

Duke Street Mill

Sustainable Drainage Strategy Report

Job Number: FRA241034

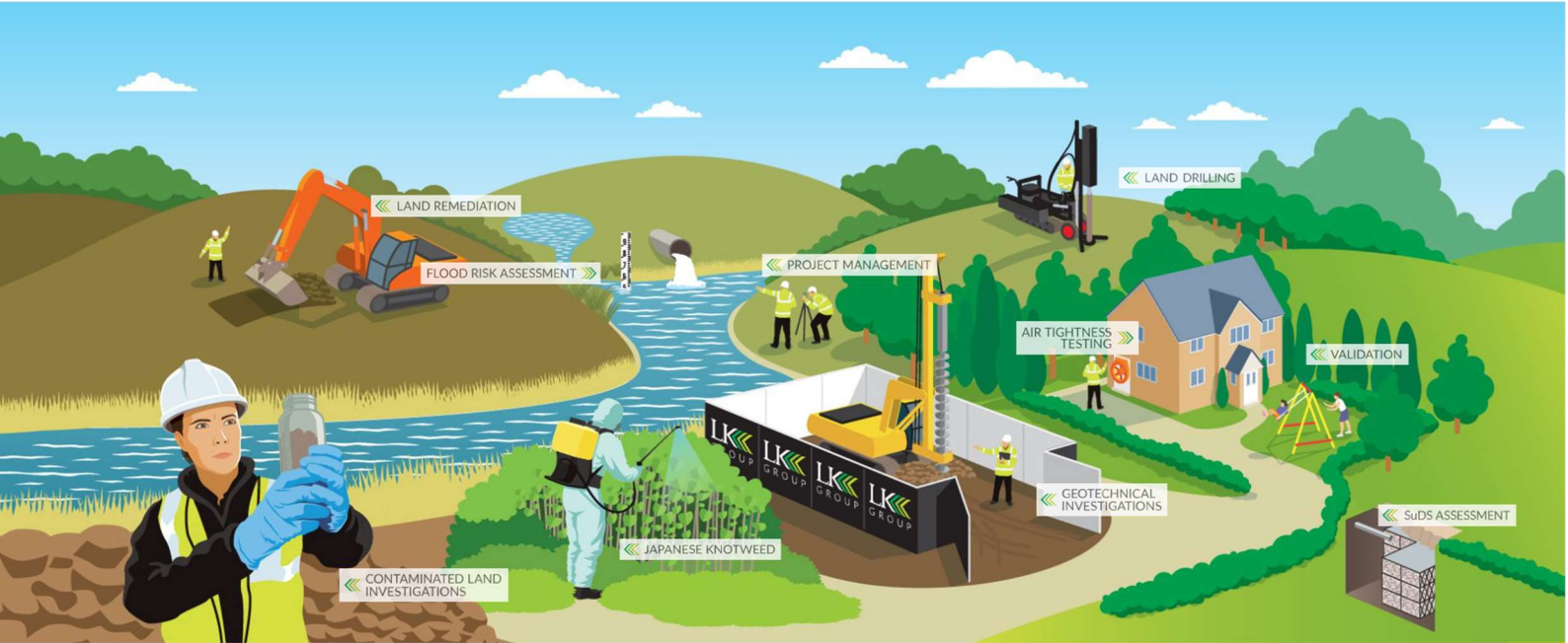
Date: November 2024

Client: Allied Property Group Ltd



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DOCUMENT QUALITY ASSURANCE

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Report Title	Sustainable Drainage Strategy Report
Job Number	FRA241034
Client	Allied Property Group Ltd

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Written By	Liam Greenwood-Dean and Matthew Bell		
Approved By	Colin Crompton		

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EXECUTIVE SUMMARY

Scope and Background

This Sustainable Drainage (SuDS) Strategy has been undertaken by LK Consult Ltd (LKC) to support a planning application for the site located west of Duke Street, south of Princess Street, east of Whitehall Street and north of Queen Street, with the approximate postcode OL12 0LW.

The site is currently a vacant former mill building and small external hardstanding area used as car parking. The development proposal is to redevelop and refurbish the existing mill building for use as residential apartments, with the external hardstanding area becoming amenity space.

Site Constraints and Drainage Strategy

A review of the site setting and existing constraints has identified that there are existing downspouts from the building that pass down the external relations and directly into the ground at the pavement (likely passing to the combined or highway network).

Based on a review the site constraints and consideration of the drainage hierarchy it is considered that there is limited opportunity to provide SuDS within the development to control the flows of surface water. Therefore, effectively the existing drainage would be retained, however, the downspout that passes directly onto the pavement would need to be connected to the UU combined sewer or the highway drain.

There may be opportunities within the development to include some SuDS features in the amenity space such as tree pits, garden planters or rain gardens to provide some element of betterment from this area of the site. There may also be some opportunity to provide a green or blue roof within the development, however, further review of the existing building and consideration to the structure will be required to further inform this position.

There may be an opportunity to include porous paving within the amenity space, however, this would only provide attenuation to the area which it drains directly, and based on the ground conditions, would need to be connected to the UU combined sewer.

In addition, it is recognised that the existing downspout of the southern elevation of the building is not ideal given that flows would pass directly onto the pavement and subsequently the public highway. Further assessment will be required in order to consider the options for this downspout, however, given that flows from this would pass directly from it into the adjacent highway gulley, it would be beneficial from a health and safety perspective to regularise this with a connection either directly to the highway drain or the UU combined sewer within Queen Street, subject to agreement with the Highway Authority or United Utilities.

All proposed outflow connections from the development should be agreed with the Lead Local Planning Authority and United Utilities.

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1 Introduction

1.1 Background

LKC were commissioned to carry out an Sustainable Drainage Strategy Report for Duke Street Mill, Rochdale. The report was undertaken in support of a planning application to redevelop the site for residential use.

The report will assesses the impact of the development on surface water runoff. The sustainable drainage assessment in Section 4 will provide an overview of the SuDS techniques which could be considered on the site.

The assessment is presented with reference to the hydrological and hydrogeological context of the development and taking account of the development proposals at the site taking account of the drainage hierarchy as set out in the Planning Practice Guidance (PPG), updated August 2022³.

The report findings are based upon professional judgement and are summarised below. The report includes baseline data from the Environment Agency (EA), and Hydrogeological information from the British Geological Survey (BGS). The assessment will summarise and refer to these datasets in the text.

Drainage on the site has been assessed by considering the following key constraints:

- Topography of the site.
- Local water features and hydrological context.
- Underlying geology, soil types and permeability.
- Layout and geometry of the proposed development.

1.2 Site Details

A summary of the general site details is presented in Table 1-1. Plans, Drawings and Figures are provided in Appendix A.

Location	Site is west of Duke Street, south of Princess Street, east of Whitehall Street and north of Queen Street, with the approximate postcode OL12 0LW. Centred at National Grid Reference 389767E, 413945N.
Area	Existing building, substation and access c.1,530 m ² . Existing external hardstanding area of approximately 250m ² .
Topography	c. 143 metres above ordnance datum (AOD). External areas within the site and the bordering streets slope gradually down to the south.
Current Site Use	Site currently comprises vacant mill building with and external hardstanding area. A 2 storey vacant office building (former public house) is present in the south west corner of the site but is currently not part of the proposed development scheme.
Proposed Development	Residential apartments (64no units) including amenity space. The proposed development retains and refurbishes the existing mill building structure and does not increase the overall built or hardstanding footprint. The existing external hardstanding areas will become an amenity space within the development.

Table 1-1: Summary of site details.

³ "Planning Practice Guidance" <https://www.gov.uk/guidance/flood-risk-and-coastal-change>. Ministry of Housing Communities and Local Government. August 2022.

2 Site Setting

2.1 Environmental Setting

LKC have previously undertaken a Preliminary Risk Assessment for the site⁴ and pertinent environmental information for the site supplemented by further public domain resources is summarised in Table 2-1 below.

Summary of the Environmental Setting			
Geology	Artificial Ground		None recorded.
	Superficial		Till Devensian (Diamicton).
	Bedrock		Milnrow Sandstone.
	BGS Boreholes		BH Ref: SD81SE556, 48m S: No strata information provided.
	Nearby Ground Investigations (Appendix B)		Haynes Street, c. 60m NNE (planning approval 15/00942). Report by TJ Booth and Associates ⁵ . November 2015. MADE GROUND generally comprised between 1.5-2.5m of loose, very coarse demolition rubble. Cellar walls & sandstone base flags were noted in THs1, 4, 5 & 7. SAND & GRAVEL lenses were noted below MADE GROUND to the N/NW side of the site (BH1 & THs 1, 2 & 3). Below this was a glacial soft/firm becoming stiff glacial CLAY. The SAND & GRAVEL thinned out towards the E side of the site leaving MADE GROUND directly overlying the glacial CLAY. Redcross Mill c. 120m SW – report by LKC ref. JB1000-01 ⁶ . MADE GROUND up to 2m depth over natural strata comprising a very stiff hard grey slightly gravelly clay (possibly weathered mudstone) with much fine to coarse gravel of sandstone and coal.
	Defra Soilscape Mapping		Type 17: Slowly permeable, seasonally wet, acid, loamy and clayey soils.
Hydrogeology	Aquifer Designation	Superficial	Secondary Undifferentiated Aquifer.
		Bedrock	Secondary A Aquifer.
	Source Protection Zone (SPZ)		Site not within an SPZ.
	Risk Flooding from Groundwater		Limited potential.
Flood Zone	The site is within Fluvial Flood Zone 1.		
Risk of Surface Water Flooding	1% annual chance of flooding noted to highways to the west and east of the site. 1% and 0.1% annual chance of flooding noted to highways to the north, west and east of the site.		
Hydrology	All adjacent and internal surface water		No surface watercourses indicated within 250m.
Site History		Onsite: Residential dwellings, cotton mill, Chimney, Road, Works, electricity substation.	
		Surrounding Area: Reservoir, works, iron foundry.	

Table 2-1: Summary of the Environmental Setting.

⁴ LK Consult Ltd: Phase 1 Preliminary Risk Assessment, ref. LKC 24 1109-A1-PRA, dated October 2024.

⁵ TJ Booth & Associates: Site Investigation Report, ref. rep-tjba-PPL-haynes st, rochdale-SI report-021115.docx, dated November 2015.

⁶ LK Consult Ltd: Ground Investigation and Risk Assessment, ref. JB1000-01, dated November 2006.

2.2 Site Reconnaissance

A site reconnaissance was undertaken in October 2024 and photographs are provided below.

- The majority of the site is occupied by the building footprint of Duke Street Mill. The northwest quadrant of the site comprises a hardstanding tarmac parking area demarked by palisade fencing to Whitehall Street and Princess Street. An unmarked electricity substation with a small cobbled area to the front access is present.
- A two storey office building (former public house) is present to the southwest corner of the mill building. This appeared to be unused and is not part of the current development proposals.
- The northern and northeastern elevations of the mill building are fronted in brick and pavement level iron grids and lightwells are present. On the central northern elevation lintels and the very top part of bricked up windows are visible at pavement level. The iron grids are considered to reflect the basement area.
- Access to the basement was possible via a locked door and stairs. Upon opening the basement doors a strong “draft” was noted. This is conjectured to be due to the lift shafts which have openings to the basement and extend above the level of the roof.
- The surrounding area comprises a car park and retail area to the south, housing to the west and northwest, retail outlets for carpets and tools to the north and composite tube manufacture to the east.
- A number of drain covers were noted in the pavement or highway on all four sides of the building. External downspouts to below pavement level possibly related to foul drainage were noted on the northern and southern elevations.
- Evidence of roof drainage into gulley boxes was noted on the eastern elevation. A downspout on the southern elevation was noted to discharge to a highway gulley across the pavement.

Site photographs are provided in Table 2-2.

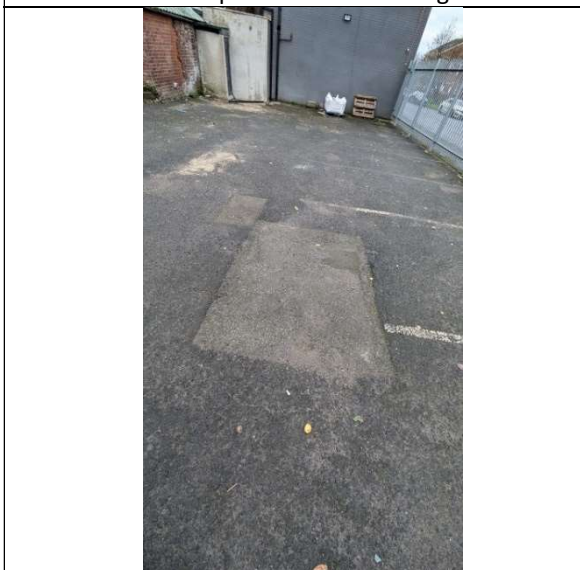
In addition to this, a plan indicating the location of the downspouts supported by photographic evidence is included as Figure 3.



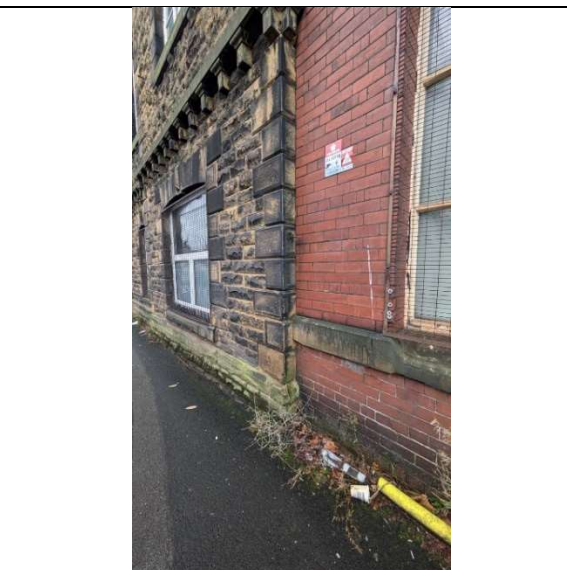
Photograph 1: View SW of site from the NW. Behind palisade fencing (L-R) substation, former engine house and former public house building. .



Photograph 2: Substation.



Photograph 3: Repair to car park. Former public house building visible.



Photograph 4: View SW of eastern elevation from Duke Street. No evidence of cellar / lightwells below stone fronted section .



Photograph 5: View S showing roof drainage to the north of the former engine house.



Photograph 6: View of eastern elevation. Roof drainage visible to right of photograph.

	
Photograph 7: Roof Drainage to northern elevation. Foul drainage visible to left of photo.	View towards NE corner. Pavement level metal grids / lightwells at pavement level.
	
Photograph 9: View E along northern elevation. Lintels and former windows to basement with some lightwells infilled and tarmacked.	Photograph 10: Roof Drainage on Queen Street.

Table 2-1: Site photographs.

2.3 Site Levels

A topographic survey of the site was not provided, therefore opensource LiDAR levels have been extracted to OS GPS datum, and information is included on the drawings in Appendix B.

The external areas falls gradually to the south / south east with a level of c. 143m AOD at the north west corner and c. 142.1mAOD at the south west corner. This slight fall in level can be seen on the external yard area in the northwest corner of the site. There is a very slight fall in external ground levels indicated from west to east (less than 50cm).

3 Consultation

Information from all relevant consultees is summarised in Table 3-1 below.

Relevant correspondence / information is provided in Appendix C.

Source	Details	
Lead Local Flood Authority (LLFA)	No information provided at the time of writing. SFRA indicates council policy for brownfield sites is 50% less than pre-development and for greenfield sites is current runoff up to 1 in 100 year event plus climate change.	
United Utilities (UU)	Sewer Map	There is a 225mm diameter combined sewer to the north of the site flowing northeast into a 450mm diameter combined sewer which flows southeast along Duke Street. A 300mm becoming 225mm diameter sewer in present in Queen Street to the south of the site which flows northeast into the same 450mm combined sewer in Duke Street. A further 2no. combined sewers (375mm diameter and 550 x 610mm) are present to the west of the site in Whitehall Street flowing southeast. A 600mm diameter surface water sewer is indicated c. 35m southeast of the site.
	Likely conditions for connecting into their sewerage system	UU would request conditions for a separate system with only foul draining to foul / combined sewers and surface water draining to soakaway/SuDS, watercourse or surface water sewer. All surface water flow from the proposed development should drain in-line with the drainage hierarchy, as outlined in Paragraph 80 of the National Planning Practice Guidance. Surface water runoff generated from this development should discharge to the ground via infiltration system where feasible. If not feasible, UU recommend that a discussion with the LLFA and/the EA is carried out to discuss a point of discharge to the culverted/watercourse located in Duke Street south of the site. If this is not feasible then UU will consider a connection to the 450mm combined sewer to the east of the site in Duke Street at a rate of up to 3l/s. Foul flow from this site will be allowed to drain into the public combined sewer system. UU's preferred point of discharge would be to the 225/300mm diameter public combined sewer within Queen Street at an unrestricted rate. UU state they have modelled flood risk within the vicinity of the development.

Table 3-1: Summary consultee information.

4 Sustainable Drainage Strategy

4.1 Introduction

The NPPF recognises that flood risk and other environmental damage can be managed by minimising changes in the volume and rate of surface run-off from development sites through the use of Sustainable Drainage Systems (SuDS), this being complementary to the control of development within the floodplain.

SuDS will not alleviate flooding in an area prone to flooding; however, properly designed SuDS have the potential to prevent the surface water runoff from new development worsening the flood risk. The effective disposal of surface water from development is a material planning consideration in determining proposals for the development and use of land.

The accepted principles are that surface water arising from a developed area should, as far as practicable, be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development, while reducing the flood risk to the site itself and elsewhere, taking climate change into account.

The Building Regulations Requirement H3⁷ stipulates that rainwater from roofs and paved areas is carried away from the surface to discharge to one of the following, listed in order of priority:

- an adequate soakaway or other adequate infiltration system,
- a watercourse or, where that is not practicable,
- a sewer.

The concept of a sustainable drainage system has been incorporated into the outline drainage strategy for the study area in order to comply with the Flood and Water Management Act 2010⁸.

Suitability of different SuDS will be governed by prevailing site conditions, such as the type and scale of development, topography, ground conditions (soil permeability, ground stability, depth to water table), local hydrogeology and risk of groundwater contamination (presence of sensitive aquifers and source protection zones) etc.

4.2 Sustainable Drainage Hierarchy

4.2.1 Infiltration

The Groundwater Source Protection Zone mapping from the EA website shows that the site is not within any identified protection zones.

A summary of the BGS superficial and bedrock aquifer descriptions and classifications supplemented by nearby ground investigation records is shown in Table 4-1 below:

⁷ Building Regulations part H3 2010: Approved Document, Drainage and Waste Disposal.

⁸ Flood and Water Management Act 2010: UK Government.

Classification	Description	Recorded Water Table Depth	Soakaway Potential
Glacial Till Deposits	Firm to stiff to hard Silty, sandy gravelly clay.	N/A	Poor
Milnrow Sandstone	Sandstone (BGS mapping). Mudstone present in boreholes in the vicinity of the site.	N/A	Poor

Table 4-1: Geological and Hydrogeological Setting.

Infiltration methods such as soakaways are unlikely to be feasible given the prevailing cohesive soils and the shallow mudstone bedrock and the constrained nature of the site.

4.2.2 Watercourses

There are no observable open watercourses within or near the boundary of the site. Currently surface water from the site runs overland to the south and into existing sewers.

4.2.3 Public Sewer

A 600mm diameter surface water sewer is indicated c. 35m southeast of the site. Access to the watercourse would cause significant disruption and would be across third party land.

4.2.4 Other Sewers

There is a private connection to the public sewer from the study land.

4.3 Surface Water Drainage Strategy Options Review

Following the assessment of the site settings and existing constraints to the development. The drainage options relating to the final discharge of surface water for this section of the site are listed in Table 4-2 in order of priority within the NPPF:

Option No:	Drainage Solution	Most feasible solution	Reasoning
1	Soakaway/Infiltration	N/A	Not likely to be feasible as the site is constrained by the proximity of the adjacent properties and roads. The impermeable ground conditions also make the use of infiltration unlikely.
2	Connection to Watercourse	N/A	Not feasible as there are no known watercourses within or adjacent to the site.
3a	Discharge into a surface water sewer	2	A connection into the 600mm diameter surface water sewer off Whitworth Road would be possible – subject to approval from LLFA and connection consent from UU. However this would require crossing of highways and third party land and cause disruption.
3b	Discharge into a combined sewer	1	A connection into the 450mm diameter combined sewer in Duke Street would be possible – subject to approval from LLFA and connection consent from UU.

Table 4-2: Drainage options.

4.4 Site Constraints and Opportunities

Whilst it is recognised that opportunities to utilise SuDS should be included within developments, the constraints posed by the development are also critical in assessing the options for disposal of surface water.

UU have indicated potential points of connection that have been discussed in Section 3, Table 3-1 of this report. A review of the drainage hierarchy has been undertaken and ruled out the opportunity for infiltration or discharge to surface watercourse. UU have identified a discharge rate of 3 l/s through a predevelopment enquiry. As part of this enquiry the constraints within the site and the development proposals were not set out to UU and these are discussed below.

The development proposal comprises the use of the existing mill building which will essentially be refurbished to form residential apartments.

Following a review of the site setting through site reconnaissance and a review of Streetview and aerial imagery, it is evident that the existing mill is drained via downspouts located on the northern, western and southern elevations of the mill, as shown on the plan included at Figure 3.

The mill building also forms the entire site boundary up to the pavement on the southern, eastern and northern boundaries of the site. A small area of approximately 250 m² is located at the western end of the mill building and is currently occupied by hardstanding utilised as car parking and will become an amenity space as part of the development.

The roof downspouts indicated on Figure 3 pass down the elevations of the building and directly into the pavement located around the perimeter of the building. The only exception to this is the downspout on the southern elevation, which according to Streetview imagery, only appeared between April 2017 and August 2024.

This suggests that historically the mill building has drained to the western and northern elevations only.

4.5 Proposed Drainage in the Context of the Development Proposals

The existing drainage and site setting have been reviewed in order to consider the constraints and opportunities for the site in terms of the drainage. As noted above, the proposed development is for residential apartments through the refurbishment and re-use of the existing mill building, and creation of a small amenity space.

At this stage it is considered that there is limited opportunity to alter the existing drainage arrangements for the site given the locations of the existing roof drainage downspouts on the building and the limited space to provide attenuation, given that this development is effectively re-using the existing building.

There may be opportunities within the development to include some SuDS features in the amenity space such as tree pits, garden planters or rain gardens to provide some element of betterment from this area of the site. There may also be some opportunity to provide a green or blue roof within the development, however, further review of the existing building and consideration to the structure will be required to further inform this position.

There may be an opportunity to include porous paving within the amenity space, however, this would only provide attenuation to the area which it drains directly, and based on the ground conditions, would need to be connected to the UU combined sewer.

Given the scale and nature of the development there are no opportunities to provide other SuDS features such as infiltration features based on the geology and SuDS features such as ponds, swales, rills etc based on the limited space within the development.

In addition, it is recognised that the existing downspout of the southern elevation of the building is not ideal given that flows would pass directly onto the pavement and subsequently the public highway. Further assessment will be required in order to consider the options for this downspout, however, given that flows from this would pass directly from it into the adjacent highway gulley, it would be beneficial from a health and safety perspective to regularise this with a connection either directly to the highway drain or the UU combined sewer within Queen Street, subject to agreement with the Highway Authority or United Utilities.

5 Foul Drainage

A predevelopment enquiry has been undertaken with United Utilities who have indicated that foul flow from this site will be allowed to drain into the public combined sewer system. UU's preferred point of discharge would be to the 225/300mm diameter public combined sewer within Queen Street at an unrestricted rate.

6 Conclusion

The site is currently a vacant former mill building and small external hardstanding area used as car parking. The development proposal is to redevelop and refurbish the existing mill building for use as residential apartments, with the external hardstanding area becoming amenity space.

A review of the site setting and existing constraints has identified that there are existing downspouts from the building that pass down the external relations and directly into the ground at the pavement (likely passing to the combined or highway network).

Based on a review the site constraints and consideration of the drainage hierarchy it is considered that there is limited opportunity to provide SuDS within the development to control the flows of surface water. Therefore, effectively the existing drainage would be retained, however, the downspout that passes directly onto the pavement would need to be connected to the UU combined sewer or the highway drain.

There may be opportunities within the development to include some SuDS features in the amenity space such as tree pits, garden planters or rain gardens to provide some element of betterment from this area of the site. There may also be some opportunity to provide a green or blue roof within the development, however, further review of the existing building and consideration to the structure will be required to further inform this position.

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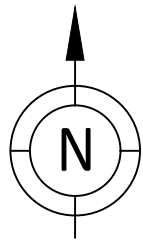
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All proposed outflow connections from the development should be agreed with the Lead Local Planning Authority and United Utilities.

Appendix A – Plans, Figures and Drawings



Client: Allied Property Group Ltd				Title: Site Location & Boundary Plan		LK CONSULT
Site: Duke Street Mill, Rochdale				Scale (see scale bar): 1:25,000 & 1:2,000 @ A4		
Job No.: LKC 24 1109	Drawn By: LGD	Checked By: CC	Drawn: Oct 2024	Figure: 1	Revision:	



KEY

 Site Boundary

accommodation schedule

28No studio

12No 1-bed

24No 2-bed

Total 64No units

Do not scale from this drawing and work from marked dimensions only.
All dimensions and features should be confirmed on site by the Contractor.
Where this drawing includes information provided to LK Consult Ltd by others,
LK Consult Ltd gives no warranty, representation or assurance as to the
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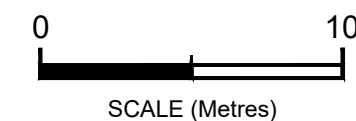


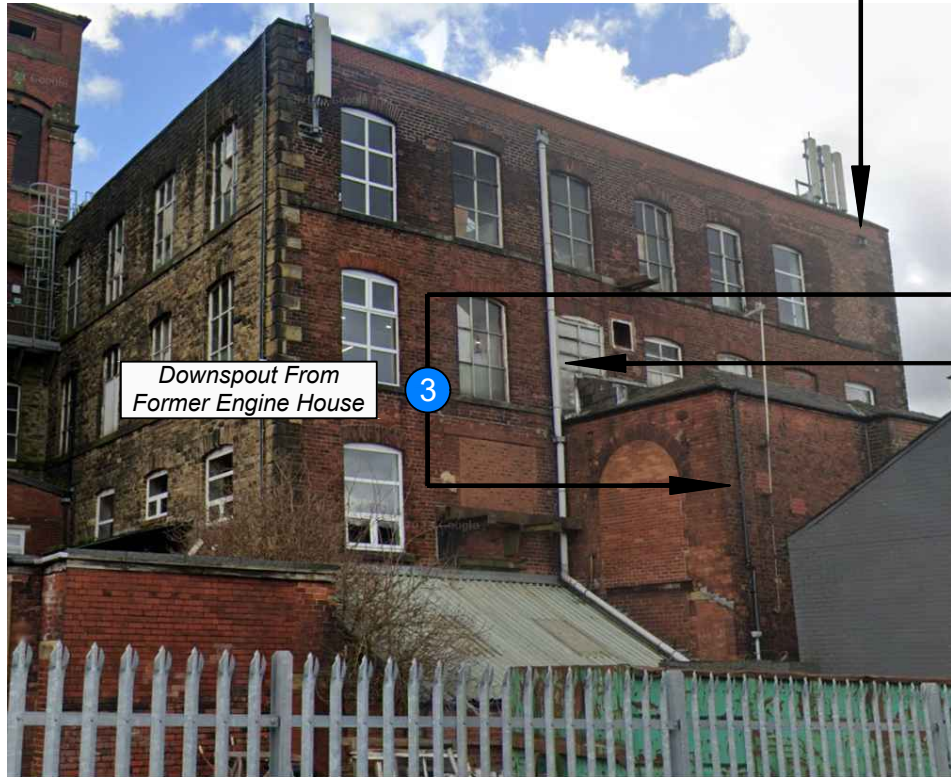
Client:
Allied Property Group Ltd

Site:
Duke Street Mill, Rochdale

Title:
Proposed Development Plan

Job No.: FRA241034	Scale (See Scale Bar): 1:250 @ A3	Figure: 2	Revision:
Drawn By: AC	Checked By: LD	Drawn: Oct 2024	





KEY

- Site Boundary
- Existing Roof Drainage Points

MAPPING:

Extract from: CJ Partnership
Drawing Ref: Proposed Ground Floor Plan, No.08 (February 2023)

PHOTOGRAPHIC IMAGES:

Extract from: © Google Streetview

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Client:
Allied Property Group Ltd

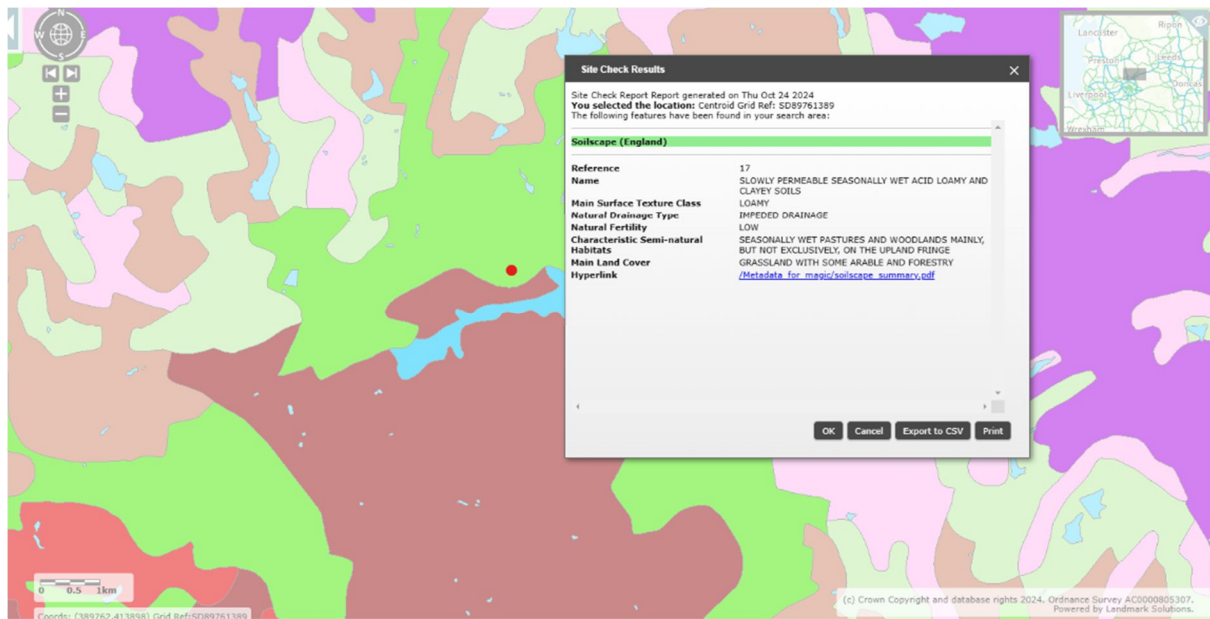
Site:
Duke Street Mill, Rochdale

Title:
Indicative Location of
Existing Roof Drainage Points

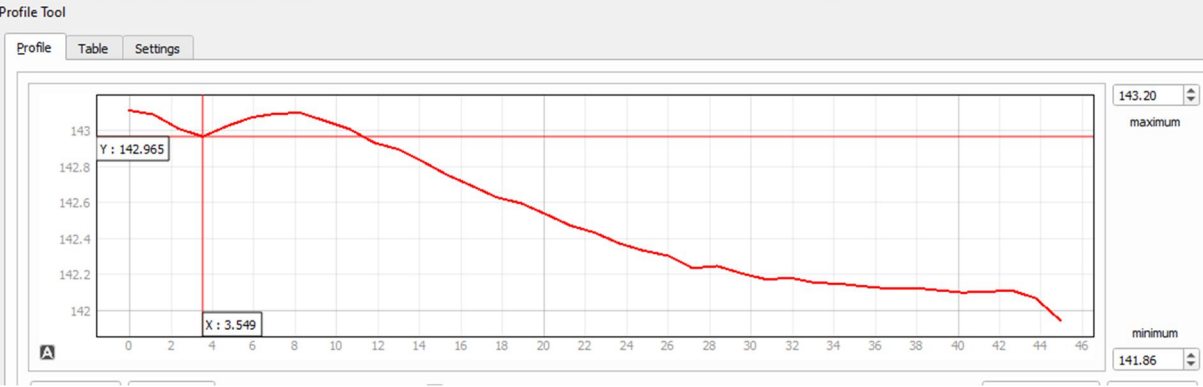
Job No.: FRA241034	Scale (See Scale Bar): See Scale Bar	Figure: 3	Revision:
Drawn By: AC	Checked By: CC	Drawn: Nov 2024	

Appendix B – Site Information

Extract from MAGIC Map Soilscape mapping

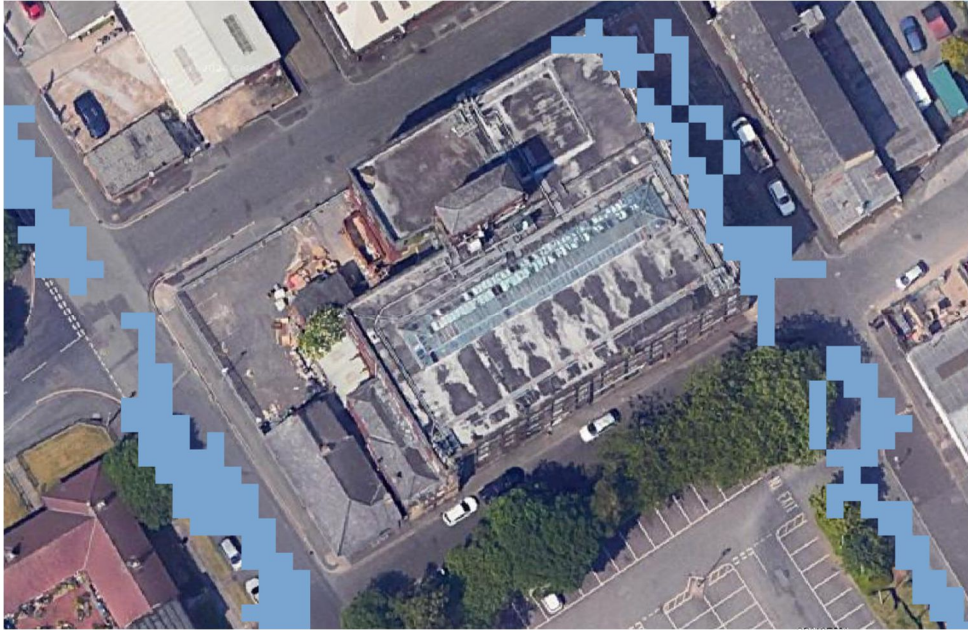


Extract from 2022 1m LiDAR DTM

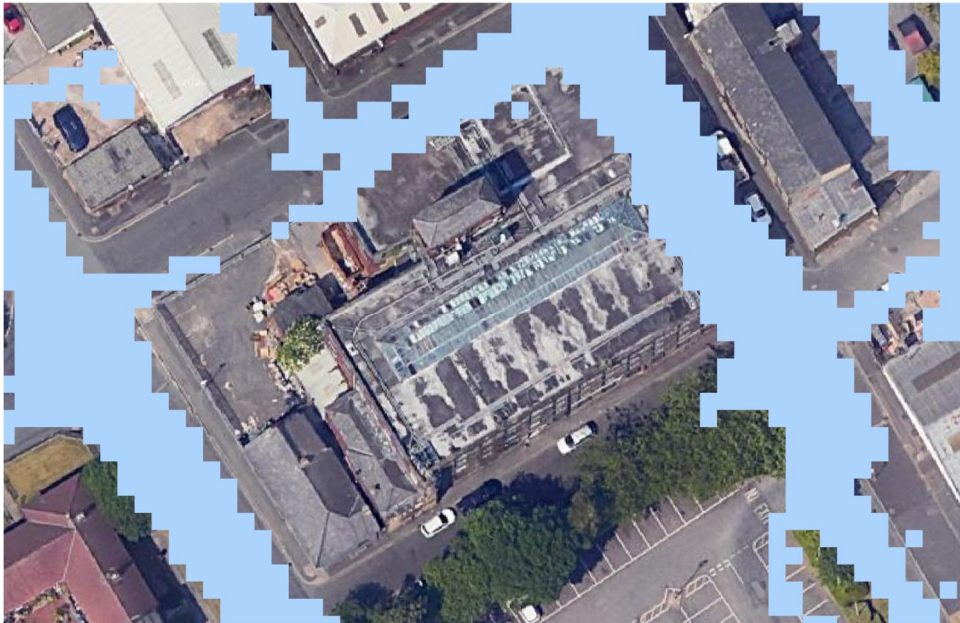


Risk of Flooding from Surface Water Mapping Extract

1% Annual Chance



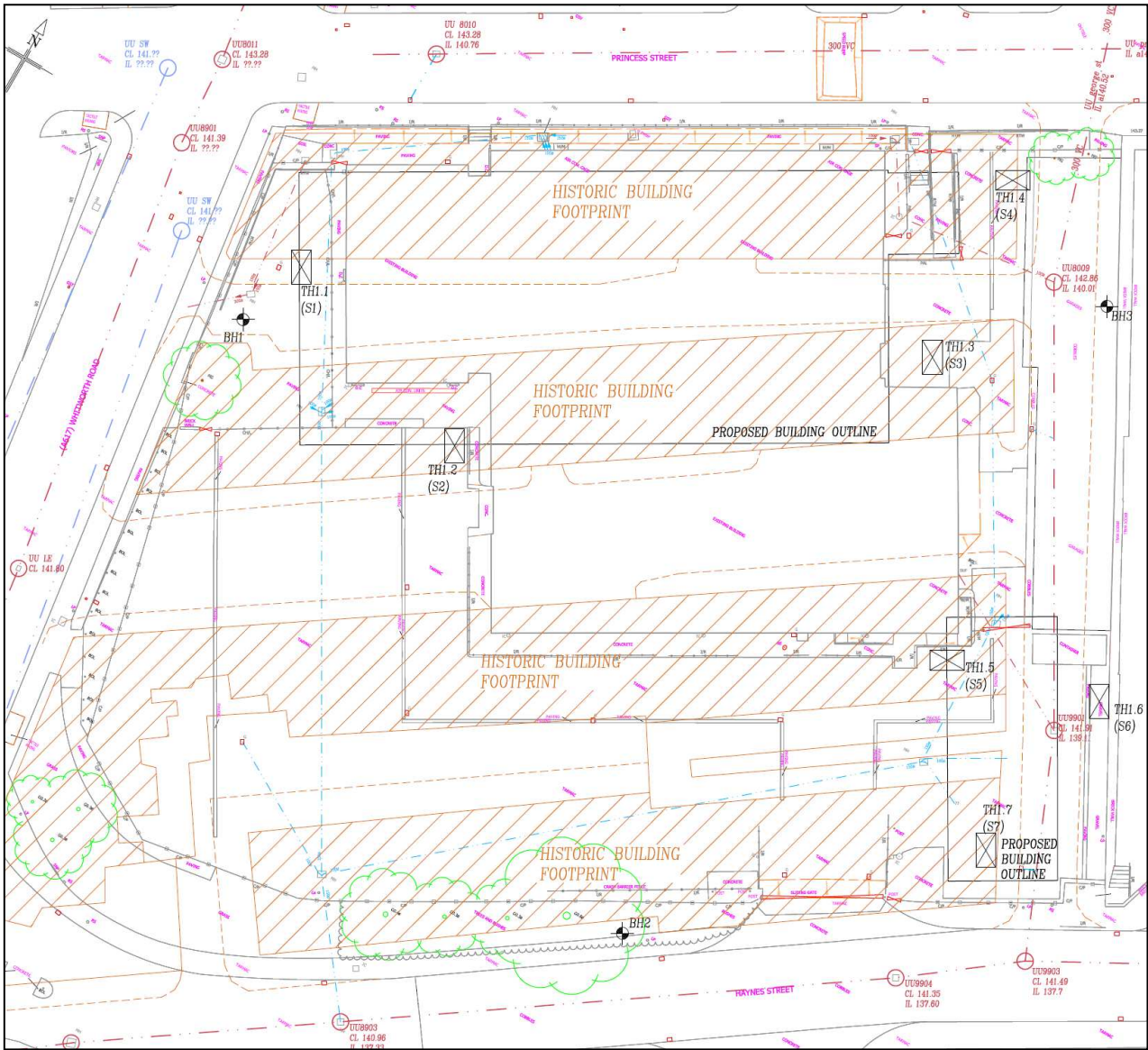
0.1% Annual Chance



 T J Booth Associates. Consulting Engineers 20A Eastgate St, Rochdale OL16 1DH	Project			Job Ref.	
	Pulse Partnership Ltd – Haynes St, Rochdale.			rep-tjba-PPL-haynes st, rochdale-SI report-021115.docx.	
	Section			Sheet no./rev.	
	SITE INVESTIGATION REPORT			5 / 0	
Calc. by	Date	Chk'd by	Date	App'd by	Date
DS	06/11/2015	TJB	06/11/20		

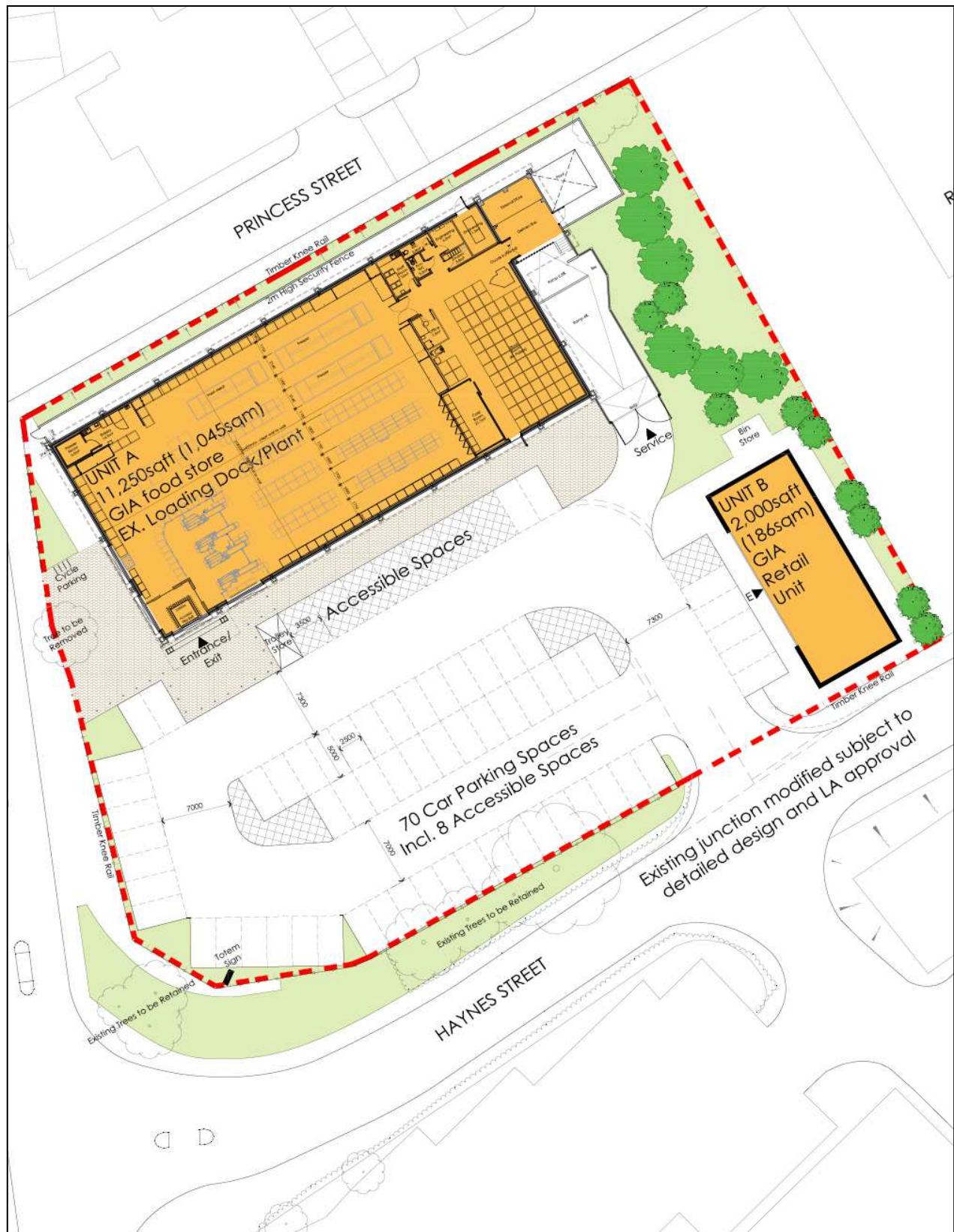
Appendix

SI Plan



T J Booth Associates. Consulting Engineers 20A Eastgate St, Rochdale OL16 1DH		Project Pulse Partnership Ltd – Haynes St, Rochdale.		Job Ref. rep-tjba-PPL-haynes st, rochdale-SI report-021115.docx.	
		Section SITE INVESTIGATION REPORT		Sheet no./rev. 6 / 0	
Calc. by DS	Date 06/11/2015	Chk'd by TJB	Date 06/11/20	App'd by	Date

Proposed Development Plan



 T J Booth Associates. Consulting Engineers 20A Eastgate St, Rochdale OL16 1DH	Project Pulse Partnership Ltd – Haynes St, Rochdale.				Job Ref. rep-tjba-PPL-haynes st, rochdale-SI report-021115.docx.	
	Section SITE INVESTIGATION REPORT				Sheet no./rev. 7 / 0	
	Calc. by DS	Date 06/11/2015	Chk'd by TJB	Date 06/11/20	App'd by	Date

SI Logs Boreholes – MSS, 06/10/15.

MINI • SOIL • SURVEYS MINI SOIL SURVEYS NORTHERN LTD. 12 Beech Walk Leigh Lancs. WN7 3LH Site:- HAYNES STREET ROCHDALE Job No. NTH 1612		 01942 269769 mssnorth@btinternet.com	
		Date:- 6/10/15	BH No.1
Description	Depth	Leg	Test/Depth Value
Paving flags over sand and angular sandstone gravel. FILL.			
Soft/firm dark grey very sandy organic clay with some mixed gravel, cinder and occasional brick fragments. MADE GROUND.	0.25		0.3 DS
Soft/firm light orange/brown very sandy CLAY with mixed gravel.	1.30		1.2 SPT N = 6
Medium dense becoming dense brown/grey medium SAND and mixed GRAVEL with some sandstone and shale fragments.	1.70		1.7 DS 1.8 SPT N = 29 2.4 SPT N = 34
Firm/stiff becoming very stiff brown/grey sandy laminated CLAY with some fine gravel and occasional sand bands/inclusions.	3.40		3.4 DS 3.6 SPT N = 13 4.8 SPT N = 24 6.0 SPT N = 31
Borehole converted to gas well.	7.00		
SPT @ 1.2m 2/1/2,1,2,1 @ 1.8m 3/6/6,7,8,8 @ 2.4m 13/10/8,8,9,10 @ 3.6m 3/2/3,4,3,3 @ 4.8m 7/6/6,6,6,6 @ 6.0m 6/7/7,8,8,8 Water encountered at 2.6m. Standing on completion at 2.5m.			
Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).			

 T J Booth Associates. Consulting Engineers 20A Eastgate St, Rochdale OL16 1DH	Project Pulse Partnership Ltd – Haynes St, Rochdale.				Job Ref. rep-tjba-PPL-haynes st, rochdale-SI report-021115.docx.	
	Section SITE INVESTIGATION REPORT				Sheet no./rev. 8 / 0	
	Calc. by DS	Date 06/11/2015	Chk'd by TJB	Date 06/11/20	App'd by	Date

MINI - SOIL - SURVEYS					
MINI SOIL SURVEYS NORTHERN LTD. 12 Beech Walk Leigh Lancs. WN7 3LH				01942 269769 mssnorth@btinternet.com	
Site:- HAYNES STREET ROCHDALE				BH No.2	
Job No. NTH 1612				Date:- 6/10/15	
Description	Depth	Leg	Test/ Depth	Value	
Vegetation over dark brown clayey topsoil with very stiff friable clay bands, mixed gravel, brick fragments and many large roots. MADE GROUND.			0.2 DS		
Compact becoming very compact red/brown sandy fragmented brick. (Fragmented by sampler) with ash, cinder and sandstone fragments. MADE GROUND.	0.70		1.2 SPT N = ***		
Refusal on sandstone obstruction. Borehole converted to shallow gas well as instructed.	1.35				
SPT @ 1.2m 5/6/19,29, * Refusal. Borehole dry. Two further boreholes were attempted. Both refused at similar depth in brick infill.					
Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).					

 T J Booth Associates. Consulting Engineers 20A Eastgate St, Rochdale OL16 1DH	Project				Job Ref.	
	Pulse Partnership Ltd – Haynes St, Rochdale.				rep-tjba-PPL-haynes st, rochdale-SI report-021115.docx.	
	Section				Sheet no./rev.	
SITE INVESTIGATION REPORT				9 / 0		
Calc. by	Date	Chk'd by	Date	App'd by	Date	
DS	06/11/2015	TJB	06/11/20			

	
MINI - SOIL - SURVEYS	
MINI SOIL SURVEYS NORTHERN LTD. 12 Beech Walk Leigh Lancs. WN7 3LH	
Site:- HAYNES STREET ROCHDALE	
Job No. NTH 1612	Date:- 6/10/15 BH No.3
Description	Depth Leg Test/Depth Value
Loose becoming very loose dark brown sandy ash with cinder, some clinker, fine brick fragments and occasional clay drain fragments. MADE GROUND.	
	0.3 DS
	1.0 DS
	1.2 SPT N = 2
	1.8 SPT N = 2
Soft dark brown/grey sandy clay with organic bands, some cinder and some mixed gravel. MADE GROUND.	2.10
	2.1 DS
	2.4 SPT N = 3
Firm/stiff becoming very stiff brown/grey sandy laminated CLAY with wet fine to medium sand bands and some fine gravel	3.10
	3.5 DS
	3.6 SPT N = 16
	4.8 SPT N = 22
	6.0 SPT N = 23
	7.2 SPT N = 31
Borehole converted to gas well.	7.60
SPT @ 1.2m 1/1/0,1,0,1 @ 1.8m 1/1/0,1,0,1 @ 2.4m 1/1/0,1,1,1 @ 3.6m 3/3/3,3,5,5 @ 4.8m 6/5/5,6,5,6 @ 6.0m 6/6/5,6,6,6 @ 7.2m 7/8/8,7,8,8 Water encountered at 3.0m. Standing on completion at 2.8m.	
Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).	

 T J Booth Associates. Consulting Engineers 20A Eastgate St, Rochdale OL16 1DH	Project Pulse Partnership Ltd – Haynes St, Rochdale.				Job Ref. rep-tjba-PPL-haynes st, rochdale-SI report-021115.docx.	
	Section SITE INVESTIGATION REPORT				Sheet no./rev. 10 / 0	
	Calc. by DS	Date 06/11/2015	Chk'd by TJB	Date 06/11/20	App'd by	Date

SI Logs Trial Holes – TJBA, 14/10/15.

TRIAL PIT AND BOREHOLE LOGGING (BS5930)

Trial pit reference TP1					Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description	
	142.47				
	140.97	X X X X X X X X X X X X X X	(1.50) 1.50	MADE GROUND. Pcc pavements to top. Infilled cellars (brick/demolition rubble), very coarse cobbly with much boulders. Remnants of sub walls, flag floor & drainage. Sandstone cellar flag slabs at 1500mm.	
	139.97	: o : o : o : o : o : o : o : o : o : o : o : o :	(1.00) 2.50	Loose to medium dense silty SAND AND GRAVEL with much cobbles & occasional boulders. Occasional sand lenses.	
				Trial pit ends	
Not shown to scale					
Additional notes:					

Trial pit reference TP2					Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description	
	142.43				
	142.36	X X	0.08	MADE GROUND (macadam)	
	141.43	X X X X X X X X X X	(0.93) 1.00	Very dense stoney clay MADE GROUND	
	140.13	X X X X X X X X X X X X X X	(1.30) 2.30	Loose brick, ash, occasional stone masonry MADE GROUND	
	139.73	: o : o : o : o : o	(0.40) 2.70	Medium dense orange/brown SAND AND GRAVEL coarse with occasional cobbles (damp, slight water ingress to BOH).	
				Trial pit ends	
Not shown to scale					
Additional notes:					

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	Section SITE INVESTIGATION REPORT				Sheet no./rev. 11 / 0	
	Calc. by DS	Date 06/11/2015	Chk'd by TJB	Date 06/11/20	App'd by	Date

Trial pit reference TP3					Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description	
	142.43				
	142.23	X X	0.20	MADE GROUND (concrete hardstanding)	
		X X X X X X X X	(1.20)	Loose black MADE GROUND ash fill becoming loose pale brown coarse sandyfill with occasional brick.	
	141.03	X X	1.40		
		: o : o	(2.10)	Soft dark brown wet gravelly clayey/silty SAND AND GRAVEL with very soft black silt brick fragments. Slight water ingress at 3500mm.	
<u>v</u>	138.93	: o : o :	3.50		
	138.73	- - -	3.70	Soft to firm pale brown organic CLAY	
				Trial pit ends	
Not shown to scale					
Additional notes:					

Trial pit reference TP4					Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description	
	143.00				
	142.95	X X	0.05	MADE GROUND (macadam)	
	142.75	X X	0.25	MADE GROUND (sandstone hardcore)	
		X X X X X X X X X X X X X X X X X X	(2.15)	Loose MADE GROUND (brick & ash/plaster fill), subwall oriented N-S	
	140.60	X X	2.40		
		- o - o - o - o - o - o - o -	(0.50) 2.90	Firm becoming stiff grey/brown mottled gravelly CLAY with occasional cobbles. (slightly organic black to upper).	
	140.10				
				Trial pit ends	
Not shown to scale					
Additional notes:					

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	Section SITE INVESTIGATION REPORT				Sheet no./rev. 12 / 0	
	Calc. by DS	Date 06/11/2015	Chk'd by TJB	Date 06/11/20	App'd by	Date

Trial pit reference TP5	Sheet 1 of 1
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Water	Reduced Level (m)	Legend	Depth (m)	Description
	142.30			
	142.23	X X	0.08	MADE GROUND (macadam)
	142.11	X X	0.20	MADE GROUND (sandstone hardcore)
		X X X X X X X X X X X X X X	(1.60)	MADE GROUND (loose brick & rubble fill, old walls & cellar flags)
	140.51	X X	1.80	
		X o X o o X o X X o X o o X o X X o X o o X o X X o X o o X o X	(1.50)	Very stiff black very gravelly CLAY MADE GROUND (wet) with occasional brick frags.
	139.01		3.30	
	138.81	- - -	3.50	Grey/green slightly organic CLAY
				Trial pit ends

Not shown to scale

Additional notes:

Trial pit reference TP6	Sheet 1 of 1
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Water	Reduced Level (m)	Legend	Depth (m)	Description
	142.00			
	141.90	X X	0.10	Black organic topsoil MADE GROUND
		X X X X X X	(0.80)	Slightly organic ash fill, MADE GROUND
	141.10	X X	0.90	
		- - -	(0.30)	Stiff orange/brown mottled very sandy (occasionally gravelly) CLAY
	140.80	- - -	1.20	
				Trial pit ends

Not shown to scale

Additional notes:

 T J Booth Associates. Consulting Engineers 20A Eastgate St, Rochdale OL16 1DH	Project Pulse Partnership Ltd – Haynes St, Rochdale.				Job Ref. rep-tjba-PPL-haynes st, rochdale-SI report-021115.docx.	
	Section SITE INVESTIGATION REPORT				Sheet no./rev. 13 / 0	
	Calc. by DS	Date 06/11/2015	Chk'd by TJB	Date 06/11/20	App'd by	Date

Trial pit reference TP7					Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description	
	141.60				
	141.55	X X	0.05	MADE GROUND (macadam)	
	141.45	X X	0.15	MADE GROUND (hardcore)	
		X X X X X X X X X X X X X X	(1.75)	Firm stoney CLAY MADE GROUND (brick wall oriented N-S on E side to 1300mm)	
	139.70	X X	1.90		
	139.20	- o - o - o - o - o - o - o -	(0.50) 2.40	Stiff pale brown gravelly CLAY (occasional slightly organic lenses).	
				Trial pit ends	
Not shown to scale					
Additional notes:					

Soil Chemical Test Analysis (Sulphates) - 14/10/15.

Client / Site		Hallmark - Former RMBC Depot, Haynes Street, Rochdale						
Sampling Date		14th Oct 2015						
Comparison of Contamination Test Results with Thresholds (mg/kg)								
Contaminant		No	Max	Mean	t 95	COMMERCIAL/INDUSTRIAL		
							Pass/Fail	Comment
INORGANIC	Cyanide (Total)	6	1	1	1	2.5	PASS	
	Sulphate (Total) as SO4	6	1.3	0.475	1.18	0.24	FAIL	average DS2
	(Water Soluble) SO4	6	200	70	192.5	500	PASS	DS1
	Sulphide	6	10	10	10	250	PASS	
	pH	6	9.2	8.383	9.15	5 to 9	FAIL	sl alkaline
	Sulphur (Elemental)	6	500	500	500	100	comment	below LOD

GAC = LQM residential plant uptake & commercial 2009, BRE = Building Research Establishment, S = typ SNIFFER values, SOM = soil organic material, IC-ICRCL 87(withdrawn), LOD = limit of detection

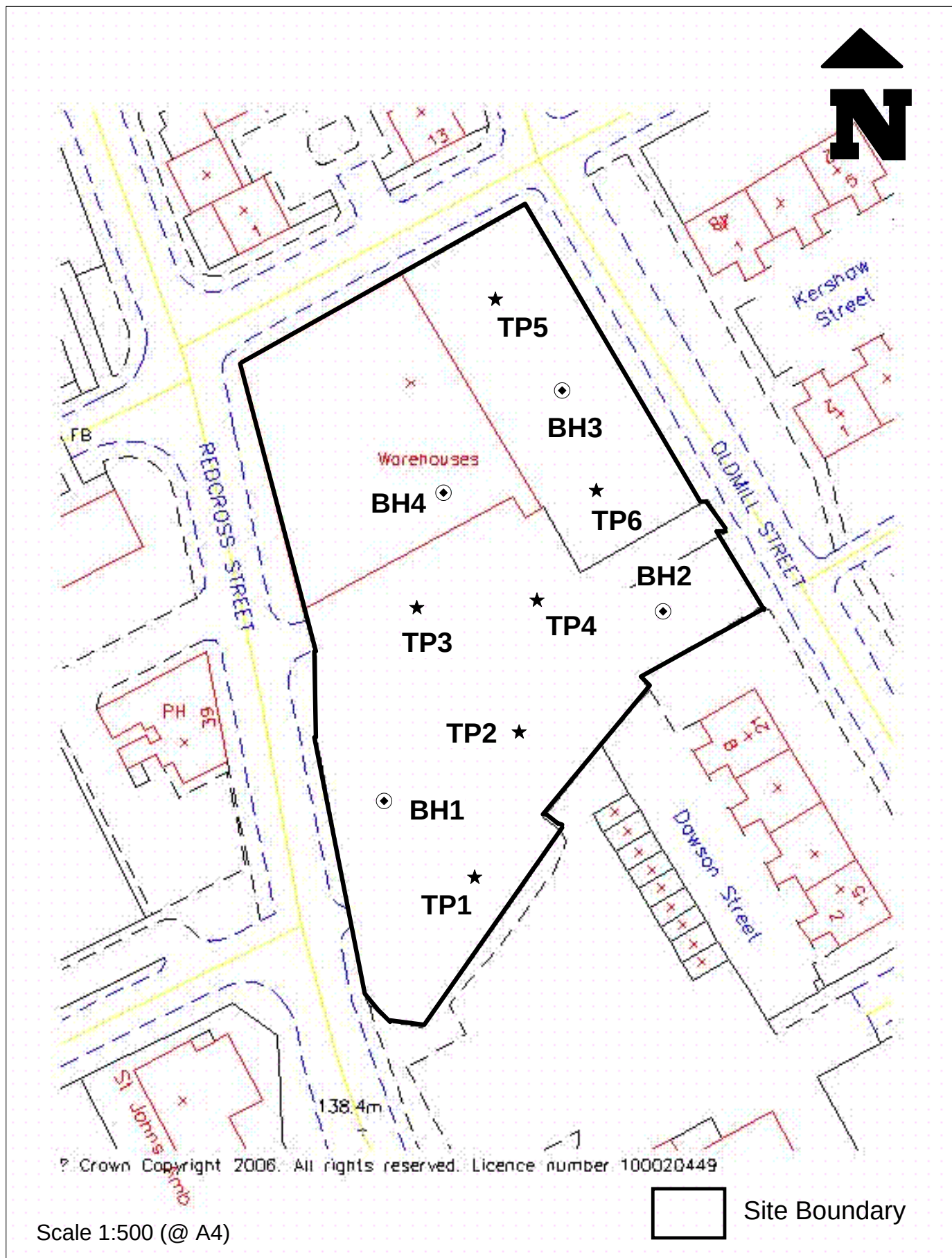
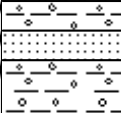
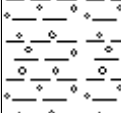
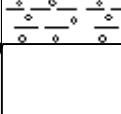


Figure 2: Sampling Location Plan, Redcross Mill, Rochdale

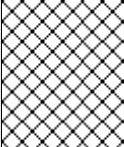
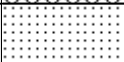
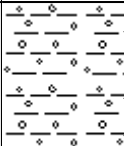
Date: 24th October 2006

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB1000 Site Name Redcross Mill	Equipment Auto Trip Drop Hammer Methods Window Sampling Contractor Mini Bore		
Borehole No BH1		Client Mr Rasul	Date 19.10.06		

Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
0.00 - 0.50	MADE GROUND Coarse angular gravel with black coarse sandy ash. Occasional coarse crushed tarmac fragments.						
0.50 - 1.00	MADE GROUND Light brown sandy coarse sub-rounded to angular gravel of sandstone and brick						
1.00 - 2.00	MADE GROUND Reworked dark brown dark grey sandy clay. Occasional fine to coarse gravel of sandstone and brick. Becoming wet @ 1.0m						
2.00 - 2.50	Very stiff grey slightly gravelly CLAY . Gravel is medium to coarse sandstone.		2.0m	SPT		7/5-6,11,14,18 N=49	
2.50 - 3.00	Light brown cobbles sized SANDSTONE fragment.						
3.00 - 3.50	Very stiff grey slightly gravelly CLAY . Gravel is medium to coarse sandstone. Becoming grey orange from 2.5m. Becoming hard from 2.0m. Possibly weathered MUDSTONE .						
3.50 - 8.00	End of Borehole					Monitoring well installed	
4.00							
5.00							
6.00							
7.00							
8.00							

Remarks	Logged by M.Waddicor
	Scale NTS
	Sample taken at depth 0.5-0.7m

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB1000 Site Name Redcross Mill		Equipment Auto Trip Drop Hammer Methods Window Sampling Contractor Mini Bore		
Borehole No BH2		Client Mr Rasul		Date 19.10.06		

Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
0.00 - 0.30	MADE GROUND Concrete.						
0.30 - 1.50	MADE GROUND Fine to coarse gravel of crushed brick. Many cobble sized brick fragments. Some medium to coarse orange sand.						
1.50 - 2.00	Light brown cobbles sized SANDSTONE fragment.						
2.00 - 2.70	Very stiff grey slightly gravelly CLAY . Gravel is medium to coarse sandstone and coal. Becoming hard from 2.7m. Possibly weathered MUDSTONE .		2.0m	SPT		4/3-5,5,5,7 N=22	
2.70 - 3.00			2.7m	SPT		15,18,20,24 N=77	
3.00 - 8.00	End of Borehole					Monitoring well installed	

Remarks	Logged by M.Waddicor
	Scale NTS
	Sample taken at depth 0.3-0.5m

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB1000 Site Name Redcross Mill	Equipment Auto Trip Drop Hammer Methods Window Sampling Contractor Mini Bore		
Borehole No BH3		Client Mr Rasul	Date 19.10.06		

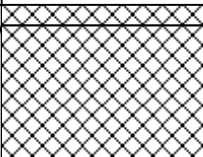
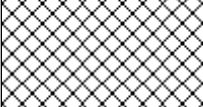
Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
0.00 - 0.50	MADE GROUND Grass underlain by black coarse sandy ash with many fine rootlets. Occasional lenses of light brown sand. (TOPSOIL).						
0.50 - 1.00	MADE GROUND Mid brown medium sand. Becoming medium to coarse and orange from 0.5m						
1.00 - 2.00	MADE GROUND Reworked dark grey very sandy gravelly clay. Gravel is medium to coarse sandstone, coal and brick.						
2.00 - 2.80	Very stiff grey slightly gravelly CLAY . Gravel is medium to coarse sandstone and coal. Rare cobble sized sandstone fragment. Becoming hard from 2.8m. Possibly weathered MUDSTONE .		1.9m	SPT		2/4-4,6,6,8 N=25	
2.80 - 3.00			2.8m	SPT		3/4-5,7,10,12 N=34	
3.00	End of Borehole					Monitoring well installed	
4.00							
5.00							
6.00							
7.00							
8.00							

Remarks	Logged by M.Waddicor
	Scale NTS
	Sample taken at depth 0.1-0.3m

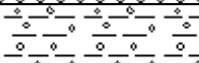
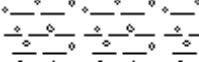
Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB1000 Site Name Redcross Mill	Equipment Auto Trip Drop Hammer Methods Window Sampling Contractor Mini Bore				
Borehole No BH4		Client Mr Rasul	Date 19.10.06				
Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
	MADE GROUND Concrete.						
	MADE GROUND Stone cobbles.						
1.00	MADE GROUND Black coarse ash with occasional coarse sub- rounded to angular gravel of brick, sandstone and slate.						
2.00	Very stiff grey slightly gravelly CLAY . Gravel is medium to coarse sandstone and coal. Becoming hard from 2.2m. Possibly weathered MUDSTONE.		2.2	SPT	19,23,25-REF N=85+	Borehole terminated due to refusal on possibly weathered mudstone.	
	End of Borehole						
3.00							
4.00							
5.00							
6.00							
7.00							
8.00							
Remarks					Logged by M.Waddicor		
					Scale NTS		
					Sample taken at depth 0.8-0.9m		

Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB1000 Site Name Redcross Mill	Equipment JCB 3CX Methods Mechanical Excavation Contractor H & C Plant Hire	
TRIAL PIT No. TP01		Client Mr Rasul	Date 25.10.06	
Depth (m)	B	Legend	Groundwater	Field Records
0.00	Ground Surface			
	MADE GROUND Dark grey coarse angular gravel			
	MADE GROUND Light brown sandy coarse sub-rounded to angular gravel. Rare cobbles sized concrete and brick fragments. Occasional timber fragments.			
1.00	MADE GROUND Reworked dark brown dark grey sandy clay with occasional coarse gravel of brick, sandstone and concrete. Rare cobble sized sandstone fragment. Occasional cobble sized reinforced concrete fragment. Some pockets of coarse black ash.			
	Very stiff grey slightly gravelly CLAY. Gravel is medium to coarse of sandstone and coal. Possibly weathered MUDSTONE		Water ingress from 1.6m	
2.00	End of Trial Pit			
3.00				
4.00				
5.00				

Remarks	Dimensions	
Stability Stable	A = 0.8m  D = B = 3.2m C =	Logged by M.Waddicor
		Scale NTS
		Sample taken at depth 0.4-0.6m

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB1000 Site Name Redcross Mill	Equipment JCB 3CX Methods Mechanical Excavation Contractor H & C Plant Hire	
TRIAL PIT No. TP02		Client Mr Rasul	Date 25.10.06	
Depth (m)	B	Legend	Groundwater	Field Records
0.00	Ground Surface		DRY	
	MADE GROUND Black coarse angular gravel and much burnt wood and metal springs, staples and shavings.			
1.00	MADE GROUND Light brown sandy coarse sub-rounded to angular gravel. Rare cobbles sized concrete and brick fragments. Many timber fragments. Occasional coarse angular sandstone gravel			
	MADE GROUND Coarse orange black sandy ash gravel with much crushed brick.			
2.00	MADE GROUND Reworked dark brown dark grey sandy clay with occasional coarse gravel of brick, sandstone, concrete and timber.			
	Very stiff grey slightly gravelly CLAY. Gravel is medium to coarse of sandstone and coal. Possibly weathered MUDSTONE End of Trial Pit			
3.00				
4.00				
5.00				

Remarks	Dimensions	
Stability Unstable	A = 0.8m	
	D = B = 3.6m C =	Logged by M.Waddicor
		Scale NTS
		Sample taken at depth 0.75-0.9m

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB1000 Site Name Redcross Mill	Equipment JCB 3CX Methods Mechanical Excavation Contractor H & C Plant Hire	
TRIAL PIT No. TP03		Client Mr Rasul	Date 25.10.06	
Depth (m)	B	Legend	Groundwater	Field Records
0.00	Ground Surface		DRY	
	MADE GROUND Tarmaac underlain by a light brown gravelly coarse sand. Gravel is coarse sub-rounded to angular.			
	MADE GROUND Orange brown gravelly coarse sand. gravel is fine to coarse of brick. Ocasional cobble sized brick and concrete.			
1.00	MADE GROUND Reworked grey sandy clay with occasional coarse gravel of brick, sandstone and concrete.			
	Very stiff grey slightly gravelly CLAY. Gravel is medium to coarse of sandstone and coal. Possibly weathered MUDSTONE			
2.00	End of Trial Pit			
3.00				
4.00				
5.00				

Remarks	Dimensions	
Stability Stable	A = 0.8m	
		Logged by M.Waddicor
	D =	Scale NTS
	B = 3.2m	Sample taken at depth 0-0.1m
	C =	



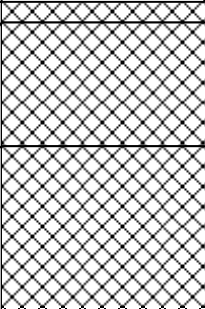
Equipment JCB 3CX

Methods Mechanical Excavation

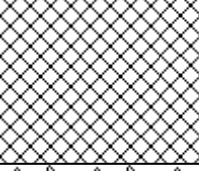
Contractor H & C Plant Hire

Client Mr Rasul

Date 25.10.06

Depth (m)	B	Legend	Groundwater	Field Records
0.00	Ground Surface			
	MADE GROUND Concrete		DRY	
	MADE GROUND Dark brown sandy coarse ash with much coarse sub-rounded to angular gravel of brick, concrete and timber.			
1.00	MADE GROUND Reworked dark grey sandy clay with occasional coarse gravel of brick, sandstone and concrete.			
	Very stiff grey slightly gravelly CLAY . Gravel is medium to coarse of sandstone and coal. Possibly weathered MUDSTONE			
2.00	End of Trial Pit			
3.00				
4.00				
5.00				

Remarks	Dimensions	
	A = 0.8m 	Logged by M.Waddicor
	B = 3.8m C =	Scale NTS
Stability Stable		Sample taken at depth 0.2-0.4m

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB1000 Site Name Redcross Mill	Equipment JCB 3CX Methods Mechanical Excavation Contractor H & C Plant Hire	
TRIAL PIT No. TP05		Client Mr Rasul	Date 25.10.06	
Depth (m)	B	Legend	Groundwater	Field Records
0.00	Ground Surface		DRY	
	MADE GROUND Grass underlain by black ashy sand with many fine rootlets (TOPSOIL)			
	MADE GROUND Mid brown medium sand.			
1.00	MADE GROUND Reworked briwn gravelly sandy clay. Gravel is coarse sub-angular to angular of brick and sandstone. Occasional cobbles. Occasional medium coal fragments.			
2.00	Very stiff grey slightly gravelly CLAY. Gravel is medium to coarse of sandstone and coal. Possibly weathered MUDSTONE End of Trial Pit			
3.00				
4.00				
5.00				

Remarks	Dimensions	
Stability Stable	A = 0.8m	
		Logged by M.Waddicor
		Scale NTS
		Sample taken at depth 0.5-0.6m



Remarks	Dimensions A = 0.8m D = B = 4.1m C =	Logged by M.Waddicor Scale NTS Sample taken at depth 0.8-1.0m
Stability Unstable		



CENTRAL WATER PLANNING UNIT WELL RECORD		M.F.S. REF. NO. SD 81/101	
1. WELL IDENTITY		N.A. LICENCE NO. 23/68/2/173	
Well at Holcroft Casing & Forging Ltd		I.G.S. REF. NO. 898 139	
Town.....		RIVER AUTHORITY.....	
County.....		HYDROMETRIC AREA.....	
Owner of well.....		SUB-CATCHMENT.....	
Well made by.....		Date of sinking.....	
Information from UWA		Date received 4.1.1980	
ADDITIONAL NOTES: App. No. 559A. 2 wells + borehole			

Appendix C – Consultee Correspondence

LKGroup**Unit 29
Eton Hill Road,
Radcliffe,
m26 2zs****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: FRA 24 1034
Our Ref: UUPS-ORD-607853
Date: 23/10/2024****Dear Sirs****Location: Duke Street Rochdale**

I acknowledge with thanks your request dated 18/10/2024 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)".

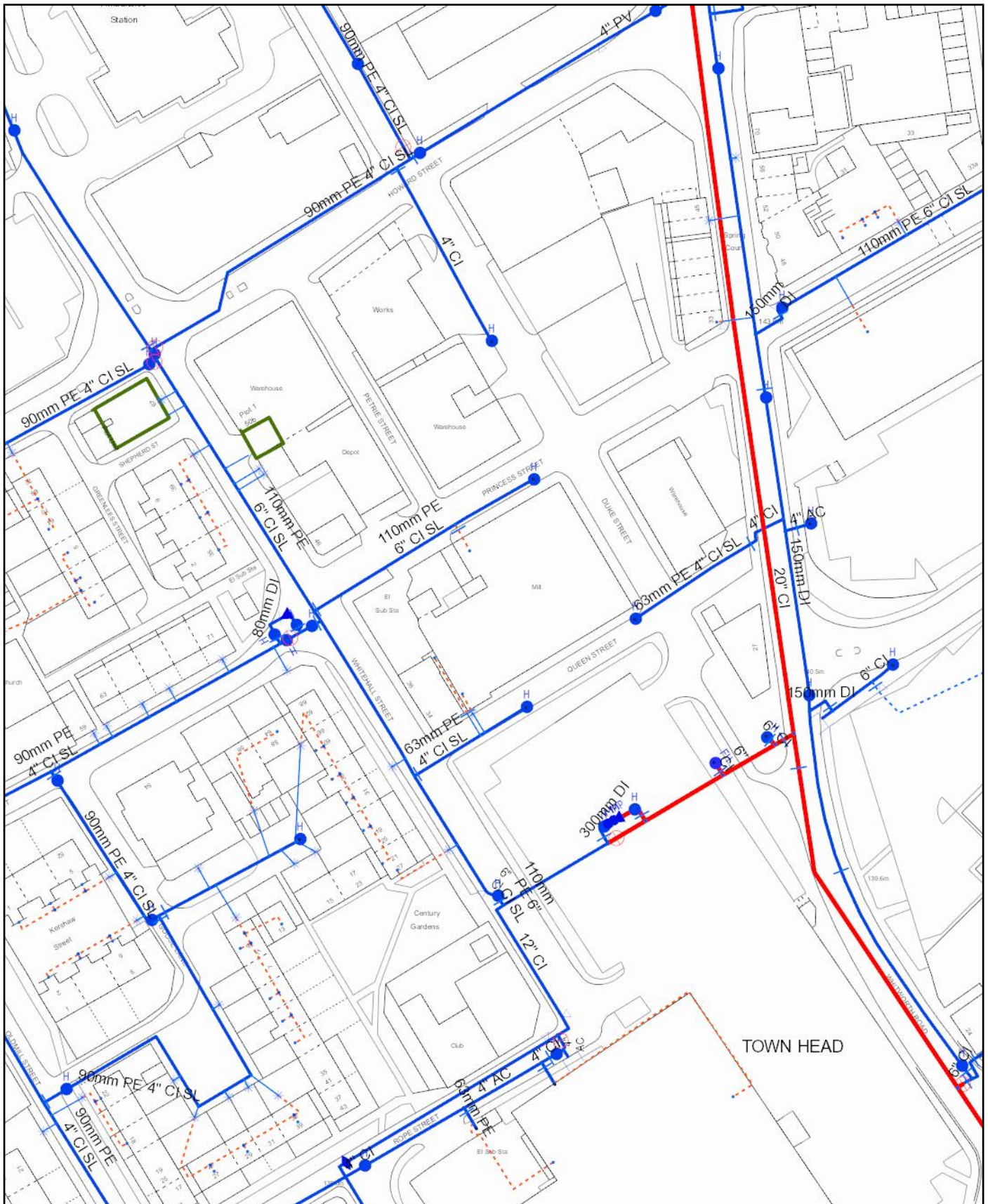
TERMS AND CONDITIONS:

- 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.

Clean Water Symbolology

Proposed	Abandoned	Live	
			Distribution Main
			Trunk Main
			Comms Pipe
			Private Pipe
			Concessionary Service
			Raw Water
			LDTM Raw Water
			LDTM Treated Water
			Air Valve
			AC Valve, open
			AC Valve, closed
			CC Valve, open
			CC Valve, closed
			Non Return Valve
			Pressure Management Valve
			OMS Valve
			Stop Tap
			Flow Meter
			Domestic Meter
			Commercial Meter
			Pump
			Hydrant
			Fire Hydrant
			Anode
			Chlorination Point
			De-chlorination Point
			Strainer Point
			Access Point
			Hatch Box
			IP Point
			Sampling Station
			Logger Box
			Bore Hole
			Inlet Point
			Bulk Supply Point
			End Cap
			Site Termination
			Change of Characteristic
			Condition Report
			<u>Property Types</u>
			Water Tower
			Valve House
			Booster Pumping Station
			Intake Pumping Station
			Water Treatment Works
			Supply Reservoir
			Service Reservoir
			Impounding Reservoir
			Pipe Bridge

Symbology for proposed assets is the same as above, but shown in **green**
 Symbology for abandoned assets is the same as above, but shown in **black**



Scale: 1:1250
Date: 23/10/2024

WATER MAINS RECORDS



Water for the North West

Address or Site Reference: Duke Street Rochdale
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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Colin Crompton

From: seweradoptions@uuplc.co.uk
Sent: 28 October 2024 16:30
To: Colin Crompton
Subject: RE: REF - Pre development - 06469833 - Duke St Mill, Rochdale

Good Afternoon Colin,

Please see my response below regarding surface water going to the combined sewer.

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 combined sewer within Duke Street located East 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 3 l/s.

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.

Regards,

 Water for the North West	James Darlington Developer Engineer Developer Services & Metering T: 01925 429095 M: 07917096253 unitedutilities.com
---	--

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

From: seweradoptions@uuplc.co.uk [seweradoptions@uuplc.co.uk]
Sent: 28/10/2024 14:25
To: c.crompton@thelkgroup.com
Subject: RE: REF - Pre development - 06469833 - Duke St Mill, Rochdale

Good Afternoon

Your enquiry has been logged and sent to our engineer James Darlington and their contact number is 01925 429095. Our service Level agreement is to respond to you within 10 working days.

Many thanks



Colleen Scott
Customer Advisor Advanced
Developer Services & Metering
Customer Services
Tel: 0345 026 8989
unitedutilities.com

If you have received a great service today why not tell us?

Visit: [unitedutilities.com/wow](https://www.unitedutilities.com/wow)

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

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

From: Colin Crompton [c.crompton@thelkgroup.com]

Sent: 24/10/2024 20:58

To: seweradoptions@uuplc.co.uk

Subject: RE: REF - Pre development - 06469833 - Duke St Mill, Rochdale

Hi James

Thank you for your email below to my colleague Sam. We are currently working up an outline drainage strategy for this development to try and get a solution in principle.

I note the recommendation to consider and engage with LLFA/EA and third party land owners to look at a connection to the watercourse to the south of the site in Duke Street if infiltration is impractical.

From ground investigations we have carried out shallow firm to stiff clay is present in the area so it is likely that infiltration is not going to be possible – similarly there is a basement to the building which may also support this statement. This will be justified in our report.

It may be impractical to reach this watercourse given the existing building and infrastructure and the significant civil works required. This is before we have even considered third party land ownership and consent.

Given the site is existing and fully hardstood, the proposal is for internal refurbishment. There are no plans for demolition or construction of new buildings and there are combined sewers to all sides of the site. Realistically an attenuated discharge with the existing layout is likely all that is possible. To this end I note the consultation response does not even mention priority no. 4 on the SuDS hierarchy. Generally UU would provide a “last resort” discharge rate to combined sewer. Please could you provide this, if indeed options 1 to 3 are shown to be unachievable? On the basis that the development will probably require some restriction / attenuation to discharge surface water to combined sewer then this would be an improvement on the current situation.

I hope this ok

Regards

Colin



Colin Crompton
Director
07970 190 265 | 0161 763 7200
Manchester | London | Swindon | Liverpool | Glasgow
www.thelkgroup.com

I N C R E A S I N G L A N D V A L U E



Introducing our new Swindon Office

39 Bowman House Business Centre, Bowman Court, Whitehill Lane, Royal Wootton Bassett,
Swindon, SN4 7DB

t: 01793 987 390, e: info@thelkgroup.com

Disclaimer Information [Here](#)

From: seweradoptions@uuplc.co.uk <seweradoptions@uuplc.co.uk>
Sent: 16 October 2024 13:22
To: Sam Shaw <s.shaw@thelkgroup.com>
Subject: RE: REF - Pre development - 06469833 - Duke St Mill, Rochdale

Good afternoon Sam,

Pre Development Enquiry for: Duke Street, Rochdale, OL12 0LW UU Reference Number : 06469833

For future reference we now have a new wastewater pre-development enquiry form designed to be easier and more user friendly which is available on our website via the following link:
<https://www.unitedutilities.com/builders-developers/larger-developments/pre-development/wastewater-pre-dev/>

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 225/300mm diameter public combined sewer within Queen Street located to the East 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.

Waterbody

If an evidence based assessment has been carried out and confirms that infiltration is not feasible, we recommend that you contact the Lead Local Flood Authority and/or Environment Agency to discuss a point of discharge to the culverted/watercourse located in Duke street south of the proposed site.

We would encourage you to identify and engage with any third party landowner and riparian owner to agree access and discharge rights to the water body if this is not in your ownership.

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.

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

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.

I can confirm that we have modelled flood risk within the vicinity of the proposed development.

Please note that United Utilities Water Limited (Uuw) can only record and check flooding events which are reported to us and we have to comply with our Regulators instructions on the qualification of flooding events.

Our response does not include:

- 1. any sewer flooding events caused by blockages or collapses which are the result of third party actions, natural events or other actions over which Uuw has no control and not a facet of sewer capacity; or*

- 1. any historical sewer flooding events that have been resolved as a result of investment in our infrastructure.*

As with all development sites, we recommend you liaise with our water and wastewater engineers by contacting our Developer Services team so the details of your development proposal can be considered further. Details can be found at the following link.

<https://www.unitedutilities.com/services/builders-developers/>

Should you require any further information please do not hesitate to contact me.

Many thanks and kind regards,



James Darlington
Developer Engineer
Developer Services & Metering
T: 01925 33253
M: 07917096253
[unitedutilities.com](https://www.unitedutilities.com)

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

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

Sent: 14/10/2024 13:16

To: s.shaw@thelkgroup.com

Subject: REF - Pre development - 06469833 - Duke St Mill, Rochdale

Good Afternoon

PRE DEVELOPMENT APPLICATION AT: Duke St Mill, Rochdale – UU Ref 06469833

Please accept this email as receipt of your application received on 8 October 2024 for the above development. This has now been logged on our system and the job reference is 06469833 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 James Darlington for technical assessment. You will receive their response within 8 working days.

Kind regards



Jayne Guest
Customer Advisor Advanced
Developer Services & Metering
Customer Services
T: 0345 026 8989 option 4
unitedutilities.com

If you feel you have received a good service from myself, please can you take two minutes to fill in the survey below. This will be much appreciated



Visit: <https://unitedutilities.thewowawards.co.uk/nominate>

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

From: Sam Shaw [s.shaw@thelkgroup.com]

Sent: 08/10/2024 14:22

To: wastewaterdeveloperservices@uuplc.co.uk

Subject: Request for Information - Duke Street Mill, Wardleworth, Rochdale, Greater Manchester, OL12 0LW

To whom it may concern,

LK Consult Ltd. has been commissioned to undertake a Sustainable Drainage Systems (SuDS) Strategy, for a site located at Duke Street Mill, Wardleworth, Rochdale, Greater Manchester, OL12 0LW, centered at approximate National Grid Reference 389760, 413 943.

The area of interest appears to be within Flood Zone 1.

The site location and Wastewater Pre-Development Enquiry form are attached to this email.

To complete the SuDS Strategy, we would be grateful if you could supply us with the following, if available, for the vicinity of the site:

1. Records of any historic flood events and potential sources of flooding from foul and surface water sewers on site and in the area.
2. Any restrictions to discharge into the sewers

If you have any queries, please do not hesitate to get in touch.

We are, of course, happy to pay your reasonable charge for this service. Please let me know by return what information is available, what the charge will be, and we will pay the relevant fees by debit card as soon as possible.

Any advice or recommendations you may have regarding the potential discharges from the development of this site would also be appreciated.

We will be in contact with all other relevant authorities to get a more complete understanding of the issues in the area.

Regards

Sam Shaw

Based across the UK with
offices in Manchester,
London, Liverpool and Glasgow.

Manchester (Head Office)

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Eton Business Park
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M26 2ZS

t: 0161 763 7200
e: info@thelkgroup.com

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KT13 0TT

t: 01932 871872
e: info@thelkgroup.com

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e : info@thelkgroup.com



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