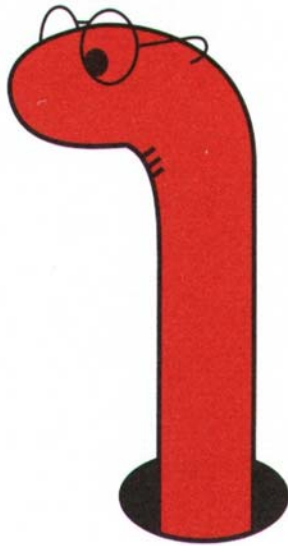


Electronic Report



WORMS EYE

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Our Ref: Roundthorn Road / M24 1FT / 2022
Date: 11 November 2024

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RAMSDEN FARM, ROUNDTORN ROAD, MIDDLETON, M24 1FT – Phase 2
COAL MINING RISK ASSESSMENT – Amended 10/11/24

INTRODUCTION

A residential development is proposed. Worms Eye have been commissioned to prepare a Desk Top Coal Mining Risk Assessment in order to assess the impact of coal mining on the site.

SITE LOCATION

The site is triangular, about 150 x 125m, located to the north of Roundthorn Road in Middleton and at OS Grid Reference 387707, 405374. The site comprises a vacant plot immediately southeast of the recently developed Phase 1 (four detached houses). The area dips to the northeast.

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PROPOSED DEVELOPMENT

It is proposed to build three detached houses running northeast to southwest across the site. These are referred to as Plot 5 (northeast), Plot 6 (middle) and Plot 7 (southwest), and will have associated gardens to their southeast and driveways to their northwest. The southwest of the site will be reserved for new planting.

BRIEF SITE HISTORY

Historical maps show the site has remained undeveloped, with a sand pit immediately southeast. No mining related features are shown on or close to the site.

SOURCES OF INFORMATION USED TO INFORM THIS REPORT

The following data sources have been reviewed in preparing this risk assessment.

- British Geological Survey map, Solid and Drift edition, 1:50000 scale.
- A Coal Mining Consultants Report dated 8/7/22.
- A site history based on historic Ordnance Survey mapping of the area.
- Memoirs of the Geological Survey.
- Worms Eye Boreholes, 2019.

SCOPE OF COAL MINING RISK ASSESMENT

The purpose of this Coal Mining Risk Assessment Report is to:

- Present a desk study of available information on the coal mining issues relevant to the site.
- Identify and assess risks to the development from coal mining legacy.
- Set out appropriate mitigation measures to address coal mining issues, including necessary remedial works, and/or demonstrate how mining issues have influenced the development.
- Demonstrate to the Local Planning Authorities the application site is, or can be made, safe and stable to meet national planning policy with regard to development on unstable land.

GEOLOGY OF SITE

The geological map indicates that the underlying solid rocks are undefined strata, likely to be mudstone, of the Pennine Lower Coal Measures, dipping to the south at about 14°.

Surface drift is shown as glacial sand and gravel, nearby boreholes show this is 14-18m thick.

MINING REPORT

A Coal Authority mining report has been obtained and is enclosed. The salient points are as follows:

- Workings are present in the Lower Bent seam at 131m deep, last worked in 1900, when 1.3m was extracted.
- The Higher Bent seam outcrops northwest-southeast across the north corner.
- The site is underlain by probable unrecorded shallow workings.
- No spine roadway recorded at shallow depth.
- No present or future planned underground mining.
- No opencast mining within 500m.
- No record of mine gas emissions within 500m.
- A mine shaft is shown about 23m southwest, no treatment details are since.
- No subsidence claims, since 1994, within 50m.

NEARBY BOREHOLES/PREVIOUS INVESTIGATION

Rotary boreholes 1-5 were drilled by Worms Eye in 2019, on Phase 1 of the development, immediately northwest. These show rock at 14.0 to 18.0m, overlying mudstone. A shallow, intact, coal seam (0.6 – 0.8m thick) was seen to be dipping southwest across the site, underlain by mudstone and a further intact coal seam (0.6 – 0.8m thick), also generally dipping southwest, with mudstone below this. There was continued firm drilling and no loss of flush.

The following approximates to a section looking northwest.

Strata	RC5 (m)	RC4 (m)	RC3 (m)	RC2 (m)	RC1 (m)
Drift	0.0 - 16.5	0.0 – 18.0	0.0 – 15.5	0.0 – 16.5	0.0 – 14.0
Mudstone	16.5 – 32.0	18.0 – 30.3	15.5 – 23.1	16.5 – 22.0	14.0 – 21.3
Coal (intact)	32.0 – 32.8	30.3 – 31.0	23.1 – 23.7	22.0 – 22.8	21.3 – 22.1
Mudstone	32.8 – 37.4	31.0 – 35.2	23.7 – 29.5	22.8 – 30.2	22.1 – 31.4
Coal (intact)	37.4 – 38.1	35.2 – 36.0	29.5 – 30.3	30.2 – 31.0	31.4 – 32.0
Mudstone	38.1 – 40.0	36.0 – 39.0	30.3 – 33.0	31.0 – 33.0	32.0 – 50.0
Loss of Flush	No	No	No	No	No

Using local datum from the proposed site plan shows the following:

Rotary Borehole	Local Datum (m)	Rock Head (m)	Coal 1	Coal 2
1	95.5	81.5	74.2 – 73.4	64.1 – 63.5
2	97.2	80.7	75.2 – 74.4	67.0 – 66.2
3	97.5	82.0	74.1 – 73.8	68.0 – 67.2
4	99.2	81.2	68.9 – 68.2	64.0 – 63.2
5	98.1	81.6	66.1 – 65.3	60.7 – 60.0

Local Datum taken from proposed plan of site.

SHALLOW COAL SEAMS

The findings show the Higher Bent seam outcrops northwest to southeast 8m northeast of Plot 5, 25m from Plot 6 and 40m from Plot 7. This dips to the southwest, passing below the proposed houses at about 2m, 6m and 10m respectively, below rock head. The geology map shows the next seams in the sequence are the Lower Bent, about 15m deeper, and the Olive, about 35m below the Higher Bent. Further seams are over 50m below the Higher Bent.

The CA show the Lower Bent is 125m deep.

COAL AUTHORITY AND GEOLGY MAP CONFUSION

The CA and the BGS both show the Higher Bent to be the shallowest seam (coal seam 1 seen in the rotary boreholes). However, the BGS map shows the next seam to be the Lower Bent at about 15 metres deeper, whilst the CA report the Lower Bent as being at 125 metres deep.

The CA reported seam at 125m deep, coincides with the Half Yard coal seam on the geology map, about 125m below the Higher Bent seam.

IDENTIFICATION AND ASSESSMENT OF SITE SPECIFIC COAL MINING RISKS

The table below initially summarises the potential risks associated with coal mining for the site.

Coal Mining Issue	Yes	No	Risk Assessment
Recorded underground coal mining	X		>125m, no risk
Underground coal mining (recorded at shallow depths)		X	
Underground coal mining (possible at shallow depths)	X		<30m, possible risk
Future underground coal mining		X	
Mine entries (shafts and adits)		X	103m southwest, no risk.
Coal mining geology (fissures)		X	
Record of past mine gas emissions		X	
Unrecorded mine gas emissions	X		Shallow seam, possible risk
Recorded coal mining surface hazards		X	
Surface mining (opencast workings)		X	
Nearby subsidence claims		X	
Mine Workings Found in Previous Investigations		X	No workings found to northwest

For those issues identified as “yes” a more detailed discussion and assessment is made below.

Shallow Underground Mining – unrecorded/probable/possible

The geology map suggests the Higher Bent coal seam is the shallowest seam. The next seams probably being the Lower Bent, followed by the Olive. These need to be considered further and the Geological Memoir has been reviewed. To achieve a minimal thickness of rock cover over a worked seam, 10 times the seam thickness is widely accepted.

Higher Bent Coal Seam

The seam is reported as widely exploited, less thick than the Lower Bent (0.9m thick), and boreholes just to the northwest show a thickness of 0.8m. With about 2m of rock cover at plot 5, 6m at plot 6 and 10m at plot 7, this suggests about 2, 7 and 12 times the seam thickness of rock cover respectively. This is insufficient rock cover on plots 5 and plot 6, and sufficient rock cover on plot 7. However, the adjacent boreholes show the seam is not worked.

Lower Bent Coal Seam

This seam is reported as one of the chief seams in the area, boreholes show 0.8m thick, and widely exploited. Although the findings show only about 4 to 9m of rock cover between seams, the shallower Higher Bent is unworked, allowing about 6 to 19m of rock cover or 7 (plot 5), 12 (plot 6) and 23 (plot 7) times the seam thickness. This is insufficient rock cover at plot 5 but sufficient rock cover on plot 6 and 7. Furthermore, the adjacent boreholes also show this seam is not worked.

Olive Coal Seam

Very little details are given on the seam, it possibly being four inferior seams which unite in places. The lack of data suggests it is insignificant and unworked. At about 20m below the Lower Bent, this would allow about 20m of rock cover over an inferior seam, likely, less than 1m thick, this is sufficient rock cover to minimise risks to the development.

Summary of Coal Seams

Seam	Thickness (m)	Worked	Plot	Depth Below Rock (m)	Rock Cover/ Thickness	Sufficient Cover
Higher Bent	0.8	No	5	2	2	No
			6	6	7	No
			7	10	12	Yes
Probably Lower Bent	0.8	No	5	6 – 11	>7	No
			6	10 – 15	>12	Yes
			7	14 – 19	>17	Yes
Olive	Inferior	No	All	26 – 39	>20	Yes

Mine Gas

There are two shallow coal seams. Taking into account the depth of the coal seams, and overlying sand and gravel which will not impede the passage of gases, it is considered there is a potential gas risk to the development if the seams were worked.

Mine Shaft

The nearest mine shaft is about 20m southwest of the proposed planting area, 103m from the nearest proposed house. Bearing in mind:

- Rock at 16.5m deep at the closest borehole to the shaft (from WE BHs).
- 8m departure for mapping error (CA interactive map).
- 2.5m diameter shaft.
- 45° angle of response, in drift deposits if the shaft were to collapse.

This indicates a Zone of Influence of 26m radius around the plotted location, and possible area of damage of 18m radius around the actual location. This will not affect the proposed houses.

CONCLUSION

Watching Brief

In common with many mining areas, it is recommended that site staff keep a watching brief during the project, particularly while excavations are taking place. Any unusual features such as voids, cracks, ground movement or strange soil conditions should be flagged up and safely checked out.

Shallow Mining

Five boreholes on phase 1, immediately northwest, show (mudstone) at 14.0 o 18.0m deep with two shallow, intact, coal seams (about 0.8m thick) dipping south across the site. The findings from Phase 1 confirm two shallow seams are present, however, the findings also show neither seam is worked.

The findings show the Higher Bent and Lower Bent coal seams are present at shallow depth, below rock, beneath the proposed houses. Although their anticipated depth indicates there is insufficient cover above the Higher Bent (plots 5 and 6) and Lower Bent seam (plot 5) the findings on the adjacent (phase 1) part of the development show the seams are not worked.

There findings indicate are no risks from shallow mining and no further action is required.

Mine Gas

There are two shallow coal seams, however, the findings from phase 1 show these are not worked and, therefore, are not a gas risk to the development.

No further action is required.

Mine Shaft

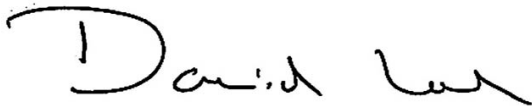
The findings suggest, if the nearest mine shaft were to collapse there may be a Zone of Influence of about 26m radius around the plotted position. This impinges onto the planting area at the southwest by about 6m and is about 75m from plot 7.

The nearby mine shaft does not pose a risk to the proposed houses. Bearing in mind the proposal at the southwest is to be a planting area, not a private garden or a communal garden, and use of that area is likely to be very low, if at all, it is considered that there is a negligible risk to the development.

No further action is required.

Yours faithfully

on behalf of Worms Eye Ltd

A handwritten signature in black ink, appearing to read 'David Lord', with a stylized, cursive script.

David Lord

BSc (Hons)

FGS MEnvSc AIEMA

RAMSDEN FARM, ROUNDTORN ROAD, MIDDLETON, M24 1FT – Phase 2

List of Appendices – COAL MINING RISK ASSESSMENT

Existing Site Plan

Proposed Site Plans

Existing Site Plan – Showing Mining Related Features and Rotary Boreholes

Proposed Site Plans - Showing Mining Related Features and Rotary Boreholes

Rotary Borehole Logs

Coal Mining Report

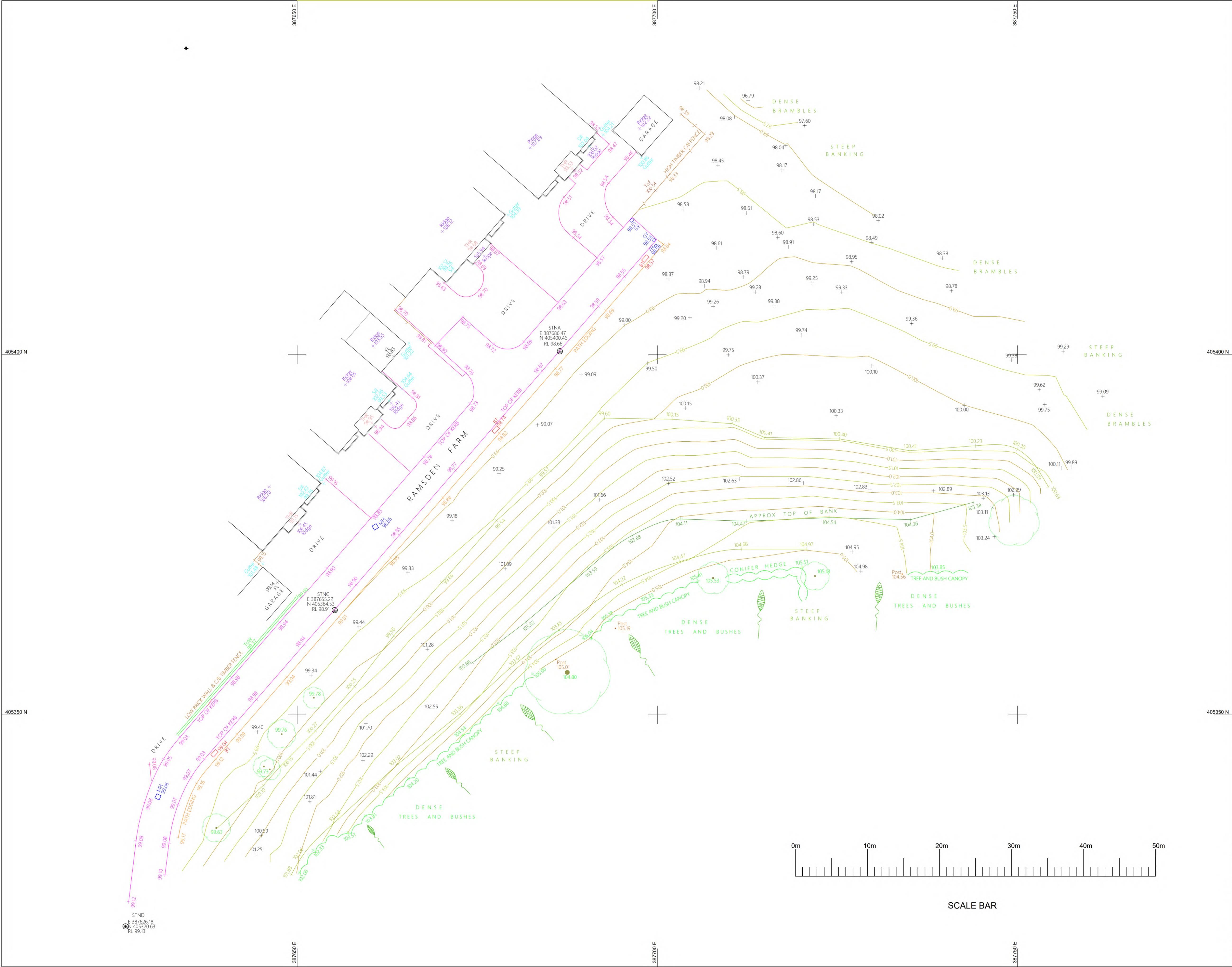
Coal Authority Summary Map

Extract From Geology Map

ABBREVIATIONS

<u>Chemical</u>	BAP	Benzo(a)pyrene
	BTEX	Benzene, toluene, ethylbenzene, xylene
	DAHA	Dibenzo(ah)anthracene
	MTBE	Methyl tertiaryt-butyl ether (additive to petrol)
	EPH	Extractable Petroleum Hydrocarbons (formerly Diesel Range Organics – DRO)
	NFD	No fibres detected (asbestos test)
	PAH	Polycyclic aromatic hydrocarbons
	PCB	Polychlorinated biphenyls
	PID	Photo ionisation detector
	PRO/GRO	Petrol range organics/gasoline range organics
	SVOC	Semi-volatile organic compounds
	TCE	Trichloroethylene
	TPH	Total petroleum hydrocarbons
	VOC	Volatile organic compounds
<u>Other</u>	AGS	Association of Geotechnical Specialists
	BGS	British Geological Survey
	BRE	Building Research Establishment
	CBR	California Bearing Ratio
	CIEH	Chartered Institute of Environmental Health
	CIRIA	Construction Industry Research and Information Association
	CLEA	Contaminated Land Exposure Assessment (Environment Agency)
	CLR 8	Contaminated Land Research Report 8 (Environment Agency)
	DWQ	Drinking water quality
	EA	Environment Agency
	EQS	Environmental quality standards
	ICRCL	Inter-departmental Commission for the Reclamation of Contaminated Land
	LQM	Land Quality Management Ltd (Land and Environmental Consultancy)
	NHBC	National House Builders Council
	SGV	Soil Guideline Values
	SPT	Standard penetration test
	TPHWG	TPH Working Group

1. This report should be considered in relation to the objectives agreed between Worms Eye and the Client, outlined in the introduction.
2. For the work, reliance has been placed on publicly available data, obtained from the sources identified in the report. The information is not exhaustive and further information may be available from other sources. When using the information it has been assumed it is correct, and no attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and guidelines, for land and groundwater contamination, enforced by the Local Authority and the Environment Agency.
4. During the site walkover, reasonable effort was made to obtain an overview of the site. However, no attempt was made to enter areas that are unsafe, a risk to health and safety, locked, barricaded, overgrown, or areas not made accessible.
5. Access, the presence of services and activities on the site, limited locations where sampling could be carried out and the techniques that could be used.
6. Assessments are based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.
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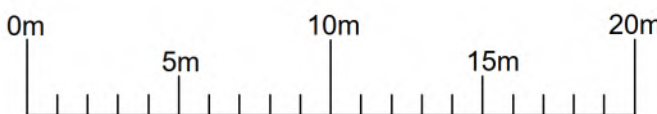
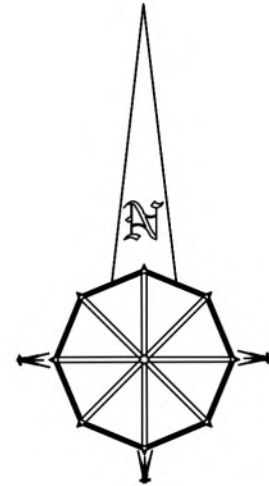
NOTES

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ALL SERVICES & MANHOLES SHOWN VISIBLE AT TIME
OF SURVEY

ALL DIMENSIONS TO BE CHECKED PRIOR TO
COMMENCEMENT OF WORK



SCALE BAR

Topographical Survey Legend

Bol	Bollard	MP	Mile post
Bin	Litter bin	Pt	Post
BL	Bed level	PM	Parking meter
BS	Bus stop	PP	Power point
BT	British Telecom	RE	Rodding eye
Com	Security Camera	Ridge	Roof/ridge level
CATV	Cable television cover	RS	Road sign
CL	Cover level	Rwp	Rain water pipe
DR	Drain	SL	Soffit level
Elec	Electrical ic	Slob	Slab level
EC	Electric Cable	Stay	Cable stay
EL	Eaves level	Step	Step level
EP	Elec. pole	SV	Stop valve
ER	Earth rod	Svp	Soil pipe
FP	Flagpole	TL	Traffic light
FA	Fitness Apparatus	ToB	Top of Building
FT	Floodlight	ToW	Top of wall level
GY	Gully	TP	Telegraph pole
GP	Gate post	TS	Traffic Signal
GV	Gas valve	TT	Tac Tile
FH	Hydrant	VP	Vent pipe
FL	Floor level	WL	Water level
IC	Inspection cover	WM	Water meter
IL	Invert level	UTL	Unable to lift
LP	Lamp post	ZCB	Zebra Crossing Beacon
MH	Manhole		
Mkr	Utility marker		

CTES

URVEYING

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CLIENT

MR T CONNOR

JOB TITLE

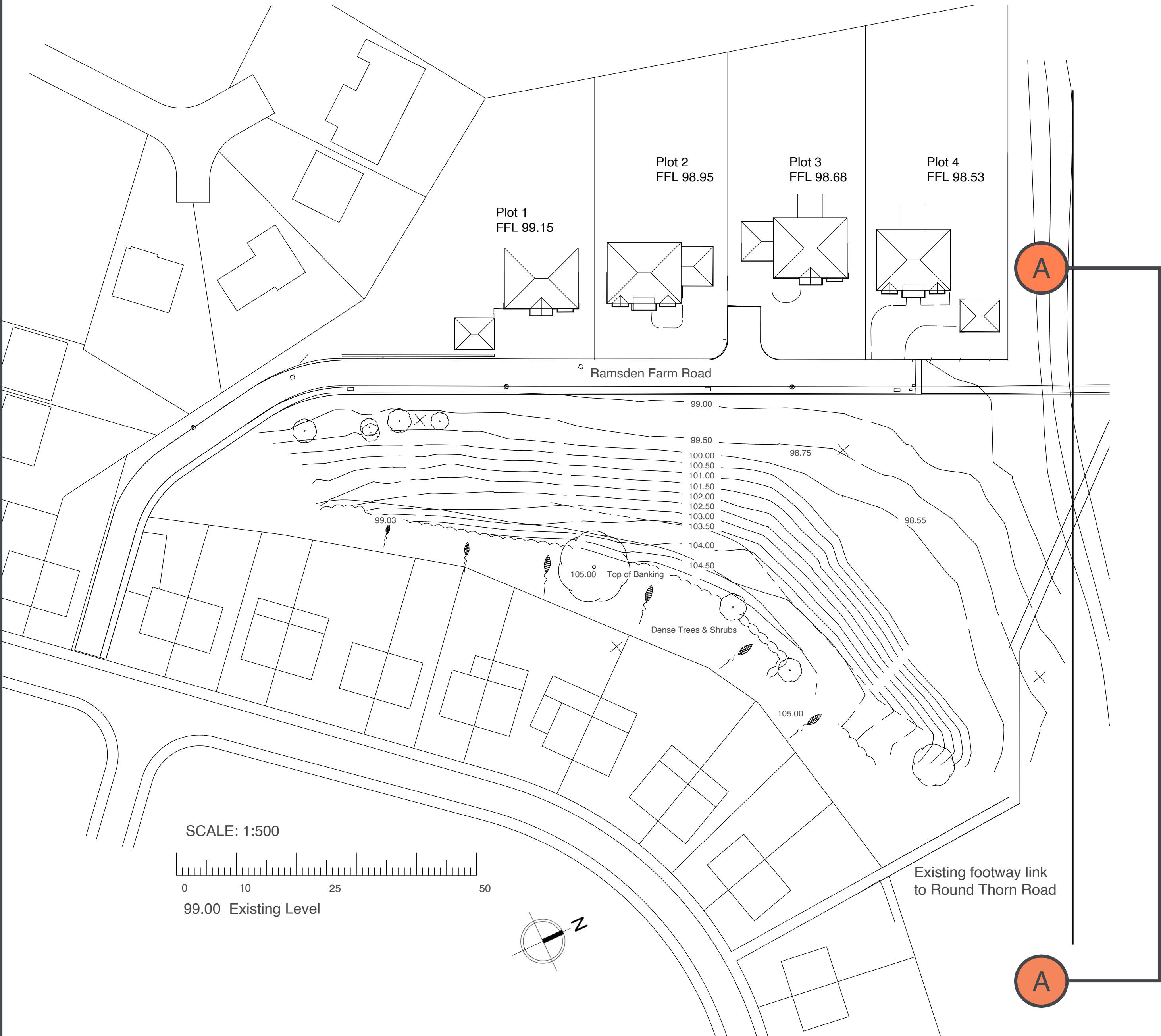
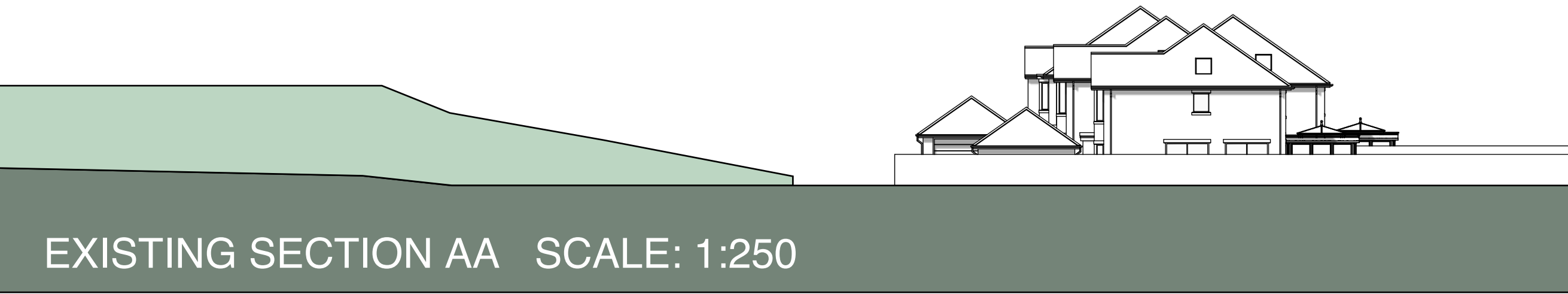
TOPOGRAPHICAL SURVEY
RAMSDEN FARM, MIDDLETON, M24 1FT

SCALE	DATE	REVISIONS
1:250	JULY 2023	A

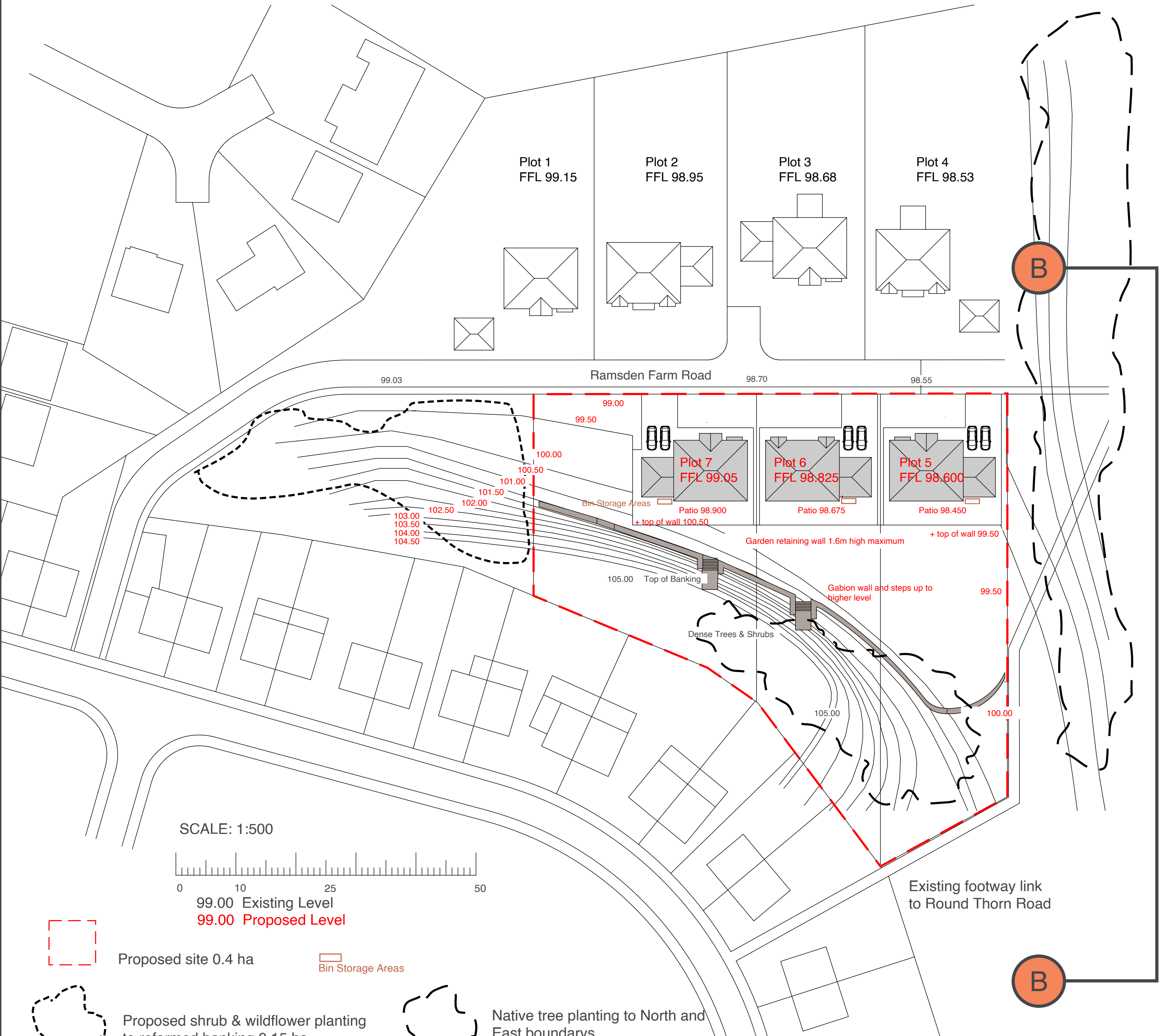
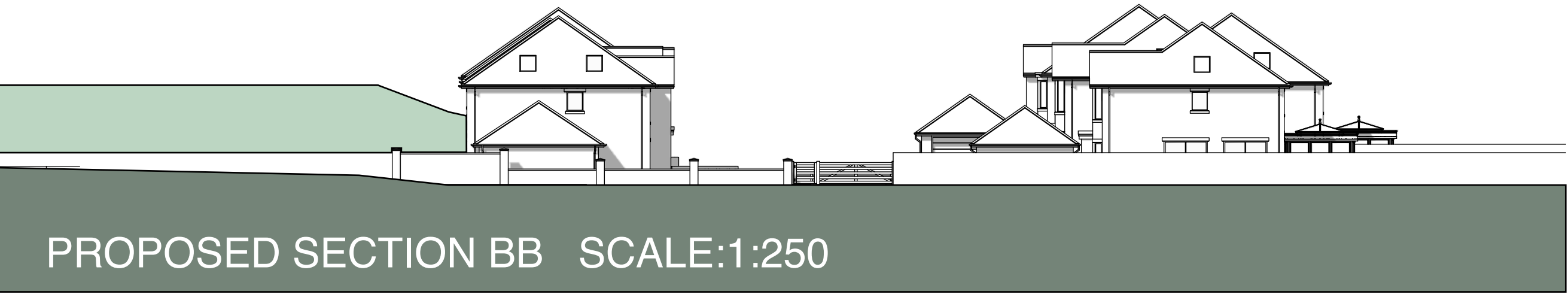
Rev A Scale Bar added

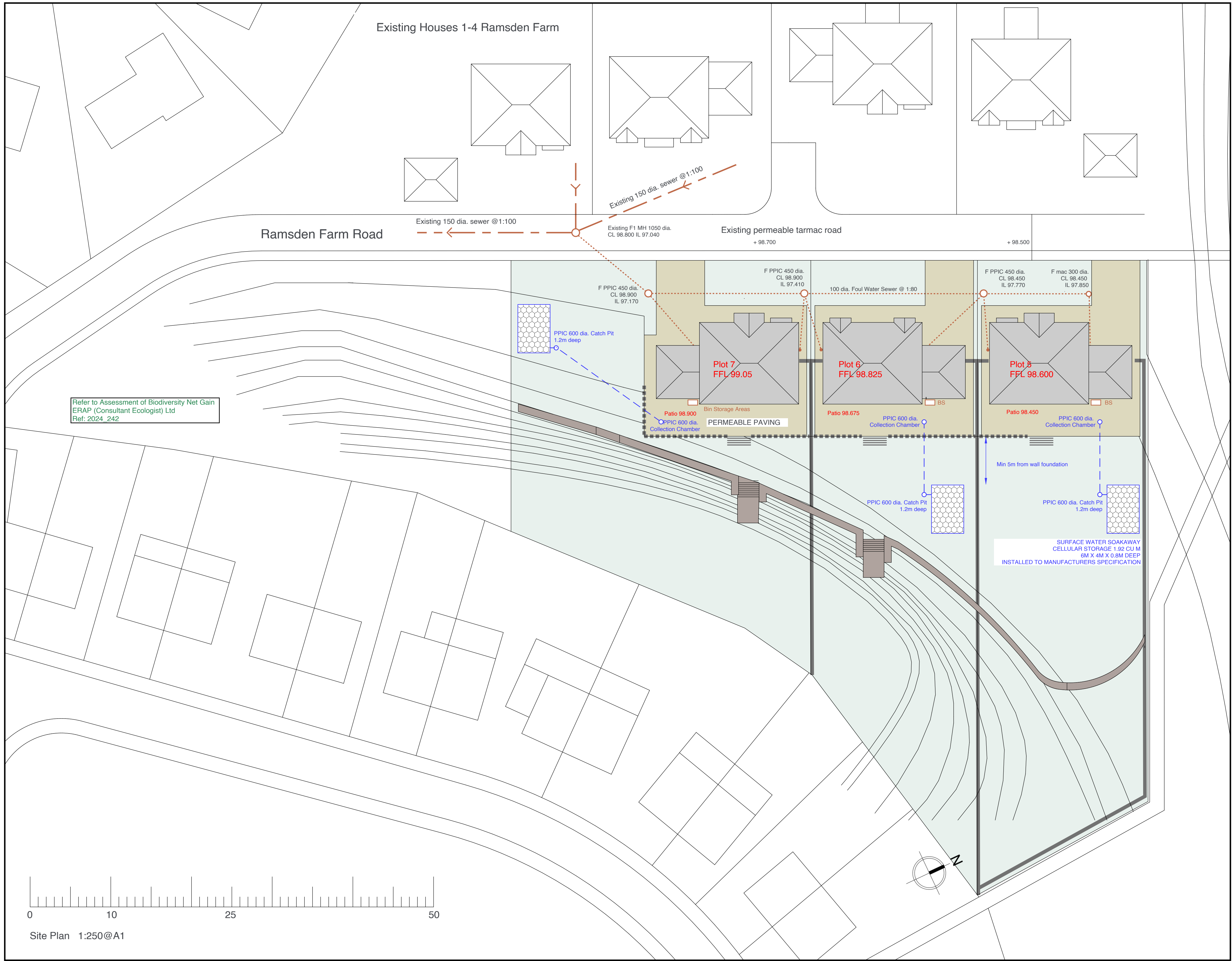
JOB REF (WATERGROVE: RAMSDEN FARM JULY 2023)

Existing



Proposed





DRAINAGE: FOUL WATER SYSTEM TO DISCHARGE INTO THE EXISTING SEWER IN RAMSDEN FARM ROAD
SURFACE WATER TO DISCHARGE TO NEW SOAKAWAYS.

ALL INVERTS AND DIMENSIONS MUST BE CHECKED ON SITE

ALL DRAINAGE INSTALLED IN ACCORDANCE WITH REGULATIONS AND TO MATCH THE EXISTING PHASE 1 DRAINAGE TO PLOTS 1-4

- SOFT LANDSCAPING TO LANDSCAPE ARCHITECTS PLAN
- GABION BASKET RETAINING WALLS
- PERMEABLE PAVING: MARSHALLS TEGULA PRIORA

Refer to Landscape Design
Trevor Bridge Associates Ltd
Ref: 7515.01/02A

Refer to Arboricultural Impact Assessment
Bowland Tree Consultancy Ltd
Ref: BTC3007

Refer to Assessment of Biodiversity Net Gain
ERAP (Consultant Ecologist) Ltd
Ref: 2024_242



1M high gabion basket retaining walls



Patio and garden walls in facing bricks with stone copings to match the houses.



1.8m high close boarded timber fence to match the existing boundary fences to Plots 1-4

Shown here with Marshalls Tegula Paving

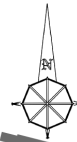
RAMSDEN FARM, ROUNDTORN ROAD, MIDDLETON, M24 1FT – Phase 2 Existing Plan Showing Mining Related Features and Nearby Rotary Boreholes Not to Scale

HigherBent
Coal Seam

Dip
14°

NOTES

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SCALE BAR

Topographical Survey Legend

Bo	Boiler	MP	Mile post
Bin	Bin	PH	Post
BL	Bed level	PM	Parking meter
BIS	Bus stop	PP	Power point
BT	British Telecom	RE	Rodding eye
Cam	Security Camera	RS	Road sign
CATV	Cable television cover	Rd	Road
CL	Lower level	RWP	Road water pipe
CR	Chimney	SL	Slab level
Elec	Electrical is	Shd	Shed
EC	Electric Cable	SL	Slab level
EL	Eners level	SL	Slab level
EP	Electric pole	SL	Slab level
ER	Earth rod	SV	Stop valve
FP	Flagpole	SV	Stop valve
FA	Fire Alarm	TL	Traffic light
FT	Floodlight	TL	Traffic light
GY	Gully	TL	Traffic light
GP	Gate post	TL	Traffic light
GV	Gas valve	TL	Traffic light
PH	Hydrant	TL	Traffic light
FL	Floor level	TL	Traffic light
IC	Inspection cover	TL	Traffic light
IL	Iron level	TL	Traffic light
LP	Lamp post	TL	Traffic light
MH	Manhole	TL	Traffic light
Mtr	Utility marker	TL	Traffic light

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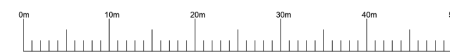
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TOPOGRAPHICAL SURVEY
RAMSDEN FARM, MIDDLETON, M24 1FT

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1:250 JULY 2023 A

Rev A: Scale Bar added
JOB REF: (WATERSGROVE: RAMSDEN FARM JULY 2023)



SCALE BAR

Proposals

Drawing Issue: Existing Topo

Client: TEC Services (NW) Ltd

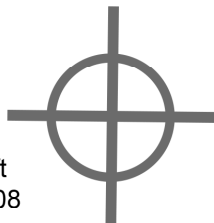
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Date: September 2024

Dwg Ref: 6383_24_1

watergrove CGI
architectural design services
3d@watergrove.co.uk 07904 971504

Mine Shaft
387405 - 008



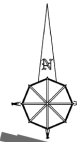
RAMSDEN FARM, ROUNDTORN ROAD, MIDDLETON, M24 1FT – Phase 2 Proposed Plan Showing Mining Related Features and Nearby Rotary Boreholes Not to Scale

HigherBent
Coal Seam

Dip
14°

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Bin	Bin	PH	Post
BL	Bed level	PM	Parking meter
BIS	Bus stop	PP	Power point
BT	British Telecom	RE	Rodding eye
Cam	Security Camera	Ridge	Roadridge level
CATV	Cable television cover	RS	Road sign
LL	Lower level	RWP	Road water pipe
GR	Gully	SL	Slab level
ELC	Electric cable	Shd	Shed
EL	Electric level	Stop	Stop level
EP	Electric pole	Stop	Stop level
SV	Earth rod	SV	Stop valve
PP	Flagpole	Sip	Scip
FA	Floodlight	TL	Traffic light
FT	Gully	Tob	Top of Building
GY	Gully	ToW	Top of wall level
GP	Gate post	TP	Telegraph pole
GV	Gas valve	TS	Traffic Signal
PH	Hydrant	VP	Vent pipe
FL	Floor level	WL	Water level
IC	Inspection cover	WM	Water meter
IL	Iron level	Utl	Unable to fit
LP	Lamp post	ZCS	Zebra Crossing
MH	Manhole		Beacon
Mtr	Utility marker		

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TOPOGRAPHICAL SURVEY
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387405 - 008

1. This report should be considered in relation to the objectives agreed between Worms Eye and the Client, outlined in the introduction.
2. For the work, reliance has been placed on publicly available data, obtained from the sources identified in the report. The information is not exhaustive and further information may be available from other sources. When using the information it has been assumed it is correct, and no attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and guidelines, for land and groundwater contamination, enforced by the Local Authority and the Environment Agency.
4. During the site walkover, reasonable effort was made to obtain an overview of the site. However, no attempt was made to enter areas that are unsafe, a risk to health and safety, locked, barricaded, overgrown, or areas not made accessible.
5. Access, the presence of services and activities on the site, limited locations where sampling could be carried out and the techniques that could be used.
6. Assessments are based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.
7. The conclusions and recommendations provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.
8. Worms Eye cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright of this report, and other plans or documents prepared by Worms Eye, is owned by them, and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies may be made and distributed by the client, as expected, in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability, or warranties, shall be extended to other parties by Worms Eye, without their written agreement.
9. New information, revised practices, or changes in legislation, may necessitate the re-interpretation of the report, in whole or in part.

Cannon House, 52 Bank Parade
Burnley, Lancashire, BB11 1TS

Site
Ramsden Farm, Roundthorn Road, Middleton, Manchester

**Borehole
Number**
RC1

Machine :	Casing Diameter	Ground Level (mOD)	Client	Job Number M241FT
Flush :				
Core Dia:	Location West of site	Dates 07/11/2019- 08/11/2019	Engineer M&J	Sheet 1/3
Method :				

[illegible]

Remarks	Scale (approx)	Logged By
	1:100	MJ/JSH
	Figure No. M241FT.RC1	

Cannon House, 52 Bank Parade
Burnley, Lancashire, BB11 1TS

Site
Ramsden Farm, Roundthorn Road, Middleton, Manchester

**Borehole
Number**
RC1

Machine :	Casing Diameter	Ground Level (mOD)	Client	Job Number M241FT
Flush :				
Core Dia:	Location	Dates 07/11/2019- 08/11/2019	Engineer	Sheet
Method :	West of site		M&J	2/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							(4.50)			
							21.30 (0.80) 22.10	COAL intact and firm		
								Grey MUDSTONE		
							(9.30)			
							31.40 (0.60) 32.00	COAL intact and firm		
								Grey MUDSTONE		
							(11.00)			

Remarks	Scale (approx)	Logged By
	1:100	MJ/JSH
		Figure No. M241FT.RC1

WORMS EYE GEOTECHNICAL						Cannon House, 52 Bank Parade Burnley, Lancashire, BB11 1TS		Site Ramsden Farm, Roundthorn Road, Middleton, Manchester		Borehole Number RC1	
Machine :			Casing Diameter			Ground Level (mOD)		Client		Job Number M241FT	
Flush :										Sheet 3/3	
Core Dia:			Location West of site			Dates 07/11/2019- 08/11/2019		Engineer M&J			
Method :											
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
							(11.00)				
							43.00	Black MUDSTONE			
							(1.90)				
							44.90	Grey MUDSTONE			
							(5.10)				
							50.00	Complete at 50.00m			
Remarks								Scale (approx) 1:100		Logged By MJ/JSH	
								Figure No. M241FT.RC1			

WORMS EYE GEOTECHNICAL

Cannon House, 52 Bank Parade
Burnley, Lancashire, BB11 1TS

Site

Ramsden Farm, Roundthorn Road, Middleton, Manchester

**Borehole
Number**
RC2

Machine :

Flush :

Core Dia:

Method :

Casing Diameter

Ground Level (mOD)

Client

Job Number
M241FT

Location

Northwest corner

Dates

07/11/2019-
08/11/2019

Engineer

M&J

Sheet

 $\frac{1}{2}$ Depth
(m)

TCE

SCP

BOD

EI

Field Records

Level
(mOD)

Depth
(m)
(Thickness)

Description

Legend

Water

Fill

(2.00)

2.00

Drift

(14.50)

16.50

Grey MUDSTONE

(5.50)

Remarks

Scale (approx)

1:100

Logged
By

MJ/JSH

Figure No.

M241FT.RC2

WORMS EYE GEOTECHNICAL

Cannon House, 52 Bank Parade
Burnley, Lancashire, BB11 1TS

Site

Ramsden Farm, Roundthorn Road, Middleton, Manchester

**Borehole
Number**
RC2

Machine :

Flush :

Core Dia:

Method :

Casing Diameter

Ground Level (mOD)

Client

Job Number
M241FT

Location

Northwest corner

Dates

07/11/2019-
08/11/2019

Engineer

M&J

Sheet

2/2

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							(5.50)			
							22.00 (0.80)	COAL intact and firm		
							22.80	Grey MUDSTONE		
							(7.40)			
							30.20 (0.80)	COAL intact and firm		
							31.00	Grey MUDSTONE		
							(2.00)			
							33.00			
								Complete at 33.00m		

Remarks

Scale (approx)

1:100

Logged
By

MJ/JSH

Figure No.

M241FT.RC2

Cannon House, 52 Bank Parade
Burnley, Lancashire, BB11 1TS

Site
Ramsden Farm, Roundthorn Road, Middleton, Manchester

**Borehole
Number**
RC3

Machine :	Casing Diameter	Ground Level (mOD)	Client	Job Number M241FT
Flush :				
Core Dia:				
Method :	Location Towards centre of site	Dates 07/11/2019- 08/11/2019	Engineer M&J	Sheet 1/2

[illegible]

Remarks	Scale (approx)	Logged By
	1:100	MJ/JSH
		Figure No. M241FT.RC3

WORMS EYE GEOTECHNICAL						Cannon House, 52 Bank Parade Burnley, Lancashire, BB11 1TS		Site Ramsden Farm, Roundthorn Road, Middleton, Manchester		Borehole Number RC3	
Machine :			Casing Diameter			Ground Level (mOD)		Client		Job Number M241FT	
Flush :								Engineer		Sheet	
Core Dia:			Location Towards centre of site			Dates 07/11/2019- 08/11/2019		M&J		2/2	
Method :											
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
							(3.90)				
							23.10 (0.60) 23.70	COAL intact and firm			
								Grey MUDSTONE			
							(5.80)				
							29.50 (0.80) 30.30	COAL intact and firm			
								Grey MUDSTONE			
							(2.70)				
							33.00	Complete at 33.00m			
Remarks									Scale (approx) 1:100	Logged By MJ/JSH	
									Figure No. M241FT.RC3		

WORMS EYE GEOTECHNICAL

Cannon House, 52 Bank Parade
Burnley, Lancashire, BB11 1TS

Site

Ramsden Farm, Roundthorn Road, Middleton, Manchester

**Borehole
Number**
RC4

Machine :

Flush :

Core Dia:

Method :

Casing Diameter

Ground Level (mOD)

Client

Job Number
M241FT

Location

Centre, south

Dates

07/11/2019-
08/11/2019

Engineer

M&J

Sheet

1/2

[illegible]

Remarks

Scale (approx)

1:100

Logged
By

MJ/JSH

Figure No.

M241FT.RC4

WORMS EYE GEOTECHNICAL						Cannon House, 52 Bank Parade Burnley, Lancashire, BB11 1TS		Site Ramsden Farm, Roundthorn Road, Middleton, Manchester		Borehole Number RC4	
Machine :			Casing Diameter			Ground Level (mOD)		Client		Job Number M241FT	
Flush :										Sheet 2/2	
Core Dia:			Location Centre, south			Dates 07/11/2019- 08/11/2019		Engineer M&J			
Method :											
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
							(7.20)				
							25.20 (1.00) 26.20	Black MUDSTONE			
								Grey MUDSTONE			
							(4.10)				
							30.30 (0.70) 31.00	COAL intact and firm			
								Grey MUDSTONE			
							(4.20)				
							35.20 (0.80) 36.00	COAL intact and firm			
								Grey MUDSTONE			
							(3.00)				
					Complete at 39.00 metres		39.00				
Remarks									Scale (approx) 1:100	Logged By MJ/JSH	
									Figure No. M241FT.RC4		

WORMS EYE GEOTECHNICAL

Cannon House, 52 Bank Parade
Burnley, Lancashire, BB11 1TS

Site

Ramsden Farm, Roundthorn Road, Middleton, Manchester

**Borehole
Number**
RC5

Machine :

Flush :

Core Dia:

Method :

Casing Diameter

Ground Level (mOD)

Client

Job Number
M241FT

Location

Towards centre. west

Dates

07/11/2019-
08/11/2019

Engineer

M&J

Sheet

 $\frac{1}{2}$ [illegible]

Remarks

Scale (approx)

1:100

Logged
By

MJ/JSH

Figure No.

M241FT.RC5

WORMS EYE GEOTECHNICAL			Cannon House, 52 Bank Parade Burnley, Lancashire, BB11 1TS					Site Ramsden Farm, Roundthorn Road, Middleton, Manchester		Borehole Number RC5		
Machine : Flush : Core Dia : Method :			Casing Diameter			Ground Level (mOD)		Client			Job Number M241FT	
			Location Towards centre. west			Dates 07/11/2019- 08/11/2019		Engineer M&J			Sheet 2/2	
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description			Legend	Water
							(10.50)					
							27.00	Black MUDSTONE				
							(1.30)					
							28.30	Grey MUDSTONE				
							(3.70)					
32.00	COAL intact and firm											
(0.80)												
32.80	Grey MUDSTONE											
(4.60)												

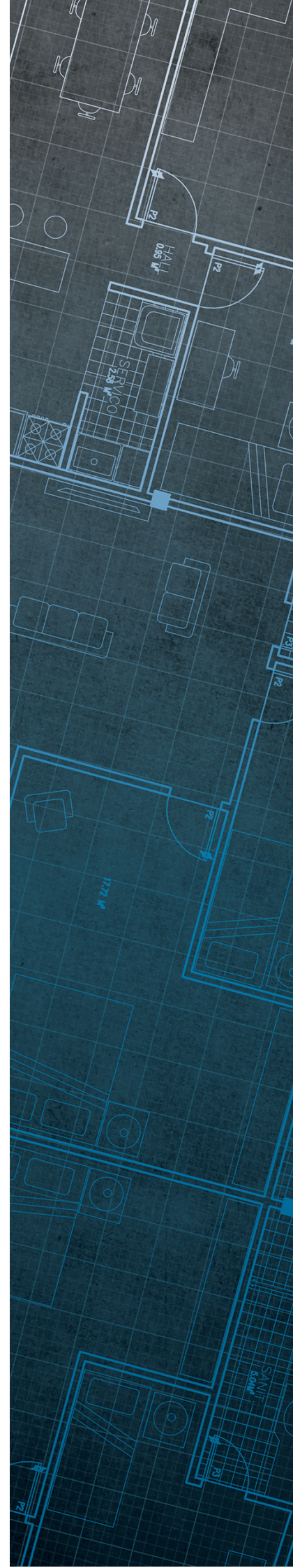


The Coal
Authority

Consultants Coal Mining Report

Ramsden Farm
Roundthorn Road
Middleton
Rochdale
M24 1FT

Date of enquiry:	8 July 2022
Date enquiry received:	8 July 2022
Issue date:	8 July 2022
Our reference:	51003264028001
Your reference:	M24 1FT



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

David Lord

Enquiry address

Ramsden Farm
Roundthorn Road
Middleton
Rochdale
M24 1FT

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

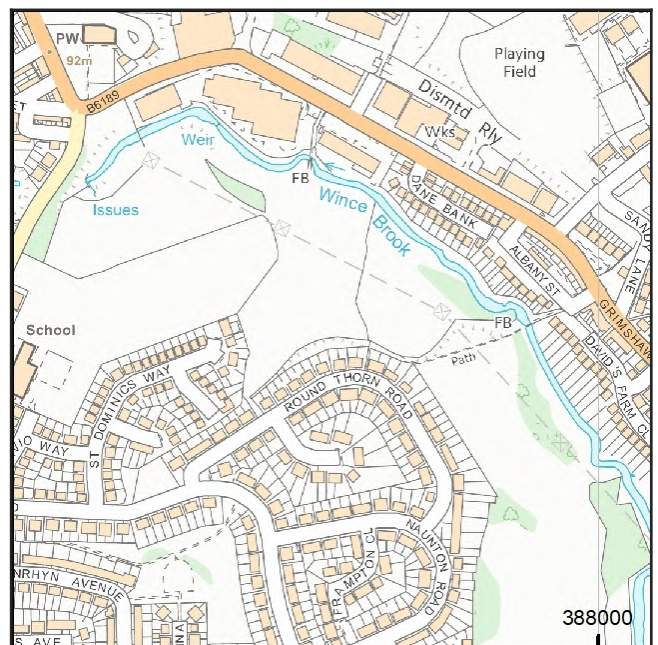
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	LOWER BENT	Coal	37B8	131	Beneath Property	14.0	South	130	1900

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	387405-008	387624 405285		Coal	

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

17156	16820	NW92
PO0	3672	NW424

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
HIGHER BENT	Coal	Yes	Within	N/A	283

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

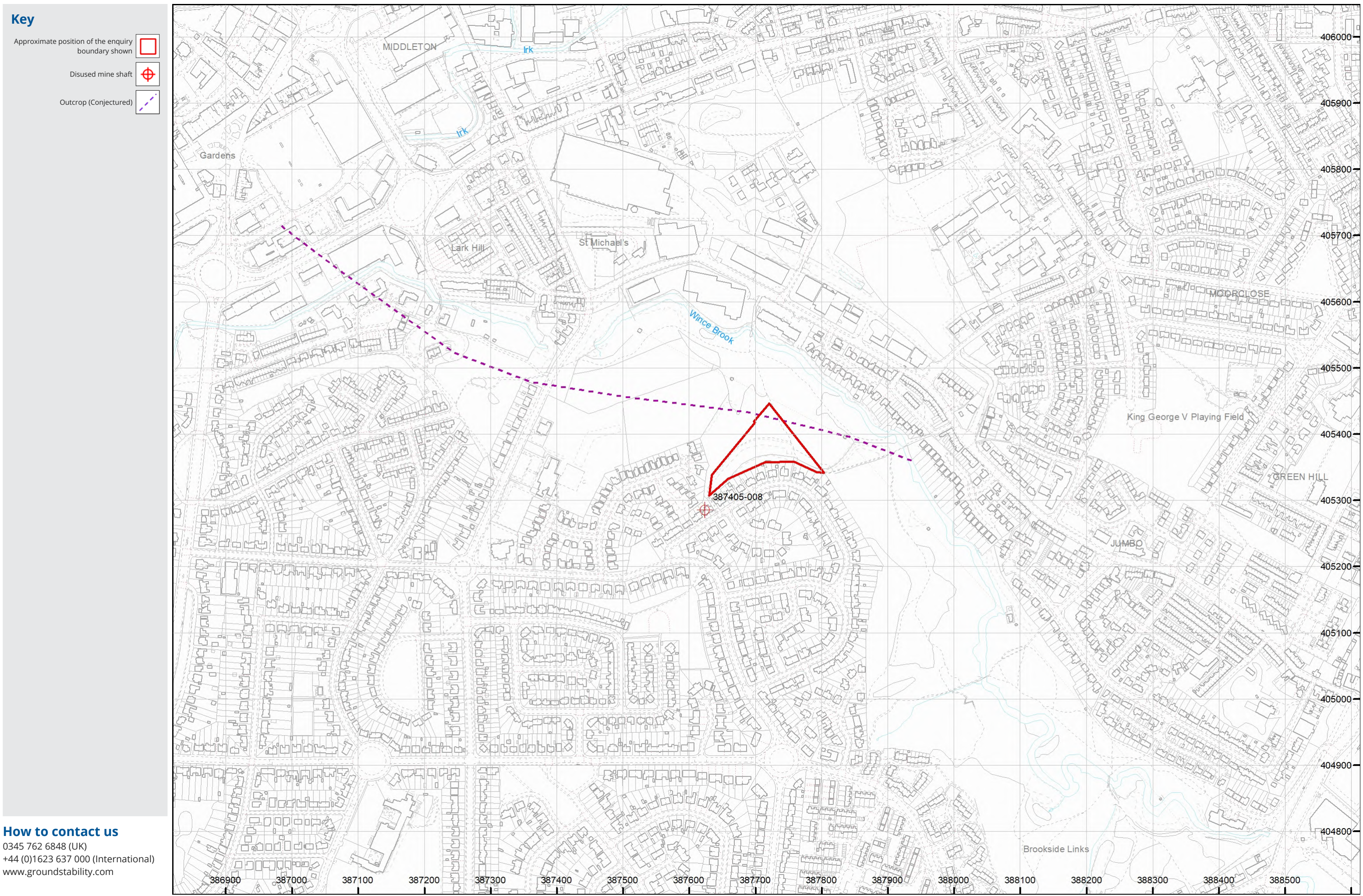
Withdrawal of support notices

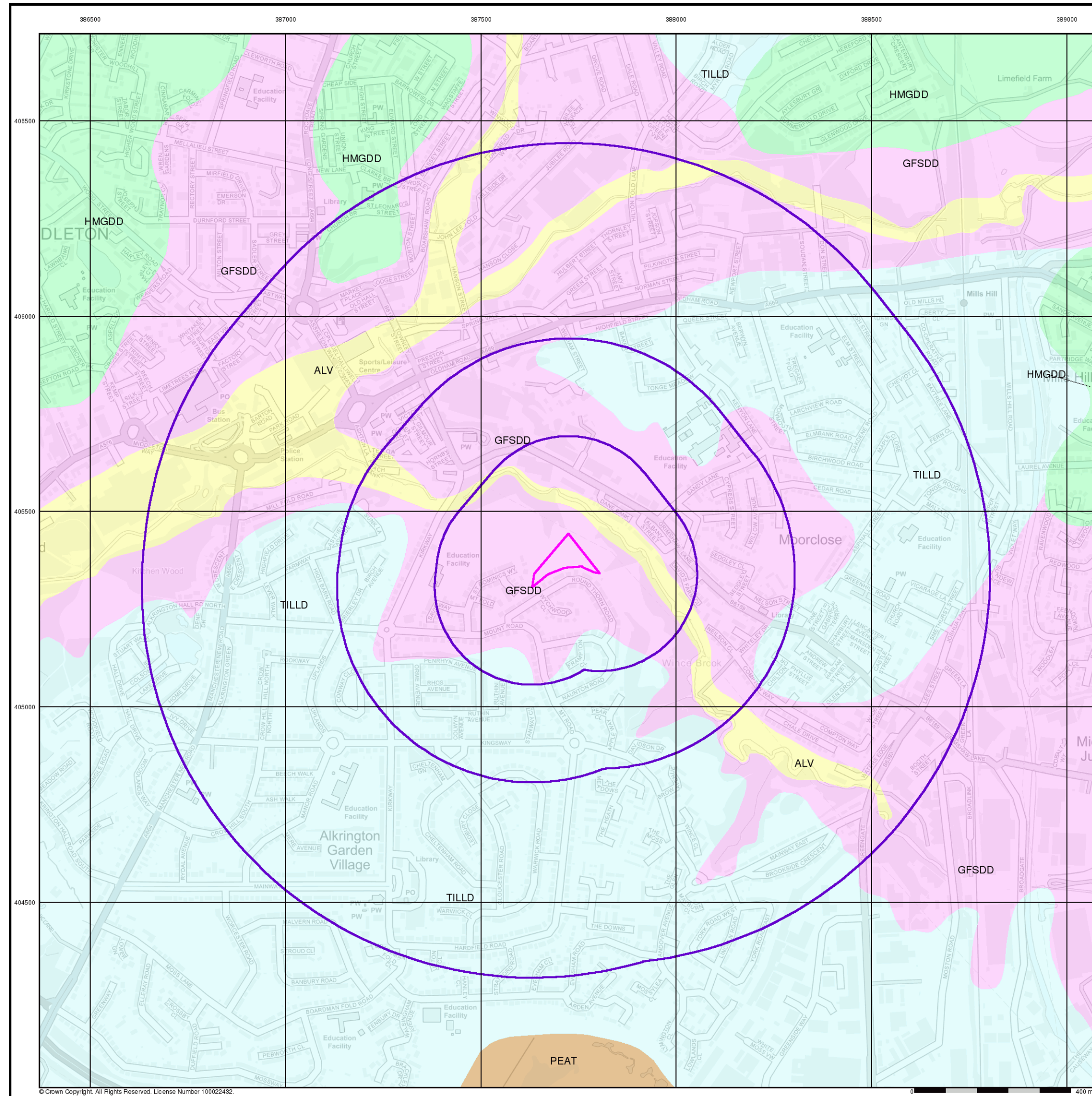
Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

The map highlights any specific surface or subsurface features within or near to the boundary of the site.





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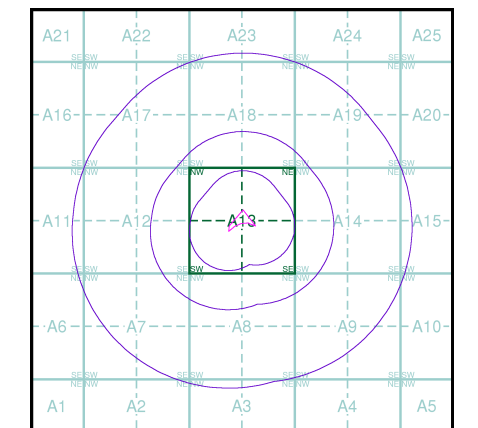
Superficial Geology

BGS 1:10,000 Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details

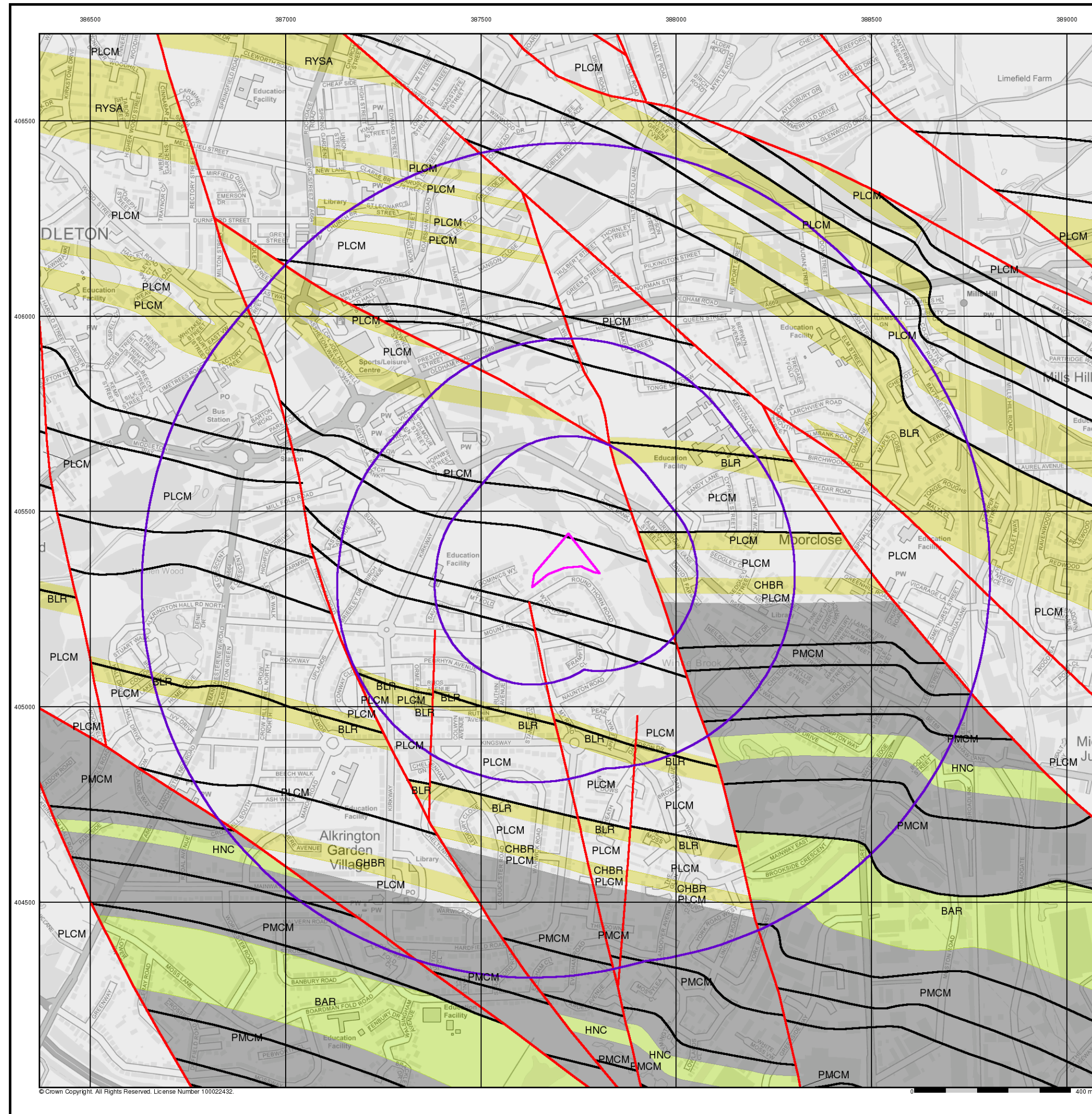
Order Number: 29811164_1_1
Customer Ref: M24 1FT
National Grid Reference: 387710, 405360
Slice: A
Site Area (Ha): 0.79
Search Buffer (m): 1000

Site Details

Ramsden Farm, Roundthorn Road, MIDDLETON, M24 1FT

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Bedrock and Faults

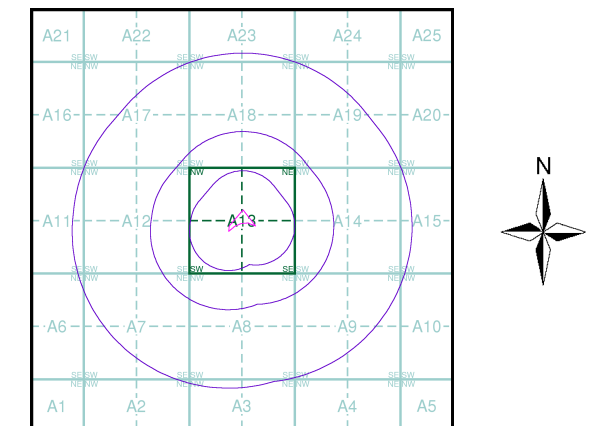
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults and thin beds mapped as lines such as coal seams and mineral veins. These are not restricted by age and could relate to features of any of the 1:10,000 geology datasets.

Bedrock and Faults Map - Slice A



Order Details

Order Number: 29811164_1_1
Customer Ref: M24 1FT
National Grid Reference: 387710, 405360
Slice: A
Site Area (Ha): 0.79
Search Buffer (m): 1000

Site Details

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