$ +1/16 | : 16 | | | | |
| Fines | 6 | -1/16 | : 6 | | | | |
| Sand in the Reading Beds (not included in the assessment) | | | | | | | |
| Gravel | 0 | +16 | : 0 | 23.6 - 24.6 | 42 | 58 | 0 |
| | | -16+4 | : 0 | 28.0 - 30.1 | No sample | | |
| | | | | 30.2 - 30.4 | No sample | | |
| Sand | 58 | -4+1 | : 1 | | | | |
| | | -1+ $\frac{1}{4}$ | : 2 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 55 | | | | |
| Fines | 42 | -1/16 | : 42 | | | | |

Surface level (+89.0m) +292 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm)diam.
 January 1971

Waste 15.5m (51.0 ft)
 Bedrock 3.0m + (10.0 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|---------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) |
| Head | Clay, brown, with sub-rounded flint and quartzite | 1.4 | (4.5) | 1.5 | (5.0) |
| | Clay, mottled grey and brown, with traces of sand and medium to coarse flint | 0.8 | (2.5) | 2.3 | (7.5) |
| | Sand, light brown to grey, clayey, with fine to coarse flint and quartz gravel | 0.7 | (2.5) | 2.9 | (9.5) |
| | Clay, greenish grey, with few flint pebbles | 1.8 | (6.0) | 4.8 | (16.0) |
| | Clay, brownish grey with subangular to sub-rounded flint pebbles | 0.4 | (1.5) | 5.2 | (17.0) |
| Glacial Sand and Gravel | 'Clayey' gravel, with greyish brown sandy clay from 5.9 to 7.8m and orange brown silt from 9.0 to 10.0m Gravel: fine to coarse subangular to subrounded flint and a little quartz and quartzite Sand: medium with coarse and fine quartz and flint; brown, clayey | 7.6 | (25.0) | 12.8 | (42.0) |
| | Clay, sandy, brown, with scattered medium to coarse flint gravel | 2.7 | (9.0) | 15.5 | (51.0) |
| Upper Chalk | Chalk, soft, white, with traces of clay and gravel | 3.0+ | (10.0+) | 18.5 | (60.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | | |
|--------|----|-----------|------|-------------------------|-------------|------|--------|----|
| | | | | | Fines | Sand | Gravel | |
| Gravel | 53 | +16 | : 37 | 5.2 - 5.9 | 20 | 32 | 48 | |
| | | -16+4 | : 16 | 5.9 - 7.8 | Sandy clay | | | |
| | | -4+1 | : 7 | 7.8 - 8.8 | 10 | 29 | 61 | |
| Sand | 28 | -1+1/4 | : 16 | 8.8 - 9.0 | 16 | 34 | 50 | |
| | | -1/4+1/16 | : 5 | 9.0 - 10.0 | Silt | | | |
| | | | | 10.0 - 11.0 | 11 | 31 | 58 | |
| Fines | 19 | -1/16 | : | 19 | 11.0 - 12.0 | 11 | 29 | 60 |
| | | | | | 12.0 - 12.8 | 14 | 28 | 58 |

SU 98 NE 114 9711 8744 Near Church Wood, Hedgerley

Surface level (+82.0m) +269 ft

Waste 0.3m (1.0 ft)

Water not struck

Bedrock 4.7m (15.5 ft +)

Shell and auger (modified), 6 inch (152 mm) diam.

January 1971

| | | Thickness | | Depth | |
|--------------|--|-----------|---------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) |
| Reading Beds | Clay, mottled brown, grey and green | 4.7 | (15.5+) | 5.0 | (16.5) |

Surface level (+79.6m) +261 ft Overburden 2.9m (9.5 ft)
 Water struck at (+74.6m) Mineral 5.0m (16.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 2.1m + (7.0 ft +)
 February 1971

| | | Thickness | | Depth | | | |
|-------------------------|--|-----------------------|--------|-------------------------|--------|------|--------|
| | | m | (ft) | m | (ft) | | |
| | Made Ground | 0.2 | (0.5) | 0.2 | (0.5) | | |
| Head | Clay, yellowish buff, with flint pebbles | 0.4 | (1.5) | 0.6 | (2.0) | | |
| | Clay, yellowish buff, streaked reddish brown, with trace of flint pebbles | 0.2 | (0.5) | 0.8 | (2.5) | | |
| | Clay, reddish brown, mottled yellowish buff and pale grey, sandy at base, trace of flint pebbles | 0.8 | (2.5) | 1.6 | (5.5) | | |
| | Clay, stiff, mottled reddish brown and grey with sub-angular to rounded flint and quartzite | 0.2 | (0.5) | 1.8 | (6.0) | | |
| | Clay, reddish brown and light grey with some flint pebbles in bands | 1.1 | (3.5) | 2.9 | (9.5) | | |
| Glacial Sand and Gravel | Gravel | 5.0 | (16.5) | 7.9 | (26.0) | | |
| | Gravel: fine to coarse, angular to rounded flint with a little well rounded quartz, quartzite and sandstone Sand: medium with fine and coarse quartz and some flint; brown to pale green, clayey in parts | | | | | | |
| Reading Beds | Clay, stiff, reddish brown, yellowish green, and greenish blue | 2.1+ | (7.0+) | 10.0 | (33.0) | | |
| | | | | Percentage | | | |
| | % | mm | % | Depth below surface (m) | Fines | Sand | Gravel |
| Gravel | 53 | +16 | : 28 | 2.9 - 3.7 | 8 | 54 | 38 |
| | | -16+4 | : 25 | 3.7 - 4.0 | 8 | 84 | 8 |
| | | | | 4.0 - 5.0 | 13 | 32 | 55 |
| Sand | 42 | -4+1 | : 9 | 5.0 - 6.0 | 3 | 41 | 56 |
| | | -1+ $\frac{1}{4}$ | : 24 | 6.0 - 7.0 | 1 | 32 | 67 |
| | | - $\frac{1}{4}$ +1/16 | : 9 | 7.0 - 7.9 | 2 | 37 | 61 |
| Fines | 5 | -1/16 | : 5 | | | | |

Surface level (+77.4m) +254 ft Overburden 0.1m (0.5 ft)
 Water struck at (+74.4m) Mineral 5.1m (17.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.8m + (2.5 ft +)
 October 1971

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: medium to coarse subangular to well rounded flint and quartzite Sand: medium with coarse and fine quartz and some flint; silty and clayey in parts, light brown to reddish brown | 5.1 | (17.0) | 5.2 | (17.0) |
| London Clay | Clay, orange-brown, mottled black at top, passing to bluish grey | 0.8 + | (2.5+) | 6.0 | (19.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 50 | +16 | : 26 | 0.1 - 1.1 | 18 | 35 | 47 |
| | | -16+4 | : 24 | 1.1 - 2.1 | 17 | 31 | 52 |
| | 37 | -4+1 | : 10 | 2.1 - 3.1 | 11 | 39 | 50 |
| | | -1+1/4 | : 18 | 3.1 - 4.1 | 8 | 46 | 46 |
| Sand | 37 | -1/4+1/16 | : 9 | 4.1 - 5.2 | 9 | 36 | 55 |
| | | | | | | | |
| Fines | 13 | -1/16 | : 13 | | | | |

Surface level (+84.1m) +276 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 0.2m (0.5 ft)
 Mineral 6.5m (21.5 ft)
 Bedrock 2.8m + (9.0 ft+)

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Glacial Sand and Gravel | Gravel, with sandy clay and scattered flints at 3.0 to 3.7m Gravel: fine to coarse, with rare cobbles, subangular to subrounded flint with subrounded quartz and quartzite Sand: medium with fine and coarse quartz and flint; brown to dark grey, clayey in parts | 6.5 | (21.5) | 6.7 | (22.0) |
| Reading Beds | Clay, dark brown and grey | 0.3 | (1.0) | 7.0 | (23.0) |
| | Sand, medium grained, grey, clayey towards base | 1.8 | (6.0) | 8.8 | (29.0) |
| | Clay, tenaceous, grey with green sandy partings | 0.2 | (0.5) | 9.0 | (29.5) |
| | Clay, sandy with coarse and cobble flints | 0.2 | (0.5) | 9.2 | (30.0) |
| Upper Chalk | Chalk | 0.3+ | (1.0+) | 9.5 | (31.0) |

| | | | | Depth below surface (m) | Percentage | | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|----|
| | | | | | Fines | Sand | Gravel | |
| | % | mm | % | | | | | |
| Gravel | 55 | +16 | : 30 | 0.2 - 1.2 | 11 | 25 | 64 | |
| | | -16+4 | : 25 | 1.2 - 2.2 | 17 | 25 | 58 | |
| | | | | 2.2 - 3.0 | 10 | 44 | 46 | |
| Sand | 36 | -4+1 | : 9 | 3.0 - 3.7 | Clay | | | |
| | | -1+ $\frac{1}{4}$ | : 17 | 3.7 - 4.7 | | 7 | 41 | 52 |
| | | - $\frac{1}{4}$ +1/16 | : 10 | 4.7 - 5.7 | | 4 | 46 | 50 |
| | | | | 5.7 - 6.7 | | 4 | 35 | 61 |
| Fines | 9 | -1/16 | : 9 | | | | | |

Sand in the Reading Beds
 (not included in the assessment)

| | | | | | | | |
|--------|----|-----------------------|------|-----------|----|----|---|
| Gravel | 0 | +16 | : 0 | 7.0 - 8.0 | 2 | 97 | 1 |
| | | -16+4 | : 0 | 8.0 - 8.8 | 10 | 90 | 0 |
| | | -4+1 | : 1 | | | | |
| Sand | 94 | -1+ $\frac{1}{4}$ | : 41 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 52 | | | | |
| Fines | 6 | -1/16 | : 6 | | | | |

Surface level (+58.8m) +193 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 0.2m (0.5 ft)
 Mineral 5.3m (17.5 ft)
 Bedrock 0.5m + (1.5 ft +)

| | | Thickness | | Depth | |
|---------------------|---|-------------------------|--------|------------|-------------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Dry Valley Deposits | 'Clayey' gravel Gravel: fine to coarse with rare cobbles, sub- angular to subrounded flint with subrounded quartz and quartzite Sand: coarse and medium with fine quartz and flint; brown | 5.3 | (17.5) | 5.5 | (18.0) |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 6.0 | (19.5) |
| | | Depth below surface (m) | | Percentage | |
| | | | | Fines | Sand Gravel |
| Gravel | 59 +16 : 35 | 0.2 - 1.1 | | 19 | 29 52 |
| | -16+4 : 24 | 1.1 - 2.1 | | 10 | 31 59 |
| | | 2.1 - 3.1 | | 11 | 32 57 |
| | -4+1 : 13 | 3.1 - 4.1 | | 5 | 27 68 |
| Sand | 30 -1+ $\frac{1}{4}$: 12 | 4.1 - 5.5 | | 10 | 34 56 |
| | - $\frac{1}{4}$ +1/16 : 5 | | | | |
| Fines | 11 -1/16 : 11 | | | | |

Surface level (+77.7m) +255 ft
 Water struck at (+75.4m)
 Shell and auger (modified), 6 inch (152mm) diam.
 February 1971

Overburden 0.9m (3.0 ft)
 Mineral 5.6m (18.5 ft)
 Bedrock 1.0m + (3.5 ft +)

| | | Thickness | | Depth | | | |
|-------------------------|--|-------------------------|--------|------------|----------------|----|----|
| | | m | (ft) | m | (ft) | | |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) | | |
| Head | Clay, reddish brown and sandy, with some gravel | 0.8 | (2.5) | 0.9 | (3.0) | | |
| Glacial Sand and Gravel | Sandy gravel Gravel: fine to coarse, with rare cobbles, subangular to well rounded flint with subrounded to well rounded quartz and quartzite Sand: medium with fine and coarse quartz; yellow to orange-brown, clayey in upper part | 5.6 | (18.5) | 6.5 | (21.5) | | |
| London Clay | Clay, reddish brown to light brown at top, passing to dark greyish blue | 1.0+ | (3.5+) | 7.5 | (24.5) | | |
| | | Depth below surface (m) | | Percentage | | | |
| | % mm % | | | Fines | Sand Gravel | | |
| Gravel | 42 | +16 | : 21 | 0.9 - 2.0 | 13 | 45 | 42 |
| | | -16+4 | : 21 | 2.0 - 3.0 | 14 | 74 | 12 |
| | | | | 3.0 - 4.0 | 3 | 57 | 40 |
| Sand | 51 | -4+1 | : 10 | 4.0 - 5.0 | 2 | 43 | 55 |
| | | -1+ $\frac{1}{4}$ | : 30 | 5.0 - 6.0 | 3 | 53 | 44 |
| | | - $\frac{1}{4}$ +1/16 | : 11 | 6.0 - 6.5 | 9 | 34 | 57 |
| Fines | 7 | -1/16 | : 7 | | | | |

SU 98 NE 120 9919 8570 Fulmer Chase, Fulmer

Surface level (+75.0m) +246 ft
 Water struck at (+72.0m)
 Shell and auger (modified), 6 inch (152mm) diam.
 February 1971

Mineral 4.6m (15.0 ft)
 Bedrock 0.9m+ (3.0 ft +)

| | | Thickness | Depth |
|-------------------------|--|------------|------------|
| | | m (ft) | m (ft) |
| Glacial Sand and Gravel | Gravel Gravel: fine to coarse subangular to well rounded flint, with some well rounded quartzite Sand: medium with coarse and fine quartz; orange-brown, silty and clayey throughout | 4.6 (15.0) | 4.6 (15.0) |

| | | | |
|-------------|--|-------------|------------|
| London Clay | Clay, stiff, reddish brown streaked pale blue at top, passing to dark greyish blue below | 0.9+ (3.0+) | 5.5 (18.0) |
|-------------|--|-------------|------------|

| | | | | Depth below | Percentage | | |
|--------|----|-----------------------|------|-------------|------------|------|--------|
| | | | | surface (m) | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 52 | +16 | : 20 | 0 - 1.0 | 9 | 31 | 60 |
| | | -16+4 | : 32 | 1.0 - 2.0 | 10 | 44 | 46 |
| | | | | 2.0 - 3.0 | 11 | 40 | 49 |
| Sand | 40 | -4+1 | : 12 | 3.0 - 4.0 | 7 | 48 | 45 |
| | | -1+ $\frac{1}{4}$ | : 21 | 4.0 - 4.6 | 3 | 39 | 58 |
| | | - $\frac{1}{4}$ +1/16 | : 7 | | | | |
| Fines | 8 | -1/16 | : 8 | | | | |

SU 98 NE 121 9749 8775 Near Manor Farm, Hedgerley Green

Surface level (+91.1m) +299 ft Overburden 0.5m (1.5 ft)
 Water not struck Mineral 5.0m (16.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 1.8m + (6.0 ft)
 October 1971

| | | Thickness m (ft) | Depth m (ft) |
|----------------------------|---|--------------------------|----------------------|
| | Soil | 0.5 (1.5) | 0.5 (1.5) |
| Glacial Sand and Gravel | 'Clayey' sandy gravel Gravel: fine to coarse, trace of cobbles, subangular to well rounded flint with well rounded white quartz and quartzite Sand: medium and fine with coarse quartz; clayey in parts, brown | 5.0 (16.5) | 5.5 (18.0) |
| Reading Beds | Clay, soft, mottled black to blue, slightly sandy | 1.8+ (6.0+) | 7.3 (24.0) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage Sand Gravel | |
|--------|----|-----------------------|------|----------------------------|-------|--------------------------------|----|
| Gravel | 38 | +16 | : 15 | 0.5 - 1.5 | 24 | 35 | 41 |
| | | -16+4 | : 23 | 1.5 - 2.3 | 21 | 35 | 44 |
| | | | | 2.3 - 3.3 | 12 | 56 | 32 |
| Sand | 49 | - 4 +1 | : 6 | 3.3 - 4.3 | 6 | 82 | 12 |
| | | -1+ $\frac{1}{4}$ | : 24 | 4.3 - 4.5 | 11 | 65 | 24 |
| | | - $\frac{1}{4}$ +1/16 | : 19 | 4.5 - 5.5 | 2 | 34 | 64 |
| Fines | 13 | -1/16 | : 13 | | | | |

| | | | |
|--|---|-----------------------------|--------------------|
| Surface level (+85. 3m) +280 ft | | Overburden 2. 3m (7. 5 ft) | |
| Water not struck | | Mineral 1. 0m (3. 5 ft) | |
| Shell and auger (modified), 6 inch (152mm) diam. | | Waste 3. 6m (12. 0 ft) | |
| October 1971 | | Mineral 2. 1m (7. 0 ft) | |
| | | Bedrock 3. 0m + (10. 0 ft+) | |
| | | Thickness | Depth |
| | | m (ft) | m (ft) |
| | Soil | 0. 2 (0. 5) | 0. 2 (0. 5) |
| Head | Clay, mottled brown and white, sandy, with traces of angular white flint and well rounded quartz and quartzite | 2. 1 (7. 0) | 2. 3 (7. 5) |
| Glacial Sand (a) and Gravel | 'Clayey' gravel Gravel: fine to coarse with trace of cobbles, subrounded to well rounded flint with well rounded quartz and quartzite Sand: predominantly medium with fine and coarse quartz with flint; white to buff | 1. 0 (3. 5) | 3. 3 (11. 0) |
| | Clay, sandy, buff, with traces of fine angular white flint and well rounded quartz and quartzite | 3. 6 (12. 0) | 6. 9 (22. 5) |
| | (b) 'Clayey' gravel Gravel: fine to coarse with trace of cobbles, sub-angular to well rounded flint, with well rounded quartz and quartzite Sand: predominantly medium with coarse and some fine quartz and flint; clayey in upper metre, white to buff | 2. 1 (7. 0) | 9. 0 (29. 5) |
| Reading Beds | Clay, sandy, variably coloured from greenish brown to mottled green and reddish brown | 2. 8 (9. 0) | 11. 8 (38. 5) |
| Upper Chalk | Chalk | 0. 2+ (0. 5+) | 12. 0 (39. 5) |

/continued.....

SU 98 NE 122 (continued)

| | | | | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|--|-------------|----------------------------|---------|--------------------|----------|
| (a) | % | mm | % | | | | |
| Gravel | 47 | +16 -16+4 | : : | 2.3 - 3.3 | 18 | 35 | 47 |
| | | | | | | | |
| Sand | 35 | -4-1 -1+ $\frac{1}{4}$ - $\frac{1}{4}$ +1/16 | : : : | | | | |
| | | | | | | | |
| Fines | 18 | -1/16 | : 18 | | | | |
| (b) | | | | | | | |
| Gravel | 45 | +16 -16+4 | : : | 6.9 - 7.9 7.9 - 8.6 | 17 5 | 35 52 | 48 43 |
| | | | | | | | |
| Sand | 44 | -4-1 -1- $\frac{1}{4}$ - $\frac{1}{4}$ +1/16 | : : : | | | | |
| | | | | | | | |
| Fines | 11 | -1/16 | : 11 | | | | |

Surface level (+93.3m) +306 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1971

Overburden 4.5m (15.0 ft)
 Mineral 16.7m (55.0 ft)
 Bedrock 0.2m + (0.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|--|---------------------|-----------------|
| | Soil | 0.4 (1.5) | 0.4 (1.5) |
| Head | Clay with gravel. Silty brown clay with scattered fine to medium flint and quartz gravel passing into gravel with clay between 2.0m to 3.4m, the gravel being fine to coarse subangular to rounded flint with about 5% quartz and quartzite | 4.1 (13.5) | 4.5 (15.0) |
| Glacial Sand and Gravel | Sandy gravel with a clay band between 12.8 and 12.9m. Dominantly sand between 12.9m and 16.2m Gravel: fine to coarse, subangular to rounded flint with a trace of quartz and quartzite. Sand: medium with fine some coarse, quartz; generally brown and clayey, becoming slightly coarser towards base | 16.7 (55.0) | 21.2 (69.5) |
| Upper Chalk | Chalk | 0.2+ (0.5+) | 21.4 (70.0) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|------------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 34 | +16 | : 16 | 4.5 - 5.5 | 10 | 44 | 46 |
| | | -16+4 | : 18 | 5.5 - 6.5 | 9 | 40 | 51 |
| Sand | 56 | -4+1 | : 6 | 6.5 - 7.5 | 2 | 45 | 53 |
| | | -1+ $\frac{1}{4}$ | : 33 | 7.5 - 8.5 | 10 | 43 | 47 |
| | | - $\frac{1}{4}$ +1/16 | : 17 | 8.5 - 9.5 | 5 | 41 | 54 |
| | | | | 9.5 -10.5 | 5 | 60 | 35 |
| Fines | 10 | -1/16 | : 10 | 10.5 -11.5 | 8 | 57 | 35 |
| | | | | 11.5 -12.8 | 8 | 44 | 48 |
| | | | | 12.8 -12.9 | Clay | | |
| | | | | 12.9 -14.5 | 11 | 89 | 0 |
| | | | | 14.5 -15.5 | 7 | 93 | 0 |
| | | | | 15.5 -16.2 | 10 | 89 | 1 |
| | | | | 16.2 -17.2 | 10 | 58 | 32 |
| | | | | 17.2 -18.2 | 10 | 43 | 47 |
| | | | | 18,2 -19.1 | 7 | 61 | 32 |
| | | | | 19.1 -19.7 | 19 | 77 | 4 |
| 19.7 -20.4 | 20 | 66 | 14 | | | | |
| 20.4 -21.2 | 13 | 47 | 40 | | | | |

SU 98 NE 124 9867 8848 Bullstrode Park, Gerrards Cross

Surface level (+83.8m) +275 ft Overburden 0.2m (0.5 ft)
 Water not struck Mineral 2.8m (9.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.8m + (2.6 ft +)
 November 1971

| | | Thickness | Depth |
|-------------------------|---|-------------|------------|
| | | m (ft) | m (ft) |
| | Soil | 0.2 (0.5) | 0.2 (0.5) |
| Glacial Sand and Gravel | Pebbly sand Gravel: fine to coarse, angular to well rounded flint with traces of quartz Sand: predominantly medium (56% of total samples) with fine and trace of coarse, mainly quartz; buff to brown | 2.8 (9.0) | 3.0 (10.0) |
| Reading Beds | Clay, stiff, mottled reddish brown and greenish grey | 0.8+ (2.5+) | 3.8 (12.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 15 | +16 | : 7 | 0.2 - 1.2 | 6 | 79 | 15 |
| | | -16+4 | : 8 | 1.2 - 2.0 | 7 | 88 | 5 |
| | | -4+1 | : 4 | 2.0 - 3.0 | 12 | 66 | 22 |
| Sand | 76 | -1+ $\frac{1}{4}$ | : 56 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 16 | | | | |
| Fines | 9 | -1/16 | : 9 | | | | |

SU 98 NE 125 9931 8631 South of Duke's Wood, Fulmer

Surface level (+44.8m) + 147 ft
 Water struck at (+42.7m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Waste 3.4m (11.0 ft)
 Bedrock 2.6m + (8.5 ft +)

| | | Thickness | | Depth | |
|-------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Alluvium | Clay, black, stony | 2.2 | (7.0) | 2.4 | (8.0) |
| | Clayey sand with gravel Gravel: mainly fine and medium subangular chalk with flint Sand: medium to coarse subangular flint and quartz; brown, clayey | 0.7 | (2.5) | 3.1 | (10.0) |
| | Silt, grey | 0.3 | (1.0) | 3.4 | (11.0) |
| Upper Chalk | Chalk | 2.6+ | (8.5+) | 6.0 | (19.5) |

Surface level (+75.3m) + 247 ft
 Water struck at (+72.3m)
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Overburden 0.3m (1.0 ft)
 Mineral 6.2m (20.5ft)
 Bedrock 0.5m + (1.5 ft +)

| | | Thickness | | Depth | | |
|-------------------------|---|-------------------------|--------|------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) | |
| Head | Clay, brown and sandy | 0.2 | (0.5) | 0.3 | (1.0) | |
| Glacial Sand and Gravel | Gravel: fine to coarse, subangular to well rounded flint and some well rounded quartz and quartzite Sand: medium and coarse with fine quartz, some coarse flint, brown; clay bands in the top 2.0m | 6.2 | (20.5) | 6.5 | (21.5) | |
| Reading Beds | Clay, stiff, brown | 0.5+ | (1.5+) | 7.0 | (23.0) | |
| | | Depth below surface (m) | | Percentage | | |
| | % mm : | | | Fines | Sand | Gravel |
| Gravel | 66 +16 : 38 | 0.3 - 1.3 | | 10 | 53 | 37 |
| | -16+4 : 28 | 1.3 - 2.3 | | 6 | 35 | 59 |
| | | 2.3 - 3.3 | | 5 | 37 | 58 |
| | -4+1 : 11 | 3.3 - 4.3 | | 1 | 27 | 72 |
| Sand | 30 -1+1/4 : 14 | 4.3 - 5.3 | | 2 | 23 | 75 |
| | -1/4+1/16 : 5 | 5.3 - 6.5 | | 0 | 7 | 93 |
| Fines | 4 -1/16 : 4 | | | | | |

SU 98 SE 34 9535 8383 East Burnham Park, Burnham

Surface level (+51.5m) +169 ft Overburden 2.2 m (7.0 ft)
 Water not struck Mineral 2.2m (7.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.3m + (1.0 ft +)
 September 1970

| | | Thickness | | Depth | |
|--------------------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| Brickearth | Clay, silty, brown and yellow, grey towards base | 2.2 | (7.0) | 2.2 | (7.0) |
| Terrace Deposits (Boyn Hill Terrace) | Sandy gravel Gravel: fine to coarse subangular to sub-rounded flint and trace of fine to medium well rounded quartz. Cobbles at base Sand: medium with fine and coarse quartz, a little coarse flint; brown and buff | 2.2 | (7.0) | 4.4 | (14.5) |
| Reading Beds | Clay, firm, brown | 0.3+ | (1.0+) | 4.7 | (15.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 42 | +16 | : 24 | 2.2 - 3.2 | 7 | 43 | 50 |
| | | -16+4 | : 18 | 3.2 - 3.7 | 7 | 44 | 49 |
| | | -4+1 | : 7 | 3.7 - 4.1 | 7 | 85 | 8 |
| Sand | 51 | -1+ $\frac{1}{4}$ | : 29 | 4.1 - 4.4 | 5 | 49 | 46 |
| | | - $\frac{1}{4}$ +1/16 | : 15 | | | | |
| | | | | | | | |
| Fines | 7 | -1/16 | : 7 | | | | |

SU 98 SE 35 9647 8440 Parsonage Lane, Farnham Royal

Surface level (+69.8m) +229 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

Overburden 0.3m (1.0 ft)
 Mineral 2.0m (6.5 ft)
 Waste 0.4m (1.5 ft)
 Bedrock 0.5m + (1.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|----------------------------|--|---------------------|-----------------|
| | Soil | 0.3 (1.0) | 0.3 (1.0) |
| Glacial Sand and Gravel | Sandy gravel Gravel: fine to coarse, subangular to well rounded flint Sand: medium with fine and coarse quartz and coarse flint; brown | 2.0 (6.5) | 2.3 (7.5) |
| | Clay, reddish brown or grey, with scattered flints | 0.4 (1.5) | 2.7 (9.0) |
| Reading Beds | Clay, mottled light blue and brown | 0.5+ (1.5+) | 3.2 (10.5) |

| | % | mm | : | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|---|----|----------------------------|-------|--------------------|--------|
| Gravel | 45 | +16 | : | 22 | 0.3 - 1.3 | 6 | 40 | 54 |
| | | -16+4 | : | 23 | 1.3 - 2.3 | 8 | 56 | 36 |
| Sand | 48 | -4+1 | : | 9 | | | | |
| | | -1+ $\frac{1}{4}$ | : | 31 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : | 8 | | | | |
| Fines | 7 | -1/16 | : | 7 | | | | |

Surface level (+50.9m) +167 ft Overburden 0.6m (2.0 ft)
 Water struck at (+43.9m) Mineral 2.7m (9.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 5.7m + (18.5 ft +)
 September 1970

| | | Thickness m (ft) | Depth m (ft) |
|--------------------------------------|---|---------------------------|--------------------------|
| | Soil | 0.6 (2.0) | 0.6 (2.0) |
| Terrace Deposits (Boyn Hill Terrace) | Gravel Gravel: fine to coarse, subangular to angular flint, with subrounded quartz and quartzite Sand: medium with fine and coarse quartz, and coarse flint; brown. Thin clay layers | 2.7 (9.0) | 3.3 (11.0) |
| Reading Beds | Sand, mainly fine to medium grained with a little clay; brown. Very rare flint and quartz gravel Clay, bluish grey | 4.5 (15.0) 1.2+ (4.0+) | 7.8 (25.5) 9.0 (29.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|---|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 46 | +16 | : 22 | 0.6 - 1.6 | 12 | 44 | 44 |
| | | -16+4 | : 24 | 1.6 - 2.6 | 9 | 48 | 43 |
| | | | | 2.6 - 3.3 | 10 | 37 | 53 |
| Sand | 44 | -4+1 | : 10 | | | | |
| | | -1+ $\frac{1}{4}$ | : 20 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 14 | | | | |
| Fines | 10 | -1/16 | : 10 | | | | |
| Sand in the Reading Beds (not included in the assessment) | | | | | | | |
| Gravel | 1 | +16 | : 0 | 3.3 - 4.3 | 4 | 93 | 3 |
| | | -16+4 | : 1 | 4.3 - 5.3 | 6 | 94 | 0 |
| | | | | 5.3 - 6.3 | 6 | 94 | 0 |
| Sand | 94 | -4+1 | : 1 | 6.3 - 7.3 | 5 | 95 | 0 |
| | | -1+ $\frac{1}{4}$ | : 50 | 7.3 - 7.8 | 5 | 95 | 0 |
| | | - $\frac{1}{4}$ +1/16 | : 43 | | | | |
| Fines | 5 | -1/16 | : 5 | | | | |

Surface level (+74.1m) +243 ft
 Water struck at (+73.4m)
 Shell and auger (modified), 6 inch (152mm) diam.
 February 1972

Waste 1.5m (5.0 ft)
 Bedrock 3.5m+(11.5 ft +)

| | | Thickness | | Depth | |
|--------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Made ground and soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Clay, light brown, with some fine to medium flint and quartzite gravel | 1.3 | (4.5) | 1.5 | (5.0) |
| Reading Beds | Clay, reddish brown, bluish grey, green and yellow; carbonaceous streaks | 3.5 | (11.5) | 5.0 | (16.5) |

Surface level (+47.8m) +157 ft
 Water struck at (+39.9m)
 Shell and auger (modified), 6 inch (152mm) diam.
 February 1971

Waste 2.0m (6.5 ft)
 Bedrock 7.5m + (24.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|---|---|--------------------------|----------------------|
| | Soil | 0.4 (1.5) | 0.4 (1.5) |
| Head | Clay, reddish brown with some gravel | 1.1 (3.5) | 1.5 (5.0) |
| Terrace Deposits (Boyn Hill Terrace) | Gravel, fine to coarse flint and trace of quartz, with fine to coarse quartz sand and a little clay | 0.5 (1.5) | 2.0 (6.5) |
| Reading Beds | Clayey silt, pale orange, mottled greenish grey | 0.5 (1.5) | 2.5 (8.0) |
| | Sand, fine to medium grained, yellowish orange, a little clay | 5.5 (18.0) | 8.0 (26.0) |
| | Clay, light to dark brown, grey, light blue, silty in parts | 1.4 (4.5) | 9.4 (31.0) |
| | Sand, fine to medium grained, pale brown, with clay lenses | 0.1+ (0.5+) | 9.5 (31.0) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|------|----------------------------|-------|--------------------|--------|
| Gravel | 53 | +16 | : 23 | 1.5 - 2.0 | 9 | 38 | 53 |
| | | -16+4 | : 30 | | | | |
| Sand | 38 | -4+1 | : 11 | | | | |
| | | -1+ $\frac{1}{4}$ | : 18 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 9 | | | | |
| Fines | 9 | -1/16 | : 9 | | | | |

Sand in the Reading Beds
 (not included in the assessment)

| | | | | | | | |
|--------|----|-----------------------|------|-----------|----|----|----------|
| Gravel | 0 | +16 | : 0 | 2.5 - 3.5 | 14 | 86 | 0 |
| | | -16+4 | : 0 | 3.5 - 4.5 | 6 | 94 | 0 |
| | | | | 4.5 - 5.5 | 9 | 90 | 1 |
| Sand | 92 | -4+1 | : 2 | 5.5 - 6.5 | 4 | 96 | 0 |
| | | -1+ $\frac{1}{4}$ | : 23 | 6.5 - 7.5 | 6 | 93 | 1 |
| | | - $\frac{1}{4}$ +1/16 | : 67 | 7.5 - 8.0 | 9 | 91 | 0 |
| Fines | 8 | -1/16 | : 8 | | | | |

Surface level (+45.4m) +149 ft
 Water struck at (+41.4m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 1.8m (6.0 ft)
 Mineral 2.0m (6.5 ft)
 Waste 2.0m (6.5 ft)
 Bedrock 1.7m + (5.5 ft +)

| | | Thickness | | Depth | |
|--------------------------------------|--|---------------------------|--------|-----------------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Clay, mottled grey to brown, sandy, with some flints | 1.6 | (5.5) | 1.8 | (6.0) |
| Terrace Deposits (Boyn Hill Terrace) | Gravel Gravel: fine to coarse subangular to rounded flint and some quartzite Sand: medium with coarse and fine quartz; buff, yellow, brown and white, clayey | 2.0 | (6.5) | 3.8 | (12.5) |
| | Clay, silty and sandy with gravel, brown | 2.0 | (6.5) | 5.8 | (19.0) |
| Reading Beds | Clay, mottled buff and blue, passing to bluish grey and brown | 1.7+ | (5.5+) | 7.5 | (24.0) |
| | | Depth below surface (m) | Fines | Percentage Sand | Gravel |
| Gravel | 54 | +16 : 27 | 10 | 40 | 50 |
| | | -16+4 : 27 | 5 | 37 | 58 |
| Sand | 39 | -4+1 : 11 | | | |
| | | -1+ $\frac{1}{4}$: 20 | | | |
| | | - $\frac{1}{4}$ +1/16 : 8 | | | |
| Fines | 7 | -1/16 : 7 | | | |

Surface level (+31.1m) +102 ft
 Water struck at (+25.9m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 2.1m (7.0 ft)
 Mineral 3.1m (10.0 ft)
 Waste 0.7m (2.5 ft)
 Bedrock 2.1m + (7.0 ft +)

| | | Thickness | | Depth | |
|--|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) |
| Brickearth | Clay, silty, reddish brown passing to buff | 2.0 | (6.5) | 2.1 | (7.0) |
| Terrace Deposits (Taplow Terrace) | 'Clayey' gravel Gravel: fine to coarse mainly subrounded flint with a little quartzite. A few cobble size flints in lower part Sand: medium with coarse and fine quartz; clayey in parts, brown | 3.1 | (10.0) | 5.2 | (17.0) |
| | Clay, silty and sandy, yellow | 0.7 | (2.5) | 5.9 | (19.5) |
| Reading Beds | Clay, dark brown in upper part passing to mottled brown and pale greyish blue, hard and compact | 2.1+ | (7.0+) | 8.0 | (26.0) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage | |
|--------|----|-----------------------|------|----------------------------|-------|------------|--------|
| | | | | | | Sand | Gravel |
| Gravel | 50 | +16 | : 23 | 2.1 - 3.1 | 11 | 39 | 50 |
| | | -16+4 | : 27 | 3.1 - 4.1 | 14 | 50 | 36 |
| | | -4+1 | : 13 | 4.1 - 5.2 | 7 | 32 | 61 |
| Sand | 39 | -1+ $\frac{1}{4}$ | : 17 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 9 | | | | |
| Fines | 11 | -1/16 | : 11 | | | | |

Surface level (+76.9m) +252 ft Overburden 1.4m (4.5 ft)
 Water struck at (+72.9m) Mineral 4.5m (15.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 1.1m + (3.5 ft +)
 February 1971

| | | Thickness | Depth |
|-------------------------|--|------------------|-----------------|
| | | m (ft) | m (ft) |
| | Made ground | 1.2 (4.0) | 1.2 (4.0) |
| Head | Clay, orange, streaked pale grey. Scattered subangular to rounded fine to medium flint and a little quartzite | 0.2 (0.5) | 1.4 (4.5) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, with trace of cobbles, subangular to rounded flint with a little well rounded quartzite Sand: medium with coarse and fine quartz; orange brown, clayey | 4.5 (15.0) | 5.9 (19.5) |
| London Clay | Clay, orange brown, streaked bluish grey in upper part, uniformly bluish grey below | 1.1+ (3.5+) | 7.0 (23.0) |

| | | | | Depth below surface (m) | Fines | Percentage | |
|--------|----|-----------------------|------|-------------------------|-------|------------|--------|
| | | | | | | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 47 | +16 | : 24 | 1.4 - 2.7 | 16 | 34 | 50 |
| | | -16+4 | : 23 | 2.7 - 3.9 | 23 | 27 | 50 |
| | | -4+1 | : 9 | 3.9 - 4.9 | 26 | 42 | 32 |
| Sand | 36 | -1+ $\frac{1}{4}$ | : 21 | 4.9 - 5.9 | 3 | 43 | 54 |
| | | - $\frac{1}{4}$ +1/16 | : 6 | | | | |
| Fines | 17 | -1/16 | : 17 | | | | |

Surface level (+48.5m) +159 ft
 Water struck at (+43.5m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 0.2m (0.5 ft)
 Mineral 7.4m (24.5 ft)
 Bedrock 3.4m + (11.0 ft +)

| | | Thickness | | Depth | | |
|--------------------------------------|--|-----------|--|-------------------|----------------------|----------------------|
| | | m | (ft) | m | (ft) | |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) | |
| Terrace Deposits (Boyn Hill Terrace) | Gravel Gravel: fine and medium with coarse, trace of cobbles, angular to well rounded flint with a little quartz and quartzite Sand: medium with coarse and fine quartz and flint; white, yellow and brown. Clayey, particularly in the upper part | 7.4 | (24.5) | 7.6 | (25.0) | |
| Reading Beds | Clay, mottled yellow and green, passing to blue and brown | 3.4+ | (11.0+) | 11.0 | (36.0) | |
| | | | | Percentage | | |
| | | | | Fines | Sand | Gravel |
| | % mm : | % | Depth below surface (m) | | | |
| Gravel | 50 +16 : -16+4 : | 25 25 | 0.2 - 1.2 1.2 - 2.2 2.2 - 3.2 3.2 - 4.2 | 10 8 7 5 | 34 36 66 52 | 56 56 27 43 |
| Sand | 45 -1+1/4 : -1/4+1/16 : | 24 9 | 4.2 - 5.2 5.2 - 6.2 6.2 - 7.6 | 5 1 1 | 47 42 38 | 48 57 61 |
| Fines | 5 -1/16 : | 5 | | | | |

Surface level (+45.1m) +148 ft
 Water struck at (+43.4m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 1.7m (5.5 ft)
 Mineral 2.6m (8.5 ft)
 Waste 1.2m (4.0 ft)
 Mineral 1.3m (4.5 ft)
 Bedrock 3.2m + (10.5 ft +)

| | | Thickness | | Depth | |
|---|---|----------------------------|---------|------------|--------|
| | | m | (ft) | m | (ft) |
| | Soil, brown and clayey with a few pebbles | 0.2 | (0.5) | 0.2 | (0.5) |
| Terrace Deposits (Boyn Hill Terrace) | Clay, brown to black, with a few flints | 0.9 | (3.0) | 1.1 | (3.5) |
| | Sand, clayey, with a few flints | 0.6 | (2.0) | 1.7 | (5.5) |
| | (a) Gravel | 2.6 | (8.5) | 4.3 | (14.0) |
| | Gravel: fine to coarse, angular to rounded flint and quartzite Sand: medium with fine and coarse quartz and flint; white to brown, clayey in parts | | | | |
| | Clay, with a few pebbles | 1.2 | (4.0) | 5.5 | (18.0) |
| | (b) Gravel | 1.3 | (4.5) | 6.8 | (22.5) |
| | Gravel: fine to coarse, angular to rounded flint and quartzite Sand: medium with fine and coarse quartz and flint; white to brown, clayey in parts | | | | |
| London Clay | Clay, bluish grey to black | 3.2+ | (10.5+) | 10.0 | (33.0) |
| | | Depth below surface (m) | | Percentage | |
| | % mm % | | Fines | Sand | Gravel |
| (a) Gravel | 58 +16 : 38 | 1.7 - 2.7 | 5 | 47 | 48 |
| | -16+4 : 20 | 2.7 - 3.7 | 2 | 33 | 65 |
| | : 11 | 3.7 - 4.3 | 2 | 33 | 65 |
| Sand | 39 -4+1 : 11 | | | | |
| | -1+ $\frac{1}{4}$: 20 | | | | |
| | - $\frac{1}{4}$ +1/16 : 8 | | | | |
| Fines | 3 -1/16 : 3 | | | | |

/continued

SU 98 SE 43 (continued)

| | | | | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|--|--------------------|-------------------------|-------|-----------------|--------|
| (b) | % | mm | % | | | | |
| Gravel | 59 | +16 -16 + 4 | : 33 : 26 | 5.5 - 6.8 | 4 | 37 | 59 |
| Sand | 37 | -4+1 -1+ $\frac{1}{4}$ - $\frac{1}{4}$ +1/16 | : 9 : 23 : 5 | | | | |
| Fines | 4 | -1/16 | : 4 | | | | |

SU 98 SE 44 9944 8489 Framewood, Fulmer

Surface level (+75.3m) +247 ft
 Water struck at (+73.7m)
 Shell and auger (modified), 6 inch (152mm) diam.
 February 1971

Overburden 0.1m (0.5 ft)
 Mineral 4.6m (15.0 ft)
 Bedrock 0.8m + (2.5ft+)

| | | Soil | Thickness m (ft) | Depth m (ft) |
|-------------------------|--|------|---------------------|-----------------|
| | | Soil | 0.1 (0.5) | 0.1 (0.5) |
| Glacial Sand and Gravel | 'Clayey' sandy gravel Gravel: fine to coarse subangular to rounded flint with a little quartzite Sand: medium with fine and coarse quartz, silty and clayey; yellowish brown | | 4.6 (15.0) | 4.7 (15.5) |
| London Clay | Clay, reddish brown, streaked pale bluish grey at top passing to dark bluish grey | | 0.8+ (2.5+) | 5.5 (18.0) |

| | | | | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|--|---------------------|-------------------------------------|----------------|-----------------|---------------|
| | % | mm | % | | | | |
| Gravel | 29 | +16 -16+4 | : 12 : 17 | 0.1 - 1.1 1.1 - 1.6 1.6 - 2.6 | 13 13 10 | 31 44 84 | 56 43 6 |
| Sand | 59 | -4+1 -1+ $\frac{1}{4}$ - $\frac{1}{4}$ +1/16 | : 6 : 39 : 14 | 2.6 - 3.6 3.6 - 4.7 | 16 9 | 75 61 | 9 30 |
| Fines | 12 | -1/16 | : 12 | | | | |

Surface level (+60.0m) +197 ft
 Water struck at (+33.4m)
 Shell and auger (modified), 8 to 6 inch (204 to 152mm)
 diam.
 February 1971

Overburden 1.1m (3.5 ft)
 Mineral 1.4m (4.5 ft)
 Waste 0.3m (1.0 ft)
 Bedrock (London Clay) 14.0m(46.0 ft)
 (Reading Beds) 10.8m+ (35.5 ft+)

| | | Thickness | | Depth | |
|--------------------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Clay, mottled, pale orange to brown and pale greenish to grey, with scattered rounded cobbles and pebbles of flint | 0.9 | (3.0) | 1.1 | (3.5) |
| Terrace Deposits (Boyn Hill Terrace) | 'Clayey' sandy gravel Gravel: predominantly medium with fine and coarse and some cobbles flint with a little quartz Sand: mainly fine with medium and trace of coarse, very clayey, mottled orange and grey | 1.4 | (4.5) | 2.5 | (8.0) |
| | Clay, sandy, with scattered gravel, orange | 0.3 | (1.0) | 2.8 | (9.0) |
| London Clay | Clay, essentially dark bluish grey, silty and laminated in parts with occasional white shells | 14.0 | (46.0) | 16.8 | (55.0) |
| Reading Beds | Clay, usually mottled from pale green to blue, yellow and orange, brown to chocolate brown and buff with depth, silty in parts. Sand from 24.6 to 27.6m, fine grained, orange coloured, high silt content | 10.8 | (35.5) | 27.6 | (90.5) |

| | % | mm | : | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------|---|----|-------------------------|-------|-----------------|--------|
| Gravel | 38 | +16 | : | 31 | 1.1 - 2.5 | 19 | 43 | 38 |
| | | -16+4 | : | 7 | | | | |
| Sand | 43 | -4+1 | : | 1 | | | | |
| | | -1+1/4 | : | 12 | | | | |
| | | -1/4+1/16 | : | 30 | | | | |
| Fines | 19 | -1/16 | : | 19 | | | | |

/ continued

SU 98 SE 45 (continued)

| | | | | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--|----|-----------------------|------|-------------------------|-------|-----------------|--------|
| Sand in the Reading Beds (not included in the assessment) | | | | | | | |
| | % | mm | % | | | | |
| Gravel | 0 | +16 | : 0 | 24.6 - 25.6 | 31 | 68 | 1 |
| | | -16+4 | : 0 | 25.6 - 26.6 | 34 | 66 | 0 |
| | | | | 26.6 - 27.0 | 25 | 75 | 0 |
| | | -4+1 | : 2 | | | | |
| Sand | 70 | -1+ $\frac{1}{4}$ | : 12 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 56 | | | | |
| Fines | 30 | -1/16 | : 30 | | | | |

SU 98 SE 46 9947 8244 Bell Farm, Wexham

Surface level (+45.7m) +150 ft Overburden 0.6m (2.0 ft)
 Water struck at (+40.4m) Mineral 5.4m (18.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.2m + (0.5 ft +)
 January 1971

| | | Thickness m (ft) | Depth m (ft) |
|---|---|---------------------|-----------------|
| | Soil | 0.6 (2.0) | 0.6 (2.0) |
| Terrace Deposits (Boyn Hill Terrace) | Gravel, with sand and trace of gravel from 2.4 to 2.8m Gravel: fine to coarse sub-angular to well-rounded flint with a little quartzite and quartz Sand: medium with coarse and fine quartz and a little flint; brown | 5.4 (18.0) | 6.0 (19.5) |
| London Clay | Clay, brown | 0.2+ (0.5+) | 6.2 (20.5) |

| | | | | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|------|-------------------------|-------|-----------------|--------|
| | % | mm | % | | | | |
| Gravel | 54 | +16 | : 21 | 0.6 - 1.6 | 10 | 35 | 55 |
| | | -16+4 | : 33 | 1.6 - 2.4 | 12 | 27 | 61 |
| | | | | 2.4 - 2.8 | | No sample | |
| | | -4+1 | : 7 | 2.8 - 3.8 | 5 | 44 | 51 |
| Sand | 38 | -1+ $\frac{1}{4}$ | : 27 | 3.8 - 4.8 | 9 | 45 | 44 |
| | | - $\frac{1}{4}$ +1/16 | : 4 | 4.8 - 5.8 | 3 | 38 | 59 |
| Fines | 8 | -1/16 | : 8 | | | | |

Surface level (+30.5m) +100 ft
 Water struck at (+24.2m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 3.6m (12.0 ft +)
 Mineral 5.1m (17.0 ft +)
 Bedrock 0.3m + (1.0 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-----------------------------------|---|---------------------|-----------------|
| | Made ground | 2.3 (7.5) | 2.3 (7.5) |
| Brickearth | Clay, silty, grey, with scattered flints | 0.9 (3.0) | 3.2 (10.5) |
| | Clay, silty, mottled light blue and brown, with scattered flints | 0.4 (1.5) | 3.6 (12.0) |
| Terrace Deposits (Taplow Terrace) | Gravel Gravel: fine to coarse, trace of cobbles, angular to well rounded flint Sand: medium with coarse, and fine quartz, silty at top; brown | 5.1 (17.0) | 8.7 (28.5) |
| London Clay | Clay, stiff, mottled green and red | 0.3+ (1.0+) | 9.0 (29.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | % | mm | % | | Fines | Sand | Gravel |
| Gravel | 52 | +16 | : 26 | 3.6 - 4.6 | 16 | 49 | 35 |
| | | -16+4 | : 26 | 4.6 - 5.6 | 9 | 41 | 50 |
| | | | | 5.6 - 6.3 | 9 | 39 | 52 |
| Sand | 42 | -4+1 | : 16 | 6.3 - 7.3 | 0 | 41 | 59 |
| | | -1+ $\frac{1}{4}$ | : 22 | 7.3 - 8.7 | 1 | 40 | 59 |
| | | - $\frac{1}{4}$ +1/16 | : 4 | | | | |
| Fines | 6 | -1/16 | : 6 | | | | |

Surface level (+54.9m) +180 ft
 Water struck at (+51.4m)
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1971

Overburden 0.3m (1.0 ft)
 Mineral 4.8m (16.0 ft)
 Bedrock 0.4m+ (1.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|--------------------------------------|---|---------------------|-----------------|
| | Soil | 0.3 (1.0) | 0.3 (1.0) |
| Terrace Deposits (Boyn Hill Terrace) | Gravel Gravel: fine to coarse, subangular to sub-rounded flint with trace of white quartz and well rounded buff quartzite Sand: essentially medium with coarse and some fine quartz with flint; brown | 4.8 (16.0) | 5.1 (17.0) |
| London Clay | Clay, brown | 0.4+ (1.5) | 5.5 (18.0) |

| | | | | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|------|-------------------------|-------|-----------------|--------|
| | % | mm | % | | | | |
| Gravel | 55 | +16 | : 25 | 0.3 - 1.3 | 3 | 36 | 61 |
| | | -16-4 | : 30 | 1.3 - 2.3 | 6 | 39 | 55 |
| Sand | 41 | -4+1 | : 11 | 2.3 - 3.3 | 5 | 45 | 50 |
| | | -1+ $\frac{1}{4}$ | : 25 | 3.3 - 4.3 | 4 | 48 | 48 |
| | | - $\frac{1}{4}$ +1/16 | : 5 | 4.3 - 5.1 | 1 | 39 | 60 |
| Fines | 4 | -1/16 | : 4 | | | | |

Surface level (+64.9m) +213 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Overburden 1.2m (4.0 ft)
 Mineral 1.0m (3.5 ft)
 Bedrock 0.8m + (2.5 ft +)

| | | Thickness | | Depth | | | |
|-------------------------|---|-----------------------|--------|-------------------------|------------------------------|----|----|
| | | m | (ft) | m | (ft) | | |
| | Soil | 0.4 | (1.5) | 0.4 | (1.5) | | |
| Head | Clay, brown | 0.8 | (2.5) | 1.2 | (4.0) | | |
| Glacial Sand and Gravel | Gravel Gravel: fine to coarse, some cobbles, sub-angular to subrounded flint, with some well-rounded quartz and quartzite Sand; medium and fine with coarse flint and quartz; brown | 1.0 | (3.5) | 2.2 | (7.0) | | |
| Reading Beds | Clay, mottled grey and red | 0.8+ | (2.5+) | 3.0 | (10.0) | | |
| | | | | Depth below surface (m) | Percentage Fines Sand Gravel | | |
| Gravel | 53 | +16 | : 30 | 1.2 - 2.2 | 8 | 39 | 53 |
| | | -16+4 | : 23 | | | | |
| | | -4+1 | : 7 | | | | |
| Sand | 39 | -1+ $\frac{1}{4}$ | : 19 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 13 | | | | |
| Fines | 8 | -1/16 | : 8 | | | | |

SU 98 SW 23 9168 8477 Near Canadian Memorial Hospital, Taplow

Surface level (+77.4m) +254 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Mineral 3.4m (11.0 ft)
 Bedrock 0.6m +(2.0 ft +)

| | | Thickness | Depth |
|-------------------------|--|-------------|------------|
| | | m (ft) | m (ft) |
| Glacial Sand and Gravel | Gravel Gravel: fine to coarse, traces of cobbles, sub-angular to subrounded flint with traces of fine subrounded to subangular quartz and quartzite Sand: medium, with fine and coarse, mainly quartz; brown | 3.4 (11.0) | 3.4 (11.0) |
| Reading Beds | Sand, brown (0.3 m thick), on stiff, grey, sandy clay | 0.6+ (2.0+) | 4.0 (13.0) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 55 | +16 | : 34 | 0 - 1.0 | 10 | 29 | 61 |
| | | -16+4 | : 21 | 1.0 - 2.0 | 9 | 37 | 54 |
| | | | | | 2.0 - 3.0 | 10 | 40 |
| Sand | 35 | -4+1 | : 10 | 3.0 - 3.4 | 14 | 29 | 57 |
| | | -1+ $\frac{1}{4}$ | : 15 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 10 | | | | |
| Fines | 10 | -1/16 | : 10 | | | | |

SU 98 SW 24 9130 8390 Near Hunt's Wood, Taplow

Surface level (+64.6m) +212 ft Overburden 0.4m (1.5 ft)
 Water not struck Mineral 3.0m (10.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.1m + (0.5 ft +)
 September 1970

| | | Thickness | Depth |
|----------------------------|--|------------------|-----------------|
| | | m (ft) | m (ft) |
| Soil | | 0.4 (1.5) | 0.4 (1.5) |
| Glacial Sand and Gravel | Clayey gravel Gravel: fine to coarse sub- angular to subrounded flint with trace of fine well- rounded quartzite Sand: coarse with fine and medium (predominantly fine in upper metre) quartz, with traces of flint; brown | 3.0 (10.0) | 3.4 (11.0) |
| Upper Chalk | Chalk | 0.1+ (0.5+) | 3.5 (11.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|----------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 51 | +16 | : 23 | 0.4 - 1.4 | 40 | 27 | 33 |
| | | -16+4 | : 28 | 1.4 - 2.4 | 3 | 33 | 64 |
| | | -4+1 | : 16 | 2.4 - 3.4 | 8 | 36 | 56 |
| Sand | 32 | -1+ $\frac{1}{4}$ | : 8 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 8 | | | | |
| Fines | 17 | -1/16 | : 17 | | | | |

Surface level (+51.8m) +170 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 September 1970

Overburden 0.3m (1.0 ft)
 Mineral 2.7m (9.0 ft)
 Bedrock 0.5m + (1.5 ft)

| | | Thickness | | Depth | |
|-------------------------|--|-------------------------|--------|------------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) |
| Glacial Sand and Gravel | Sandy gravel. Clayey in upper 0.7m, gravel mainly in lower 2m Gravel: fine to coarse subangular to sub-rounded flint with traces of fine well-rounded quartz and quartzite Sand: mainly medium with fine and coarse, but medium and fine in upper 0.7m, quartz with traces of flint; brown | 2.7 | (9.0) | 3.0 | (10.0) |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 3.5 | (11.5) |
| | | | | Percentage | |
| | % mm % | Depth below surface (m) | Fines | Sand | Gravel |
| Gravel | 40 +16 : 25 | 0.3 - 1.0 | 16 | 75 | 9 |
| | -16+4 : 15 | 1.0 - 2.0 | 6 | 48 | 46 |
| | -4+1 : 11 | 2.0 - 3.0 | 4 | 37 | 59 |
| Sand | 52 -1+ $\frac{1}{4}$: 25 | | | | |
| | - $\frac{1}{4}$ +1/16 : 16 | | | | |
| Fines | 8 -1/16 : 8 | | | | |

Surface level (+53.6m) + 176 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 March 1971

Overburden 2.5m (8.0 ft)
 Mineral 3.7m (12.0 ft)
 Waste 1.1m (3.5 ft)
 Bedrock 0.7m + (2.5 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil and made ground | 0.7 | (2.5) | 0.7 | (2.5) |
| Head | Clay, brown, with traces of rounded pebbles | 1.8 | (6.0) | 2.5 | (8.0) |
| Glacial Sand and Gravel | Sandy Gravel. Clayey in lower 0.7m Gravel: fine to coarse with medium subangular to subrounded flint with quartz Sand: medium with coarse, trace of fine quartz and flint; yellow | 3.7 | (12.0) | 6.2 | (20.5) |
| | Clay, yellow, with some rounded to subangular flint | 1.1 | (3.5) | 7.3 | (24.0) |
| Upper Chalk | Chalk | 0.7+ | (2.5+) | 8.0 | (26.0) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | % | mm | % | | Fines | Sand | Gravel |
| Gravel | 44 | +16 | : 21 | 2.5 - 3.5 | 6 | 46 | 48 |
| | | -16+4 | : 23 | 3.5 - 4.5 | 7 | 50 | 43 |
| | | -4+1 | : 12 | 4.5 - 5.5 | 6 | 50 | 44 |
| Sand | 49 | -1+ $\frac{1}{4}$ | : 31 | 5.5 - 6.2 | 10 | 49 | 41 |
| | | - $\frac{1}{4}$ +1/16 | : 6 | | | | |
| Fines | 7 | -1/16 | : 7 | | | | |

SU 98 SW 27 9358 8432 Longmead, Burnham

Surface level (+58.5m) +192 ft Overburden 0.4m (1.5 ft)
 Water not struck Mineral 2.5m (8.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 2.1m + (7.0 ft +)
 October 1970

| | | Thickness | Depth |
|-------------------------|--|------------|------------|
| | | m (ft) | m (ft) |
| | Soil | 0.4 (1.5) | 0.4 (1.5) |
| Glacial Sand and Gravel | Gravel: fine to coarse subangular flint and traces of well rounded quartzite Sand: medium with fine and coarse quartz and flint, the coarse fraction being essentially flint; light brown | 2.5 (8.0) | 2.9 (9.5) |
| Reading Beds | Sand, medium with trace of coarse quartz; brown | 1.9 (6.0) | 4.8 (16.0) |
| | Clay, stiff, dark brown, with traces of sand | 0.2+ (0.5) | 5.0 (16.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 53 | +16 | : 30 | 0.4 - 1.4 | 4 | 51 | 45 |
| | | -16+4 | : 23 | 1.4 - 2.4 | 0 | 40 | 60 |
| | | -4+1 | : 12 | 2.4 - 2.9 | No sample | | |
| Sand | 45 | -1+ $\frac{1}{4}$ | : 28 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 5 | | | | |
| Fines | 2 | -1/16 | : 2 | | | | |
| Sand in the Reading Beds (not included in the assessment) | | | | | | | |
| Gravel | 0 | +16 | : 0 | 2.9 - 3.4 | No sample | | |
| | | -16+4 | : 0 | 3.4 - 4.4 | 2 | 98 | 0 |
| | | -4+1 | : 1 | 4.4 - 4.8 | 5 | 95 | 0 |
| Sand | 97 | -1+ $\frac{1}{4}$ | : 75 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 21 | | | | |
| Fines | 3 | -1/16 | : 3 | | | | |

Surface level (+53.3m) +175 ft
 Water struck at (+48.3m)
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

Overburden 0.1m (0.5 ft)
 Mineral 7.5m (24.5 ft)
 Bedrock 0.9m + (3.0 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-------------------------|--------|------------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) |
| Glacial Sand and Gravel | Sandy gravel. Gravel mainly between 2.3 and 4.0m, clayey and silty in upper 2.3m Gravel: fine to coarse subrounded to subangular flint Sand: fine and medium with some coarse quartz, silty in upper 2m; grey and brown | 7.5 | (24.5) | 7.6 | (25.0) |
| Reading Beds | Clay, stiff, brown | 0.9+ | (3.0+) | 8.5 | (28.0) |
| | | Depth below surface (m) | | Percentage | |
| | % mm : | | Fines | Sand | Gravel |
| Gravel | 37 +16 : 19 | 0.1 - 1.1 | 18 | 51 | 31 |
| | -16+4 : 18 | 1.1 - 2.3 | 26 | 72 | 2 |
| | -4+1 : 9 | 2.3 - 3.3 | 6 | 34 | 60 |
| Sand | 53 -1+1/4 : 22 | 3.3 - 4.0 | 4 | 24 | 72 |
| | -1/4+1/16 : 22 | 4.0 - 4.9 | 4 | 86 | 10 |
| | | 4.9 - 5.9 | 4 | 46 | 50 |
| | | 5.9 - 7.6 | [4 | 46 | 50] |
| Fines | 10 -1/16 : 10 | | | | |

SU 98 SW 29 9449 8418 Hunt's Wood, Burnham

Surface level (+54.6m) +179 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

Overburden 0.2m (0.5 ft)
 Mineral 5.2m (17.0 ft)
 Bedrock 0.6m + (2.0 ft +)

| | | Thickness | | Depth | | |
|---|--|-------------------------|--------|------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Soil and made-ground | 0.2 | (0.5) | 0.2 | (0.5) | |
| Terrace Deposits (Boyn Hill Terrace) | Sandy gravel Gravel: fine and medium, with trace of coarse, rounded to angular flint with some quartzite Sand: medium with fine and coarse, flint and quartz; brown | 5.2 | (17.0) | 5.4 | (18.0) | |
| Reading Beds | Clay, light brown, mottled red, brown and purple | 0.6+ | (2.0+) | 6.0 | (19.5) | |
| | | Depth below surface (m) | | Percentage | | |
| | | | | Fines | Sand | Gravel |
| Gravel | % mm % | 0.2 - 1.2 | | 9 | 50 | 41 |
| | | 1.2 - 2.2 | | 6 | 40 | 54 |
| | | 2.2 - 3.2 | | 12 | 66 | 22 |
| | | 3.2 - 4.2 | | 9 | 45 | 46 |
| Sand | 45 $-1+\frac{1}{4}$: 23 | 4.2 - 5.2 | | 7 | 30 | 63 |
| | $-\frac{1}{4}+1/16$: 11 | 5.2 - 5.4 | | 7 | 28 | 65 |
| Fines | 9 -1/16 : 9 | | | | | |

Surface level (+53.3m) +175 ft

Water not struck

Shell and auger (modified), 6 inch (152mm) diam.

September 1970

Overburden 0.2m (0.5 ft)

Mineral 4.0m (13.0 ft)

Bedrock 5.3m + (17.5 ft +)

| | | Thickness | | Depth | |
|--------------------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Terrace Deposits (Boyn Hill Terrace) | Gravel Gravel: fine to coarse, with some cobbles, mainly subangular flaky flint with some fine to medium subrounded quartzite Sand: medium with coarse and fine quartz; brown | 4.0 | (13.0) | 4.2 | (14.0) |
| Reading Beds | Sand, fine to medium with traces of gravel and clay; light brown | 4.3 | (14.0) | 8.5 | (28.0) |
| | Clay, brown, with grey-green speckles | 1.0+ | (3.5+) | 9.5 | (31.0) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 53 | +16 | : 27 | 0.2 - 1.2 | 9 | 36 | 55 |
| | | -16+4 | : 26 | 1.2 - 2.2 | 6 | 44 | 50 |
| | | -4+1 | : 11 | 2.2 - 3.2 | 6 | 43 | 51 |
| Sand | 40 | -1+ $\frac{1}{4}$ | : 22 | 3.2 - 4.2 | 7 | 39 | 54 |
| | | - $\frac{1}{4}$ +1/16 | : 7 | | | | |
| | | | | | | | |
| Fines | 7 | -1/16 | : 7 | | | | |

Sand in the Reading Beds
(not included in the assessment)

| | | | | | | | |
|--------|----|-----------------------|------|-----------|----|-----------|---|
| Gravel | 2 | +16 | : 0 | 4.2 - 4.8 | 5 | 86 | 9 |
| | | -16+4 | : 2 | 4.8 - 5.8 | 6 | 94 | 0 |
| | | -4+1 | : 1 | 5.8 - 6.8 | 8 | 92 | 0 |
| Sand | 87 | -1+ $\frac{1}{4}$ | : 25 | 6.8 - 7.8 | 15 | 85 | 0 |
| | | - $\frac{1}{4}$ +1/16 | : 61 | 7.8 - 8.5 | | No sample | |
| | | | | | | | |
| Fines | 11 | -1/16 | : 11 | | | | |

Surface level (+114.3m) +375 ft

Water struck at (+111.8m)

Shell and auger (modified), 6 inch (152mm) diam.

December 1970

Overburden 0.7m (2.5 ft)

Mineral 2.7m (9.0 ft)

Bedrock 2.6m + (8.5 ft +)

| | | Thickness | | Depth | |
|-------------------------|--|-------------------------|--------|------------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) |
| Head | Sandy clay, brown | 0.4 | (1.5) | 0.7 | (2.5) |
| Glacial Sand and Gravel | 'Clayey' gravel with a band of brown sandy clay with scattered flint pebbles from 2.0 to 2.7m Gravel: coarse with fine and medium, some cobbles, subrounded to subangular flint and quartzite Sand: fine with medium and some coarse flint and quartz, very clayey throughout, brown | 2.7 | (9.0) | 3.4 | (11.0) |
| Reading Beds | Clay, mottled buff, green and brown | 2.6+ | (8.5+) | 6.0 | (19.5) |
| | | Depth below surface (m) | | Percentage | |
| | % mm : | | Fines | Sand | Gravel |
| Gravel | 51 +16 : 35 | 0.7 - 2.0 | 15 | 30 | 55 |
| | -16+4 : 16 | 2.0 - 2.7 | Clay | | |
| | | 2.7 - 3.4 | 24 | 31 | 45 |
| | -4+1 : 7 | | | | |
| Sand | 30 -1+1/4 : 11 | | | | |
| | -1/4+1/16 : 12 | | | | |
| Fines | 19 -1/16 : 19 | | | | |

TQ 09 SW 26 0037 9327 Near Ashwell's Farm, Chalfont St Peter

Surface level (+101.5m) +333 ft

Waste 6.5m (21.5 ft)

Water not struck

Bedrock 0.1m + (0.5 ft +)

Shell and auger (modified), 6 inch (152mm) diam.

December 1970

| | | Thickness | | Depth | | | |
|-------------------------|---|-------------------------|--------|------------|--------|--------|----|
| | | m | (ft) | m | (ft) | | |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) | | |
| Head | Clay, brown, with some flint pebbles | 3.9 | (13.0) | 4.0 | (13.0) | | |
| Glacial Sand and Gravel | 'Very clayey' sandy gravel Gravel: fine to coarse, rounded to angular flint and quartzite; with the larger pebbles freshly broken Sand: fine with medium and trace of coarse quartz and flint, clayey throughout, brown | 1.0 | (3.5) | 5.0 | (16.5) | | |
| 'Bullhead Bed' | Clay, brown, with cobble size flints immediately overlying the chalk | 1.5 | (5.0) | 6.5 | (21.5) | | |
| Upper Chalk | Chalk | 0.1+ | (0.5+) | 6.6 | (21.5) | | |
| | | Depth below surface (m) | | Percentage | | | |
| | % | mm | % | Fines | Sand | Gravel | |
| Gravel | 35 | +16 | : 19 | 4.0 - 5.0 | 21 | 44 | 35 |
| | | -16+4 | : 16 | | | | |
| Sand | 44 | -4+1 | : 4 | | | | |
| | | -1+ $\frac{1}{4}$ | : 11 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 29 | | | | |
| Fines | 21 | -1/16 | : 21 | | | | |

TQ 09 SW 27 0080 9239 Chalfont Common, Chalfont St Peter

Surface level (+97.2 m) +319 ft

Water not struck

Shell and auger (modified), 6 inch (152mm) diam.

December 1970

Waste 6.8m (22.5 ft)

Bedrock 0.2m + (0.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------|---|---------------------|-----------------|
| | Soil | 0.3 (1.0) | 0.3 (1.0) |
| Head | Clay, brown, with bands of fine to cobble size flint and quartzite. The largest flints occur immediately overlying the chalk in association with black-stained clay | 6.5 (21.5) | 6.8 (22.5) |
| Upper Chalk | Chalk | 0.2+ (0.5+) | 7.0 (23.0) |

Surface level (+94.2m) +309 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 3.5m (11.5 ft)
 Mineral 7.0m (23.0 ft)
 Bedrock 1.0m + (3.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|---|---------------------|-----------------|
| | Soil | 0.3 (1.0) | 0.3 (1.0) |
| Head | Clay, brown, with fine to coarse angular flints | 3.2 (10.5) | 3.5 (11.5) |
| Glacial Sand and Gravel | Gravel, with pebbly brown sandy clay between 6.5 and 6.7m Gravel: coarse with medium and fine, subrounded to subangular flint with a little quartzite Sand: coarse with medium and fine flint and quartz, white to brown, clayey in parts | 7.0 (23.0) | 10.5 (34.5) |
| Reading Beds | Clay, brown | 0.2 (0.5) | 10.7 (35.0) |
| | Sand, fine grained, with trace of gravel, buff | 0.8 (2.5) | 11.5 (37.5) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|------|-------------------------|-------|-----------------|--------|
| Gravel | 65 | +16 | : 42 | 3.5 - 4.5 | 17 | 24 | 59 |
| | | -16+4 | : 23 | 4.5 - 5.5 | 10 | 21 | 69 |
| | | | | 5.5 - 6.5 | 13 | 28 | 59 |
| Sand | 26 | -4+1 | : 10 | 6.5 - 6.7 | Clay | | |
| | | -1+ $\frac{1}{4}$ | : 9 | 6.7 - 7.7 | 7 | 18 | 75 |
| | | - $\frac{1}{4}$ +1/16 | : 7 | 7.7 - 8.7 | 5 | 21 | 74 |
| | | | | 8.7 - 9.7 | 6 | 27 | 67 |
| Fines | 9 | -1/16 | : 9 | 9.7 - 10.5 | 8 | 38 | 54 |

Surface level (+101.2m) +332 ft Overburden 0.6m (2.0 ft)
 Water not struck Mineral 2.9m (9.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Waste 1.5m (5.0 ft)
 December 1970 Bedrock 0.5m + (1.5 ft +)

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.6 | (2.0) | 0.6 | (2.0) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, subangular to subrounded flint with some quartz and quartzite Sand: medium and coarse with fine quartz and flint, clayey in parts. brown | 2.9 | (9.5) | 3.5 | (11.5) |
| 'Bullhead Bed' | Clay, brown, with black streaks; scattered subangular to subrounded flint and quartzite | 1.5 | (5.0) | 5.0 | (16.5) |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 5.5 | (18.0) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | % | mm | % | | Fines | Sand | Gravel |
| Gravel | 54 | +16 | : 32 | 0.6 - 1.6 | 20 | 20 | 60 |
| | | -16+4 | : 22 | 1.6 - 2.6 | 19 | 28 | 53 |
| | | | | 2.6 - 3.5 | 15 | 36 | 49 |
| Sand | 28 | -4+1 | : 10 | | | | |
| | | -1+ $\frac{1}{4}$ | : 11 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 7 | | | | |
| Fines | 18 | -1/16 | : 18 | | | | |

Surface level (+100.9m) +331 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 0.2m (0.5 ft)
 Mineral 8.8m (29.0 ft)
 Waste 0.1m (0.5 ft)
 Bedrock 0.4m+ (1.5 ft+)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Glacial Sand and Gravel | Gravel, with brown pebbly clay between 1.0 and 2.0m Gravel: fine to coarse with trace of cobbles, subrounded to sub-angular flint, quartz and quartzite; some freshly broken flint Sand: medium with fine and coarse flint and quartz, clayey in parts, brown | 8.8 | (29.0) | 9.0 | (29.5) |
| 'Bullhead Bed' | Clay, brown | 0.1 | (0.5) | 9.1 | (30.0) |
| Upper Chalk | Chalk | 0.4+ | (1.5+) | 9.5 | (31.0) |

| | | | | Depth below surface (m) | Fines | Percentage | |
|--------|----|-----------------------|------|-------------------------|-----------|------------|--------|
| | % | mm | % | | | Sand | Gravel |
| Gravel | 55 | +16 | : 30 | 0.2 - 1.0 | 17 | 24 | 59 |
| | | -16+4 | : 25 | 1.0 - 2.0 | Clay | | |
| | | | -4+1 | : 10 | 2.0 - 3.0 | 11 | 38 |
| Sand | 37 | -1+ $\frac{1}{4}$ | : 18 | 3.0 - 4.0 | 9 | 41 | 50 |
| | | - $\frac{1}{4}$ +1/16 | : 9 | 4.0 - 5.0 | 10 | 36 | 54 |
| | | | | 5.0 - 6.0 | 10 | 37 | 53 |
| Fines | 8 | -1/16 | : 8 | 6.0 - 7.0 | 6 | 46 | 48 |
| | | | | 7.0 - 8.0 | 6 | 42 | 52 |
| | | | | 8.0 - 9.0 | 6 | 20 | 74 |

Surface level (+89.9m) +295 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 3.0m (10.0 ft)
 Mineral 7.0 m (23.0 ft)
 Bedrock 0.2m + (0.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|---|---------------------|-----------------|
| | Soil | 0.4 (1.5) | 0.4 (1.5) |
| Head | Clay, brown, with fine to coarse flint pebbles | 2.6 (8.5) | 3.0 (10.0) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel; fine to coarse subrounded to sub-angular flint, quartz and quartzite. Some freshly broken flint Sand: fine to medium with coarse flint and quartz, clayey in parts, brown | 7.0 (23.0) | 10.0 (33.0) |
| Upper Chalk | Chalk | 0.2+ (0.5+) | 10.2 (33.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 47 | +16 | : 27 | 3.0 - 4.0 | 18 | 18 | 64 |
| | | -16+4 | : 20 | 4.0 - 5.0 | 18 | 36 | 46 |
| | | | | 5.0 - 6.0 | 14 | 35 | 51 |
| Sand | 38 | -4+1 | : 8 | 6.0 - 7.0 | 11 | 29 | 60 |
| | | -1+ $\frac{1}{4}$ | : 16 | 7.0 - 8.0 | 16 | 55 | 29 |
| | | - $\frac{1}{4}$ +1/16 | : 14 | 8.0 - 9.0 | 10 | 50 | 40 |
| Fines | 15 | -1/16 | : 15 | 9.0 - 10.0 | 15 | 46 | 39 |

Surface level (+91.4m) +300 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 March 1971

Overburden 1.5m (5.0 ft)
 Mineral 2.8m (9.0 ft)
 Bedrock 0.7m + (2.5 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Made ground | 1.5 | (5.0) | 1.5 | (5.0) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, trace of cobbles, sub-angular to well rounded flint with traces of quartz and sandstone Sand: medium and coarse quartz, with fine flint and quartz; reddish brown | 2.8 | (9.0) | 4.3 | (14.0) |
| Reading Beds | Clay, silty, orange to pale green, with abundant carbonaceous streaks and patches | 0.7+ | (2.5+) | 5.0 | (16.5) |

| | | | | Depth below surface (m) | Fines | Percentage | |
|--------|----|-----------------------|------|-------------------------|-------|------------|--------|
| | | | | | | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 55 | +16 | : 30 | 1.5 - 2.5 | 16 | 27 | 57 |
| | | -16+4 | : 25 | 2.5 - 3.5 | 10 | 36 | 54 |
| | | | | 3.5 - 4.3 | 16 | 31 | 53 |
| Sand | | -4+1 | : 13 | | | | |
| | 31 | -1+ $\frac{1}{4}$ | : 14 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 4 | | | | |
| Fines | 14 | -1/16 | : 14 | | | | |

Surface level (+71.6m) +235 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

Overburden 2.5m (8.0 ft)
 Mineral 2.0m (6.5 ft)
 Bedrock 5.8m + (19.0 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|---|---------------------|-----------------|
| | Soil | 0.3 (1.0) | 0.3 (1.0) |
| Head | Clayey gravel and grey-green clayey sand | 2.2 (7.0) | 2.5 (8.0) |
| Glacial Sand and Gravel | 'Clayey' sandy gravel Gravel: fine to coarse, subangular to rounded flint Sand: medium with fine and coarse quartz, brown | 2.0 (6.5) | 4.5 (15.0) |
| Reading Beds | Clay, brown | 0.2 (0.5) | 4.7 (15.5) |
| | Sand, fine and medium, with traces of clay and gravel, brown | 5.1 (17.0) | 9.8 (32.0) |
| Upper Chalk | Chalk | 0.5+ (1.5+) | 10.3 (34.0) |

| | % | mm | : | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--|----|-----------------------|---|----|-------------------------|-------|-----------------|--------|
| Gravel | 37 | +16 | : | 23 | 2.5 - 3.5 | 11 | 54 | 35 |
| | | -16+4 | : | 14 | 3.5 - 4.5 | 9 | 51 | 40 |
| Sand | 53 | -4+1 | : | 8 | | | | |
| | | -1+ $\frac{1}{4}$ | : | 34 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : | 11 | | | | |
| Fines | 10 | -1/16 | : | 10 | | | | |
| Sand in the Reading Beds (not included in the assessment) | | | | | | | | |
| Gravel | 0 | +16 | : | 0 | 4.7 - 5.7 | 15 | 84 | 1 |
| | | -16+4 | : | 0 | 5.7 - 6.7 | 6 | 94 | 0 |
| | | -4+1 | : | 1 | 6.7 - 7.7 | 2 | 98 | 0 |
| Sand | 92 | -1+ $\frac{1}{4}$ | : | 17 | 7.7 - 8.7 | 6 | 94 | 0 |
| | | - $\frac{1}{4}$ +1/16 | : | 74 | 8.7 - 9.8 | 11 | 89 | 0 |
| Fines | 8 | -1/16 | : | 8 | | | | |

TQ 08 NW 98 0071 8757 Woodhill House, Gerrards Cross

Surface level (+76.5m) +251 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1970

Waste 0.8m (2.5 ft)
 Bedrock 3.2m + (10.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|--------------|---|---------------------|-----------------|
| | Soil | 0.2 (0.5) | 0.2 (0.5) |
| Head | Clay, light brown, silty, containing fine to medium flint and quartzite pebbles and some chalk | 0.6 (2.0) | 0.8 (2.5) |
| Reading Beds | Clay, mottled red-brown to blue, passing to dark brown, with fine pebbles at the top | 3.2+ (10.5+) | 4.0 (13.0) |

TQ 08 NW 99 0061 8548 Alderbourne River Valley, Fulmer

Surface level (+43.3m) +142 ft
 Water struck at (+41.3m)
 Shell and auger (modified), 6 inch (152mm) diam.
 February 1971

Overburden 0.3m (1.0 ft)
 Mineral 2.1m (7.0 ft)
 Bedrock 2.3m+ (7.5 ft)

| | | Thickness m (ft) | Depth m (ft) |
|--------------|--|---------------------|-----------------|
| | Soil | 0.3 (1.0) | 0.3 (1.0) |
| Alluvium | Gravel Gravel: fine to coarse, with rare cobbles, angular to well rounded flint with some quartz and quartzite Sand: coarse and medium with fine flint and quartz, slightly clayey | 2.1 (7.0) | 2.4 (8.0) |
| Reading Beds | Clay, sandy, grey, mottled yellow and red in lower part | 2.3+ (7.5+) | 4.7 (15.5) |

| | % | mm | : | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|---|----|----------------------------|-------|--------------------|--------|
| Gravel | 68 | +16 | : | 35 | 0.3 - 1.3 | 7 | 29 | 64 |
| | | -16+4 | : | 33 | 1.3 - 2.4 | 8 | 21 | 71 |
| Sand | 25 | -4+1 | : | 12 | | | | |
| | | -1+ $\frac{1}{4}$ | : | 10 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : | 3 | | | | |
| Fines | 7 | -1/16 | : | 7 | | | | |

TQ 08 NW 100 0057 8528 Alderbourne River Valley, Fulmer

Surface level (+47.9m) +157 ft Bedrock 1.5m + (5.0 ft +)
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

| | | Thickness | Depth |
|--------------|---------------------------|----------------|--------------|
| | | m (ft) | m (ft) |
| Reading Beds | Clay, red-brown and sandy | 1.5+ (5.0+) | 1.5 (5.0) |

TQ 08 NW 101 0134 8921 Coldharbour Farm, Gerrards Cross

Surface level (+83.5m) +274 ft Waste 0.9m (3.0 ft)
 Water not struck Bedrock 1.1m (3.5 ft +)
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

| | | Thickness | Depth |
|-------------------------|---|--------------|--------------|
| | | m (ft) | m (ft) |
| | Soil | 0.2 (0.5) | 0.2 (0.5) |
| Glacial Sand and Gravel | 'Very clayey' sandy gravel Gravel: fine to coarse well rounded to sub-angular flint with quartzite Sand: medium with fine and coarse, silty in parts, brown | 0.7 (2.5) | 0.9 (3.0) |
| Reading Beds | Clay, mottled brown and blue, silty in parts | 1.1 (3.5) | 2.0 (6.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|--|---------------------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 35 | +16 -16+4 | : 20 : 15 | 0.2 - 0.9 | 21 | 44 | 35 |
| Sand | 44 | -4+1 -1+ $\frac{1}{4}$ - $\frac{1}{4}$ +1/16 | : 8 : 26 : 10 | | | | |
| Fines | 21 | -1/16 | : 21 | | | | |

Surface level (+50.6m) +166 ft
 Water struck at (+45.6m)
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

Overburden 1.1m (3.5 ft)
 Mineral 8.9 (29.0 ft)
 Bedrock 0.5m + (1.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------|--|---------------------|-----------------|
| | Made ground and soil | 1.1 (3.5) | 1.1 (3.5) |
| Alluvium | Gravel Gravel: fine to coarse, with trace of cobbles, subangular to well rounded flint with quartz and quartzite Sand: coarse and medium with fine quartz and flint, brown | 8.9 (29.0) | 10.0 (33.0) |
| Upper Chalk | Chalk | 0.5+ (1.5+) | 10.5 (34.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|----------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 66 | +16 | : 39 | 1.1 - 2.1 | 9 | 36 | 55 |
| | | -16+4 | : 27 | 2.1 - 3.1 | 0 | 19 | 81 |
| | | -4+1 | : 15 | 3.1 - 4.1 | 3 | 32 | 65 |
| Sand | 31 | -1+ $\frac{1}{4}$ | : 13 | 4.1 - 5.0 | 7 | 37 | 56 |
| | | - $\frac{1}{4}$ +1/16 | : 3 | 5.0 - 6.0 | 1 | 24 | 75 |
| | | | | 6.0 - 7.0 | 1 | 21 | 78 |
| | | | | 7.0 - 8.0 | 0 | 29 | 71 |
| Fines | 3 | -1/16 | : 3 | 8.0 - 9.0 | 1 | 43 | 56 |
| | | | | 9.0 - 10.0 | 1 | 41 | 58 |

Surface level (+75.6m) +248 ft Overburden 0.2m (0.5 ft)
 Water not struck Mineral 3.2m (10.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.1m + (0.5 ft+)
 October 1970

| | | Thickness | | Depth | | |
|----------------------------|---|-------------------------|--------|------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) | |
| Glacial Sand and Gravel | Gravel Gravel: fine to coarse, with rare cobbles, subangular to well rounded flint and a little quartzite Sand: medium with coarse and fine quartz and flint, light brown | 3.2 | (10.5) | 3.4 | (11.0) | |
| | | 0.1+ | (0.5+) | 3.5 | (11.5) | |
| London Clay | Clay, greyish brown | Depth below surface (m) | | Percentage | | |
| | % mm % | | | Fines | Sand | Gravel |
| Gravel | 66 +16 : 40 | 0.2 - 1.2 | | 7 | 24 | 69 |
| | -16+4 : 26 | 1.2 - 2.2 | | 0 | 35 | 65 |
| | | 2.2 - 3.4 | | [0 | 35 | 65] |
| | -4+1 : 10 | | | | | |
| Sand | 32 -1+ $\frac{1}{4}$: 18 | | | | | |
| | - $\frac{1}{4}$ +1/16: 4 | | | | | |
| Fines | 2 -1/16 : 2 | | | | | |

Surface level (+79.6m) +261 ft

Water not struck

Shell and auger (modified), 6 inch (152mm) diam.
February 1971

Overburden 3.5m (11.5 ft)

Mineral 1.3m (4.5 ft)

Bedrock 3.2m + (10.5 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|---------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) |
| Head | Sand, very clayey, with fine to medium angular to rounded flint | 3.2 | (10.5) | 3.5 | (11.5) |
| Glacial Sand and Gravel | 'Clayey' sandy gravel Gravel: fine to coarse angular to well rounded flint Sand: medium with coarse and fine quartz, clayey in parts, brown | 1.3 | (4.5) | 4.8 | (16.0) |
| London Clay | Clay, sandy, blue and brown passing to brown and black | 3.2+ | (10.5+) | 8.0 | (26.0) |

| | | | | Depth below surface (m) | Percentage | | | |
|--------|----|-------|-----------------------|-------------------------|------------|------|--------|------|
| | % | mm | % | | Fines | Sand | Gravel | |
| Gravel | 31 | +16 | : 12 | 3.5 - 4.8 | 19 | 50 | 31 | |
| | | | -16+4 | | | | | : 19 |
| Sand | 50 | | -4+1 | | | | | |
| | | | -1+ $\frac{1}{4}$ | | | | | : 34 |
| | | | - $\frac{1}{4}$ +1/16 | | | | | : 3 |
| Fines | 19 | -1/16 | : 19 | | | | | |

Surface level (+78.9m) +259 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

Overburden 3.5m (11.5 ft)
 Mineral 3.5m (11.5 ft)
 Bedrock 1.0 + (3.5 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) |
| Head | Sand, fine grained with a little flint gravel | 0.5 | (1.5) | 0.8 | (2.5) |
| | Clay, silty, mottled reddish brown and grey, with scattered flint pebbles | 2.7 | (9.0) | 3.5 | (11.5) |
| Glacial Sand and Gravel | 'Very clayey' gravel, with a band of clayey sand at 4.5 to 4.7 m Gravel: fine to coarse subrounded to well rounded flint with some quartzite Sand: medium with fine and coarse quartz, brown, clayey throughout | 3.5 | (11.5) | 7.0 | (23.0) |
| Reading Beds | Clay, slightly silty, reddish brown | 1.0+ | (3.5+) | 8.0 | (26.0) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 45 | +16 | : 26 | 3.5 - 4.5 | 22 | 48 | 30 |
| | | -16+4 | : 19 | 4.5 - 5.7 | 16 | 35 | 49 |
| | | -4+1 | : 5 | 5.7 - 6.7 | 26 | 22 | 52 |
| Sand | 35 | -1+ $\frac{1}{4}$ | : 20 | 6.7 - 7.0 | 10 | 36 | 54 |
| | | - $\frac{1}{4}$ +1/16 | : 10 | | | | |
| | | | | | | | |
| Fines | 20 | -1/16 | : 20 | | | | |

Surface level (+72.8m) +239 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1970

Overburden 0.4m (1.5 ft)
 Mineral 4.3m (14.0 ft)
 Bedrock 0.4m + (1.5 ft +)

| | | Thickness | | Depth | | |
|-------------------------|--|-------------------------|--------|------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Soil | 0.4 | (1.5) | 0.4 | (1.5) | |
| Glacial Sand and Gravel | 'Clayey' gravel, with a bed of pebbly clay, silt and sand at 1.7 to 2.6m Gravel: fine to coarse, with trace of cobbles, angular to well rounded flint and quartzite Sand: medium with coarse and fine quartz, clayey in parts, light to dark brown | 4.3 | (14.0) | 4.7 | (15.5) | |
| Reading Beds | Clay, silty, mottled greyish brown and yellow, with sandy layers | 0.4+ | (1.5+) | 5.1 | (17.0) | |
| | | Depth below surface (m) | | Percentage | | |
| | | | | Fines | Sand | Gravel |
| | % mm : | | | | | |
| Gravel | 49 +16 : 25 | 0.4 - 1.4 | | 9 | 33 | 58 |
| | -16+4 : 24 | 1.4 - 1.7 | | 3 | 44 | 53 |
| | | 1.7 - 2.6 | | Clay | | |
| | -4+1 : 13 | 2.6 - 3.6 | | 12 | 52 | 36 |
| Sand | 40 -1+1/4 : 16 | 3.6 - 4.7 | | 11 | 36 | 53 |
| | -1/4+1/16 : 11 | | | | | |
| Fines | 11 -1/16 : 11 | | | | | |

Surface level (+40.8m) +134 ft Overburden 2.3m (7.5 ft)
 Water struck at (+38.5m) Mineral 4.5m (15.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.5m + (1.5 ft)
 February 1971

| | | Thickness | | Depth | |
|-------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Fill | 1.8 | (6.0) | 1.8 | (6.0) |
| | Topsoil | 0.5 | (1.5) | 2.3 | (7.5) |
| Alluvium | Gravel | 4.5 | (15.0) | 6.8 | (22.5) |
| | Gravel: fine to coarse, with rare cobbles, angular to well rounded flint, quartz and quartzite Sand: coarse with medium and fine flint and quartz | | | | |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 7.3 | (24.0) |

| | | | Depth below | Percentage | | |
|--------|----|-----------------------|-------------|------------|------|--------|
| | | | surface (m) | Fines | Sand | Gravel |
| | % | mm | | | | |
| Gravel | 78 | +16 | 2.3 - 3.3 | 3 | 12 | 85 |
| | | -16+4 | 3.3 - 4.3 | 3 | 8 | 89 |
| | | | 4.3 - 5.3 | 4 | 11 | 85 |
| Sand | 16 | -4+1 | 5.3 - 6.3 | 3 | 17 | 80 |
| | | -1+ $\frac{1}{4}$ | 6.3 - 6.8 | 17 | 32 | 51 |
| | | - $\frac{1}{4}$ +1/16 | | | | |
| Fines | 6 | -1/16 | | | | |

Surface level (+73.2m) +240 ft Overburden 0.4m (1.5 ft)
 Water struck at (+71.2m) Mineral 3.1m (10.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 1.0m + (3.5 ft +)
 November 1970

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Made ground and topsoil | 0.4 | (1.5) | 0.4 | (1.5) |
| Glacial Sand and Gravel | Gravel Gravel: fine to coarse, with trace of cobbles, subangular to well rounded flint with a little quartz and quartzite Sand: coarse and medium with fine quartz, clayey in parts, brown | 3.1 | (10.0) | 3.5 | (11.5) |
| London Clay | Clay, bluish brown passing to bluish grey | 1.0+ | (3.5+) | 4.5 | (15.0) |

| | | | | Depth below | Percentage | | |
|--------|----|-----------------------|------|-------------|------------|------|--------|
| | | | | surface (m) | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 59 | +16 | : 32 | 0.4 - 1.4 | 12 | 38 | 50 |
| | | -16+4 | : 27 | 1.4 - 2.4 | 11 | 31 | 58 |
| | | -4+1 | : 13 | 2.4 - 3.5 | 6 | 26 | 68 |
| Sand | 31 | -1+ $\frac{1}{4}$ | : 13 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 5 | | | | |
| Fines | 10 | -1/16 | : 10 | | | | |

TQ 08 NW 109 0225 8504 Blanchard's Farm, Iver

Surface level (+54.2m) +178 ft Waste 1.4m (4.5 ft)
 Water struck at (+53.2m) Bedrock 7.6m+ (25.0 ft+)
 Shell and auger (modified), 6 inch (152mm) diam.
 February 1971

| | | Thickness | | Depth | |
|-------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Made ground; brown clay with red brick infill | 1.4 | (4.5) | 1.4 | (4.5) |
| London Clay | Clay, light brown to mottled chocolate brown, hard and compact | 7.6 | (25.0) | 9.0 | (29.5) |

TQ 08 NW 110 0333 8961 Great Halings Wood, Denham

Surface level (+71.0m) +233 ft Overburden 0.3m (1.0 ft)
 Water not struck Mineral 3.0m (10.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.7m + (2.5 ft +)
 February 1971

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) |
| Glacial Sand and Gravel | Gravel: fine to coarse angular to well rounded flint with a little quartz and quartzite Sand: medium with coarse and fine quartz, clayey, buff and grey | 3.0 | (10.0) | 3.3 | (11.0) |
| Reading Beds | Clay, buff, mottled red, grey and yellow | 0.7+ | (2.5+) | 4.0 | (13.0) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 53 | +16 | : 28 | 0.3 - 1.3 | 7 | 41 | 52 |
| | | -16+4 | : 25 | 1.3 - 2.3 | 11 | 41 | 48 |
| | | | | 2.3 - 3.3 | 6 | 36 | 58 |
| Sand | 39 | -4+1 | : 9 | | | | |
| | | -1+ $\frac{1}{4}$ | : 25 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 5 | | | | |
| Fines | 8 | -1/16 | : 8 | | | | |

Surface level (+71.9m) +236 ft
 Water struck at +68.5m
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1970

Overburden 0.4m (1.5 ft)
 Mineral 5.0m (16.5 ft)
 Bedrock 0.3m + (1.0 ft +)

| | | Thickness | Depth |
|-------------------------|---|-------------|------------|
| | | m (ft) | m (ft) |
| | Soil | 0.4 (1.5) | 0.4 (1.5) |
| Glacial Sand and Gravel | Gravel: fine to coarse subangular to subrounded flint with a little quartzite Sand: medium with coarse and fine quartz, brown, clayey in parts | 5.0 (16.5) | 5.4 (18.0) |
| Reading Beds | Clay, brown | 0.3+ (1.0+) | 5.7 (18.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 60 | +16 | : 34 | 0.4 - 1.4 | 6 | 30 | 64 |
| | | -16+4 | : 26 | 1.4 - 2.4 | 10 | 36 | 54 |
| | | -4+1 | : 12 | 2.4 - 3.4 | 8 | 44 | 48 |
| Sand | 35 | -1+ $\frac{1}{4}$ | : 18 | 3.4 - 4.4 | 1 | 29 | 70 |
| | | - $\frac{1}{4}$ +1/16 | : 5 | 4.4 - 5.4 | 1 | 34 | 65 |
| | | | | | | | |
| Fines | 5 | -1/16 | : 5 | | | | |

Surface level (+45.4m) +149 ft

Water not struck

Shell and auger (modified), 6 inch (152mm) diam.

November 1970

Overburden 1.1m (3.5 ft)

Mineral 8.4m (27.5 ft)

Bedrock 0.5m + (1.5 ft)

| | | Thickness | | Depth | | |
|---|---|-------------------------|--------|----------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Soil and subsoil | 1.1 | (3.5) | 1.1 | (3.5) | |
| River Terrace Deposits (undifferentiated) | Gravel, with a band of silt and very clayey gravel from 5.5 to 6.5m Gravel: fine to coarse, with rare cobbles, angular to well rounded flint with a little quartz and quartzite Sand: medium and coarse with fine quartz and a little flint, light brown, silty and clayey in parts | 8.4 | (27.5) | 9.5 | (31.0) | |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 10.0 | (33.0) | |
| | | Depth below surface (m) | | Percentage | | |
| | % mm : | | | Fines | Sand | Gravel |
| Gravel | 57 +16 : 29 | 1.1 - 2.1 | | 11 | 33 | 56 |
| | -16+4 : 28 | 2.1 - 3.1 | | 12 | 29 | 59 |
| | -4+1 : 13 | 3.1 - 4.1 | | 15 | 27 | 58 |
| | -1+1/4 : 15 | 4.1 - 5.1 | | 10 | 35 | 55 |
| Sand | 33 -1/4+1/16 : 5 | 5.1 - 5.5 | | 9 | 36 | 55 |
| | | 5.5 - 6.5 | | Clay | | |
| | | 6.5 - 7.7 | | 7 | 36 | 57 |
| Fines | 10 -1/16 : 10 | 7.7 - 9.1 | | No information | | |
| | | 9.1 - 9.5 | | 2 | 38 | 60 |

Surface level (+43.3m) +142 ft
 Water struck at (+37.3m)
 Shell and auger (modified), 6 inch (152mm) diam.
 February 1971

Overburden 1.5m (5.0 ft)
 Mineral 9.0m (29.5 ft)
 Bedrock 1.0m + (3.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|---|---|--------------------------|----------------------|
| | Soil and subsoil | 1.5 (5.0) | 1.5 (5.0) |
| River Terrace Deposits (undifferentiated) | Gravel Gravel: fine to coarse, trace of cobbles, angular to well rounded flint, with a little quartz and quartzite Sand: coarse and medium with a little fine quartz and flint, clayey in upper 4.0m, brown | 9.0 (29.5) | 10.5 (34.5) |
| Reading Beds | Clay, silty and sandy, mottled buff and grey | 1.0+ (3.5+) | 11.5 (37.5) |

| | | | | Depth below surface (m) | Fines | Percentage | | |
|--------|----|-----------------------|---|----------------------------|------------|------------|--------|----|
| | | | | | | Sand | Gravel | |
| | % | mm | % | | | | | |
| Gravel | 64 | +16 | : | 32 | 1.5 - 2.5 | 12 | 30 | 58 |
| | | -16+4 | : | 32 | 2.5 - 3.5 | 13 | 25 | 62 |
| | | | | | 3.5 - 4.5 | 10 | 30 | 60 |
| Sand | 28 | -4+1 | : | 14 | 4.5 - 5.5 | 16 | 29 | 55 |
| | | -1+ $\frac{1}{4}$ | : | 12 | 5.5 - 6.5 | 10 | 35 | 55 |
| | | - $\frac{1}{4}$ +1/16 | : | 2 | 6.5 - 7.5 | 2 | 29 | 69 |
| Fines | 8 | | | | 7.5 - 8.5 | 3 | 27 | 70 |
| | | -1/16 | : | 8 | 8.5 - 9.5 | 2 | 28 | 70 |
| | | | | | 9.5 - 10.5 | 3 | 20 | 77 |

TQ 08 NW 114 0363 8517 Kingcup Farm, Denham

Surface level (+39.6m) +130 ft Overburden 0.4m (1.5 ft)
 Water struck at +37.0 m Mineral 5.0m (16.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.2m + (0.5 ft +)
 November 1970

| | | Thickness | Depth |
|---|---|-------------|------------|
| | | m (ft) | m (ft) |
| Soil | | 0.4 (1.5) | 0.4 (1.5) |
| River Terrace Deposits (undifferentiated) | Gravel Gravel: fine to coarse, with trace of cobbles, subangular to well rounded flint with a little quartzite Sand: coarse and medium with fine quartz and flint, clayey in parts, light brown | 5.0 (16.5) | 5.4 (18.0) |
| Reading Beds | Clay, mottled brown and grey | 0.2+ (0.5+) | 5.6 (18.5) |

| | | Depth below surface (m) | | Percentage | | |
|--------|----|-------------------------|------|------------|------|--------|
| | | | | Fines | Sand | Gravel |
| % | mm | | | | | |
| Gravel | 66 | +16 | : 42 | 10 | 35 | 55 |
| | | -16+4 | : 24 | 14 | 35 | 51 |
| | | -4+1 | : 12 | 3 | 30 | 67 |
| Sand | 28 | -1+ $\frac{1}{4}$ | : 11 | 1 | 14 | 85 |
| | | - $\frac{1}{4}$ +1/16 | : 5 | 3 | 23 | 74 |
| Fines | 6 | -1/16 | : 6 | | | |

Surface level (+41.5m) +136 ft
 Water struck at (+35.5m)
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1970

Overburden 0.8m (2.5 ft)
 Mineral 6.1m (20.0 ft)
 Bedrock 0.1m + (0.5 ft +)

| | | | | Thickness | Depth | | |
|---|----|-----------------------|---|-------------------------|--------|------------------------|--------|
| | | | | m | (ft) | m | (ft) |
| | | Soil | | 0.8 | (2.5) | 0.8 | (2.5) |
| River Terrace Deposits (undifferentiated) | | Gravel | Gravel: fine to coarse, with trace of cobbles, subangular to well rounded flint with a little quartzite | 6.1 | (20.0) | 6.9 | (22.5) |
| | | | Sand: medium and coarse with fine flint and quartz, clayey to 4.8m, brown | | | | |
| Upper Chalk | | Chalk | | 0.1+ | (0.5+) | 7.0 | (23.0) |
| | | | | Depth below surface (m) | Fines | Percentage Sand Gravel | |
| | % | mm | % | | | | |
| Gravel | 60 | +16 | : 35 | 0.8 - 1.8 | 5 | 38 | 57 |
| | | -16+4 | : 25 | 1.8 - 2.8 | 11 | 33 | 56 |
| | | | | 2.8 - 3.8 | 10 | 30 | 60 |
| | | -4+1 | : 12 | 3.8 - 4.8 | 9 | 26 | 65 |
| Sand | 34 | -1+ $\frac{1}{4}$ | : 16 | 4.8 - 5.8 | 2 | 33 | 65 |
| | | - $\frac{1}{4}$ +1/16 | : 6 | 5.8 - 6.9 | 1 | 41 | 58 |
| Fines | 6 | -1/16 | : 6 | | | | |

Surface level (+71.9m) +236 ft Overburden 0.4m (1.5 ft)
 Water struck at (+70.5m) Mineral 5.0m (16.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.6m + (2.0 ft +)
 October 1970

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|--|---------------------|-----------------|
| | Soil and made ground | 0.4 (1.5) | 0.4 (1.5) |
| Glacial Sand and Gravel | Gravel; fine to coarse, subrounded with angular and subangular flint with quartzite Sand: medium with fine and coarse quartz and flint, the coarse fraction being mainly flint; light brown | 5.0 (16.5) | 5.4 (18.0) |
| London Clay | Clay, upper 0.4m reddish brown and sandy, with carbonaceous material, lower 0.2m grey-blue with a smooth texture | 0.6+ (2.0+) | 6.0 (19.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 48 | +16 | : 25 | 0.4 - 1.4 | 12 | 50 | 38 |
| | | -16+4 | : 23 | 1.4 - 2.4 | 6 | 68 | 26 |
| | | -4+1 | : 10 | 2.4 - 3.4 | 2 | 67 | 31 |
| | | -1+1/4 | : 26 | 3.4 - 4.4 | 1 | 23 | 76 |
| Sand | 48 | -1/4+1/16 | : 12 | 4.4 - 5.4 | 0 | 34 | 66 |
| | | | | | | | |
| Fines | 4 | -1/16 | : 4 | | | | |

Surface level (+56.0m) +187 ft
 Water struck at (+53.7m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 3.4m (11.0 ft)
 Mineral 1.4m (4.5 ft)
 Bedrock 1.2m + (4.0 ft +)

| | | Thickness | | Depth | | |
|-------------------------|---|-------------------------|--------|------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Made ground | 0.4 | (1.5) | 0.4 | (1.5) | |
| Head | Clay, mottled reddish brown and light grey with scattered sub-rounded quartz and flint pebbles | 1.9 | (6.0) | 2.3 | (7.5) | |
| | Silt, yellow, very clayey, with traces of fine gravel | 1.1 | (3.5) | 3.4 | (11.0) | |
| Glacial Sand and Gravel | Sandy gravel Gravel: fine with some medium subrounded to rounded flint Sand: medium with fine and trace of coarse subrounded flint and quartz; yellow | 1.4 | (4.5) | 4.8 | (16.0) | |
| London Clay | Clay, dull reddish brown at top passing to dark bluish grey | 1.2+ | (4.0+) | 6.0 | (19.5) | |
| | | Depth below surface (m) | | Percentage | | |
| | | | | Fines | Sand | Gravel |
| Gravel | % mm % | 3.4 - 4.8 | | 10 | 64 | 26 |
| | +16 : 7 | | | | | |
| | -16+4 : 19 | | | | | |
| Sand | % mm % | | | | | |
| | -4+1 : 6 | | | | | |
| | -1+ $\frac{1}{4}$: 36 | | | | | |
| | - $\frac{1}{4}$ +1/16 : 22 | | | | | |
| Fines | % mm % | | | | | |
| | -1/16 : 10 | | | | | |

Surface level (+55.8m) +183 ft Overburden 0.7m (2.5 ft)
 Water struck at (+53.3m) Mineral 5.0m (16.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.3m + (1.0 ft +)
 December 1970

| | | Thickness | Depth |
|-------------------------|---|------------|------------|
| | | m (ft) | m (ft) |
| | Soil | 0.7 (2.5) | 0.7 (2.5) |
| Glacial Sand and Gravel | Gravel Gravel: fine to coarse, angular to rounded flint with a little quartzite Sand: medium with fine and coarse quartz, silty in parts; yellow to brown | 5.0 (16.5) | 5.7 (18.5) |
| London Clay | Clay, brown, mottled with black carbonaceous material | 0.3+ (1.0) | 6.0 (19.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 49 | +16 | : 26 | 0.7 - 1.7 | 8 | 45 | 47 |
| | | -16+4 | : 23 | 1.7 - 2.7 | 7 | 38 | 55 |
| | | | | | 2.7 - 3.7 | 5 | 39 |
| Sand | 46 | -4+1 | : 9 | 3.7 - 4.7 | 3 | 52 | 45 |
| | | -1+ $\frac{1}{4}$ | : 29 | 4.7 - 5.7 | 1 | 57 | 42 |
| | | - $\frac{1}{4}$ +1/16 | : 8 | | | | |
| Fines | 5 | -1/16 | : 5 | | | | |

Surface level (+72.2m) +237 ft
 Water struck at (+70.9m)
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 0.7m (2.5 ft)
 Mineral 6.2m (20.5 ft)
 Bedrock 0.1m + (0.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|--------------------------------------|--|---------------------|-----------------|
| | Soil, stoney, reddish brown | 0.7 (2.5) | 0.7 (2.5) |
| Terrace Deposits (Boyn Hill Terrace) | Gravel Gravel: fine and medium, with coarse, subangular to rounded flint with a little well rounded quartzite Sand: medium, with coarse and some fine, flint and quartz, silty in parts, brown | 6.2 (20.5) | 6.9 (22.5) |
| London Clay | Clay, brown, mottled with black carbonaceous staining | 0.1+ (0.5) | 7.0 (23.0) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 52 | +16 | : 28 | 0.7 - 1.7 | 15 | 53 | 32 |
| | | -16+4 | : 24 | 1.7 - 2.7 | 7 | 50 | 43 |
| | | -4+1 | : 13 | 2.7 - 3.7 | 1 | 45 | 54 |
| Sand | 44 | -1+ $\frac{1}{4}$ | : 25 | 3.7 - 4.7 | 1 | 30 | 69 |
| | | - $\frac{1}{4}$ +1/16 | : 6 | 4.7 - 5.7 | 1 | 41 | 58 |
| | | | | 5.7 - 6.9 | [1 | 41 | 58] |
| Fines | 4 | -1/16 | : 4 | | | | |

TQ 08 SW 10 0106 8068 Love Hill, Langley

Surface level (+29.6m) +97 ft
 Water struck at (+23.6m)
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 3.0m (10.0 ft)
 Mineral 6.6m (21.5 ft)
 Bedrock 0.4m + (1.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-----------------------------------|--|---------------------|-----------------|
| | Soil | 0.1 (0.5) | 0.1 (0.5) |
| Brickearth | Clay, soft, very silty, reddish brown | 2.9 (9.5) | 3.0 (10.0) |
| Terrace Deposits (Taplow Terrace) | Gravel Gravel: medium with fine and coarse, subangular to well rounded flint with a little quartzite Sand: medium, with coarse and trace of fine quartz, silty between 3.0 and 5.5m; light brown | 6.6 (21.5) | 9.6 (31.5) |
| London Clay | Clay, brown in upper 0.1m, bluish grey below | 0.4+ (1.5) | 10.0 (33.0) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|------|-------------------------|-------|-----------------|--------|
| Gravel | 55 | +16 | : 30 | 3.0 - 4.0 | 11 | 44 | 45 |
| | | -16+4 | : 25 | 4.0 - 5.5 | 6 | 49 | 45 |
| | | -4+1 | : 14 | 5.5 - 6.5 | 1 | 35 | 64 |
| Sand | 41 | -1+ $\frac{1}{4}$ | : 22 | 6.5 - 7.5 | 1 | 49 | 50 |
| | | - $\frac{1}{4}$ +1/16 | : 5 | 7.5 - 8.5 | 1 | 40 | 59 |
| | | | | 8.5 - 9.5 | 0 | 26 | 74 |
| Fines | 4 | -1/16 | : 4 | | | | |

Surface level (+28.3m) +93 ft
 Water struck at (+24.3m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 2.2m (7.0 ft)
 Mineral 4.0 m (13.0 ft)
 Bedrock 0.3m + (1.0 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|--|---|--------------------------|----------------------|
| | Soil | 0.7 (2.5) | 0.7 (2.5) |
| Brickearth | Clay, silty and sandy, light brown | 1.5 (5.0) | 2.2 (7.0) |
| Terrace Deposits (Taplow Terrace) | Gravel Gravel: fine and medium with coarse, subangular to subrounded flint with some quartzite and a trace of limestone Sand: coarse and medium with some fine flint and quartz, silty bands; grey-brown | 4.0 (13.0) | 6.2 (20.5) |
| London Clay | Clay, brownish grey | 0.3+ (1.0+) | 6.5 (21.5) |

| | | | | Depth below surface (m) | Percentage | | | |
|--------|----|-----------|---|----------------------------|------------|------|--------|----|
| | % | mm | % | | Fines | Sand | Gravel | |
| Gravel | 58 | +16 | : | 26 | 2.2 - 3.2 | 11 | 47 | 42 |
| | | -16+4 | : | 32 | 3.2 - 4.0 | 11 | 32 | 57 |
| | | -4+1 | : | 16 | 4.0 - 5.0 | 1 | 27 | 72 |
| Sand | 36 | -1+1/4 | : | 14 | 5.0 - 6.2 | 2 | 38 | 60 |
| | | -1/4+1/16 | : | 6 | | | | |
| Fines | 6 | -1/16 | : | 6 | | | | |

Surface level (+70.4m) +231 ft Overburden 0.8m (2.5 ft)
 Water struck at (+68.4m) Mineral 6.6m (21.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 1.0m + (3.5 ft +)
 February 1971

| | | Thickness m (ft) | Depth m (ft) |
|----------------------------|--|--------------------------|----------------------|
| | Soil | 0.3 (1.0) | 0.3 (1.0) |
| Head | Clay, stony, brown | 0.5 (1.5) | 0.8 (2.5) |
| Glacial Sand and Gravel | Gravel Gravel: fine to coarse, with trace of cobbles, rounded to angular flint with quartz and quartzite Sand: medium with coarse and fine quartz and flint, clayey in upper 2.0m; brown | 6.6 (21.5) | 7.4 (24.5) |
| London Clay | Clay, dark brown at top, passing to bluish grey | 1.0+ (3.5+) | 8.4 (27.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | Gravel |
|--------|----|-----------------------|------|----------------------------|------------|------|--------|
| | | | | | Fines | Sand | |
| Gravel | 62 | +16 | : 40 | 0.8 - 1.8 | 10 | 55 | 35 |
| | | -16+4 | : 22 | 1.8 - 2.8 | 6 | 49 | 45 |
| | | | | 2.8 - 3.8 | 1 | 34 | 65 |
| Sand | 35 | -4+1 | : 9 | 3.8 - 4.8 | 0 | 30 | 70 |
| | | -1+ $\frac{1}{4}$ | : 19 | 4.8 - 5.8 | 1 | 24 | 75 |
| | | - $\frac{1}{4}$ +1/16 | : 7 | 5.8 - 6.8 | 1 | 28 | 71 |
| Fines | 3 | -1/16 | : 3 | 6.8 - 7.4 | 1 | 26 | 73 |

Surface level (+61.6m) +203 ft
 Water struck at (+56.7m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 0.8m (2.5 ft)
 Mineral 6.6m (21.5 ft)
 Bedrock 0.4 m + (1.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|---|---------------------|-----------------|
| | Soil | 0.1 (0.5) | 0.1 (0.5) |
| Head | Clay, light brown, scattered flint gravel | 0.7 (2.5) | 0.8 (2.5) |
| Glacial Sand and Gravel | Gravel: fine to coarse, trace of cobbles, sub-angular to subrounded flint with traces of quartz and pink quartzite Sand: medium, with coarse and a trace of fine, quartz and flint; orange-brown | 6.6 (21.5) | 7.4 (24.5) |
| London Clay | Clay, stiff, reddish brown | 0.4+ (1.5+) | 7.8 (25.5) |

| | % | mm | % | Depth below surface (m) | Fines | Sand | Gravel |
|--------|----|-----------------------|------|-------------------------|-------|------|--------|
| Gravel | 57 | +16 | : 26 | 0.8 - 1.8 | 11 | 39 | 50 |
| | | -16+4 | : 31 | 1.8 - 2.8 | 10 | 41 | 49 |
| | | | | 2.8 - 3.8 | 5 | 27 | 68 |
| Sand | 37 | -4+1 | : 12 | 3.8 - 4.8 | 3 | 41 | 56 |
| | | -1+ $\frac{1}{4}$ | : 20 | 4.8 - 5.8 | 2 | 42 | 56 |
| | | - $\frac{1}{4}$ +1/16 | : 5 | 5.8 - 6.8 | 4 | 35 | 61 |
| Fines | 6 | -1/16 | : 6 | 6.8 - 7.4 | 4 | 34 | 62 |

TQ 08 SW 14 0160 8215 Roughground Wood, Wexham

Surface level (+55.5m) +182 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 0.5m (1.5 ft)
 Mineral 1.4m (4.5 ft)
 Bedrock 2.1m + (7.0 ft +)

| | | Thickness | | Depth | | |
|----------------------------|--|-------------------------|--------|------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Made ground, stony silt | 0.5 | (1.5) | 0.5 | (1.5) | |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, mainly subangular with rounded flint with quartzite Sand: medium, with coarse and a trace of fine, flint and quartz, clayey in parts, earthy brown colour | 1.4 | (4.5) | 1.9 | (6.0) | |
| London Clay | Clay, friable, mottled chocolate brown and light blue with silty yellow patches | 2.1+ | (7.0+) | 4.0 | (13.0) | |
| | | Depth below surface (m) | | Percentage | | |
| | | | | Fines | Sand | Gravel |
| Gravel | % mm : % | 0.5 - 1.9 | | 14 | 40 | 46 |
| | +16 : 23 | | | | | |
| | -16+4 : 23 | | | | | |
| | -4+1 : 9 | | | | | |
| Sand | 40 -1+ $\frac{1}{4}$: 27 | | | | | |
| | - $\frac{1}{4}$ +1/16 : 4 | | | | | |
| Fines | 14 -1/16 : 14 | | | | | |

Surface level (+36.0m) +118 ft
 Water struck at (+30.3m)
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 0.7m (2.5 ft)
 Mineral 6.7m (22.0 ft)
 Bedrock 0.6m + (2.0 ft +)

| | | Thickness | | Depth | |
|--------------------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Clay, with a few flint pebbles, reddish brown | 0.5 | (1.5) | 0.7 | (2.5) |
| Terrace Deposits (Boyn Hill Terrace) | 'Clayey' gravel Gravel: fine to coarse, trace of cobbles, sub-rounded to rounded flint with some quartz and quartzite Sand: medium and coarse with fine quartz and flint, clayey from top to 5.7m | 6.7 | (22.0) | 7.4 | (24.5) |
| London Clay | Clay, uniform composition, brown at top becoming dark bluish-grey | 0.6+ | (2.0+) | 8.0 | (26.0) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | % | mm | % | | Fines | Sand | Gravel |
| Gravel | 47 | +16 | : 20 | 0.7 - 1.7 | 23 | 33 | 44 |
| | | -16+4 | : 27 | 1.7 - 2.7 | 10 | 44 | 46 |
| | | | | 2.7 - 3.7 | 11 | 60 | 29 |
| Sand | 42 | -4+1 | : 15 | 3.7 - 4.7 | 11 | 46 | 43 |
| | | -1+ $\frac{1}{4}$ | : 20 | 4.7 - 5.7 | 18 | 38 | 44 |
| | | - $\frac{1}{4}$ +1/16 | : 7 | 5.7 - 6.7 | 2 | 39 | 59 |
| | | | | 6.7 - 7.4 | 3 | 33 | 64 |
| Fines | 11 | -1/16 | : 11 | | | | |

Surface level (+29.6m) +97 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1970

Overburden 4.4m (14.5 ft)
 Mineral 3.4m (11.0 ft)
 Bedrock 0.7m + (2.5 ft +)

| | | Thickness | | Depth | | | |
|-----------------------------------|---|-------------------------|--------|------------|--------|--------|------|
| | | m | (ft) | m | (ft) | | |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) | | |
| Brickearth | Clay, very silty, red-brown to yellow, with flint pebbles towards base | 4.2 | (14.0) | 4.4 | (14.5) | | |
| Terrace Deposits (Taplow Terrace) | Gravel Gravel: fine to coarse trace of cobbles, sub-angular to well rounded flint with quartzite Sand: medium with coarse and some fine quartz and flint, silty in parts; brown | 3.4 | (11.0) | 7.8 | (25.5) | | |
| London Clay | Clay, stiff, brown at top, passing to blue below | 0.7+ | (2.5+) | 8.5 | (28.0) | | |
| | | Depth below surface (m) | | Percentage | | | |
| | | | | Fines | Sand | Gravel | |
| Gravel | 51 | +16 | : 27 | 4.4 - 5.4 | 9 | 46 | 45 |
| | | -16+4 | : 24 | 5.4 - 6.4 | 6 | 35 | 59 |
| | | | | 6.4 - 7.4 | 1 | 49 | 50 |
| | | | | 7.4 - 7.8 | [1 | 49 | 50] |
| Sand | 44 | -4+1 | : 15 | | | | |
| | | -1+ $\frac{1}{4}$ | : 23 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 6 | | | | |
| Fines | 5 | -1/16 | : 5 | | | | |

TQ 08 SW 17 0287 8432 Broom Warren, Iver

Surface level (+53.6m) +176 ft
 Water struck at (+50.7m)
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1970

Overburden 0.6m (2.0 ft)
 Mineral 5.5m (18.0 ft)
 Bedrock 0.3m + (1.0 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|---|---------------------|-----------------|
| | Soil and silt | 0.6 (2.0) | 0.6 (2.0) |
| Glacial Sand and Gravel | Gravel: coarse, with fine and medium, subangular to well rounded flint with quartz and quartzite Sand: medium, with coarse and some fine, flint and quartzite, clayey and silty in upper 2.0m; brown to grey | 5.5 (18.0) | 6.1 (20.0) |
| London Clay | Clay, stiff, brown with bluish tinge | 0.3+ (1.0+) | 6.4 (21.0) |

| | | | | Depth below surface (m) | Fines | Percentage | | |
|--------|----|---|------|-------------------------|-----------|------------|--------|------|
| | | % | mm | | | Sand | Gravel | |
| Gravel | 56 | + | 16 | 0.6 - 1.6 | 22 | 33 | 45 | |
| | | | : | 34 | 1.6 - 2.6 | 16 | 33 | 51 |
| | | | : | 22 | 2.6 - 3.6 | 2 | 40 | 58 |
| Sand | 37 | - | 4+1 | 3.6 - 4.6 | 1 | 41 | 58 | |
| | | | : | 11 | 4.6 - 5.6 | [0 | 35 | 65] |
| | | | : | 20 | 5.6 - 6.1 | 0 | 35 | 65 |
| | | | | | | | | |
| Fines | 7 | - | 1/16 | | | | | |
| | | | : | | | | | |
| | | | 7 | | | | | |

TQ 08 SW 18 0216 8290 Five Points, Iver Heath

Surface level (+58.2m) +191 ft
 Water not struck
 Shell and auger (modified, 6 inch (152mm) diam.
 December 1970

Waste 1.7m (5.5 ft)
 Bedrock 0.4m + (1.5 ft +)

| | | Thickness | | Depth | |
|-------------|--|-----------|--------|-------|-------|
| | | m | (ft) | m | (ft) |
| | Soil | 1.1 | (3.5) | 1.1 | (3.5) |
| Head | Clay, blue, with flint pebbles and medium to coarse sand | 0.6 | (2.0) | 1.7 | (5.5) |
| London Clay | Clay, mottled chocolate brown to blue | 0.4+ | (1.5+) | 2.1 | (7.0) |

TQ 08 SW 19 0272 8161 Love Green, Iver

Surface level (+47.9m) + 157 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1970

Overburden 0.6m (2.0 ft)
 Mineral 1.8m (6.0 ft)
 Bedrock 0.6m + (2.0 ft +)

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil, clayey | 0.6 | (2.0) | 0.6 | (2.0) |
| Glacial sand and Gravel | Gravel Gravel: fine to coarse, angular to subrounded flint Sand: medium with coarse and fine, silty or clayey; light brown or light grey | 1.8 | (6.0) | 2.4 | (8.0) |
| London Clay | Clay, stiff, brownish blue | 0.6+ | (2.0+) | 3.0 | (10.0) |

| | | | | Depth below surface (m) | Fines | Percentage | |
|--------|----|-----------------------|------|-------------------------|-------|------------|--------|
| | | | | | | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 49 | +16 | : 26 | 0.6 - 2.4 | 9 | 42 | 49 |
| | | -16+4 | : 23 | | | | |
| Sand | 42 | -4+1 | : 11 | | | | |
| | | -1+ $\frac{1}{4}$ | : 24 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 7 | | | | |
| Fines | 9 | -1/16 | : 9 | | | | |

Surface level (+33.5m) +110 ft Overburden 0.6m (2.0 ft)
 Water not struck Mineral 2.9m (9.5 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.5m + (1.5 ft +)
 November 1970

| | | Thickness | | Depth | |
|--------------------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Made ground | 0.6 | (2.0) | 0.6 | (2.0) |
| Terrace Deposits (Boyn Hill Terrace) | Gravel Gravel: fine to coarse, angular to subrounded flint and trace of quartzite Sand: medium with fine and coarse quartz, some silt occurring mainly as bands; light brown to reddish brown | 2.9 | (9.5) | 3.5 | (11.5) |
| London Clay | Clay, stiff, brown at top passing to bluish grey | 0.5+ | (1.5+) | 4.0 | (13.0) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 46 | +16 | : 20 | 0.6 - 1.6 | 11 | 49 | 40 |
| | | -16+4 | : 26 | 1.6 - 2.6 | 10 | 39 | 51 |
| | | | | | 2.6 - 3.5 | 6 | 47 |
| Sand | 45 | -4+1 | : 12 | | | | |
| | | -1+ $\frac{1}{4}$ | : 20 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 13 | | | | |
| Fines | 9 | -1/16 | : 9 | | | | |

Surface level (+54.9m) +180 ft Overburden 0.8m (2.5 ft)
 Water struck at (+52.9m) Mineral 3.0m (10.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Bedrock 0.4m + (1.5 ft +)
 November 1970

| | | Thickness | Depth |
|----------------------------|--|------------------|-----------------|
| | | m (ft) | m (ft) |
| | Made ground and soil | 0.8 (2.5) | 0.8 (2.5) |
| Glacial Sand and Gravel | Gravel Gravel: fine to coarse, angular to well rounded flint with quartzite Sand: medium with coarse and some fine quartz, clayey in upper part; brown | 3.0 (10.0) | 3.8 (12.5) |
| London Clay | Clay, stiff, traces of carbonaceous material, mottled light brown to chocolate coloured | 0.4+ (1.5+) | 4.2 (14.0) |

| | | | | Depth below | Percentage | | |
|--------|----|-----------------------|---|-------------|------------|------|--------|
| | | | | surface (m) | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 62 | +16 | : | 0.8 - 1.8 | 12 | 29 | 59 |
| | | -16+4 | : | 1.8 - 2.8 | 8 | 31 | 61 |
| | | -4+1 | : | 2.8 - 3.8 | 1 | 32 | 67 |
| Sand | 31 | -1+ $\frac{1}{4}$ | : | | | | |
| | | - $\frac{1}{4}$ +1/16 | : | | | | |
| | | -4+1 | : | | | | |
| Fines | 7 | -1/16 | : | | | | |

TQ 08 SW 22 0357 8296 Gallow Hill, Iver Heath

Surface level (+59.1m) +194 ft
 Water struck at (+51.1m)
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1970

Waste 1.0m (3.5 ft)
 Bedrock 3.0m+ (10.0 ft+)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.8 | (2.5) | 0.8 | (2.5) |
| Glacial Sand and Gravel | Sand, mainly flint, and fine and medium flint and quartzite gravel | 0.2 | (0.5) | 1.0 | (3.5) |
| London Clay | Clay, mottled brown and blue. Yellowish brown sand lenses and fissured sandstone concretions below 2.5m | 3.0 | (10.0) | 4.0 | (13.0) |

TQ 08 SW 23 0356 8113 Grange Farm Estate, Iver

Surface level (+42.4m) +139 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1970

Waste 2.0m (6.5 ft)
 Bedrock 5.0m + (16.5 ft +)

| | | Thickness | | Depth | |
|-------------|--|-----------|--------|-------|--------|
| | | m | ft | m | ft |
| | Made ground; silty clay with pebbles | 2.0 | (6.5) | 2.0 | (6.5) |
| London Clay | Clay, stiff, silty, evidence of fissuring and fractures, trace of fossils, mottled in brown, blue and grey | 5.0+ | (16.5) | 7.0 | (23.0) |

TQ 08 SW 24 0008 8227 Jubilee Plantation, Wexham

Surface level (+42.4m) +139 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1971

Overburden 0.2m (0.5 ft)
 Mineral 4.3m (14.0 ft)
 Bedrock 0.5m + (1.5 ft +)

| | | Thickness | | Depth | |
|--------------------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Terrace Deposits (Boyn Hill Terrace) | Gravel Gravel: fine to coarse subangular to sub-rounded flint, with some well rounded quartz and quartzite Sand: medium with coarse and some fine, mainly quartz with some flint; brown | 4.3 | (14.0) | 4.5 | (15.0) |
| London Clay | Clay, brown | 0.5+ | (1.5+) | 5.0 | (16.5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 51 | +16 | : 21 | 0.2 - 1.2 | 13 | 33 | 54 |
| | | -16+4 | : 30 | 1.2 - 2.2 | 12 | 46 | 42 |
| | | -4+1 | : 12 | 2.2 - 3.2 | 5 | 35 | 60 |
| Sand | 42 | -1+ $\frac{1}{4}$ | : 23 | 3.2 - 4.2 | 3 | 41 | 56 |
| | | - $\frac{1}{4}$ +1/16 | : 7 | 4.2 - 4.5 | 3 | 71 | 26 |
| | | -1/16 | : 7 | | | | |

Surface level (+108.2m) +355 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 3.4m (11.0 ft)
 Mineral 6.9m (22.5 ft)
 Waste 1.4m (4.5 ft)
 Bedrock 0.3m + (1.0 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|---|---------------------|-----------------|
| | Soil | 0.4 (1.5) | 0.4 (1.5) |
| Head | Clay, brown, speckled buff to white, traces of sand with a few fine to medium flint pebbles | 3.0 (10.0) | 3.4 (11.0) |
| Glacial Sand and Gravel | 'Clayey' gravel with dark brown clay and scattered fine to coarse flints from 6.4 to 7.0m and 9.0 to 9.3m Gravel: fine to coarse, with trace of cobbles, rounded to angular flint and quartz Sand: fine to coarse quartz and flint, brown to buff with black bands, clayey throughout | 6.9 (22.5) | 10.3 (34.0) |
| 'Bullhead Bed' | Clay, dark brown, firm, with coarse and cobble size flints | 1.4 (4.5) | 11.7 (38.5) |
| Upper Chalk | Chalk | 0.3+ (1.0+) | 12.0 (39.5) |

| | | | | Depth below surface (m) | Fines | Percentage | |
|--------|----|-----------------------|------|-------------------------|-------|------------|--------|
| | % | mm | % | | | Sand | Gravel |
| Gravel | 51 | +16 | : 30 | 3.4 - 4.4 | 35 | 23 | 42 |
| | | -16+4 | : 21 | 4.4 - 5.4 | 10 | 35 | 55 |
| | | | | 5.4 - 6.4 | 14 | 39 | 47 |
| Sand | | -4+1 | : 11 | 6.4 - 7.0 | Clay | | |
| | 31 | -1+ $\frac{1}{4}$ | : 10 | 7.0 - 8.0 | 26 | 29 | 45 |
| | | - $\frac{1}{4}$ +1/16 | : 10 | 8.0 - 9.0 | 10 | 34 | 56 |
| Fines | 18 | -1/16 | : 18 | 9.0 - 9.3 | Clay | | |
| | | | | 9.3 - 10.3 | 15 | 25 | 60 |

SU 99 SE 4

9536 9206

Oldfields Farm, Beaconsfield

Surface level (+102.4m) +336 ft

Waste 10.5m (34.5 ft)

Water not struck

Bedrock 0.5m + (1.5 ft +)

Shell and auger (modified), 6 inch (152mm) diam.

December 1970

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Clay, brown to buff, with some medium to coarse flint | 3.2 | (10.5) | 3.4 | (11.0) |
| Glacial Sand and Gravel | Clay, sandy, with flint and quartz gravel | 1.3 | (4.5) | 4.7 | (15.5) |
| | Clay, sandy, brown | 2.3 | (7.5) | 7.0 | (23.0) |
| | Clay, brown, with large angular flints | 0.2 | (0.5) | 7.2 | (23.5) |
| | Clay, brown, with traces of sand | 0.8 | (2.5) | 8.0 | (26.0) |
| | Clay, brown, sandy | 0.5 | (1.5) | 8.5 | (28.0) |
| | Clay, dark brown, with flint pebbles | 2.0 | (6.5) | 10.5 | (34.5) |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 11.0 | (36.0) |

Surface level (+101.8m) +334 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 January 1971

Overburden 5.6m (18.5 ft)
 Mineral 6.4m (21.0 ft)
 Waste 9.7m (32.0 ft)
 Bedrock 0.8m + (2.5 ft +)

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) |
| Head | Clay, buff to red brown, with few angular flint pebbles at the base, sandy in parts | 5.5 | (18.0) | 5.6 | (18.5) |
| Glacial Sand and Gravel | Sandy gravel with hard red-brown clay with flints between 4.3m and 5.6m Gravel: fine to coarse with some cobble size sub-rounded to subangular quartz and flint, and some quartzite Sand: medium with fine and some coarse sub-rounded to subangular quartz and flint, brown slightly clayey | 6.4 | (21.0) | 12.0 | (39.5) |
| | Clay, in various colours of brown to green with thin bands of quartz and flint pebbles | 9.7 | (32.0) | 21.7 | (71.0) |
| Upper Chalk | Chalk | 0.8+ | (2.5+) | 22.5 | (74.0) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 42 | +16 | : 25 | 3.8 - 4.3 | 15 | 49 | 36 |
| | | -16+4 | : 17 | 4.3 - 5.6 | Clay | | |
| Sand | 51 | -4+1 | : 7 | 5.6 - 6.5 | 11 | 61 | 28 |
| | | -1+ $\frac{1}{4}$ | : 26 | 6.5 - 7.5 | 6 | 78 | 16 |
| | | - $\frac{1}{4}$ +1/16 | : 18 | 7.5 - 8.5 | 5 | 58 | 37 |
| | | | | 8.5 - 9.5 | 6 | 28 | 66 |
| Fines | 7 | -1/16 | : 7 | 9.5 - 10.5 | [6 | 42 | 52] |
| | | | | 10.5 - 11.5 | [6 | 42 | 52] |
| | | | | 11.5 - 12.6 | 9 | 36 | 55 |

Surface level (+102.1m) +335 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 November 1970

Overburden 3.0m (10.0 ft)
 Mineral 2.0m (6.5 ft)
 Waste 2.5m (8.0 ft)
 Bedrock 0.5m + (1.5 ft +)

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Clay, grey and brown, sandy in parts, with medium to coarse and cobble sized flint and quartz | 2.8 | (9.0) | 3.0 | (10.0) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, subangular to sub-rounded flint with some usually well rounded quartz and quartzite Sand: medium with fine and coarse subrounded to subangular quartz, brown, clayey | 2.0 | (6.5) | 5.0 | (16.5) |
| 'Bullhead Bed' | Clay, brown, silty in patches, with subangular black flint cobbles | 2.5 | (8.0) | 7.5 | (24.5) |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 8.0 | (26.0) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage | |
|--------|----|-----------------------|------|-------------------------|-------|------------|--------|
| | | | | | | Sand | Gravel |
| Gravel | 46 | +16 | : 28 | 3.0 - 4.0 | 11 | 33 | 56 |
| | | -16+4 | : 18 | 4.0 - 4.4 | 13 | 45 | 42 |
| | | | | 4.4 - 5.0 | 12 | 57 | 31 |
| Sand | 42 | -4+1 | : 8 | | | | |
| | | -1+ $\frac{1}{4}$ | : 24 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 10 | | | | |
| Fines | 12 | -1/16 | : 12 | | | | |

Surface level (+98.1m) +322 ft
 Water not struck
 Shell and auger (modified), 6 inch (152 mm) diam.
 December 1970

Overburden 0.1m (0.5 ft)
 Mineral 3.0m (10.0 ft)
 Waste 0.9m (3.0 ft)
 Bedrock 3.0m + (10.0 ft +)

| | | Thickness | Depth |
|-------------------------|---|--------------|------------|
| | | m (ft) | m (ft) |
| | Soil | 0.1 (0.5) | 0.1 (0.5) |
| Glacial Sand and Gravel | Gravel Gravel; fine to coarse, trace of cobbles, sub-angular to subrounded quartz, quartzite and flint Sand: medium with fine and some coarse quartz and flint, grey to brown | 3.0 (10.0) | 3.1 (10.0) |
| 'Bullhead Bed' | Clay, brown, with flint and some quartzite | 0.9 (3.0) | 4.0 (13.0) |
| Upper Chalk | Chalk, together with infilling of brown clay and flint pebbles | 3.0+ (10.0+) | 7.0 (23.0) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 57 | +16 | : 44 | 0.1 - 1.1 | No sample | | |
| | | -16+4 | : 13 | 1.1 - 2.1 | 9 | 41 | 50 |
| | | | | 2.1 - 3.1 | 6 | 30 | 64 |
| Sand | 36 | -4+1 | : 5 | | | | |
| | | -1+ $\frac{1}{4}$ | : 22 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 9 | | | | |
| Fines | 7 | -1/16 | : 7 | | | | |

SU 99 SE 8 9618 9087 Walk Wood, Seer Green

Surface level (+97.5m) +320 ft

Water not struck

Shell and auger (modified), 6 inch (152mm) diam.

January 1971

Overburden 0.2m (0.5 ft)

Mineral 2.8m (9.0 ft)

Bedrock 0.5m + (1.5 ft +)

| | | Thickness | | Depth | | |
|----------------------------|---|-------------------------|--------|------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) | |
| Glacial Sand and Gravel | 'Clayey' sandy gravel Gravel: fine to coarse with some cobbles, sub- angular to subrounded flint and fine and medium subrounded quartz and quartzite Sand: coarse and medium with fine quartz, clayey, brown | 2.8 | (9.0) | 3.0 | (10.0) | |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 3.5 | (11.5) | |
| | | Depth below surface (m) | | Percentage | | |
| | % mm % | | | Fines | Sand | Gravel |
| Gravel | 41 +16 : 33 | 0.2 - 1.2 | | 9 | 37 | 54 |
| | -16+4 : 8 | 1.2 - 2.2 | | 11 | 39 | 50 |
| | | 2.2 - 3.0 | | 11 | 30 | 59 |
| | -4+1 : 23 | | | | | |
| Sand | 49 -1+ $\frac{1}{4}$: 18 | | | | | |
| | - $\frac{1}{4}$ +1/16 : 8 | | | | | |
| Fines | 10 -1/16 : 10 | | | | | |

| | |
|---|-----------------------------|
| Surface level (+100. 6m) +330 ft | Overburden 0. 4m (1. 5 ft) |
| Water not struck | Mineral 5. 6m (18. 5 ft) |
| Shell and auger (modified) 6 inch (152mm) diam. | Waste 1. 0m (3. 5 ft) |
| December 1970 | Bedrock 0. 1m + (0. 5 ft +) |

| | | Thickness m (ft) | Depth m (ft) |
|----------------------------|--|--------------------------|----------------------|
| | Soil | 0. 4 (1. 5) | 0. 4 (1. 5) |
| Glacial Sand and Gravel | 'Clayey' gravel with brown clay from 1. 1 to 2. 0m Gravel: subangular to sub- rounded flint with quartz and quartzite Sand: mainly medium with fine and some coarse quartz and flint, clayey in parts, brown | 5. 6 (18. 5) | 6. 0 (19. 5) |
| 'Bullhead Bed' | Clay, silty brown with some flints | 1. 0 (3. 5) | 7. 0 (23. 0) |
| Upper Chalk | Chalk | 0. 1+ (0. 5+) | 7. 1 (23. 5) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|----------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 48 | +16 | : 31 | 0. 4 - 1. 1 | 12 | 38 | 50 |
| | | -16+4 | : 17 | 1. 1 - 2. 0 | Clay | | |
| | | -4+1 | : 7 | 2. 0 - 3. 0 | 11 | 42 | 47 |
| Sand | 41 | -1+ $\frac{1}{4}$ | : 23 | 3. 0 - 4. 0 | 10 | 44 | 46 |
| | | - $\frac{1}{4}$ +1/16 | : 11 | 4. 0 - 5. 0 | 12 | 42 | 46 |
| | | | | 5. 0 - 6. 0 | 12 | 39 | 49 |
| Fines | 11 | -1/16 | : 11 | | | | |

SU 99 SE 10 9733 9148 Village Green, Jordans

Surface level (+98.8m) +324 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 March 1971

Overburden 5.1m (17.0 ft)
 Mineral 9.7m (32.0 ft)
 Bedrock 1.0m + (3.5 ft +)

| | | Thickness | | Depth | | |
|-------------------------|--|-------------------------|--------|------------|--------|--------|
| | | m | (ft) | m | (ft) | |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) | |
| Head | Clay, mottled red and orange, slightly sandy, with a few fine rounded flint and quartzite pebbles, becoming laminated and greyish with increased sand content and depth | 4.8 | (16.0) | 5.1 | (17.0) | |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, with trace of cobbles, unsorted and frequently fractured flint with some quartzite Sand: medium with fine and coarse quartz and flint, red to yellow, rather clayey, commonly in bands about 5 to 10 cms thick | 9.7 | (32.0) | 14.8 | (48.5) | |
| Upper Chalk | Chalk | 1.0+ | (3.5+) | 15.8 | (52.0) | |
| | | Depth below surface (m) | | Percentage | | |
| | % mm : | | | Fines | Sand | Gravel |
| Gravel | 55 +16 : 33 | 5.1 - 6.1 | | 14 | 30 | 56 |
| | -16+4 : 22 | 6.1 - 7.1 | | 11 | 26 | 63 |
| | | 7.1 - 8.1 | | 12 | 29 | 59 |
| | -4+1 : 8 | 8.1 - 9.1 | | 13 | 31 | 56 |
| Sand | 30 -1+1/4 : 13 | 9.1 - 10.1 | | 21 | 26 | 53 |
| | -1/4+1/16 : 9 | 10.1 - 11.1 | | 17 | 40 | 43 |
| | | 11.1 - 12.1 | | 14 | 34 | 52 |
| Fines | 15 -1/16 : 15 | | | | | |

SU 99 SE 11 9694 9040 Pitlands Wood, Beaconsfield

Surface level (+102.7m) +337 ft

Water not struck

Shell and auger (modified), 6 inch (152mm) diam.
December 1970

Waste 4.0m (13.0 ft)

Bedrock 2.0m + (6.5 ft +)

| | | Thickness | | Depth | |
|--------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Clay, red to brown, hard and compact, sandy in parts, scattered fine angular flints | 3.8 | (12.5) | 4.0 | (13.0) |
| Reading Beds | Clay, mottled buff to brown with patches of red and green, sandy in parts | 2.0+ | (6.5+) | 6.0 | (19.5) |

Surface level (+107.3m) +352 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 De cember 1970

Overburden 3.0m (10.0 ft)
 Mineral 4.0m (13.0 ft)
 Waste 1.0m (3.5 ft)
 Bedrock 0.2m + (0.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|--|---------------------|-----------------|
| | Soil | 0.4 (1.5) | 0.4 (1.5) |
| Head | Clay, brown to grey, more sandy and silty with depth, with medium quartz and flint pebbles | 2.6 (8.5) | 3.0 (10.0) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: coarse with medium and fine, trace of cobbles, angular to subrounded flint and quartz Sand: medium and coarse with fine quartz and flint, light brown, very clayey | 4.0 (13.0) | 7.0 (23.0) |
| 'Bullhead Bed' | Clay, brown, with fine to cobble size angular flint, and trace of quartz | 1.0 (3.5) | 8.0 (26.0) |
| Upper Chalk | Chalk | 0.2+ (0.5+) | 8.2 (27.0) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 56 | +16 | : 33 | 3.0 - 4.0 | 21 | 25 | 54 |
| | | -16+4 | : 23 | 4.0 - 5.0 | 16 | 27 | 57 |
| | | -4+1 | : 13 | 5.0 - 6.0 | 16 | 28 | 56 |
| | | -1+ $\frac{1}{4}$ | : 10 | 6.0 - 7.0 | 15 | 29 | 56 |
| Sand | 27 | - $\frac{1}{4}$ +1/16 | : 4 | | | | |
| | | | | | | | |
| Fines | 17 | -1/16 | : 17 | | | | |

Surface level (+105.8m) +347 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 3.7m (12.0 ft)
 Mineral 3.3m (11.0 ft)
 Waste 1.5m (5.0 ft)
 Bedrock 0.2m + (0.5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|---|---------------------|-----------------|
| | Soil | 0.4 (1.5) | 0.4 (1.5) |
| Head | Clay, brown to grey, with some flint gravel in the upper 2m while in the lower 1.3m there is an absence of flint but an increase in the sand content | 3.3 (11.0) | 3.7 (12.0) |
| Glacial Sand and Gravel | Gravel: coarse with medium and fine rounded to sub-angular flint, quartz and some quartzite Sand: fine to coarse, white to brown quartz and flint; clayey, brown | 3.3 (11.0) | 7.0 (23.0) |
| 'Bullhead Bed' | Clay, brown, with cobble size quartzite and flint | 1.5 (5.0) | 8.5 (28.0) |
| Upper Chalk | Chalk | 0.2+ (0.5+) | 8.7 (28.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 54 | +16 | : 34 | 3.7 - 4.7 | 13 | 33 | 54 |
| | | -16+4 | : 20 | 4.7 - 5.7 | 11 | 34 | 55 |
| | | -4+1 | : 11 | 5.7 - 6.7 | 6 | 40 | 54 |
| | | -1+1/4 | : 15 | 6.7 - 7.0 | No sample | | |
| Sand | 36 | -1/4+1/16 | : 10 | | | | |
| | | | | | | | |
| Fines | 10 | -1/16 | : 10 | | | | |

Surface level (+97.8m) +321 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 2.9m (9.5 ft)
 Mineral 1.4m (4.5 ft)
 Bedrock 3.7m + (12.0 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|----------------------------|---|--------------------------|----------------------|
| | Soil | 0.4 (1.5) | 0.4 (1.5) |
| Head | Clay, brown, with some flints | 2.5 (8.0) | 2.9 (9.5) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, subangular to subrounded flint with trace of quartz and quartzite Sand: medium and coarse with fine quartz and flint, brown clay in parts | 1.4 (4.5) | 4.3 (14.0) |
| Reading Beds | Clay, brown and sandy | 3.7+ (12.0+) | 8.0 (26.0) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage Sand | Gravel |
|--------|----|-----------------------|------|----------------------------|-------|--------------------|--------|
| Gravel | 52 | +16 | : 26 | 2.9 - 3.9 | 12 | 33 | 55 |
| | | -16+4 | : 26 | 3.9 - 4.3 | 17 | 38 | 45 |
| Sand | 34 | -4+1 | : 11 | | | | |
| | | -1+ $\frac{1}{4}$ | : 16 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 7 | | | | |
| Fines | 14 | -1/16 | : 14 | | | | |

Surface level (+101.2m) +332 ft
 Water struck at +97.8m
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Waste 2.4m (8.0 ft)
 Bedrock 3.6m + (12.0 ft+)

| | | Thickness | | Depth | |
|-------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.1 | (0.5) | 0.1 | (0.5) |
| Glacial Sand and Gravel | 'Very clayey' gravel Gravel: coarse to medium with fine subangular to rounded flint with occasional quartz Sand: coarse with medium and fine quartz and flint, brown to black rather clayey | 0.6 | (2.0) | 0.7 | (2.5) |
| | Clay, brown with some flint pebbles | 1.7 | (5.5) | 2.4 | (8.0) |
| Reading Beds | Sand, predominantly medium with fine, with trace of gravel | 3.3 | (11.0) | 5.7 | (18.5) |
| | Clay, mottled brown with reddish-green patches | 0.3+ | (1.0+) | 6.0 | (19.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|--|--------------------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 64 | +16 -16+4 | : 45 : 19 | 0.1 - 0.7 | 20 | 16 | 64 |
| Sand | 16 | -4+1 -1+ $\frac{1}{4}$ - $\frac{1}{4}$ +1/16 | : 10 : 3 : 3 | | | | |
| Fines | 20 | -1/16 | : 20 | | | | |

Sand in the Reading Beds
 (not included in the assessment)

| | | | | | | | |
|--------|----|--|---------------------|------------------------|------------------|----|---|
| Gravel | 4 | +16 -16+4 | : 2 : 2 | 2.4 - 3.4 3.4 - 5.7 | 10 No samples | 86 | 4 |
| Sand | 86 | -4+1 -1+ $\frac{1}{4}$ - $\frac{1}{4}$ +1/16 | : 1 : 60 : 25 | | | | |
| Fines | 10 | -1/16 | : 10 | | | | |

Surface level (+71. 3m) +234 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 0. 3m (1. 0 ft)
 Mineral 5. 6m (18. 5 ft)
 Bedrock 0. 1m + (0. 5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------|---|------------------------|--------------------|
| | Soil | 0. 3 (1. 0) | 0. 3 (1. 0) |
| Alluvium | Gravel Gravel: medium to coarse with fine, essentially flint with some well rounded quartzite, and large cobble size flint Sand: medium and coarse with fine quartz and flint, white to grey, very little clay | 5. 6 (18. 5) | 5. 9 (19. 5) |
| Upper Chalk | Chalk | 0. 1+ (0. 5+) | 6. 0 (19. 5) |

| | | | | Depth below surface (m) | Percentage | | | | |
|--------|----|-------|------|----------------------------|------------|-------------|--------|----|----|
| | | % | mm | | Fines | Sand | Gravel | | |
| Gravel | 68 | +16 | : 43 | 0. 3 - 1. 3 | 6 | 28 | 66 | | |
| | | | | -16+4 | : 25 | 1. 3 - 2. 3 | 4 | 24 | 72 |
| | | | | | | 2. 3 - 3. 3 | 5 | 30 | 65 |
| Sand | 27 | -4+1 | : 13 | 3. 3 - 4. 3 | 5 | 30 | 65 | | |
| | | | | -1+ $\frac{1}{4}$ | : 10 | 4. 3 - 5. 3 | 5 | 30 | 65 |
| | | | | - $\frac{1}{4}$ +1/16 | : 4 | 5. 3 - 5. 9 | 4 | 21 | 75 |
| Fines | 5 | -1/16 | : 5 | | | | | | |

Surface level (+67.7m) +222 ft
 Water struck at (+61.2m)
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 0.2m (0.5 ft)
 Mineral 7.7m (25.5 ft)
 Waste 0.1m (0.5 ft)
 Bedrock 0.1m + (0.5 ft +)

| | | Thickness | Depth |
|-------------|--|-------------|------------|
| | | m (ft) | m (ft) |
| | Soil | 0.2 (0.5) | 0.2 (0.5) |
| Alluvium | Gravel Gravel: medium to coarse, some cobbles, angular to subrounded quartz, quartzite and flint Sand: coarse with medium and some fine quartz and flint, with a little clay | 7.7 (25.5) | 7.9 (26.0) |
| | Clay, brown, sandy, with a few rounded flints | 0.1 (0.5) | 8.0 (26.0) |
| Upper Chalk | Chalk | 0.1+ (0.5+) | 8.1 (26.5) |

| | | | | Depth below | Percentage | | |
|--------|----|-----------------------|------|-------------|------------|------|--------|
| | | | | surface (m) | Fines | Sand | Gravel |
| | % | mm | % | | | | |
| Gravel | 64 | +16 | : 40 | 0.2 - 1.2 | 13 | 23 | 64 |
| | | -16+4 | : 24 | 1.2 - 2.2 | 3 | 26 | 71 |
| | | | | 2.2 - 3.2 | 6 | 29 | 65 |
| Sand | 30 | -4+1 | : 15 | 3.2 - 4.2 | 6 | 25 | 69 |
| | | -1+ $\frac{1}{4}$ | : 11 | 4.2 - 5.2 | 6 | 29 | 65 |
| | | - $\frac{1}{4}$ +1/16 | : 4 | 5.2 - 6.2 | 5 | 26 | 69 |
| Fines | 6 | | | 6.2 - 7.2 | 5 | 39 | 56 |
| | | -1/16 | : 6 | 7.2 - 7.9 | 4 | 42 | 54 |

Surface level (+64.0m) +210 ft
 Water struck at (+60.0m)
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 0.2m (0.5 ft)
 Mineral 7.5m (24.5 ft)
 Bedrock 0.3m + (1.0 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------|---|--------------------------|----------------------|
| | Soil | 0.2 (0.5) | 0.2 (0.5) |
| Alluvium | Gravel | 7.5 (24.5) | 7.7 (25.5) |
| | Gravel: medium to coarse with fine rounded to subangular flint, some quartz and trace of red quartzite Sand: coarse with medium and some fine, essentially quartz, grey to light brown, slightly clayey | | |
| Upper Chalk | Chalk | 0.3+ (1.0+) | 8.0 (26.0) |

| | | | | Depth below surface (m) | Percentage | | | |
|--------|----|-----------------------|------|----------------------------|------------|-----------|--------|----|
| | | | | | Fines | Sand | Gravel | |
| | % | mm | % | | | | | |
| Gravel | 66 | +16 | : | 40 | 0.2 - 1.2 | 5 | 20 | 75 |
| | | -16+4 | : | 26 | 1.2 - 2.2 | No sample | | |
| | | | -4+1 | : | 15 | 2.2 - 3.2 | 7 | 32 |
| Sand | 29 | -1+ $\frac{1}{4}$ | : | 11 | 3.2 - 4.2 | 8 | 30 | 62 |
| | | - $\frac{1}{4}$ +1/16 | : | 3 | 4.2 - 5.2 | 2 | 44 | 54 |
| | | | | | 5.2 - 6.2 | 6 | 24 | 70 |
| Fines | 5 | | : | 5 | 6.2 - 7.2 | 3 | 26 | 71 |
| | | | | | 7.2 - 7.7 | 2 | 29 | 69 |

Surface level (+99.1m) +325 ft Overburden 0.1m (0.5 ft)
 Water not struck Mineral 9.8m (32.0 ft)
 Shell and auger (modified), 6 inch (152mm) diam. Waste 2.3m (7.5 ft)
 December 1970 Bedrock 0.3m + (1.0 ft +)

| | | Thickness | Depth |
|-------------------------|---|-------------|-------------|
| | | m (ft) | m (ft) |
| | Soil | 0.1 (0.5) | 0.1 (0.5) |
| Glacial Sand and Gravel | Gravel Gravel: coarse with medium and fine, trace of cobbles, subangular to well rounded flint with some quartz and quartzite Sand: fine to coarse quartz and flint, clay in thin bands, brown to red brown | 9.8 (32.0) | 9.9 (32.5) |
| 'Bullhead Bed' | Clay, hard, dark reddish brown with medium to cobble size subrounded flint, some reddish brown sand | 2.3 (7.5) | 12.2 (40.0) |
| Upper Chalk | Chalk | 0.3+ (1.0+) | 12.5 (41.0) |

| | % | mm | % | Depth below surface (m) | Fines | Percentage | |
|--------|----|-----------------------|------|-------------------------|-------|------------|--------|
| | | | | | | Sand | Gravel |
| Gravel | 54 | +16 | : 32 | 0.1 - 1.1 | 19 | 20 | 61 |
| | | -16+4 | : 22 | 1.1 - 2.1 | 10 | 30 | 60 |
| | | | | 2.1 - 3.1 | 10 | 41 | 49 |
| Sand | 36 | -4+1 | : 12 | 3.1 - 4.1 | 7 | 39 | 54 |
| | | -1+ $\frac{1}{4}$ | : 14 | 4.1 - 5.1 | 12 | 38 | 50 |
| | | - $\frac{1}{4}$ +1/16 | : 10 | 5.1 - 6.1 | 9 | 31 | 60 |
| Fines | 10 | | | 6.1 - 7.1 | 5 | 44 | 51 |
| | | | | 7.1 - 8.1 | 6 | 33 | 61 |
| | | | | 8.1 - 9.1 | 10 | 41 | 49 |
| | | | | 9.1 - 9.9 | 12 | 41 | 47 |
| | | | | 9.9 - 10.9 | 9 | 35 | 56 |

Surface level (+93. 3m) +306 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 December 1970

Overburden 0. 2m (0. 5 ft)
 Mineral 3. 2m (10. 5 ft)
 Bedrock 2. 6m + (8. 5 ft +)

| | | Thickness | | Depth | |
|-------------------------|---|-------------------------|---------|------------|---------|
| | | m | (ft) | m | (ft) |
| | Soil | 0. 2 | (0. 5) | 0. 2 | (0. 5) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse, with some cobbles, subrounded to sub-angular flint and quartz Sand: medium and coarse with fine quartz with flint, clayey in parts, brown | 3. 2 | (10. 5) | 3. 4 | (11. 0) |
| Reading Beds | Clay, mottled green, black and red | 2. 6+ | (8. 5+) | 6. 0 | (19. 5) |
| | | Depth below surface (m) | | Percentage | |
| | | | Fines | Sand | Gravel |
| Gravel | % mm % | 0. 2 - 1. 4 | 9 | 26 | 65 |
| | 59 +16 : 36 | 1. 4 - 2. 4 | 18 | 31 | 51 |
| | -16+4 : 23 | 2. 4 - 3. 4 | 15 | 26 | 59 |
| Sand | -4+1 : 11 | | | | |
| | 28 -1+ $\frac{1}{4}$: 11 | | | | |
| | - $\frac{1}{4}$ +1/16 : 6 | | | | |
| Fines | 13 -1/16 : 13 | | | | |

Surface level (+100. 3m) +329 ft
 Water not struck
 Shell and auger (modified), 6 inch (152mm) diam.
 October 1971

Overburden 0. 6m (2. 0 ft)
 Mineral 5. 0m (16. 5 ft)
 Bedrock 0. 4m + (1. 5 ft +)

| | | Thickness m (ft) | Depth m (ft) |
|-------------------------|---|---------------------|-----------------|
| | Soil | 0. 2 (0. 5) | 0. 2 (0. 5) |
| Head | Clay, silty, with traces of medium to coarse flint, brown | 0. 4 (1. 5) | 0. 6 (2. 0) |
| Glacial Sand and Gravel | 'Clayey' sandy gravel. Gravel: fine to coarse, trace of cobbles, sub-angular to well rounded flint with some quartz and quartzite Sand: medium with coarse and some fine quartz and flint, variably clayey, brown | 5. 0 (16. 5) | 5. 6 (18. 5) |
| Upper Chalk | Chalk | 0. 4+ (1. 5+) | 6. 0 (19. 5) |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | % | mm | % | | Fines | Sand | Gravel |
| Gravel | 38 | +16 | : 17 | 0. 6 - 1. 6 | 23 | 31 | 46 |
| | | -16+4 | : 21 | 1. 6 - 1. 8 | 17 | 75 | 8 |
| | | -4+1 | : 11 | 1. 8 - 2. 8 | 13 | 54 | 33 |
| Sand | 48 | -1+ $\frac{1}{4}$ | : 30 | 2. 8 - 3. 8 | 11 | 49 | 40 |
| | | - $\frac{1}{4}$ +1/16 | : 7 | 3. 8 - 4. 8 | 12 | 52 | 36 |
| Fines | 14 | -1/16 | : 14 | 4. 8 - 5. 6 | 10 | 48 | 42 |

Surface level (c+135.6 m) c+445 ft
 Water not struck
 Shell and auger (modified), 6 in (152 mm) diam.
 March 1973

Overburden 5.0 m (16.5 ft)
 Mineral 11.2 m (36.5 ft)
 Bedrock 0.3 m + (1.0 ft+)

| | | Thickness | Depth |
|-------------------------|--|-------------|-------------|
| | | m (ft) | m (ft) |
| Soil | | 0.2 (0.5) | 0.2 (0.5) |
| Head | Clay, brown, mottled grey, with scattered fine to medium flint and quartz pebbles. Becomes reddish brown below 3.5 m and slightly silty and sandy | 4.5 (15.0) | 4.7 (15.5) |
| | Clay, sandy, friable, with fine to medium flint pebbles, reddish-brown | 0.3 (1.0) | 5.0 (16.5) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse with a few cobbles, subangular to well rounded flint with a trace of well rounded quartz and quartzite Sand: mainly medium quartz, brown, clayey in parts | 11.2 (36.5) | 16.2 (53.0) |
| 'Bullhead Bed' | Clay, sandy, green and dark brown, with black flint nodules | 0.2 (0.5) | 16.4 (54.0) |
| Upper Chalk | Chalk | 0.1+ (0.5+) | 16.5 (54.0) |

| | % | mm | % | Depth below surface (m) | Percentages | | |
|--------|----|-----------------------|------|-------------------------|-------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 45 | +16 | : 19 | 5.0 - 6.0 | 16 | 44 | 40 |
| | | -16+4 | : 26 | 6.0 - 7.0 | 17 | 33 | 50 |
| | | | | 7.0 - 8.0 | 15 | 32 | 53 |
| Sand | 40 | -4+1 | : 8 | 8.0 - 9.0 | 14 | 33 | 53 |
| | | -1+ $\frac{1}{4}$ | : 29 | 9.0 - 10.0 | 9 | 37 | 54 |
| | | - $\frac{1}{4}$ +1/16 | : 3 | 10.0 - 11.0 | 19 | 69 | 12 |
| | | | | 11.0 - 12.0 | 24 | 58 | 18 |
| Fines | 15 | -1/16 | : 15 | 12.0 - 13.0 | 18 | 40 | 42 |
| | | | | 13.0 - 14.0 | 16 | 25 | 59 |
| | | | | 14.0 - 15.0 | 0 | 24 | 76 |
| | | | | 15.0 - 16.2 | 18 | 49 | 33 |

Surface level (c+120.0 m) c+395 ft

Overburden 7.0 m (23.0 ft)

Water not struck

Mineral 5.5 m (18.0 ft)

Shell and auger (modified), 6 in (152 mm) diam.

Bedrock 1.2 m+ (4.0 ft+)

March 1973

| | | Thickness | | Depth | |
|-------------------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Clay, stiff, slightly silty, brown. mottled grey and reddish-brown, containing scattered fine to coarse subrounded to well rounded quartz and flint pebbles. Becoming more silty and sandy at base | 6.8 | (22.5) | 7.0 | (23.0) |
| Glacial Sand and Gravel | 'Clayey' sandy gravel Gravel: fine to coarse subrounded to well rounded flint with some fine to medium well rounded quartz Sand: medium quartz, reddish-brown | 5.5 | (18.0) | 12.5 | (41.0) |
| 'Bullhead Bed' | Clay, dark brown, with abundant unworn flint nodules | 1.0 | (3.5) | 13.5 | (44.5) |
| Upper Chalk | Chalk | 0.2+ | (0.5+) | 13.7 | (45.0) |

| | % | mm | % | Depth below surface (m) | Percentages | | |
|--------|----|-----------------------|------|-------------------------|-------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 33 | +16 | : 13 | 7.0 - 8.0 | 21 | 63 | 16 |
| | | -16+4 | : 20 | 8.0 - 9.0 | 32 | 51 | 17 |
| | | | | 9.0 - 10.0 | 10 | 40 | 50 |
| Sand | 50 | -4+1 | : 8 | 10.0 - 11.0 | 15 | 38 | 47 |
| | | -1+ $\frac{1}{4}$ | : 39 | 11.0 - 12.5 | 9 | 56 | 35 |
| | | - $\frac{1}{4}$ +1/16 | : 3 | | | | |
| Fines | 17 | -1/16 | : 17 | | | | |

Surface level (c+143.0 m) c+470 ft Overburden 0.3 m (1.0 ft)
 Water not struck Mineral 2.2 m (7.0 ft)
 Shell and auger (modified), 6 in (152 mm) diam. Bedrock 11.9 m+ (39.0 ft+)
 February 1973

| | | Thickness | | Depth | |
|----------------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse sub- angular to well rounded flint with fine to medium well rounded quartz Sand: medium to coarse quartz, clayey, brown | 2.2 | (7.0) | 2.5 | (8.0) |
| Reading Beds | Clay, brown, stiff, silty from 3.5 m (11.5 ft) to base and less firm | 3.4 | (11.0) | 5.9 | (19.5) |
| | Clay, pale greenish-grey, stiff, silty from 7.0 m to 7.5 m (23 ft to 24.5 ft). Mottled reddish- brown below 8.6 m (28 ft) and mainly reddish-brown below 10.0 m (33 ft) | 5.5 | (18.0) | 11.4 | (37.5) |
| | Silt with sand, thin clay bands throughout | 3.0 | (10.0) | 14.4 | (47.0) |
| | Hard obstruction struck at 14.4 m (47 ft) - probably a large flint on the Chalk surface | | | | |

| | | | Depth below surface (m) | Percentages | | | |
|--------|----|-----------------------|----------------------------|-------------|------|--------|----|
| % | mm | % | | Fines | Sand | Gravel | |
| Gravel | 49 | +16 | : 22 | 0.3 - 1.3 | 15 | 36 | 49 |
| | | -16+4 | : 27 | | | | |
| Sand | 36 | -4+1 | : 10 | | | | |
| | | -1+ $\frac{1}{4}$ | : 26 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 0 | | | | |
| Fines | 15 | -1/16 | : 15 | | | | |

Surface level (+118.0 m) +387 ft
 Water not struck
 Shell and auger (modified), 6 inch (152 mm)
 diam.
 February 1971

Overburden 0.2 m (0.5 ft)
 Mineral 3.8 m (12.5 ft)
 Waste 1.1 m (3.5 ft)
 Bedrock 0.1 m+ (0.5 ft+)

| | | Thickness | Depth |
|-------------------------|--|-------------|------------|
| | | m (ft) | m (ft) |
| | Soil | 0.2 (0.5) | 0.2 (0.5) |
| Glacial Sand and Gravel | 'Very clayey' sandy gravel Gravel: fine to coarse angular to rounded flint and quartzite Sand: essentially medium with some fine and coarse quartz and flint, clayey in parts; white to brown | 3.8 (12.5) | 4.0 (13.0) |
| 'Bullhead Bed' | Clay, brown to black, with some cobble size rounded to angular black flints | 1.1 (3.5) | 5.1 (17.0) |
| Upper Chalk | Chalk, with black flint cobbles | 0.1+ (0.5+) | 5.2 (17.0) |

| | % mm | % | Depth below surface (m) | Percentage | | |
|--------|------|---|-------------------------|------------|------|--------|
| | | | | Fines | Sand | Gravel |
| Gravel | 25 | +16 : 15 -16+4 : 10 | 0.2 - 1.2 | 9 | 40 | 51 |
| | | | 1.2 - 2.2 | 20 | 59 | 21 |
| | | | 2.2 - 4.0 | 39 | 49 | 12 |
| Sand | 49 | -4+1 : 6 -1+ $\frac{1}{4}$: 35 - $\frac{1}{4}$ +1/16 : 8 | | | | |
| | | | | | | |
| | | | | | | |
| Fines | 26 | -1/16 : 26 | | | | |

SU 99 SW 3 9123 9263 Parsonage Farm, Penn

Surface level (+146.0 m) +479 ft

Water not struck

Shell and auger (modified), 6-inch (152 mm)
diameter

February 1971

Waste 4.5 m (15.0 ft)

Bedrock 0.5 m+ (1.5 ft+)

| | | Thickness | | Depth | |
|------------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) |
| Clay-with-flints | Clay, yellow to brown, black at base, sandy in part with rare gravel; black cobble size flints in black clay at the junction with the chalk | 4.2 | (14.0) | 4.5 | (15.0) |
| Upper Chalk | Chalk with flints | 0.5+ | (1.5+) | 5.0 | (16.5) |

Surface level (+123.7 m) + 406 ft

Overburden 2.5 m (8.0 ft)

Water not struck

Bedrock 8.5 m+ (28.0 ft+)

Shell and auger (modified), 6 inch (152 mm)
diam.

February 1971

| | | Thickness | | Depth | |
|--|---|----------------------------|--------|------------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Clay-with-Flints | Clay, brick red to yellow, sandy in parts with some fine to coarse well rounded flint and quartzite gravel | 2.3 | (7.5) | 2.5 | (8.0) |
| Reading Beds | Clay, mottled yellow and brown, sandy in parts | 0.4 | (1.5) | 2.9 | (9.5) |
| | Sand, well sorted, medium, with fine, clay bands, brown to reddish brown | 6.7 | (22.0) | 9.6 | (31.5) |
| | Clay, mottled yellow to whitish yellow, sandy in parts | 0.6 | (2.0) | 10.2 | (33.5) |
| | Sand, yellow to white, clayey in parts | 0.6 | (2.0) | 10.8 | (35.5) |
| Upper Chalk | Chalk, with large black flints | 0.2+ | (0.5+) | 11.0 | (36.0) |
| Sand in the Reading Beds (not included in the assessment) | | Depth below surface (m) | | Percentage | |
| | % mm % | Fines | Sand | Gravel | |
| Gravel | 0 +16 : 0 | 2.9 - 3.9 | 32 | 68 | 0 |
| | -16+4 : 0 | 3.9 - 4.9 | 16 | 84 | 0 |
| | | 4.9 - 5.9 | 18 | 82 | 0 |
| | -4+1 : 2 | 5.9 - 6.9 | 8 | 92 | 0 |
| Sand | 80 -1+ $\frac{1}{4}$: 55 | 6.9 - 7.9 | 9 | 91 | 0 |
| | - $\frac{1}{4}$ +1/16 : 23 | 7.9 - 8.9 | 41 | 59 | 0 |
| | | 8.9 - 9.6 | 18 | 80 | 2 |
| Fines | 20 -1/16 : 20 | | | | |

| | | | | | |
|---|---|---------------------------|--|------------------|--|
| Surface level (+102.1 m) +335 ft | | Overburden 0.2 m (0.5 ft) | | | |
| Water not struck | | Mineral 10.3 m (34.0 ft) | | | |
| Shell and auger (modified), 6 inch (152 mm) diam. | | Waste 0.8 m (2.5 ft) | | | |
| February 1971 | | Bedrock 0.2 m+ (0.5 ft+) | | | |
| | | Thickness | | Depth | |
| | | m (ft) | | m (ft) | |
| | Soil | 0.2 (0.5) | | 0.2 (0.5) | |
| Glacial Sand and Gravel | 'Clayey' gravel Gravel: fine to coarse angular to rounded flint and quartzite Sand: medium with coarse and some fine flint and quartz, clayey in parts, white and brown | 10.3 (34.0) | | 10.5 (34.5) | |
| 'Bullhead Bed' | Clay, black, with large cobble size rounded and angular flints | 0.8 (2.5) | | 11.3 (37.0) | |
| Upper Chalk | Chalk, with occasional flint cobbles | 0.2+ (0.5+) | | 11.5 (37.5) | |

| | | | | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | % | mm | % | | Fines | Sand | Gravel |
| Gravel | 50 | +16 | : 30 | 0.2 - 1.2 | 14 | 19 | 67 |
| | | -16+4 | : 20 | 1.2 - 2.2 | 13 | 13 | 74 |
| | | | | | 2.2 - 3.2 | 10 | 25 |
| Sand | 36 | -4+1 | : 8 | 3.2 - 4.2 | 11 | 28 | 61 |
| | | -1+ $\frac{1}{4}$ | : 24 | 4.2 - 5.2 | 16 | 25 | 59 |
| | | - $\frac{1}{4}$ +1/16 | : 4 | 5.2 - 6.2 | 12 | 23 | 65 |
| | | | | | 6.2 - 7.2 | 14 | 41 |
| Fines | 14 | -1/16 | : 14 | 7.2 - 8.2 | 19 | 57 | 24 |
| | | | | 8.2 - 9.2 | 14 | 63 | 23 |
| | | | | 9.2 -10.5 | 16 | 62 | 22 |

SU 99 SW 6 9236 9213 Saunder's Wood, Forty Green

Surface level (+106.4 m) +349 ft
 Water not struck
 Shell and auger (modified), 6 inch (152 mm)
 diam.
 March 1971

Overburden 0.5 m (1.5 ft)
 Bedrock 7.6 m+ (25.0 ft+)

| | | Thickness | | Depth | |
|----------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Reading Beds | Clay, brown, sandy | 0.3 | (1.0) | 0.5 | (1.5) |
| | Sand, medium with fine, well sorted, with occasional bands or lens of grey or black clay; sands mottled orange and brown | 7.1 | (23.5) | 7.6 | (25.0) |
| 'Bullhead Bed' | Clay, hard, mottled brown to yellow, scattered flints and a few black carbonaceous bands | 0.3 | (1.0) | 7.9 | (26.0) |
| Upper Chalk | Chalk, with flint cobbles and black clay | 0.2+ | (0.5+) | 8.1 | (26.5) |

| | | | |
|---|---|---------------------------|-----------------|
| Surface level (+123.4 m) +405 ft | | Overburden 1.9 m (6.0 ft) | |
| Water not struck | | Mineral 3.2 m (10.5 ft) | |
| Shell and auger (modified), 6 inch (152 mm) diam. | | Waste 0.5 m (1.5 ft) | |
| March 1971 | | Bedrock 0.3 m+ (1.0 ft+) | |
| | | Thickness | Depth |
| | | m (ft) | m (ft) |
| | Soil | 0.2 (0.5) | 0.2 (0.5) |
| Head | Clay, laminated, brown and white, sandy in part with some fine to medium rounded quartzite and flint gravel | 1.7 (5.5) | 1.9 (6.0) |
| Glacial Sand and Gravel | Sandy gravel Gravel: fine to coarse, well rounded flint and quartzite; the gravel appears to occur in thin bands (5 cms) throughout the sand Sand: predominantly medium, with fine and some coarse, flint and quartz, clayey in parts, white to brown | 3.2 (10.5) | 5.1 (17.0) |
| 'Bullhead Bed' | Clay, black, with large rounded fractured black flints | 0.5 (1.5) | 5.6 (18.5) |
| Upper Chalk | Chalk | 0.3+ (1.0+) | 5.9 (19.5) |

| | % | mm | % | Depth below surface (m) | Percentage | | |
|--------|----|-----------------------|------|-------------------------|------------|------|--------|
| | | | | | Fines | Sand | Gravel |
| Gravel | 37 | +16 | : 23 | 1.9 - 2.9 | 3 | 71 | 26 |
| | | -16+4 | : 14 | 2.9 - 3.9 | 6 | 65 | 29 |
| | | | | 3.9 - 4.5 | 4 | 61 | 35 |
| Sand | 59 | -4+1 | : 5 | 4.5 - 5.1 | 5 | 27 | 68 |
| | | -1+ $\frac{1}{4}$ | : 41 | | | | |
| | | - $\frac{1}{4}$ +1/16 | : 13 | | | | |
| Fines | 4 | -1/16 | : 4 | | | | |

SU 99 SW 6 9344 9270 Seagrave Farm, Knotty Green

Surface level (+124.7 m) + 409 ft

Overburden 0.3 m (1.0 ft)

Water not struck

Bedrock 4.7 m+ (15.5 ft+)

Shell and auger (modified), 6 inch (152 mm)
diam.

March 1971

| | | Thickness | | Depth | |
|----------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.3 | (1.0) | 0.3 | (1.0) |
| Reading Beds | Clayey sand, medium with fine, well sorted, orange-yellow | 4.0 | (13.0) | 4.3 | (14.0) |
| 'Bullhead Bed' | Clay, hard, yellow to black, with cobble size black flints | 0.2 | (0.5) | 4.5 | (15.0) |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 5.0 | (16.5) |

SU 99 SW 9 9314 9214 Recreation Ground, Knotty Green

Surface level (+110.9 m) +364 ft

Overburden 6.0 m (19.5 ft)

Water not struck

Bedrock 3.8 m+ (12.5 ft+)

Shell and auger (modified), 6 inch (152 mm)
diam.

March 1971

| | | Thickness | | Depth | |
|--------------|--|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Clay, mottled buff to brown with traces of fine to medium rounded flint gravel | 5.8 | (19.0) | 6.0 | (19.5) |
| Reading Beds | Clay, white-grey, becoming greenish grey with depth | 2.5 | (8.0) | 8.5 | (28.0) |
| | Sand, fine grained, orange coloured, rather clayey | 0.5 | (1.5) | 9.0 | (29.5) |
| | Clay, with fine grained reddish sand with a black speckled clay | 0.8+ | (2.5+) | 9.8 | (32.0) |

SU 99 SW 10 9475 9286 Grange Farm, North Beaconsfield

Surface level (+119.8 m) +393 ft

Water not struck

Shell and auger (modified), 6 inch (152 mm)
diam.

February 1971

Waste 3.8 m (12.5 ft)

Bedrock 0.5 m+ (1.5 ft+)

| | | Thickness | | Depth | |
|-------------|---|-----------|--------|-------|--------|
| | | m | (ft) | m | (ft) |
| | Soil | 0.2 | (0.5) | 0.2 | (0.5) |
| Head | Sand, fine to medium quartz, with some fine to medium subrounded to well rounded flint gravel, clayey in parts | 0.7 | (2.5) | 0.9 | (3.0) |
| | Sand, rusty brown, medium to coarse grained, with trace of medium flint gravel, clayey in parts | 2.7 | (9.0) | 3.6 | (12.0) |
| | Clay, brown, with fine to medium black flint gravel | 0.2 | (0.5) | 3.8 | (12.5) |
| Upper Chalk | Chalk | 0.5+ | (1.5+) | 4.3 | (14.0) |

Dd. 505165 K16

Printed in England for Her Majesty's Stationery Office
by Unwin Brothers Limited, The Gresham Press, Old Woking, Surrey

Reports of the Institute of Geological Sciences

- No. 69/1 Geochemistry of sedimentary rocks. 1. Petrography and chemistry of arenaceous rocks. By P. A. Sabine, Eileen M. Guppy and G. A. Sergeant. Price 45p.
- No. 69/2 Preliminary report on a seismic reflection survey in the southern Irish Sea, July 1968. By W. Bullerwell and R. McQuillin. Price 15p.
- No. 69/3 Cruise report: Humber investigations, 1968. By R. McQuillin, Susan E. Arnold, M. C. Tully and J. H. Hull. Price 25p.
- No. 69/4 Sodic scapolite (dipyre) in the Shetland Islands. By W. Mykura and B. R. Young. Price 10p.
- No. 69/5 A summary of the mineral resources of the 'Crofter Counties' of Scotland. Compiled by N. G. Berridge. Price 25p.
- No. 69/6 The Tertiary welded-tuff vent agglomerate and associated rocks at Sandy Braes, Co. Antrim. By I. B. Cameron and P. A. Sabine. Price 10p.
- No. 69/7 Lower Old Red Sandstone ignimbrites from Dunkeld, Perthshire. By I. B. Paterson and A. L. Harris. Price 10p.
- No. 69/8 Recent sedimentation in the central north-eastern Irish Sea. By D. S. Cronan. Price 10p.
- No. 69/9 Sand and gravel resources of the inner Moray Firth. By A. L. Harris and J. D. Peacock. Price 15p.
- No. 70/1 Preliminary report on marine geological and geophysical work off the east coast of Scotland 1966-1968. By R. A. Eden, Anne V. F. Small and R. McQuillin. Price 25p.
- No. 70/2 Regional geochemical reconnaissance of the Derbyshire area. By I. Nichol, I. Thornton, J. S. Webb, W. K. Fletcher, R. F. Horsnail, J. Khaleelee and D. Taylor. [Limited edition]. Price £2.50. *Out of print.*
- No. 70/3 Geological and shallow subsurface geophysical investigations in the Western Approaches to the English Channel. By D. Curry, D. Hamilton and A. J. Smith. Price 10p.
- No. 70/4 Sands and gravels of the southern counties of Scotland. By G. A. Goodlet. Price 90p.
- No. 70/5 Sources of aggregate in Northern Ireland. By I. B. Cameron. Price 25p.
- No. 70/6 A petrological-mineralogical code for computer use. Edited by R. K. Harrison and P. A. Sabine. Price £1.
- No. 70/7 Chamosite in Weald Clay from Horsham, Sussex. By R. G. Thurrell, G. A. Sergeant and B. R. Young. Price 10p.
- No. 70/8 Regional geochemical reconnaissance of the Denbighshire area. By I. Nichol, I. Thornton, J. S. Webb, W. K. Fletcher, R. F. Horsnail, J. Khaleelee and D. Taylor. [Limited edition]. Price £2.50. *Out of print.*
- No. 70/9 The drift sequence and subglacial topography in parts of the Ouse and Nene basin. By A. Horton. Price 35p.
- No. 70/10 Regional magnetic anomalies: An analysis of the Smoothed Aeromagnetic Map of Great Britain and Northern Ireland. By D. H. Hall and P. Dagley. Price 50p.
- No. 70/11 Perlitic obsidian at Sandy Braes, Co. Antrim: its devitrification and volumetric relationship. By P. A. Sabine. Price 10p.
- No. 70/12 The Lower Old Red Sandstone of the Strathmore region. By M. Armstrong and I. B. Paterson. Price 50p.
- No. 70/13 ICSU/SCOR Symposium Cambridge 1970: The Geology of the East Atlantic Continental Margin. Part 1: General and Economic Papers. Edited by F. M. Delany. Price 90p.
- No. 70/14 ICSU/SCOR Symposium Cambridge 1970: The Geology of the East Atlantic Continental Margin. Part 2: Europe. Edited by F. M. Delany. Price 90p.
- No. 70/15 ICSU/SCOR Symposium Cambridge 1970: The Geology of the East Atlantic Continental Margin. Part 3: Europe (continued). Edited by F. M. Delany. Price 90p.
- No. 70/16 ICSU/SCOR Symposium Cambridge 1970: The Geology of the East Atlantic Continental Margin. Part 4: Africa. Edited by F. M. Delany. Price £1.
- No. 70/17 Geochemistry of Recent sediments from the central north-eastern Irish Sea. By D. S. Cronan. Price 20p.
- No. 71/1 Synthesis of International Geomagnetic Reference Field Values. By D. R. Barraclough and S. R. C. Malin. Price 20p.
- No. 71/2 Regional geochemical reconnaissance of part of Devon and north Cornwall. By I. Nichol, I. Thornton, J. S. Webb, W. K. Fletcher, R. F. Horsnail and J. Khaleelee. [Limited edition]. Price £2.50. *Out of print.*
- No. 71/3 The stratigraphy of the Upper Magnesian Limestone: a revision based on the Institute's Seaham Borehole. By D. B. Smith. Price 15p.
- No. 71/4 Calcium montmorillonite (fuller's earth) in the Lower Greensand of the Baulking area, Berkshire. By E. G. Poole and B. Kelk. Price 45p.
- No. 71/5 Organic geochemistry of some Carboniferous shales from the South Wales Coalfield. By T. W. Bloxam. Price 10p.
- No. 71/6 The Rb: Sr age and K/Rb ratios of samples from St. Austell Granite, Cornwall. By R. R. Harding and J. R. Hawkes. Price 15p.
- No. 71/7 Hydrogeochemistry of groundwaters in the Derbyshire Dome with special reference to trace constituents. By W. M. Edmunds. Price 45p.
- No. 71/8 The structural and stratigraphical geology of a portion of the eastern English Channel. By R. G. Dingwall. Price 35p.
- No. 71/9 A palynological investigation of the Dalradian rocks of Scotland. By C. Downie, T. R. Lister, A. L. Harris and D. J. Fettes. Price 25p.
- No. 71/10 Scottish mica-schist as a possible source of ground mica. By A. L. Harris and D. C. Turner. Price 15p.
- No. 71/11 Geological results of the Channel Tunnel site investigation 1964-65. By J. P. Destombes and E. R. Shephard-Thorn. Price 40p.
- No. 71/12 Calcium montmorillonite (fuller's earth) in the Lower Greensand of the Fernham area, Berkshire. By E. G. Poole, B. Kelk, J. A. Bain and D. J. Morgan. Price 50p.
- No. 71/13 A pilot project on the storage and retrieval by computer of geological information from cored boreholes in central Scotland. By T. N. Gover, W. A. Read and A. G. Rowson. Price 30p.
- No. 71/14 A quantitative comparison, using cross-association, of vertical sections of Namurian (E₁) paralic sediments in the Kincardine Basin, Scotland. By W. A. Read and M. J. Sackin. Price 25p.
- No. 71/15 Data banking of drift borehole records for the Edinburgh area. By D. W. Rhind and J. B. Sissons. Price 25p.
- No. 71/16 Geological investigations with a manned submersible off the west coast of Scotland 1969-1970. By R. A. Eden, D. A. Arduis, P. E. Binns, R. McQuillin and J. B. Wilson. Price 45p.
- No. 71/17 The Permian evaporites of the Langwathby Borehole, Cumberland. By R. S. Arthurton. Price 30p.
- No. 71/18 The Llanbedr (Mochras Farm) Borehole. Edited by A. W. Woodland. Price £1.50.
- No. 71/19 Irish Sea investigations 1969-70. By J. E. Wright, J. H. Hull, R. McQuillin and Susan E. Arnold. Price 45p.
- No. 71/20 The sand and gravel resources of the country south-east of Norwich, Norfolk: Description of 1:25 000 resource sheet TG 20. By E. F. P. Nickless. Price £1.15.
- No. 72/1 A description of the geology of the Hunterston Peninsula, Ayrshire. By A. Davies. Price 15p.
- No. 72/2 The Pleistocene history of the Barnstaple area. By E. A. Edmonds. Price 15p.
- No. 72/3 Intra-Liassic structures in the Severn Basin area. By A. Whittaker. Price 15p.
- No. 72/4 An interglacial deposit near Austerfield, southern Yorkshire. By G. D. Gaunt, G. R. Cooper, P. J. Osborne and J. W. Franks. Price 35p.
- No. 72/5 Diatomaceous deposits in Snowdonia. By D. Thomas. Price 25p.
- No. 72/6 The sand and gravel resources of the country around Witham, Essex: Description of 1:25 000 resource sheet TL 81. By H. J. E. Haggard. Price £1.20.
- No. 72/7 The reservoir principle of mass movement. By B. Denness. Price 30p.
- No. 72/8 The use and resources of moulding sand in Northern Ireland. By R. A. Old. Price 30p.

- No. 72/9 The sand and gravel resources of the area south and west of Woodbridge, Suffolk: Description of 1 : 25 000 resource sheet TM 24. By R. Allender and S. E. Hollyer. Price £1.70.
- No. 72/10 IGS marine drilling with m.v. *Whitethorn* in Scottish waters 1970-71. By J. A. Chesher, C. E. Deegan, D. A. Arduis, P. E. Binns and N. G. T. Fannin. Price 40p.
- No. 73/1 The sand and gravel resources of the country around Maldon, Essex: Description of 1 : 25 000 resource sheet TL 80. By J. D. Ambrose. Price £1.20.
- No. 73/2 Geological investigations with a manned submersible in the Irish Sea and off western Scotland 1971. By R. A. Eden, C. E. Deegan, G. H. Rhys, J. E. Wright and M. R. Dobson. Price 50p.
- No. 73/3 Ordovician ash-flow tuffs in eastern Snowdonia. By M. F. Howells, B. E. Leveridge and C. D. R. Evans. Price 55p.
- No. 73/4 The sand and gravel resources of the country around Hethersett, Norfolk: Description of 1 : 25 000 resource sheet TG 10. By E. F. P. Nickless. Price £1.60.
- No. 73/5 The sand and gravel resources of the country around Terling, Essex: Description of 1 : 25 000 resource sheet TL 71. By C. H. Eaton. Price £1.20.
- No. 73/6 Computer mapping of drift lithologies from borehole records. By D. W. Rhind. Price 45p.
- No. 73/7 The mode of intrusion of Cornish elvans. By A. J. J. Goode. Price 30p.
- No. 73/8 The sand and gravel resources of the country around Layer Breton and Tolleshunt D'Arcy, Essex: Description of 1 : 25 000 resource sheet TL 91 and part of TL 90. By J. D. Ambrose. Price £1.30.
- No. 73/9 The superficial deposits of the Firth of Clyde and its sea lochs. By C. E. Deegan, R. Kirby, I. Rae and R. Floyd. Price 95p.
- No. 73/10 The petrology of volcanic rocks from the Small Isles of Inverness-shire. By W. I. Ridley. Price 80p.
- No. 73/11 The geology of the south Irish Sea. By M. R. Dobson, W. E. Evans and R. Whittington. Price 75p.
- No. 73/12 The geology of Peterborough. By A. Horton, R. D. Lake, G. Bisson and B. C. Coppack. Price £2.25.
- No. 73/13 The sand and gravel resources of the country around Shotley and Felixstowe, Suffolk: Description of 1 : 25 000 resource sheet TM 23. By R. Allender and S. E. Hollyer. Price £1.60.
- No. 73/14 The geology of the Sea of the Hebrides. By P. E. Binns, R. McQuillan and N. Kenolty. Price £1.20.
- No. 73/15 The sand and gravel resources of the country around Attlebridge, Norfolk: Description of 1 : 25 000 resource sheet TG 11. By E. F. P. Nickless. Price £1.85.
- No. 73/16 Deposits of gypsum at Hurworth Place, Darlington. By D. B. Smith and P. J. Moore. Price 20p.
- No. 73/17 A new look at river capture and at the denudation history of the Weald. By B. C. Worssam. Price 30p.
- No. 73/18 A computer system for storage and retrieval of hydrogeological data from well records. By Betty I. Harvey. Price 50p.
- No. 74/1 Analysis of geological data using Rokdoc, a Fortran IV package for the IBM 360/65 computer. By T. V. Loudon. Price £1.40.
- No. 74/2 The sedimentary sequence of the Wealden beds in boreholes near Cuckfield, Sussex. By R. D. Lake and R. G. Thurrell. Price 75p.
- No. 74/3 The Black Ven landslip, Charmouth, Dorset. An example of the effect of a secondary reservoir of groundwater in an unstable area. By B. W. Conway. Price 65p.
- No. 74/4 Basal Purbeck evaporites of the Fairlight Borehole, Sussex. By D. W. Holliday and E. R. Shephard-Thorn. Price 40p.
- No. 74/5 The Gaborone Granite, Kanye Volcanics and Ventersdorp Plantation Porphyry, Botswana; geochronology and review. By R. R. Harding, R. N. Crockett and N. J. Snelling. Price 50p.
- No. 74/6 The sand and gravel resources of the country west of Colchester, Essex. By J. D. Ambrose. Price £1.45.
- No. 74/7 IGS Boreholes 1973. Price 55p.
- No. 74/8 A proposed standard lithostratigraphic nomenclature for the southern North Sea and an outline structural nomenclature for the whole of the (UK) North Sea. Compiled by G. H. Rhys. Price £1.45.
- No. 74/9 The sand and gravel resources of the country around Tattingstone, Suffolk: Description of 1 : 25 000 resource sheet TM 13. By S. E. Hollyer. Price £1.95.
- No. 74/10 Infiltration studies on the Lower Greensand outcrop near Liss, Hampshire. By R. Kitching. Price 45p.
- No. 74/11 The sequence of Pleistocene deposits proved during the construction of the Birmingham motorways. By A. Horton. Price 40p.
- No. 74/12 Preliminary report on seismic reflection surveys in sea areas around Scotland, 1969-1973. By R. McQuillan and M. Bacon. Price 35p.
- No. 74/13 Classification of the Carboniferous rocks of South-west England. By E. A. Edmonds. Price 40p.

Government publications can be bought from the Government Bookshops in London (post orders to P.O. Box 569, SE1) Edinburgh, Cardiff, Belfast, Manchester, Birmingham, Bristol or through booksellers. Postage is not included in the prices given.

The full range of Institute publications is displayed and sold at the Institute's Bookshop.

INSTITUTE OF GEOLOGICAL SCIENCES
 MINERAL ASSESSMENT UNIT
THE SAND & GRAVEL RESOURCES OF THE GERRARDS CROSS AREA
 (Including sheet SU98 and parts of sheets SU99, TQ08 and TQ09)
 Scale 1:25 000 or about 2½ Inches to 1 Mile

ORDNANCE SURVEY
 SHEET SU98 & PARTS OF SU99 & TQ08/09
 PROVISIONAL EDITION

The map should be read in conjunction with the accompanying Report which contains details of the assessment of resources.

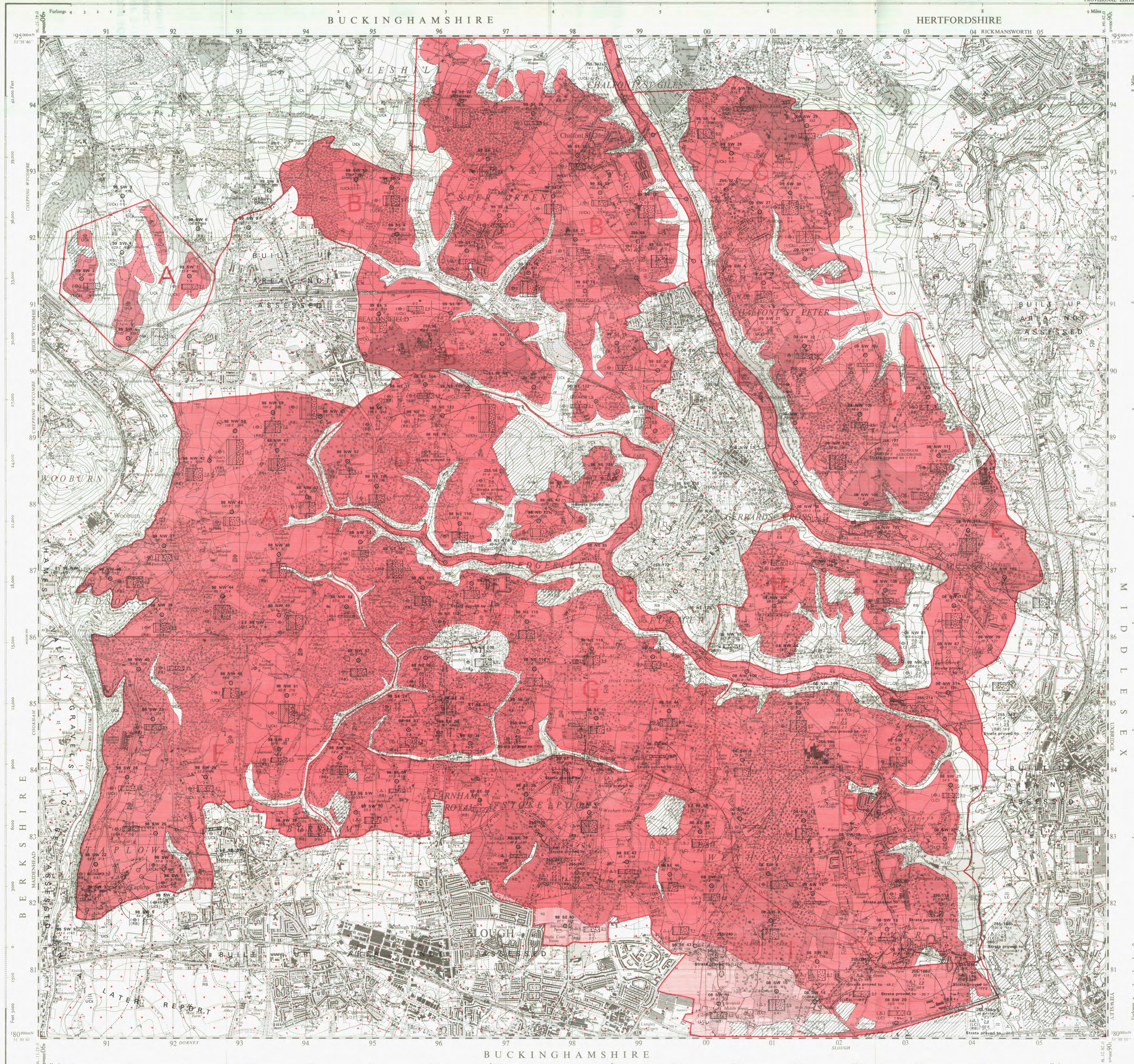
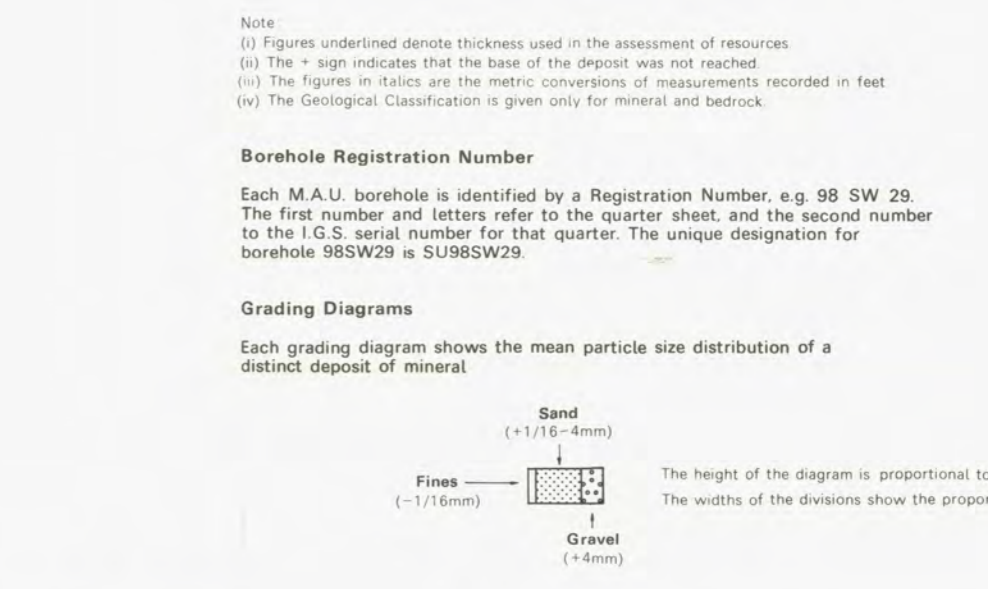
12

EXPLANATION OF SYMBOLS AND ABBREVIATIONS

- DRIFT**
- A-5 Alluvium — mainly sand and gravel
 - DV-1 Dry Valley and Nailbourne Deposits — mainly sand and gravel
 - RT-4 River Terrace Deposits, undifferentiated — mainly sand and gravel
 - BT-1 Boy's Hill Terrace
 - TT-1 Taplow Terrace
 - FP-1 Flood Plain Terrace
 - RB-2 River Brickearth — silty clay
 - CF-1 Clay with flints
 - PC-1 Pebbly Clay and Sand
 - CS-10 Glacial Sand and Gravel (including undifferentiated Head) — sand and gravel, clayey and silty in parts
- SOLID**
- LC London Clay — stiff bluish grey clay
 - RB Reading Beds — variegated clay, sand, locally with pebbles, at base
 - UCA Upper Chalk — soft white chalk containing black nodular flints with a white patina
- BOUNDARY LINES**
- Geological boundary, Drift
 - Geological boundary, Solid
 - Fault at surface, crossbar indicates downthrow side
 - Resource Block Boundary
- Broken lines denote uncertainty
- Worked out opencast sand and gravel areas: WO-2
- BOREHOLE DATA**
- SITE LOCATIONS**
- Mineral Assessment Unit (M.A.U.) Boreholes
 - Other Boreholes
- M. A. U. BOREHOLES**
- Borehole Registration Number: 98 SE 52
 Borehole site: (1) Surface level in metres and feet above O.D. (Ordnance Datum)
 (2) Overburden
 Grading Diagram: (L.S.) 0.5 (Mineral (sand and gravel))
 Geological Classification: (L.S.) 0.5 (Mineral (sand and gravel))
 (UCA) 0.5 (Water Bedrock)
 Thickness in metres
- Note:
 (1) Figures underlined denote thickness used in the assessment of resources.
 (2) The 'u' sign indicates that the base of the deposit was not reached.
 (3) The figures in circles are the mean percentages of measurements recorded in feet and the Geological Classification is given only for mineral and bedrock.
- Borehole Registration Number
 Each M.A.U. borehole is identified by a Registration Number, e.g. 98 SW 20. The first number and letters refer to the quarter sheet, and the second number to the U.C.S. serial number for that quarter. The unique designation for borehole 98SW20 is SU98W20.
- Grading Diagrams
 Each grading diagram shows the mean particle size distribution of a distinct deposit of mineral.
- Sand (+150-600µ)
 Fines (-150µ) 1
 Gravel (1-600µ) 4
 The height of the diagram is proportional to the mineral thickness. The widths of the divisions show the proportions of Fines, Sand and Gravel.

- OTHER BOREHOLES**
- The layout of information is the same as for M.A.U. boreholes, although data available may not be as comprehensive. They are registered in the same series, except for records in the Hydrogeological Department, for example 255 70 (see Hydrogeological Department borehole 70 on New Series One-Inch Geological Sheet 255. The first depth of deep boreholes is quoted in metres above or below O.D.
- EXPOSURE RECORDS**
- Information from the inspection of exposures is shown in the same way as for boreholes, but they are located by an asterisk, thus * Reference number and details of thickness are shown.

- CATEGORIES OF DEPOSITS**
- Exposed sand and gravel, as mapped CAT-E3
 - Continuous or almost continuous spreads of sand and gravel beneath overburden CAT-C1
 - Sand and gravel not assessed (at surface and below overburden) CAT-N1
 - Sand and gravel absent CAT-A3
- Where appropriate on other sheets a fifth category, Discontinuous spreads of sand and gravel beneath overburden, is recognised.
- RESOURCE BLOCKS**
- For the purpose of assessment the mineral is divided into Resource Blocks (see Report). Each is designated by a letter.
- Detailed records may be consulted, on application to the Director, at the appropriate office of the Institute of Geological Sciences.



The representation on this map of a Road, Track, or Footpath, is no evidence of the existence of a right of way.
 Geological data from this map are used by the Ordnance Survey by A. H. Jones, R. L. Shotton, A. H. Noble and C. N. Brumhead in 1952-20.
 Revised by H. C. Gifford in 1971, worked out areas of Colne Valley by E. J. Roper in 1972. S. C. A. Thomas, General Geologist.
 Revised by H. C. Gifford in 1973 and 1975.
 Sand and Gravel Survey by H. C. Gifford, J. A. Gray, A. H. Clayton, P. Robson and C. E. Coker in 1975-77.
 R. G. Thurler, Head, Mineral Assessment Unit.
 1:25,000 Sand and Gravel Resource Sheet published 1974
 by Kenneth Davidson, G.S.U., F.R.S., Director, Institute of Geological Sciences incorporating the Geological Survey of Great Britain,
 the Museum of Practical Geology and Ordnance Geological Survey.
 205074

Data quoted for an individual borehole refer strictly to that site; reliable conclusions cannot be drawn about the thickness and grading elsewhere in the deposit, particularly in material as variable as sand and gravel. However, a correlation of the volume and mean grading of the mineral in a block, in each Resource Block is given in the Report.