



**BROWNFIELD
SOLUTIONS LTD**

GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

ARTAL

185 Manchester Road, Rochdale

Factual Ground Investigation Report

OS/C5591/12754

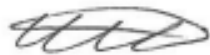
January 2024

PROJECT QUALITY CONTROL DATA SHEET

Site Name:	185 Manchester Road, Rochdale		
Document Name:	Factual Ground Investigation Report		
Reference:	OS/C5591/12754		
Status:	-	23/01/2024	Final.

Issued By:	Client:	Engineer:
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DRAWINGS

Drawing Number	Rev	Title
C5591/01	-	Site Location Plan
C5591/02	-	Root Plan

APPENDICES

Appendix	Title
Photographs	Photographic Volume
Appendix A	Exploratory Hole Logs

1.0 INTRODUCTION

1.1 Context

This factual report describes a ground investigation carried out by Brownfield Solutions Limited (BSL) for Artal on a site off Manchester Road, Rochdale.

This report has been completed in general accordance with the following guidance:

-
- BS 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites.
 - BS5930: 2015+A1:2020 Code of Practice for Ground Investigations.
-

1.2 Proposed Development

The proposed development is for a 4-storey building comprising of 73 care home apartment units plus amenities and associated external works, as shown on the proposed development plan, drawing No.55.22 provided to BSL by the client.

1.3 Scope

A ground investigation was undertaken to establish ground conditions and the extent of tree roots onsite to determine the suitability of the site for the proposed development.

1.4 Limitations

BSL have used reasonable skill, care and diligence for the investigation of the site and the production of this report. There may be other conditions prevailing on the site which are outside the scope of work and have not been highlighted, therefore have not been considered by this report. Responsibility cannot be accepted for such site conditions not revealed by this report.

This report has been prepared for the sole use and reliance of the Client, Artal. No other third parties may rely upon or reproduce the contents of this report without the written permission of Brownfield Solutions Ltd (BSL). If any unauthorised third party comes into possession of this report, then they rely on it at their own risk and BSL do not owe them any Duty of Care.

The groundwater results described are only representative of the dates on which they were recorded, and levels may vary seasonally (e.g. due to changes in weather).

Notwithstanding site observations concerning the presence or otherwise of archaeological issues, asbestos-containing materials (ACM) or invasive weeds (e.g. Japanese knotweed), this report does not constitute a formal survey of these potential issues.

The site plans enclosed in this report should not be scaled off. Any site boundary line depicted on plans does not imply legal ownership of land.

2.0 THE SITE

2.1 Location

The site is located off Manchester Road, Rochdale, OL11 3QY. It is situated approximately 15 Km northeast of Manchester City Centre, centred of National Grid Reference 389180 412331 as shown on the Site Location Plan, Drawing No. C5591/01.

2.2 Site Description

The main site features and potential issues identified during this survey are tabulated below:

Feature	Description
Site Area	The site covers approximately 0.17 hectares.
Site Access	Access to the site is gained off Manchester Road to the west.
Current Land Use and Site Features	The site is currently an existing residential plot comprising a 2-storey house in the north-west of the site with associated hardstanding comprising brick pavement driveway in the west. The remainder of the site comprise soft landscaping.
Potential Sources of Gross Contamination	There are no obvious signs of gross contamination.
Vegetation	There are semi-mature trees across the north, east and south border of the site. The remainder is grassland vegetation across the centre of the site.
Topography	The site is generally flat.
Site Boundaries	The site is enclosed by brick wall in the west, adjacent to Manchester Road. The north, east and south is bound by wooden fencing and brick wall.
Surrounding Area	The site is set within a mixed commercial and residential area. Residential properties exist to the northeast and southeast of the site. Open fields occupy the northwest (Mandale Park) of the site. In addition, The Highfield Hospital is located to the southwest of the site.

3.0 METHOD OF INVESTIGATION

3.1 Objectives

The scope and the aim of the fieldwork was specified by Artal.

The aim of the fieldwork was to:

- Investigate ground conditions on the site.
- Investigate the extent of tree roots.

3.2 Site Works

The following site works have been undertaken as part of the intrusive investigation between the dates of 16th January and 17th January 2024.

Method	No.	Range Depths (m bgl)	Purpose
Hand Pits	4	0.80	Establish general ground conditions and gain good coverage. Investigate the extent of tree roots.

The approximate locations of the pits are indicated on the Exploratory Hole Location Plan, drawing No.SK01, provided to BSL from the client. The exploratory hole logs are presented in Appendix A.

The exploratory holes were logged by an experienced geo-environmental engineer in general accordance with the following guidance:

- BS 5930:2015+A1:2020 Code of Practice for Site Investigations.
- BS EN 14688-1:2018 Geotechnical Investigation and Testing – Identification and classification of soil.

4.0 GROUND CONDITIONS

4.1 Made Ground Topsoil

Made ground topsoil was encountered across the site from ground level to between 0.40m and 0.80m bgl, comprising grass over dark brown slightly gravelly sandy clay with frequent rootlets and roots. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone, brick and clinker.

4.2 Natural Superficial Strata

The natural strata underlying the site was encountered from 0.70m bgl to between 0.80m and 1.30m bgl as soft brown slightly gravelly slightly sandy clay. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of mudstone.

4.3 Tree Roots

Tree roots were encountered within each of the exploratory hole locations ranging from surface level to between 0.15m and 0.55m bgl. The thickness of the tree roots ranged between 1.5cm to 4cm in diameter across the site. This is detailed further in the Root Plan, Drawing No.C5591/02.

5.0 REFERENCES

Association of Ground Investigation Specialists. 'Guidelines for Good Practice in Site Investigation'. Issue 2, March 2006.

BS 1377 'Method of Test for Soils for Civil Engineering Purposes'. 1990.

BS 5930:2015+A1:2020 'Code of Practice for Site Investigations'. 2020.

BS 10175:2011+A2 'Investigation of Potentially Contaminated sites – code of practice'. 2017.

BS EN ISO 14688 'Geotechnical investigation and testing – Identification and classification of soil'. 2018.

BS EN ISO 17892 'Geotechnical investigation and testing. Laboratory testing of soil.' Parts 1-12 :2018.

DRAWINGS



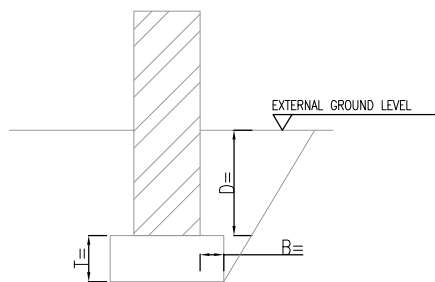
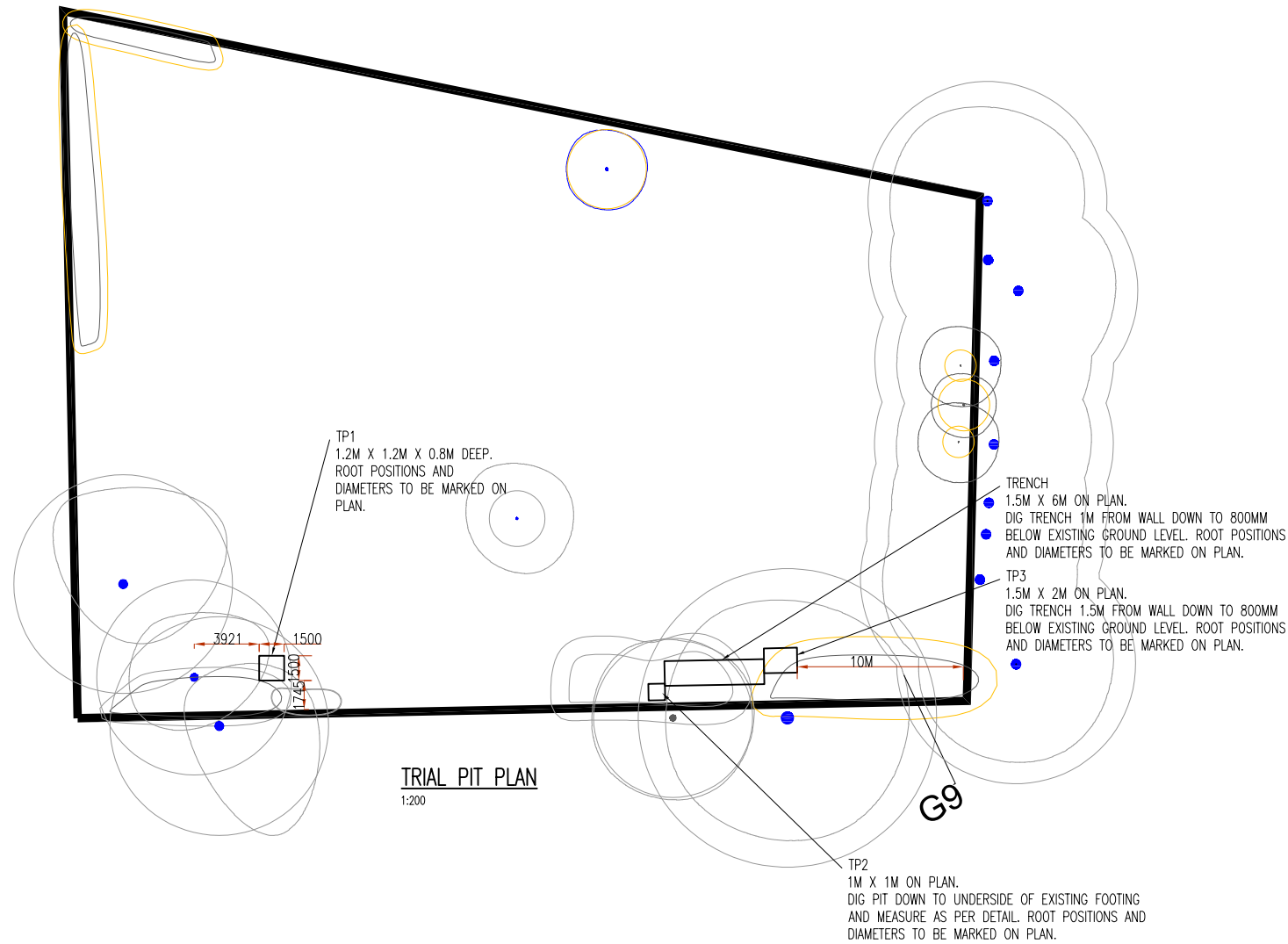
SITE LOCATION

NEAREST POSTCODE: OL11 3QY

SITE ENTRANCE WHAT3WORDS: ///SNOW.RAIL.DENT



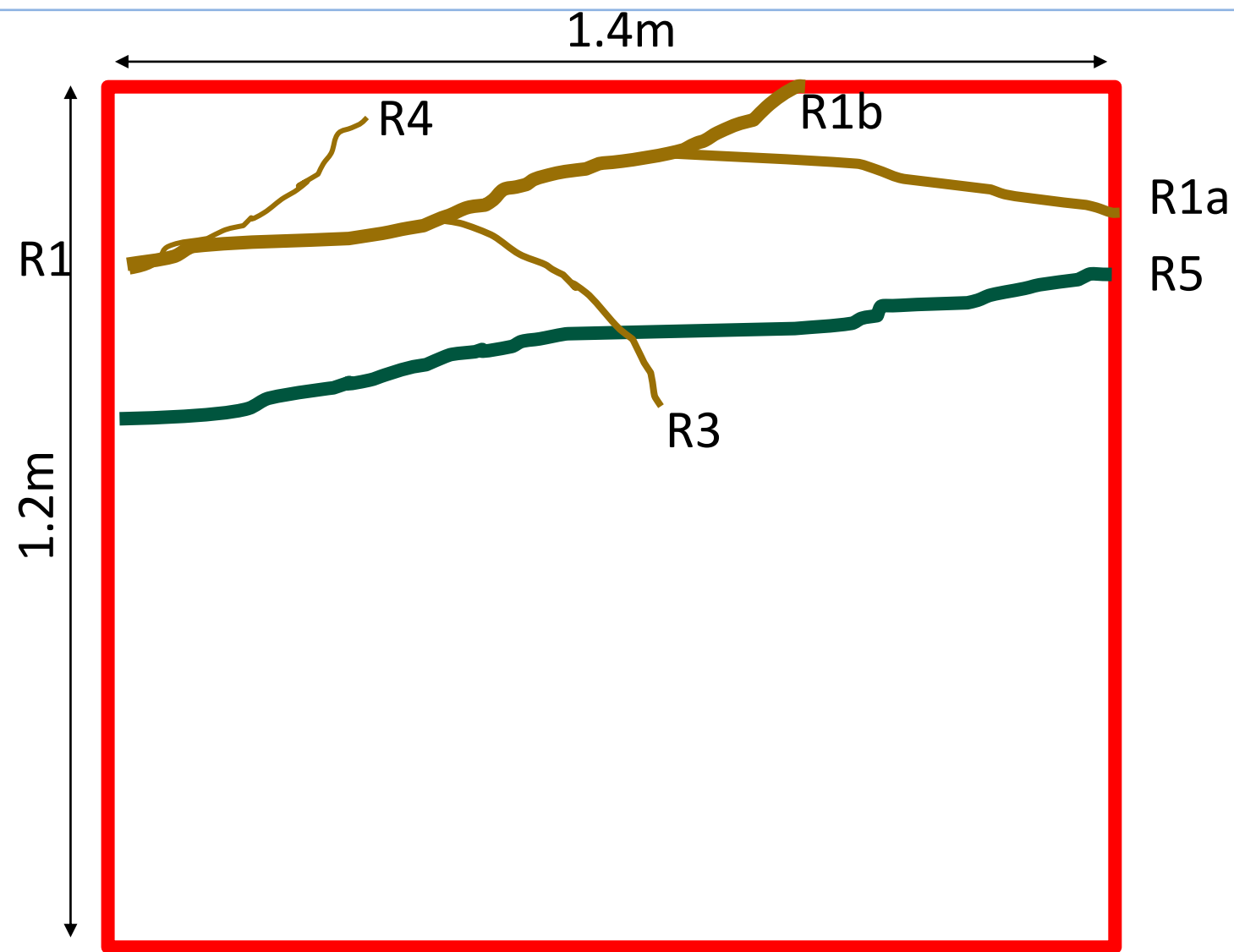
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CLIENT				
ARTAL				
PROJECT TITLE				
185 MANCHESTER ROAD, ROCHDALE				
DRAWING TITLE				
SITE LOCATION PLAN				
DRAWING No.		REVISION	SCALE	DATE
C5591/01		-	NTS	15/01/24
DRAWN BY			CHECKED BY	
SD			JM	



TRIAL PIT SECTION
1:20

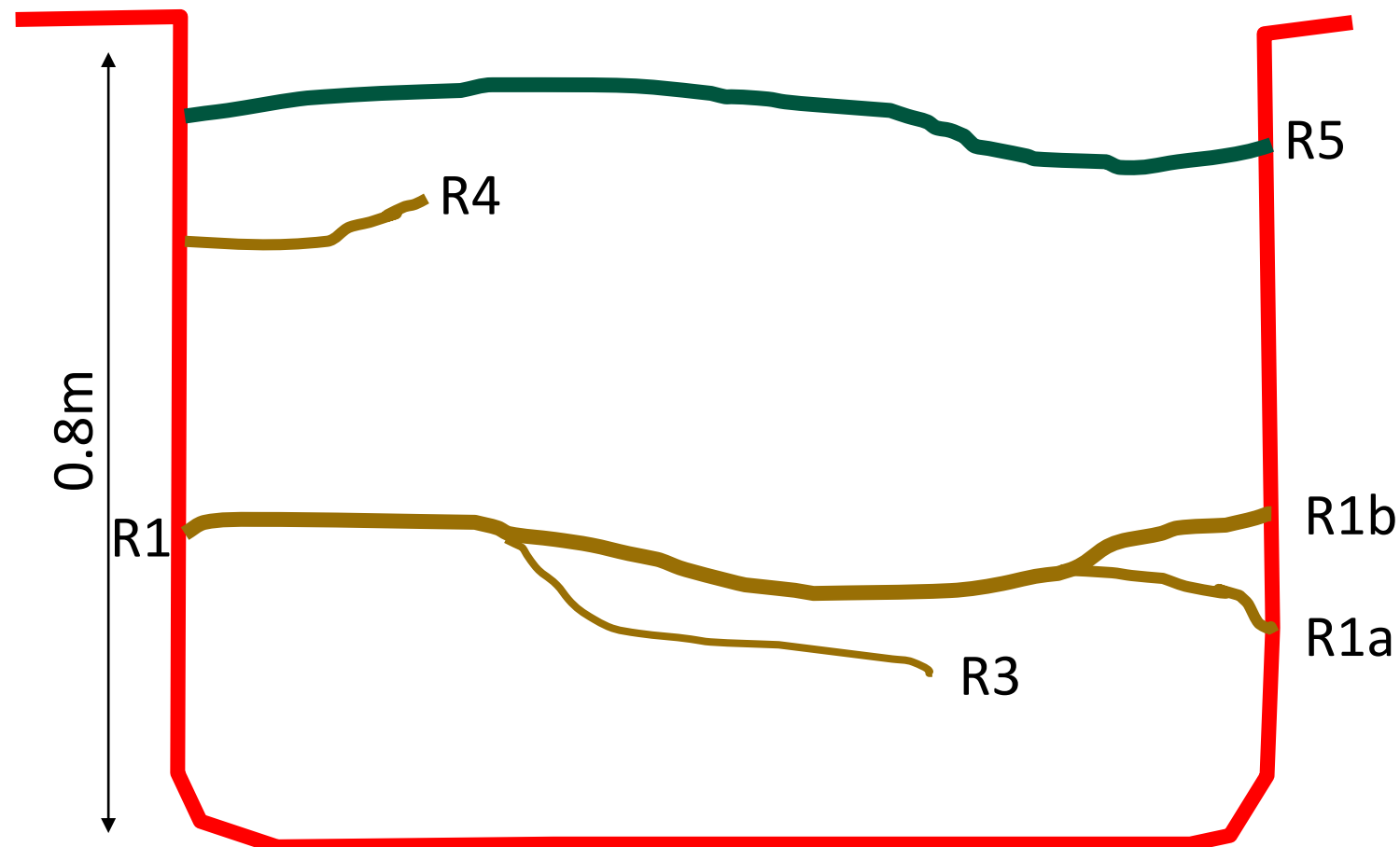
PRELIMINARY DRAWING.
NOT FOR CONSTRUCTION.

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Rev	Details	Drawn By	Checked By	Date
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CS MANCHESTER ROAD LTD				
Project:				
72 BED NURSING HOME SPARTH HOUSE ROCHDALE				
Title:				
TRIAL PIT MARK UP				
Issued For:				
INFORMATION				
Reid Jones partnership Consulting Civil & Structural Engineers				
8 Orrell Road Orrell, Wigan WN5 8ET Tel 01942 218006 E-mail: enq@reidjonespartnership.co.uk Web address: www.reidjonespartnership.co.uk				
3 Cross Street Preston PR1 3LT Tel 01772 468007				
Scale:	1:200	@	(A1)	
Project No:	11610	Drawing No:	SK01	Issue: P1
DO NOT SCALE - USE FIGURED DIMENSIONS ONLY. This drawing is confidential and is the property of Reid Jones Partnership. It must not be disclosed to any third party, copied or lost without prior written consent. The contractor is to check all dimensions on site prior to commencement of works.				
QMS ISO 9001:2015 REGISTERED QUALITY MANAGEMENT				



PLAN VIEW

Root	Thickness	Depth
R1	4cm	30cm
R1a	2cm	28cm
R1b	2.5cm	40cm
R3	2cm	55cm
R4	2.5cm	15cm
R5	3cm	Surface



CROSS SECTION

KEY

- APPROXIMATE PIT BOUNDARY
- ROOTS >2.5cm
- DEAD ROOT

NOTES

- ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS REPORTS. THIS DRAWING IS COPYRIGHT OF BSL.
- DRAWING NOT FOR CONSTRUCTION PURPOSES.

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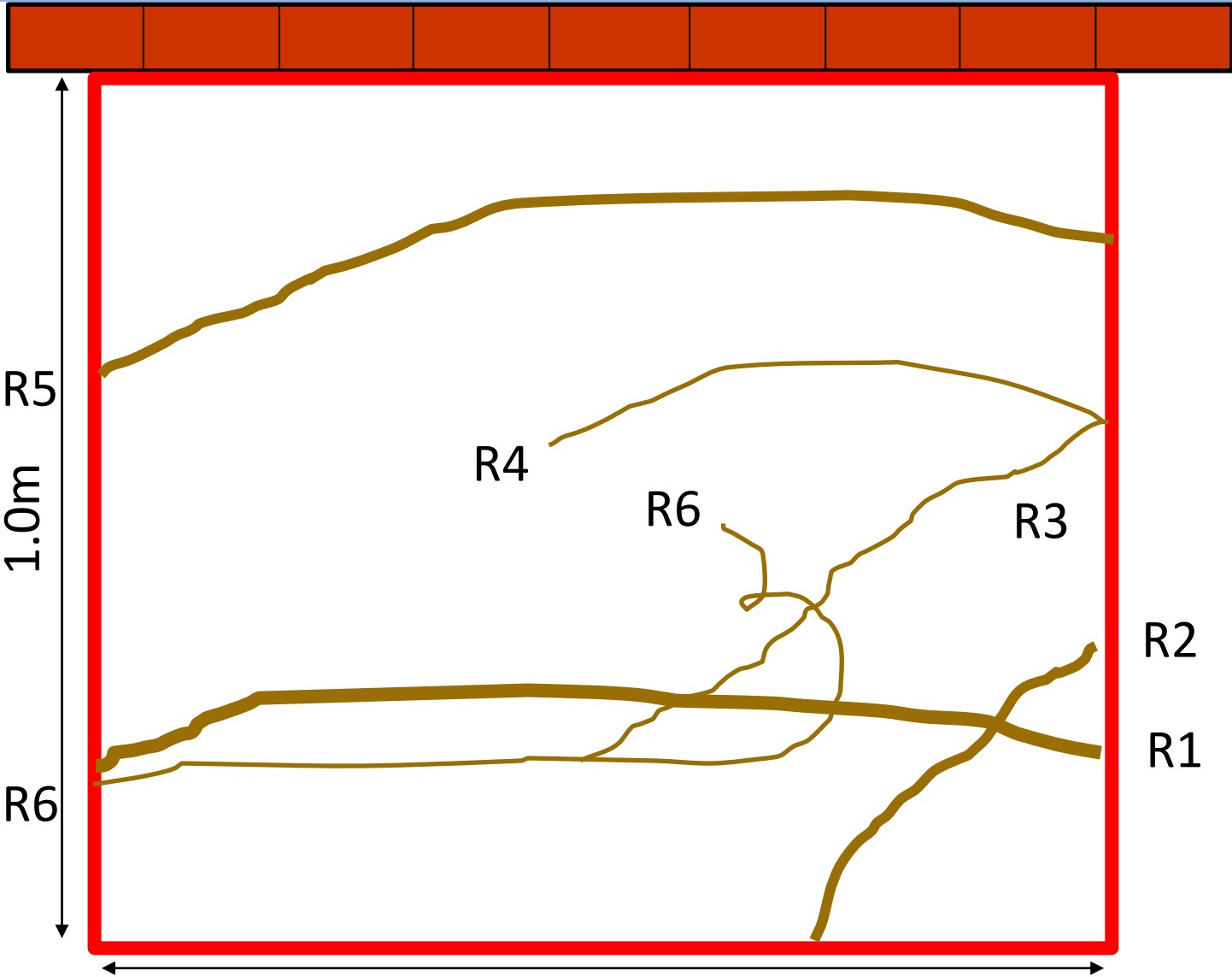


CLIENT	ARTAL
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PROJECT TITLE	185 MANCHESTER ROAD
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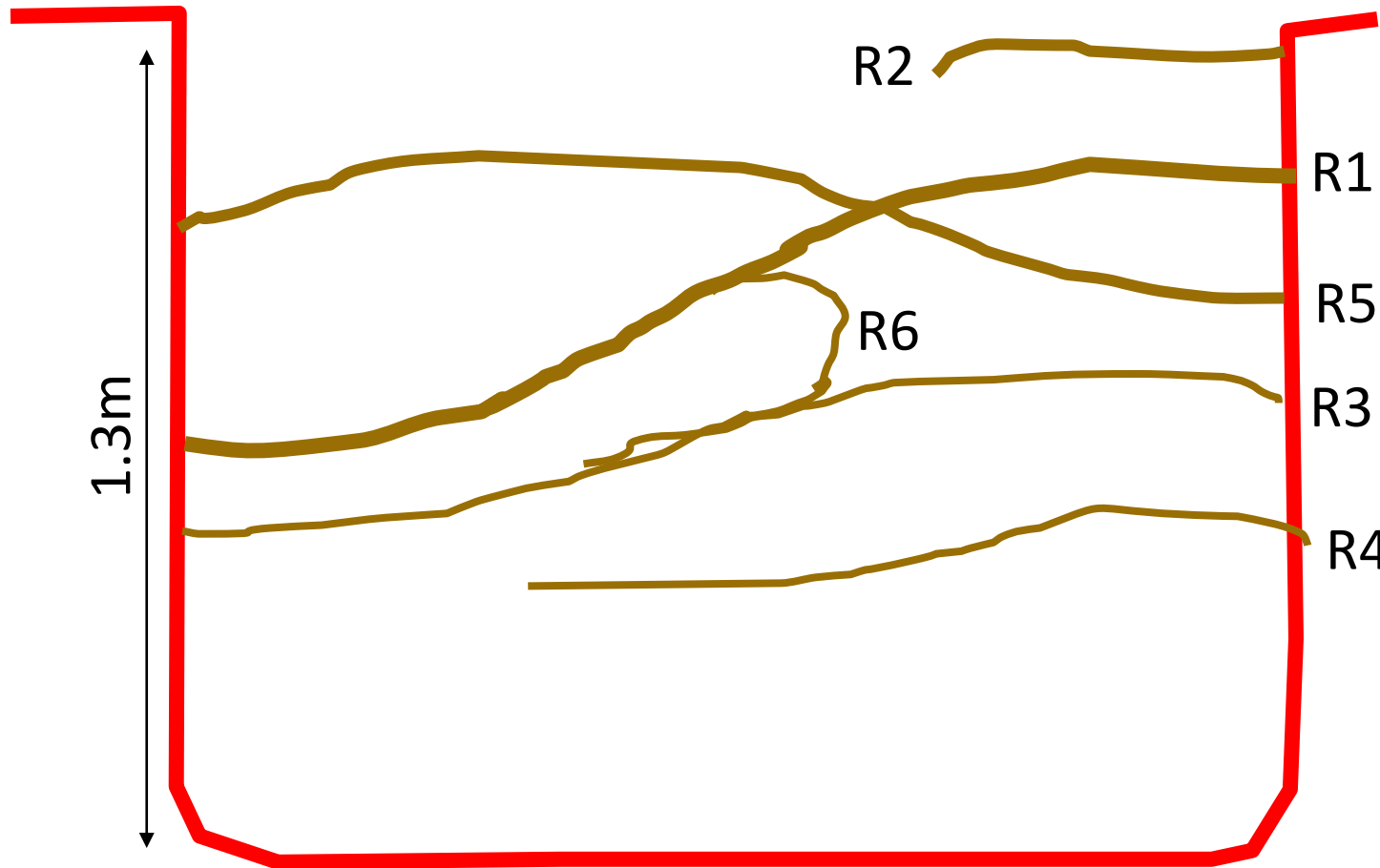
DRAWING TITLE	ROOT PLAN
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DRAWING No. C5591/02	REVISION -	SCALE NTS	DATE 22/01/24
DRAWN BY KB	CHECKED BY JM		



1.0m
PLAN VIEW

Root	Thickness	Depth
R1	4cm	10cm
R2	3cm	Surface
R3	2.5cm	30cm
R4	2.5cm	35cm
R5	3cm	30cm
R6	2.5cm	25cm



CROSS SECTION

TP02
1.0m x 1.0m x 1.3m

KEY

- APPROXIMATE PIT BOUNDARY
- ROOTS >25mm
- BRICK WALL

- NOTES
- ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS REPORTS. THIS DRAWING IS COPYRIGHT OF BSL.
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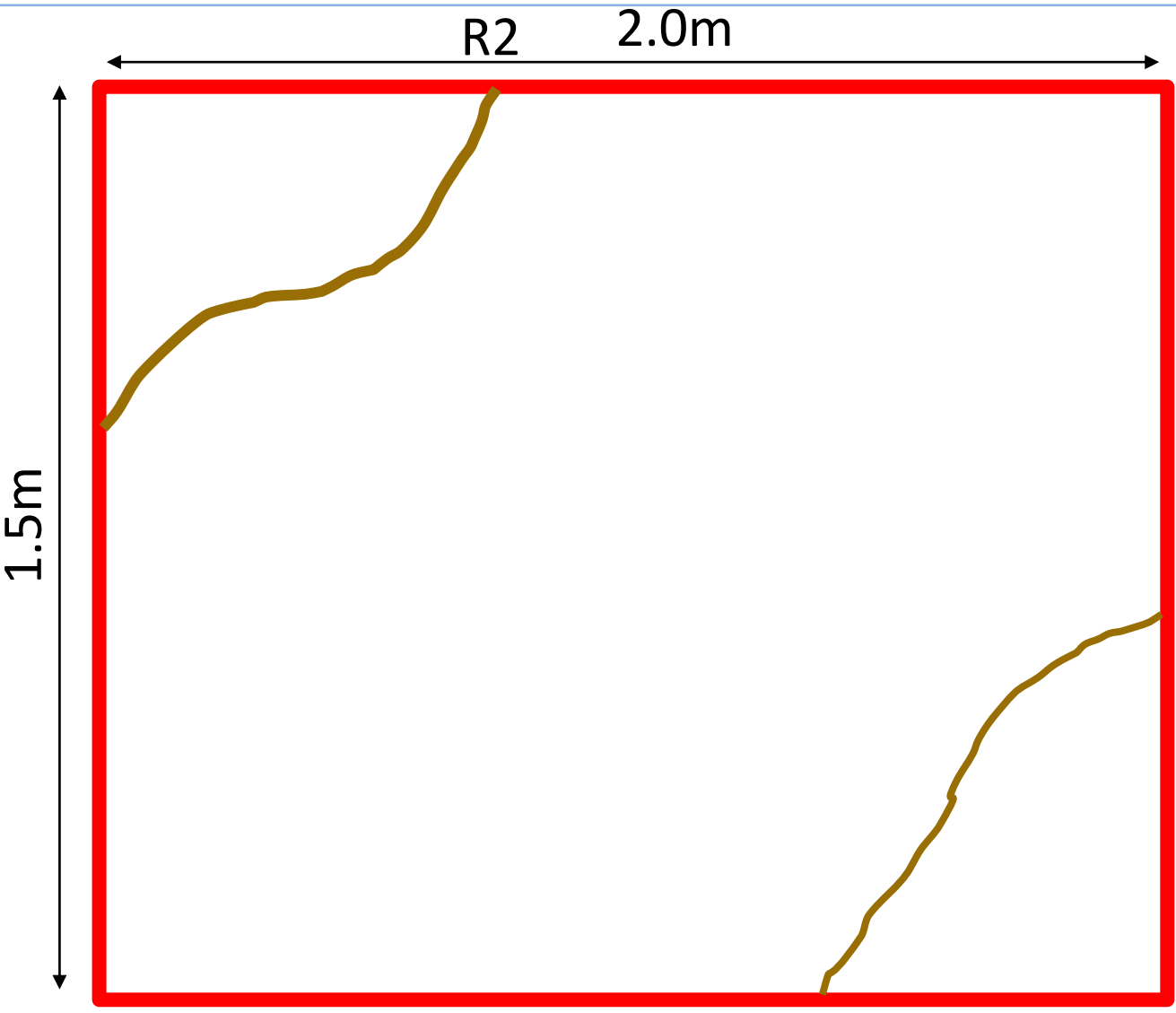


CLIENT
ARTAL

PROJECT TITLE
185 MANCHESTER ROAD

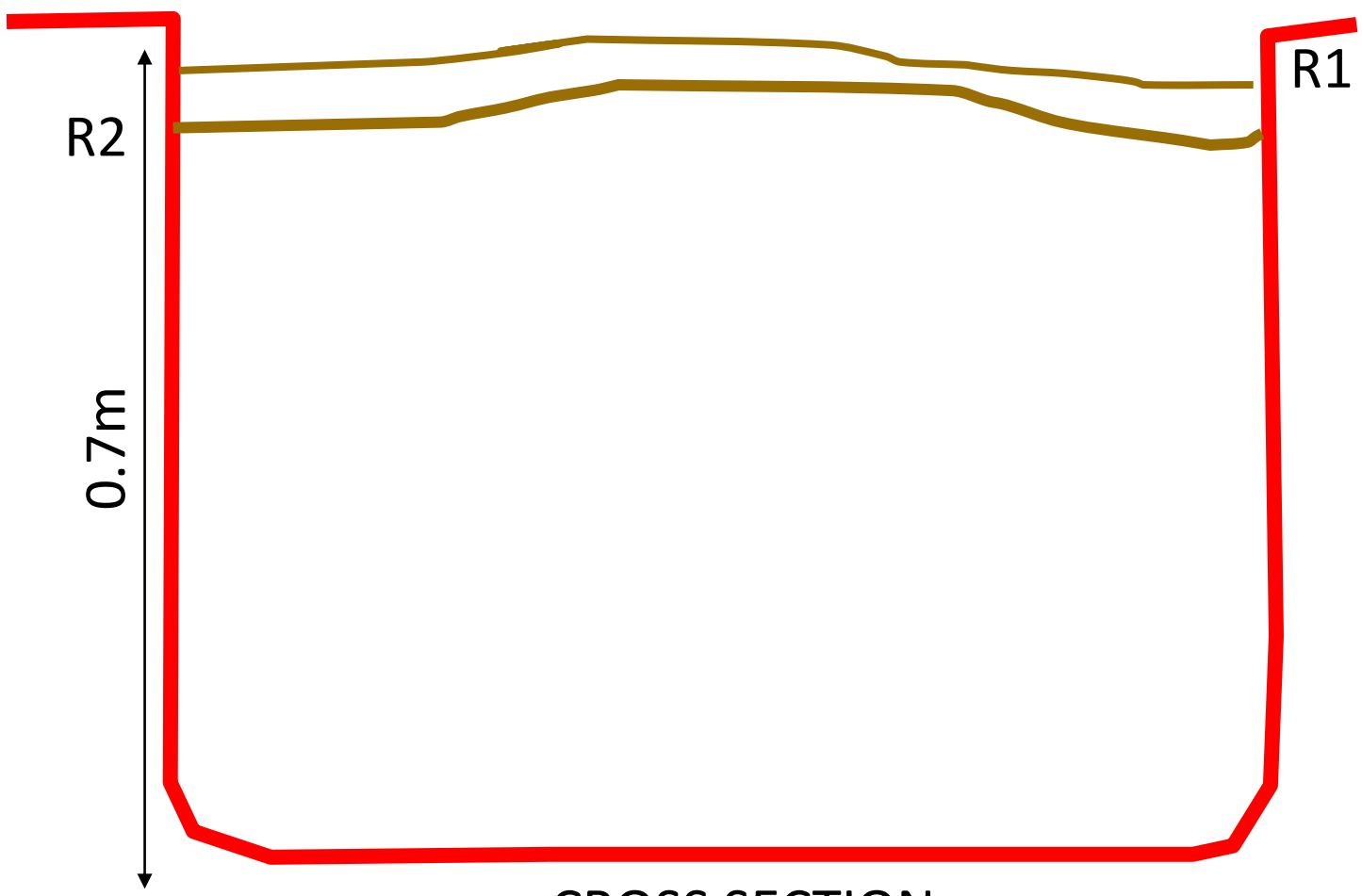
DRAWING TITLE
ROOT PLAN

DRAWING No. C5591/02	REVISION -	SCALE NTS	DATE 22/01/24
DRAWN BY KB		CHECKED BY JM	



PLAN VIEW

Root	Thickness	Depth
R1	2.5cm	Surface
R2	3cm	Surface



CROSS SECTION

TP03
2.0m x 1.5m x 0.7m

KEY

- APPROXIMATE PIT BOUNDARY
- ROOTS >25mm

- NOTES
- ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
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 - DRAWING NOT FOR CONSTRUCTION PURPOSES.

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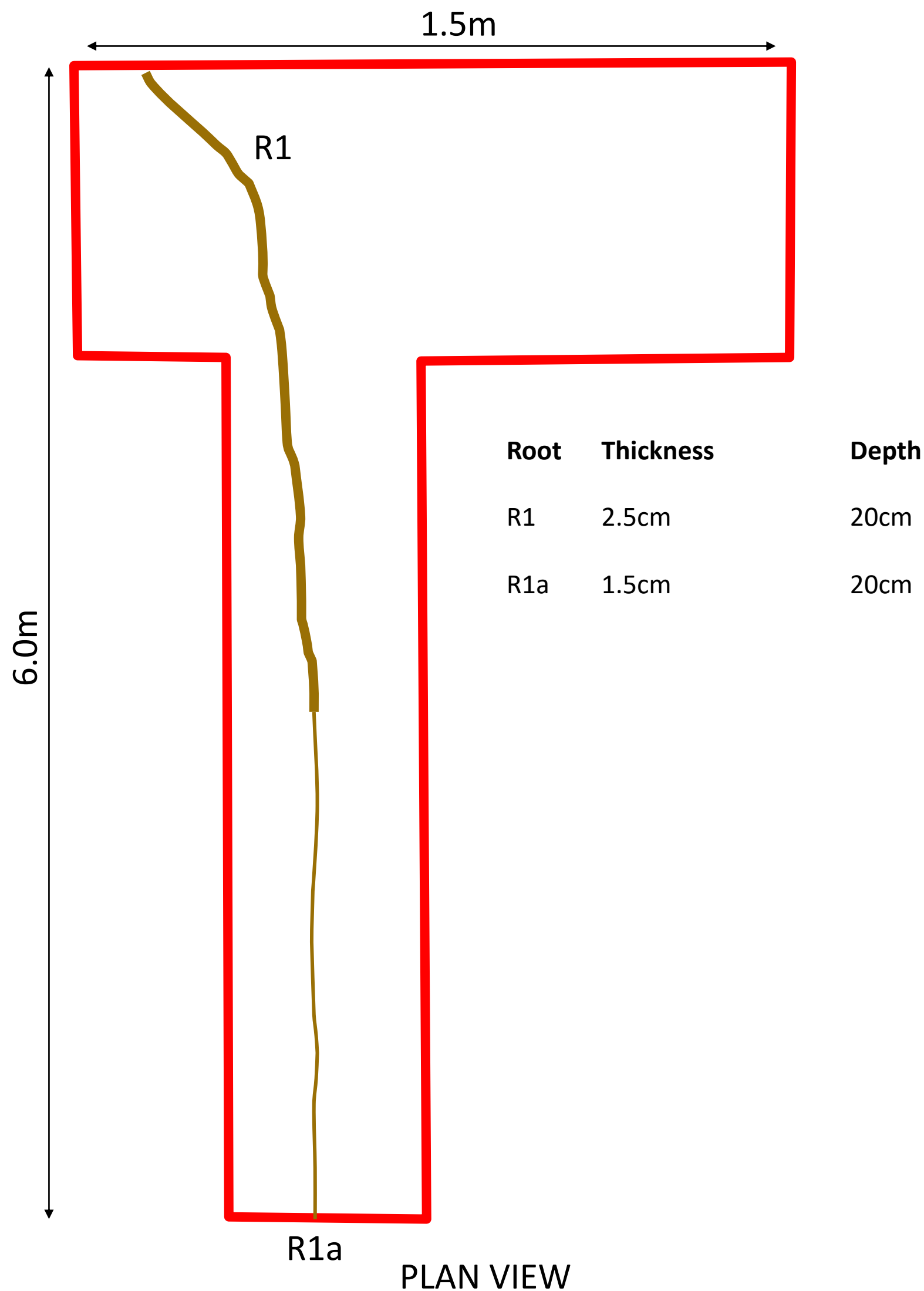


CLIENT
ARTAL

PROJECT TITLE
185 MANCHESTER ROAD

DRAWING TITLE
ROOT PLAN

DRAWING No. C5591/02	REVISION -	SCALE NTS	DATE 22/01/24
DRAWN BY KB		CHECKED BY JM	



TRENCH
2.0m x 6.0m x 0.7m

KEY				
APPROXIMATE PIT BOUNDARY				
ROOTS >25mm				
NOTES 1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING. 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS REPORTS. THIS DRAWING IS COPYRIGHT OF BSL. 3. DRAWING NOT FOR CONSTRUCTION PURPOSES.				
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CLIENT ARTAL				
PROJECT TITLE 185 MANCHESTER ROAD				
DRAWING TITLE ROOT PLAN				
DRAWING No.	REVISION	SCALE	DATE	
C5591/02	-	NTS	22/01/24	
DRAWN BY		CHECKED BY		
KB		JM		

PHOTOGRAPHS



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4

Photo Descriptions

PHOTO NO.	DETAILS
1	TP1
2	
3	
4	

REV	DATE	DESCRIPTION	BY	CKD



CLIENT		ARTAL	
PROJECT TITLE		185 MANCHESTER ROAD, ROCHDALE	
TITLE		TRIAL PIT PHOTOBOARD	
Associated Document Ref No.		PAGE	
OS/C5591/12754		1 of 4	
COMPLIED BY		CHECKED BY	
OS		JM	

Photo Descriptions

PHOTO NO.	DETAILS
5	TP2
6	
7	
8	

REV	DATE	DESCRIPTION	BY	CKD



CLIENT	ARTAL
PROJECT TITLE	185 MANCHESTER ROAD, ROCHDALE
TITLE	TRIAL PIT PHOTOBOARD
Associated Document Ref No.	PAGE
OS/C5591/12754	2 of 4
COMPLIED BY	CHECKED BY
OS	JM



PHOTO 5



PHOTO 6



PHOTO 7



PHOTO 8



PHOTO 9



PHOTO 10



PHOTO 11



PHOTO 12

Photo Descriptions

PHOTO NO.	DETAILS
9	TP3
10	
11	
12	

REV	DATE	DESCRIPTION	BY	CKD



CLIENT		ARTAL	
PROJECT TITLE		185 MANCHESTER ROAD, ROCHDALE	
TITLE		TRIAL PIT PHOTOBOARD	
Associated Document Ref No.		PAGE	
OS/C5591/12754			3 of 4
COMPLIED BY		CHECKED BY	
OS		JM	



PHOTO 13



PHOTO 14



PHOTO 15



PHOTO 16

Photo Descriptions

PHOTO NO.	DETAILS
13	Trench
14	
15	
16	

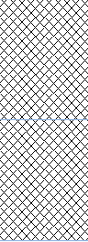
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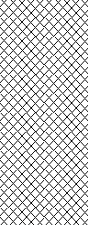
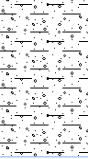


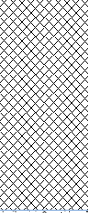
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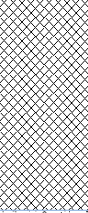
APPENDIX A

Exploratory Hole Logs

 BROWNFIELD SOLUTIONS LTD						Trial Pit Log		No. TP1 Sheet 1 of 1	
PROJECT NO: C5591						CO-ORDS:		Hole Type TP	
PROJECT NAME: 185 MANCHESTER ROAD, ROCHDALE						LEVEL:		Scale 1:25	
CLIENT: ARTAL						DATES: 16/01/24		Logged JEM	Checked JM
Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description		
	Depth (m)	Type	Results						
				0.40			MADE GROUND TOPSOIL: Grass over dark brown slightly gravelly sandy clay with frequent rootlets and roots. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone, brick and clinker (Made Ground Topsoil).		1.0
				0.80			MADE GROUND: Brown gravelly fine to coarse sand. Gravel is subangular to subrounded fine to coarse of sandstone, mudstone, slag, clinker and brick.		
							End of Trial Pit at 0.80m		2.0
									3.0
									4.0
									5.0
Remarks		1. Service clearance undertaken by BSL engineer using CAT & Genny. 2. No groundwater encountered. 3. Trial pit backfilled with arisings upon completion.						ES = Environmental Sample D = Disturbed Sample B = Bulk Sample LB = Large Bulk Sample U = Undisturbed Sample UT = Undisturbed Thin Wall Sample SPT = Standard Penetration Test PID = Photoionization Detector (ppm) PPM = Part Per Million HSV = Hand Shear Vane	

 BROWNFIELD SOLUTIONS LTD						Trial Pit Log		No. TP2 Sheet 1 of 1	
PROJECT NO: C5591						CO-ORDS:		Hole Type TP	
PROJECT NAME: 185 MANCHESTER ROAD, ROCHDALE						LEVEL:		Scale 1:25	
CLIENT: ARTAL						DATES: 16/01/24		Logged JEM Checked JM	
Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description		
	Depth (m)	Type	Results						
				0.75			MADE GROUND TOPSOIL: Grass over dark brown slightly gravelly sandy clay with frequent rootlets and roots. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone, brick and clinker (Made Ground Topsoil).		
				1.30			Soft brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of mudstone.		1.0
							End of Trial Pit at 1.30m		2.0
									3.0
									4.0
									5.0
Remarks		1. Service clearance undertaken by BSL engineer using CAT & Genny. 2. No groundwater encountered. 3. Trial pit backfilled with arisings upon completion.						ES = Environmental Sample D = Disturbed Sample B = Bulk Sample LB = Large Bulk Sample U = Undisturbed Sample UT = Undisturbed Thin Wall Sample SPT = Standard Penetration Test PID = Photoionization Detector (ppm) PPM = Part Per Million HSV = Hand Shear Vane	

 BROWNFIELD SOLUTIONS LTD						Trial Pit Log		No.	
TP3									
Sheet 1 of 1									
PROJECT NO: C5591						CO-ORDS:		Hole Type	
PROJECT NAME: 185 MANCHESTER ROAD, ROCHDALE						LEVEL:		TP	
								Scale	
								1:25	
CLIENT: ARTAL						DATES: 17/01/24		Logged	Checked
								JEM	JM
Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description		
	Depth (m)	Type	Results						
				0.70 0.80			MADE GROUND TOPSOIL: Grass over dark brown slightly gravelly sandy clay with frequent rootlets and roots. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone, brick and clinker (Made Ground Topsoil).		
							Soft brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of mudstone.		1.0
							End of Trial Pit at 0.80m		
									2.0
									3.0
									4.0
									5.0
Remarks		1. Service clearance undertaken by BSL engineer using CAT & Genny. 2. No groundwater encountered. 3. Trial pit backfilled with arisings upon completion.						ES = Environmental Sample D = Disturbed Sample B = Bulk Sample LB = Large Bulk Sample U = Undisturbed Sample UT = Undisturbed Thin Wall Sample SPT = Standard Penetration Test PID = Photoionization Detector (ppm) PPM = Part Per Million HSV = Hand Shear Vane	

 BROWNFIELD SOLUTIONS LTD						Trial Pit Log		No.	
Trench									
Sheet 1 of 1									
PROJECT NO: C5591						CO-ORDS:		Hole Type	
PROJECT NAME: 185 MANCHESTER ROAD, ROCHDALE						LEVEL:		TP	
CLIENT: ARTAL						DATES: 17/01/24		Scale	
								1:25	
								Logged	
								Checked	
								JEM	
Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description		
	Depth (m)	Type	Results						
				0.70			MADE GROUND TOPSOIL: Grass over dark brown slightly gravelly sandy clay with frequent rootlets and roots. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of sandstone, brick and clinker (Made Ground Topsoil).		
				0.80			Soft brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of mudstone.		
							End of Trial Pit at 0.80m	1.0	
								2.0	
								3.0	
								4.0	
								5.0	
Remarks		1. Service clearance undertaken by BSL engineer using CAT & Genny. 2. No groundwater encountered. 3. Trial pit backfilled with arisings upon completion.						ES = Environmental Sample D = Disturbed Sample B = Bulk Sample LB = Large Bulk Sample U = Undisturbed Sample UT = Undisturbed Thin Wall Sample SPT = Standard Penetration Test PID = Photoionization Detector (ppm) PPM = Part Per Million HSV = Hand Shear Vane	

North West

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