

Land off Basingstoke Road, Spencers Wood

Mineral Resource Assessment

Richborough

16 April 2025 - FINAL

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1.0 Introduction

1.1 Background

- 1.1.1 This report has been prepared by the Minerals Department of Fisher German LLP following instructions from Richborough (the Client) to produce a desktop-based Mineral Resource Assessment (MRA) for Land off Basingstoke Road, Spencers Wood (the site).
- 1.1.2 The indicative site centre location is shown in **Figure 1**. An Application Boundary Plan showing the current site layout is included within **Appendix 1**.

Figure 1: Indicative site centre location



1.2 Proposed Development

- 1.2.1 Richborough proposes to develop the site for a mixed use residential and employment development in Spencers Wood, Wokingham. The planning application comprises:
- 1.2.2 *"Outline planning permission is sought with all matters reserved for future determination, save for the means of access via Basingstoke Road, for: up to 420 dwellings (Use Class C3), an 80 bed care home (Use Class C2), 1ha of employment land (Use Class E(g), primary school (Use Class F1), local centre (Use Classes E(a), (b), (c), (f)), GP Surgery (Use Class E(e)), sports pitch and changing facility, public open space, SANG provision and associated infrastructure."*
- 1.2.3 A Development Framework Plan is included in **Appendix 1**.

1.3 Assessment Aims

- 1.3.1 The aim of this Minerals Assessment is to consider the possible impacts the proposed development may have on potential mineral resources beneath the site. The assessment will support an Outline Planning Application being made by Richborough.
- 1.3.2 This report has been prepared in cognisance of the following guidance documents:
- Mineral Safeguarding in England: Good Practice advice, British Geological Survey – Minerals and Waste Programme, Open Report OR/11/046, 2011.
 - Mineral Safeguarding Practice Guidance: The Mineral Products Association and The Planning Officers' Society, April 2019, Version 1.4.

1.4 Site Description

- 1.4.1 The site description and location details are summarised in **Table 1**.

Table 1: Site description

Detail	Comment
Approximate site area	39 hectares
National Grid reference (OS GB)	E: 471760 N: 166205 (Approximate centre)
Site location	The site is located on the southern periphery of Spencers Wood village and is approximately 3 km south of the outskirts of Reading, c.14 km northeast of Basingstoke, and c.13 km west of Bracknell. The site is approximately 1 km west of the A33 and 2 km south of the M4 Junction 11.
Current land use and description	Based on satellite imagery, the site predominantly comprises agricultural fields and several drainage ditches cross the site. The site boundaries consist of hedgerows, fencing and isolated trees.
Surrounding land use	Based on satellite imagery, the site borders residential properties to the north, and west. The site borders agricultural land / possible equine land use to the east and agricultural land to the south. Off-site approximately 300 m south is a solar farm. To the south and southwest the site borders Basingstoke Road (B3349) beyond which is commercial / industrial land use.
Sensitive land use	The River Loddon is located approximately 500m to the southeast which flows from southwest to northeast. <i>Stanford End Mill and River Loddon Site of Special Scientific Interest (SSSI)</i> is located approximately 380 m off-site to the southeast at its closest point. The site is within the associated SSSI impact risk zone. <i>Thames Basin Heaths Special Protection Area (SPA) and Bramshill SSSI</i> is located approximately 3.6 km off-site to the southeast at its closest point. The site is within the associated SSSI impact risk zone. Swallowfield Park is a Grade II listed park and garden which is located immediately south of the River Loddon. A number of listed buildings are located within Spencers Wood with the closest being Sussex Lodge which is a Grade II listed building located approximately

	195 m east. Sheepbridge Court is a Grade II listed building located approximately 275 m southeast at the sites closest point.
Relevant Planning Review	A review of the Wokingham Borough Council Planning Portal highlights full planning permission (application reference 232653) which was approved on 26 March 2025 for a 25 hectare solar farm immediately off-site to the south. The permission is for a temporary period of 40 years. The solar farm is shown on the Development Framework Plan included in Appendix 1 .
Site topography	Site topography decreases from the north and west (c. 57 m Above Ordnance Datum (AOD)) to the south and east c. 48 mAOD. Topography generally reduces towards the River Loddon.

1.5 Confidentiality Statement

- 1.5.1 This report is addressed to and may be relied upon by Richborough Estates Limited. It may not be relied upon or transferred to any other parties without the express written agreement of Fisher German LLP. No responsibility will be accepted where this report is used, either in its entirety or in part, by any other party.

2.0 Mineral planning

2.1 National Planning Policy

2.1.1 The National Planning Policy Framework (NPPF) sets out a framework for facilitating the sustainable use of minerals, including their safeguarding. Relevant extracts of the NPPF are detailed below¹:

2.1.2 Paragraph 223:

c) safeguard mineral resources by defining Mineral Safeguarding Areas and Mineral Consultation Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked);

2.1.3 Paragraph 226:

Minerals planning authorities should plan for a steady and adequate supply of aggregates by:

f) maintaining landbanks of at least 7 years for sand and gravel and at least 10 years for crushed rock, whilst ensuring that the capacity of operations to supply a wide range of materials is not compromised.

2.1.4 Paragraph 227:

Minerals planning authorities should plan for a steady and adequate supply of industrial minerals by:

c) maintaining a stock of permitted reserves to support the level of actual and proposed investment required for new or existing plant, and the maintenance and improvement of existing plant and equipment. These reserves should be at least 10 years for individual silica sand sites; at least 15 years for cement primary (chalk and limestone) and secondary (clay and shale) materials to maintain an existing plant, and for silica sand sites where significant new capital is required; and at least 25 years for brick clay, and for cement primary and secondary materials to support a new kiln.

2.2 Local Planning Policy

2.2.1 Wokingham Borough Council, part of Central and Eastern Berkshire, is the Mineral Planning Authority for the site.

2.2.2 The current Central and Eastern Berkshire Joint Minerals & Waste Plan up to 31 December 2036 (JMWP) was adopted on 19 January 2023. *"The Central and Eastern Berkshire - Joint Minerals & Waste Plan (JMWP) forms the land use planning strategy for minerals and waste development within the administrative area covered by the Central & Eastern Berkshire Authorities which are:*

- *Bracknell Forest Council;*
- *Reading Borough Council;*
- *The Royal Borough of Windsor and Maidenhead; and*
- *Wokingham Borough Council.*

2.2.3 *Together with the individually adopted Local Plans for each Authority and any other adopted or made Plans, the JMWP will form the development plan for the area. The Plan guides the level of minerals and waste development needed within Central and Eastern Berkshire and identifies where development should go. Proposals for minerals and waste developments will be considered against the policies contained in*

¹ Ministry of Housing Communities & Local Government, National Planning Policy Framework (NPPF), December 2024.

the Plan. The determination of non-minerals and waste applications by those Authorities (in terms of other matters such as housing) will also need to take the JMWP into consideration."

- 2.2.4 The eastern area of the site is identified within the Central and Eastern Berkshire JMWP as being within a Mineral Safeguarding Area (MSA) for sand and gravel and also within a Sand and Gravel Area of Search (see **Appendix 2**).
- 2.2.5 The most recent Local Aggregate Assessment for Central and Eastern Berkshire (published December 2023) states at that time that the landbank for sand and gravel was 9.42 years based on 2022 figures. A minimum of 7 years is required in line with national planning policy.

2.3 Mineral Safeguarding Areas

- 2.3.1 Mineral resources are finite materials and can only be worked where they exist naturally. Mineral planning authorities are required to define Mineral Safeguarding Areas in minerals plans so that resources are not sterilised by non-mineral development, although there is no presumption that the resources will be worked.

2.3.2 Under Policy M2: Safeguarding sand and gravel resources

- 2.3.3 *"1. Sharp sand and gravel and soft sand resources of economic importance, and around active mineral workings, are safeguarded against unnecessary sterilisation by non-minerals development.*

- 2.3.4 *2. Safeguarded mineral resources are defined by the Minerals Safeguarding Area illustrated on the Policies Map.*

- 2.3.5 *3. Non-minerals development in the Minerals Safeguarding Area may be permitted if it can be demonstrated through the preparation of a Mineral Resources Assessment, that the option of prior extraction has been fully considered as part of an application, and:*

a. Prior extraction, where practical and environmentally feasible, is maximised, taking into account site constraints and phasing of development; or

b. It can be demonstrated that the mineral resources will not be permanently sterilised; or

c. It would be inappropriate to extract mineral resources in that location, with regard to other policies in the wider Local Plans."

2.3.6 Under Policy M4: Locations for sand and gravel extraction

- 2.3.7 *"A steady and adequate supply of locally extracted sand and gravel will be provided by:*

- 2.3.8 *1. The extraction of remaining reserves at the following permitted sites:*

a. Horton Brook Quarry, Horton

b. Riding Court Farm, Datchet

c. Sheephouse Farm, Maidenhead

d. Poyle Quarry, Horton

e. Water Oakley, Holyport

- 2.3.9 *2. Extensions to the following existing sites, provided the proposals address the relevant development considerations outlined in Appendix A:*

a. Horton Brook & Poyle Quarry, Horton (MA1) – 0.15 Mt

b. Poyle Quarry, Horton (MA 2) – 0.25 Mt

2.3.10 3. *Proposals for new sites not outlined in Policy M4 (1 and 2) will be supported, in appropriate locations which comply with all relevant policies in the Plan, where:*

a. They are situated within the Area of Search (as shown on the Policies Map); and

b. They are needed to maintain the landbank; and/or

c. Maximise opportunities of existing infrastructure and available resources; or

d. At least one of the following applies:

i. The site contains soft sand;

ii. The resources would otherwise be sterilised; or

iii. The proposal is for a specific local requirement."

2.3.11 Planning applications for non-mineral development within a Mineral Safeguarding Areas should be accompanied by a Mineral Resource Assessment of the effect of the proposed development on the mineral resource beneath or adjacent to it.

3.0 Mineral Resource

3.1 Data Sources

- 3.1.1 Relevant information sources have been reviewed in assessing the anticipated ground conditions, and include:
- British Geological Survey (BGS) GeoIndex Onshore
 - BGS scanned historical exploratory hole records
 - Ordnance Survey historical mapping records
 - BGS published geological map Sheet 268, Reading, scale 1:50,000, Solid and Drift (2000).

3.2 Type of mineral on site – Published BGS Mapping

- 3.2.1 A distinction is made between superficial deposits and bedrock. Superficial deposits, consisting of clays, silts, sands and gravels are the youngest geological deposits, found at or near to the surface. Bedrock deposits are older and are found beneath superficial deposits, should they exist.
- 3.2.2 The geological mapping indicates that the site and surrounding area are underlain by the following materials as described by the BGS.

Superficial Deposits

- 3.2.3 **Appendix 3** presents the 1:50,000 scale superficial deposits for the site and surrounding area. The majority of the site is mapped to be absent of superficial deposits. There are two deposits mapped within the east and south as detailed in **Table 2**. Both superficial deposits were deposited during the Quaternary geological time period.

Table 2: Superficial deposits within the site boundary

Location on site	Formation/Member	BGS Description
Eastern end	River Terrace Deposits, 3 – Sand and Gravel	<i>"Sand and gravel with subsidiary clay and silt."</i>
Southern tip	River Terrace Deposits 4 – Sand and Gravel	<i>"Sand and gravel, locally with lenses of silt, clay or peat."</i>

- 3.2.4 River Terrace Deposits 3 also extend off-site to the east and southeast. River Terrace Deposit numbers are mapped according to their elevation relative to the current river level.

Bedrock Geology

- 3.2.5 **Appendix 4** presents the 1:50,000 scale bedrock deposits for the site and surrounding area.
- 3.2.6 The site and surrounding area is entirely underlain by the **London Clay Formation**. This is referred to by the BGS as:
- 3.2.7 *"...silty to very silty clay, clayey silt and sometimes silt, with some layers of sandy clay. It commonly contains thin courses of carbonate concretions ('cementstone nodules') and disseminated pyrite..."*

3.3 Intrusive mineral resource data

BGS historical exploratory hole records

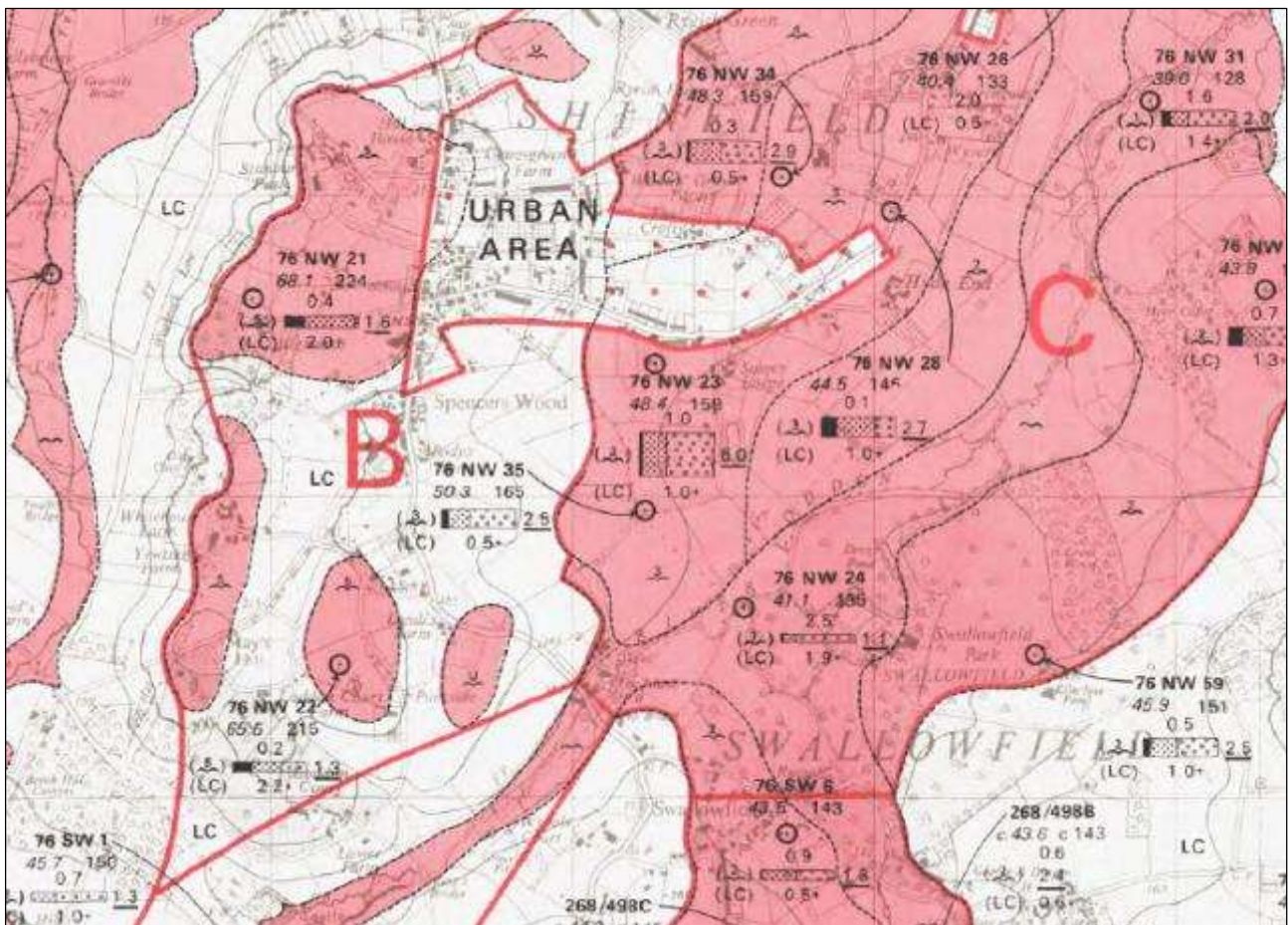
- 3.3.1 There are no historical exploratory hole records within the site boundary.
- 3.3.2 BGS historical exploratory hole records SU76NW162, SU76NW165 and SU76NW166 are water well records which present limited or illegible geological information.
- 3.3.3 A summary of three relevant BGS historical borehole logs in relatively close proximity to the site are summarised in within **Table 3**. The borehole locations and borehole logs are presented in **Appendix 5**.

Table 3: Historical BGS Borehole Log Summary

Borehole ID (Approximate distance and direction from site)	Relevance to site	Geological Strata Summary	Grading Information	Groundwater Observations
SU76NW23 (60 m northeast)	Within eastern River Terrace Deposits, 3 block – Sand and Gravel	0.0 to 1.0: Made Ground - Clay, sand, gravel and brick rubble 1.0 to 7.0: River Terrace Deposits (3rd Terrace) Gravel: Fine to coarse, angular to subrounded with occasional rounded flint Sand: mainly medium to coarse quartz and flint 7.0 to 8.0*: London Clay: Clay, firm, grey	Mean gradings data for RTD (1.0 to 7.0m): 3% fines, 33% sand, 64% gravel	Water stuck at 1.0 m bgl
SU76NW35 (200 m south)	Within eastern River Terrace Deposits, 3 block – Sand and Gravel	0.0 to 2.5: River Terrace Deposits (3rd Terrace) - Gravel: fine to coarse, angular to rounded flint Sand: fine to coarse, quartz and flint 2.5 to 2.8: London Clay – Clay, firm, brown, silty 2.8 to 3.0*: London Clay – Clay, firm, grey, silty	Mean gradings data for RTD (0.0 to 2.4m): 8% fines, 30% sand, 62% gravel	Water stuck at 0.5 m bgl
SU76NW22 (380 m southwest)	Within isolated River Terrace Deposit resource block to the southwest	0.0 to 0.2: Soil 0.2 to 1.8: River Terrace Deposits (5 th Terrace) - Very clayey sandy gravel with sandy clay band between 0.8m and 1.3m. Gravel: fine to coarse, angular to subrounded with occasional rounded flint. Sand: fine to coarse quartz and flint 1.8 to 2.2*: London Clay – Clay, brown silty with some grey and orange mottling	Mean gradings data for RTD (excluding clay band): 26% fines, 40% sand, 34% gravel	Water not struck

- 3.3.4 Based on the historical records obtained, the River Terrace Deposits (3) at the eastern end of the site are shown to range in thickness between 2.5 and 6.0 m thick with favourable gradings data (i.e. low fines content). Where observed, the London Clay Formation is shown to underly the River Terrace Deposits, 3 to the maximum depth of boreholes.
- 3.3.5 Historical record SU76NW22 indicates River Terrace Deposits (5) to be present as a relatively thin band (1.6m thick) of clayey sands and gravels. The gradings data at this location indicate an average fines content of 26% which is unlikely to represent an economic mineral resource. A maximum fines content of 10 to 12% is typical for determining economic viability, noting that washing and processing becomes too intensive to process in excess of this.
- 3.3.6 The historical borehole records presented within **Table 3** are sourced from Mineral Assessment Report 48, Loddon Valley² which details that 'the River Terrace Deposits of the Loddon Valley consist of almost entirely of flint gravels and quartz sands'. An extract of the Mineral Assessment Report is included as **Figure 2** with the full drawing included as **Appendix 6**.

Figure 2: Mineral Assessment Report 48, Sand and Gravel Resource Sheet Extract



- 3.3.7 It is considered that the geological mapping and sheets presented in Mineral Assessment Report 48 are relatively accurate given the level of assessment, data assimilation and interpretation which will have been undertaken at that time. The mineral extent mapped in proximity to Spencers Wood in the mineral assessment report matches BGS publicly available 1:10,000 mapping.

² Institute of Geological Sciences, Natural Environment Research Council, Mineral Assessment Report 48, The sand and gravel resources of the Loddon Valley area, dated 1980.

3.3.8 Site specific intrusive ground investigation

3.3.9 Site specific intrusive ground investigation data is not currently available for the site.

3.4 Historical Sand and Gravel Workings

3.4.1 The closest historical sand and gravel working is Riseley Common which is located approximately 2.8 km off-site to the southeast and worked River Terrace Deposits 3 extracting from the River Whitewater valley. A large cluster of former sand and gravel workings are also located approximately 3.2 km northwest associated with workings in the Beenham Grange Gravel Member associated with the River Kennet.

3.5 Mineral quality

Superficial deposits

3.5.1 The quality of superficial deposits is dictated by the material size. The lower the content of clay, silt and fine sand, the higher the quality of the deposit. Without site specific borehole or trial pit data, it is not possible to definitively comment on their quality because geological maps only infer the geology of an area.

3.5.2 Based on geological maps, BGS descriptions and professional experience, River Terrace Deposits can typically represent a viable sand and gravel resource. Gradings data available as part of Mineral Assessment Report 48 indicates the third River Terrace Deposit at the eastern end of the site is likely to represent a viable grade of sand and gravel with respect to quality. However, the majority of the site is mapped as being absent of superficial deposits.

Bedrock Geology

3.5.3 The London Clay Formation is not typically targeted for brick manufacture but can, in some instances, be targeted as a cement raw material. Without intrusive data for the site, it is not possible to comment on its suitability, however, modern cement raw material quarries tend to cover large spatial areas and extensions to existing sites are preferred in proximity to existing cement plants.

3.5.4 It is noted that the bedrock geology underlying the site is not attributed to a Mineral Safeguarding Area.

3.5.5 Constraints to the potential extraction of the resource are detailed in **Section 4.1**.

3.6 Estimated tonnage of resource

3.6.1 In accordance with the PERC Reporting Standard (Pan European Reserves and Resources Reporting Committee, 2021) the assessment can only be an Inferred Mineral Resource.

3.6.2 An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

3.6.3 Due to the lack of intrusive site-specific data, the estimated tonnage of any sand and gravel, which could be classed as a mineral resource, is unknown, however, the majority of site is mapped as being absent of superficial deposits. The eastern end of the site is shown to be underlain by River Terrace Deposits, although this will be subject to the constraints to mineral extraction as detailed in **Section 4.1**.

3.7 Estimated economic value of mineral

- 3.7.1 Without intrusive data on the site to confirm the quality and quantity of any mineral deposit, the economic value cannot be stated.

4.0 Potential Constraints and Opportunities On Mineral Extraction

4.1 Constraints for mineral extraction

- 4.1.1 Should intrusive surveys confirm the presence of an economic grade of mineral, the standoff distances as shown in **Table 4** would typically be employed. They may, however, be subject to change following detailed planning assessment in subsequent development stages.

Table 4: Development constraints

Constraint	Value
Max overburden to mineral ratio	1:1
Standoff to external highway boundaries	30 m
Standoff to significant hedgerow	15 m or 1.5x the Root Protection Zone
Standoff to surface water body/water course	30 m
Standoff to residential dwellings	100 m

- 4.1.2 The majority of the site is mapped as being absent of superficial deposits and therefore the site is unlikely to be suitable for mineral extraction. The eastern end of the site is mapped as being underlain by River Terrace Deposits (3) which have the potential to yield an economic grade of mineral. An isolated block of River Terrace Deposits (4) is also located on the southern tip of the site although this is limited in extent and likely to contain higher fines content based on review of historical borehole logs.
- 4.1.3 Working of mineral at the eastern end of the site (either as a standalone development or for prior extraction) is not considered to be viable primarily due to standoffs required to residential dwellings which would prevent extraction across much of this area. The landscape and visual impacts of mineral extraction in proximity to existing residential properties is a further constraint.
- 4.1.4 This MRA is required to assess that the proposed non-mineral development would not unduly sterilise potential mineral resources off-site. River Terrace Deposits extend off-site to the east and southeast and therefore it is recommended that the proposals shown on the Development Framework Masterplan (Rev O, dated 21.11.2023) are maintained at the eastern end of the site, specifically the location of Grovelands Country Park (to limit off-site mineral sterilisation which could otherwise be associated with standoffs to newly built residential dwellings).
- 4.1.5 Based on the above factors, the site is not considered to be viable for commercial scale mineral extraction as a standalone quarry or for prior extraction, although incidental extraction undertaken as part of the residential development is discussed in **Section 4.2**.

4.2 Opportunities for mineral extraction

- 4.2.1 As indicated in **Section 4.1**, it is considered there is little scope for a viable mineral resource to exist beneath the site when the constraints are factored in.
- 4.2.2 Based on geological mapping, historical borehole logs, and professional experience, it is likely that the majority of the site will be absent of mineral-bearing superficial deposits, and therefore, incidental extraction for reuse during construction of the proposed development is likely to be limited.
- 4.2.3 Should intrusive surveys confirm the presence of an economic grade of mineral at the eastern end of the site, it may be possible to undertake localised incidental extraction for reuse in construction of the proposed residential development. It is recommended that the location of the proposed sustainable urban drainage solution (infiltration pond) at the eastern end of the site (as shown on the Development Framework Masterplan) is maintained as incidental extraction of underlying minerals could be reused from excavations at this location.

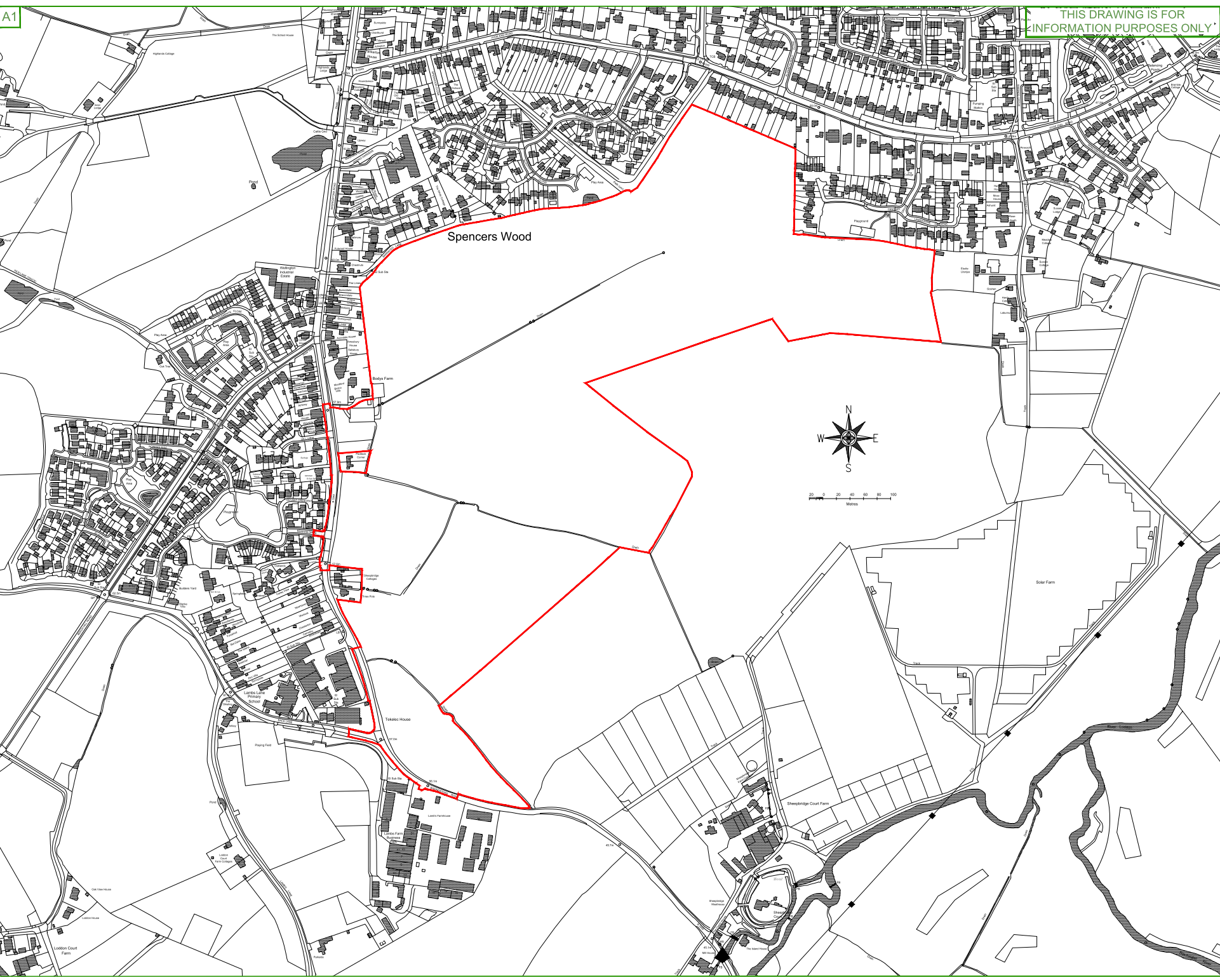
5.0 Conclusions and Recommendations

- 5.1.1 The site is being considered for non-mineral development for a mixed use residential and employment development.
- 5.1.2 The site falls within a Mineral Safeguarding Area for Sand and Gravel and also a Sand and Gravel Area of Search as identified by Wokingham Borough Council.
- 5.1.3 The majority of the site is recorded by the BGS to be absent of superficial deposits although River Terrace Deposits are recorded at the eastern end of the site. These deposits have the potential to yield an economic grade of mineral. However, the resource is not considered to be economically viable as a standalone mineral development or for prior extraction due to standoffs to existing residential properties.
- 5.1.4 Subject to confirmation of underlying geology with site-specific intrusive investigation, it is possible that incidental extraction and reuse of potential sand and gravel deposits at the eastern end of the site could be undertaken as part of the proposed residential development.
- 5.1.5 It is recommended that the proposals shown on the Development Framework Masterplan (Rev V, dated 21.11.2023) are maintained at the eastern end of the site, specifically the location of the Grovelands Country Park (to limit off-site mineral sterilisation which could otherwise be associated with standoffs to residential dwellings), and the location of the proposed sustainable urban drainage solution (infiltration pond) where incidental extraction of underlying minerals could be utilised for reuse during the proposed construction works.

Appendix 1. Current site Layout and Proposed Development Plans

THIS DRAWING IS FOR
INFORMATION PURPOSES ONLY

Notes:
Key:
APPLICATION BOUNDARY 97.02 Acres



- D. RLB updated to reflect SIM Search results. Area in key corrected to 97.02 acres. NM 21-02-25
 - C. Paddocks corner plots 1&2 removed from RLB. NM 20-02-25
 - B. Updated to include highway works. NM 16-02-25
 - A. Updated following legal report. RBH 07-12-23
- Revision:

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London
SW1Y 4JJ
Tel: 02030 111 353

Development Name: Land East of Basingstoke Road, Spencers Wood			Status
Title: Application Boundary Plan			
Drawn date: 13-02-2025	Drawn by: LG	Scale: 1/2500 @ A1	
Drawing number: R-SPWD-ABP-01			Revision: D



KEY

SITE BOUNDARY

RESIDENTIAL DEVELOPMENT

SCHOOL SITE

LOCAL CENTRE

EMPLOYMENT USES

SAND BOUNDARY

GP SURGERY

CARE HOME FACILITY

ACCESS VIA BASINGSTOKE ROAD

PRIMARY AVENUE

INDUSTRIAL ROAD

SECONDARY STREETS

TERTIARY STREETS

PRIVATE LANES

SHARED SURFACE STREET VIEWS

PROPOSED EMERGENCY

EXISTING PUBLIC RIGHTS OF WAY

ACTIVE TRAVEL ROUTES

KEY FOOTPATHS

SAND WALKING ROUTE

EXISTING VEGETATION

PROPOSED PLANTING

NEW TREE PLANTING

COMMUNITY ORCHARD

PUBLIC OPEN SPACE

MULTI-FUNCTIONAL OPEN SPACE AND PAVILION

EXCLUSION PIPELINE

AREAS OF PLAY

SUSTAINABLE DRAINAGE

PARKING

POTENTIAL HIGHWAYS UPGRADES

VESTING POINTS

POTENTIAL CONNECTIONS TO EXISTING MOVEMENT ROUTES

KEY PRINCIPLES

1. PRIMARY ACCESS VIA BASINGSTOKE ROAD;
2. PRIMARY AVENUE THROUGH DEVELOPMENT;
3. SECONDARY STREETS;
4. TERTIARY STREETS;
5. FULLY CIRCULATORY CYCLE/PEDESTRIAN ROUTES PROVIDING ACCESS TO ALL AREAS OF PUBLIC OPEN SPACE AND SURROUNDING INFRASTRUCTURE;
6. NEWLY CREATED SAND (GROVELANDS COUNTRY PARK) PROVIDING A 2.3KM FULLY CIRCULATORY PEDESTRIAN ROUTE;
7. LANDSCAPED COMMONS AND GREENS PROVIDING RECREATIONAL SPACE FOR ALL AGES;
8. COMMUNITY SPACES IN THE FORM OF MULTI-FUNCTIONAL OPEN SPACES AND A COMMUNITY ORCHARD;
9. LANDSCAPED GREENWAYS PROVIDING PUNCTUATION THROUGH DEVELOPMENT AND AREAS FOR ADDITIONAL PLANTING;
10. MAXIMUM RETENTION OF EXISTING VEGETATION;
11. POTENTIAL CYCLE/PEDESTRIAN CONNECTIONS TO EXISTING MOVEMENT ROUTES;
12. POTENTIAL HIGHWAYS IMPROVEMENT TO EXISTING HIGHWAYS TO FACILITATE CYCLE AND PEDESTRIAN MOVEMENT;
13. SITE LOW POINTS UTILISED FOR SUSTAINABLE DRAINAGE;
14. NATURALISED WILDLIFE PONDS (FALLING WITHIN SAND BOUNDARY);
15. MAXIMUM OUTWARD FACING DEVELOPMENT FOR NATURAL SURVEILLANCE;
16. VIEWING CORRIDORS PROVIDING OPPORTUNITY TO ENJOY FAR-REACHING VIEWS OVER RIVER LODDON AND LOCAL COUNTRYSIDE;

Appendix 2. Mineral Safeguarding Areas plan

- ☐ Adopted Local Plans
 - ☒ Minerals and Waste Local Plan
 - ☒ Areas of Search for Sand and Gravel
 - ☒ JCEB Proposed Allocations
 - ☒ Mineral Safeguarding Area
 - ☒ Preferred Waste Areas
 - ☒ Safeguarded Sites
 - ☐ Public Rights of Way
 - ☐ Safety Hazard Areas
 - ☐ Other, including consultees
 - ☐ Hydrology and Drainage
 - ☐ Ecology and Environment
 - ☐ Trees and Landscape
 - ☐ Heritage and Conservation
 - ☐ Article 4 Live
 - ☒ Boundaries

Central & Eastern Berkshire - Joint Minerals & Waste Plan Policies Map

Proposed Allocations

- Mineral allocation (MA)
- Transport allocation (TA)
- ▲ Waste allocation (WA)

Preferred Waste Areas



Safeguarded Sites

- Aggregate recycling
- Clinical Waste
- ▲ Composting
- End of Life Vehicle
- Green Waste/Kitchen Waste
- Household Waste Recycling Centre
- ▲ Metal Recycling
- Sharp Sand and Gravel Extraction
- ★ Sharp Sand and Gravel Extraction/Soft Sand Extraction
- Sharp Sand and Gravel Processing
- Soft Sand
- Waste Electrical and Electronic Equipment
- Wastewater Treatment Works
- Waste Transfer Station

— Navigable Rivers

— Plan Area

— Administrative Boundaries

— Inset Maps

— Area of Search for Sand and Gravel

— Mineral Safeguarding Area

— Strategic Road Network and Main A Roads

— Railway Network

— Green Belt

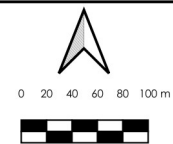
Adopted by:

Royal Borough of Windsor and Maidenhead - TBC
Bracknell Forest Council - TBC
Wokingham Borough Council - TBC
Reading Borough Council - TBC



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Appendix 3. Superficial deposits plan



Key :

Site Boundaries

Background Mapping Layers

GBR BGS 1:50k Superficial deposits

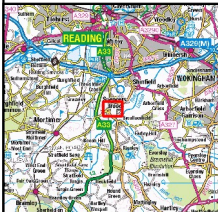
River Terrace Deposits, 3
- Sand and Gravel

River Terrace Deposits, 4
- Sand and Gravel

River Terrace Deposits, 5
- Sand and Gravel

Alluvium - Clay, Silt,
Sand and Gravel

Google Earth



Revision: A

Title:
Superficial Deposits

Client:
Richborough Estates Limited

Project:
Mineral Resource Assessment

Site:
Land east of Basingstoke
Road, Spencers Wood,
Reading, Berkshire

HC FP: 133468

Scale: 1:6,000
Date: 26/03/2025

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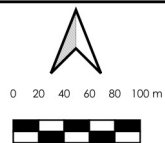


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Drawing Ref:
25-03_MRA_Spencers Wood_SD

Appendix 4. Bedrock geology map



Key :

Site Boundaries

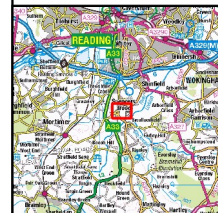
Background Mapping Layers

GBR BGS 1:50k Bedrock

Geology

London Clay Formation
– Clay, Silt and Sand

Google Earth



Revision: A

Title:
Bedrock Geology

Client:
Richborough Estates Limited

Project:
Mineral Resource Assessment

Site:
Land east of Basingstoke
Road, Spencers Wood,
Reading, Berkshire

HC FP: 133468

Scale: 1:6,000
Date: 26/03/2025

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Appendix 5. BGS exploratory hole data

Spencers Wood



British
Geological
Survey



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GeoIndex Onshore Data Sources: NERC, Natural England, English Heritage and Ordnance Survey

Map Key

Borehole records

-  Unknown Length
-  Confidential
-  0 - 10m
-  10 - 30m
-  30m+



SU 76 NW 22 7122 6545 Nr. Loddon Court Farm, Swallowfield

Surface level (+ 65.5 m) + 215 ft
Water not struck
Shell and Auger 152 mm (6 in) diameter
June 1974

Block B

Overburden 0.2 m
Mineral 1.3 m
Bedrock 2.2 m +

LOG

Geological classification	Lithology	Thickness m	Depth m
	Soil	0.2	0.2
River Terrace Deposit (5th Terrace)	'Very clayey' sandy gravel with sandy clay band between 0.8 m and 1.3 m Gravel: fine to coarse, angular to subrounded with occasional rounded flint Sand: fine to coarse quartz and flint	1.8	2.0
London Clay	Clay, brown silty with some grey and orange mottling	2.2 +	4.2

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages					
Fines	Sand	Gravel		Fines	Sand			Gravel	
					- 1/16	+ 1/16 - 1/4	+ 1/4 - 1/2	+ 1/2 - 3/4	+ 3/4 - 1
26	40	34	0.2-0.8	30	22	15	4	12	17
			0.8-1.3						
			1.3-2.0	23	7	22	9	20	19
			Mean	26	14	18	8	16	18



SU 76 NW 23 7229 6645 Nr. Sussex Lodge, Shinfield

Surface level (+48.4 m) +159 ft
Water struck at +47.4 m
Shell and Auger 152 mm (6 in) diameter
June 1974

Block C

Overburden 1.0 m
Mineral 6.0 m
Bedrock 1.0 m +

LOG

Geological classification	Lithology	Thickness m	Depth m
Made Ground	Clay, sand, gravel and brick rubble	1.0	1.0
River Terrace Deposits (3rd Terrace)	Gravel Gravel: fine to coarse, angular to subrounded with occasional rounded flint Sand: mainly medium to coarse quartz and flint	6.0	7.0
London Clay	Clay, firm, grey	1.0+	8.0

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages					
Fines	Sand	Gravel		Fines	Sand			Gravel	
				- 1/16	+ 1/16 - 1/4	+ 1/4 - 1/2	+ 1/2 - 3/4	+ 3/4 - 16	+ 16
3	33	64	1.0-2.0	4	8	26	9	35	18
			2.0-3.0	5	5	26	9	37	18
			3.0-4.0	2	4	14	4	38	38
			4.0-5.0	1	2	17	13	33	34
			5.0-6.0	2	4	17	9	35	33
			6.0-7.0	2	3	18	12	44	21
			Mean	3	4	20	9	37	27

SU 76 NW 35 7224 6595 S.W. of Sussex Lodge, Shinfield

Block C

Surface level (+50.3 m) +165 ft
Water struck at +49.8 m
Shell and Auger 152 mm (6 in) diameter
December 1974

Mineral 2.5 m
Bedrock 0.5 m +

LOG

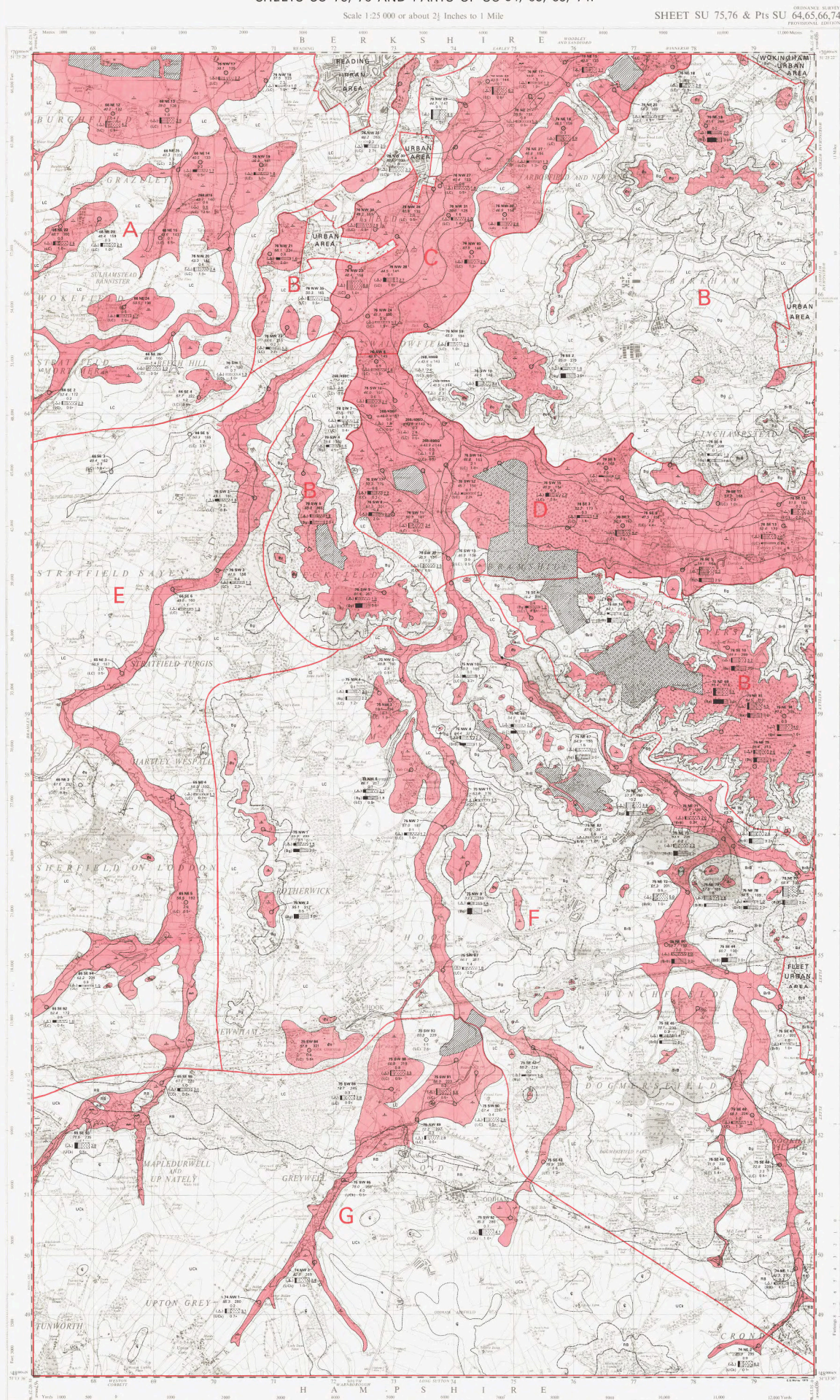
Geological classification	Lithology	Thickness m	Depth m
River Terrace Deposits (3rd Terrace)	Gravel Gravel: fine to coarse, angular to rounded flint Sand: fine to coarse, quartz and flint	2.5	2.5
London Clay	Clay, firm, brown, silty Clay, firm, grey, silty	0.3 0.2 +	2.8 3.0

GRADING

Mean for deposit percentages			Depth below surface (m)	Bulk samples percentages					
Fines	Sand	Gravel		Fines	Sand		Gravel		
				- 1/16	+ 1/16 - 1/4	+ 1/4 - 1	+ 1 - 4	+ 4 - 16	+ 16
8	30	62	0.0-0.5	11	15	9	8	31	26
			0.5-1.5	9	7	18	11	38	17
			1.5-2.5	4	3	8	14	47	24
			Mean	8	6	13	11	40	22

Appendix 6. Mineral Assessment Report 48, Loddon Valley Sheet Map

48



EXPLANATION OF SYMBOLS AND ABBREVIATIONS

LUTP-8		
Ashcon:	clay chips and silts of fluvial origin, with scattered pebbles and occasional thin peat beds.	
B&B	Silt/claystone - orange-brown, clayey and silty clays overlying River Terrace Deposits.	8-9
Dw	Downwash Gravel (Head Gravel) - thin and patchy sands and gravels of variable composition, derived by sedimentation from adjacent benches and drift deposits.	
12A	River Terrace Deposits (Pebble Gravels)	RT-12
10D	River Terrace Deposits (Pebble Gravels) - fluviatile sands and gravels composed mainly fine sand <0.6mm, silt, coarse sands, sandstones	RT-13
E	River Terrace Deposits (Silt/Hematite) - thin and patchy sands and gravels of limited extent and uncertain origin.	
F	Clay with fines - red-brown, silty clays with nodular lenses and angular flint fragments.	

SOLID	
Ba	Barton Bed - silty, fine quartz sands, yellow and pale grey, with glauconite at some levels.
B-B	Brookhaven Beds - mainly fine with medium quartz sands; dark grey and yellow, but becoming greenish yellow with increasing glauconite content.
Bg	Bagshot Bed - fine and medium quartz sands; orange, yellow and pale grey.
LC	London Clay - firm, bluish grey clay; silty in parts and with bluish grey sands near the top of the formation.
R	Reading Beds - soft red, grey and green, sands and clays.
U2a	Upper Chalk - soft, white chalk with coralline fossils.

BOUNDARY LINES

	Geological boundary, Drift.
	Geological boundary, Solid.
	Inferred boundary between recognized categories of deposits.
	Resource Block boundary.

BOREHOLE DATA

SITE LOCATIONS

● Industrial Mine-wait Assessment Unit (I.M.A.U.) Boreholes

○ Other Boreholes

I.M.A.U. BOREHOLES

Borehole Registration Number → 75 NE 79
Borehole Size → 5.75" 1890" → Surface level in moose and feet above O.D. (feet)

Geological Classification → 1.5 → Oymurden
→ 2.8 → Mineral sand and gravel
→ 2.0 → Bedrock

Grading Diagram
Thickness in metres

Notes:

- (i) Current unfilled depth (thickness) is used as the assessment of resources.
- (ii) The + sign indicates that the base of the deposit was not reached.
- (iii) Bedrock and the former columnar jointing are recorded in feet.
- (iv) The Geological Classification is given only for mineral and bedrock.

Borehole Registration Number

Each I.M.A.U. borehole is identified by a serial number, e.g. 75 NE 76. The first numbers and letters refer to the sheet and the final figures to the I.O.S. registration numbers for that quarter. The unique designation for borehole 75 NE 79 is 50 75 NE 79.

Grading Diagrams

These diagrams indicate the distribution of a certain deposit of mineral.

Each grading diagram shows the mean profile but indicates if a check is required by color:

Sand
(+ 1/16"-4mm)

Fines
(- 1/16mm) (- 4mm)

Gravel
(+ 4mm)

The widths of the divisions show the proportions of Fines, Sand and Gravel but small amounts of gravel may be omitted or exaggerated.

The heights of the diagrams is proportional to the extreme conditions.

OTHER BOREHOLES

The layout of information is the same as for I.M.A.U. boreholes although data may not be as comprehensive. They are registered in the same series, except for records in the Hydrogeological Department, for example 208-465 signifies Hydrogeological Department borehole 415 on New Series One-Inch Geological Sheet 208.

CATEGORIES OF DEPOSITS

☒	Exposed mineral	CAT - E6
☐	Send and gravel either not potentially workable (see Report) or absent	CAT - A2
☒	Send and gravel not exposed	CAT - N1

RESOURCE BLOCKS

For the purpose of assessment, the mineral is divided into Resource Block (see Report). Each is designated by a letter.

Detained records may be consulted on application to the Head, Industrial Minerals Assessment Unit, Institute of Geological Sciences, Keyworth, Nottingham. NG12 5GG

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S1/87	S1/87	S1/77	S1/87
S1/88	S1/88	S1/78	S1/88
S1/89	S1/89	S1/79	S1/89
S1/90	S1/90	S1/70	S1/90
S1/91	S1/91	S1/71	S1/91
S1/92	S1/92	S1/72	S1/92
S1/93	S1/93	S1/73	S1/93
S1/94	S1/94	S1/74	S1/94

725,000 sheets with the One-inch Geological sheets
200,000, 200 and 200.

Original geological survey on the six-inch scale by M.W. Beeson, W.F. Ayres, W. Whitaker, F.R. Polachin, B. Trench and F. Drew. Resurveyed on the six-inch scale by F.J. Bennett, J.H. Blake and C.E. Hawkins. Published with Drift in 1887 (sheet 264) and in 1898 (sheet 268). Sir Archibald Geikie, D.C.L. F.R.S., Director General. Sheet 268 reprinted in 1937 and sheet 264 in 1934.

1.25.000 Sand and Gravel Resource Sheet published 1980.
C. M. Brown, D.Sc., F.R.S., Director, Institute of Geological Sciences.
1/0080

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