MURPHY & SONS LIMITED

MURPHY & SONS LIMITED, NEWARK ROAD

Preliminary Mineral Resource Assessment

70110220-PMRA
JANUARY 2024

PUBLIC

MURPHY & SONS LIMITED

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DATE: JANUARY 2024

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Preliminary Mineral Resource Assessment

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1 INTRODUCTION AND OBJECTIVES

1.1 INTRODUCTION

1.1.1. This Preliminary Mineral Resource Assessment (MRA) has been prepared by WSP on behalf of Murphy & Sons Limited ("The Applicant") to support a planning application for the redevelopment of the Murphy & Sons Limited depot, at Newark Road, New Ollerton, Newark. The proposed site plan is attached in **Appendix A.**

1.1.2. It has been identified that the site (~25.5 Ha) lies within a Minerals Safeguarding Area (MSA) within the Nottinghamshire Minerals Local Plan, up to 2026, adopted March 2021. The planning application is therefore subject to Policy SP7.

1.1.3. Proposals for development of a site allocated through a local plan prepared by a district council that is within an MSA will be required to demonstrate that the matters considered under the Mineral Assessment have been previously assessed and an agreement (in writing) reached between the District and County Council regarding the presence and identification of mineral resources beneath or adjacent to the site, the effect of the proposed development on the mineral resource, and feasibility and viability of prior extraction. This statement is to be supported by evidence demonstrating that the development would not needlessly sterilise mineral resource of local or national importance.

1.1.4. If this cannot be demonstrated to the satisfaction of the County Council, the proposal will be required to include the prior extraction of the mineral resources, to comply with Policy SP7: Minerals Safeguarding, Consultation Areas and Associated Minerals Infrastructure

1.1.5. The west of the Site lies within the MSA for "Construction Sand and Silica Sand (Sherwood sandstone Group) and the east of the Site Lies in a MSA for "Brick Clay". The whole site is also within a Coal Licence Area. (shown in **Figure 1 and 2** below). As only the east of the site is proposed to be redeveloped only the Brick Clay will be considered within this report.

1.1.6. Policy SP7 that requires that a non-mineral proposal located within a MSA must be supported by a MRA. This will need to demonstrate that the development can acceptably sterilise the site without significant harmful impact on the supply of local mineral. Therefore, an MRA is required as part of the planning application.

1.2 SCOPE OF WORKS

1.2.1. Accordingly, this Mineral Resource Assessment provides the following:

Description of Site and Proposed Development;
Site geology and potential for a mineral resource to be present – analysis of British Geological Survey (BGS) mapping data and available site borehole records completed in ground investigations required for the first phase of development;
Mineral planning policy review – national and local planning policy;
The practicability and viability of the prior extraction of the mineral - taking account of site-specific constraints; a market appraisal; transport considerations; and effect on the deliverability and viability of the non-minerals development; and
An assessment of compliance with Policy.

1.2.2. This report has been prepared in general accordance with:

BGS – Nottinghamshire Mineral Resources Map (scale 1:100,000 dated 2002);
Adopted Nottinghamshire Minerals Local Plan (adopted, March 2021);
BGS - A guide to mineral safeguarding in England, October 2007; and
The National Planning Policy Framework, 2023.

1.3 LIMITATIONS

1.3.1. This report is addressed to and may be relied upon by the client (Murphy & Sons Limited). It may not be relied upon or transferred to any other parties without the express agreement of WSP in writing. The report should be read and used in full. No responsibility will be accepted where this report is used, ether in its entirety or in part, by any other party. WSP cannot be held liable for third party information.

1.3.2. The limitations of this assessment are attached in **Appendix C**.

2 SITE DESCRIPTION & PROPOSED DEVELOPMENT

2.1 SITE DESCRIPTION & SURROUNDING AREA

2.1.1. The Site is located to the south of Ollerton and is approximately 25.5 hectares (ha) in area.

2.1.2. The Site location is provided at **Figure 1** (**Appendix A**)

2.1.3. **Table 1** provides information relating to the site obtained from a review of Ordnance Survey (OS) mapping and online aerial photography.

Table 1 – Site Information

Details	Description
Name and Address of Site	Murphy & Sons Limited depot, at Newark Road, New Ollerton, Newark
National Grid Reference	466879, 367166
Site Description and Current Use	Murphy & Sons Limited depot is located in Nottinghamshire. The Site is irregularly shaped and located between Ollerton and Wellow. The comprises of 16 Ha of undeveloped agricultural land found in the west of the Site, with the remaining 9.5 Ha comprising of hardstanding for the commercial area of the Murphy & Sons Limited Depot. Mature wooded areas and hedgerows are located along the Site boundaries and between the agricultural land and the depot. A stream is present running northeast southwest across the site. Adjacent to the north boundary of the site is a railway and adjacent to the west boundary is a residential development. The A616 is located approximately 150m to the south of the Site
Topography and Ground Cover	The topography of the area is relatively flat, the site slopes downwards toward the from the west and southwest corner at 50 AOD to the northeast corner at 42 AOD. The Site predominantly comprises undeveloped grassland / agricultural land (63%). The remaining ground cover was noted to be buildings and external hardstanding associated with the depot.

2.2 PROPOSED DEVELOPMENT

2.2.1. The description of the proposed development is the redeveloped and expansion for continual operations at Murphy & Sons Limited depot.

3 MINERAL PLANNING POLICY REVIEW

3.1 NATIONAL PLANNING POLICY

3.1.1. National planning policy for minerals is set out in Section 17 of the National Planning Policy Framework (NPPF) 'Facilitating the sustainable use of minerals'.

3.1.2. National policy is clear that *"it is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation"* (Paragraph 215). Further Paragraph 218 adds that local planning authorities should *"not normally permit other development proposals in mineral safeguarding areas where they might constrain potential future use for these purposes."* However, the site forms part of a strategic housing allocation and the adopted Local Plan *"sets out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place"* (Paragraph 216d).

3.1.3. With respect to further guidance on the scope of Mineral Assessments, the National Planning Policy Guidance (NPPG) refers to the detailed advice on Mineral Safeguarding in the BGS report "Mineral Safeguarding in England: Good Practice Advice" (2011). This identifies that there are two levels of Mineral Assessment:

1. *"A site-specific desk-based assessment of the existing surface and solid geological mineral resource information, comprising information on the mining and quarrying history, mineral assessments and market appraisals, boreholes, site investigations, geological memoirs, technical reports, mining plans, and the thickness of superficial geological deposits.*
2. *Analysis of the site-specific information derived from level 1 including:*

   An estimate of the economic value (for example quality and quantity) of the mineral resource. It's potential for use in the forthcoming development and an assessment of whether it is feasible and viable to extract the mineral resource ahead of development to prevent unnecessary sterilisation.
   Where prior extraction can be undertaken, an explanation of how this will be carried out as part of the overall development scheme."

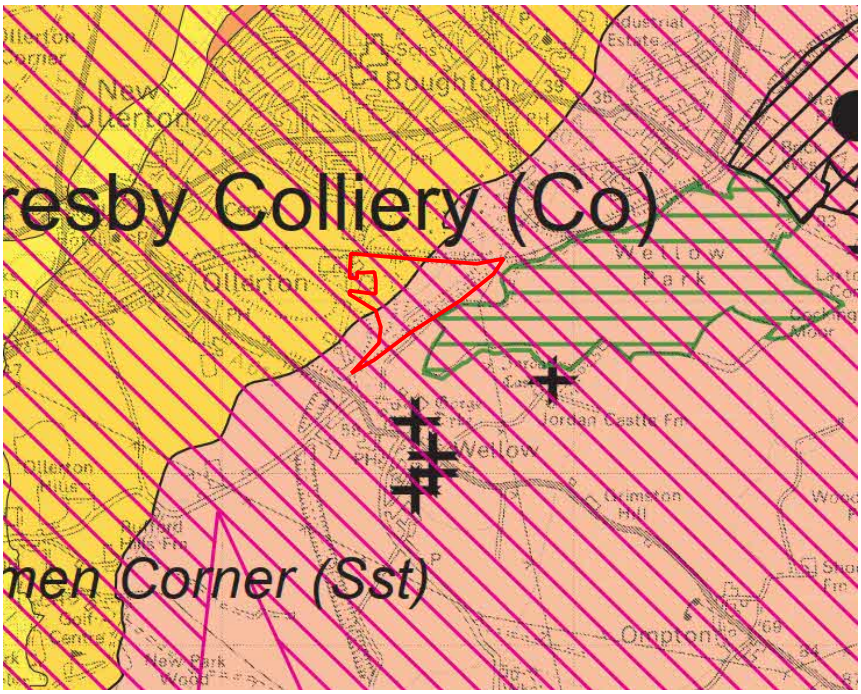
3.2 LOCAL PLANNING POLICY

3.2.1. The Nottinghamshire Minerals Local Plan (NMLP) was adopted in March 2021 and provides the overarching strategy and planning policies for mineral extraction in Nottinghamshire.

3.2.2. With respect to mineral safeguarding, Policy SP7 identifies the mineral resources in Nottinghamshire which are to be safeguarded, including sand and gravel, Sherwood Sandstone and limestone areas.

3.2.3. The extent of the Mineral Safeguarding Areas (MSAs) for each resource are defined on the BGS Mineral Resources Map extract as shown in **Figure 1** below. The current Site area is shown in the redline boundary. The Site is located in an area of Construction Sand and Silica deposits which are a regionally significant for aggregate and its use in the making of glass and creating moulds and castings in industrial processing. Brick Clay deposits are found in the east of the Site which are significant for concrete aggregate. The whole site is also within a Coal License Area.

Figure 1 – Extract from Nottinghamshire Mineral Resources Map, 2013 (BGS)



3.2.4. Whist the British Geological Survey (BGS) Resource Map 2013 provides an overall indication of the geological resource within Nottinghamshire, the county council has chosen to safeguard an economic resource as based on minerals industry input. This resource-based approach results in far less mineral resources being considered for safeguarding. An extract from the adopted minerals plan is shown below as **Figure 2** that shows the Brick clay in the east of the site lies within a MSA.

Figure 2 – Extract from drawing within the Adopted Nottinghamshire Minerals Local Plan, March 2011

3.2.5. The NMLP identifies that proposals located in MSAs will usually need to be accompanied by a 'Minerals Assessment' which should address Policy SP7, detailed below

3.2.6. Policy SP7 identifies the circumstances when non-mineral development may be considered acceptable at a location in a MSA. These include:

Development which is in accordance with adopted District/Borough Local Plan allocations which took account of minerals sterilisation and where prior extraction is not feasible or appropriate;

Temporary development;

Householder planning applications (except for new dwellings);

All applications for advertisements;

Infill development;

Reserved matters; and

Prior notifications (telecoms, forestry, agriculture, demolition).

3.2.7. A Mineral Assessment will be required to accompany the planning application for the proposed non-minerals development, detailing:

The mineral concerned is no longer of any value or potential value; or

There is an overriding need for the non-mineral development which outweighs the need for the mineral; or

The proposed non-minerals development site is located on the urban fringe and mineral extraction would be inappropriate in this location; or

The non-mineral development is of a minor nature

3.2.8. This MRA undertakes a preliminary examination of the presence, quantity and quality of the deposits on site and their importance and viability as mineral resources.

3.2.9. As the development is to be in the east of the site and only Brick Clay is noted as a MSA in the NMLP only the Brick Clay will be discussed.

4 NATURE OF THE EXISTING MINERAL

4.1 GEOLOGY

4.1.1. The British Geological Survey (BGS) Map Sheet 113 – Ollerton (1:50,000 Series, 1990) has been reviewed and the underlying geology is presented in **Table 2** together with EA aquifer designations.

4.1.2. **Table 2 – Geological Mapping Summary**

Strata	Location	Description	Aquifer Designation
Alluvium	Located in the centre of the Site along the stream. Absent elsewhere	Clay, silt, sand and gravel	Secondary A Aquifer
Chester Formation	Located in the west of the Site	Sandstone, pebbly (gravelly)	Principal Aquifer
Retford Member	Located in the east of the Site	Mudstone	Secondary A Aquifer

4.1.3. Man-made soils (Made Ground) have the potential to be present in areas of the depot, along the north boarder due the railway and along the west border due to the presence of residential buildings. These soils are likely to exhibit a certain degree of heterogeneity. The nature of the material can be expected to vary substantially in both composition and thickness over short distances. Buried obstructions from the former uses of site are also possible however will not be widespread.

4.1.4. There are no historical borehole records within the Site boundary. There are 3 historical borehole records for boreholes completed within 100 m of the Site boundary. Information gained from selected borehole records is summarised (as recorded) in **Table 3** below:

Table 3 – Summary of relevant Historical Boreholes Logs

Stratum	Thickness (m)	Depth to Base
Drift	1.37 to 3.05	1.37 to 3.05
Interbedded siltstones and sandstones	11.66 to 13.18	13.03 to 16.23
Mudstones	0.44 to 2.09	15.12 to 16.43
Coal seam	2.03 to 2.10 (thickness not proven)	13.03 to 16.43 (thickness not proven)

A copy of the historical borehole logs are contained within **Appendix B**.

4.2 GROUND INVESTIGATION

4.2.1. No onsite ground investigations have been undertaken to date to confirm thicknesses of the identified deposits.

4.3 HYDROLOGY

4.3.1. No groundwater strikes were recorded within the historical borehole logs.

4.3.2. Groundwater may be present within Made Ground or the shallow ground as perched water, associated with lenses of permeable material which are recharged by surface water infiltration. A higher localised groundwater table may be associated with the stream on Site.

4.4 MINERAL RESOURCE PRESENCE

4.4.1. The Nottinghamshire Mineral Plan indicates that the Site is located in an area of “sand, gravel and coal” deposits as shown in **Figure 1** above.

4.4.2. It is also apparent from the BGS maps and the Nottinghamshire BGS Minerals map that the Construction Sands and Silica and Brick Clay deposits as shown in **Figure 1 and 2** (are within the MSA) are present at the site.

4.5 MINERAL RESOURCE SIZE AND QUALITY

4.5.1. A ground investigation has not been undertaken to date.

4.5.2. As the development is to be in the east of the site and only Brick Clay is noted as a MSA in the NMLP only the Brick Clay will be discussed.

4.6 REGULATORY LIASION

4.6.1. WSP contacted the minerals and waste team at Nottinghamshire County Council on 19th December 2023 outlining WSPs preliminary findings and requested their view on whether a ground investigation would be required at this time.

4.6.2. WSP received a response on 20th December that stated that a desk based assessment would be sufficient at this time and to draw WSPs attention to paragraph 3.87 of the Adopted Nottinghamshire Minerals Local Plan, March 2021, which provides information on the cases where prior extraction of a mineral resource, may not be appropriate.

4.6.3. This includes details as identified in **section 3.2.3** of this report.

4.6.4. The full correspondence is attached in **Appendix D.**

5 PRACTICABILITY AND VIABILITY OF PRIOR EXTRACTION

5.1.1. The following focuses on the practicability and viability of the prior extraction of the potential area of Brick Clay deposits across the eastern area of the site.

5.2 SITE SPECIFIC CONSIDERATIONS

5.2.1. Brick Clay deposits are present at the site.

5.2.2. The quality / quantity of the minerals are not known.

5.2.3. A shallow water table may be present at the site which would mean significant dewatering would be required.

5.2.4. A drainage channel passes across the middle of the eastern portion of the site.

5.2.5. Wellow Park is listed as an area of Ancient Woodland, and a Site of Special Scientific Interest (SSSI). It is located 26 m to the south-east of the Site;

5.2.6. The apparent deposits are also in close proximity to existing infrastructure, a railway to adjacent to the north boundary, residential housing adjacent to the west boundary. A stream is also present running through the site. Due to the infrastructure present would require the presence of an extraction buffer zone (50m) which would likely sterilize additional areas of the site.

5.3 MARKET CONSIDERATIONS

5.3.1. There are two active allocated sites within 25 km of the Site area with large resources of extractable material.

5.3.2. The Nottinghamshire Local mineral plan maintains *'An adequate supply of brick clay will be identified to meet expected demand over the plan period and enable a 25-year landbank per brick works'*

5.3.3. There are two allocated brick clay extraction sites; Kirton and Dorket Head, within 25km of the Site. Kirton provides both red and white firing clays. The red-firing clay accounts for approximately 90% of demand. The reserves of the red firing clay are expected to be adequate until 2044. Kirton is estimated to produce 5.5 million tonnes of brick clay for 25 years from 2017. The Cream-firing clay reserves are expected to be adequate until 2030. Dorket Head reserves are expected to be sufficient until 2033.

5.3.4. These sites are presented below in **Table 4.**

Table 4 - Local allocated sites for Brick Clay

Quarry/Brickworks	Distance from site	Material	Allocated
Kirton	2.2 Km	Brick Clay (Red and White Firing Clay)	Yes
Dorket Head	21 km	Brick Clay	Yes

6 CONCLUSIONS AND RECOMMENDATIONS

6.1.1. This Preliminary Mineral Resource Assessment (MRA) has been prepared by WSP on behalf of Murphy & Sons Limited (“The Applicant”) to support a planning application for the redevelopment of Murphy & Sons Limited depot.

6.1.2. At this time WSP concludes that the materials located at the site as identified within the Nottinghamshire Minerals Plan (Brick Clay deposits is likely).

6.1.3. WSP concludes that the majority of the site is not viable for extraction and that the development overrides the presumption for mineral safeguarding such that sterilisation of the mineral can be permitted, primarily due to

The likely requirement of development buffer zones due to adjacent infrastructure, a water course and the sites location on the urban fringe. Any sterilization buffer would likely comprised a 50m standoff due to stability issues and air quality and noise restrictions from any proposed quarrying activities

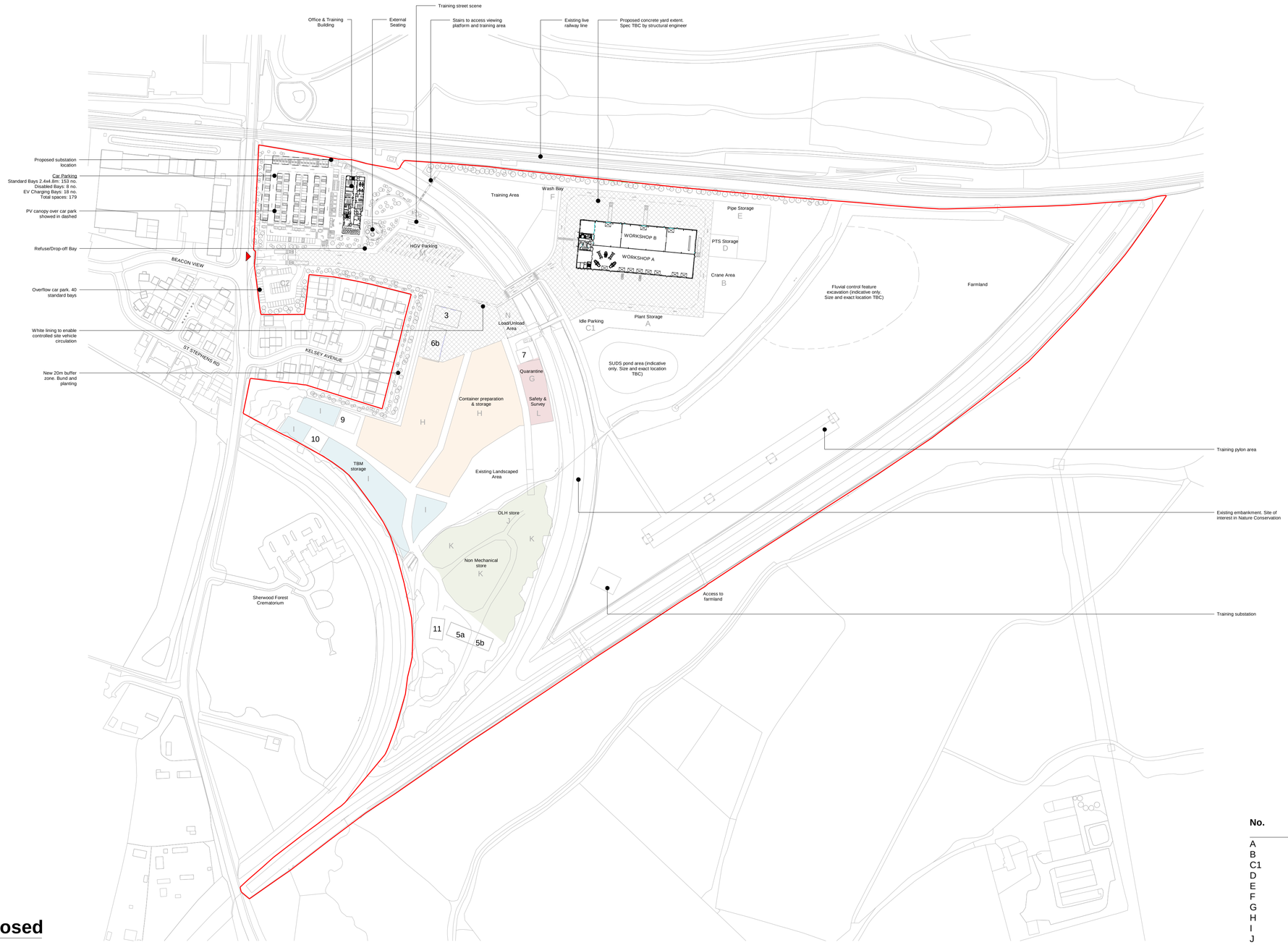
The mineral concerned is no longer of any value or potential value due to alternative allocated sites in the nearby proximity.

Appendix A

FIGURES

Zone: 04

Status: S0



1 Site Plan - Proposed

1 : 2000

No.	Use	Target Area	Current Area
A	Plant storage	2000 m²	2400 m²
B	Crane area	1500 m²	1880 m²
C1	Idle parking	400 m²	400 m²
D	PTS storage	500 m²	500 m²
E	Pipe storage	1500 m²	2500 m²
F	Wash bay	500 m²	500 m²
G	Quarantine	500 m²	500 m²
H	Cabines / welfare storage	8000 m²	8960 m²
I	Tunnelling	4000 m²	4150 m²
J	OHL storage	1500 m²	1576 m²
K	Non mech	5000 m²	5008 m²
L	Safety & survey	-	1500 m²
M	HGV parking	1200 m²	700 m²
N	Load / unload	450 m²	550 m²

**C2 corresponds to overflow parking area next to site entrance*

The contractor must check dimensions on site. Only figured dimensions to be worked from.

Any discrepancies must be reported to the architect before proceeding

DRAWING CONVENTIONS:

For ease of reading,View Tags (Elevation, Section markers etc.) indicate last 4 digits of Document no. only

Drawing based on survey drawing ref. LBU0171_Ollerton Plant Depot_Rev 3 and X61-06-JMS-DWG-XX-001 Ollerton Elevations provided by Murphy

NOTES:

N

-20 0 20 40 60 80 100

SCALE 1:2000 m

DRAFT 07/11/2023

REVISIONS

Rev.	Description	Date	Checked

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PROJECT TITLE: Ollerton Project

Newark Rd, New Ollerton, Newark NG22 9QG

DOCUMENT TITLE: Site Plan - Proposed

DOCUMENT NO.	STATUS	REVISION	SCALE @ A3	SCALE @ A0
117-GTH-04-ZZ-DR-A-1100	S0		1:2000	1:4000

CURRENT ISSUE DATE:

Appendix B

EXPLORATORY HOLE LOGS

BGS ID: 234841 : BGS Reference: SK66NE24
British National Grid (27700) : 466777,366542

321	SK 66 N.E.	321

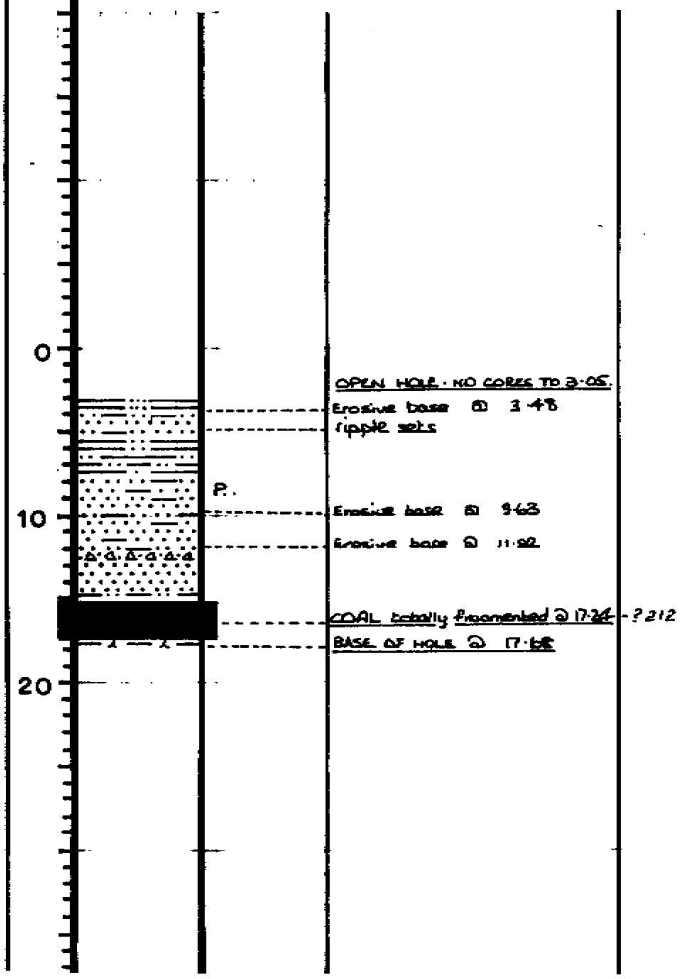
OLLERTON COLLIERY
PARKGATE INTAKE DRIFT
SK 66 NE/24
No.1. DOWNBORE

E. 466 778 m.
N. 366 541 m.

DATE. Jan. 1976.
STARTING LEVEL. 543·2 m. B.O.D.

SEAMS * ANALYSED	DEPTH (METRES)	LOG	SEAM SECTIONS & DEPTHS Seam thicknesses in centimetres.	DIP DEV. OIL GAS WATER	GEOPHYSICAL LOG	CORING	CASING LEFT IN HOLE

BOREHOLE SITE AT 812 m. FROM SOUTH TRUNKS JUNCTION PARKGATE INTAKE DRIFT.



FORM P 70
SERIES 680

Section of OLLERTON COLLIERY

PARKGATE INTAKE DRIFT NO. 1 DOWNBORE at 812 metres

Purpose To prove depth to Parkgate seam and nature of roof strata

Exact Site 812 metres from South Trunks Junction Parkgate Intake Drift

N.M.G. reference E 466 778 metres
N 366 541 metres

Level at which bore commenced relative to O.D. 543.2m B.O.D. m or ft*

Date of boring 1976

borer N.C.B. (North Notts Area Team)

6-INCH MAP (County, Sheet and Qtr.)	B/H REGD. No.
SK 66 NE (Nat. Grid, Sheet & Qtr.)	321

Attach tracing from a map or sketch map if possible

SK 66 NE /24

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ft*	THICKNESS cm or in*	DEPTH m or ft*	DEPTH cm or in*
	Floor of drift and zero for borehole			0	00
	Open Hole to	3	05	3	05
Siltstone	medium sandstone laminae and layers	0	43		
	erosive base			3	48
Siltstone	and sandstone fine interlaminated and interlayered	0	18		
				3	66
Siltstone	coarse and sandstone fine transitional	0	30		
				3	96
Sandstone	fine siltstone laminae and layers	0	15		
				4	11
Sandstone	fine abundant micaceous carbonaceous planes also silty laminae and thin layers in top 0·30, fine comminuted plant debris; ironstone nodules and lenses; straight ripple sets; ripple marks	0	82		
				4	93
Siltstone	medium to coarse in parts, sandy laminae and thin layers, continuous and discontinuous; rare plant debris. (dip 5° average) straight ripple sets, minor diastems	2	41		
				7	34
Sandstone	fine to medium ferruginous and silty laminae, numerous micaceous carbonaceous planes in top 0·30, numerous truncated dune sets, ferruginous and carbonaceous plant debris, micaceous carbonaceous planes, numerous minor diastems; local dip of 20° to the lamination, rare burrows	1	55		
				8	89

FORM P 71
SERIES 680

6-INCH MAP	8/H
SK 66 NE	24

Section of OLLERTON COLLIERY PARKGATE INTAKE DRIFT
NO. 1 DOWNBORE

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ft*	THICKNESS cm or in*	DEPTH m or ft*	DEPTH cm or in*
				8	89
Sandstone	fine numerous micaceous carbonaceous planes disturbed, silt fragments up to 0·10 diameter to base	0	74		
	erosive			9	63
Sandstone	fine siltstone and micaceous laminae, dip 20°, numerous minor diastems, burrows: fine comminuted plant debris	0	23		
				9	86
Sandstone	medium siltstone fragments selectively replaced by ironstone, small siltstone fragments and flecks throughout; micaceous carbonaceous planes, rare siltstone laminae, abundant carbonaceous plant debris; dune sets throughout	2	06		
	erosive			11	92
Breccio Conglomerate	large siltstone fragments with sandstone fine laminae and layers in a sandy matrix, numerous minor diastems, some fragments replaced by ironstone	0	22		
	dipping base			12	14
Siltstone	sandstone fine laminae and thin layers, straight ripple set dip 20° - 30°	0	05		
				12	19
Sandstone	medium to coarse, dips up to 10° in top 0·30, rare plant debris, ferruginous flecks; abundant micaceous carbonaceous planes; carbonaceous and coalified plant debris; dune sets	2	39		
				14	58
Siltstone	coarse sandstone laminae and thin layers and siltstone fine transitional; ironstone rich layers	0	10		
				14	68
Mudstone	silty to siltstone fine in parts laminated; rare plant debris; ironstone rich bands, rare discontinuous sandy laminae	0	20		
				14	88
Mudstone	to mudstone silty, slightly carbonaceous rare plant fragments	0	24		
				15	12

FORM P 71
SERIES 680

6-INCH MAP	B/H
SK 66 NE	24

*Delete as appropriate

Section of OLLERTON COLLIERY PARKGATE INTAKE DRIFT
NO. 1 DOWNBORE

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				15	12
COAL PARKGATE	totally fragmented not possible to determine thickness from cores, driller gives base at 17·24	2	12		
				17	24
	Core lost	0	14		
	Base of hole			17	68

BGS ID: 234842 : BGS Reference: SK66NE25
British National Grid (27700) : 466926,366676

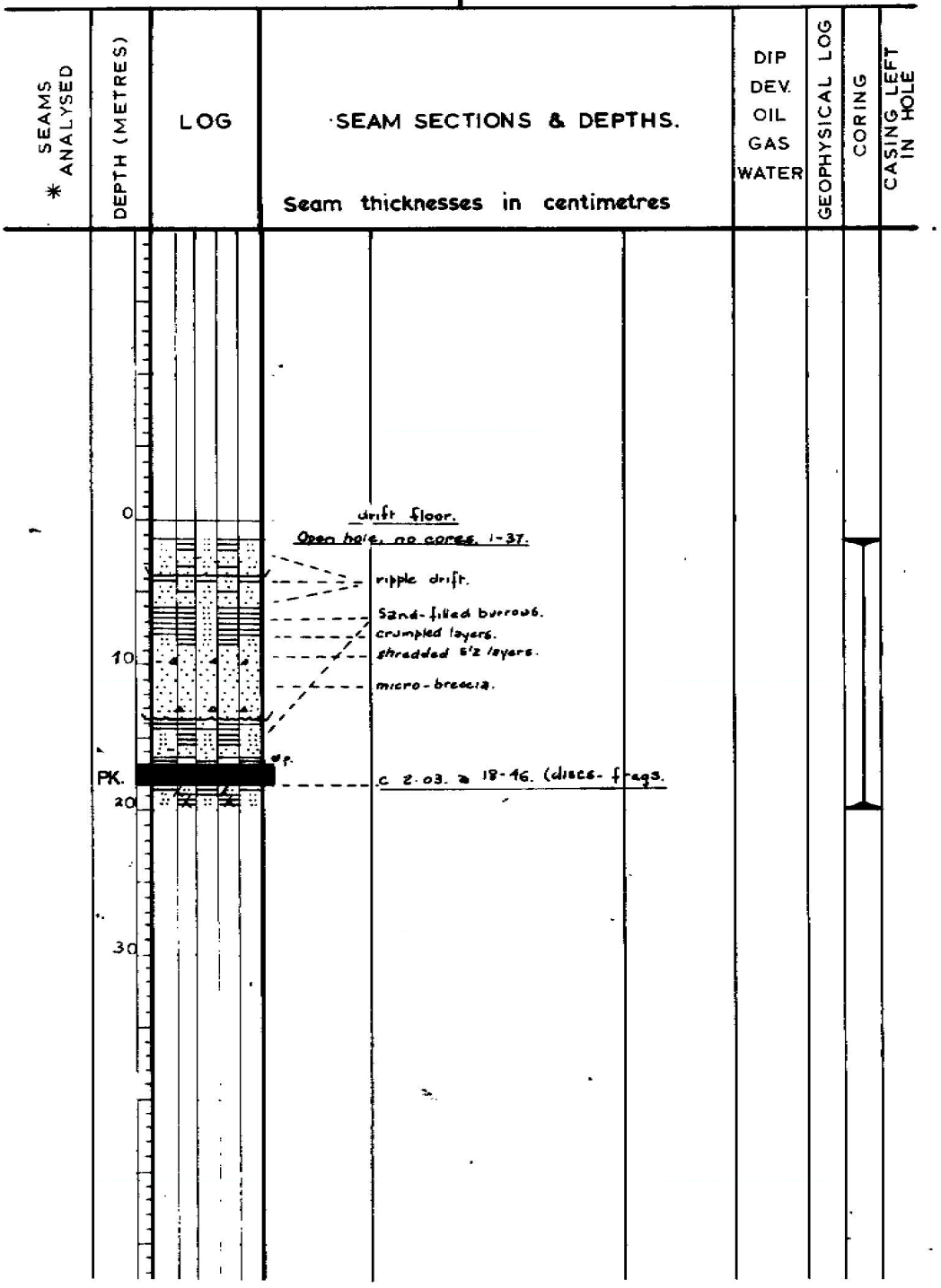
322	SK 66 N.E.	322

SK 66 NE/25

OLLERTON COLLIERY
PARKGATE RETURN DRIFT
No.1. DOWNBORE
(@783·9 m.)

E. 466 933 m.
N. 366 681 m.

DATE. MARCH 15th. 1976
STARTING LEVEL. 551·504 m. B.O.D.



FORM P 70
SERIES 680

Section of OLLERTON COLLIERY
PARKGATE RETURN DRIFT NO. 1 DOWNBORE AT 783·9m.

Purpose To prove the Parkgate seam.

Exact Site N.M.G. reference
E 466 933 m
N 366 681 m

Level at which bore commenced relative to O.D. 551·504mB.O.D.

Date of boring 15th March 1976

Borer N.C.B. North Notts Area Team.
Cores examined by J. Mayne, N.C.B. Geologist.

6-INCH MAP (County, Sheet and Qtr.)	B/H REGD. No.
SK 66 NE (Nat. Grid, Sheet & Qtr.)	322

SK 66 NE /25

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	Drift floor and zero of borehole			0	0
	Open hole - no cores	1	37		
				1	37
Siltstone	fine sandstone laminae, vague micaceous carbonaceous planes, rare Calamites stem, thin ironstone band	0	30		
	passage			1	67
Siltstone	and sandstone interlaminated, discordant dipping siltstone layers and laminae cross-laminated units, diastems, ripple drift	0	46		
	passage			2	13
Sandstone	discontinuous silty laminae and micaceous carbonaceous planes, bands of cross-laminated units; ripple-drift, inter-bedded with predominantly sandstone bands,	1	65		
	irregular, erosive			3	78
Siltstone	coarse, fine even sandstone laminae, interlaminated in parts, micaceous carbonaceous planes	0	23		
				4	01
Sandstone	with fine dark silty laminae, some discontinuous; cross-laminated units, abundant ripple-drift, diastems; rare sand-filled burrows	1	88		
	passage			5	89
Siltstone	with fine sandstone laminae and connected fine lenses; abundant micro-lenses from 6·09 to base; fine sand-filled burrows, micaceous carbonaceous planes	2	03		
				7	92

FORM P 71
SERIES 680

6-INCH MAP	B/H
SK 66 NE	25

Section of OLLDERTON COLLIERY PARKGATE RETURN DRIFT NO. 1 DOWNBORE.

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ft*	THICKNESS cm or in*	DEPTH m or ft*	DEPTH cm or in*
				7	92
Siltstone	and sandstone, interlaminated and interlayered, poorly sorted in parts, crumpled layers, non-sequences, comminuted plant debris; rare shredded silty laminae in sandstone at base	0	28		
				8	20
Sandstone	discontinuous silty micaceous carbonaceous planes, becoming even and regularly spaced between 8·73 and 9·14 and finely inter-laminated from 9·14 to 9·44; intense folding of siltstone and sandstone laminae for 0·10 at 9·59;	1	40		
				9	60
Breccia;	sandstone matrix with numerous shredded sandstone siltstone interlaminated chunks; fine silty breccia scattered	0	38		
				9	98
Sandstone	dark micaceous carbonaceous planes, finely interlaminated, dip approximately 1:6 passing into sandstone with finely spaced comminuted plant debris planes with fine grey silty breccia and light brown muddy pellets, 0·07 ironstone band at base, irregular boundaries	1	60		
				11	58
Sandstone	fine-scattered micro-breccia; fine silty pellets in 0·02 band at 12·31; rare shredded silty laminae, 0·10 breccia of silty pebbles and large nodular ironstone at 13·27; dark even silty micaceous carbonaceous planes from 13·27 to 13·35; vague and rare below	1	98		
	irregular, erosive			13	56
Siltstone	medium to fine, vague fine sandstone laminae, ferruginous patchy bands, 0·05 nodular ironstone band at 14·02,	0	89		
	passage			14	45
Siltstone	and sandstone interlaminated and up to 0·07 sandstone bands with discontinuous silty laminae, dark coarse micaceous carbonaceous planes; sand-filled burrows; scattered plant fragments on bedding planes	0	94		
	passage			15	39

FORM P 71
SERIES 680

6-INCH MAP	B/H
SK 66 NE	25

*Delete as appropriate

Section of OLLERTON COLLIERY PARKGATE RETURN DRIFT
NO. 1 DOWNBORE

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				15	39
Sandstone	with discontinuous silty micaceous carbonaceous planes becoming more frequent and finely interlaminated towards base; thin 0·02 ironstone band	0	61		
				16	00
Siltstone	medium to fine, vague sandstone laminae, ferruginous patches	0	23		
				16	23
Mudstone	poorly laminated, becoming carbonaceous below 16·33; rare non-marine lamellibranch fragments; Lepidodendron leaf near base	0	20		
				16	43
COAL PARKGATE	mostly worn discs and fragments, drillers depths and thickness	2	03		
				18	46
Seat Earth	siltstone coarse, highly disturbed sandstone patchy band at 18·62	0	51		
				18	97
Siltstone	and sandstone interlaminated and interbedded with up to 0·15 sandstone bands; roots	0	84		
	Total Depth.			19	81

323 | SK 66 N.E. | 323

COMMERCIAL IN CONFIDENCE

B.O.D.JUN 1978

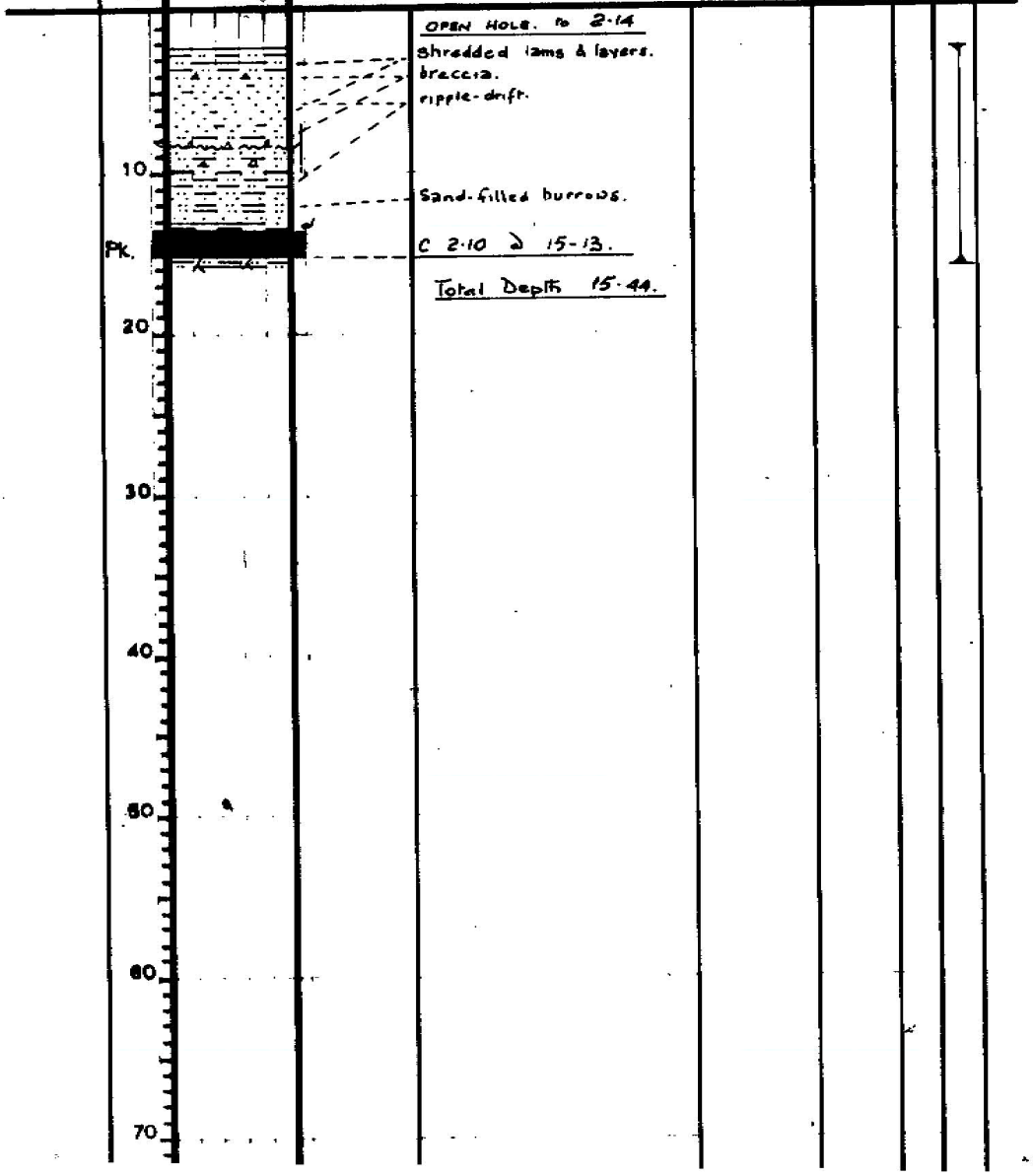
OLLERTON COLLIERY
PARKGATE RETURN DRIFT
No. 2 DOWNBORE (@799 m.)

SK 66 NE/26

E. 466944 m
N. 366671 m

DATE. March 1976
STARTING LEVEL. 554·5m B.O.D.

SEAMS * ANALYSED	DEPTH (METRES)	LOG	SEAM SECTIONS & DEPTHS Seam thicknesses in centimetres.	DIP DEV. OIL GAS WATER	GEOPHYSICAL LOG	CORING	CASING LEFT IN HOLE



FORM P 70
SERIES 680

Section of OLLERTON COLLIERY
PARKGATE RETURN DRIFT NO. 2 DOWNBORE (at 799 metres)

Purpose

Exact Site N.M.G. reference
E 466 944 metres
N 366 671 metres

Level at which bore commenced relative to O.D. 554·5 B.O.D m ~~or ft~~*

Date of boring March 1976

borer N.C.B. (North Notts Area Team)

Examined by J. Mayne N.C.B. Geologist.

6-INCH MAP (County, Sheet and Qtr.)	B/H REGD. No.
SK 66 NE (Nat. Grid, Sheet & Qtr.)	323

Attach tracing from a map or sketch map if possible

SK 66 NE/26

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ft*	THICKNESS cm or in*	DEPTH m or ft*	DEPTH cm or in*
	Drift floor and zero of borehole	2	14		
	Open Hole - no cores			2	14
Siltstone	coarse, sandstone laminae, fine layers and micro lenses, interlaminated in parts; micaceous carbonaceous planes	1	21		
				3	35
Siltstone	coarse, sandstone laminae and up to 0·01 sandstone layers and lenses becoming predominantly sandstone in basal 0·10 with discontinuous silty laminae; many shredded silty laminae, breccia of siltstone chunks and pebbles in sandstone matrix, micaceous carbonaceous planes sharp	0	43		
				3	78
Sandstone	discontinuous silty laminae, rare ripple-sets; ripple-drift, scattered comminuted plant fragments, dark micaceous planty planes, some crumpled	2	37		
				6	15
Sandstone	fine layers and laminae of comminuted plant debris	1	17		
				7	32
Siltstone	and sandstone interlaminated; highly disturbed convolute layers; micro-breccia of fine dark siltstone specks and fine pebbles in sandstone matrix; shredded chunks of interlaminated sandstone and siltstone	0	65		
				7	97

FORM P 71
SERIES 680

6-INCH MAP	B/H
SK 66 NE	26

Section of OLLERTON COLLIERY PARKGATE RETURN DRIFT NO.2 DOWNBORE

COMMERCIAL IN CONFIDENCE

*Delete as appropriate

30 JUN 1978

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ft*	THICKNESS cm or in*	DEPTH m or ft*	DEPTH cm or in*
				7	97
Sandstone	with scattered fine breccia and layers of larger siltstone pebbles, some ferruginous 0·10 sandstone and siltstone poorly sorted band at 8·15	0	36		
	erosive			8	33
Sandstone	fine dipping 1:3 siltstone micaceous carbonaceous planes, irregular and erosive at 8·45, sandstone below with 0·10 breccia-conglomerate of large ferruginous pebble and small angular chunks at 8·81	0	48		
	sharp			8	81
Sandstone	with evenly spaced ferruginous and silty pebbles, abundant from 9·21 to 9·59, brecciated sandstone and siltstone layers	0	88		
	irregular, sharp, dipping :2½			9	69
Siltstone	medium to coarse, fine sandstone laminae, interlaminated in parts, rare ferns, thin ferruginous bands	1	23		
	passage			10	92
Sandstone	and siltstone interlaminated; 0·22 predominantly sandstone with discontinuous silty laminae and layers, rare cross-laminated units; ripple-drift at 11·27, 0·10 sandstone with siltstone inter-laminated and interlayered, vague ripple-drift at base 11·73, sand-filled burrows	1	22		
				12	14
Sandstone	discontinuous silty micaceous carbonaceous planes passing quickly into sandstone and siltstone interlaminated in basal 0·07	0	48		
				12	62
Siltstone	fine to mudstone silty, vaguely laminated, nodular ironstones and thin ironstone lenses; passing into mudstone, (mostly worn discs) thin ferruginous band, carbonaceous towards base; then crowded non-marine-lamellibranchs layer at 12·97, flattened plant stems near base	0	41		
				13	03
COAL PARKGATE	highly fragmented. (Drillers thickness and depths accepted) pyrite layer near base	2	10		
				15	13
Seat Earth	siltstone coarse, disturbed sandstone layers, roots	0	31		
	Total depth			15	44

Appendix C

LIMITATIONS

REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

GENERAL

1. WSP UK Limited has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed and outlined in the body of the report.

2. Unless explicitly agreed otherwise, in writing, this report has been prepared under WSP UK Limited standard Terms and Conditions as included within our proposal to the Client.

3. Project specific appointment documents may be agreed at our discretion and a charge may be levied for both the time to review and finalise appointments documents and also for associated changes to the appointment terms. WSP UK Limited reserves the right to amend the fee should any changes to the appointment terms create an increase risk to WSP UK Limited.

4. The report needs to be considered in the light of the WSP UK Limited proposal and associated limitations of scope. The report needs to be read in full and isolated sections cannot be used without full reference to other elements of the report and any previous works referenced within the report.

PHASE 1 GEO ENVIRONMENTAL AND PRELIMINARY RISK ASSESSMENTS

Coverage: *This section covers reports with the following titles or combination of titles: phase 1; desk top study; geo environmental assessment; development appraisal; preliminary environmental risk assessment; constraints report; due diligence report; geotechnical development review; environmental statement; environmental chapter; project scope summary report (PSSR), program environmental impact report (PEIR), geotechnical development risk register; and, baseline environmental assessment.*

5. The works undertaken to prepare this report comprised a study of available and easily documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the Site and correspondence with relevant authorities and other interested parties. Due to the short timescales associated with these projects responses may not have been received from all parties. WSP UK Limited cannot be held responsible for any disclosures that are provided post production of our report and will not automatically update our report.

6. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only for the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, WSP UK Limited reserves the right to review such information and, if warranted, to modify the opinions accordingly.

7. It should be noted that any risks identified in this report are perceived risks based on the information reviewed. Actual risks can only be assessed following intrusive investigations of the site.

8. WSP UK Limited does not warrant work / data undertaken / provided by others.

INTRUSIVE INVESTIGATION REPORTS

Coverage: *The following report titles (or combination) may cover this category of work: geo environmental site investigation; geotechnical assessment; GIR (Ground Investigation reports); preliminary environmental and geotechnical risk assessment; and, geotechnical risk register.*

REPORT LIMITATIONS - GROUND RISK AND REMEDIATION

9. The investigation has been undertaken to provide information concerning either:

- **i.** The type and degree of contamination present at the site in order to allow a generic quantitative risk assessment to be undertaken; or
- **ii.** Information on the soil properties present at the site to allow for geotechnical development constraints to be considered.

10. The scope of the investigation was selected on the basis of the specific development and land use scenario proposed by the Client and may be inappropriate to another form of development or scheme. If the development layout was not known at the time of the investigation the report findings may need revisiting once the development layout is confirmed.

11. For contamination purposes, the objectives of the investigation are limited to establishing the risks associated with potential contamination sources with the potential to cause harm to human health, building materials, the environment (including adjacent land), or controlled waters.

12. For geotechnical investigations the purpose is to broadly consider potential development constraints associated with the physical property of the soils underlying the site within the context of the proposed future or continued use of the site, as stated within the report.

13. The amount of exploratory work, soil property testing and chemical testing undertaken has necessarily been restricted by various factors which may include accessibility, the presence of services; existing buildings; current site usage or short timescales. The exploratory holes completed assess only a small percentage of the area in relation to the overall size of the Site, and as such can only provide a general indication of conditions.

14. The number of sampling points and the methods of sampling and testing do not preclude the possible existence of contamination where concentrations may be significantly higher than those actually encountered or ground conditions that vary from those identified. In addition, there may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.

15. The inspection, testing and monitoring records relate specifically to the investigation points and the timeframe that the works were undertaken. They will also be limited by the techniques employed. As part of this assessment, WSP UK Limited has used reasonable skill and care to extrapolate conditions between these points based upon assumptions to develop our interpretation and conclusions. The assumption made in forming our conclusions is that the ground and groundwater conditions (both chemically and physically) are the same as have been encountered during the works undertaken at the specific points of investigation. Conditions can change between investigation points and these interpretations should be considered indicative.

16. The risk assessment and opinions provided are based on currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values. Specific assumptions associated with the WSP UK Limited risk assessment process have been outlined within the body or associated appendix of the report.

17. Additional investigations may be required in order to satisfy relevant planning conditions or to resolve any engineering and environmental issues.

18. Where soil contamination concentrations recorded as part of this investigation are used for commentary on potential waste classification of soils for disposal purposes, these should be classed as indicative only. Due consideration should be given to the variability of contaminant concentrations taken from targeted samples versus bulk excavated soils and the potential variability of contaminant concentrations between sampling locations. Where major waste disposal operations are considered, targeted waste classification investigations should be designed.

19. The results of the asbestos testing are factually reported and interpretation given as to how this relates to the previous use of the site, the types of ground encountered and site conceptualisation. This does not however constitute a formal asbestos assessment. These results should be treated cautiously and should not be relied

upon to provide detailed and representative information on the delineation, type and extent of bulk ACMs and / or trace loose asbestos fibres within the soil matrix at the site.

20. If costs have been included in relation to additional site works, and / or site remediation works these must be considered as indicative only and must be confirmed by a qualified quantity surveyor.

EUROCODE 7: GEOTECHNICAL DESIGN

21. On 1st April 2010, BS EN 1997-1:2004 (Eurocode 7: Geotechnical Design – Part 1) became the mandatory baseline standard for geotechnical ground investigations.

22. In terms of geotechnical design for foundations, slopes, retaining walls and earthworks, EC7 sets guidance on design procedures including specific guidance on the numbers and spacings of boreholes for geotechnical design, there are limits to methods of ground investigation and the quality of data obtained and there are also prescriptive methods of assessing soil strengths and methods of design. Unless otherwise explicitly stated, the work has not been undertaken in accordance with EC7. A standard geotechnical interpretative report will not meet the requirements of the Geotechnical Design Report (GDR) under Eurocode 7. The GDR can only be prepared following confirmation of all structural loads and serviceability requirements. The report is likely to represent a Ground Investigation Report (GIR) under the Eurocode 7 guidance.

DETAILED QUANTITATIVE RISK ASSESSMENTS AND REMEDIAL STRATEGY REPORTS

23. These reports build upon previous report versions and associated notes. The scope of the investigation, further testing and monitoring and associated risk assessments were selected on the basis of the specific development and land use scenario proposed by the Client and may not be appropriate to another form of development or scheme layout. The risk assessment and opinions provided are based on currently available approaches in the generation of Site Specific Assessment Criteria relating to contamination concentrations and are not considered to represent a risk in a specific land use scenario to a specific receptor. No liability can be accepted for the retrospective effects of any future changes or amendments to these values, associated models or associated guidance.

24. The outputs of the Detailed Quantitative Risk Assessments are based upon WSP UK Limited manipulation of standard risk assessment models. These are our interpretation of the risk assessment criteria.

25. Prior to adoption on site they will need discussing and agreeing with the Regulatory Authorities prior to adoption on site. The regulatory discussion and engagement process may result in an alternative interpretation being determined and agreed. The process and timescales associated with the Regulatory Authority engagement are not within the control of WSP UK Limited. All costs and programmes presented as a result of this process should be validated by a quantity surveyor and should be presumed to be indicative.

GEOTECHNICAL DESIGN REPORT (GDR)

26. The GDR can only be prepared following confirmation of all structural loads and serviceability requirements. All the relevant information needs to be provided to allow for a GDR to be produced.

MONITORING (INCLUDING REMEDIATION MONITORING REPORTS)

27. These reports are factual in nature and comprise monitoring, normally groundwater and ground gas and data provided by contractors as part of an earthworks or remedial works.

28. The data is presented and will be compared with assessment criteria.

Appendix D

REGULATORY LIASION

To: Mann, Alex
Subject: RE: Ollerton Murphy and Sons Mineral assessment

From: John Wilson <John.Wilson@nottscc.gov.uk> On Behalf Of Planning Policy
Sent: Wednesday, Decemb[redacted]
To: Mann, Alex <Alex.Mann[redacted]
Cc: Emma Brook <emma.brook@nottscc.gov.uk>
Subject: RE: Ollerton [redacted]t

Hello Alex [redacted]

Thank you for your email. NCC welcomes your enquiry regarding the submission of a minerals resource assessment to accompany the planning application to Newark and Sherwood District Council.

I would advise in this case a desk top exercise would be sufficient at this stage. I would draw your attention to paragraph 3.87 of the Adopted Nottinghamshire Minerals Local Plan, March 2021 (extract attached), which provides information on the cases where prior extraction of a mineral resource, may not be appropriate.

Whist the British Geological Survey (BGS) Resource Map 2013 provides an overall indication of the geological resource within Nottinghamshire, the county council has chosen to safeguard an economic resource as based on minerals industry input. This resource based approach results in far less mineral resources being considered for safeguarding. For the purposes of the minerals assessment the Policy Team would be happy to provide detailed information in regard to the economic resource, should this be required.

Kind regards

John Wilson
Technical Support Officer | Planning Policy
Place | Nottinghamshire County Council
County Hall | Loughborough Road | West Bridgford | NG2 7QP
Tel: 01159932605

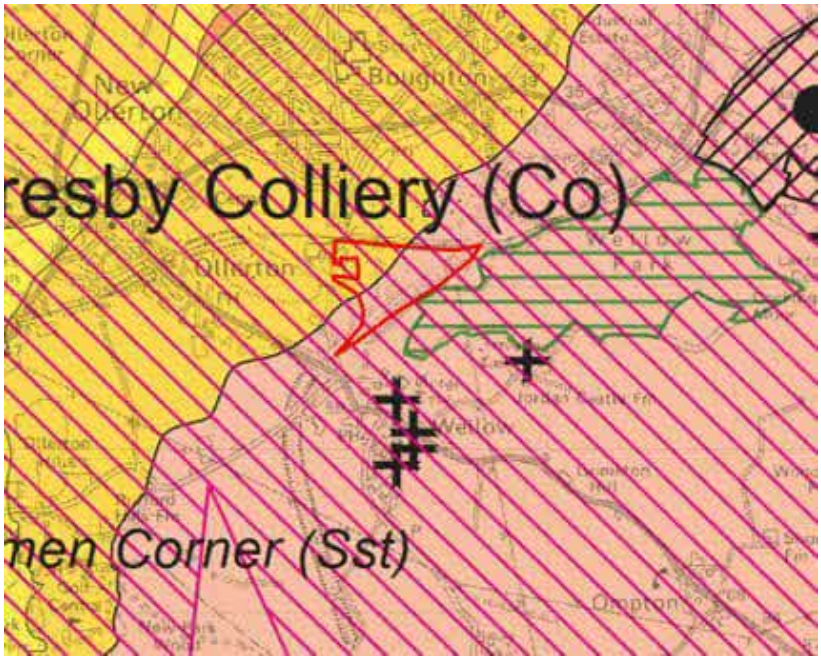
From: Mann, Alex <Alex.Mann@wsp.com>
Sent: 19 December 2023 17:06
To: Planning Policy <planning.policy@nottscc.gov.uk>
Cc: Bennett, Elena <Elena.Bennett@wsp.com>
Subject: Ollerton Murphy and Sons Mineral assessment

Dear Sir/Madam

As part of the planning application for the expansion of the Ollerton Murphy and Sons site , our client, **J. Murphy & Sons Limited** has commissioned WSP to undertake a Minerals Resource Assessment.

Could you please provide [redacted] do you require ground investigation information to show absence / presence of identified deposit (in this case Brick Clay (As only the east of the site is be redeveloped for new build) including thickness and quality of deposit. See **Figure 1.**

Alternately would a desk- [redacted]uld undertake an initial assessment of the site to examine anticipated volumes and quality as well as examining current land banks in the area following review of the local plans.
WSP also note at that a land drain crosses the eastern portion of the site and that the land is subject to flooding and also may lie on a coal fissure or breakline. WSP note the site to the north was quarried for brick earth and that minerals railways have crossed the study site previously.



Many thanks

Alex Mann **BSc(Hons), C.WEM, MCIWEM**

Associate Director | Ground and Water

M+ (0) 7 [redacted]

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