

Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: County Series

Map date: 1910

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1910
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

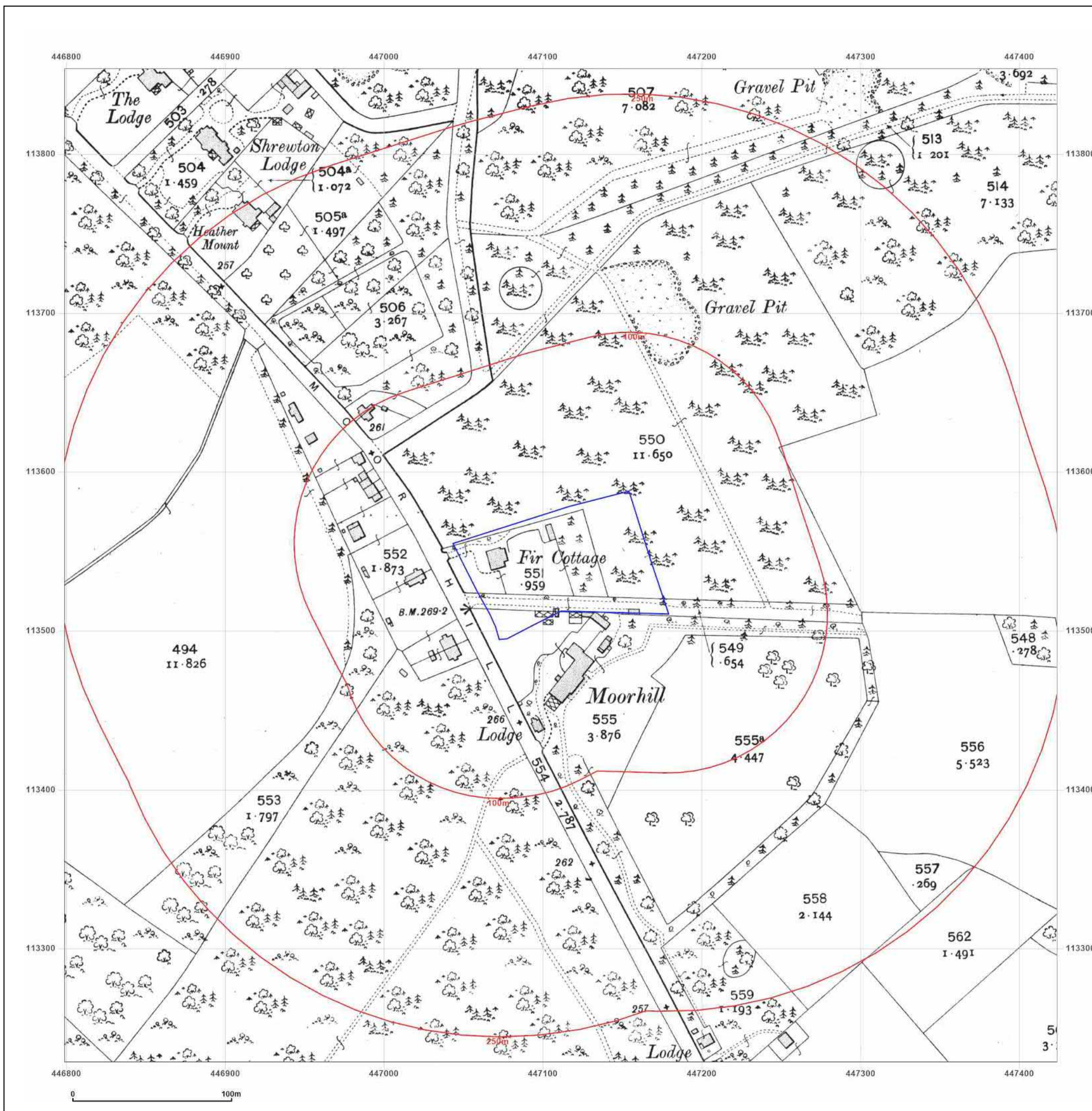


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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: County Series

Map date: 1940

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1940
Revised 1940
Edition N/A
Copyright N/A
Levelled N/A

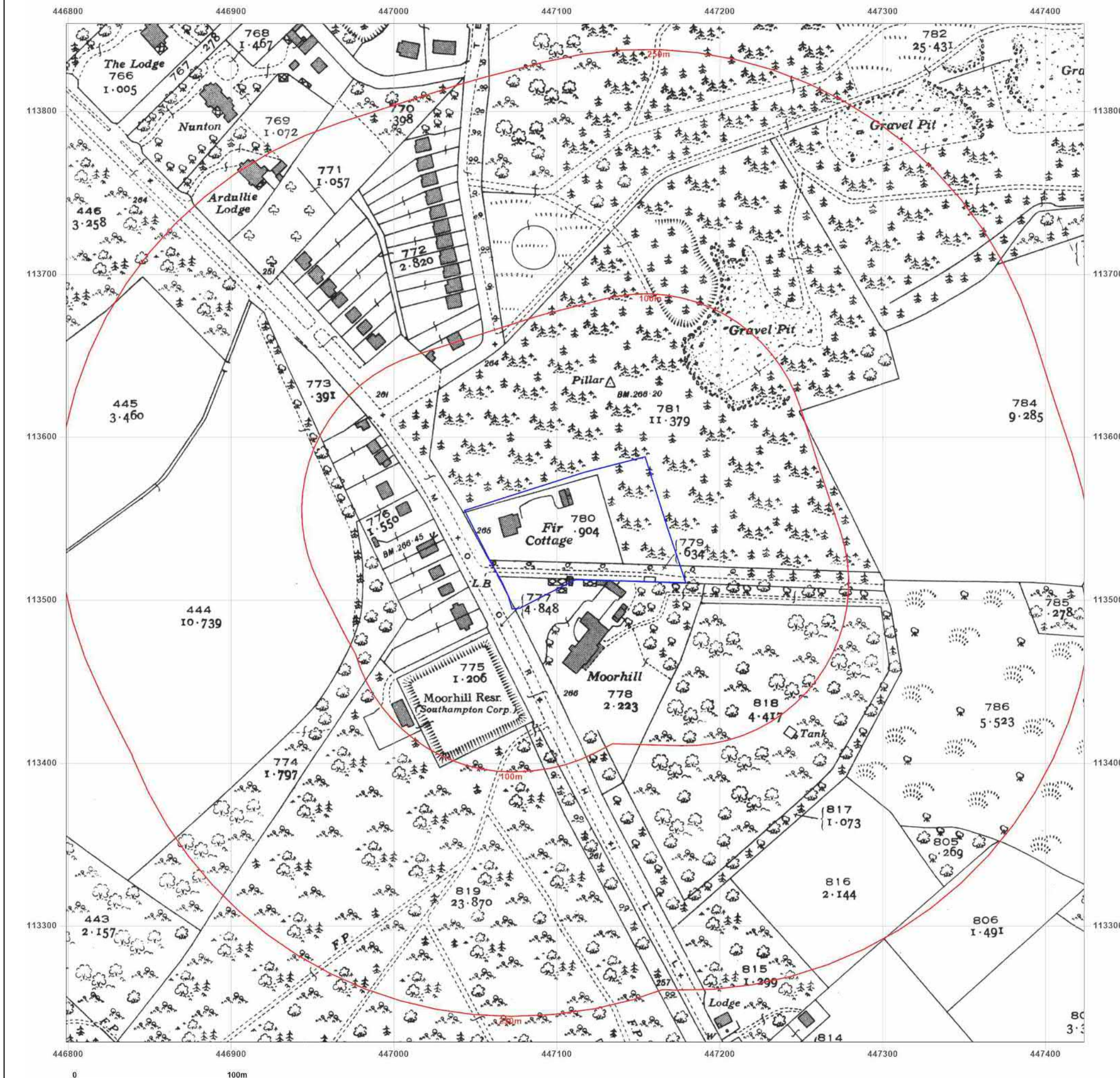


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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1949-1950

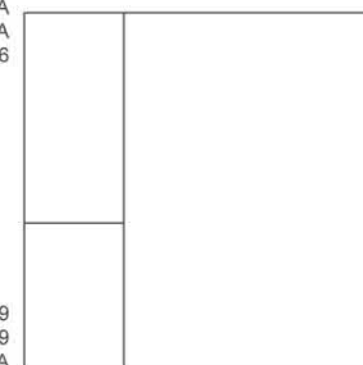
Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled 1946

Surveyed 1949
Revised 1949
Edition N/A
Copyright N/A
Levelled 1947

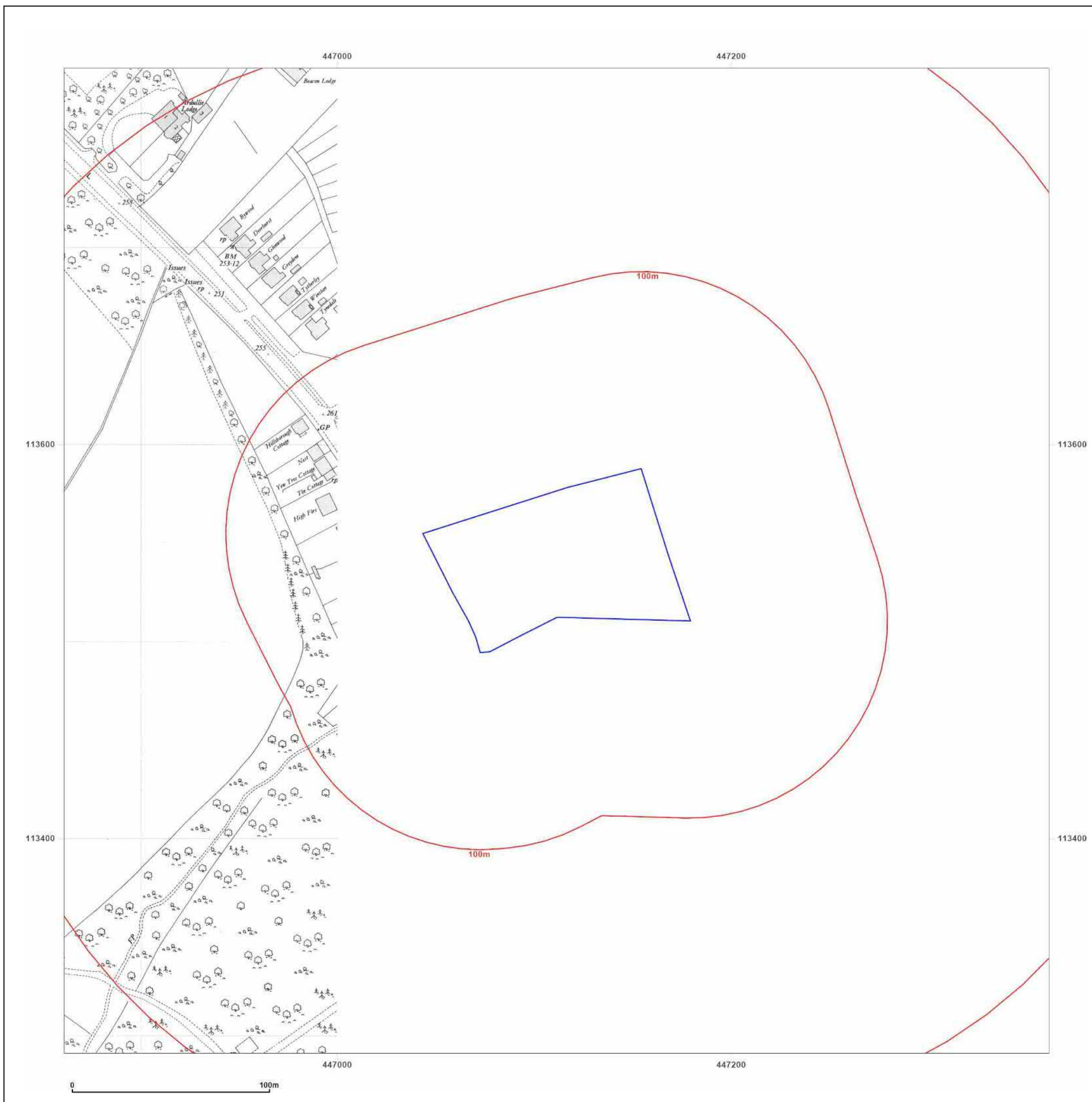


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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1950

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1950
Revised 1950
Edition N/A
Copyright N/A
Levelled 1947

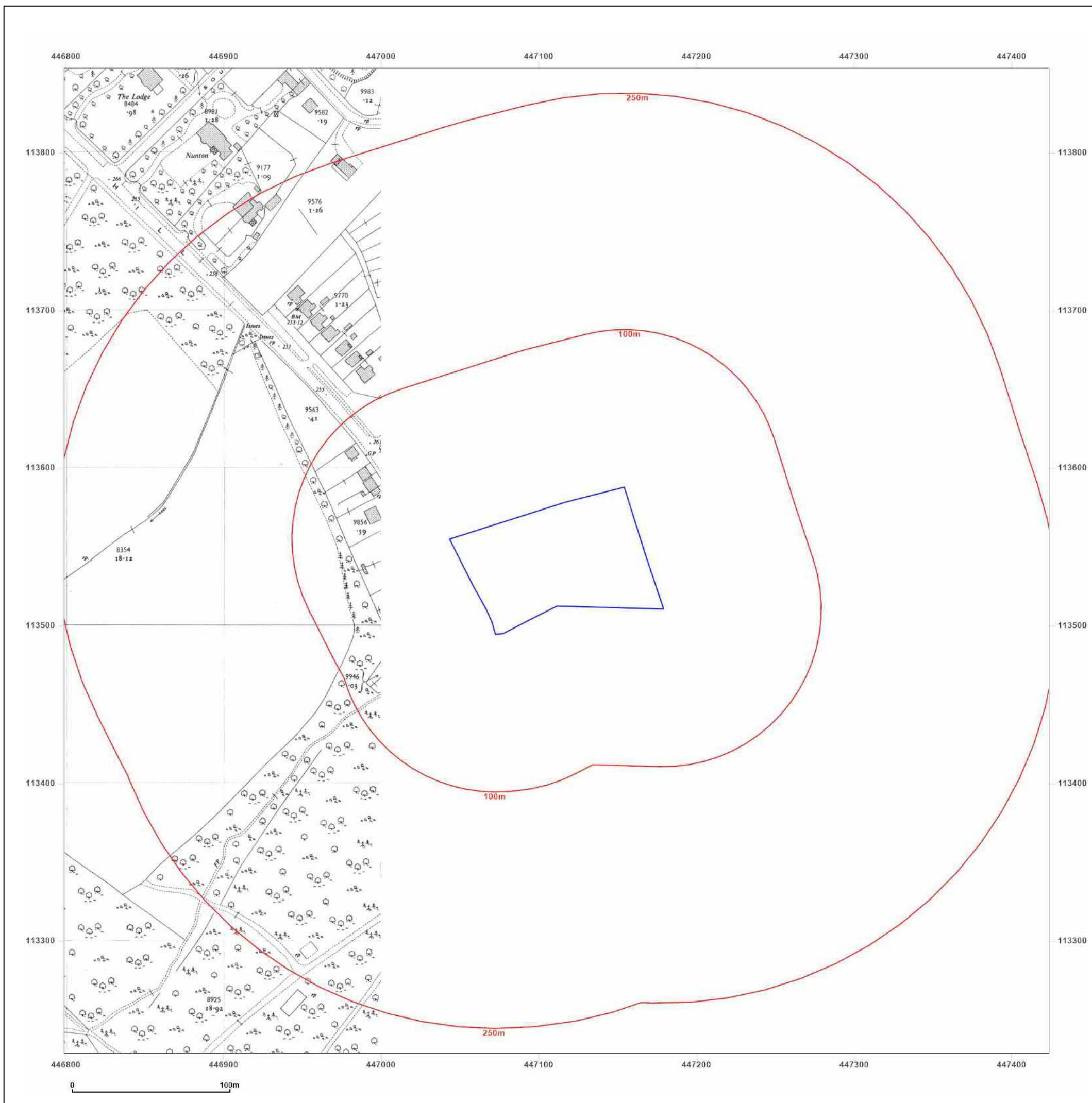


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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1951

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

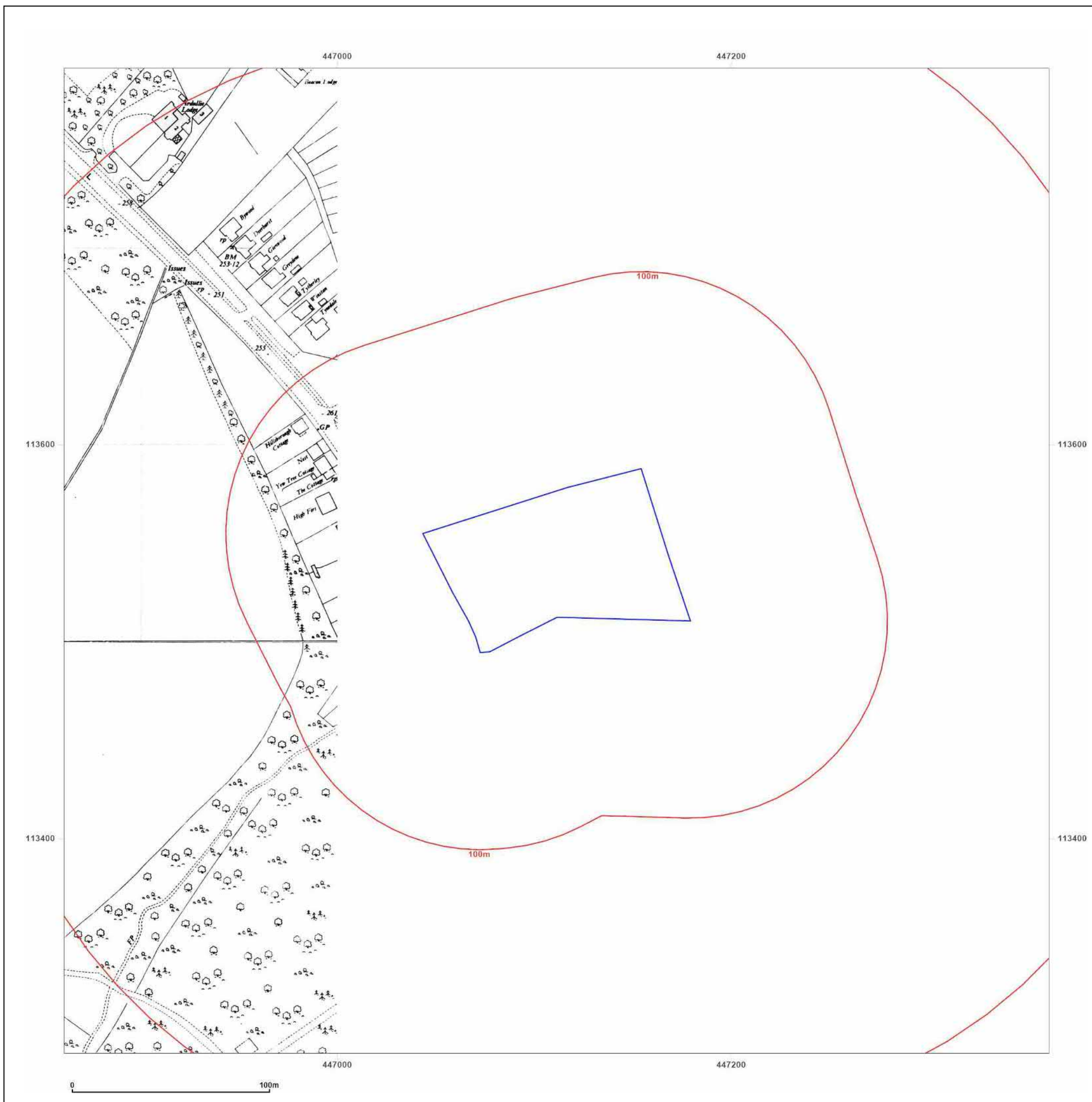


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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1954

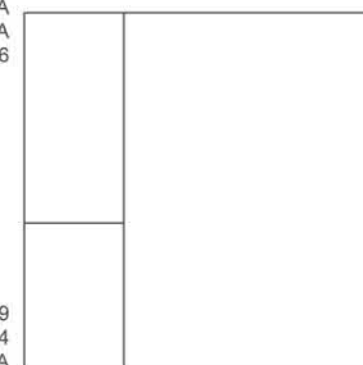
Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1946

Surveyed 1949
Revised 1954
Edition N/A
Copyright N/A
Levelled 1947

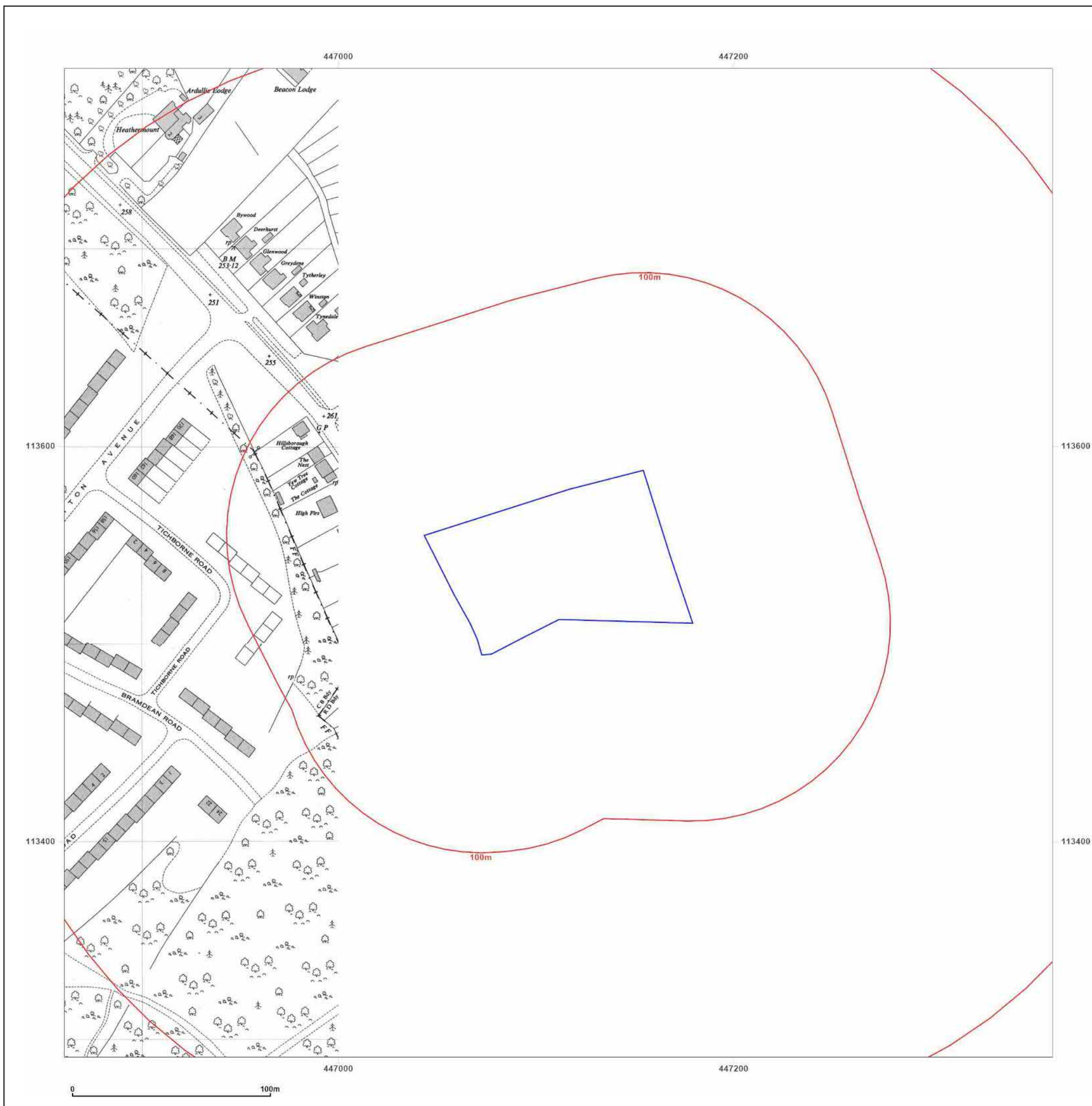


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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1955

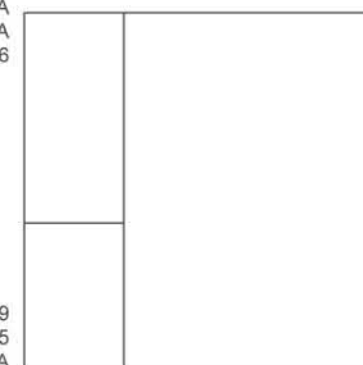
Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1955
Revised 1955
Edition N/A
Copyright N/A
Levelled 1946

Surveyed 1949
Revised 1955
Edition N/A
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Site Details:

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WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1955-1959

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1954
Revised 1954
Edition N/A
Copyright 1955
Levelled 1947

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled 1959

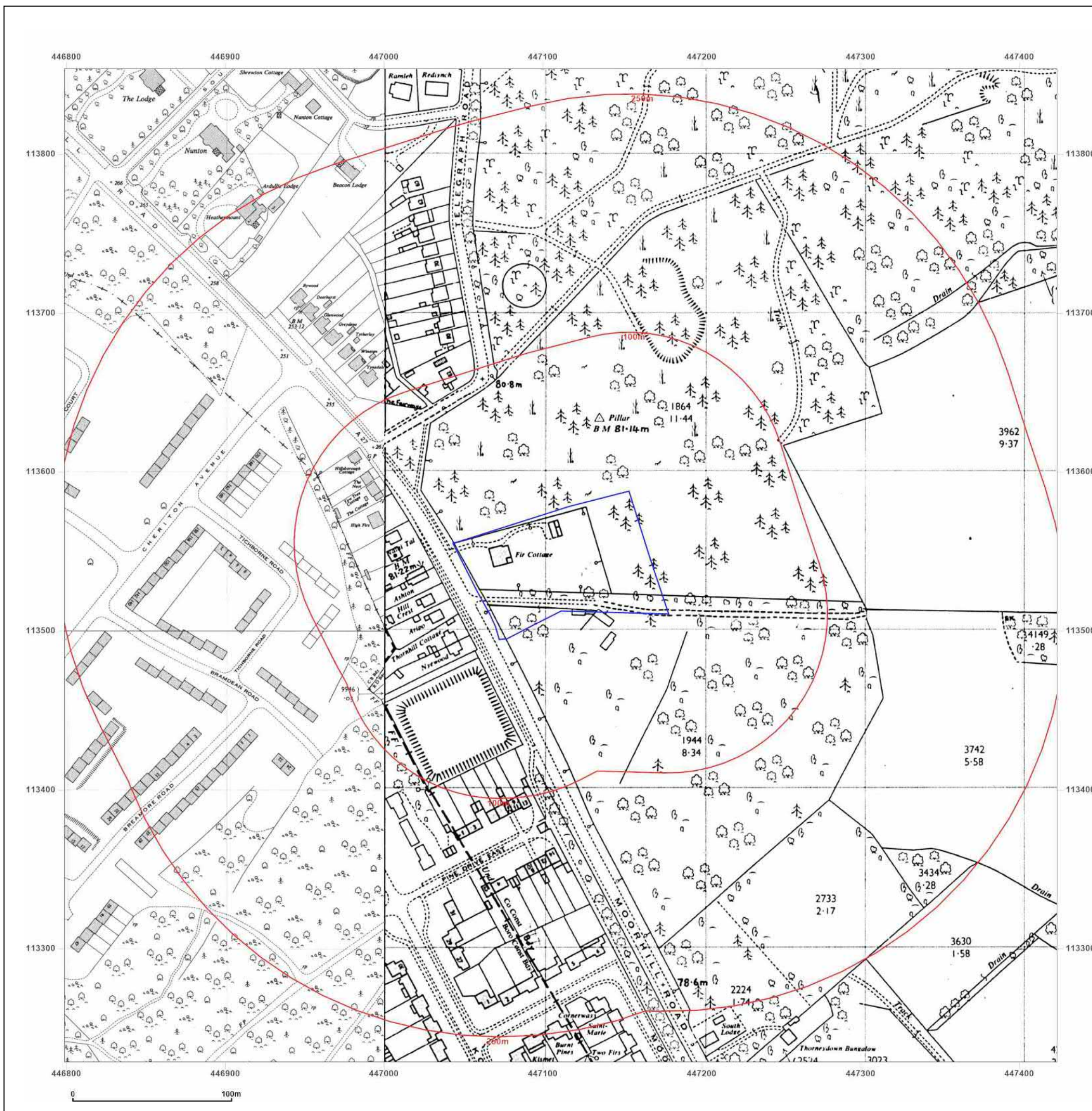


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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1965

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1965
Revised 1965
Edition 1965
Copyright 1965
Levelled 1959

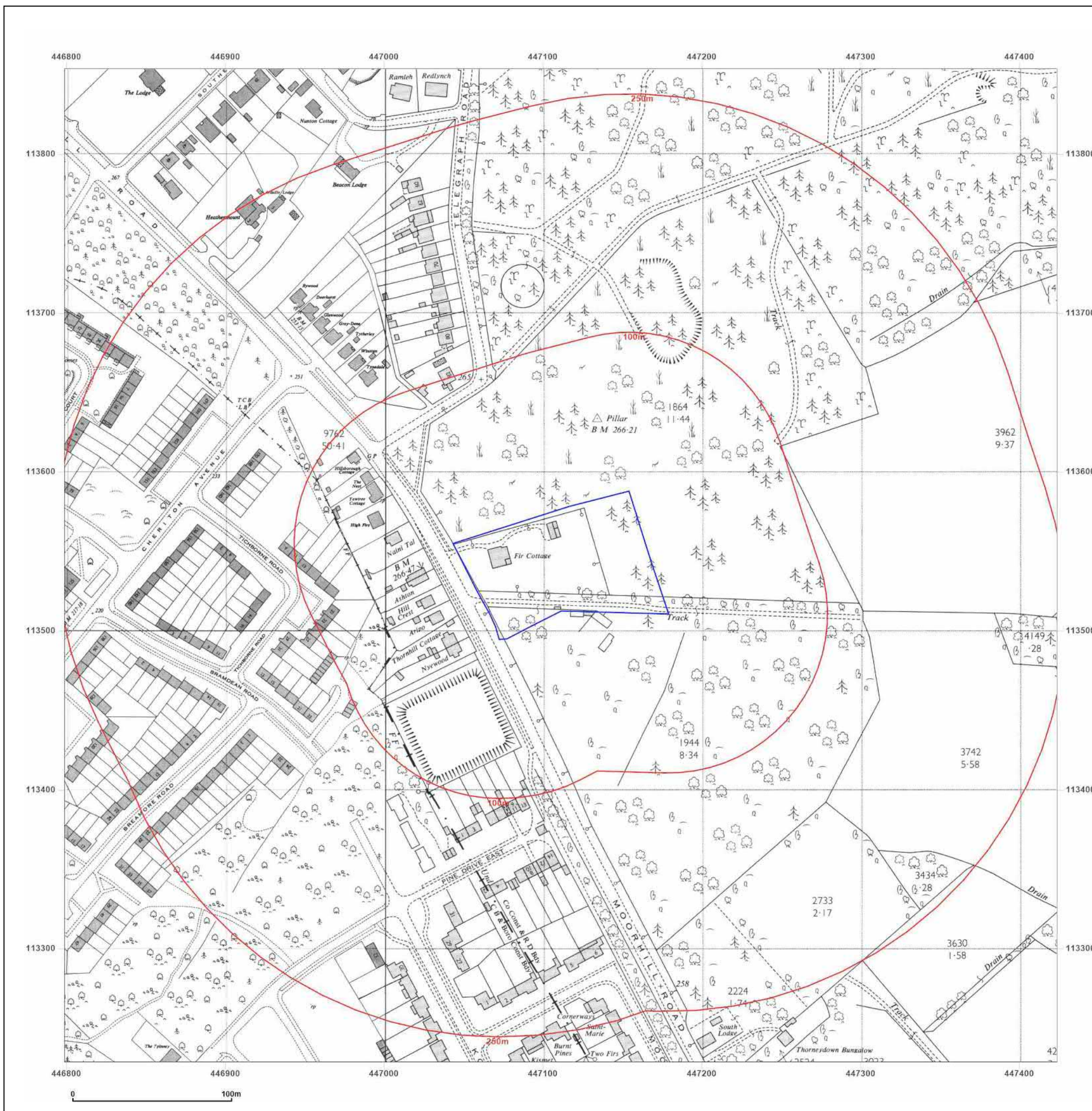


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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1965

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
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Levelled N/A

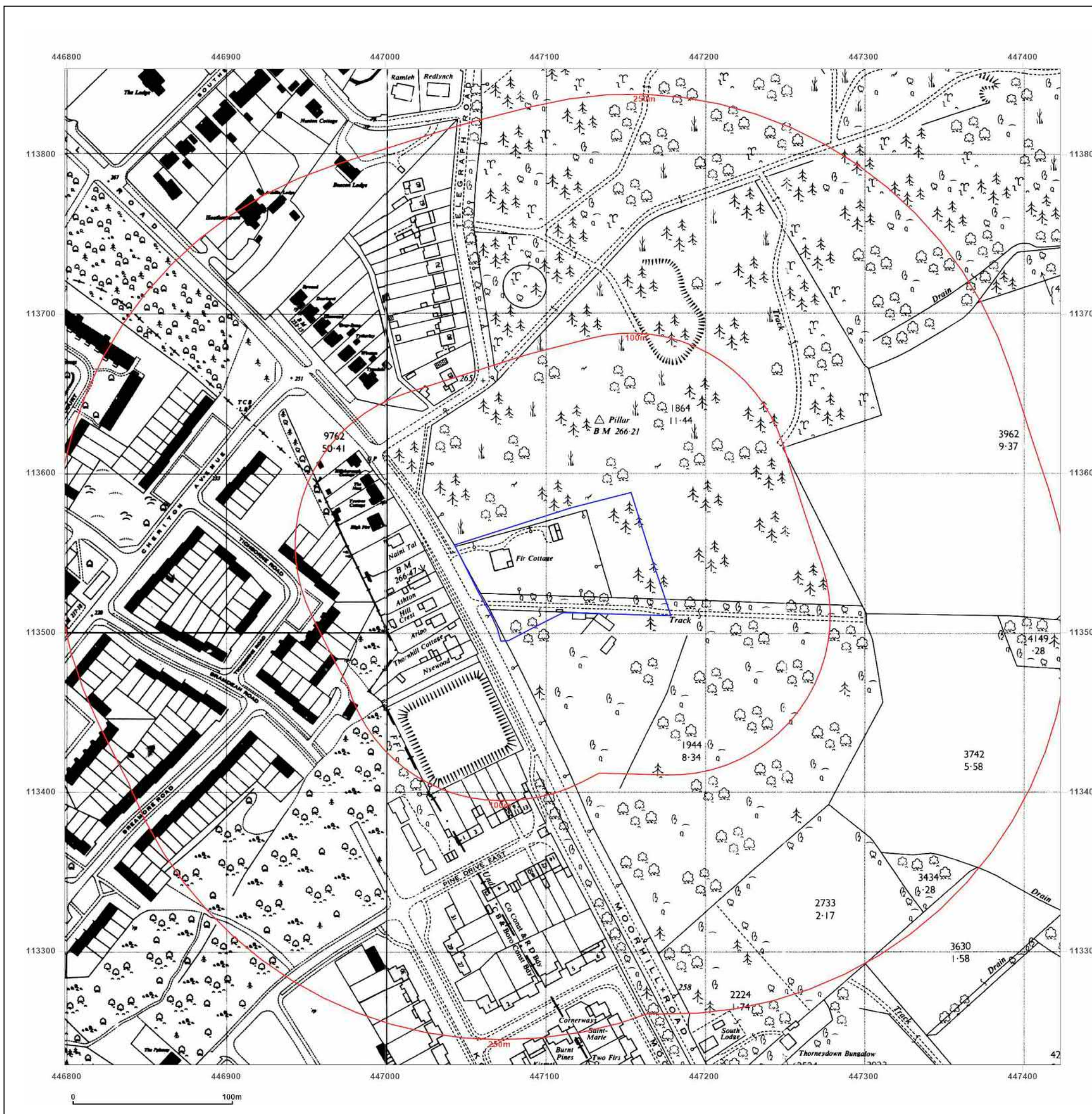


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Site Details:

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WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

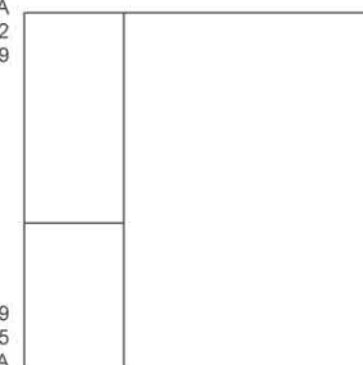
Map date: 1962-1966

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1961
Revised 1961
Edition N/A
Copyright 1962
Levelled 1959



Surveyed 1949
Revised 1965
Edition N/A
Copyright 1966
Levelled 1959



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Site Details:

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WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

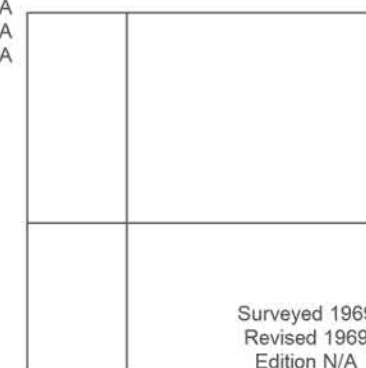
Map date: 1970-1974

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1969
Revised 1969
Edition N/A
Copyright 1970
Levelled 1959

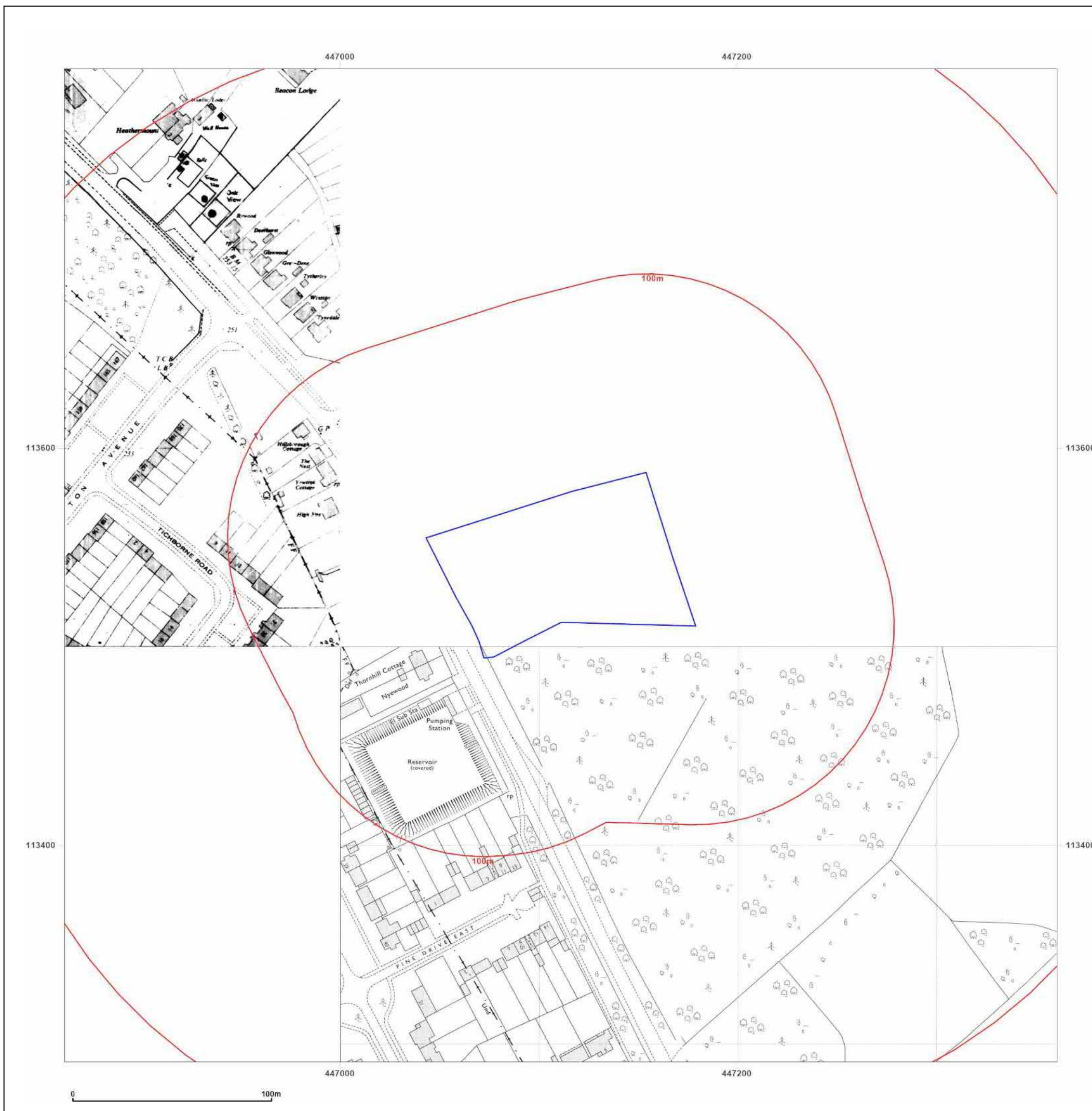


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Site Details:

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WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

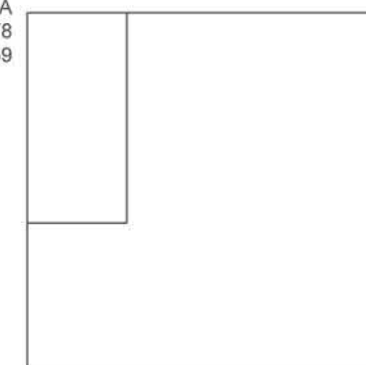
Map date: 1978

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1950
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WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1978

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1978
Revised 1978
Edition N/A
Copyright 1978
Levelled N/A

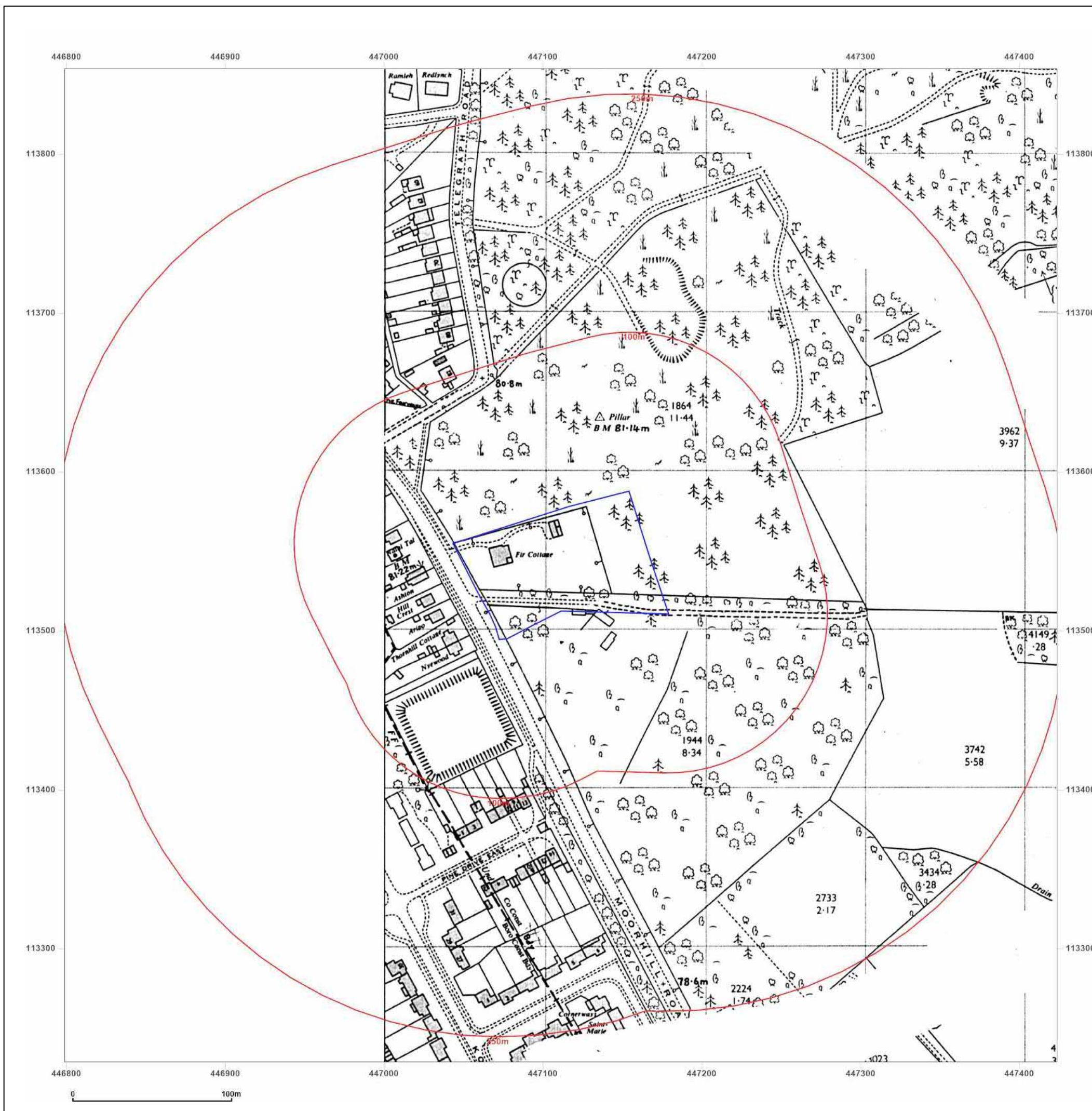


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Site Details:

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WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1985

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1959
Revised 1985
Edition N/A
Copyright 1985
Levelled 1959



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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1993

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1993
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

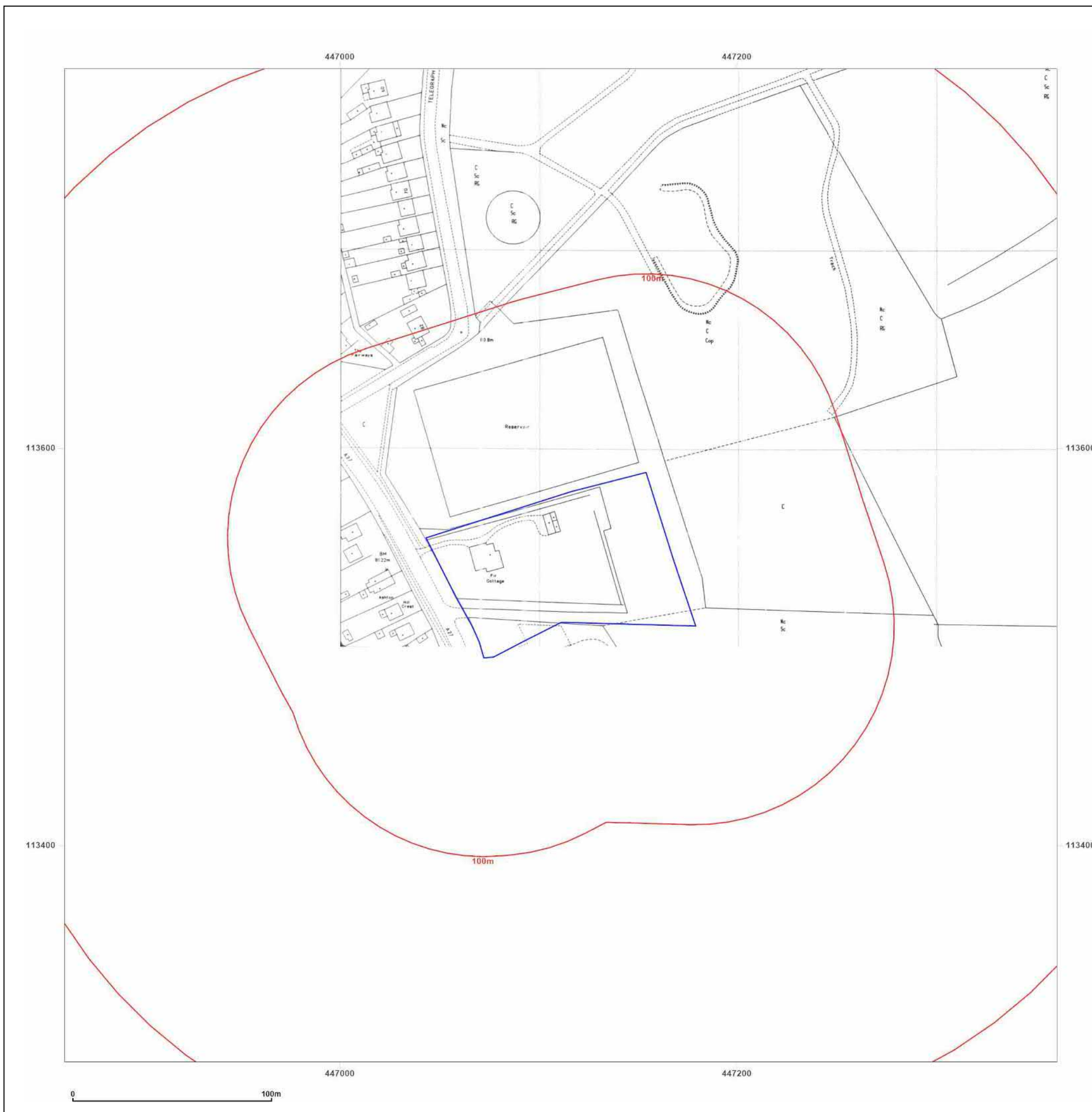


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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: National Grid

Map date: 1993

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1993
Revised N/A
Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1993
Revised N/A
Edition N/A
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Surveyed 1993
Revised N/A
Edition N/A
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Site Details:

MOORHILL, MOORHILL ROAD,
WEST END, SO30 3AZ

Client Ref: A11641
Report Ref: GS-8775594
Grid Ref: 447111, 113541

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



2003



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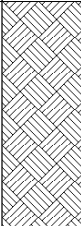
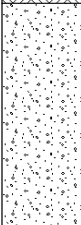
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Map legend available at:
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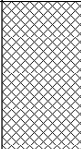
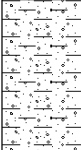
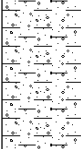


APPENDIX VI - EXPLORATORY HOLE LOGS

				Trial Pit Log			Trialpit No HP101 Sheet 1 of 1		
Project Name: Land east of Moorhill Road				Project No. A11641		Co-ords: 447070.00 - 113560.00 Level:		Date 26/05/2022	
Location: Moorhill Road, West End, Southampton, SO30 3AZ						Dimensions (m):		0.3 	
Client: Highwood						Depth 0.60		Scale 1:10 Logged HS	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20 - 0.30	ES		0.30			Dark brown gravelly fine SAND. Gravel is sub-angular to rounded fine to medium flint. [TOPSOIL]		
	0.50 - 0.60	ES		0.60			Orange gravelly fine to medium SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [RIVER TERRACE DEPOSITS]		
							End of pit at 0.60 m		
Remarks: Position scanned with calibrated CAT & 'Genny' prior to excavation. Groundwater not encountered.									
Stability: Stable									



				Trial Pit Log				Trialpit No SA101 Sheet 1 of 1	
Project Name: Land east of Moorhill Road				Project No. A11641		Co-ords: 447143.00 - 113536.00 Level:		Date 26/05/2022	
Location: Moorhill Road, West End, Southampton, SO30 3AZ						Dimensions (m): Depth 2.30 0.55 2.1		Scale 1:20 Logged HS	
Client: Highwood									

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10 - 0.20	ES		0.40			Grass over reddish brown slightly silty gravelly fine to coarse SAND with frequent rootlets. Gravel is angular to sub-rounded fine to coarse flint, brick, concrete crush and tile. [MADE GROUND]	
	0.40 - 0.50	D						
	1.00 - 1.20	D						1
							Clay pipe at 1.20m bgl	
	1.90 - 2.00	B		1.90			Orange clayey, silty very sandy fine to coarse sub-angular to sub-rounded GRAVEL of flint. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]	2
	2.00 - 2.30	D	HVP=20 HVP=23 HVP=32	2.00			Soft orange and blueish grey mottled CLAY. [RIVER TERRACE DEPOSITS]	
				2.30			End of pit at 2.30 m	
								3
								4

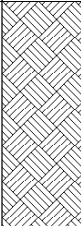
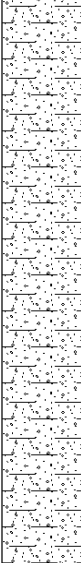
Remarks: Position scanned with calibrated CAT & 'Genny' prior to excavation. Groundwater not encountered.

Stability: STABLE





				Trial Pit Log				Trialpit No SA103 Sheet 1 of 1	
Project Name: Land east of Moorhill Road				Project No. A11641		Co-ords: 447069.00 - 113533.00 Level:		Date 26/05/2022	
Location: Moorhill Road, West End, Southampton, SO30 3AZ						Dimensions (m): 2.7 0.5 2.60		Scale 1:20 Logged HS	
Client: Highwood									

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10 - 0.20	ES					Dark brown slightly silty gravelly fine to coarse SAND. Gravel is sub-angular to rounded fine to medium flint. [TOPSOIL]	
	0.60 - 0.70	ES		0.60			Orangish red mottled greenish grey very sandy CLAY. Sand is coarse. [RIVER TERRACE DEPOSITS]	1
	0.70 - 0.80	D						
	1.10 - 1.30	B		1.10			Orange slightly clayey silty very sandy fine to medium subangular to rounded GRAVEL of flint. Sand is coarse. [RIVER TERRACE DEPOSITS]	2
	2.00 - 2.10	B						
	2.50 - 2.60	B		2.60				3
▼							End of pit at 2.60 m	4

Remarks: Position scanned with calibrated CAT & 'Genny' prior to excavation. Groundwater seepage at 2.60m bgl.

Stability: STABLE





Borehole Log

Borehole No.

WS101

Sheet 1 of 1

Project Name: Land east of Moorhill Road

Project No.
A11641

Co-ords: 447139.00 - 113572.00

Hole Type
WS

Location: Moorhill Road, West End, Southampton, SO30 3AZ

Level:

Scale
1:25

Client: Highwood

Dates: 26/05/2022 - 26/05/2022

Logged By
TH

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.20	ES		0.20			Vegetation over reddish brown and grey slightly clayey sandy sub-angular to sub-rounded fine to coarse flint GRAVEL. Sand is fine to coarse. [TOPSOIL]	
		0.30 - 0.50	ES					Brown slightly gravelly sandy CLAY. Gravel is sub-angular to sub-rounded fine to coarse flint. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]	
		0.50 - 0.80	B						
		0.80 - 1.00	ES						
		1.20		N=23 (3,4/4,5,7,7)	1.10			Brownish orange slightly gravelly clayey fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [RIVER TERRACE DEPOSITS]	1
		1.50		N=33 (7,8/9,8,8,8)	1.30			Orangish brown slightly sandy clayey sub-angular to sub-rounded fine to coarse flint GRAVEL. [RIVER TERRACE DEPOSITS]	
		1.50 - 1.70	D						
		2.00		51 (7,14/51 for 225mm)	2.00			End of borehole at 2.00 m	2
									3
									4
									5

Remarks

1. Position scanned with calibrated CAT & 'Genny' prior to excavation. Groundwater not encountered.





Borehole Log

Borehole No.

WS102

Sheet 1 of 1

Project Name: Land east of Moorhill Road

Project No.
A11641

Co-ords: 447145.00 - 113548.00

Hole Type
WS

Location: Moorhill Road, West End, Southampton, SO30 3AZ

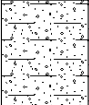
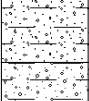
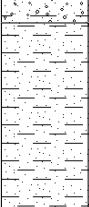
Level:

Scale
1:25

Client: Highwood

Dates: 26/05/2022 - 26/05/2022

Logged By
TH

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.10 - 0.20	ES	N=23 (3,3/3,5,5,10) 50 (19,15/50 for 225mm)	0.25		Vegetation over brownish grey slightly clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [TOPSOIL]	1		
		0.10 - 0.30	D							
		0.30 - 0.50	ES							
		0.50 - 0.80	B							
		0.80 - 0.90	D		0.80				Brownish orange slightly sandy clayey sub-angular to sub-rounded fine to coarse flint GRAVEL. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]	
		0.80 - 1.00	ES							
		1.20	D		1.00				Firm mottled grey and brownish orange sandy CLAY with occasional angular to sub-rounded medium flint gravel. [RIVER TERRACE DEPOSITS]	
		1.30 - 1.50								
		1.50								
					1.70				From 1.60m bgl becomes gravelly. Gravel is sub-angular to sub-rounded fine to coarse flint.	2
		End of borehole at 1.70 m								
								3		
								4		
								5		

Remarks

1. Position scanned with calibrated CAT & 'Genny' prior to excavation. Groundwater not encountered.





Borehole Log

Borehole No.

WS103

Sheet 1 of 1

Project Name: Land east of Moorhill Road

Project No.
A11641

Co-ords: 447124.00 - 113538.00

Hole Type
WS

Location: Moorhill Road, West End, Southampton, SO30 3AZ

Level:

Scale
1:25

Client: Highwood

Dates: 26/05/2022 - 26/05/2022

Logged By
TH

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.20	ES					Grass over grey slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [TOPSOIL]	
		0.40 - 0.60	ES		0.40			Brownish orange slightly clayey fine to coarse fine to coarse SAND. [RIVER TERRACE DEPOSITS]	
		0.60 - 0.90	B						
		0.90 - 1.00	ES		1.00			From 0.80m, bgl becomes gravelly. Gravel is sub-angular to sub-rounded fine to medium flint.	
		1.20		N=33 (3,6/6,7,9,11)				Orangish brown slightly clayey sandy angular to sub-rounded fine to coarse flint GRAVEL. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]	1
		1.30 - 1.50	D						
		1.40		33 (10,13/33 for 225mm)					
		2.00		60 (5,13/60 for 225mm)	2.00			End of borehole at 2.00 m	2
									3
									4
									5

Remarks

1. Position scanned with calibrated CAT & 'Genny' prior to excavation. Groundwater not encountered.





Borehole Log

Borehole No.

WS104

Sheet 1 of 1

Project Name: Land east of Moorhill Road

Project No.
A11641

Co-ords: 447058.00 - 113538.00

Hole Type
WS

Location: Moorhill Road, West End, Southampton, SO30 3AZ

Level:

Scale
1:25

Client: Highwood

Dates: 26/05/2022 - 26/05/2022

Logged By
TH

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.20	ES					Grass over grey slightly clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]	
		0.40 - 0.60	ES		0.40				
		0.40 - 0.70	B						
		0.60 - 0.80	D						
		0.80 - 1.00	ES					Dark brown slightly sandy clayey sub-angular to sub-rounded fine to coarse flint GRAVEL. Sand is fine to coarse. [RIVER TERRACE DEPOSITS] <i>From 0.60-0.85m bgl becomes orange</i> <i>From 0.85m bgl becomes reddish orange</i>	1
		1.10 - 1.30	D						
		1.20		N=32 (10,9/9,8,7,8)					
		1.30		50 (11,14/50 for 225mm)	1.30			End of borehole at 1.30 m	2
									3
									4
									5

Remarks

1. Position scanned with calibrated CAT & 'Genny' prior to excavation. Groundwater not encountered.





Borehole Log

Borehole No.

WS105

Sheet 1 of 1

Project Name: Land east of Moorhill Road

Project No.
A11641

Co-ords: 447089.00 - 113558.00

Hole Type
WS

Location: Moorhill Road, West End, Southampton, SO30 3AZ

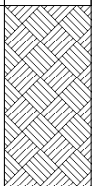
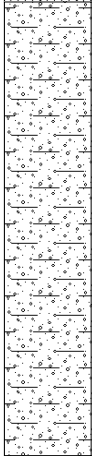
Level:

Scale
1:25

Client: Highwood

Dates: 26/05/2022 - 26/05/2022

Logged By
TH

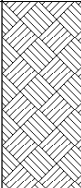
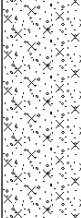
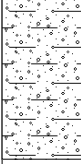
Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.10 - 0.30	ES		0.60			Grass over brown slightly gravelly sandy CLAY. Gravel is sub-angular to rounded fine to medium flint. Sand is fine to coarse. [TOPSOIL]	1		
		0.40 - 0.60	D								
		0.60 - 0.70	ES								
		0.60 - 0.90	B								
		0.80 - 0.90	ES								
		1.20	D	N=40 (4,6/7,9,12,12)		Brownish orange slightly sandy clayey sub-angular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]	2				
		1.20 - 1.40									
		2.00		N=50 (6,11/13,13,14,10)	2.10		From 0.85-1.60 becomes slightly clayey and sandy. Sand is fine to coarse.				
		End of borehole at 2.10 m									
										3	
								4			
								5			

Remarks

1. Position scanned with calibrated CAT & 'Genny' prior to excavation. Groundwater not encountered.



				Trial Pit Log			Trialpit No SA201 Sheet 1 of 1		
Project Name: Land east of Moorhill Road				Project No. A11641		Co-ords: 447056.00 - 113542.00 Level:		Date 26/07/2022	
Location: Moorhill Road, West End, Southampton, SO30 3AZ						Dimensions (m): Depth 1.70 0.7 2.7		Scale 1:20 Logged HS	
Client: Highwood									

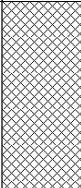
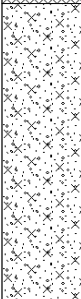
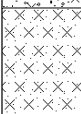
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.50			Dark brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL] <i>From 0.20m bgl: Colour becomes light greyish brown.</i>	
				1.10			Orangish brown silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE DEPOSITS]	1
				1.20			Orange sandy angular to sub-rounded GRAVEL of flint. Sand is coarse. [RIVER TERRACE DEPOSITS]	
				1.70			Orange clayey sandy sub-angular to sub-rounded fine to coarse GRAVEL of flint. Sand is coarse. [RIVER TERRACE DEPOSITS]	
						----- End of pit at 1.70 m		2
								3
								4

Remarks: Position scanned with calibrated CAT & 'Genny' prior to excavation

Stability: STABLE

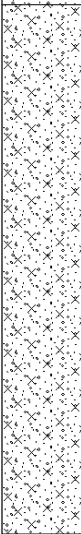


				Trial Pit Log			Trialpit No SA202 Sheet 1 of 1		
Project Name: Land east of Moorhill Road				Project No. A11641		Co-ords: 447080.00 - 113527.00 Level:		Date 26/07/2022	
Location: Moorhill Road, West End, Southampton, SO30 3AZ						Dimensions (m): 2.3 0.6 		Scale 1:20	
Client: Highwood						Depth 1.70		Logged HS	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.50			Dark brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint with rare angular coarse brick. [MADE GROUND]	
							Orangish brown and reddish brown silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE DEPOSITS]	1
				1.30			Mottled red blueish grey and orange sandy SILT. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]	
				1.60			Orange slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [RIVER TERRACE DEPOSITS]	
				1.70			End of pit at 1.70 m	2
								3
								4

Remarks: Position scanned with calibrated CAT & 'Genny' prior to excavation		
Stability: STABLE		

				Trial Pit Log			Trialpit No SA203 Sheet 1 of 1		
Project Name: Land east of Moorhill Road				Project No. A11641		Co-ords: 447140.00 - 113561.00 Level:		Date 26/07/2022	
Location: Moorhill Road, West End, Southampton, SO30 3AZ						Dimensions (m): Depth 1.80 0.7 2.3		Scale 1:20 Logged HS	
Client: Highwood									

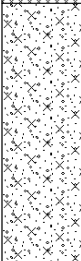
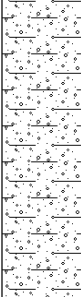
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.20			Light reddish brown grey type 1 concrete crush. [MADE GROUND]	
				0.40			Light reddish brown sandy angular to sub-angular fine to coarse GRAVEL of concrete. Sand is fine to coarse. [MADE GROUND]	
				1.80			Orange and dark brown slightly gravelly slightly silty coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE DEPOSITS]	
							----- End of pit at 1.80 m -----	

Remarks: Position scanned with calibrated CAT & 'Genny' prior to excavation

 Stability: STABLE



				Trial Pit Log			Trialpit No SA204 Sheet 1 of 1		
Project Name: Land east of Moorhill Road				Project No. A11641		Co-ords: 447142.00 - 113533.00 Level:		Date 26/07/2022	
Location: Moorhill Road, West End, Southampton, SO30 3AZ						Dimensions (m): 2.6 		Scale 1:20	
Client: Highwood						Depth 2.10		Logged HS	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.15			Light reddish brown sandy angular to sub-angular fine to coarse GRAVEL of concrete. Sand is fine to coarse. [MADE GROUND]
							Dark brown sandy angular to sub-angular fine to coarse GRAVEL of flint, slate and rare brick. [MADE GROUND]
				0.60			Orangish brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE DEPOSITS]
				1.30			Orangish brown clayey sandy sub-angular to sub-rounded fine to coarse GRAVEL of flint. Sand is coarse. [RIVER TERRACE DEPOSITS]
				2.10		End of pit at 2.10 m	

Remarks: Position scanned with calibrated CAT & 'Genny' prior to excavation		
Stability: STABLE		

APPENDIX VII - CHEMICAL ANALYSIS CERTIFICATES

Omnia
3-6 The Quarterdeck
Port Solent
Portsmouth
PO6 4TP



Attention : Georgia Wass
Date : 17th June, 2022
Your reference : A11641
Our reference : Test Report 22/9100 Batch 1
Location : Moorhill
Date samples received : 2nd June, 2022
Status : Final Report
Issue : 1

Twenty three samples were received for analysis on 2nd June, 2022 of which nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:



Liza Klebe

Project Co-ordinator

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Omnia
Reference: A11641
Location: Moorhill
Contact: Georgia Wass
EMT Job No: 22/9100

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	7-9	13-16	26-28	32-34	35-37	47-49	50-52	62		Please see attached notes for all abbreviations and acronyms		
Sample ID	HP101	SA101	SA102	WS101	WS102	WS102	WS103	WS104	WS105				
Depth	0.20-0.30	0.10-0.20	0.40-0.60	0.30-0.50	0.10-0.20	0.30-0.50	0.90-1.00	0.10-0.20	0.40-0.60				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	T				
Sample Date	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022		LOD/LOR	Units	Method No.
Arsenic #	5.9	15.0	5.4	7.1	-	5.4	16.1	8.1	10.7		<0.5	mg/kg	TM30/PM15
Barium #	20	84	18	128	-	35	21	41	50		<1	mg/kg	TM30/PM15
Beryllium	<0.5	0.7	<0.5	<0.5	-	0.5	0.5	<0.5	<0.5		<0.5	mg/kg	TM30/PM15
Cadmium #	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1		<0.1	mg/kg	TM30/PM15
Chromium #	73.6	74.1	91.2	57.1	-	65.9	78.7	81.6	62.3		<0.5	mg/kg	TM30/PM15
Copper #	8	20	6	4	-	6	7	8	16		<1	mg/kg	TM30/PM15
Lead #	38	256	10	11	-	11	10	60	68		<5	mg/kg	TM30/PM15
Mercury #	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1		<0.1	mg/kg	TM30/PM15
Nickel #	6.2	19.4	9.1	7.8	-	7.0	9.6	9.2	10.6		<0.7	mg/kg	TM30/PM15
Selenium #	<1	2	1	1	-	2	2	1	<1		<1	mg/kg	TM30/PM15
Vanadium	28	38	35	41	-	39	53	32	45		<1	mg/kg	TM30/PM15
Water Soluble Boron #	0.4	0.5	0.2	0.3	-	0.3	0.2	0.3	0.5		<0.1	mg/kg	TM74/PM32
Zinc #	30	95	18	24	-	65	21	33	45		<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.12	0.04	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	mg/kg	TM4/PM8
Fluorene #	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.98	0.17	<0.03	<0.03	0.04	<0.03	<0.03	0.10	0.06		<0.03	mg/kg	TM4/PM8
Anthracene #	0.13	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Fluoranthene #	1.49	0.50	<0.03	<0.03	0.15	<0.03	<0.03	0.29	0.07		<0.03	mg/kg	TM4/PM8
Pyrene #	1.21	0.47	<0.03	<0.03	0.12	<0.03	<0.03	0.25	0.07		<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.54	0.30	<0.06	<0.06	<0.06	<0.06	<0.06	0.14	0.07		<0.06	mg/kg	TM4/PM8
Chrysene #	0.67	0.36	<0.02	<0.02	0.12	<0.02	<0.02	0.16	0.19		<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene #	1.28	0.69	<0.07	<0.07	0.13	<0.07	<0.07	0.26	0.12		<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.62	0.34	<0.04	<0.04	0.05	<0.04	<0.04	0.12	0.06		<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	0.60	0.36	<0.04	<0.04	0.05	<0.04	<0.04	0.14	0.06		<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.11	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.61	0.31	<0.04	<0.04	0.05	<0.04	<0.04	0.12	0.06		<0.04	mg/kg	TM4/PM8
Coronene	-	-	-	-	<0.04	-	-	-	<0.04		<0.04	mg/kg	TM4/PM8
PAH 16 Total	8.5	3.7	<0.6	<0.6	-	<0.6	<0.6	1.6	0.8		<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	-	-	-	0.71	-	-	-	0.76		<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.92	0.50	<0.05	<0.05	0.09	<0.05	<0.05	0.19	0.09		<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.36	0.19	<0.02	<0.02	0.04	<0.02	<0.02	0.07	0.03		<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	91	92	94	85	92	94	89	90	93		<0	%	TM4/PM8
EPH >C8-C10 (EH_1D_Total) #	<5	<5	<5	<5	-	<5	<5	<5	<5		<5	mg/kg	TM5/PM8
EPH >C10-C12 (EH_1D_Total) #	<10	<10	<10	<10	-	<10	<10	<10	<10		<10	mg/kg	TM5/PM8
EPH >C12-C16 (EH_1D_Total) #	<10	<10	<10	<10	-	<10	<10	<10	<10		<10	mg/kg	TM5/PM8
EPH >C16-C21 (EH_1D_Total) #	<10	<10	<10	<10	-	<10	<10	32	<10		<10	mg/kg	TM5/PM8
EPH >C21-C35 (EH_1D_Total) #	362	70	<10	71	-	<10	<10	168	<10		<10	mg/kg	TM5/PM8
EPH >C35-C44 (EH_1D_Total)	61	<10	<10	<10	-	<10	<10	37	<10		<10	mg/kg	TM5/PM8
EPH >C8-C44 (EH_1D_Total)	423	70	<30	71	-	<30	<30	237	<30		<30	mg/kg	TM5/PM8

Element Materials Technology

Client Name: Omnia
Reference: A11641
Location: Moorhill
Contact: Georgia Wass
EMT Job No: 22/9100

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	7-9	13-16	26-28	32-34	35-37	47-49	50-52	62		Please see attached notes for all abbreviations and acronyms		
Sample ID	HP101	SA101	SA102	WS101	WS102	WS102	WS103	WS104	WS105				
Depth	0.20-0.30	0.10-0.20	0.40-0.60	0.30-0.50	0.10-0.20	0.30-0.50	0.90-1.00	0.10-0.20	0.40-0.60				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	T				
Sample Date	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022	02/06/2022		LOD/LOR	Units	Method No.
Mineral Oil (C10-C40) (EH_CU_1D_AL)	-	-	-	-	<30	-	-	-	<30		<30	mg/kg	TM5/PM8/PM16
GRO (>C4-C6)	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1	-	<0.1	<0.1	<0.1 ^{SV}	<0.1		<0.1	mg/kg	TM36/PM12
GRO (>C6-C8) (HS_1D_Total) #	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1	-	<0.1	<0.1	<0.1 ^{SV}	<0.1		<0.1	mg/kg	TM36/PM12
GRO (>C4-C8)	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	<0.1	-	<0.1	<0.1	<0.1 ^{SV}	<0.1		<0.1	mg/kg	TM36/PM12
MTBE #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM36/PM12
Benzene #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM36/PM12
Toluene #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM36/PM12
Ethylbenzene #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM36/PM12
m/p-Xylene #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM36/PM12
o-Xylene #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM36/PM12
PCB 28 #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	<5	-	-	-	<5		<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	<35	-	-	-	<35		<35	ug/kg	TM17/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	-	<0.15	<0.15	<0.15	<0.15		<0.15	mg/kg	TM26/PM21B
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	-	<0.3	<0.3	<0.3	<0.3		<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.0113	0.0084	0.0094	0.0263	-	0.0429	0.0879	0.0096	0.0383		<0.0015	g/l	TM38/PM20
Chromium III	73.6	74.1	91.2	57.1	-	65.9	78.7	81.6	62.3		<0.5	mg/kg	NONE/NONE
Total Cyanide #	<0.5	0.9	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5		<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	-	2.11	0.11	0.44	0.35	0.42	-	1.52	0.93		<0.02	%	TM21/PM24
ANC at pH4	-	-	-	-	0.19	-	-	-	0.05		<0.03	mol/kg	TM77/PM0
ANC at pH7	-	-	-	-	0.03	-	-	-	NDP		<0.03	mol/kg	TM77/PM0
Loss on Ignition #	-	-	-	-	1.6	-	-	-	4.4		<1.0	%	TM22/PM0
pH #	4.56	7.91	4.96	6.68	8.24	5.02	4.36	6.17	7.58		<0.01	pH units	TM73/PM11

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	25.5
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	79.7
Particle Size <4mm =	>95%		
EMT Job No	22/9100	Landfill Waste Acceptance Criteria Limits	
Sample No	34		
Client Sample No	WS102		
Depth/Other	0.10-0.20		
Sample Date	26/05/2022		
Batch No	1		
Solid Waste Analysis		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill
Total Organic Carbon (%)	0.35	3	5
Loss on Ignition (%)	1.6	-	10
Sum of BTEX (mg/kg)	<0.025	6	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-
Mineral Oil (mg/kg) (EH_CU_1D_AL)	<30	500	-
PAH Sum of 17(mg/kg)	0.71	100	-
pH (pH Units)	8.24	-	>6
ANC to pH 7 (mol/kg)	0.03	-	to be evaluated
ANC to pH 4 (mol/kg)	0.19	-	to be evaluated
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C ₁₀	A ₁₀	
	mg/l	mg/kg	
Arsenic	<0.0025	<0.025	0.5
Barium	0.063	0.63	2
Cadmium	<0.0005	<0.005	100
Chromium	<0.0015	<0.015	0.04
Copper	<0.007	<0.07	1
Mercury	<0.001	<0.01	5
Molybdenum	<0.002	<0.02	0.5
Nickel	<0.002	<0.02	10
Lead	<0.005	<0.05	0.4
Antimony	<0.002	<0.02	10
Selenium	<0.003	<0.03	0.5
Zinc	0.005	0.05	50
Chloride	1.0	10	0.06
Fluoride	<0.3	<3	0.7
Sulphate as SO ₄	<0.5	<5	5
Total Dissolved Solids	72	720	0.1
Phenol	<0.01	<0.1	0.5
Dissolved Organic Carbon	7	70	7
			4
			50
			800
			15000
			25000
			10
			150
			500
			1000
			20000
			50000
			4000
			60000
			100000
			1
			-
			-
			500
			800
			1000

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	11.1
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	90.0
Particle Size <4mm =	>95%		
EMT Job No	22/9100	Landfill Waste Acceptance Criteria Limits	
Sample No	62		
Client Sample No	WS105		
Depth/Other	0.40-0.60		
Sample Date	26/05/2022		
Batch No	1		
Solid Waste Analysis		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill
Total Organic Carbon (%)	0.93	3	5
Loss on Ignition (%)	4.4	-	10
Sum of BTEX (mg/kg)	<0.025	6	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-
Mineral Oil (mg/kg) (EH_CU_1D_AL)	<30	500	-
PAH Sum of 17(mg/kg)	0.76	100	-
pH (pH Units)	7.58	-	>6
ANC to pH 7 (mol/kg)	NDP	-	to be evaluated
ANC to pH 4 (mol/kg)	0.05	-	to be evaluated
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg
	C ₁₀ mg/l	A ₁₀ mg/kg	
Arsenic	<0.0025	<0.025	0.5
Barium	0.014	0.14	20
Cadmium	<0.0005	<0.005	0.04
Chromium	0.0024	0.024	0.5
Copper	<0.007	<0.07	2
Mercury	<0.001	<0.01	0.01
Molybdenum	<0.002	<0.02	0.5
Nickel	<0.002	<0.02	0.4
Lead	<0.005	<0.05	0.5
Antimony	0.004	0.04	0.06
Selenium	<0.003	<0.03	0.1
Zinc	0.006	0.06	4
Chloride	0.5	5	800
Fluoride	<0.3	<3	10
Sulphate as SO ₄	1.9	19	1000
Total Dissolved Solids	36	360	4000
Phenol	<0.01	<0.1	1
Dissolved Organic Carbon	4	40	500

Client Name: Omnia
Reference: A11641
Location: Moorhill
Contact: Georgia Wass

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
22/9100	1	HP101	0.20-0.30	3	Catherine Coles	17/06/2022	General Description (Bulk Analysis)	soil, roots, stone
					Catherine Coles	17/06/2022	Asbestos Fibres	NAD
					Catherine Coles	17/06/2022	Asbestos ACM	NAD
					Catherine Coles	17/06/2022	Asbestos Type	NAD
22/9100	1	SA101	0.10-0.20	9	Andrew Alker	17/06/2022	General Description (Bulk Analysis)	brown soil and stone
					Andrew Alker	17/06/2022	Asbestos Fibres	NAD
					Andrew Alker	17/06/2022	Asbestos ACM	NAD
					Andrew Alker	17/06/2022	Asbestos Type	NAD
22/9100	1	SA102	0.40-0.60	15	Simon Postlewhite	17/06/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	17/06/2022	Asbestos Fibres	NAD
					Simon Postlewhite	17/06/2022	Asbestos ACM	NAD
					Simon Postlewhite	17/06/2022	Asbestos Type	NAD
22/9100	1	WS101	0.30-0.50	28	Simon Postlewhite	17/06/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	17/06/2022	Asbestos Fibres	NAD
					Simon Postlewhite	17/06/2022	Asbestos ACM	NAD
					Simon Postlewhite	17/06/2022	Asbestos Type	NAD
22/9100	1	WS102	0.30-0.50	37	Simon Postlewhite	17/06/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	17/06/2022	Asbestos Fibres	NAD
					Simon Postlewhite	17/06/2022	Asbestos ACM	NAD
					Simon Postlewhite	17/06/2022	Asbestos Type	NAD
22/9100	1	WS103	0.90-1.00	49	Simon Postlewhite	17/06/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	17/06/2022	Asbestos Fibres	NAD
					Simon Postlewhite	17/06/2022	Asbestos ACM	NAD
					Simon Postlewhite	17/06/2022	Asbestos Type	NAD
22/9100	1	WS104	0.10-0.20	52	Andrew Alker	17/06/2022	General Description (Bulk Analysis)	brown soil and stone
					Andrew Alker	17/06/2022	Asbestos Fibres	NAD
					Andrew Alker	17/06/2022	Asbestos ACM	NAD
					Andrew Alker	17/06/2022	Asbestos Type	NAD
22/9100	1	WS105	0.40-0.60	62	Simon Postlewhite	16/06/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	16/06/2022	Asbestos Fibres	NAD
					Simon Postlewhite	16/06/2022	Asbestos ACM	NAD
					Simon Postlewhite	16/06/2022	Asbestos Type	NAD

Matrix : Solid

[illegible]

Client Name: Omnia
Reference: A11641
Location: Moorhill
Contact: Georgia Wass

Matrix : Solid

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/9100

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 22/9100

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3:1990/USEPA 160.1/3 (TDS/TS: 1971) Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM22	Modified BS1377-3:1990 Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (35C-440C). On request modified ASTM D2974-00 LOI (105C-440C)	PM0	No preparation is required.	Yes		AD	Yes

EMT Job No: 22/9100

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry); WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry); WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SMEWW 5310B:1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.			AR	Yes

EMT Job No: 22/9100

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes		AD	Yes
TM77	Modified DDCE/TS method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes
TM170	Determination of Trace Metals by ICP-MS (Inductively Coupled Plasma – Mass Spectrometry): Modified USEPA Method 200.8, Rev. 5.4, 1994; Modified EPA Method 6020A, Rev.1, Feb 2007; Modified BS EN ISO 17294-2:2016	PM14	Preparation of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for Dissolved metals, and remain unfiltered for Total metals then acidified			AR	Yes
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.			AR	

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



IHB48-MF6EI-5TW6P

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in **pale yellow**.

Job name

A11641

Description/Comments

Project

Site

Moorhill, Southampton

Classified by

Name: **William Bennett**
 Date: **27 Jun 2022 14:30 GMT**
 Telephone: **01489 808 088**
 Company: **Omnia Environmental Consulting**
3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

Course
 Hazardous Waste Classification

Date
 50% complete

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	WS102	0.10-0.20	Non Hazardous		2
2	WS105	0.40-0.60	Non Hazardous		4

Related documents

#	Name	Description
1	Screening Suite 1	waste stream template used to create this Job

Report

Created by: William Bennett

Created date: 27 Jun 2022 14:30 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	6
Appendix B: Rationale for selection of metal species	7
Appendix C: Version	8

Classification of sample: WS102



Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS102	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.10-0.20 m	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
2	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	208-96-8									
3	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9									
4	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		201-695-5	86-73-7									
5	phenanthrene				0.04	mg/kg		0.04	mg/kg	0.000004 %		
		201-581-5	85-01-8									
6	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		204-371-1	120-12-7									
7	fluoranthene				0.15	mg/kg		0.15	mg/kg	0.000015 %		
		205-912-4	206-44-0									
8	pyrene				0.12	mg/kg		0.12	mg/kg	0.000012 %		
		204-927-3	129-00-0									
9	benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
	601-033-00-9	200-280-6	56-55-3									
10	chrysene				0.12	mg/kg		0.12	mg/kg	0.000012 %		
	601-048-00-0	205-923-4	218-01-9									
11	benzo[b]fluoranthene				0.09	mg/kg		0.09	mg/kg	0.000009 %		
	601-034-00-4	205-911-9	205-99-2									
12	benzo[k]fluoranthene				0.04	mg/kg		0.04	mg/kg	0.000004 %		
	601-036-00-5	205-916-6	207-08-9									
13	benzo[a]pyrene; benzo[def]chrysene				0.05	mg/kg		0.05	mg/kg	0.000005 %		
	601-032-00-3	200-028-5	50-32-8									
14	indeno[123-cd]pyrene				0.05	mg/kg		0.05	mg/kg	0.000005 %		
		205-893-2	193-39-5									
15	dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
16	benzo[ghi]perylene				0.05	mg/kg		0.05	mg/kg	0.000005 %		
		205-883-8	191-24-2									
17	arsenic { arsenic }				<0.025	mg/kg		<0.025	mg/kg	<0.0000025 %		<LOD
	033-001-00-X	231-148-6	7440-38-2									
18	barium { barium oxide }				0.63	mg/kg	1.117	0.703	mg/kg	0.0000703 %		
		215-127-9	1304-28-5									

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
19		cadmium { cadmium oxide }			1	<0.005 mg/kg	1.142	<0.0057 mg/kg	<0.000000571 %		<LOD
		048-002-00-0	215-146-2	1306-19-0							
20		chromium in chromium(VI) compounds { chromium(VI) oxide }			7	<0.015 mg/kg	1.923	<0.0288 mg/kg	<0.00000288 %		<LOD
		024-001-00-0	215-607-8	1333-82-0							
21		copper { dicopper oxide; copper (I) oxide }			1	<0.07 mg/kg	1.126	<0.0788 mg/kg	<0.00000788 %		<LOD
		029-002-00-X	215-270-7	1317-39-1							
22		lead {  lead compounds with the exception of those specified elsewhere in this Annex }			1	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		082-001-00-6									
23		mercury { mercury }			7	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		080-001-00-0	231-106-7	7439-97-6							
24		nickel { nickel }			7	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		028-002-00-7	231-111-4	7440-02-0							
25		selenium { selenium }			7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
		034-001-00-2	231-957-4	7782-49-2							
26		zinc { zinc powder - zinc dust (stabilised) }			7	0.05 mg/kg		0.05 mg/kg	0.000005 %		
		030-001-01-9	231-175-3	7440-66-6							
								Total:	0.0002 %		

Key

-  User supplied data
-  Determinand values ignored for classification, see column 'Conc. Not Used' for reason
-  Determinand defined or amended by HazWasteOnline (see Appendix A)
-  Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- ND** Not detected
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: WS105

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS105	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.40-0.60 m	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
2	naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
3	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	208-96-8									
4	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9									
5	fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		201-695-5	86-73-7									
6	phenanthrene				0.06	mg/kg		0.06	mg/kg	0.000006 %		
		201-581-5	85-01-8									
7	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		204-371-1	120-12-7									
8	fluoranthene				0.07	mg/kg		0.07	mg/kg	0.000007 %		
		205-912-4	206-44-0									
9	pyrene				0.07	mg/kg		0.07	mg/kg	0.000007 %		
		204-927-3	129-00-0									
10	benzo[a]anthracene				0.07	mg/kg		0.07	mg/kg	0.000007 %		
	601-033-00-9	200-280-6	56-55-3									
11	chrysene				0.19	mg/kg		0.19	mg/kg	0.000019 %		
	601-048-00-0	205-923-4	218-01-9									
12	benzo[b]fluoranthene				0.09	mg/kg		0.09	mg/kg	0.000009 %		
	601-034-00-4	205-911-9	205-99-2									
13	benzo[k]fluoranthene				0.03	mg/kg		0.03	mg/kg	0.000003 %		
	601-036-00-5	205-916-6	207-08-9									
14	benzo[a]pyrene; benzo[def]chrysene				0.06	mg/kg		0.06	mg/kg	0.000006 %		
	601-032-00-3	200-028-5	50-32-8									
15	indeno[123-cd]pyrene				0.6	mg/kg		0.6	mg/kg	0.00006 %		
		205-893-2	193-39-5									
16	dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
17	benzo[ghi]perylene				0.06	mg/kg		0.06	mg/kg	0.000006 %		
		205-883-8	191-24-2									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
18	arsenic { arsenic }				10.7 mg/kg		10.7 mg/kg	0.00107 %		
	033-001-00-X	231-148-6	7440-38-2							
19	barium { barium oxide }				50 mg/kg	1.117	55.825 mg/kg	0.00558 %		
		215-127-9	1304-28-5							
20	beryllium { beryllium }				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	004-001-00-7	231-150-7	7440-41-7							
21	boron { diboron trioxide; boric oxide }				0.05 mg/kg	3.22	0.161 mg/kg	0.0000161 %		
	005-008-00-8	215-125-8	1303-86-2							
22	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
23	chromium in chromium(III) compounds { chromium(III) oxide }				62.3 mg/kg	1.462	91.055 mg/kg	0.00911 %		
		215-160-9	1308-38-9							
24	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.3 mg/kg	1.923	<0.577 mg/kg	<0.0000577 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
25	copper { dicopper oxide; copper (I) oxide }				16 mg/kg	1.126	18.014 mg/kg	0.0018 %		
	029-002-00-X	215-270-7	1317-39-1							
26	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	68 mg/kg		68 mg/kg	0.0068 %		
	082-001-00-6									
27	mercury { mercury }				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	080-001-00-0	231-106-7	7439-97-6							
28	nickel { nickel }			7	10.6 mg/kg		10.6 mg/kg	0.00106 %		
	028-002-00-7	231-111-4	7440-02-0							
29	selenium { selenium }				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	034-001-00-2	231-957-4	7782-49-2							
30	vanadium { divanadium pentaoxide; vanadium pentoxide }				45 mg/kg	1.785	80.333 mg/kg	0.00803 %		
	023-001-00-8	215-239-8	1314-62-1							
31	zinc { zinc powder - zinc dust (stabilised) }				45 mg/kg		45 mg/kg	0.0045 %		
	030-001-01-9	231-175-3	7440-66-6							
32	TPH (C6 to C40) petroleum group				<30 mg/kg		<30 mg/kg	<0.003 %		<LOD
			TPH							
Total:								0.0414 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

■ acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

■ acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

■ fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

■ anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

■ indeno[123-cd]pyrene (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

■ benzo[ghi]perylene (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

arsenic (EC Number: 231-148-6, CAS Number: 7440-38-2)

GB MCL index number: 033-001-00-X
Description/Comments: Worst Case: IARC considers arsenic Group 1; Carcinogenic to humans
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

▪ **barium oxide** (EC Number: 215-127-9, CAS Number: 1304-28-5)

Description/Comments: Data from ECHA's C&L Inventory Database, Sigma Aldrich SDS dated 6/2/20
Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/88825>
Data source date: 02 Apr 2020
Hazard Statements: Acute Tox. 3; H301 , Skin Corr. 1B; H314 , Eye Dam. 1; H318 , Acute Tox. 1; H332

▪ **lead compounds with the exception of those specified elsewhere in this Annex**

GB MCL index number: 082-001-00-6
Description/Comments: Least-worst case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers many simple lead compounds to be Carcinogenic category 2
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

▪ **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

▪ **chromium(III) oxide** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from ECHA's C&L inventory database
Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>
Data source date: 30 Apr 2020
Hazard Statements: Acute Tox. 4; H302 , Skin Sens. 1; H317 , Eye Irrit. 2; H319

▪ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

Appendix B: Rationale for selection of metal species

arsenic {arsenic}

No evidence to specify otherwise

barium {barium oxide}

Most likely

cadmium {cadmium oxide}

Most likely

chromium in chromium(VI) compounds {chromium(VI) oxide}

Most likely

copper {dicopper oxide; copper (I) oxide}

No evidence to specify otherwise

lead {lead compounds with the exception of those specified elsewhere in this Annex}

No evidence to specify otherwise

mercury {mercury}

No evidence to specify otherwise

nickel {nickel}

No evidence to specify otherwise

selenium {selenium}

No evidence to specify otherwise

zinc {zinc powder - zinc dust (stabilised)}

No evidence to specify otherwise

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

No evidence to specify otherwise

beryllium {beryllium}

No evidence to specify otherwise

boron {diboron trioxide; boric oxide}

Most likely

chromium in chromium(III) compounds {chromium(III) oxide}

Most likely

vanadium {divanadium pentaoxide; vanadium pentoxide}

No evidence to specify otherwise

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**

HazWasteOnline Classification Engine Version: 2022.176.5209.9795 (25 Jun 2022)

HazWasteOnline Database: 2022.176.5209.9795 (25 Jun 2022)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

APPENDIX VIII - ORIGIN OF GAC VALUES

	DOC REF	DOCUMENT NAME
	TECH11102	Residential End Use without Homegrown Produce

Determinant	Unit	GAC	Exposure Pathway	Origin of Risk Assessment Value
Metals				
Arsenic	mg/kg	40	1	LQM CIEH Suitable for Use Levels (S4UL) 2015- Inorganic Arsenic
Beryllium	mg/kg	1.7	1	LQM CIEH Suitable for Use Levels (S4UL) 2015
Boron	mg/kg	11,000	1	
Cadmium	mg/kg	85	1	
Chromium (III)	mg/kg	910	1	
Chromium (VI)	mg/kg	6	1	
Copper	mg/kg	7,100	1	
Lead	mg/kg	310	1	Category 4 Screening Level (C4SL) utilising exposure parameters from CLEA SR3 report.
Mercury	mg/kg	56	4	LQM CIEH Suitable for Use Levels (S4UL) 2015- Inorganic Mercury
Nickel	mg/kg	180	1	LQM CIEH Suitable for Use Levels (S4UL) 2015
Selenium	mg/kg	430	1	
Vanadium	mg/kg	1,200	1	
Zinc	mg/kg	40,000	1	
General Inorganics				
Total Cyanide*	mg/kg	50	1	Dutch Intervention Values 2010
Asbestos	%	0.001%	6	OEC Derived Value based on ICRCL
General Organics				
Phenol	mg/kg	750	4,1	LQM CIEH Suitable for Use Levels (S4UL) 2015 1%SOM
PAHs				
Naphthalene	mg/kg	2.3	4	LQM CIEH Suitable for Use Levels (S4UL) 2015 based on a sandy loam as defined in SR3 (EA 2009) 1% SOM
Acenaphthylene	mg/kg	2,900	1	
Acenaphthene	mg/kg	3,000	1	
Fluorene	mg/kg	2,800	1	
Phenanthrene	mg/kg	1,300	1	
Anthracene	mg/kg	31,000	1	
Fluoranthene	mg/kg	1,500	1	
Pyrene	mg/kg	3,700	1	
Benzo(a)Anthracene ^l	mg/kg	11	1	
Chrysene	mg/kg	30	1	
Benzo(b)Fluoranthene	mg/kg	3.9	1	
Benzo(k)Fluoranthene	mg/kg	110	1	
Benzo(a)Pyrene	mg/kg	3.2	1	
Indeno(123-cd)Pyrene	mg/kg	45	1	
Dibenzo(a,h)Anthracene	mg/kg	0.31	1	

DOCUMENT VERSION	DOCUMENT DATE	OWNER
5	March 2019	T.Mitchell

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	DOC REF	DOCUMENT NAME
	TECH11102	Residential End Use without Homegrown Produce

Determinant	Unit	GAC	Exposure Pathway	Origin of Risk Assessment Value
Benzo(ghi)Perylene	mg/kg	360	1	
BTEX & MTBE				
Benzene	mg/kg	0.38	4	LQM CIEH Suitable for Use Levels (S4UL) 2015 1%SOM
Toluene	mg/kg	880	4	
Ethylbenzene	mg/kg	83	4	
Xylenes	mg/kg	79	4	LQM CIEH Suitable for Use Levels (S4UL) 2015 1% SOM p-Xylene
MTBE	mg/kg	73	4	CL:AIRE SGV 2010 1% SOM
TPH-CWG				
Aliphatic				LQM CIEH Suitable for Use Levels (S4UL) 2015 based on a sandy loam as defined in SR3 (EA 2009) 1% SOM
Aliphatic EC 5-6	mg/kg	42	4	
Aliphatic EC >6-8	mg/kg	100	4	
Aliphatic EC >8-10	mg/kg	27	4	
Aliphatic EC >10-12	mg/kg	130 ^(vap)	4	
Aliphatic EC > 12-16	mg/kg	1,100 ^(sol)	4	
Aliphatic EC > 16-35	mg/kg	65,000 ^(sol)	1	
Aliphatic EC >35-44	mg/kg	65,000 ^(sol)	1	
Aromatic				LQM CIEH Suitable for Use Levels (S4UL) 2015 based on a sandy loam as defined in SR3 (EA 2009) 1% SOM
Aromatic EC 5-7	mg/kg	370	4	
Aromatic EC>7-8	mg/kg	860	4	
Aromatic EC> 8-10	mg/kg	47	4	
Aromatic EC> 10-12	mg/kg	250	2	
Aromatic EC> 12-16	mg/kg	1,800	2	
Aromatic EC> 16-21	mg/kg	1,900	2	
Aromatic EC> 21-35	mg/kg	1,900	1	
Aromatic EC> 35-44	mg/kg	1,900	1	
Banded TPH				
TPH EC 5-6**	mg/kg	42	4	LQM CIEH Suitable for Use Levels (S4UL) 2015 based on a sandy loam as defined in SR3 (EA 2009) 1% SOM, utilising the most conservative of the Ali/Aro chain lengths.
TPH EC >6-8**	mg/kg	100	4	
TPH EC >8-10**	mg/kg	27	4	
TPH EC> 10-12**	mg/kg	130	4	
TPH EC> 12-16**	mg/kg	1,100	4	
TPH EC> 16-21**	mg/kg	1,900	2	
TPH EC> 21-35**	mg/kg	1,900	1	
TPH EC> 35-44**	mg/kg	1,900	1	

DOCUMENT VERSION	DOCUMENT DATE	OWNER
5	March 2019	T.Mitchell

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	DOC REF	DOCUMENT NAME
	TECH11102	Residential End Use without Homegrown Produce

Notes

Main Exposure Pathways: 1 = Ingestion of Soil & Indoor Dust, 2 = Consumption of Homegrown Produce & Attached Soil, 3 = Dermal contact (Indoor & Outdoor); 4 = Inhalation of Vapour (Indoor & Outdoor), 5 = Inhalation of Dust (Indoor & Outdoor), 6 = Inhalation of Fibres.

Abbreviations: GAC = General Assessment Criteria

* Total cyanide Tier 1 GAC is taken from the Dutch Intervention Value (2010) for complex cyanide.

** The Tier 1 GAC for the banded hydrocarbon fraction is derived from the CIEH/S4UL assessment for petroleum hydrocarbons Criteria Working Group (CWG) for both aliphatic and aromatic compounds. OEC has utilised the lowest of the aliphatic and aromatic chain lengths in order to adopt a conservative approach, which is considered satisfactory for the protection of human health.

(sol) – GAC presented exceeds the solubility saturation limit.

(vap) – GAC presented exceeds the vapour saturation limit

DOCUMENT VERSION	DOCUMENT DATE	OWNER
5	March 2019	T.Mitchell

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APPENDIX IX - GEOTECHNICAL ANALYSIS CERTIFICATES

Samples

Omnia Environmental Consulting
3-6 The Quarterdeck
Port Solent
Portsmouth
PO6 4TP

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404

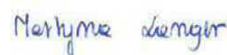
f: 01923 237404

e: reception@i2analytical.com

e: samples@omnia-consulting.co.uk

Analytical Report Number : 22-64835

Project / Site name:	Moorhill	Samples received on:	01/06/2022
Your job number:	A11641	Samples instructed on/ Analysis started on:	31/05/2022
Your order number:	PO-980	Analysis completed by:	23/06/2022
Report Issue Number:	1	Report issued on:	24/06/2022
Samples Analysed:	5 soil samples		



Signed: _____

Martyna Langer
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-64835

Project / Site name: Moorhill

Your Order No: PO-980

Lab Sample Number				2312943	2312944	2312945	2312946	2312947
Sample Reference				SA101	SA101	SA103	WS101	WS102
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.90-2.00	2.00-2.30	1.10-1.30	0.50-0.80	1.30-1.50
Date Sampled				26/05/2022	26/05/2022	26/05/2022	26/05/2022	26/05/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	8.6	17	12	14	12
Total mass of sample received	kg	0.001	NONE	0.3	0.3	0.3	0.3	0.3

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.2	5.2	4.9	7.7	4.7
Water Soluble SO ₄ 16ml extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.067	0.036	0.029	0.019	0.0043

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-64835

Project / Site name: Moorhill

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2312943	SA101	None Supplied	1.90-2.00	Brown clay and loam with gravel and vegetation.
2312944	SA101	None Supplied	2.00-2.30	Brown clay and loam.
2312945	SA103	None Supplied	1.10-1.30	Brown sand with gravel.
2312946	WS101	None Supplied	0.50-0.80	Brown clay and sand with gravel and vegetation.
2312947	WS102	None Supplied	1.30-1.50	Brown clay and sand.

Analytical Report Number : 22-64835

Project / Site name: Moorhill

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Client: Omnia Environmental Consulting

Client Address: 3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

Contact: Samples

Site Address: Moorhill

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Client Reference: A11641

Job Number: 22-64833

Date Sampled: 26/05/2022

Date Received: 01/06/2022

Date Tested: 20/06/2022

Sampled By: Client- TH/HS

Test Results:

Laboratory Reference: 2312935

Hole No.: SA101

Sample Reference: Not Given

Sample Description: Brown very gravelly slightly sandy CLAY

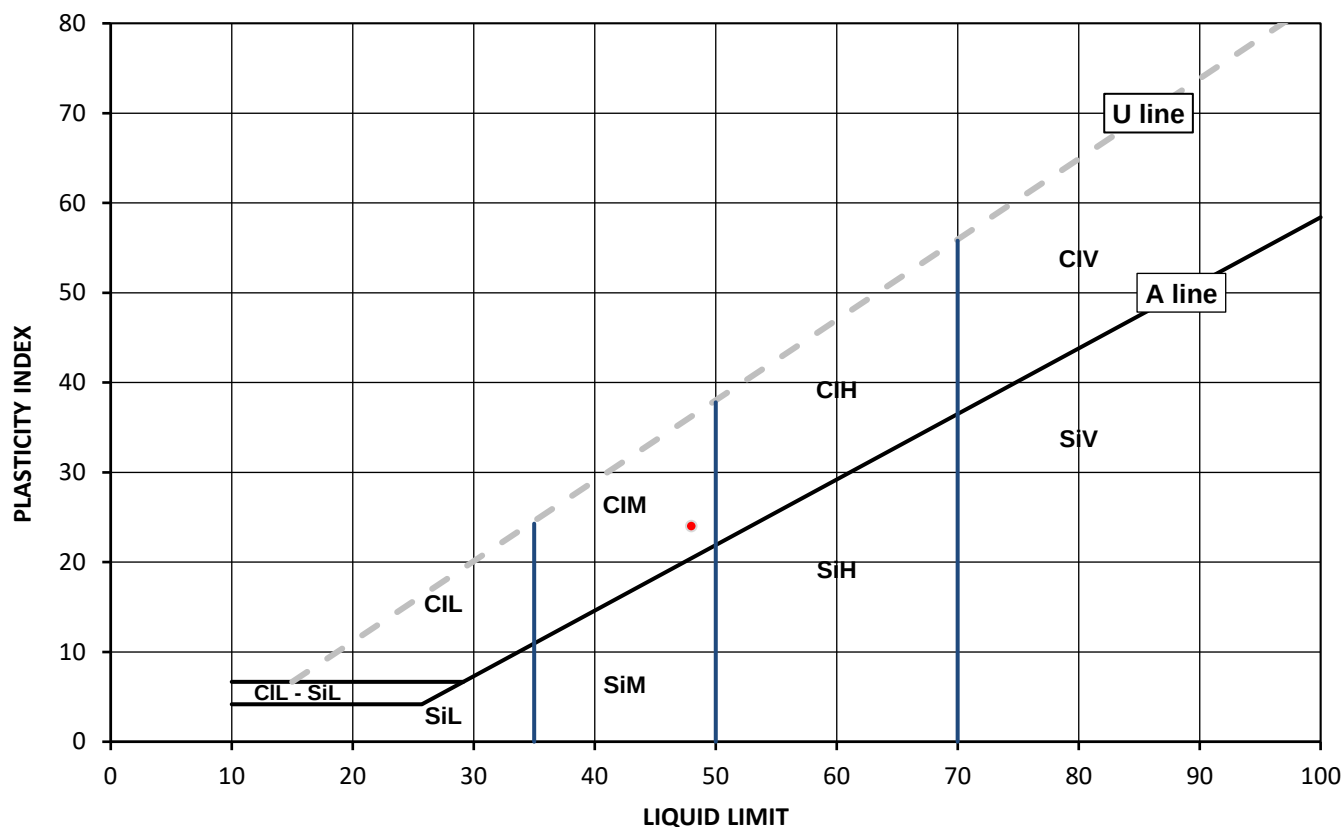
Depth Top [m]: 0.40

Depth Base [m]: 0.50

Sample Type: D

Sample Preparation: Tested after washing to remove >425um

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
12	48	24	24	34



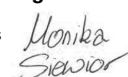
Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl Clay	L Low	below 35
Si Silt	M Medium	35 to 50
	H High	50 to 70
	V Very high	exceeding 70
	O Organic	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:



Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Client: Omnia Environmental Consulting

Client Address: 3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

Contact: Samples

Site Address: Moorhill

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Client Reference: A11641

Job Number: 22-64833

Date Sampled: 26/05/2022

Date Received: 01/06/2022

Date Tested: 20/06/2022

Sampled By: Client- TH/HS

Test Results:

Laboratory Reference: 2312937

Hole No.: SA101

Sample Reference: Not Given

Sample Description: Yellowish brown CLAY

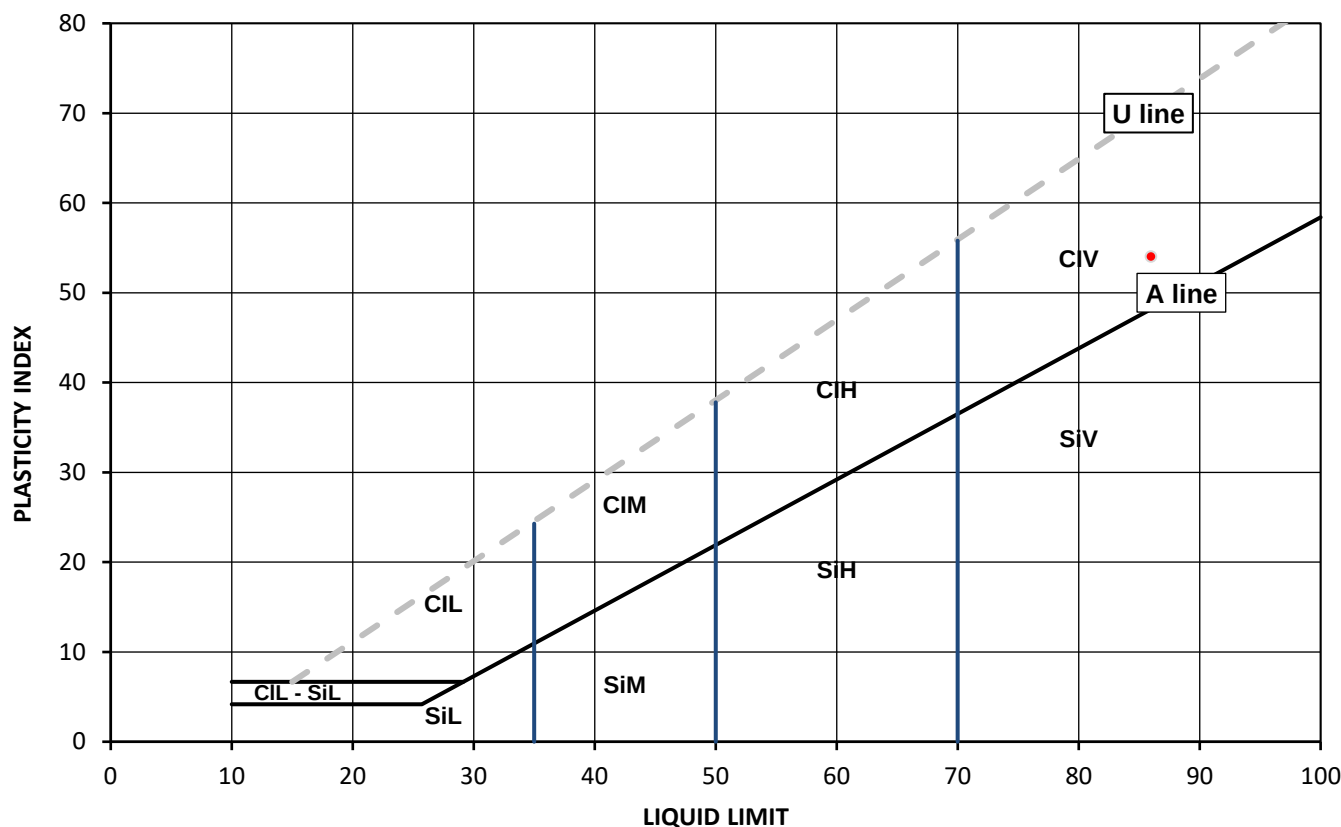
Depth Top [m]: 2.00

Depth Base [m]: 2.30

Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
30	86	32	54	100



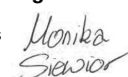
Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl Clay	L Low	below 35
Si Silt	M Medium	35 to 50
	H High	50 to 70
	V Very high	exceeding 70
	O Organic	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:



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Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Client: Omnia Environmental Consulting

Client Address: 3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

Contact: Samples

Site Address: Moorhill

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Client Reference: A11641

Job Number: 22-64833

Date Sampled: 26/05/2022

Date Received: 01/06/2022

Date Tested: 20/06/2022

Sampled By: Client- TH/HS

Test Results:

Laboratory Reference: 2312938

Hole No.: SA103

Sample Reference: Not Given

Sample Description: Yellowish brown slightly gravelly sandy CLAY

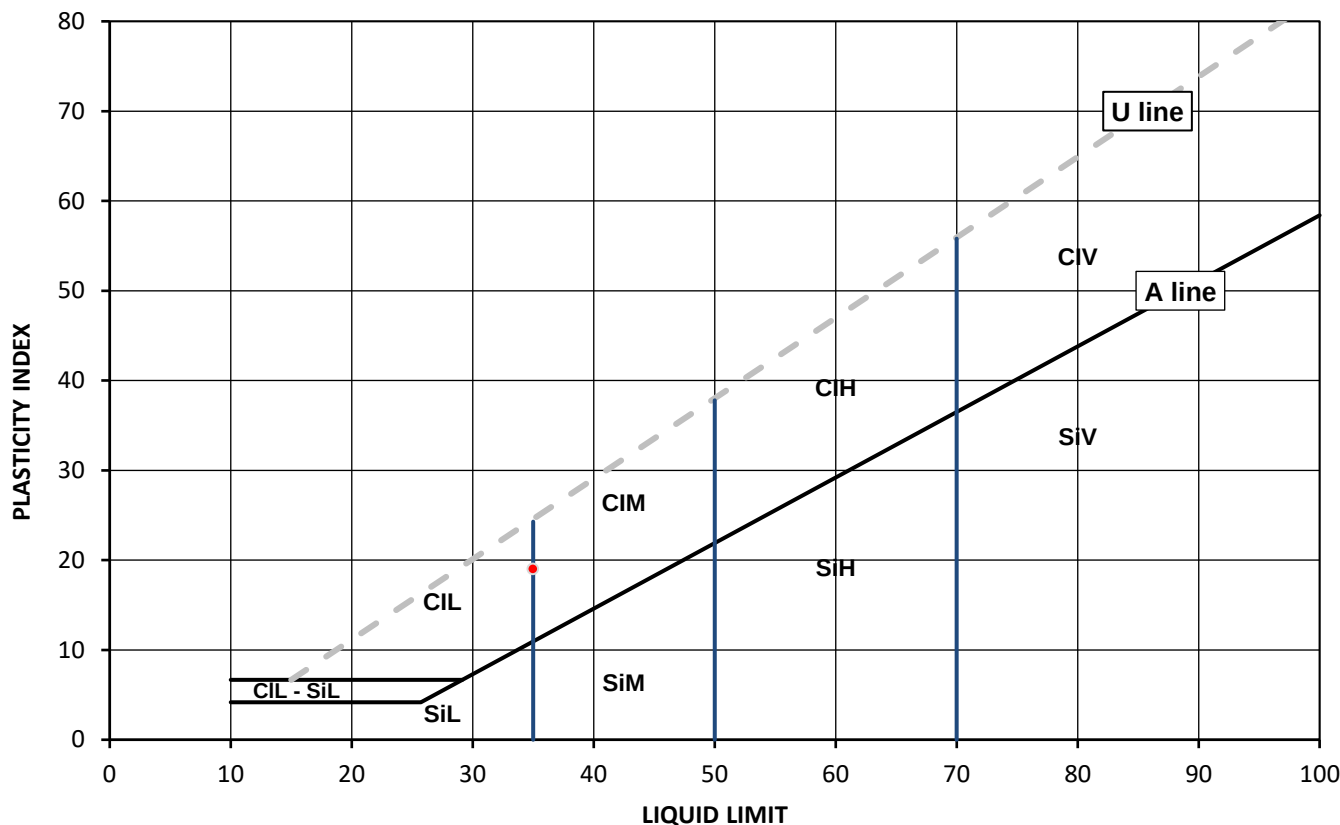
Depth Top [m]: 0.70

Depth Base [m]: 0.80

Sample Type: D

Sample Preparation: Tested after >425um removed by hand

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
11	35	16	19	81



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl Clay	L Low	below 35
Si Silt	M Medium	35 to 50
	H High	50 to 70
	V Very high	exceeding 70
	O Organic	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:



Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

Client: Omnia Environmental Consulting
Client Address: 3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

Contact: Samples
Site Address: Moorhill

Client Reference: A11641
Job Number: 22-64833
Date Sampled: 26/05/2022
Date Received: 01/06/2022
Date Tested: 18/06/2022
Sampled By: Client- TH/HS

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

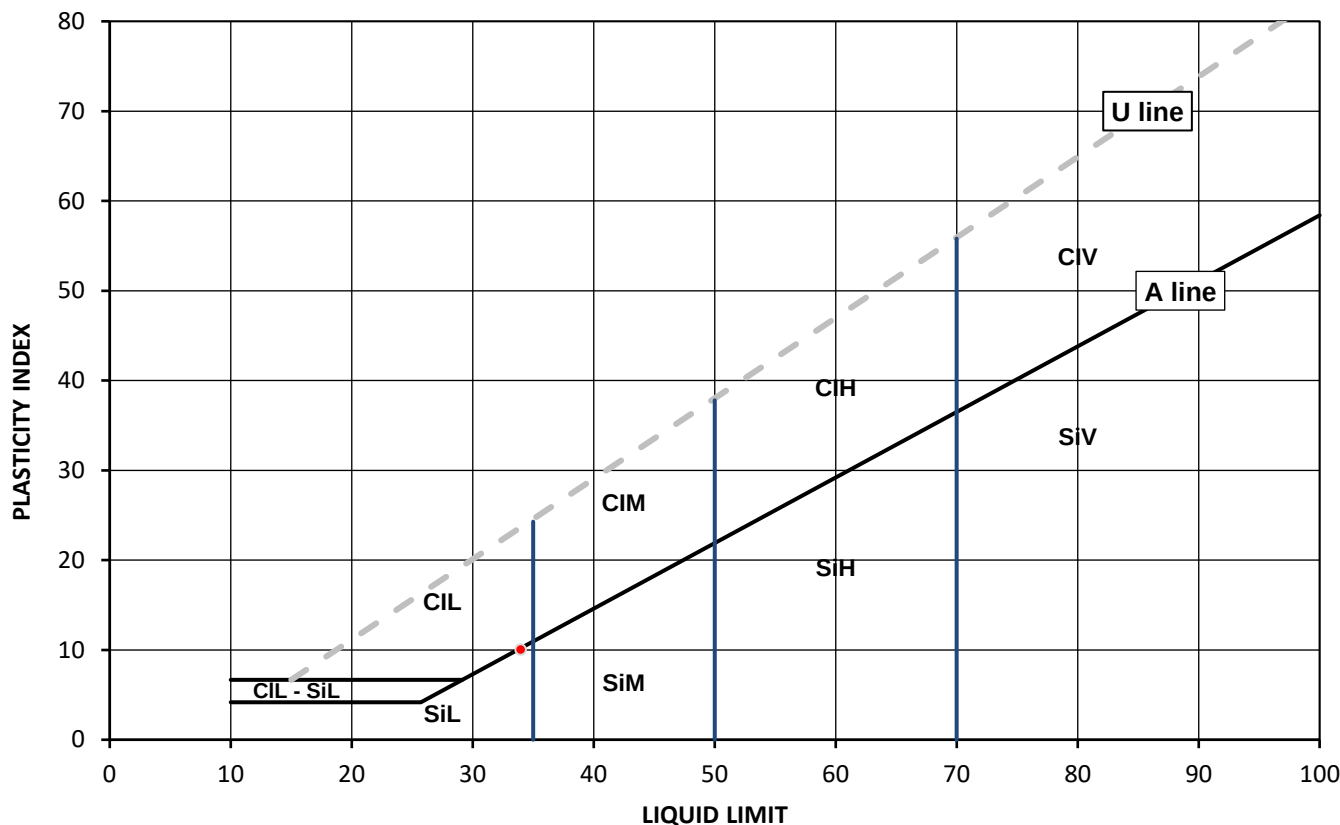
Test Results:

Laboratory Reference: 2312940
Hole No.: WS101
Sample Reference: Not Given
Sample Description: Brown gravelly very sandy CLAY

Depth Top [m]: 0.50
Depth Base [m]: 0.80
Sample Type: B

Sample Preparation: Tested after washing to remove >425um

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
17	34	24	10	41



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	Liquid Limit
Si	Silt	L Low	below 35
		M Medium	35 to 50
		H High	50 to 70
		V Very high	exceeding 70
		O Organic	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

Client: Omnia Environmental Consulting

Client Address: 3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

Contact: Samples

Site Address: Moorhill

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Client Reference: A11641

Job Number: 22-64833

Date Sampled: 26/05/2022

Date Received: 01/06/2022

Date Tested: 20/06/2022

Sampled By: Client- TH/HS

Test Results:

Laboratory Reference: 2312941

Hole No.: WS102

Sample Reference: Not Given

Sample Description: Yellowish brown slightly sandy CLAY

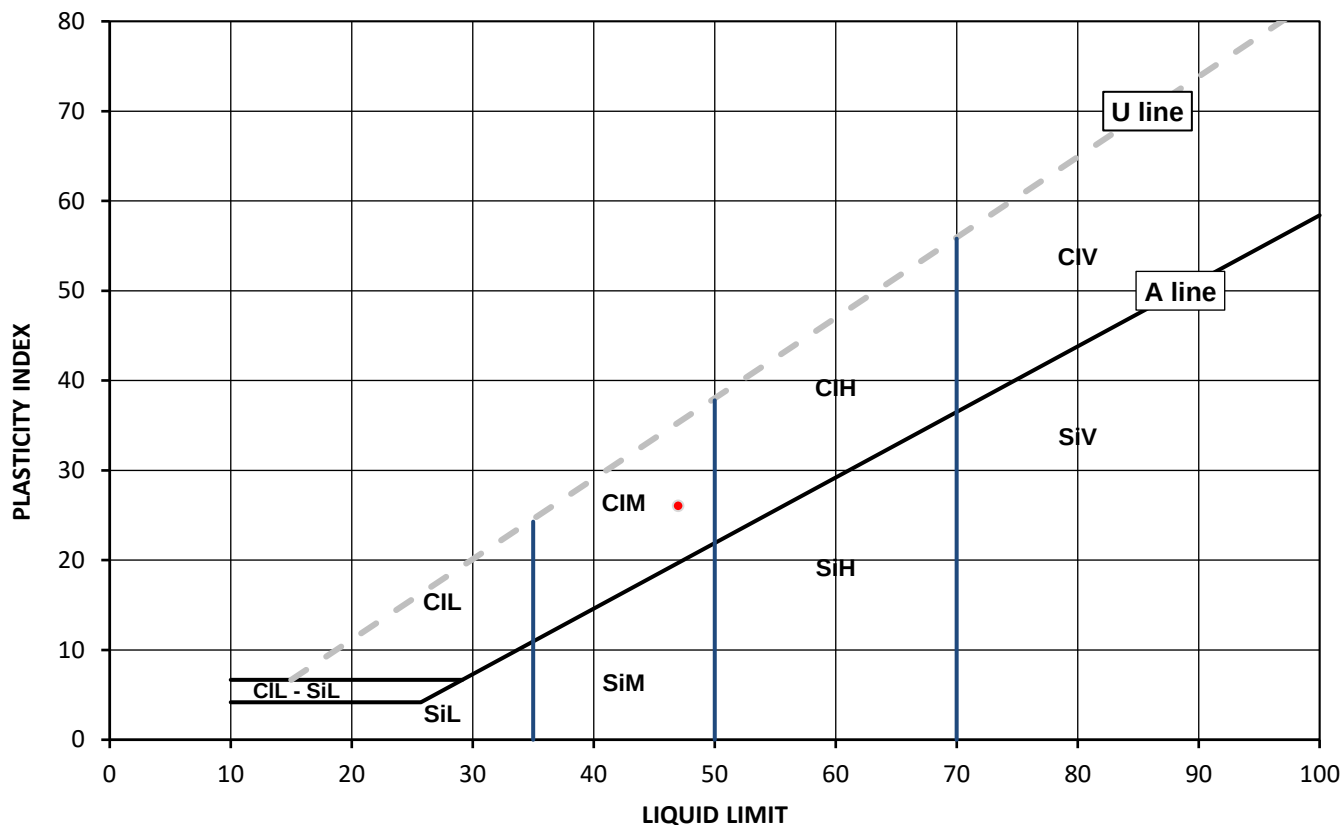
Depth Top [m]: 1.30

Depth Base [m]: 1.50

Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
20	47	21	26	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	Liquid Limit
Si	Silt	L	below 35
		M	35 to 50
		H	50 to 70
		V	exceeding 70
		O	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

Client: Omnia Environmental Consulting

Client Address: 3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

Contact: Samples

Site Address: Moorhill

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

SUMMARY REPORT**SUMMARY OF CLASSIFICATION TEST RESULTS**

Tested in Accordance with:

Water Content by BS 1377-2:1990: Clause 3.2; Atterberg by BS 1377-2: 1990:
Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2:
1990: Clause 8.2i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Environmental Science

Client Reference: A11641

Job Number: 22-64833

Date Sampled: 26/05/2022

Date Received: 01/06/2022

Date Tested: 18/06 - 20/06/2022

Sampled By: Client- TH/HS

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W] %	Water Content BS EN ISO 17892-1 [W] %	Atterberg				Density			Total Porosity# %		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m															
2312935	SA101	Not Given	0.40	0.50	D	Brown very gravelly slightly sandy CLAY	Atterberg 1 Point	12		34	48	24	24						
2312937	SA101	Not Given	2.00	2.30	D	Yellowish brown CLAY	Atterberg 1 Point	30		100	86	32	54						
2312938	SA103	Not Given	0.70	0.80	D	Yellowish brown slightly gravelly sandy CLAY	Atterberg 1 Point	11		81	35	16	19						
2312940	WS101	Not Given	0.50	0.80	B	Brown gravelly very sandy CLAY	Atterberg 1 Point	17		41	34	24	10						
2312941	WS102	Not Given	1.30	1.50	D	Yellowish brown slightly sandy CLAY	Atterberg 1 Point	20		100	47	21	26						

Note: # Non accredited; NP - Non plastic

Comments:

Signed:

*Monika Siewior*Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



4041

Client: Omnia Environmental Consulting

Client Address: 3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

Contact: Samples

Site Address: Moorhill

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

SUMMARY REPORT**DETERMINATION OF WATER CONTENT**

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Environmental Science

Client Reference: A11641

Job Number: 22-64833

Date Sampled: 26/05/2022

Date Received: 01/06/2022

Date Tested: 18/06 - 20/06/2022

Sampled By: Client- TH/HS

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type							
2312935	SA101	Not Given	0.40	0.50	D	Brown very gravelly slightly sandy CLAY		12	Sample was quartered, oven dried at 106. °C			
2312937	SA101	Not Given	2.00	2.30	D	Yellowish brown CLAY		30	Sample was quartered, oven dried at 106.6 °C			
2312938	SA103	Not Given	0.70	0.80	D	Yellowish brown slightly gravelly sandy CLAY		11	Sample was quartered, oven dried at 106.6 °C			
2312940	WS101	Not Given	0.50	0.80	B	Brown gravelly very sandy CLAY		17	Sample was quartered, oven dried at 107.2 °C			
2312941	WS102	Not Given	1.30	1.50	D	Yellowish brown slightly sandy CLAY		20	Sample was quartered, oven dried at 107.2 °C			

Comments:

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Signed:

*Monika Siewior*Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Client: Omnia Environmental Consulting
Client Address: 3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

Contact: Samples
Site Address: Moorhill

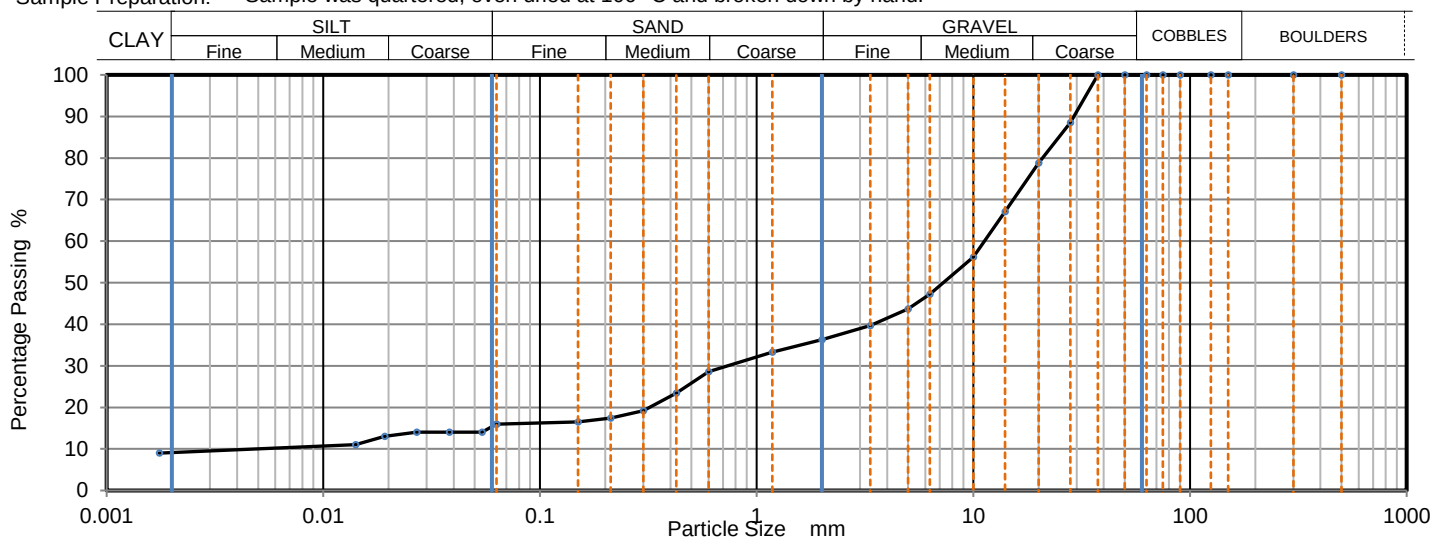
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Client Reference: A11641
Job Number: 22-64833
Date Sampled: 26/05/2022
Date Received: 01/06/2022
Date Tested: 18/06/2022
Sampled By: Client- TH/HS

Test Results:

Laboratory Reference: 2312936
Hole No.: SA101
Sample Reference: Not Given
Sample Description: Yellowish brown slightly silty clayey sandy GRAVEL
Sample Preparation: Sample was quartered, oven dried at 106 °C and broken down by hand.

Depth Top [m]: 1.90
Depth Base [m]: 2.00
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	16
300	100	0.0540	14
150	100	0.0382	14
125	100	0.0270	14
90	100	0.0192	13
75	100	0.0141	11
63	100	0.0117	9
50	100		
37.5	100		
28	89		
20	79		
14	67		
10	56		
6.3	47		
5	44		
3.35	40	Particle density (assumed) 2.65 Mg/m ³	
2	36		
1.18	33		
0.6	29		
0.425	23		
0.3	19		
0.212	17		
0.15	17		
0.063	16		

Sample Proportions	% dry mass
Very coarse	0
Gravel	64
Sand	21
Silt	6
Clay	9

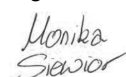
Grading Analysis		
D100	mm	37.5
D60	mm	11.2
D30	mm	0.733
D10	mm	0.00524
Uniformity Coefficient		2100
Curvature Coefficient		9.1

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:

Signed:



Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Client: Omnia Environmental Consulting
Client Address: 3-6 The Quarterdeck, Port Solent,
Portsmouth, PO6 4TP

Contact: Samples
Site Address: Moorhill

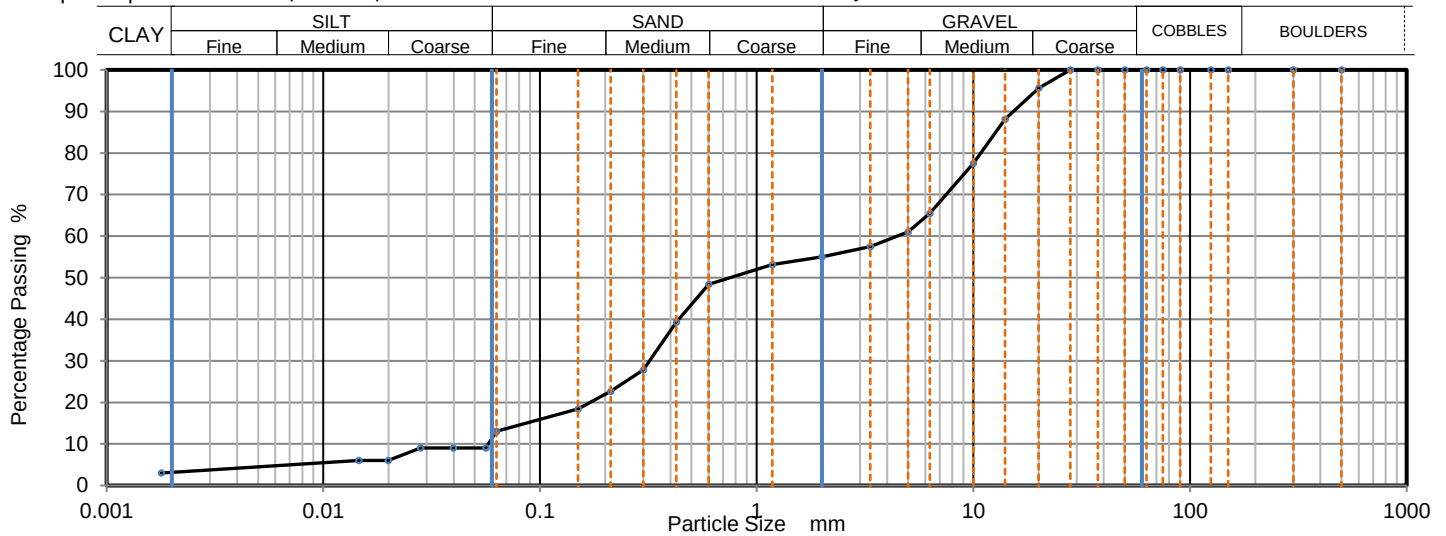
Client Reference: A11641
Job Number: 22-64833
Date Sampled: 26/05/2022
Date Received: 01/06/2022
Date Tested: 18/06/2022
Sampled By: Client- TH/HS

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 2312939
Hole No.: SA103
Sample Reference: Not Given
Sample Description: Yellowish brown slightly clayey silty very sandy GRAVEL
Sample Preparation: Sample was quartered, oven dried at 106 °C and broken down by hand.

Depth Top [m]: 1.10
Depth Base [m]: 1.30
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	13
300	100	0.0562	9
150	100	0.0397	9
125	100	0.0281	9
90	100	0.0200	6
75	100	0.0146	6
63	100	0.0118	3
50	100		
37.5	100		
28	100		
20	96		
14	88		
10	78		
6.3	66		
5	61		
3.35	58	Particle density (assumed) 2.65 Mg/m ³	
2	55		
1.18	53		
0.6	48		
0.425	39		
0.3	28		
0.212	23		
0.15	18		
0.063	13		

Sample Proportions	% dry mass
Very coarse	0
Gravel	45
Sand	42
Silt	10
Clay	3

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	
Curvature Coefficient	

Uniformity Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

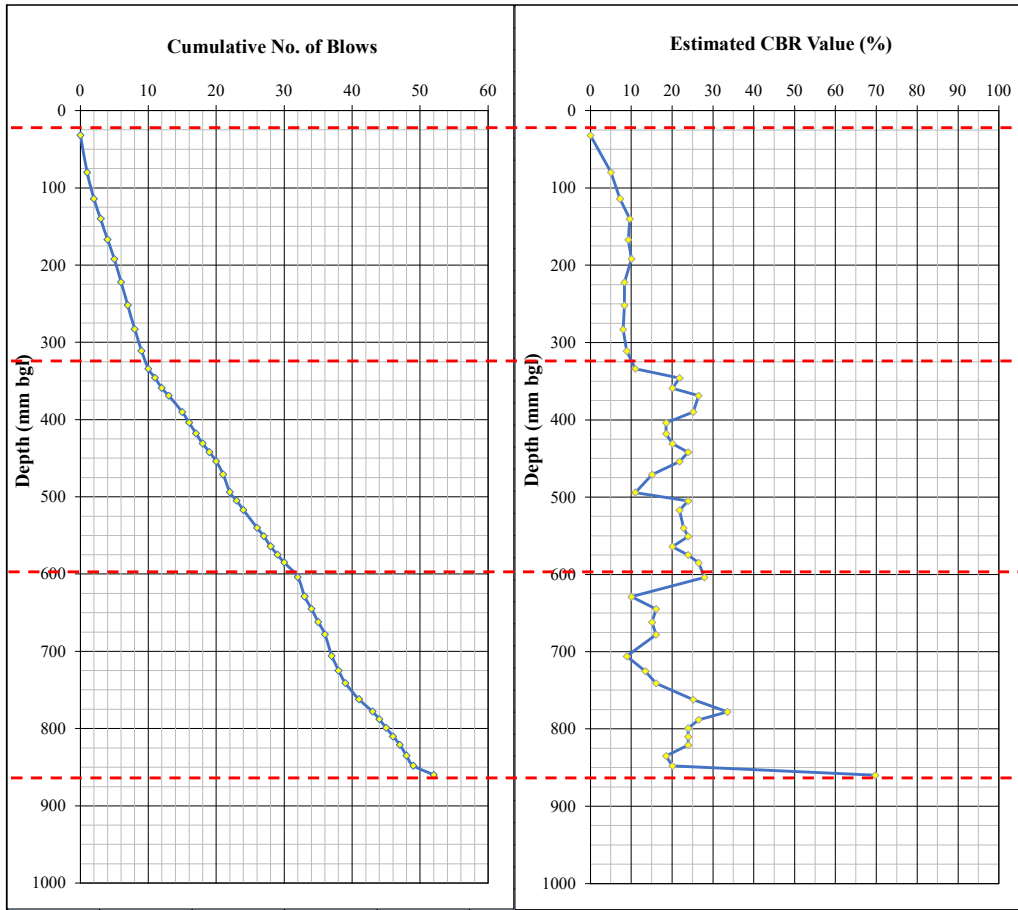
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APPENDIX X - IN-SITU DCP TEST CERTIFICATES

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

In Accordance with TRL Report 587(2003) and PR/INT/277/04

Site Name:	Moorhill, Southampton		Test Date:	27/05/2022
Site Ref:	A11641		Test Location:	DCP101
Initial Depth:	32 mm bgl		Test No.:	1 of 1
Final Depth:	860 mm bgl		Undertaken By:	TH



Start Depth (mm bgl)	End Depth (mm bgl)	Layer Range (mm)	Blows per Layer	DCP mm/Blows per Layer	Average Layer CBR Value (%)
32	330	298	9	33	7.5
330	600	270	21	13	20.3
600	860	260	22	12	22.2

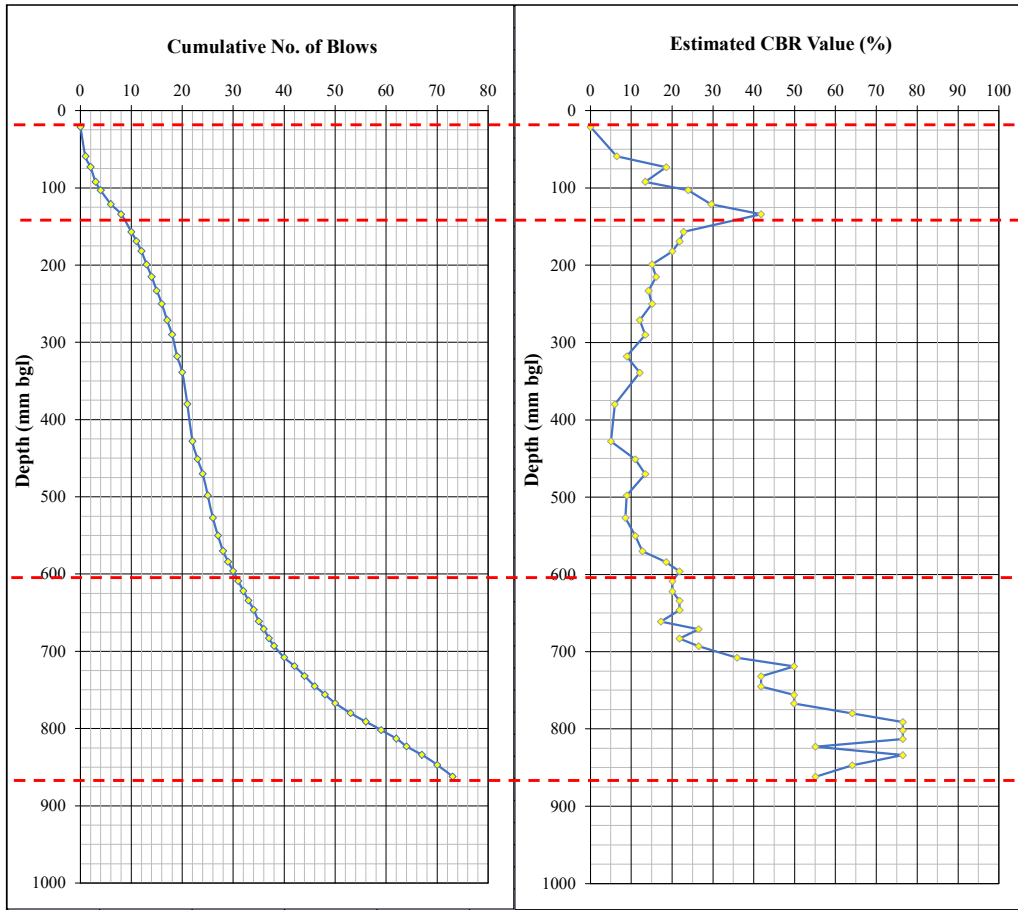
Comments

Site Engineer:	Date:	Checked and Approved By:	Date:	Location
TH	27/05/2022	LB	29/06/2022	DCP101

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

In Accordance with TRL Report 587(2003) and PR/INT/277/04

Site Name:	Moorhill, Southampton		Test Date:	27/05/2022
Site Ref:	A11641		Test Location:	DCP102
Initial Depth:	21 mm bgl		Test No.:	1 of 1
Final Depth:	862 mm bgl		Undertaken By:	TH



Start Depth (mm bgl)	End Depth (mm bgl)	Layer Range (mm)	Blows per Layer	DCP mm/Blows per Layer	Average Layer CBR Value (%)
21	140	119	8	15	17.4
140	600	460	22	21	12.1
600	862	262	43	6	44.7

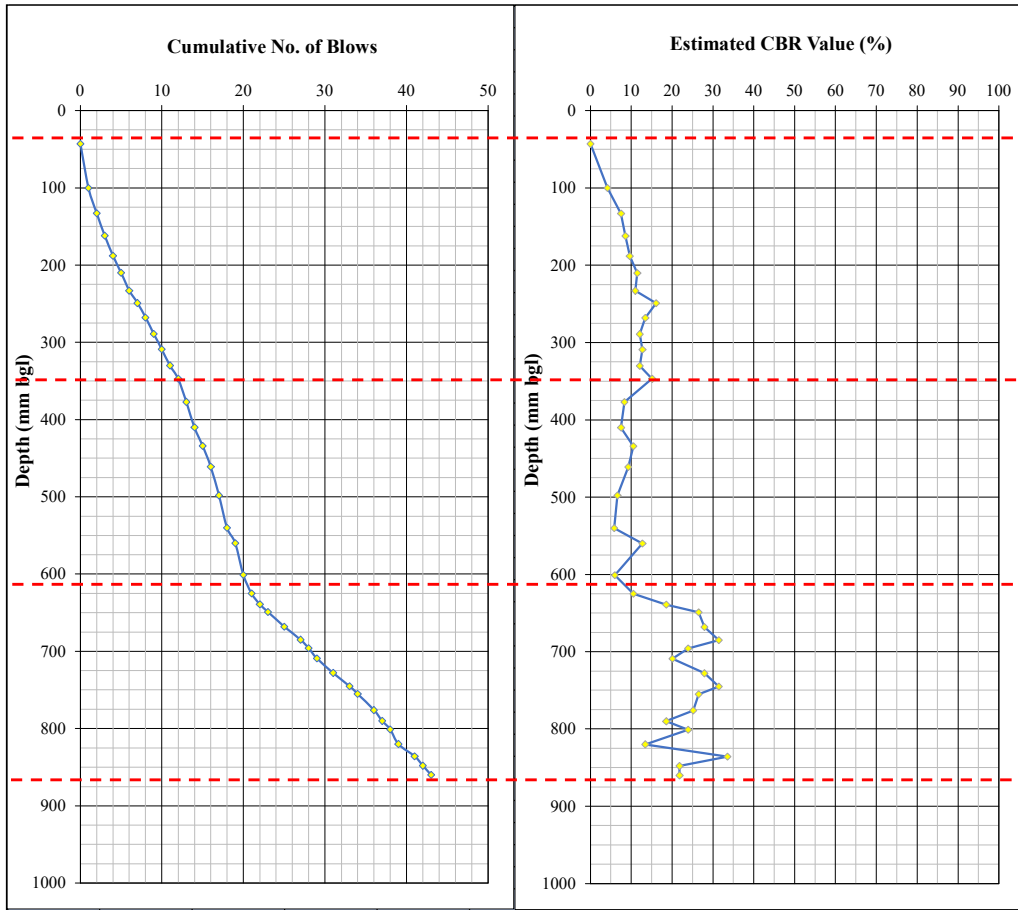
Comments

Site Engineer:	Date:	Checked and Approved By:	Date:	Location
TH	27/05/2022	LB	29/06/2022	DCP102

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

In Accordance with TRL Report 587(2003) and PR/INT/277/04

Site Name:	Moorhill, Southampton		Test Date:	27/05/2022
Site Ref:	A11641		Test Location:	DCP103
Initial Depth:	43 mm bgl		Test No.:	1 of 1
Final Depth:	860 mm bgl		Undertaken By:	TH



Start Depth (mm bgl)	End Depth (mm bgl)	Layer Range (mm)	Blows per Layer	DCP mm/Blows per Layer	Average Layer CBR Value (%)
43	350	307	12	26	9.8
350	610	260	8	33	7.6
610	860	250	23	11	24.3

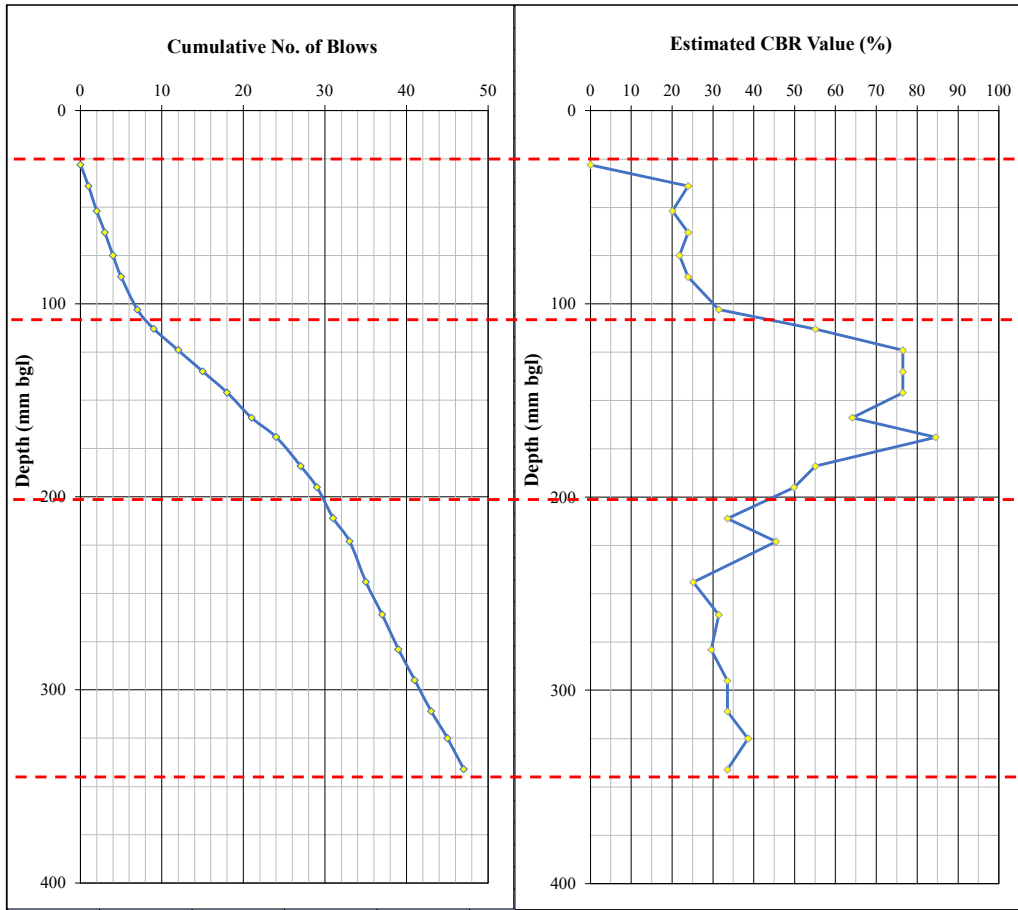
Comments

Site Engineer:	Date:	Checked and Approved By:	Date:	Location
TH	27/05/2022	LB	29/06/2022	DCP103

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

In Accordance with TRL Report 587(2003) and PR/INT/277/04

Site Name:	Moorhill, Southampton		Test Date:	27/05/2022
Site Ref:	A11641		Test Location:	DCP104
Initial Depth:	28 mm bgl		Test No.:	1 of 1
Final Depth:	341 mm bgl		Undertaken By:	TH



Start Depth (mm bgl)	End Depth (mm bgl)	Layer Range (mm)	Blows per Layer	DCP mm/Blows per Layer	Average Layer CBR Value (%)
28	110	82	7	12	22.4
110	200	90	22	4	68.1
200	341	141	18	8	34.3

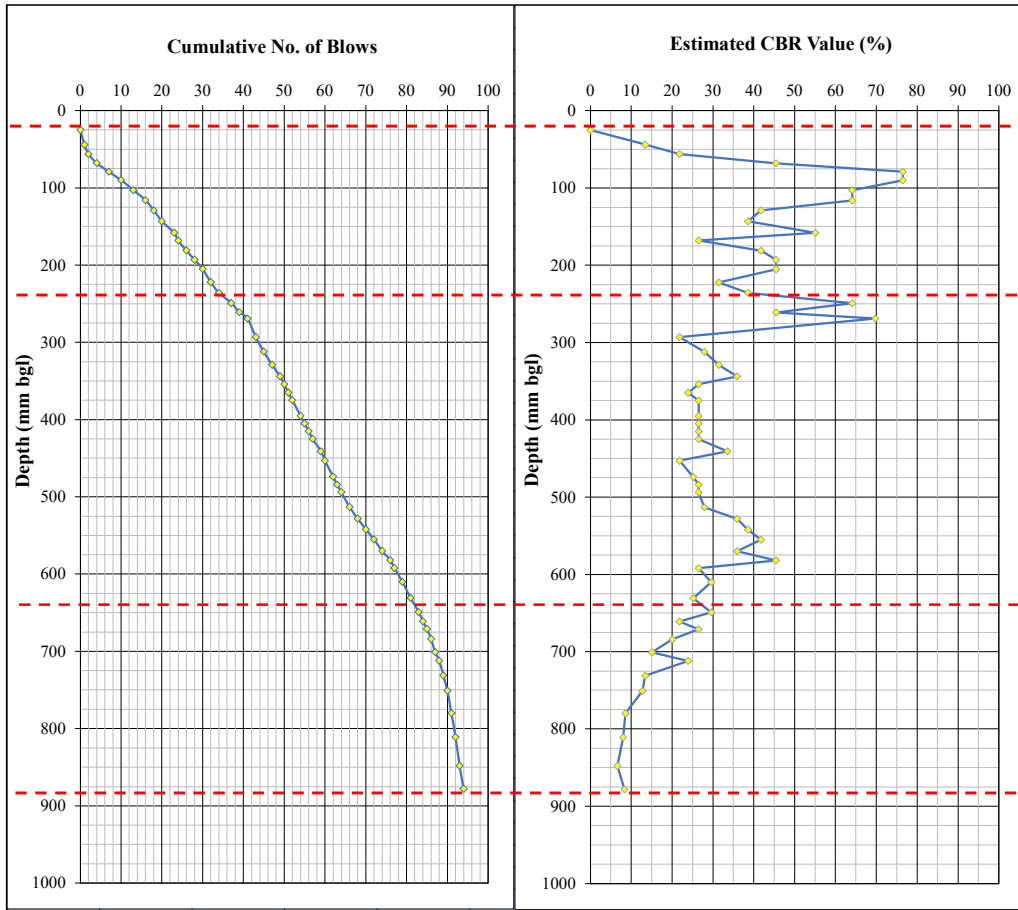
Comments
DCP rod snapped

Site Engineer:	Date:	Checked and Approved By:	Date:	Location
TH	27/05/2022	LB	29/06/2022	DCP104

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

In Accordance with TRL Report 587(2003) and PR/INT/277/04

Site Name:	Moorhill, Southampton		Test Date:	27/05/2022
Site Ref:	A11641		Test Location:	DCP105
Initial Depth:	25 mm bgl		Test No.:	1 of 1
Final Depth:	878 mm bgl		Undertaken By:	TH



Start Depth (mm bgl)	End Depth (mm bgl)	Layer Range (mm)	Blows per Layer	DCP mm/Blows per Layer	Average Layer CBR Value (%)
25	230	205	32	6	42.4
230	640	410	49	8	32.0
640	878	238	13	18	14.0

Comments

Site Engineer:	Date:	Checked and Approved By:	Date:	Location
TH	27/05/2022	LB	29/06/2022	DCP105

APPENDIX XI - BRE DG365 SOAKAWAY TEST CERTIFICATES

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	26/05/2022



Trial Pit Identification:	SA101
Trial Pit Length (m):	2.10
Trial Pit Width (m):	0.55
Trial Pit Depth (m):	2.00
Groundwater Level (m bgl):	N/A

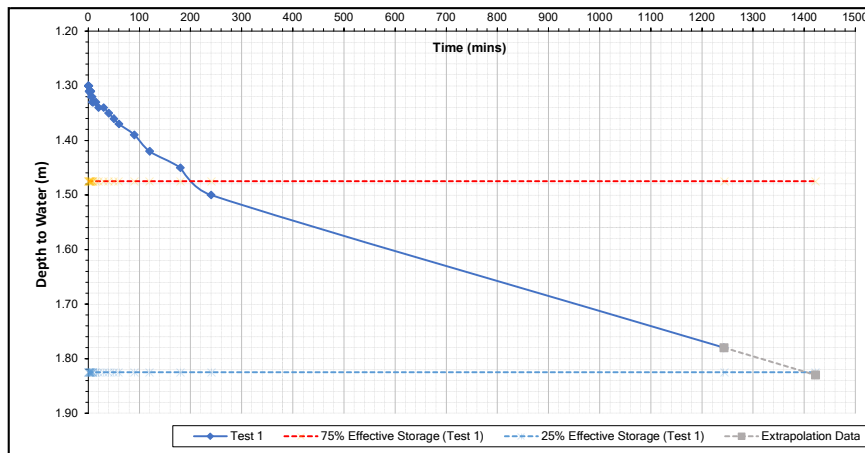
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.40m bgl Grass over purplish brown slightly silty gravelly fine to coarse SAND with frequent rootlets. Gravel is angular to sub-rounded fine to coarse flint, brick, concrete crush and tile. [MADE GROUND]
0.4-1.90m bgl Soft orange gravelly sandy CLAY. Sand is coarse. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.90-2.0m bgl Orange clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded flint. [RIVER TERRACE]
2.0-2.30m bgl Soft orange and blueish grey mottled CLAY. [WITTERING FORMATION]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
0.70	0.00	1.30
	0.25	1.30
75% Effective Storage Depth (m):	0.50	1.30
0.53	1.00	1.30
	1.50	1.31
(i.e. Depth Below Ground Level) (m):	2.00	1.31
1.48	2.50	1.31
	3.00	1.31
25% Effective Storage Depth (m):	3.50	1.31
0.18	4.00	1.31
	4.50	1.31
(i.e. Depth Below Ground Level) (m):	5.00	1.31
1.83	6.00	1.32
	7.00	1.32
Effective Storage Depth Across 75% - 25% (m):	8.00	1.33
0.35	9.00	1.33
	10.00	1.33
Time to Fall to 75% Effective Depth (min):	15.00	1.33
200	20.00	1.34
	30.00	1.34
Time to Fall to 25% Effective Depth (min):	40.00	1.35
1422	50.00	1.36
	60.00	1.37
Vp75%-25% (m3):	90.00	1.39
0.40	120.00	1.42
	180.00	1.45
As50% (m2):	240.00	1.50
3.01	1243.00	1.78
	1422.00	1.83
Tp75%-25% (mins):		
1222		

DESIGN SOIL INFILTRATION RATE, f (m/s):	1.83E-06
---	----------

Comments:
SA101 Failed to reach the 25% intercept in the time, extrapolated data has been provided. A soil infiltration rate has been provided from extrapolated data.



Site Engineer:	Date:
HS/TH	26/05/2022

Checked and Approved By:	Date:
LB	20.06.2022

Location
SA101

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	26/05/2022



SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

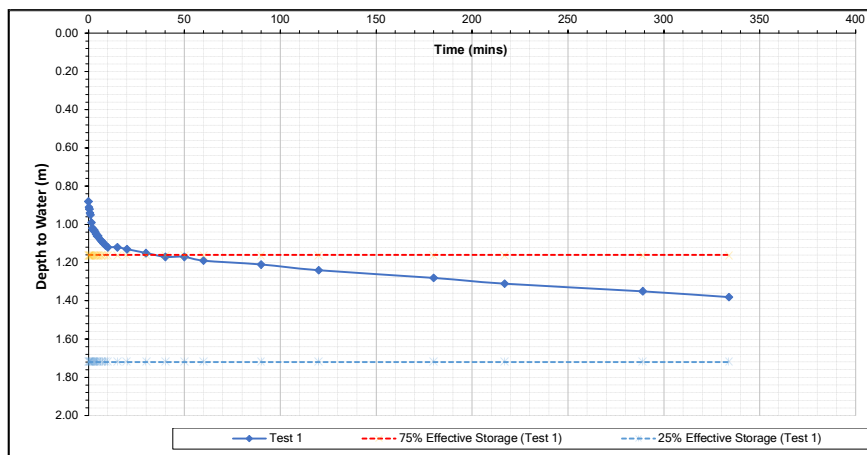
Trial Pit Identification:	SA101
Trial Pit Length (m):	2.10
Trial Pit Width (m):	0.55
Trial Pit Depth (m):	2.00
Groundwater Level (m bgl):	N/A

Geology Description:
0.00-0.40m bgl Grass over purplish brown slightly silty gravelly fine to coarse SAND with frequent rootlets. Gravel is angular to sub-rounded fine to coarse flint, brick, concrete crush and tile. [MADE GROUND]
0.4-1.90m bgl Soft orange gravelly sandy CLAY. Sand is coarse. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.90-2.0m bgl Orange clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded flint. [RIVER TERRACE]
2.0-2.30m bgl Soft orange and blueish grey mottled CLAY. [WITTERING FORMATION]

Test Parameters	TEST 2	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.12	0.00	0.88
	0.25	0.91
75% Effective Storage Depth (m):	0.50	0.92
0.84	0.75	0.94
	1.00	0.95
(i.e. Depth Below Ground Level) (m):	1.50	0.99
	2.00	1.02
1.16	2.50	1.03
25% Effective Storage Depth (m):	3.00	1.03
0.28	3.50	1.04
	4.00	1.05
(i.e. Depth Below Ground Level) (m):	4.50	1.06
	5.00	1.06
1.72	6.00	1.08
Effective Storage Depth Across 75% - 25% (m):	7.00	1.09
	8.00	1.10
0.56	9.00	1.11
Time to Fall to 75% Effective Depth (min):	10.00	1.12
	15.00	1.12
	20.00	1.13
Time to Fall to 25% Effective Depth (min):	30.00	1.15
	40.00	1.17
N/A	50.00	1.17
Vp75%-25% (m3):	60.00	1.19
	90.00	1.21
0.65	120.00	1.24
As50% (m2):	180.00	1.28
	217.00	1.31
4.12	289.00	1.35
Tp75%-25% (mins):	334.00	1.38
N/A		

DESIGN SOIL INFILTRATION RATE, f (m/s):	N/A
---	-----

Comments:
NOTE: During the duration of the test the required intercept failed to be reached. Therefore the test is considered not to have been successful



Site Engineer:	Date:
HS/TH	26.05.2022

Checked and Approved By:	Date:
LB	20.06.22

Location
SA101