

Altrincham Road, Manchester

Drainage Strategy

November 2022

Project Information	
Project:	Altrincham Road, Manchester
Report Title:	Drainage Strategy
Client:	Chicken Cabins Ltd
Instruction:	The instruction to undertake this Drainage Strategy was received from Dean Walker of Soul Foods Group acting on behalf of the Client.
File Ref:	14948-Drainage Strategy-01

Approval Record	
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Document History		
Revision	Date	Comment
01	18/11/2022	First issue

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This report will remain valid for a period of twelve months (from the date of last issue) after which the source data should be reviewed in order to reassess the findings and conclusions on the basis of latest available information.

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Introduction

Waterco has been commissioned to undertake a Drainage Strategy in relation to a proposed drive through restaurant within Tesco Car Park, Altrincham Road, Baguley, Manchester, M23 9TJ.

From April 2015, Manchester City Council as a Lead Local Flood Authority (LLFA) is a statutory consultee for major planning applications in relation to surface water drainage, requiring that all planning applications are accompanied by a Sustainable Drainage Strategy. The aim of the Sustainable Drainage Strategy is to identify water management measures, including Sustainable Drainage Systems (SuDS), to provide surface water runoff reduction and treatment.

Existing Conditions

The site covers an area of approximately 4,060m² and is located at National Grid Reference (NGR): 380224, 389297. A location plan and an aerial image are included in Appendix A.

Online mapping (including Google Maps / Google Streetview imagery, accessed November 2022) shows that the site comprises a car wash and part of Tesco car park. The site is bordered by Altrincham Road (A560) to the north, Tesco car park to the east, Tesco Petrol Station to the south and the access road to Tesco off Altrincham Road to the west. Access to the site is provided from the Tesco access road off Altrincham Road.

Local Topography

Existing site levels are shown on a proposed 'External Works' drawing reference 1747-4/3 Revision B. The external works drawing shows that the site slopes from approximately 33.89 metres Above Ordnance Datum (m AOD) in the north-east to 33.09m AOD in the south.

Topographic levels to m AOD have also been derived from a 1m resolution Environment Agency (EA) composite 'Light Detecting and Ranging' (LiDAR) Digital Terrain Model (DTM). The LiDAR data corroborates with the topographical levels on the external works drawing and shows that the site is generally flat.

Topographical data is provided as Appendix B.

Ground Conditions

The British Geological Survey (BGS) online mapping (1:50,000 scale) indicates that the site is underlain by superficial Devensian Glaciofluvial Sheet Deposits generally comprising sand and gravel. The superficial deposits are identified as being underlain by the Bollin Mudstone Member.

The geological mapping is available at a scale of 1:50,000 and as such may not be accurate on a site-specific basis.

The closest historical BGS borehole record (BGS refence: SJ88NW1158) is located approximately 80m south-east of the site (NGR: 380330, 389270) and is included in Appendix C. The borehole record identifies:

- Reinforced concrete between ground level and 0.4 metres below ground level (m.bgl)

- Made Ground comprising grey silty sand between 0.4m.bgl and 1.2m.bgl.
- Made Ground consisting of brick rubble sand and stone between 1.2m.bgl and 1.5m.bgl.
- Medium dense dark brown sand below 1.5m.bgl up to 2m.bgl.
- Medium dense light brown medium sand, becoming loose between 2m.bgl and 3.80m.bgl
- Completely weathered brown clayey Keuper Marl between 3.80m.bgl and 4.3m.bgl.
- Weathered red/brown Keuper Marl between 4.3m.bgl and 6m.bgl.

Groundwater was struck at 3m.bgl.

According to the EA's Aquifer Designation data, obtained from MAGIC's online mapping [accessed November 2022], the Devensian Glaciofluvial Sheet Deposits are classified as a Secondary A Aquifer. Secondary A Aquifers are 'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers'.

The underlying Bollin Mudstone Member is described as a Secondary B Aquifer. Secondary B Aquifers are 'predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers'.

The EA's 'Source Protection Zones' data, obtained from MAGIC's online mapping [accessed November 2022], indicates that the site is not located within a Groundwater Source Protection Zone.

Site Investigation

A Site Investigation Report has been produced by Crossfield Consulting Ltd in March 2021. The report states:

'Beneath the bituminous surfacing which is typically 0.1 to 0.14m thick, Made Ground comprising a dense sandy gravel, with brick and concrete fragments, is present to a depth of approximately 0.7m.'

'The superficial deposits were recorded to be wet from approximately 3.0m within each hole. Standing water was measured at approximately 1.9m following completion of the holes.'

Local Drainage

Public sewer records have been obtained from United Utilities (UU) and are included in Appendix D. The UU sewer records show that there is 450mm public surface water sewer located immediately north-west of the site, flowing west, before upsizing to 1350mm. The 450mm public surface water sewer forms the connection point from the surface water drainage system serving the Tesco site.

There is also a 525mm public combined sewer originating approximately 15m south-west of the site, adjacent to the existing Tesco Petrol station, flowing south. Public combined manhole 2201, located approximately

65m south-west of the site, has an identified cover level of 32.72m AOD and an invert level of 30.69m AOD. The sewer records also identify a 300mm public combined sewer located approximately 90m south-east of the site, flowing in an easterly direction. The 300mm public combined sewer accommodates foul flows from the Tesco store.

A 'Drainage Details' drawing provided by the Client (Appendix E) identifies the existing drainage system within the site which serves the existing Tesco car park. Surface water flows from the Tesco car park enter an existing chamber in the north-western extent of the site (manhole chamber S8). From manhole S8 surface water flows discharge to the 450mm public surface water sewer north-west of the site. Manhole S8 has an identified cover level of 33.20m AOD and an invert level of 30.10m AOD.

An existing foul manhole adjacent to the existing Tesco Petrol station (reference F7) has a cover level of 32.87m AOD and an invert level of 31.25m AOD.

Development Proposals

The proposed development is for the erection of a single storey building to form mixed restaurant and hot food takeaway use (sui generis), incorporating a 'drive-thru' facility, car and cycle parking, the creation of a new pedestrian and cycle footpath link into the site from Altrincham Road and associated landscaping within part of the existing supermarket car park. A development plan is included in Appendix E.

Proposed Floor Levels will be set at 33.50m AOD.

The proposed development will include hardstanding areas in the form of the building, car parking and access. Hardstanding will comprise 3,518m² or 86.7% of the total site area. The remaining permeable, soft landscaped areas will occupy 542m² or 13.3% of the total site area.

All measurements have been taken from a PDF copy of drawing 'P121A- Proposed Site Plan' and are approximate only.

Planning Policy

The Manchester City Council Core Strategy (adopted July 2012) contains the following policies relating to drainage:

'Policy EN14 - Flood Risk

.... All new development should minimise surface water run-off, including through Sustainable Drainage Systems (SUDS) and the appropriate use of Green Infrastructure. Developers should have regard to the surface water run-off rates in the SFRA User Guide. In CDAs, evidence to justify the surface water run-off approach / rates will be required.

Policy EN17 - Water Quality

.... Development should minimise surface water run-off from development and associated roads, and maximise the use of appropriate sustainable drainage systems, to minimise groundwater contamination, and to avoid pollutants reaching watercourses'

Consultation

A pre-development enquiry was submitted to United Utilities in October 2022. In their response (Appendix D) UU have stated that:

'Foul Water

Foul flow from this site will be allowed to drain into the public foul water/combined sewer system.

Our preferred point of discharge would be to the 525mm diameter public combined sewer located South West of your proposed development at an unrestricted rate.

If you are able to identify an alternative, more suitable point of discharge, we request that you contact us at your earliest convenience so that we can assess suitability.

Surface Water

All surface water flow from the proposed development should drain in-line with the drainage hierarchy, as outlined in Paragraph 80, (Reference ID: 7-080-20150323), of the National Planning Practice Guidance. We also recommend you prioritise the use of multi-functional sustainable drainage systems for the management of surface water in accordance with national planning policy.

Public Sewer

In accordance with the hierarchy of drainage options within the National Planning Practice Guidance, both discharge to ground via infiltration and discharge to a waterbody should be discounted prior to consideration of discharging surface water to the public sewer system. Evidence should be provided to demonstrate how these have been discounted, as outlined in the North West SuDS pro-forma.

Once evidence is provided as outlined above, United Utilities will consider a connection to the 450mm diameter public surface water sewer within the boundary of the proposed site at a pass forward flow to be agreed by the Lead Local Flood Authority. United Utilities request that any agreed rate does not exceed 5l/s. This is based of the peak greenfield flow rate, utilising the most impermeable soil type via the HR Wallingford Greenfield estimation tool.

As a Water Company, we have no obligation to accept highway drainage into our public sewer network. However, should your proposals include runoff from highways, we would request that consideration is given to SuDS components that deliver source control are incorporated within the design of the scheme to reduce the volume and frequency of discharges of these flows to the public sewer.'

A consultation request was submitted to the LLFA in October 2022. In their response (Appendix F), the LLFA

have advised that they have no objection in principle to a discharge to the public surface water sewer via the existing 375mm surface water drain on site. The LLFA expect surface water runoff to be restricted to greenfield rates or by at least 50% reduction from the existing rates where appropriate.

Surface Water Management

The site currently comprises hardstanding which forms part of the supermarket (Tesco) car park. Surface water currently drains to the public surface water sewer network via a 375mm pipe in the north-western extent of the site.

The proposed development will include 3,518m² of hardstanding in the form of the building, car park and access.

The Manchester City Council 'SuDS Requirements for New Developments' guidance (2019) states that '*For Brownfield site developments... details of surface water attenuation that offers a reduction in surface water runoff rate in line with the Manchester Trafford and Salford Strategic Flood Risk Assessment, i.e. at least a 50% reduction in runoff rate compared to the existing rates with an aim to reduce to Greenfield runoff rates wherever practicable*'.

Existing brownfield runoff rates have been estimated using the modified rational method $Q=CiA$, whereby:

- Q is the peak discharge (l/s)
- C is the dimensionless coefficient (2.78)
- i is the average rainfall intensity derived from FEH point data for a 6 hour storm event
- A is the contributing drainage area (0.3658ha).

A summary of the existing brownfield runoff rates is provided in Table 1.

Table 1 – Existing Brownfield Runoff Rates

Storm Event (Year)	Rainfall Intensity (mm)	Runoff Rate (l/s)
1	18.3	18.6
30	48.7	49.5
100	66.2	67.3

A 50% reduction in the existing 1 in 1 year runoff rate would equate to a proposed discharge rate of 9.3 l/s. However, UU have stipulated that the discharge rate does not exceed 5 l/s. A discharge rate of 5 l/s is therefore proposed for the development and will provide 73% betterment over the existing 1 in 1 year brownfield runoff rate.

Discharge Method

Paragraph 056 of the NPPG: Flood Risk and Coastal Change sets out the following hierarchy of drainage options: into the ground (infiltration); to a surface water body; to a surface water sewer, highway drain or another drainage system; to a combined sewer.

Infiltration

The first consideration for the disposal of surface water is infiltration (soakaways and permeable surfaces).

A 'Site Investigation Report' by Crossfield Consulting Ltd was conducted in March 2021 and summarises that *'Due to the presence of relatively deep Made Ground and shallow groundwater, it is considered that soakaway drainage is unlikely to be feasible and an alternative drainage solution should be identified'*.

As such, infiltration techniques are not considered suitable for the site.

Watercourse

There are no watercourses within immediate vicinity of the site. As such, discharge to watercourse is not a feasible option.

Sewer

A connection to the public sewer system is the final consideration. It is proposed to discharge to the 450mm public surface water sewer north-west of the site via the existing 375mm surface water drain within the site. Manhole S8 on the 375mm surface water drain in the north-western extent of the site has an invert level of 30.10m AOD. As such, a gravity connection can be achieved. Discharge will be made at a rate of 5 l/s.

Attenuation Storage

In order to achieve a discharge rate of 5 l/s, attenuation storage will be required. An attenuation storage estimate is included in Appendix G. An estimated storage volume of 259m³ will be required to accommodate the 1 in 100 year plus 45% Climate Change (CC) event. The storage estimate is based on storage within a tank structure, an impermeable drainage area of 3,518m², a design head of 2m and hydro-brake flow control.

The attenuation volume is provided for indicative purposes only and should be verified at the detailed design stage.

Sustainable Drainage Systems

Attenuation storage should be provided in the form of Sustainable Drainage Systems (SuDS) where practical.

Given the space limitations on site (86.7% of the site occupied by hardstanding), attenuation storage will be provided in the form of an underground attenuation tank located beneath the car park.

A geo-cellular storage tank measuring 23m long x 6m wide x 2m deep with a void ratio of 95% would provide up to 262.2m³ of storage, sufficient to accommodate the 1 in 100 year plus 45% CC event.

Concept Surface Water Drainage Scheme

Surface water will be discharged to the 450mm public surface water sewer north-west of the site via an existing 375mm surface water drain. Discharge will be made at a limited rate of 5 l/s and a gravity connection can be achieved. Surface water runoff up to the 1 in 100 year plus 45% climate change allowance event will be attenuated on site. A total attenuation volume of 259m³ will be required to achieve the discharge rate and will be provided in the form of underground tank located beneath the car park.

The proposed surface water drainage scheme will ensure no increase in runoff over the lifetime of the development and will create betterment over the existing drainage.

A Concept Drainage Sketch is included in Appendix H.

Exceedance Event

Storage will be provided for the 1 in 100 year plus 45% CC event. Storm events in excess of the 1 in 100 year plus 45% CC event should be permitted to produce temporary shallow depth flooding within the car park and landscaped areas. Finished floor levels will be set at a minimum of 150mm above surrounding ground levels ensuring exceedance flooding will not affect the building.

Surface Water Treatment

In accordance with the CIRIA C753 publication 'The SuDS Manual' (2015), other roofs (applicable to commercial roofs) are classified as having a 'low' pollution hazard level. Non-residential car parks with frequent change are classified as having a 'medium' pollution hazard level. Table 1 below shows the pollution hazard indices for each land use.

Table 2 – Pollution Hazard Indices

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Other roofs (typical commercial /industrial roofs)	Low	0.3	0.2	0.05
Car parking with frequent change	Medium	0.7	0.6	0.7

Table extract taken from the CIRIA C753 publication 'The SuDS Manual' – Table 26.2

* Indices values range from 0-1.

Runoff from roofs and the car park will be directed to an attenuation tank beneath the car park. Treatment will be provided by a suitably sized filtration unit / propriety treatment system placed upstream of the attenuation storage tank.

Maintenance

Maintenance of private drainage features such as an attenuation tank will be the responsibility of the site owner. A maintenance schedule for an attenuation tank is included in Appendix I.

Foul Drainage

Correspondence from UU (Appendix D) states that *'Our preferred point of discharge would be to the 525mm diameter public combined sewer located South West of your proposed development at an unrestricted rate.'*

It is proposed to discharge foul flows to the 525mm public combined sewer south-west of the site via an existing 150mm foul drain located adjacent to the Tesco Petrol Filling Station (at manhole F7). Foul manhole F7 has a cover level of 32.87m AOD and an invert level of 31.25m AOD. As such, a gravity connection can be achieved.

Conclusions

The proposed development is for the erection of a single storey building to form mixed restaurant and hot food takeaway use (sui generis), incorporating a 'drive-thru' facility, car and cycle parking, the creation of a new pedestrian and cycle footpath link into the site from Altrincham Road and associated landscaping within part of existing supermarket car park.

The proposed development will include impermeable drainage area in the form of the building, car park and access.

All methods of surface water discharge have been assessed. Infiltration techniques are not possible due to the presence of relatively deep Made Ground and shallow groundwater. There are no watercourses in the immediate vicinity of the site. Therefore, surface water will be discharged to the existing 375mm surface water drain on site, which discharges to the 450mm public surface water sewer north-west of the site. A gravity connection appears feasible. UU have stipulated a discharge rate of 5 l/s.

Attenuation storage will be required on site in order to restrict surface water discharge to 5 l/s. Attenuation storage will be provided in the form of an underground attenuation tank located beneath the car park.

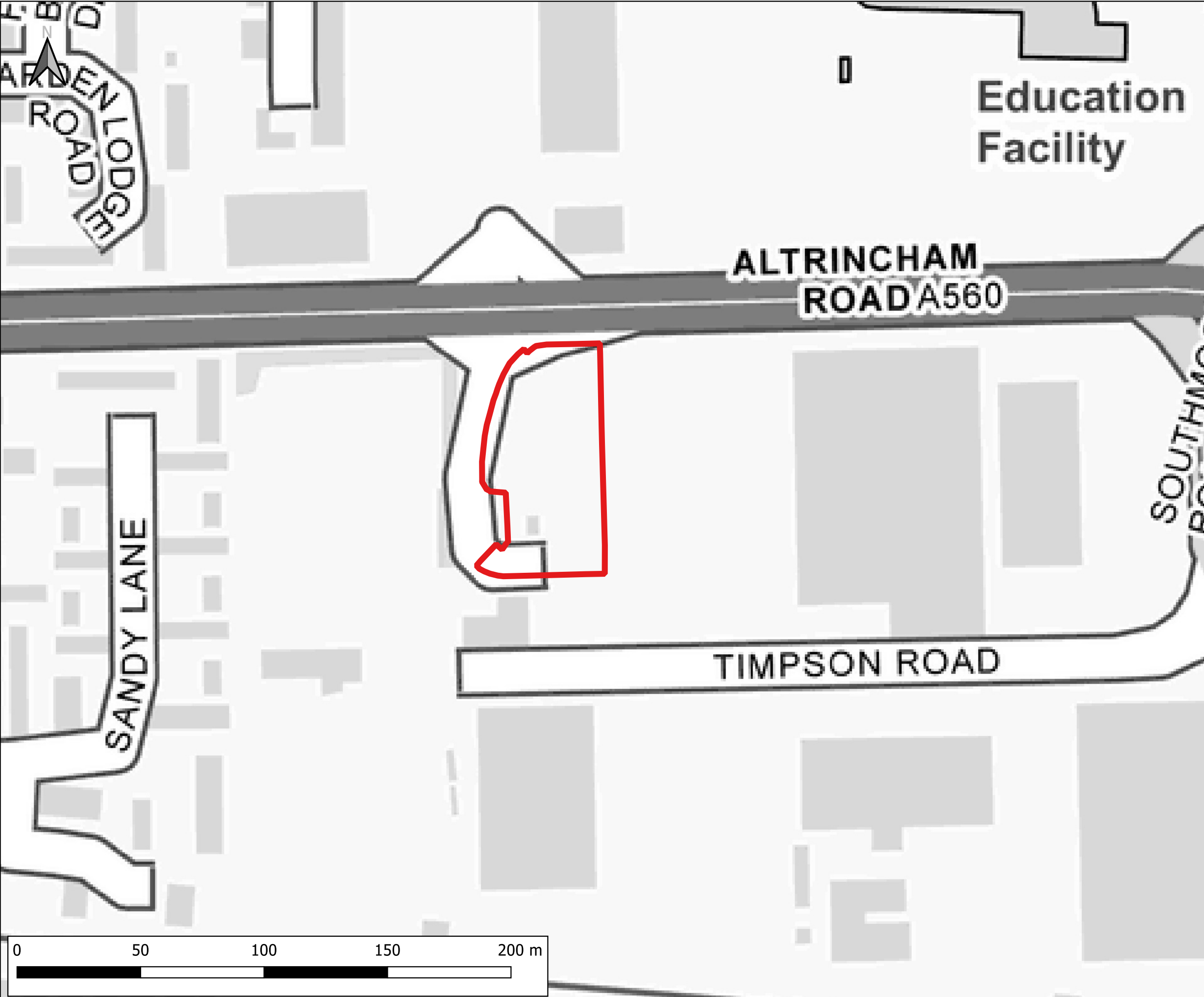
Foul flows generated from the proposed development will be discharged to the 525mm public combined sewer south of the site, via an existing 150mm foul sewer adjacent to the Tesco petrol filling station. A gravity connection can be achieved.

A Concept Designer's Risk Assessment (cDRA) has been prepared to inform future designers of any identified hazards associated with the scheme. The cDRA has been included in Appendix J.

Recommendations

1. Submit this Drainage Strategy to the Planning Authority in support of the Planning Application.
2. Verify the attenuation volume included in this report when undertaking detailed drainage design.

Appendix A Location Plan and Aerial Image



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary
- Watercourses
- Waterbodies

CLIENT:			
Chicken Cabins Ltd			
 www.waterco.co.uk			
SCHEME:			
Altrincham Road, Manchester			
PLOT TITLE:			
Location Plan			
PLOT STATUS:			DATE:
FINAL			02-11-2022
DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
MW	AW	NJ	1:1500
PLOT NAME:			REVISION:
_Location_Plan			-



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

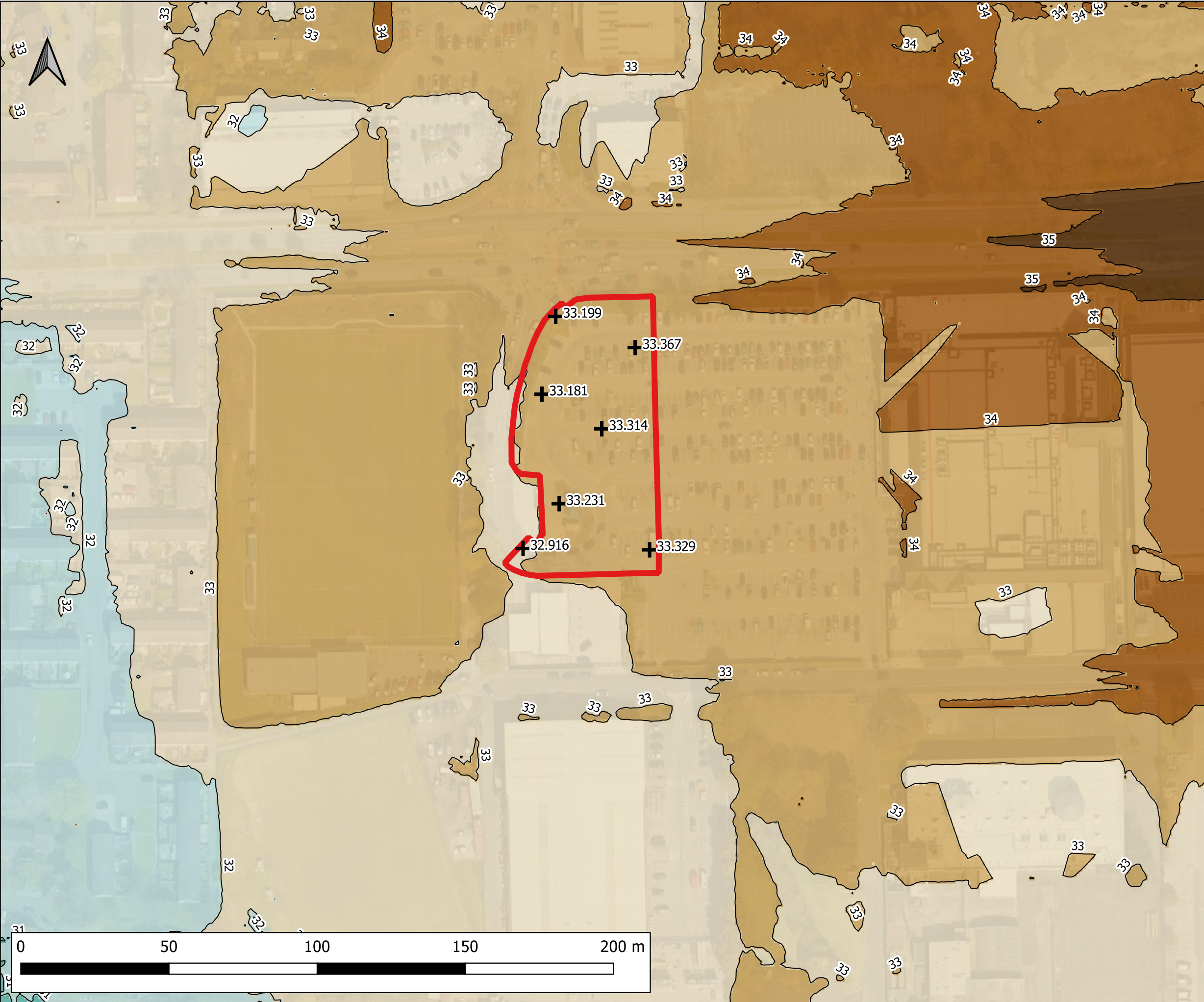
LEGEND

 Site Boundary



CLIENT:				Chicken Cabins Ltd	
				 www.waterco.co.uk	
SCHEME:				Altrincham Road, Manchester	
PLOT TITLE:				Aerial Plan	
PLOT STATUS:		FINAL		DATE:	02-11-2022
DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:		
MW	AW	NJ	1:1500		
PLOT NAME:					REVISION:
_Aerial_Plan					-

Appendix B Topographical Data



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

Site Boundary

Site Levels (m AOD)

Ground Elevations (m AOD)

	<= 31.0
	31.0 - 32.0
	32.0 - 33.0
	33.0 - 34.0
	34.0 - 35.0
	> 35.0

CLIENT:

Chicken Cabins Ltd

www.waterco.co.uk

SCHEME:

Altrincham Road, Manchester

PLOT TITLE:

LiDAR Plan
1m Resolution
Data from Environment Agency

PLOT STATUS:		DATE:	
FINAL		02-11-2022	
DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
MW	AW	NJ	1:1200
PLOT NAME:			REVISION:
_LiDAR_Plan			-

DO NOT SCALE THIS DRAWING. IF IN DOUBT ASK

NOTES

○

LEGEND

- | | |
|---|---|
|  | DENOTES PROPOSED LEVEL |
|  | DENOTES EXISTING LEVEL |
|  | DENOTES DROP KERB WITH TACTILE PAVING |
|  | ROAD GULLY |
|  | DENOTES BITUMINOUS FINISH LIGHT DUTY |
|  | DENOTES BITUMINOUS FINISH HEAVY DUTY |
|  | DENOTES PAVED AREA |
|  | DENOTES BITUMINOUS FINISH TO PEDESTRIAN AREAS |
|  | DENOTES EXISTING SURFACING TO BE PLAINED OFF TO A DEPTH OF 40mm.
A SUITABLE BONDING AGENT SHOULD BE APPLIED TO BITUMINOUS BASE COURSE PRIOR TO LAYING 40mm SMA WEARING COURSE. |



SITE LAYOUT PLAN (1:100)

	MH F1 MOVED TO AVOID CANOPY FOUNDATION	NC	FEB 22
A	MINOR MODIFICATIONS TO LAYOUT & FINISHES.	NC	FEB 22
Rev.	Description	By	Date
			
Client CHICKEN CABINS LTD.			
Site address KFC DRIVE THROUGH SECTION OF TESCO CAR PARK ALTRINCHAM ROAD, BAGULEY, MANCHESTER, M23 9JT.			
Stevenson Calam Associates CONSULTING ENGINEERS			
ORNHAMS HALL, BOROUGHBRIDGE, NORTH YORKSHIRE, YO1 5JH. Telephone: 01423 520999 Facsimile: 01423 520928 Email: stevenson.calam@btconnect.com			
Title EXTERNAL WORKS (SHEET 1 OF 2)			
Project Manager/ Checked GS	Drawn By NC	Scale AS SHOWN	Date FEB. 2022
Drawing Number 1747-4/3			Rev. B

Appendix C Historical BGS Borehole Record

Norwest Holst Soil Engineering Ltd.

Borehole No.

7

Contract No. F8108
Location Altrincham Road, Baguley
Client Curtins
Method of Boring Percussion
Diameter of Borehole 150mm

BOREHOLE LOG

Sheet 1 of 1
Chainage
Ground Level m.A.O.D.
Date 28/9/88

Description of Strata	Legend	Depth Below G.L. (m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/R.O.D. %	Daily Progress
REINFORCED CONCRETE		0.40					
MADE GROUND: Grey silty sand		1.20			1.00	22	
MADE GROUND: Brick rubble, sand and stones.		1.50					
Medium dense dark brown SAND		2.00			2.00	19	
Medium dense light brown medium SAND, becoming loose		3.80			3.00	6**	
Completely weathered brown clayey KEUPER MARL		4.30			4.20	49	
Weathered red/brown KEUPER MARL		6.00			5.10	50 for 75mm*	
					6.00	50 for 15mm*	

Type of Sample

Is S.P.T. Undisturbed
Ic. C.P.T. Vane
O Jar Water
● Bulk Piezometer

Remarks (Observations of Ground Water etc.) * Seating blows only

Water struck at 3.00m, level rose after 20 mins to 4.00m
Sealed by casing at 4.00m
** possibly disturbed due to groundwater conditions

Water levels are subject to seasonal or tidal variations and should not be taken as constant

Appendix D UU Sewer Plan & Correspondence

Waterco

**Waterco
Eden Court, Lon Parcwr Business Estate
Ruthin, Denbighshire
LL15 1NJ**

FAO:

How to contact us:

**United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP**

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

**Your Ref: 14948 - Altrincham Road, Manchester
Our Ref: UUPS-ORD-442153
Date: 26/10/2022**

Dear Sirs

Location: Altrincham Road Manchester

I acknowledge with thanks your request dated 24/10/2022 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. <http://www.unitedutilities.com/work-near-asset.aspx>.

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please [contact us](#).

Yours Faithfully,



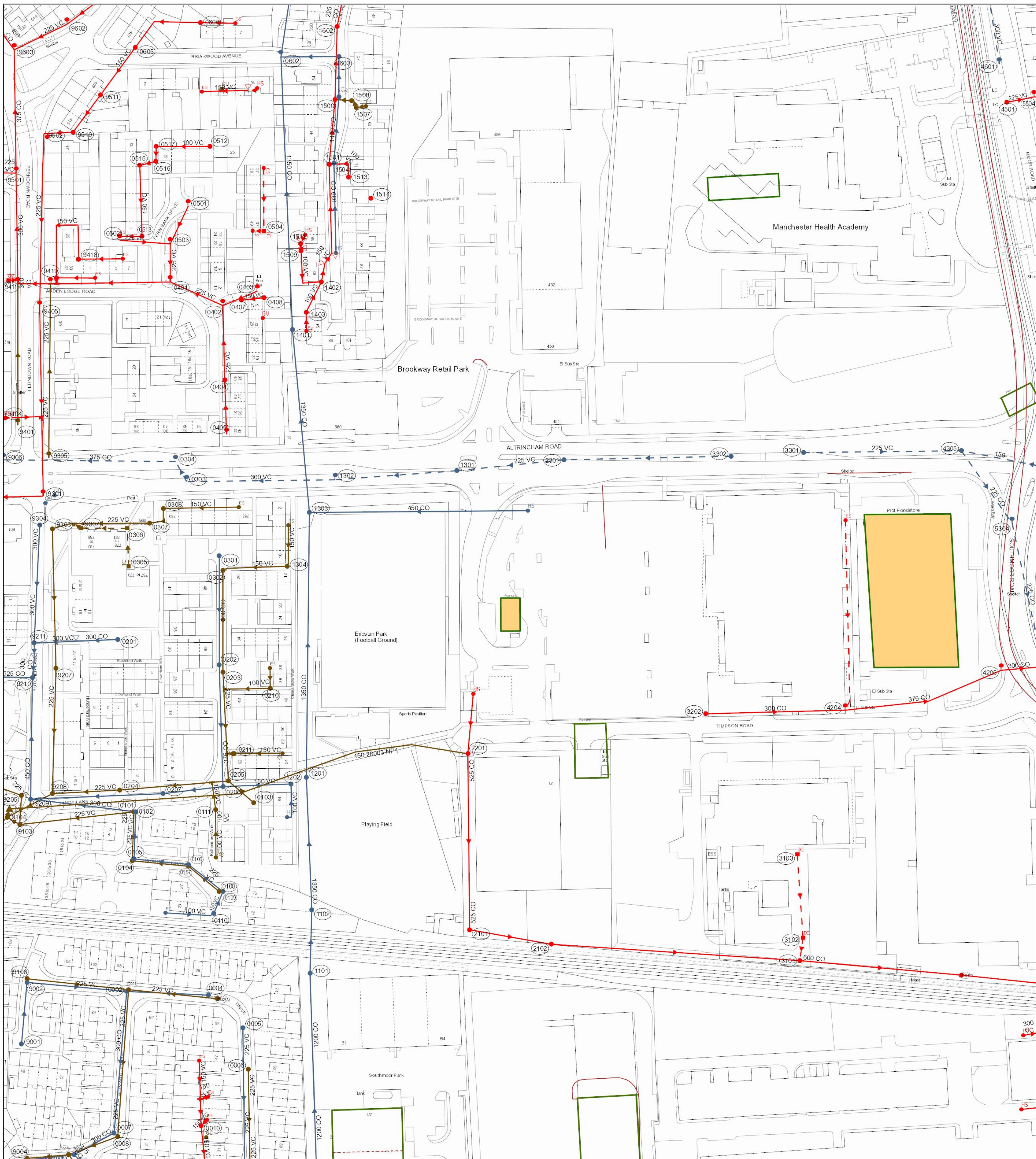
Karen McCormack
Property Searches Manager

TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.



Reho	Cover	Func	Invert	Size x	Size y	Shape	Mat	Length	Grad
9419				150			VC	3.295734	
0513				150			VC	12.27678	
4601	32.12	SW	30.3	300			VC	122.4827	1 in 236
1501		CO	0	839			CO	38.89643	
1504		SW	0	1400			CO	36.8075	
1507		FO	0	100			VC	5.11026	
1301	33.2	SW	31.31	225			VC	67.18631	1 in 140
4301	34.68	SW	32.52	225			VC	92.02174	1 in 123
4305	35.34	SW	33	225			VC	48.82622	
4307	35.69	SW	33.52	225			VC	15.26706	1 in 191
1401	33.01	SW	25.89	1350			CO	150.2864	1 in 501
1603		SW	0	1400			CO	31.97307	
4206	34.74	CO	30.07	300			CO	23.08879	1 in 257
0202	31.84	SW	29.95	375			VC	67.11701	1 in 320
0306				150			VC	14.68992	
0110	31.38	SW	30.46	150			VC	13	1 in 325
0108	31.47	SW	29.84	225			VC	22.02271	1 in 130
0109	31.47	SW	30.35	225			VC	24.20744	1 in 186
0106	31.35	SW	30.19	225			VC	30.14963	1 in 144
0404	32.96	CO	30.35	225			VC	41.01219	1 in 195
0403	32.49	CO	30.71	225			VC	20.61553	1 in 64
0403	31.67	CO	29.54	225			VC	14	1 in 129
0503	32.32	CO	30.22	225			VC	21	1 in 162
0515				150			VC	39.17923	
9511				150			VC	25.54277	
9305	31.85	FO	29.89	225			VC	96.00261	1 in 84
9103	32.82	FO	26.03	225			VC	8.90258	
9106	31.89	FO	30.34	225			VC	56.32051	1 in 128
0001	31.55	FO	29.88	225			VC	81.25162	1 in 246
0008	31.93	FO	29.53	225			VC	28.79236	1 in 221
9003	31.99	FO	29.38	225			VC	23.08879	1 in 178
0006	31.61	FO	30.17	225			VC	56.00893	1 in 181
0401	32.5	CO	30.07	225			VC	66.00791	1 in 44
0303	31.98	SW	30.26	375			CO	12.52966	
1500				0			CO	40.31477	
1201	32.49	SW	28.17	1350			CO	145.8875	1 in 123
2101	32.8	CO	30.47	525			CO	45.70558	
4204	34.04	CO	30.62	375			CO	80.93307	
5304	35.08	SW	32.02	225			VC	80.80842	1 in 95
1302	32.8	CO	30.78	100			VC	82.0591	300
1402				100			VC	10.3686	
9603	31.21	CO	28.25	450			CO	60.80296	1 in 338
9401	31.7	FO	29	225			VC	78	1 in 132
9405	31.44	CO	29.05	225			VC	104.0192	1 in 347
9306	31.73	SW	29.89	375			VC	109.6388	1 in 365
9210	31.65	SW	29.03	525			VC	60.00833	1 in 300
9209	32.16	SW	29.31	450			VC	67.00746	1 in 305
9207	31.49	FO	28.6	225			VC	69.02988	1 in 177
9104	32.5	CO	30.07	225			PVC	4.763103	
9205	32.24	FO	26.17	100			VC	16.03122	1 in 123
0002	31.55	SW	30.14	300			VC	78.31947	1 in 340
0007	31.8	SW	29.88	300			VC	25.05953	1 in 125
9005	31.98	SW	29.59	450			VC	27.16915	1 in 217
1202				150			VC	37.44826	
0003	31.61	FO	30.6	225			VC	49.25444	1 in 70
3101	31.89	CO	30.09	600			VC	99.59583	
4101				0			VC	105.5746	
0005	31.59	SW	30.39	225			VC	78.0641	1 in 488
2301	33.9	SW	31.75	225			VC	99.3943	1 in 141
5504	32.71	CO	30.72	450			CO	35	1 in 90
9602	31.25	FO	27.88	150			VC	32.20248	1 in 24
1304		FO		150			VC	35.82397	
0406				150			VC	12.47314	
1508		FO		100			VC	9.193957	
1602				0			VC	37.2763	
1505		SW		1400			VC	22.19921	
1102	31.96	SW	28.24	1350			VC	73.05161	1 in 1461
2102				0			VC	137.0563	
0602	31.01	SW	25.57	1400			VC	136.4734	
0302	31.87	FO	29.57	225			VC	56	1 in 140
0516		CO		150			VC	9.138899	
0512				100			VC	25.59886	
0405	32.53	CO	31.01	225			VC	30.01666	1 in 65
0107	31.36	FO	29.45	225			VC	31.14482	1 in 111
0111		FO		150			VC	15.16491	
0205	31.35	FO	28.75	225			VC	60.20797	1 in 241
0211				150			VC	4.008602	
1403				100			VC	18.70299	
9418				150			VC	59.76578	
0502	32.2	CO	30.39	225			VC	28.07134	1 in 175
9510		CO		150			VC	16.10588	
9301	31.44	CO	28.73	225			VC	42.2119	1 in 525
9211	31.65	SW	29.56	300			VC	42.2119	1 in 82
9206	31.64	FO	29.13	225			VC	28.17801	
0101	31.37	SW	29.8	300			VC	58.42089	1 in 154
0104	31.36	FO	29.15	225			VC	27.01691	1 in 90
0105	31.38	SW	29.96	225			VC	26.01922	1 in 186
9001	32.14	SW	30.9	225			VC	34.1321	1 in 114
9002	31.9	SW	30.52	225			VC	55.02881	1 in 153
9004	31.83	FO	29.22	225			VC	27.58623	1 in 172
0206	31.29	SW	29.72	375			CO	33.36205	1 in 186
0004	31.61	SW	30.31	225			VC	45.04442	1 in 300
1513		CO		100			VC	17.88768	
3301	35.04	SW	33.29	225			VC	87.00574	
2201	32.72	CO	30.89	525			CO	97.05516	1 in 485
3202				0			CO	77.02606	
0203	31.85	FO	29.15	225			VC	60.07465	1 in 182
0210		FO		100			VC	25.95155	
0606				300			VC	43.15915	
0301	31.87	SW	30.32	225			VC	60	1 in 171
0501	31.9	CO	30.32	150			VC	23.25941	1 in 291
1303	32.95	SW	26.02	1350			CO	101.3005	1 in 821
0103	31.28	FO	29.15	225			VC	18.43909	1 in 61
0402	32.7	CO	30.32	225			VC	31.7605	1 in 138
1509				100			VC	28.16656	
9402	31.46	CO	29.39	300			VC	61.0302	1 in 36
9501	31.67	CO	29.53	375			VC	68.00735	1 in 400
9502	31.52	CO	29.28	225			VC	95.82847	1 in 504
0517				100			VC	8.264397	
0605		CO		150			VC	32.35877	
0304	32.08	SW	30.24	375			VC	96.00526	1 in 288
9304	31.63	SW	29.65	300			VC	65.09919	1 in 176
9303	31.57	FO	29.95	225			VC	77.02697	1 in 233
0307		FO		225			VC	53.00699	
0201	31.26	SW	29.9	300			VC	23.02173	1 in 144
0204	31.33	FO	29.48	225			VC	37.05402	1 in 154
0102	31.37	FO	28.83	225			VC	63.3877	1 in 23
0207	31.24	SW	29.53	450			VC	73.06161	1 in 406
1101	32.79	SW	26.42	1350			VC	30.01428	1 in 219
0010		CO		150			VC	29.56281	

LEGEND

Abandoned

Foul

Surface Water

Combined

Public Sewer

Section 104

Rising Main

Sludge Main

Overflow

Water Course

Highway Drain

All point assets follow the standard colour convention:

red - combined

blue - surface water

brown - foul

purple - overflow

Manhole

Head of System

Extent of Survey

Rodding Eye

Inlet

Discharge Point

Vortex

Penstock

Washout Chamber

Valve

Air Valve

Non Return Valve

Soakaway

Gully

Cascade

Flow Meter

Hatch Box

Oil Interceptor

Summit

Drop Shaft

Orifice Plate

Side Entry Manhole

Outfall

Screen Chamber

Inspection Chamber

Bifurcation Chamber

Lamp Hole

T Junction / Saddle

Catchpit

Valve Chamber

Vent Column

Sewer Chamber

Penstock Chamber

Network Storage Tank

Sewer Overflow

Ww Treatment Works

Septic Tank

Control Kiosk

MANHOLE FUNCTION

FO Foul

SW Surface Water

CO Combined

OV Overflow

SEWER SHAPE

CI Circular

TR Trapezoidal

EG Egg

AR Arch

OV Oval

BA Barrel

FT Flat Top

HO HorseShoe

RE Rectangular

UN Unspecified

SQ Square

SEWER MATERIAL

AC Asbestos Cement

BR Brick

PE Polyethylene

RP Reinforced Plastic Matrix

CO Concrete

CSB Concrete Segment Bolted

CSU Concrete Segment Unbolted

CC Concrete Box Culverted

PSC Plastic / Steel Composite

GRC Glass Reinforced Plastic

DI Ductile Iron

PVC Polyvinyl Chloride

CI Cast Iron

SI Spun Iron

ST Steel

VC Vitrified Clay

PP Polypropylene

PF Pitch Fibre

MAC Masonry, Coursed

MAR Masonry, Random

U Unspecified

Address or Site Reference:
Altrincham Road Manchester,

Scale: 1:1250 Date: 26/10/2022

Sheet: 1 of 1

Printed by: Property Searches

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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Megan Williams

From: wastewaterdeveloperservices@uuplc.co.uk
Sent: 24 October 2022 10:10
To: Megan Williams
Subject: Pre Development Enquiry for: Altrincham Road, Manchester, M23 9TJ UU
Reference Number : 02949510

Good Morning, Megan

Pre Development Enquiry for: Altrincham Road, Manchester, M23 9TJ UU Reference Number : 02949510

We have carried out an assessment of your application which is based on the information provided. This pre-development advice on your drainage strategy will be valid for 12 months. Your drainage strategy will need to be reviewed by other competent authorities as part of the planning process, and we advise that you carry out the necessary site investigations to confirm the viability of your proposals.

If your investigations require access to our public sewer network, we ask that you contact our network engineers with a request for an access certificate via our main contact telephone number 0345 6723 723 or refer to the link below:

<https://www.unitedutilities.com/builders-developers/working-near-our-assets/>

Foul Water

Foul flow from this site will be allowed to drain into the public foul water/combined sewer system.

Our preferred point of discharge would be to the 525mm diameter public combined sewer located South West of your proposed development at an unrestricted rate.

If you are able to identify an alternative, more suitable point of discharge, we request that you contact us at your earliest convenience so that we can assess suitability.

In accordance with our infrastructure plans we may ask you to change your point of connection. Therefore please contact us when you are ready to formalise your drainage proposals, we would suggest before you submit for Full Planning.

Surface Water

All surface water flow from the proposed development should drain in-line with the drainage hierarchy, as outlined in Paragraph 80, (Reference ID: 7-080-20150323), of the National Planning Practice Guidance. We also recommend you prioritise the use of multi-functional sustainable drainage systems for the management of surface water in accordance with national planning policy.

Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable.

This is outlined as follows, in order of priority:

1. **into the ground (infiltration);**
2. **to a surface waterbody;**
3. **to a surface water sewer or highway drain;**

4. to a combined sewer.

For guidance, The [North West SuDS Pro-Forma](#) provides information on the appropriate evidence required at each stage of the hierarchy, to demonstrate how each level has been discounted.

The Lead Local Flood Authority has responsibility for all surface water drainage concerns and their input to your proposal is critical. You should also consider whether it is necessary to discuss your proposal with the Environment Agency, or Internal Drainage Board (if operating in your area).

The Local Planning Authority are the determining authority for any application for planning permission and the appropriate authority for determining cost viability of a proposed drainage scheme, such assessments are outside of the jurisdiction of United Utilities.

Infiltration

Surface water runoff generated from this development should discharge to the ground via infiltration system where feasible.

A detailed evidence based feasibility assessment must be carried out in line with Chapter 25 of the CIRIA SuDS Manual 2015 to determine whether infiltration is a suitable method of surface water disposal.

Particular attention must be paid to Ground Water Source Protection Zones to ensure that the risk of pollution to these valuable resources is not compromised. Details can be obtained from the government website:

<https://www.gov.uk/guidance/groundwater-source-protection-zones-spzs#find-groundwater-spzs>

If your site is in a Groundwater Source Protection Zone, you should have regard to the Environment Agency's approach to Groundwater Protection. Information on this is available via the link below:

<https://www.gov.uk/government/publications/groundwater-protection-position-statements>

Please note that such a location could have implications for the principle of your development and the need for additional mitigating measures to protect the groundwater environment and public water supply in the detailed design of your site.

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Highway Drainage

If an evidence based assessment has been carried out and confirms that infiltration is not feasible, we recommend that you investigate the possibility of draining surface water to the highway drain where this ultimately discharges to a watercourse, by contacting the relevant Highway Authority.

There is a 225mm highway drain to the North in Altrincham Road, that discharges to a 375mm public surface water sewer before outfalling to Sinderland Brook.

Public Sewer

In accordance with the hierarchy of drainage options within the National Planning Practice Guidance, both discharge to ground via infiltration and discharge to a waterbody should be discounted prior to consideration of discharging surface water to the public sewer system. Evidence should be provided to demonstrate how these have been discounted, as outlined in the North West SuDS pro-forma.

Once evidence is provided as outlined above, United Utilities will consider a connection to the 450mm diameter public surface water sewer within the boundary of the proposed site at a pass forward flow to be agreed by the Lead

Local Flood Authority. United Utilities request that any agreed rate does not exceed 5l/s. This is based on the peak greenfield flow rate, utilising the most impermeable soil type via the HR Wallingford Greenfield estimation tool.

As a Water Company, we have no obligation to accept highway drainage into our public sewer network. However, should your proposals include runoff from highways, we would request that consideration is given to SuDS components that deliver source control are incorporated within the design of the scheme to reduce the volume and frequency of discharges of these flows to the public sewer.

Levels

For low-lying sites, (where the ground level of the site or the level of a basement is below the ground level at the point where the drainage connects to the public sewer), care should be taken to ensure that the property is not at increased risk of flooding. If these circumstances exist, we recommend that you contact us to discuss further. It could affect the detailed design of your site and result in the need to incorporate appropriate mitigating measures in your drainage scheme.

Land drainage / Overland flows / track drainage

United Utilities have no obligation, and furthermore we do not accept land drainage, overland flows or track drainage into the public sewerage network under any circumstances

Existing Wastewater Assets Crossing the Site

According to our public sewer records there are public sewers located within your site boundary. We will require unrestricted access to the sewer for maintenance purposes, we would ask that you maintain a minimum clearance of 6m which is measured 3m from the centre line of the pipe unless there happens to be a formal easement agreement in place, in which case the specified easement width would apply. If you cannot achieve this then you may wish to consider diverting and or abandoning the public sewer.

Please be aware that any proposed diversion may require modelling. This process may take up to 6 months in order to reach an acceptable design.

Please refer to the link below to obtain full details of the processes involved with sewer diversions:

<https://www.unitedutilities.com/builders-developers/larger-developments/wastewater/sewer-diversions/>

Existing Water Assets Crossing the Site

It is the developer responsibility to identify utilities on-site. Where clean water assets are shown on our records, we recommend that you contact our Water Pre-Development Team, via the following email address: DeveloperServicesWater@uuplc.co.uk. Further information for this service can be found on our website via the link below:

<https://www.unitedutilities.com/builders-developers/larger-developments/pre-development/water-pre-dev/>

Connection Application

Although we may discuss and agree discharge points and rates in principle, please be aware that you will have to apply for a formal sewer connection. This is so that we can assess the method of construction, Health & Safety requirements and to ultimately inspect the connection when it is made. Details of the application process and the form itself can be obtained from our website by following the link below:

<https://www.unitedutilities.com/builders-developers/wastewater-services/sewer-connections/sewer-connection/>

We recommend that the detailed design should confirm the locations of all utilities in the area and ensure that any proposed drainage solution considers routing and clash checks where required.

If we can be of any further assistance please don't hesitate to contact us further.

Sewer Adoptions

You have indicated on your application form that you intend to put the sewers forward for adoption (including any SuDS components that can come within the meaning of a sewer).

United Utilities assess adoption applications based on the current Design & Construction Guidance and local practices which have now replaced 'Sewers For Adoption 6th Edition'.

We recommend that you submit a pre design assessment to the sewer adoption mailbox (SewerAdoptions@uuplc.co.uk) stating pre design assessment in the title

Please refer to links below to obtain further guidance:

<https://www.unitedutilities.com/builders-developers/larger-developments/wastewater/sewer-adoptions/>

Site drainage must be designed in accordance with Building Regulations, National Planning Policy, and local flood authority guidelines, we would recommend that you speak and make suitable agreements with the relevant statutory bodies.

If you intend to put forward your wastewater assets for adoption by United Utilities, the proposed detail design will be subject to a technical appraisal by an Adoption Engineer as we need to be sure that the proposals meets the requirements set out in the Design & Construction Guidance. The proposed design should give consideration to long term operability and give United Utilities a safe and cost effective proposal for the lifetime of the assets. In these cases, we strongly recommend that no construction commences until the detailed drainage design, submitted as part of the Section 104 application, has been assessed and accepted in writing by United Utilities. Any work carried out prior to the technical assessment being approved is done entirely at the developer's own risk and could be subject to change.

SuDS

If your development proposal incorporates any SuDS component(s) which interact with a sewer network you plan on offering for adoption to United Utilities; contact should be made with our technical team at your earliest convenience, please complete the 'Section 104 pre-application form : ' and include as much relevant detail as you can. These discussions can help prevent delays later in the development process.

Section 104 Pre application form (1b)

As per the sewerage sector guidance, all SuDS should be designed in accordance with the standards within the Design & construction guidance & the CIRIA SuDS manual (C753)

Codes For Adoption

The new Codes for Adoption are outlined on the Water UK Website. The link below takes you to their webpage:

<https://www.water.org.uk/technical-guidance/developers-services/codes-for-adoption/>

A free copy of the new Design & Construction Guidance can be downloaded via the link below:

<https://www.water.org.uk/sewerage-sector-guidance-approved-documents/>

Many thanks and kind regards,



Gary Jaundrell

Assistant Developer Engineer
Developer Services & Metering
Customer Services
T: 07388 715 589
unitedutilities.com

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Did you know we now have a live chat facility available to you Mon to Friday 8 -5pm. You just click on the orange live chat box on our webpage and one of our advisors will be ready to chat to you and help you with your enquiry <https://www.unitedutilities.com/builders-developers/> or you can email us at WastewaterDeveloperServices@uuplc.co.uk

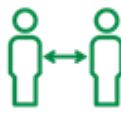
Coronavirus | Prevent the spread



Wash your
hands



Disinfect
common surfaces



Practise social
distancing



FEVER +
COUGH

Stay home if you
have symptoms

[Click for our message to customers](#)

----- Original Message -----

From: wastewaterdeveloperservices@uuplc.co.uk [wastewaterdeveloperservices@uuplc.co.uk]

Sent: 17/10/2022 10:56

To: megan.williams@waterco.co.uk

Subject: 02949510 Altrincham Road, Manchester, M23 9TJ

Dear Megan

PRE DEVELOPMENT APPLICATION AT: – UU Ref 02949510

Please accept this email as receipt of your application received on 17/10/2022 for the above development. This has now been logged on our system and the job reference is 02949510 we would ask that you quote this reference in all future correspondence.

I have reviewed your application (and attachments) and can confirm this is suitable to be passed to Gary

Jaundrell for technical assessment. You will receive their response within 8 working days.

Kind regards Jill



Jill Ellis

Customer Advisor Advanced
Developer Services & Metering
Customer Services

Direct Tel: 01925 233 064

Tel: 0345 072 6067

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Did you know we now have a live chat facility available to you Mon to Friday 8 -5pm. You just click on the orange live chat box on our webpage and one of our advisors will be ready to chat to you and help you with your enquiry <https://www.unitedutilities.com/builders-developers/> or you can email us at WastewaterDeveloperServices@uuplc.co.uk



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Appendix E Proposed Development Plans