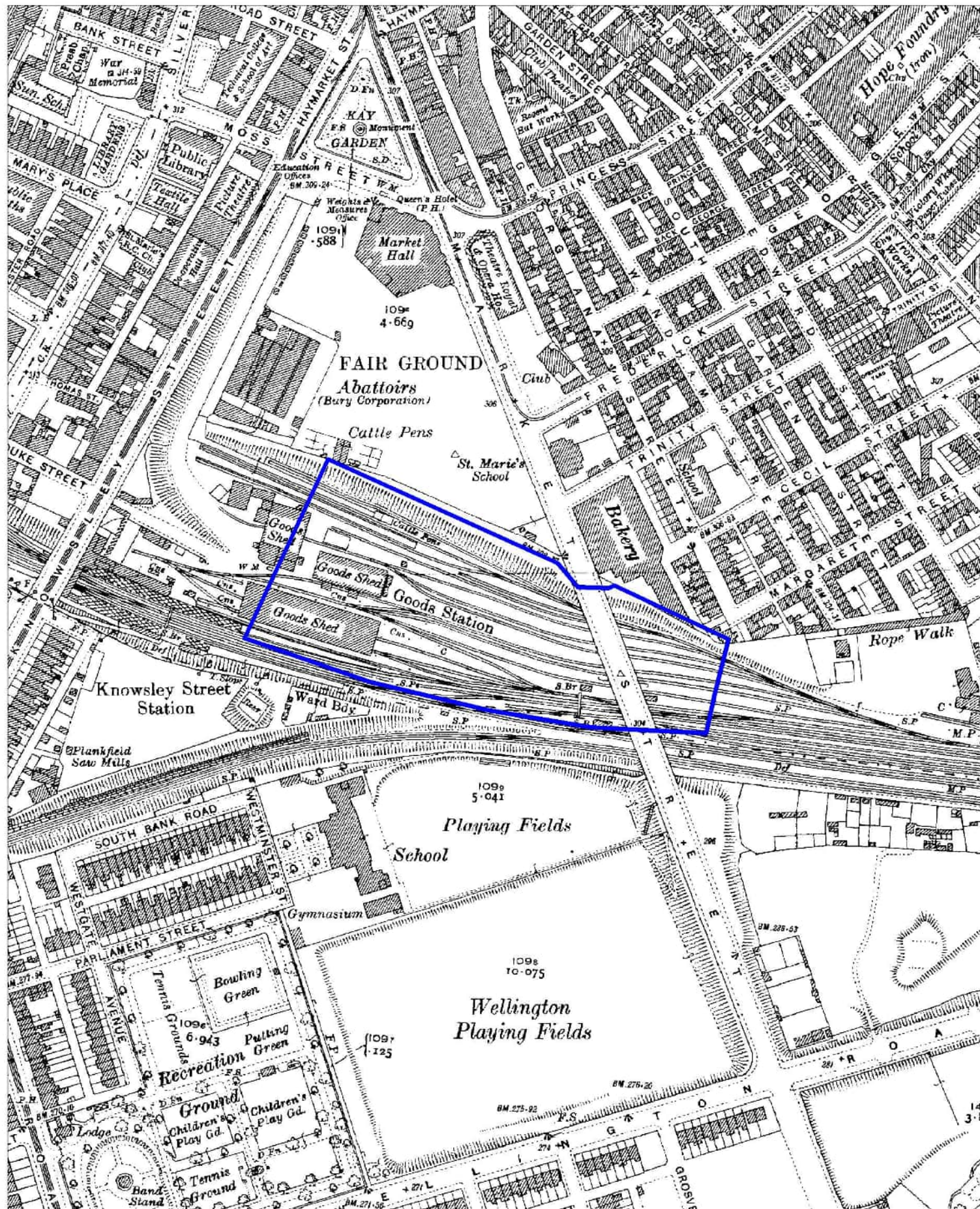




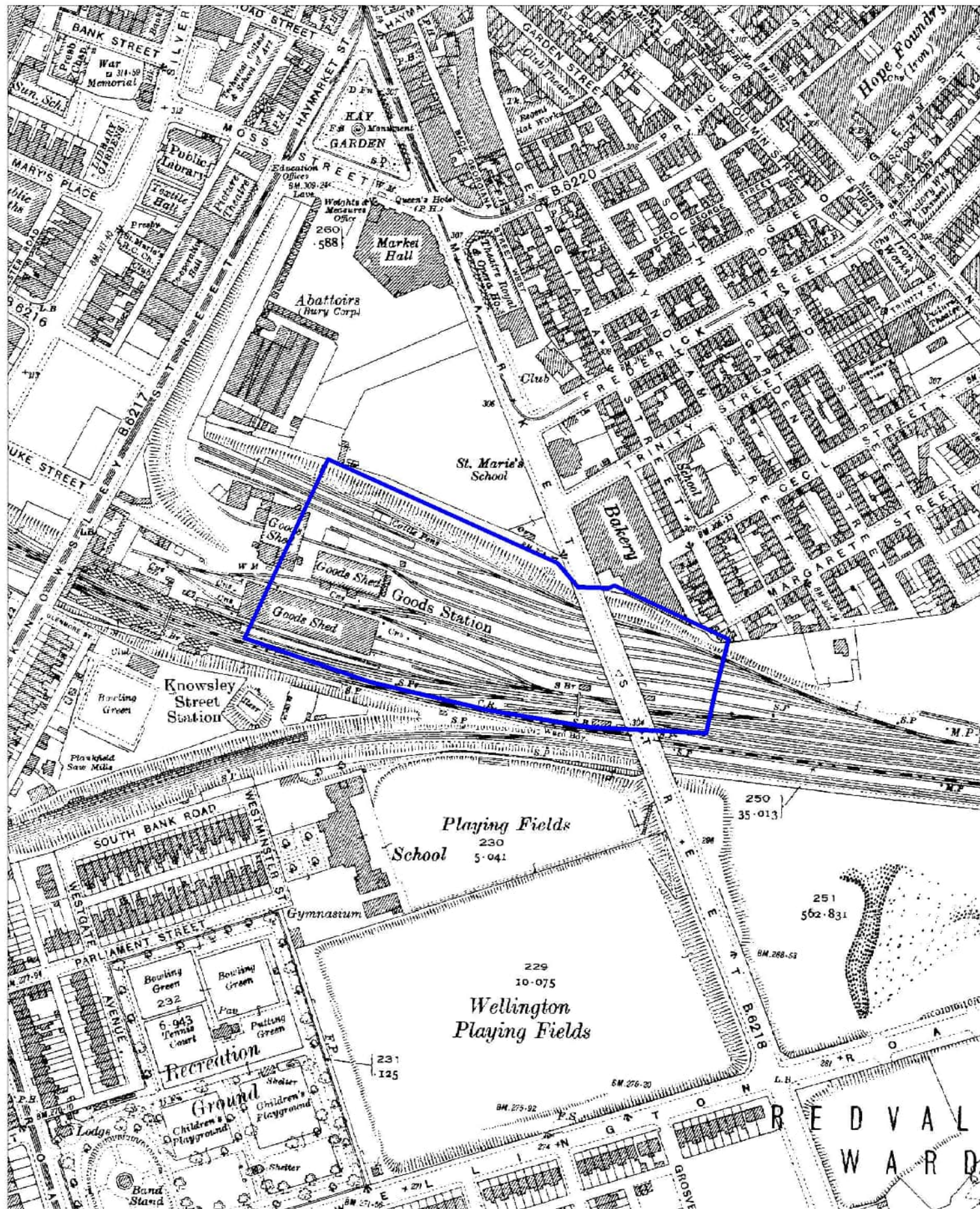
KEY:
 Site Boundary

TITLE: Townside Fields, Market Street
 Bury
 1930 Historical Map

Bury
 COUNCIL

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 Ordnance Survey 100023063.

NGR: 805 103
 SCALE: 1:2500 @ A4 Date: 11 01 2022



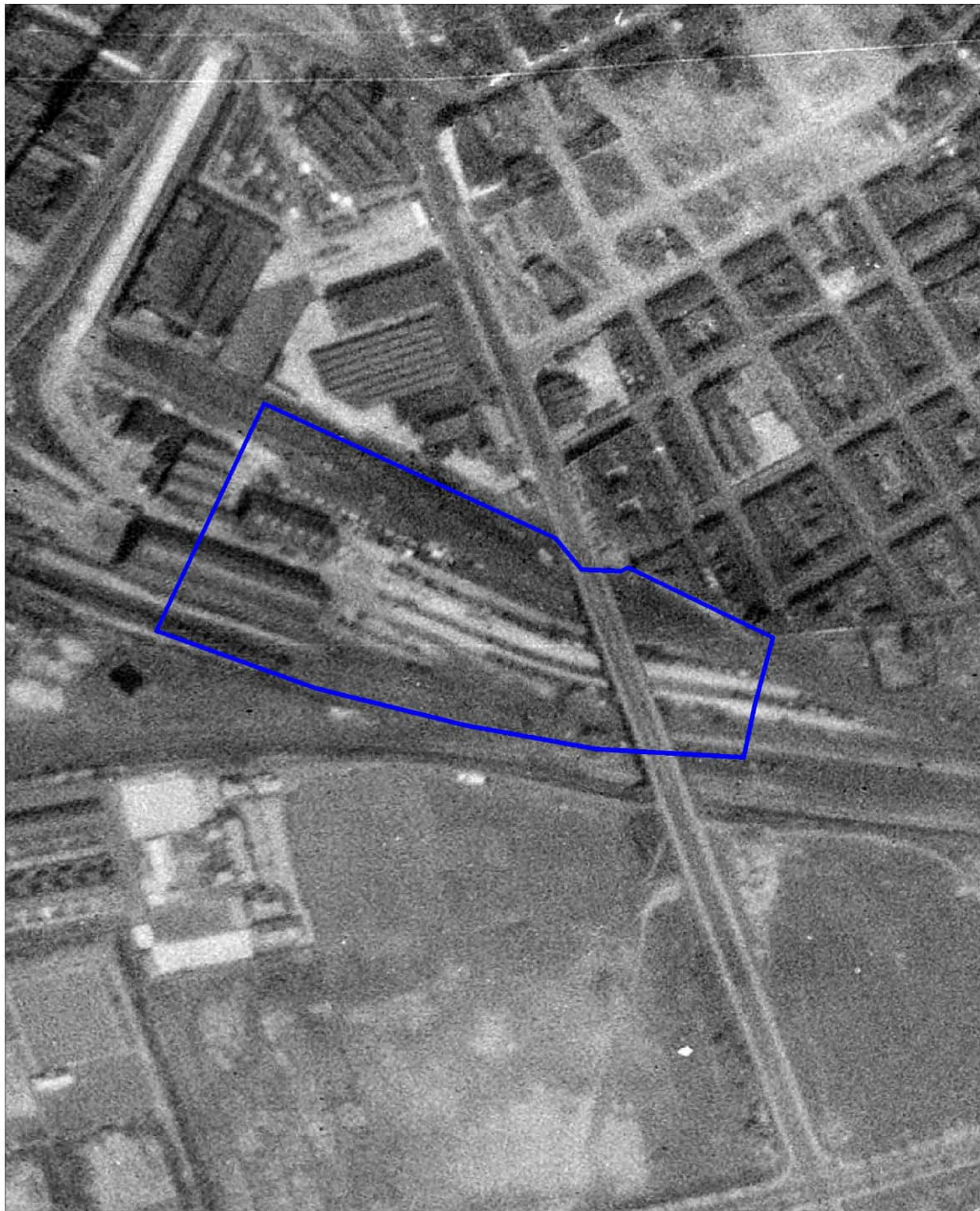
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TITLE: Townside Fields, Market Street
 Bury
 1937 Historical Map

Bury
 COUNCIL

© Crown Copyright and database right 2022
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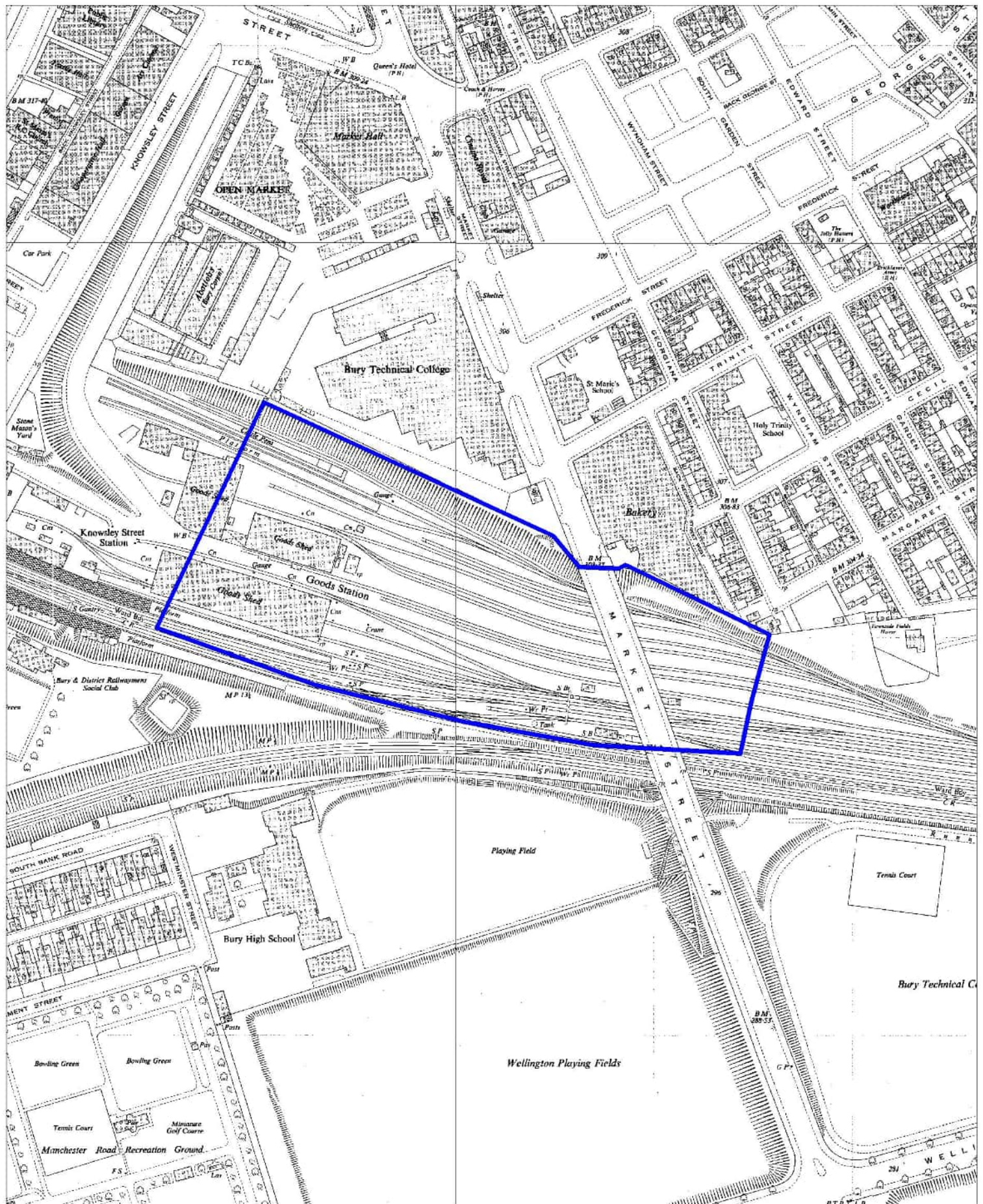
KEY:
 Site Boundary

TITLE: Townside Fields, Market Street
Bury
1940s Aerial Photo

Bury
COUNCIL

© Crown Copyright and database right 2022
Ordnance Survey 100023063.

NGR: 805 103
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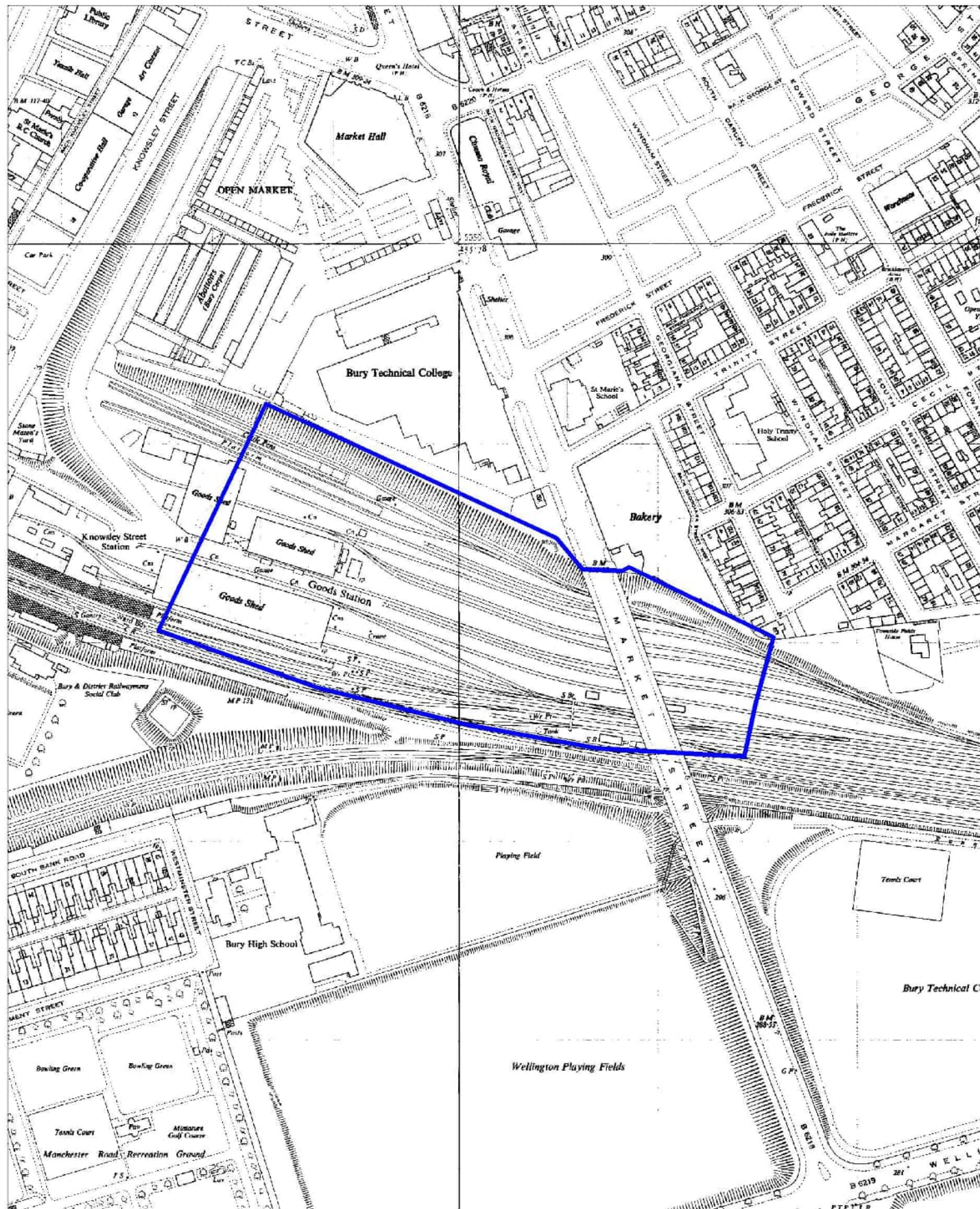
KEY:
 Site Boundary

TITLE: Townside Fields, Market Street
 Bury
 1958 Historical Map

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 Ordnance Survey 100023063.

NGR: 805 103
 SCALE: 1:2000 @ A4 Date: 11 01 2022

Bury
 COUNCIL



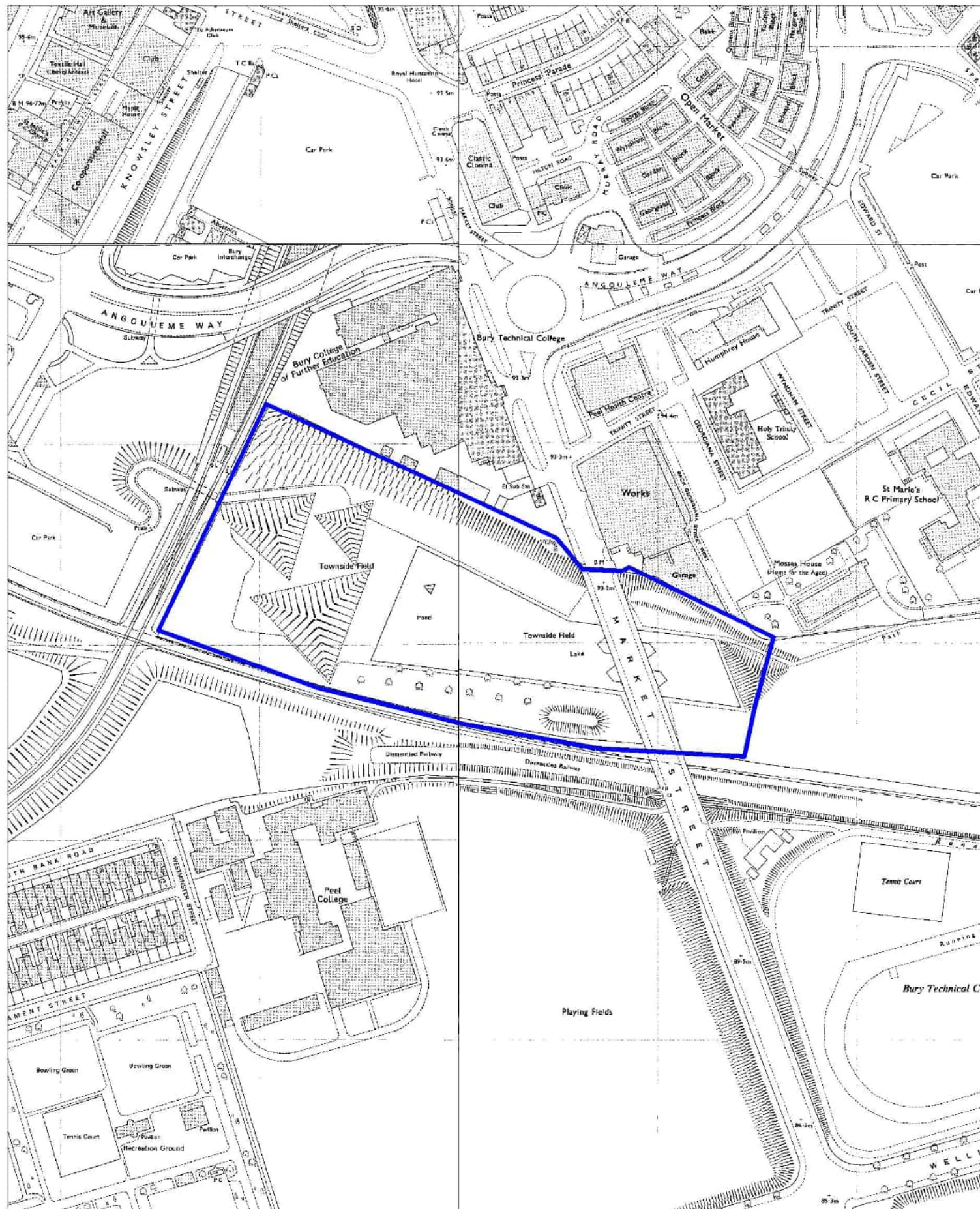
KEY:
 Site Boundary

TITLE: Townside Fields, Market Street
 Bury
 1959 Historical Map



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 Ordnance Survey 100023063.

NGR: 805 103
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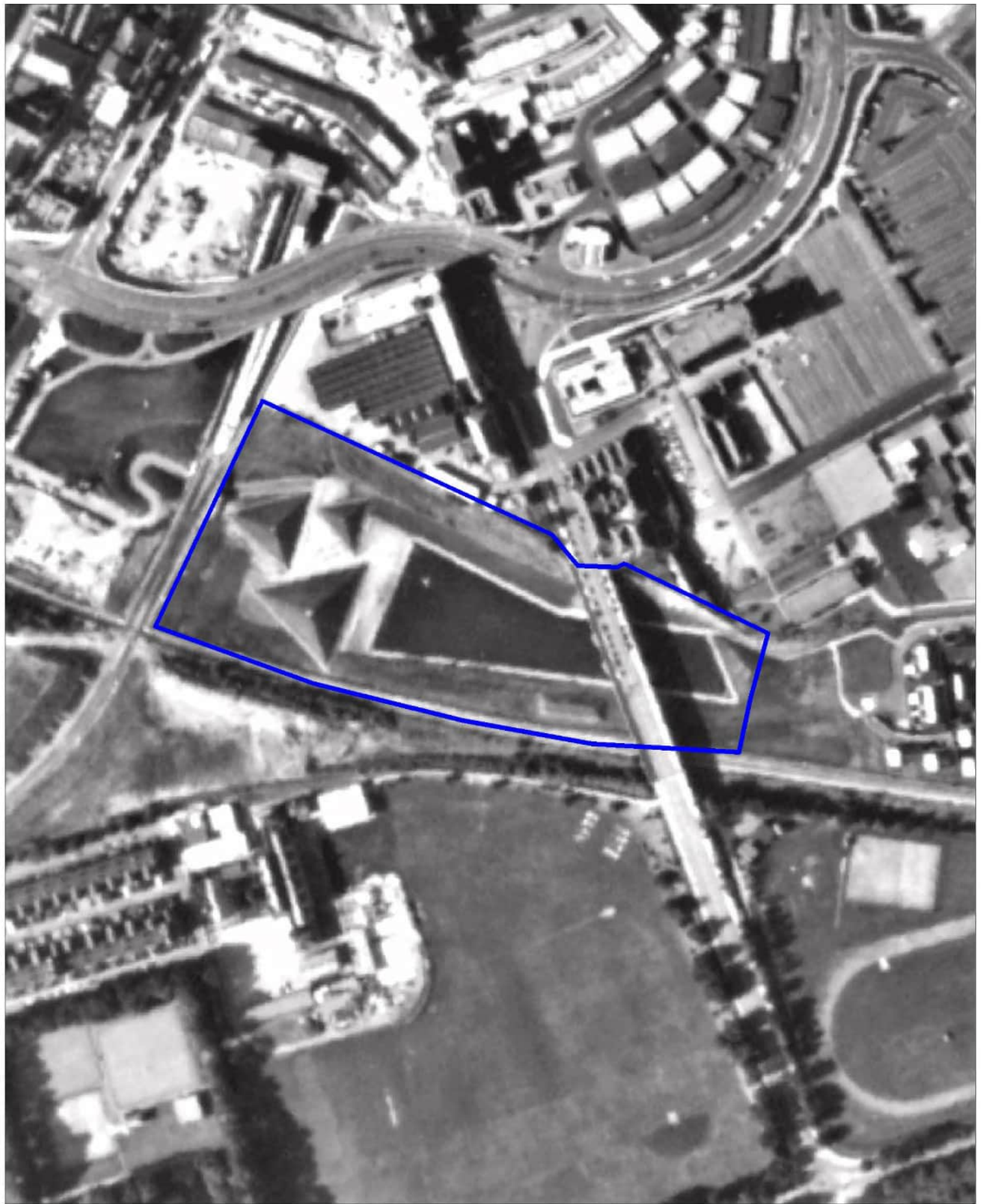
KEY:
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TITLE: Townside Fields, Market Street
 Bury
 1984 Historical Map

Bury
 COUNCIL

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 Ordnance Survey 100023063.

NGR: 805 103
 SCALE: 1:2000 @ A4 Date: 11 01 2022



KEY:
 Site Boundary

TITLE: Townside Fields, Market Street
 Bury
 1979 Aerial Photo

Bury
 COUNCIL

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NGR: 805 103
 SCALE: 1:2000 @ A4 Date: 11 01 2022



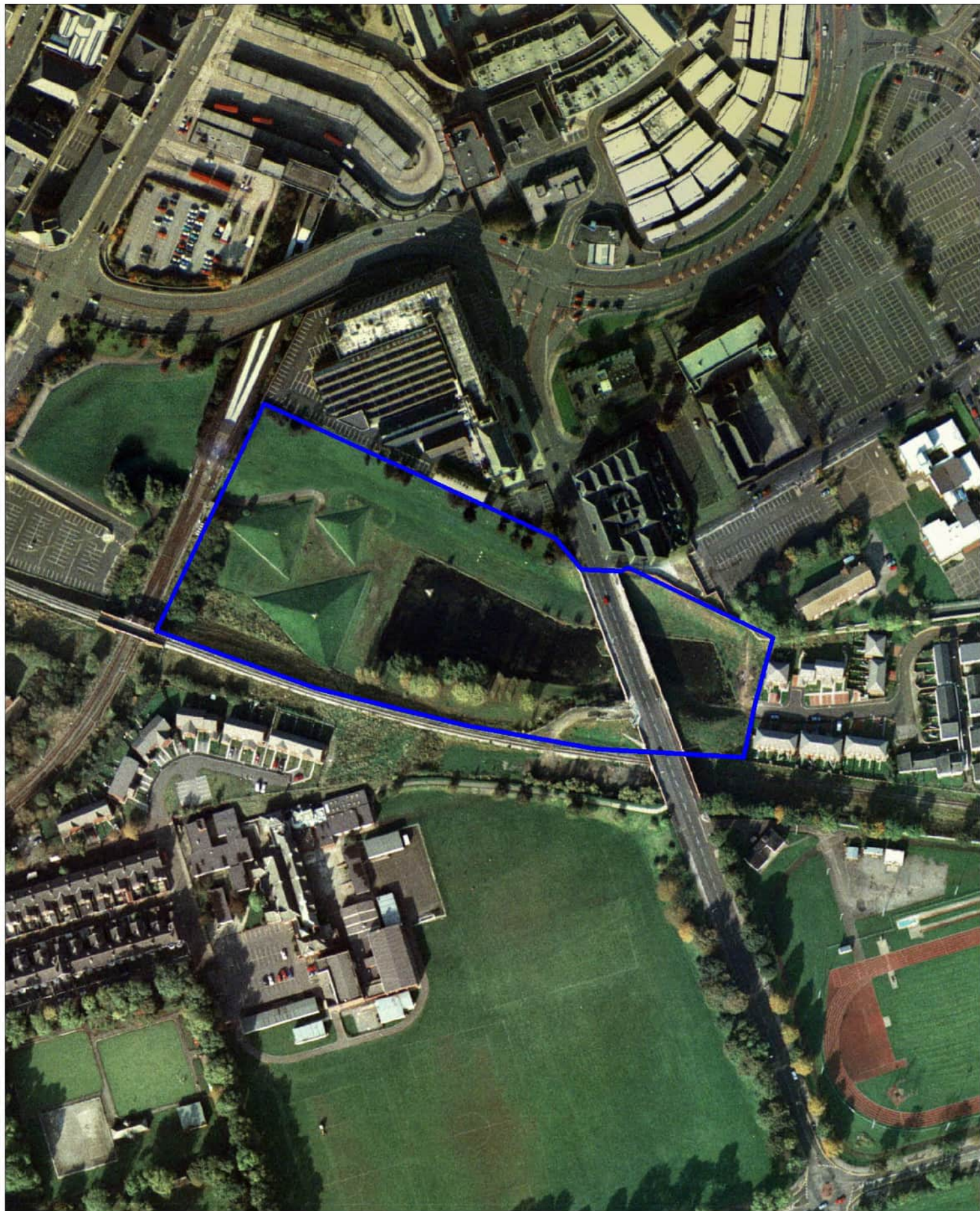
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 Site Boundary

TITLE: Townside Fields, Market Street
 Bury
 1989 Aerial Photo

Bury
 COUNCIL

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 Ordnance Survey 100023063.

NGR: 805 103
 SCALE: 1:2000 @ A4 Date: 11 01 2022



KEY:
 Site Boundary

TITLE: Townside Fields, Market Street
 Bury
 1997-9 Aerial Photo

Bury
 COUNCIL

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NGR: 805 103
 SCALE: 1:2000 @ A4 Date: 11 01 2022



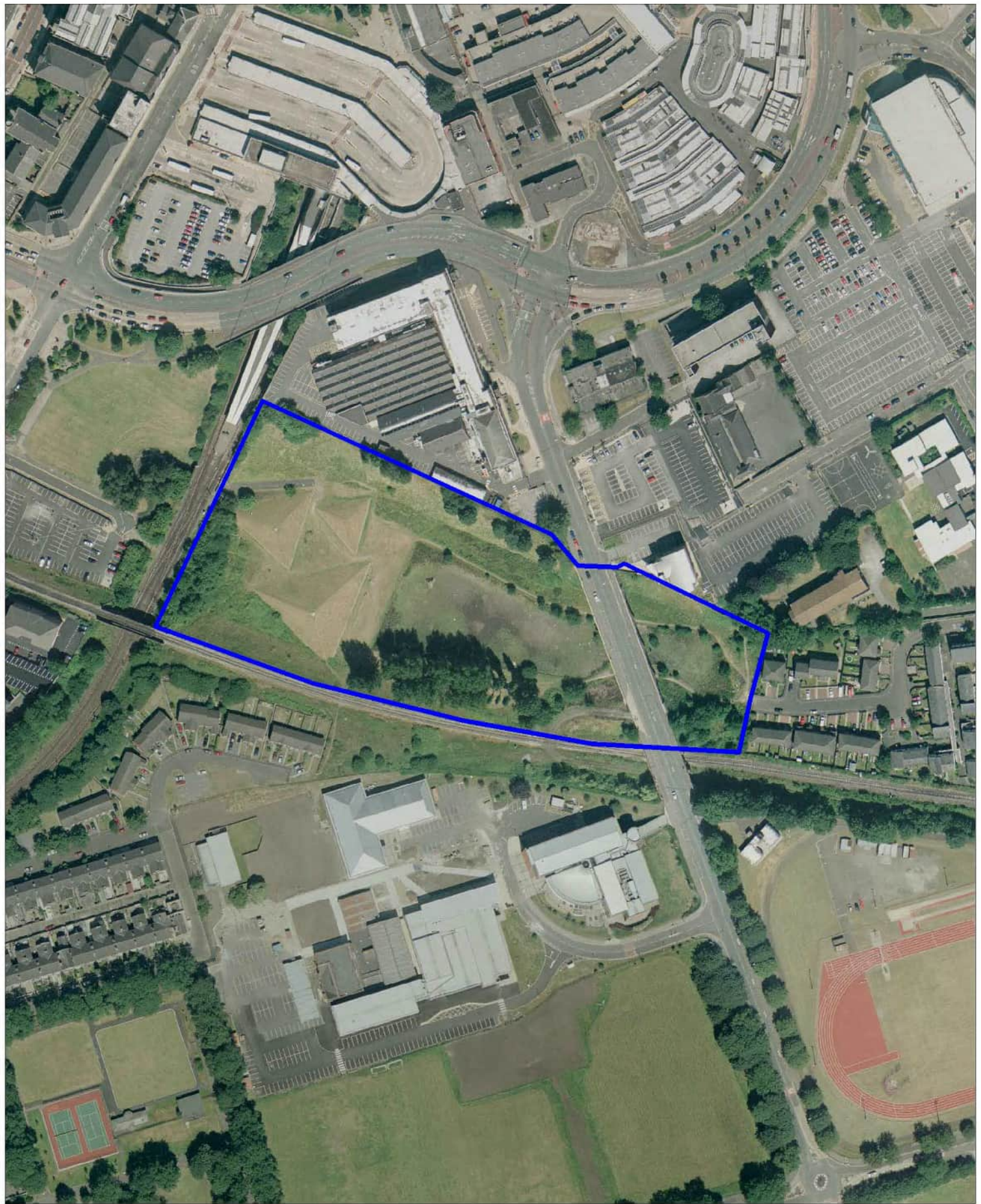
KEY:
 Site Boundary

TITLE: Townside Fields, Market Street
 Bury
 2000 Aerial Photo

Bury
 COUNCIL

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 Ordnance Survey 100023063.

NGR: 805 103
 SCALE: 1:2000 @ A4 Date: 11 01 2022



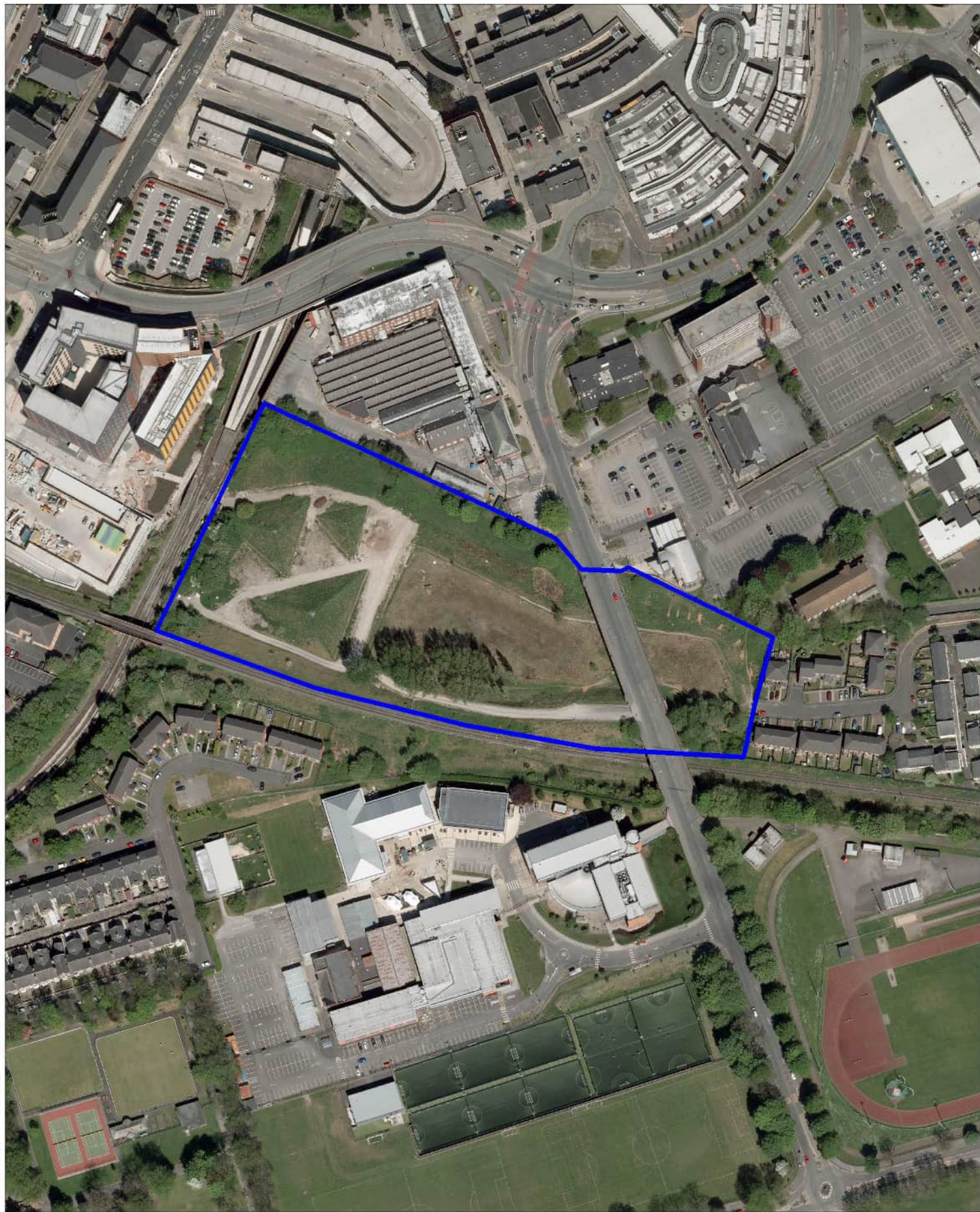
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 Site Boundary

TITLE: Townside Fields, Market Street
 Bury
 2005 Aerial Photo

Bury
 COUNCIL

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 Ordnance Survey 100023063.

NGR: 805 103
 SCALE: 1:2000 @ A4 Date: 11 01 2022



KEY:
 Site Boundary

TITLE: Townside Fields, Market Street
 Bury
 2011 Aerial Photo

Bury
 COUNCIL

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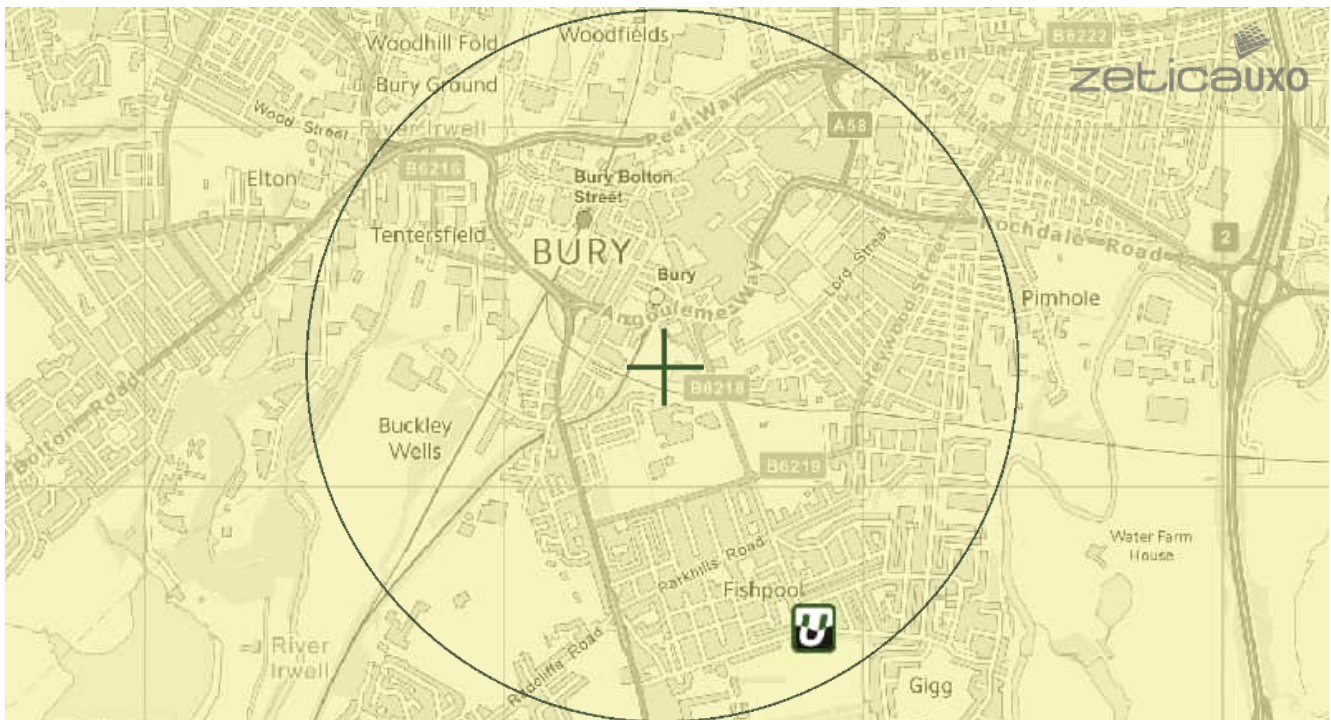
NGR: 805 103
 SCALE: 1:2000 @ A4 Date: 11 01 2022

UNEXPLODED BOMB RISK MAP



SITE LOCATION

Map Centre: 380453,410336



LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.

- military**
- industry**
- UXO find**
- transport**
- dock**
- Luftwaffe targets**
- utilities**
- Bombing decoy**
- other**

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgment. The copyright remains with Zetica Ltd.

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

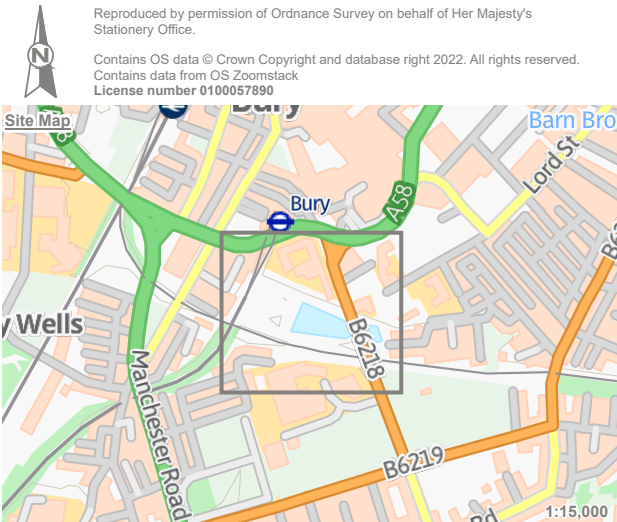
*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.



KEY

- Site boundary
- Target note
- Mammal entry point
- Scattered scrub (birch)
- Scattered broad-leaved tree
- Semi-natural broad-leaved woodland
- Continuous bramble scrub
- Semi-improved neutral grassland
- Marsh/marshy grassland
- Hardstanding

Note:
The locations of habitats and habitat features are indicative.



Rev	Description	Drawn	Approved	Date

TEP | **THE ENVIRONMENT PARTNERSHIP**

Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Townfields, Bury

Title
Phase 1 Habitat Survey

Drawing Number
G9302.007

Drawn	Checked	Approved	Scale	Date
BJ	CW	EH	1:1,200 @ A3	03/03/2022

Appendix C: Site Investigation Information

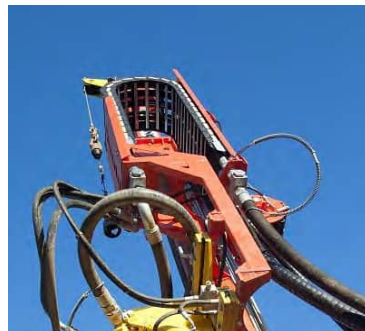


CONTRACT NO: M1062

**FACTUAL REPORT ON SITE INVESTIGATION FOR LAND AT
TOWNSIDE FIELDS, BURY**

PREPARED FOR:

CAMPBELL REITH



● UNIT 567 ● CHAMBERS BUSINESS CENTRE ● CHAPEL ROAD ● OLDHAM ● OL8 4QQ

● TEL: 0161 639 1775 ●



Contract No.	M1062
Job Name	TOWNSIDE FIELDS, BURY

REPORT REVISIONS

Revision No.	Issue Date	Details
M1062/00	07/04/2022	ISSUED FOR COMMENT AND APPROVAL
M1062/01	08/04/2022	EXPLORATORY LOG FOR TP102 UPDATED IN APPENDIX B

VERIFICATION

Revision No.	Issue Date		Written By	Checked By	Verified By
M1062/01	08/04/2022	Initials	HM	RB	
		Signature			

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3.5 IN-SITU TESTING	3
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APPENDIX B	EXPLORATORY HOLE RECORDS
APPENDIX C	PHOTOGRAPHS
APPENDIX D	GEOTECHNICAL LABORATORY RESULTS
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APPENDIX F	GAS AND GROUNDWATER MONITORING RESULTS
APPENDIX G	DUNELM STANDARD CONDITIONS AND NOTES ON LIMITATIONS

1.0 INTRODUCTION

1.1 SCOPE OF WORKS

Dunelm Geotechnical and Environmental Ltd (Dunelm) were commissioned by Campbell Reith, to carry out a site investigation of land at Townside Fields, Bury.

The objectives of the investigation were as follows:

- To determine the typical nature, thickness and engineering parameters of the made ground and natural strata.
- To determine the nature and extent of potential contamination within the site.
- To recover samples of made ground and natural strata for chemical and geotechnical laboratory testing.
- To record gas concentrations, gas flows and groundwater levels within the boreholes.

Fieldwork was undertaken generally as specified in the contract documents provided by Campbell Reith. The fieldwork was carried out between 31st January and 3rd February 2022.

Following the completion of the fieldwork selected soil samples were submitted for a range of geotechnical and chemical testing.

This report presents the factual information obtained during the investigation; interpretation of this data was outside the remit of this report. The factual data is reported separately in AGS format Version 4.

1.2 GENERAL

Guidance contained in the following Standards has been followed during the investigation work as appropriate: BS5930:2015+A1:2020, BS10175:2011+A2:2017; BS1377-1:2016; BS EN ISO 14688-2:2018 and BS EN ISO 14689:2018.

The information contained in this report is as indicated on the site plan shown in Appendix A, and the areas accessible during the ground investigation.

This report is for the exclusive use of Campbell Reith and their agents. No third party may rely upon, or reproduce, the contents of this report without the written approval of Dunelm.

This report is based on the data obtained from the exploratory holes and from the subsequent tests carried out. There is always a possibility of variation in the ground conditions between boreholes. Responsibility cannot be accepted for conditions not revealed by the investigation. Any diagram or opinion of the possible configuration of the findings is conjectural and given for guidance only, and confirmation of intermediate ground conditions should be considered if deemed necessary. Dunelm's Standard Conditions and Notes on Limitations are included in Appendix G.

2.0 SITE LOCATION & FEATURES

The site is located 1km south west of Bury town centre. The approximate centre of the site is at National Grid Reference 380326, 410365.

A site location plan is presented as Drawing No. M1062/01 in Appendix A to this report.

The site comprises a relatively flat irregular shaped parcel of land presently covered by grass and a hardstanding access track in and around the site. Three pyramid structures, covered in grass of unknown material lie within the west of the site, whilst the east periodically contains a standing body of water.

Access to the site can be gained on foot via Town Fields Close, a residential development to the east, or off Market Street to the south.

3.0 FIELDWORK

3.1 INTRODUCTION

The fieldwork comprised the following:

Number	Exploratory Hole Label	Method
10	TP01, TP02, TP03, TP04, TP04A, TP05, TP06, TP07, TP08 and TP09	Mechanically Excavated Trial Pit
6	WS01 – WS06	Windowless Sample Borehole

On completion all exploratory positions were backfilled immediately in accordance with instructions from Campbell Reith, except where described below.

Exploratory Hole No.	Depth	Reason for Termination
WS01	1.60	Hard strata
WS02	3.00	Hard strata
WS03	2.00	Obstruction
WS04	1.80	Hard strata
WS05	3.70	Hard strata
WS06	4.00	Borehole collapse

3.2 EXPLORATORY HOLE LOCATIONS

The locations of each of the above exploratory holes were recorded by survey following the completion of the works. The locations are shown on Drawing No. M1062/02 in Appendix A.

The ground elevations and co-ordinates of each of the exploratory holes determined from the survey are shown on the exploratory hole records.

3.3 STRATA DESCRIPTIONS

Descriptions of the strata encountered in each of the exploratory holes are presented on the exploratory hole record sheets in Appendix B to this report. Strata descriptions are based on an examination of the strata, together with consideration of the in-situ testing results and laboratory test data.

Strata descriptions have been completed in accordance with BS5930:2015+A1:2020, BS EN ISO 14688-2:2018 and BS EN ISO 14689:2018 as appropriate.

3.4 SAMPLING

Samples were recovered during the investigation works in general accordance with the contract specification.

Samples of soil for chemical analysis were placed into suitable containers as specified by the chemical testing laboratory. Samples of soil for geotechnical testing were recovered in accordance with the principles of BS EN ISO 22475-1:2006 and BS5930:2015+A1:2020.

3.5 IN-SITU TESTING

In-situ Standard Penetration Tests (SPTs) were carried out in the windowless sample boreholes at a frequency in general accordance with the contract specification.

SPT tests were carried out in accordance with BS EN ISO 22476-3 2005 + A1:2011 in order to determine the relative density of the granular soils and an indication of the undrained shear strength of cohesive soils. The results of these tests are shown as 'N' values on the exploratory hole records, with the blow counts for each increment shown in brackets.

3.6 MONITORING WELLS

On completion of drilling, monitoring wells were installed in selected boreholes to enable subsequent gas and groundwater monitoring. The construction of the wells was as specified during the works by Campbell Reith. Details of the installations are shown on the exploratory hole records in Appendix B.

Each well consisted of a lower slotted section of 50mm diameter HDPE standpipe surrounded by single size non-calcareous gravel, with an upper section of plain HDPE pipe surrounded by a bentonite cement seal.

Each of the wells was fitted with a suitable bung and gas tap to allow for gas and groundwater monitoring, and a protective steel cover to prevent damage to the installation.

Boreholes not fitted with a monitoring installation were backfilled in general accordance with the specification or subsequent instruction from Campbell Reith.

4.0 LABORATORY TESTING

4.1 GEOTECHNICAL

Geotechnical laboratory testing, as scheduled by Campbell Reith was carried out on selected samples in accordance with techniques in BS 1377-1:2016. The testing was undertaken by a UKAS accredited laboratory and the results are presented in Appendix D.

4.2 CHEMICAL

Samples as scheduled by Campbell Reith were tested for a range of contaminants by an MCERTS accredited laboratory. The results of these tests are presented in Appendix E.

5.0 GAS & GROUNDWATER MEASUREMENTS

5.1 INTRODUCTION

Following the completion of the investigation work on site, a Dunelm technician made a series of visits to the site in order to carry out measurements of gas and groundwater within the monitoring wells described above. The number and frequency of these visits were specified by Campbell Reith.

The site has been monitored on three occasions at the time of issuing this report and is now complete. The monitoring results are presented in Appendix F.

5.2 GAS MONITORING PROCEDURE

Each of the gas monitoring wells was monitored to record the concentration of methane, carbon dioxide, carbon monoxide, oxygen and hydrogen sulphide using an infra-red gas analyser. The borehole flow rate, atmospheric and differential pressure was also measured using a suitable instrument.

Gas monitoring was undertaken in accordance with current guidance.

5.3 GROUNDWATER MONITORING PROCEDURE

Measurements of groundwater level (in metres below ground level) were recorded in each borehole using a standard dipmeter.

APPENDIX A

Drawings





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	Contract: Townside Fields, Bury			Contract No: M1062
	Client: Campbell Reith			
TEL: 0161 639 1775	Drawing Title: Site Location Plan			
Drawing & Revision No: M1062/01 00	Date: April 2022	Scale: NTS	Status: Final	Drawn by: RB

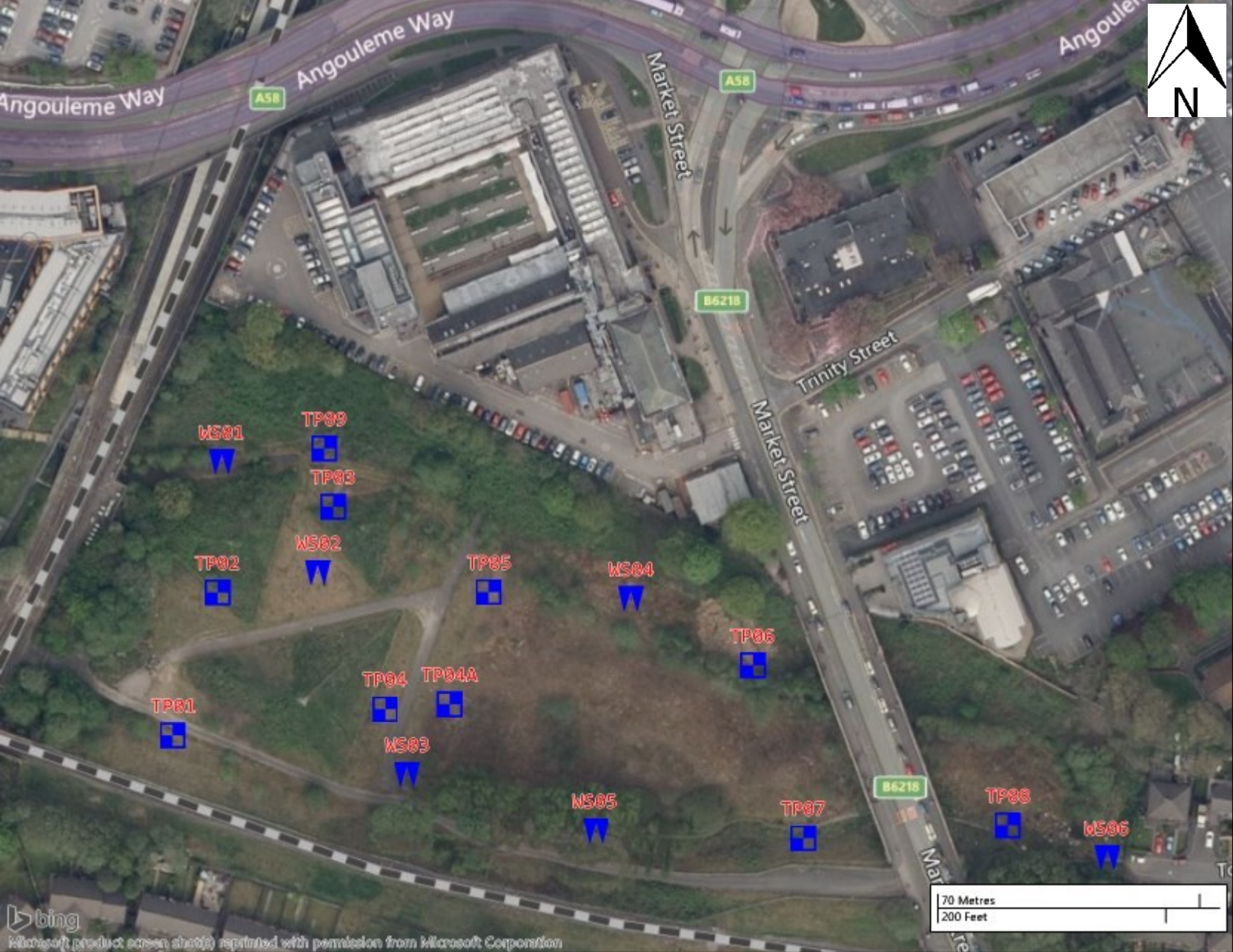
Project Id: M1062
Project Title: Townside Fields, Bury
Client: Campbell Reith

Title: Exploratory Hole Location Plan
Scale: 1:1500
Drawing No: M1062/02



Legend Key

-  Machine Excavated Trial Pit
-  Windowless Sampling



APPENDIX B

Exploratory Hole Records



INFORMATION GENERALLY RELATING TO ALL EXPLORATORY HOLE RECORDS

GENERAL

Borehole/Trial Pit No

The exploratory hole identity number used throughout the report.

Site

The ground investigation project name.

Client

Client's name responsible for funding the ground investigation project.

Ground Level and Location

The precise ground level in meters above Ordnance Datum at the exploratory hole location from which the reduced level for each stratigraphic boundary is calculated. The exploratory hole position is given as either national grid-coordinates or local grid as specified.

ABBREVIATIONS

Samples

B	Bulk disturbed sample generally representative of the soil type for cohesive and fine granular soils.
BRE	Sample taken for electrochemical testing
C	Core soil samples
CEF	CEFAS Sample
D	Small disturbed tub sample normally taken at intermediate depth between other sampling or testing operations. The sample is stored in an airtight container.
ES	Sample of potentially contaminated materials.
P	Piston Sample
PF	An attempted but failed piston sample
U	100mm diameter undisturbed thick-walled sample (OS-TK/W)
UT	100mm diameter undisturbed thin walled sample (OS-T/W)
UF/UTF	An attempted but failed 100mm undisturbed sample.
W	Water sample.
EW	Water sample for contamination testing

In-situ Testing

CBR	California Bearing Ratio mould sample or test.
SPT	Standard Penetration Test (SPT) using the split barrel sampler (S) or solid cone (C). The corresponding 'N' value is given in the test result column.
SWPen	Self-Weight Penetration
PID	On Site Volatile Headspace Testing by Photo Ionisation Detector
pp	Pocket Penetrometer, report unit: kPa
HVP	Hand Shear Vane test

Rock Quality and Core Recovery

TCR	Total core recovery - The length of the recovered core expressed as a percentage of the length of core run.
SCR	Solid Core Recovery - The sum length of all core pieces (measured along the centre of the core), expressed as a percentage of the length of core run.
RQD	Rock Quality Designation- The sum length of all core pieces that are 100mm or longer (measured along the centre of the core), expressed as a percentage of the length of core run.
FI	Fracture Index- The number of fractures per 1000mm length of solid core.
NI	Non-intact- The material recovered in a non-intact state.
NR	No recovery from the core run.
AZCL	Assessed Zone of Core Loss.

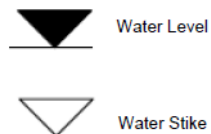
Cobble Content

Low <10%, medium 10 – 20%, high >20%

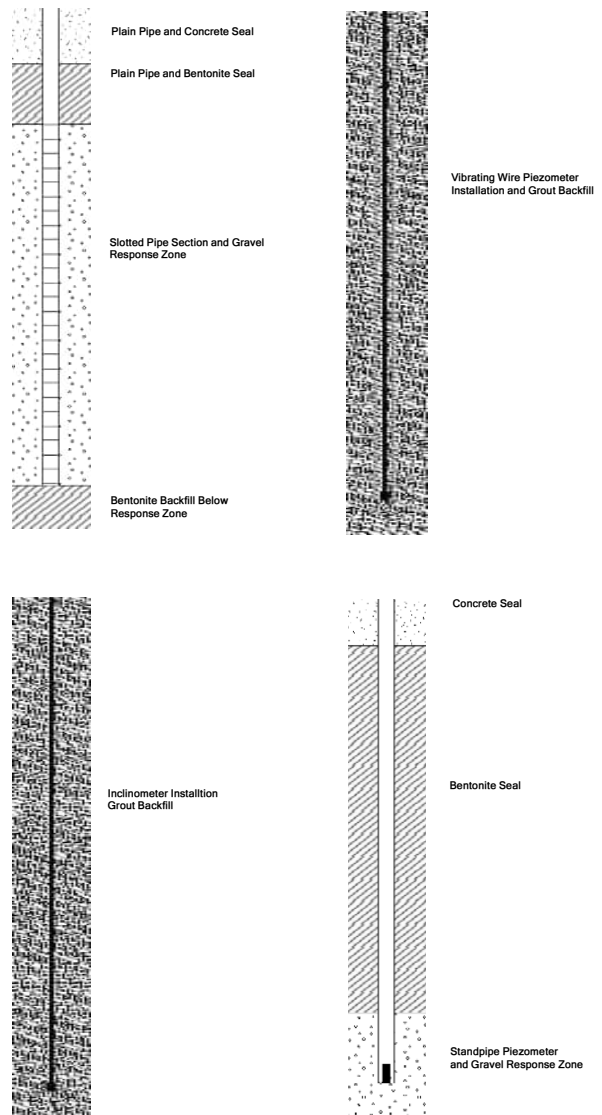
Exploratory Hole Log Legend:

BOREHOLE LEGEND:

TOPSOIL	
MADE GROUND	
SILT	
CLAY	
SAND	
GRAVEL	
PEAT	
MUDSTONE	
SILTSTONE	
SANDSTONE	
LIMESTONE	
COAL	
CHALK	
BENTONITE	
GROUT	
ARISINGS	



Monitoring Installation Legend:



NB Where strata consists of material of more than one soil or rock type the legends are appropriately combined.



Dunelm Geotechnical & Environmental Ltd
Unit 567, Chambers Business Centre,
Chapel Road, Oldham, OL8 4QQ

Tel: 0161 639 1775
e-mail: admin@dunelm.co.uk
web: www.dunelm.co.uk

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING(UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref: DART358
Test Date: 20/12/2021
Report Date: 20/12/2021
File Name: DART358.spt
Test Operator: JL

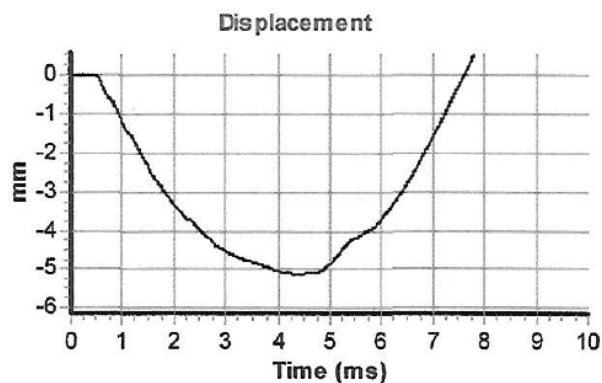
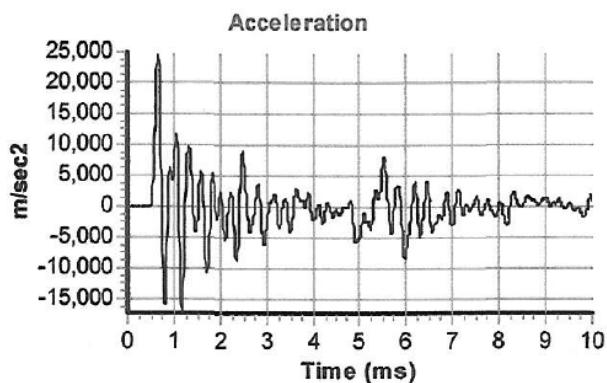
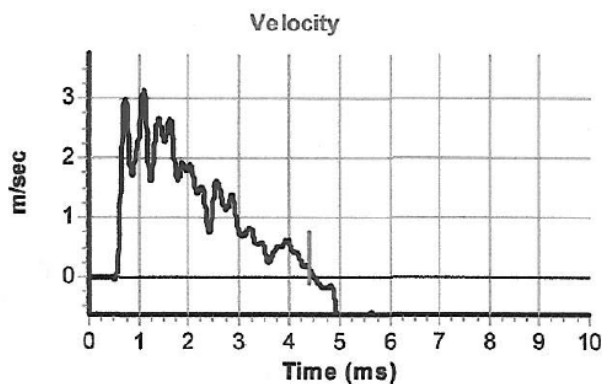
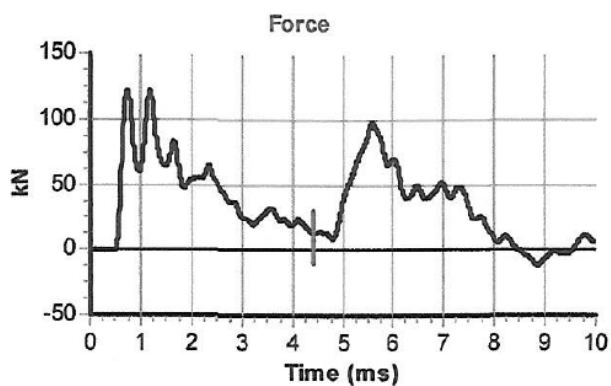
Instrumented Rod Data

Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.0
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 7080
Accelerometer No.2: 11609

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.0

Comments / Location



Calculations

Area of Rod A (mm^2): 944
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 337

Energy Ratio E_r (%): **71**

Signed: J.LOCK

Title: FITTER

The recommended calibration interval is 12 months

	Contract:	Townside Field, Bury	Contract No:	M1062
	Client:	Campbell Reith		
	Drawing:	Instrumentation Summary		
Table No.	B1	Date:	07/04/2022	Status: FINAL

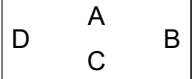
BH No.	Instrument Type	Instrument Dia. (mm)	Response Zone		Surface Protection	Remarks
			Top (m)	Base (m)		
WS01	SP	50	0.50	1.50	Flush Cover	
WS02	SP	50	1.00	3.00	Flush Cover	
WS03	SP	50	0.90	2.38	Flush Cover	
WS04	SP	50	0.50	2.00	Flush Cover	
WS05	SP	50	1.00	2.00	Flush Cover	
WS06	SP	50	1.00	2.00	Flush Cover	

	Contract:	Townside Field, Bury		Contract No:	M1062
	Client:	Campbell Reith			
TEL: 0161 6391775	Table Title:	Installation Summary Sheet			
Table & Revision No: B1 - 0	Date: April 2022	Scale: NA	Status: Final	Drawn by: RB	

Remarks	Ground Water (m)		Excavation Details	Orientation
1. No groundwater encountered.	Depth Strike	Remarks	Dimensions: 0.80m x 2.00m	DAB C 90°
			Stability: Stable	
			Weather: Dry	
			Remarks: Machine Excavated Trial Pit	

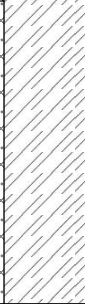
Remarks	Ground Water (m)		Excavation Details	Orientation
1. No groundwater encountered.	Depth Strike	Remarks	Dimensions: 0.80m x 2.00m	D A B C 120°
			Stability: Stable	
			Weather: Dry	
			Remarks: Machine Excavated Trial Pit	

Remarks	Ground Water (m)		Excavation Details	Orientation
1. No groundwater encountered.	Depth Strike	Remarks	Dimensions: 0.80m x 2.00m	D A B C 150°
			Stability: Stable	
			Weather: Dry	
			Remarks: Machine Excavated Trial Pit	

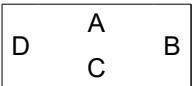
			TRIAL PIT RECORD			TP No. TP04			
Contract No.: M1062			Site: Townside Fields, Bury			GL (m AOD) 86.14 Easting: 380448.60 Scale 1:25 Northing: 410311.80			
Client: Campbell Reith					Logged By: TM		Sheet 1 of 1		
Method: Machine Excavated Trial Pit					Checked By: HM		Dates: 31/01/2022		
SAMPLE DETAILS			Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD) PID (ppm)	Legend	Backfill	
Type	Depth From-To (m)	In situ Testing							
ES	0.20			MADE GROUND: Soft brown sandy gravelly clay with frequent rootlets. Gravel is subangular to subrounded fine to coarse of sandstone, mudstone and pea gravel.	(0.20)	85.94			
B ES	0.50 - 1.00 0.50			MADE GROUND: Blackish dark brown clayey sand and gravel with a medium cobble and boulder content. Gravel is subangular to subrounded fine to coarse of ash, sandstone, mudstone and brick. Cobbles and boulders are subangular of brick, limestone and sandstone.	0.20				
					(1.00)				
			1						
				End of Trial Pit at 1.20 m	1.20	84.94			
			2						
			3						
			4						
			5						
Remarks				Ground Water (m)		Excavation Details		Orientation	
1. No groundwater encountered. 2. Exploratory hole terminated at 1.20m upon encountering 3no. service pipes and relocated to TP04A.				Depth Strike	Remarks	Dimensions: 0.80m x 2.00m			
						Stability: Stable			
						Weather: Dry			
						Remarks: Machine Excavated Trial Pit			

			TRIAL PIT RECORD			TP No. TP04A			
Contract No.: M1062			Site: Townside Fields, Bury			GL (m AOD) 85.46 Easting: 380466.00 Scale 1:25 Northing: 410313.00			
Client: Campbell Reith				Logged By: TM		Sheet 1 of 1			
Method: Machine Excavated Trial Pit				Checked By: HM		Dates: 01/02/2022			
SAMPLE DETAILS			Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD) PID (ppm)	Legend	Backfill	
Type	Depth From-To (m)	Insitu Testing							
ES	0.20			MADE GROUND: Brown gravelly sand. Gravel is subangular to subrounded fine to coarse of sandstone, mudstone and pea gravel. Abundant fragments of plastic noted.	(0.20)	85.26			
ES	0.50			MADE GROUND: Brown gravelly clayey sand. Gravel is subangular to subrounded fine to medium of sandstone and mudstone. Abundant fragments of plastic and tile noted.	0.20				
B	1.00 - 1.50		1						
B	2.00 - 2.50		2		(3.80)				
			3						
			4		4.00	81.46			
			5						
End of Trial Pit at 4.00 m									
Remarks				Ground Water (m)		Excavation Details		Orientation	
1. No groundwater encountered.				Depth Strike	Remarks	Dimensions: 0.80m x 2.00m		D A C B 150°	
						Stability: Stable			
						Weather: Dry			
						Remarks: Machine Excavated Trial Pit			

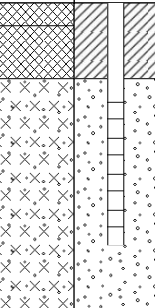
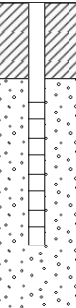
			TRIAL PIT RECORD			TP No. TP05			
Contract No.: M1062			Site: Townside Fields, Bury			GL (m AOD) 85.70 Easting: 380476.80 Scale 1:25 Northing: 410343.00			
Client: Campbell Reith				Logged By: TM		Sheet 1 of 1			
Method: Machine Excavated Trial Pit				Checked By: HM		Dates: 31/01/2022			
SAMPLE DETAILS			Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD) PID (ppm)	Legend	Backfill	
Type	Depth From-To (m)	Insitu Testing							
ES	0.20			MADE GROUND: Soft brown sandy gravelly clayey topsoil with abundant rootlets. Gravel is angular to subangular fine to coarse of sandstone and mudstone. MADE GROUND: Brown gravelly sand. Gravel is subangular to subrounded fine to coarse of sandstone, mudstone and pea gravel. Abundant fragments of plastic noted. Stiff light greyish brown slightly gravelly SILT. Gravel is subangular to rounded fine of siltstone and mudstone. At 1.00m: High plasticity.	(0.10)	85.60 85.50	  		
ES	0.50				0.10 0.10 0.20				
B	1.00 - 1.50				(2.80)				
B	2.00 - 2.50		2						
			3	End of Trial Pit at 3.00 m	3.00	82.70			
			4						
			5						
Remarks				Ground Water (m)		Excavation Details		Orientation	
1. No groundwater encountered.				Depth Strike	Remarks	Dimensions: 0.80m x 2.00m		D A C B 150°	
						Stability: Stable			
						Weather: Dry			
						Remarks: Machine Excavated Trial Pit			

			TRIAL PIT RECORD			TP No. TP06			
Contract No.: M1062			Site: Townside Fields, Bury			GL (m AOD) 85.93 Easting: 380547.40 Scale 1:25 Northing: 410323.10			
Client: Campbell Reith					Logged By: TM		Sheet 1 of 1		
Method: Machine Excavated Trial Pit					Checked By: HM		Dates: 01/02/2022		
SAMPLE DETAILS			Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD) PID (ppm)	Legend	Backfill	
Type	Depth From-To (m)	Insitu Testing							
ES	0.20			MADE GROUND: Soft dark brown sandy clayey topsoil.	(0.20)	85.73			
ES	0.50			MADE GROUND: Light brown gravelly sand. Gravel is angular to subrounded fine to coarse of mudstone, sandstone and brick. Occasional fragments of glass noted.	0.20				
B	1.00 - 1.50		1		(1.80)				
B	2.00 - 2.50		2	Stiff greyish brown slightly gravelly SILT. Gravel is subangular to rounded fine of siltstone and mudstone.	2.00	83.93			
			3	End of Trial Pit at 3.00 m	3.00	82.93			
			4						
			5						
Remarks				Ground Water (m)		Excavation Details		Orientation	
1. No groundwater encountered.				Depth Strike	Remarks	Dimensions: 0.80m x 2.00m		A C D B 120°	
						Stability: Stable			
						Weather: Dry			
						Remarks: Machine Excavated Trial Pit			

			TRIAL PIT RECORD			TP No. TP07			
Contract No.: M1062			Site: Townside Fields, Bury			GL (m AOD) 86.02 Easting: 380560.80 Scale 1:25 Northing: 410276.80			
Client: Campbell Reith				Logged By: TM		Sheet 1 of 1			
Method: Machine Excavated Trial Pit				Checked By: HM		Dates: 01/02/2022			
SAMPLE DETAILS			Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD) PID (ppm)	Legend	Backfill	
Type	Depth From-To (m)	Insitu Testing							
ES	0.20			MADE GROUND: Soft brown sandy gravelly clayey topsoil with frequent rootlets. Gravel is subangular to subrounded fine to medium of sandstone, mudstone and brick.	(0.20)	85.82			
ES	0.50			MADE GROUND: Dark brown gravelly clayey sand with a low cobble content. Gravel is angular to subrounded fine to coarse of ash, brick and limestone. Cobbles are subangular of mudstone and sandstone.	0.20				
B	1.00 - 1.50			1		(2.80)			
B	2.00 - 2.50		2	At 1.80m: 22mm clay pipe noted.					
			3	End of Trial Pit at 3.00 m	3.00	83.02			
			4						
			5						
Remarks				Ground Water (m)		Excavation Details		Orientation	
1. No groundwater encountered.				Depth	Strike	Remarks		A C D B 180°	
						Dimensions: 0.80m x 2.00m			
						Stability: Stable			
						Weather: Dr			
						Remarks: Machine Excavated Trial Pit			

			TRIAL PIT RECORD			TP No. TP08			
Contract No.: M1062			Site: Townside Fields, Bury			GL (m AOD) 85.58 Easting: 380615.80 Scale 1:25 Northing: 410280.00			
Client: Campbell Reith				Logged By: TM		Sheet 1 of 1			
Method: Machine Excavated Trial Pit				Checked By: HM		Dates: 01/02/2022			
SAMPLE DETAILS			Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD) PID (ppm)	Legend	Backfill	
Type	Depth From-To (m)	Insitu Testing							
ES	0.20			MADE GROUND: Brown gravelly sand. Gravel is subangular to subrounded fine to coarse of sandstone, mudstone and pea gravel. Abundant fragments of plastic noted.	(0.20)	85.38			
ES	0.50			MADE GROUND: Dark brown gravelly clayey sand. Gravel is angular to subrounded fine to coarse of ash, brick and limestone	0.20				
B	1.00 - 1.50				(2.20)				
B	2.50 - 3.00			Brown clayey SAND with a low cobble content. Cobbles are rounded of sandstone.	2.40				
				End of Trial Pit at 3.00 m	3.00				
Remarks				Ground Water (m)		Excavation Details		Orientation	
1. No groundwater encountered.				Depth Strike	Remarks	Dimensions: 0.80m x 2.00m			
						Stability: Stable			
						Weather: Dry			
						Remarks: Machine Excavated Trial Pit			

Remarks	Ground Water (m)		Excavation Details	Orientation
1. No groundwater encountered.	Depth Strike	Remarks	Dimensions: 0.80m x 2.00m	D A B C 110°
			Stability: Stable	
			Weather: Dry	
			Remarks: Machine Excavated Trial Pit	

				BOREHOLE RECORD				Borehole WS01				
Contract No: M1062				Site: Townside Fields, Bury				GL (m AOD) 84.40 Easting: 380405.20 Scale 1:50 Northing: 410378.10				
Client: Campbell Reith				Driller: KE		Logged By: TM		Sheet 1 of 1				
Method: Windowless Sampling				Checked By: HM		Dates: 02/02/2022						
SAMPLE DETAILS					(Casing) Groundwater	STRATA RECORD Description		Depth (m)	Level (m AOD)	Legend	Well/ Backfill	
Type	Depth From-To (m)	Insitu Testing										
B ES	0.20 - 0.50 0.20	N=27 (2,3/4,4,7,12) N=40 (9,10/8,8,12,12)	1	MADE GROUND: Soft brown gravelly sandy clayey topsoil with frequent rootlets. Gravel is subangular to subrounded fine of sandstone, mudstone and siltstone.		(0.15) 0.15	84.26					
B ES	0.50 - 1.00 0.50			MADE GROUND: Grey sandy fine to coarse of angular gravel of limestone.		(0.35) 0.50	83.90					
ES	1.00			Stiff light greyish brown slightly gravelly SILT. Gravel is subangular to rounded fine of siltstone and mudstone.								
B SPT (C)	1.20 - 1.60 1.20 - 1.65			At 0.50m: High plasticity.		(1.55)						
SPT (C)	1.60 - 2.05			End of Borehole at 2.05 m		2.05	82.36					
			2									
			3									
			4									
			5									
			6									
			7									
			8									
			9									
			10									
Ground Water (m)					Chiselling / Hard Strata		Casing Depths		Hole Diameter		General Remarks 1. Hand dug inspection pit to 1.20m. 2. No groundwater encountered. 3. Exploratory hole terminated at 2.05m upon encountering hard strata.	
Depth Struck (m)	Casing Depth (m)	Water Level	Minutes	Water sealed (m)	From (m)	To (m)	Time (hr)	Diameter (mm)	Depth (m)	Diameter (mm)		Depth (m)
										101		2.05
Log last updated 08/04/2022												



Borehole WS02

Site: Townside Fields, Bury

GL (m AOD)	Scale 1:50
86.53	
Easting:	Northing:
380431.10	410348.40

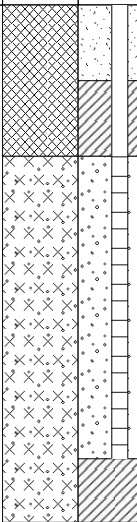
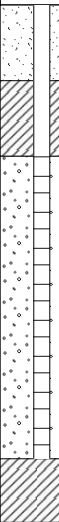
Driller: KE

Logged By: TM

Sheet 1 of 1

Checked By: HM

Dates:	02/02/2022
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SAMPLE DETAILS			(Casing) Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD)	Legend	Well/ Backfill
Type	Depth From-To (m)	Insitu Testing						
ES	0.20	N=17 (4,4/3,4,6,4)	1	MADE GROUND: Dark brown gravelly clayey sand. Gravel is angular to subrounded fine to coarse of ash, brick and limestone.	(1.00)	85.53		
ES	0.50							
ES	1.00							
B SPT (C)	1.20 - 2.00 1.20 - 1.65	N=34 (3,4/6,10,9,9)	2	Stiff light greyish brown slightly gravelly SILT. Gravel is subangular to rounded fine of siltstone and mudstone.	1.00	83.11		
B SPT (C)	2.00 - 3.00 2.00 - 2.45							
SPT (C)	3.00 - 3.42	N=50+ (11,7/12,13,15,10 for 40mm)	3	At 2.00m: High plasticity.	(2.42)			
				At 3.00m: Very stiff.				
				End of Borehole at 3.42 m	3.42			
			4					
			5					
			6					
			7					
			8					
			9					
			10					

Ground Water (m)					Chiselling / Hard Strata			Casing Depths		Hole Diameter		General Remarks
Depth Struck (m)	Casing Depth (m)	Water Level	Minutes	Water sealed (m)	From (m)	To (m)	Time (hr)	Diameter (mm)	Depth (m)	Diameter (mm)	Depth (m)	
										101	2.00	
										92	3.42	
Log last updated 08/04/2022												

				BOREHOLE RECORD				Borehole WS03			
Contract No: M1062				Site: Townside Fields, Bury				GL (m AOD) 86.06		Scale 1:50	
						Easting: 380454.70		Northing: 410294.30			
Client: Campbell Reith						Driller: KE		Logged By: TM		Sheet 1 of 1	
Method: Windowless Sampling						Checked By: HM		Dates:		02/02/2022	
SAMPLE DETAILS					(Casing) Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD)	Legend	Well/ Backfill	
Type	Depth From-To (m)	Insitu Testing									
ES	0.20				MADE GROUND: Dark brown gravelly clayey sand. Gravel is angular to subrounded fine to coarse of brick, ash and limestone.	(0.90)					
B ES	0.50 - 1.00 0.50			1	MADE GROUND: Brown gravelly sand. Gravel is subangular to rounded of mudstone, sandstone and brick. Occasional fragments of glass noted.	0.90 (0.50)	85.16				
B SPT (C)	1.20 - 2.00 1.20 - 1.65	N=12 (2,3/3,3,3,3)			Stiff greyish brown slightly gravelly SILT. Gravel is subangular to rounded fine of siltstone and mudstone.	1.40 (0.98)	84.66				
SPT (C)	2.00 - 2.38	N=50+ (7,11/15,17,18)		2	At 2.00m: Very stiff.						
					End of Borehole at 2.38 m	2.38	83.68				
				3							
				4							
				5							
				6							
				7							
				8							
				9							
				10							
Ground Water (m)					Chiselling / Hard Strata		Casing Depths		Hole Diameter		General Remarks
Depth Struck (m)	Casing Depth (m)	Water Level	Minutes	Water sealed (m)	From (m)	To (m)	Time (hr)	Diameter (mm)	Depth (m)	Diameter (mm)	
Log last updated 08/04/2022											

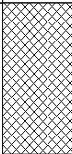
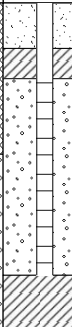
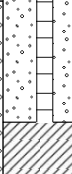


**Borehole
WS04**

GL (m AOD)	Scale 1:50
85.80	
Easting:	Northing:
380515.00	410341.00

Sheet 1 of 1

Dates:	02/02/2022
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SAMPLE DETAILS			(Casing) Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD)	Legend	Well/ Backfill
Type	Depth From-To (m)	Insitu Testing						
ES	0.20		1	MADE GROUND: Dark brown gravelly clayey sand. Gravel is angular to subrounded fine to coarse of brick, ash and limestone.	(1.00)	84.80		
ES	0.50							
B SPT (C)	1.20 - 1.80 1.20 - 1.65	N=24 (2,3/4,6,6,8)		Stiff greyish brown slightly gravelly SILT. Gravel is subangular to rounded fine of siltstone and mudstone.	1.00 (1.16)			
SPT (C)	1.80 - 2.16	N=50+ (8,12/15,20,15 for 60mm)		At 1.80m: Very stiff.				
			2	End of Borehole at 2.16 m	2.16	83.64		
			3					
			4					
			5					
			6					
			7					
			8					
			9					
			10					

Ground Water (m)					Chiselling / Hard Strata			Casing Depths		Hole Diameter		General Remarks
Depth Struck (m)	Casing Depth (m)	Water Level	Minutes	Water sealed (m)	From (m)	To (m)	Time (hr)	Diameter (mm)	Depth (m)	Diameter (mm)	Depth (m)	
										101	2.16	
Log last updated 08/04/2022												

				BOREHOLE RECORD				Borehole WS05				
Contract No: M1062				Site: Townside Fields, Bury				GL (m AOD) 88.08		Scale 1:50		
						Easting: 380504.90		Northing: 410279.00				
Client: Campbell Reith						Driller: KE		Logged By: TM		Sheet 1 of 1		
Method: Windowless Sampling						Checked By: HM		Dates:		03/02/2022		
SAMPLE DETAILS					(Casing) Groundwater	STRATA RECORD Description		Depth (m)	Level (m AOD)	Legend	Well/ Backfill	
Type	Depth From-To (m)	Insitu Testing										
ES	0.20	N=18 (2,3/5,5,4,4)		1	MADE GROUND: Soft brown gravelly sandy clayey topsoil with abundant rootlets.		(0.30)	87.78				
ES	0.50				MADE GROUND: Dark brown gravelly clayey sand. Gravel is angular to subrounded fine to coarse of brick, ash and limestone.		0.30					
							(0.50)					
B SPT (C)	1.20 - 2.00 1.20 - 1.65	N=11 (2,1/2,3,2,4)		2	MADE GROUND: Brown gravelly sand. Gravel is subangular to rounded of mudstone, sandstone and brick. Occasional fragments of glass noted.		0.80	87.28				
B SPT (C)	2.00 - 3.00 2.00 - 2.45	N=21 (3,2/3,4,6,8)		3			(3.27)					
B SPT (C)	3.00 - 3.70 3.00 - 3.45	N=50+ (8,11/14,16,20 for 70mm)		4	End of Borehole at 4.07 m		4.07	84.01				
SPT (C)	3.70 - 4.07											
				5								
				6								
				7								
				8								
				9								
				10								
Ground Water (m)					Chiselling / Hard Strata			Casing Depths		Hole Diameter		General Remarks
Depth Struck (m)	Casing Depth (m)	Water Level	Minutes	Water sealed (m)	From (m)	To (m)	Time (hr)	Diameter (mm)	Depth (m)	Diameter (mm)	Depth (m)	
										101	2.00	
										92	3.00	
										79	4.07	
Log last updated 08/04/2022												

				BOREHOLE RECORD				Borehole WS06				
Contract No: M1062				Site: Townside Fields, Bury				GL (m AOD) 86.36		Scale 1:50		
						Driller: KE		Logged By: TM		Sheet 1 of 1		
Method: Windowless Sampling						Checked By: HM		Dates:		03/02/2022		
SAMPLE DETAILS					(Casing) Groundwater	STRATA RECORD Description	Depth (m)	Level (m AOD)	Legend	Well/ Backfill		
Type	Depth From-To (m)	Insitu Testing										
B SPT (C)	1.20 - 2.00	N=23 (3,5/6,6,6,5)	1		MADE GROUND: Dark brown gravelly clayey sand. Gravel is angular to subrounded fine to coarse of brick, ash and limestone.	(0.40)	7.96					
	1.20 - 1.65				MADE GROUND: Loose very light grey sandy medium angular gravel of limestone.	0.40						
D SPT (C)	2.00 - 3.00	N=13 (2,2/2,4,4,3)	2			(0.50)	7.46					
	2.00 - 2.45											
D SPT (C)	3.00 - 4.00	N=17 (2,4/4,5,4,4)	3			0.90						
	3.00 - 3.45											
SPT (C)	4.00 - 4.45	N=27 (4,5/6,7,7,7)	4									
						End of Borehole at 4.45 m	4.45	3.92				
					5							
					6							
					7							
					8							
					9							
					10							
Ground Water (m)					Chiselling / Hard Strata		Casing Depths		Hole Diameter		General Remarks	
Depth Struck (m)	Casing Depth (m)	Water Level	Minutes	Water sealed (m)	From (m)	To (m)	Time (hr)	Diameter (mm)	Depth (m)	Diameter (mm)		Depth (m)
										101		2.00
										92		3.00
										79		4.45
Log last updated 08/04/2022												

APPENDIX C

Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs



Trial Pit Photographs

