

**Plot H4, Indurent
Heywood Distribution Park,
OL10 2TR**

Flood Risk Assessment & Drainage Strategy

for



Ref: 30042-BGL-XX-XX-RP-D-00001

Version 3
29th July 2024

DOCUMENT CONTROL SHEET

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Project: Indurent Heywood Distribution Park, Heywood

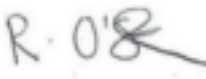
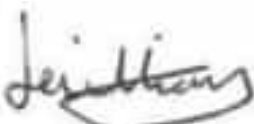
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1	14.06.2024	Preliminary Issue
2	01.07.2024	Amended to suit Planning Prospects comments
3	29.07.2024	Amended to suit Planning Prospects comments

Burrows Graham Limited has prepared this report in accordance with the instructions of the above-named Client for their sole and specific use. Any third parties who may use the information contained herein do so at their own risk.

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1.0 – EXECUTIVE SUMMARY

This Flood Risk Assessment and Drainage Strategy has been developed in due cognisance of all relevant available policy information.

It relates to Plot H4 of Heywood Distribution Park in Heywood, Rochdale. It has been prepared in support of an outline planning application for the development of the land within Use Classes E(g)(iii) (industrial processes), B2 (general industrial), B8 (storage and distribution), and removal of existing structures, hard standing, and associated works. All matters reserved for subsequent approval.

The United Utilities Public Sewer Records, which have been included in Appendix C of this report, show there to be no public sewers within the site.

Reference should be made to the following JPG reports.

- Geoenvironmental Desk Study Report 5986-JPG-XX-XX-RP-G-060-S2-P03 dated January 2022
- Geoenvironmental Ground Investigation 5986-JPG-XX-XX-RP-G-0605-S2-P03 dated January 2022

The EA flood maps for planning show that most of the site to be located within flood zone 1.

The EA Map of long-term flood risk from surface water indicates that the site is at a very low risk from surface water flooding.

Based on the limited information available, it is considered that the risk of groundwater flooding to the development is low.

As described in section 2.4 of this report, the majority of the site is underlain by Glacial Till, which is generally unfavourable to infiltration. Therefore, it is considered that soakaway drainage will not be a suitable means of disposing surface water runoff from the developed site.

In line with the latest guidance, a 30% climate change allowance has been made on the 100-year storm event.

The maximum runoff rate from the developed site will not exceed 176.15 l/s for all storms up to and including the 1 in 100-year storm plus 30% allowance for climate which is combination of greenfield runoff for the area previously greenfield and a 30% reduction in brownfield runoff for the area currently impermeable.

It is anticipated that the average foul flow from the development will be 0.98 l/s.

This Flood Risk Assessment and Drainage Strategy has concluded that the development is appropriate and can be occupied safely subject to implementation of the flood risk mitigation described in this report being carried out.

2.0 - PROJECT BACKGROUND

2.1 - Appointment

Burrows Graham Limited have been commissioned by Client Indurent (referred to the as 'the applicant' hereafter) to undertake a flood risk assessment and drainage strategy of suitable scope to support an outline planning application for the development of land within Use Classes E(g)(iii) (industrial processes), B2 (general industrial), B8 (storage and distribution) and removal of existing structures, hard standing, and associated works for Plot H4 at Heywood Business Park, Moss Hall Road, Heywood, OL10 2TR.

2.2 - Aim of study

This FRA and Drainage Strategy has been developed in due cognisance of all relevant available policy information. It is anticipated that this report will satisfy the requirements of the National Planning Policy Framework (NPPF) and all relevant flood risk planning policies.

2.3 - Relevant policy and strategy documents

The following documents were reviewed as part of this Flood Risk Assessment:

- Defra Sustainable Drainage Systems Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015)
- Environment Agency Climate Change Guidance (February 2016)
- Flood and Water Management Act (April 2010)
- National Planning Policy Framework (Updated December 2023) and Planning Practice Guidance (March 2014)
- Sustainable Drainage Systems Written Statement HCWS161 (December 2014)
- Bury, Rochdale, and Oldham Strategic Flood Risk Assessment (SFRA) Level 2 (October 2020)
- Rochdale Borough Strategy for Flood Risk Management 2014-2024 (March 2014)
- Rochdale Metropolitan Borough Council Preliminary Flood Risk Assessment (PFRA) (May 2011)

2.4 - Proposed development

- Outline planning for the development of land within Use Classes E(g)(iii) (industrial processes), B2 (general industrial), B8 (storage and distribution, data centre), and removal of existing structures, hard standing, and associated works (all matters reserved for subsequent approval) on Plot H4 of Heywood Business Park, Heywood.
- The development can be classified as 'less vulnerable' in accordance with guidance set out on the 'gov.uk' website, namely 'Table 2: Flood vulnerability classification'.

Reference should be made to the 'Site Layout' included in Appendix A, an extract of which is shown below.



Figure 1 –Parameters Plan Extract

3.0 - SITE DETAILS

3.1 - Site description



Figure 2 – Site Location Plan

Table 1 - Site characteristics

Site address	Plot H4, Indurent Heywood Distribution Park, Pilsworth Road, Heywood, OL10 2TR
Grid reference	383720, 409367
Area (hectares)	The site boundary has been measured to be 10.69 hectares.
Usage	Up to 52,000 sq m of E(g)(iii), B2 and B8 floor space
Surroundings	Heywood Distribution Park delineates all the boundaries of the site
Topography	Site levels generally fall from the Northwest to the Southeast. They vary between circa 124m at the Northwest to around circa 115m to the Southeast. A copy of the topographical survey has been included in Appendix B of this report.

3.2 - Existing drainage

The United Utilities Public Sewer Records, which have been included in Appendix C of this report, show there to be no public sewers within the site.



Figure 3 –Rochdale Watercourses Plan

The site is a mix of scrubland and existing landscaping (5.244Ha) and hardstanding (5.446Ha), the hardstanding area currently discharges via a network of sewers through the industrial estate which ultimately discharges via an 825dia pipe under Pilsworth Road to Blighty Brook which is shown on the Rochdale Watercourse Plan on figure 3.

3.3 - Existing watercourses

The nearest watercourse and main river is Blighty Brook which runs to the south of Pilsworth Road.

3.4 - Geology and hydrogeology

Reference should be made to the following JPG reports.

- Geoenvironmental Desk Study Report 5986-JPG-XX-XX-RP-G-060-S2-P03 dated January 2022
- Geoenvironmental Ground Investigation 5986-JPG-XX-XX-RP-G-0605-S2-P03 dated January 2022
- The key findings are Made Ground: Variable across the site with thickness between 0.20m and greater than 2.88m
- Glacial Till: Slightly sandy, slightly gravelly clay base between 2.40m bgl and 12.50m bgl. Generally firm, becoming stiff and very stiff with depth, however, some softer material within the upper 3m within central part of the site.
- Bedrock: Extremely weak to very weak mudstone and sandstone.
- In the Southeast of the site, at 0.55m to 0.90m thick coal seam at depths 1.90m bgl and 2.00m bgl

4.0 – FLOOD RISK STATEMENT

4.1 - Fluvial flood risk

The National Planning Policy Framework (NPPF) categorises flood risk as follows:

- Zone 1 (low probability) – Land assessed as having less than a 1 in 1,000 annual probability of river or sea flooding (<0.1%);
- Zone 2 (medium probability) – Land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year; and
- Zone 3a (high probability) - Land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.
- Zone 3b The Functional Floodplain - This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the EA. (Not separately distinguished from Zone 3a on the Flood Map).

The EA flood maps for planning show that most of the site to be located within flood zone 1.

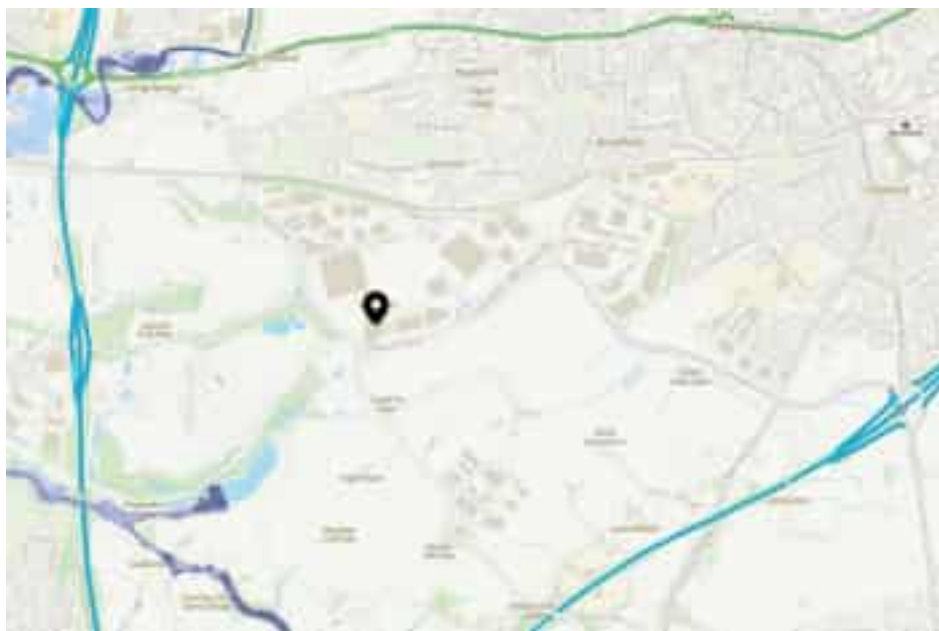


Figure 4 – EA Flood Map for Planning

Based on the above, the site considered to be at low risk of flooding from rivers or sea.

4.2 - Surface water flooding

The EA descriptions for the High, Medium and Low risk scenarios for surface water flooding are as follows:

- High risk means that each year this area has a chance of flooding of greater than 3.3%.
- Medium risk means that each year this area has a chance of flooding of between 1% and 3.3%.
- Low risk means that each year this area has a chance of flooding of between 0.1% and 1%.
- Very Low risk means that each year this area has a chance of flooding of less than 0.1%.

The EA Map of long-term flood risk from surface water indicates that the site is generally at a very low risk from surface water flooding with some areas that show low to medium risk of surface water flooding. These areas are due to the low-lying existing topography and will be mitigated against through the proposed developments levels and drainage designs.



Figure 5 – EA Flood Map for Surface Water

4.3 - Groundwater flood risk

Groundwater flooding occurs when the water table, the level of water below the ground, rises above the ground surface or into cellars and basements. Groundwater flooding is most likely to occur in low lying areas underlain by permeable rocks (aquifers). These may be extensive, regional aquifers, such as chalk or sandstone, or may be localised sands or river gravels in valley bottoms underlain by less permeable rocks.

Based on the ground conditions outlined in Section 3.4, the risk of flooding from groundwater cannot be ruled out.

Based on the limited information available, it is considered that the risk of groundwater flooding to the development is low.

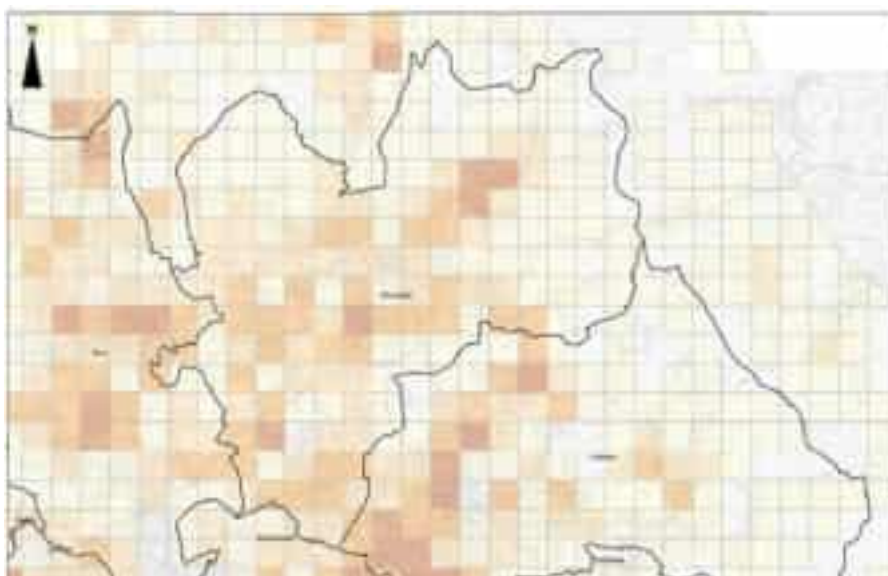


Figure 7 – Rochdale SFRA 5.14 – Risk of Flooding from Groundwater Extract

4.4 - Sewer flooding

There are no existing public sewers within the vicinity of the site. Therefore, the site is at low of risk of flooding from sewers.

4.5 - Tidal flooding

The site is remote from tidal influences and is therefore not at risk of tidal or coastal flooding.

4.6 - Reservoir flooding

Based on the EA Flood Risk from Reservoirs Map, the site is not at risk of flooding from reservoirs.

5.0– SURFACE WATER DRAINAGE STRATEGY

5.1 – Disposal of surface water

The method for removal of surface water from the site has been selected in accordance with the hierarchy outlined in Building Regulations Part H as summarised below:

- Infiltration to the ground
- Discharge to a watercourse
- Connection to a surface water sewer
- Connection to a combined sewer

As described in section 3.4 of this report, the majority of the site is underlain by Glacial Till, which is generally unfavourable to infiltration. Therefore, it is considered that soakaway drainage will not be a suitable means of disposing surface water runoff from the developed site.

Therefore, it is proposed to discharge surface water runoff to an existing manhole within the site and connect to the existing network to mimic the existing scenario.

5.2 – Sustainable Drainage Systems

Sustainable Drainage Systems (SuDS) will be utilised in line with The SuDS Manual (C753) guidance and aim to minimise the impact a development has on the runoff quantity and quality and maximise amenity and biodiversity opportunities.

The management train approach is a fundamental principle of SuDS, it aims to primarily reduce pollution, flow rates and volume of runoff from the site. The main objective is to treat the runoff as close to the source as possible and it is imperative that at least two of the following should be included within the drainage strategy.

- **Prevention** – The use of good site design and rainwater re-use measures to prevent runoff.
- **Source Control** – Controlling the runoff as close to source as possible by using; green roofs, porous pavements and soakaways.
- **Site Control** – Use of water management techniques within local area, i.e. detention basins and geo-cellular storage.
- **Regional Control** – Management of water from a number of sites in a specific location, i.e. balancing ponds and wetlands.

The drainage strategy for this development will incorporate prevention by using rainwater harvesting systems where possible and site control in the form of flow control and associated attenuation ponds and tanks.

5.3 – General strategy

As the proposals are submitted in outline, an indicative drainage strategy has been prepared based on an Illustrative Site Plan. See Burrows Graham Outline Drainage Strategy drawing (ref: 30042-BGL-XX-XX-SK-C-00009), which has been included in Appendix D of this report.

5.4 – Total site area and impermeable areas

Based on the parameters plan, the total drained impermeable area of the proposed development has been measured to be 10.15 hectares.

5.5 – Climate Change

In line with the latest guidance, a 30% allowance has been made.

5.6 – Discharge rates

The site is considered to be a brownfield development.

The hydrological characteristics for the site have been taken from uksuds.com and summarised in Table 2 below.

Table 2 – Hydrological characteristics for the site

SAAR (mm)	1052
Hydrological region	10
Soil type	4
SPR	0.47

Using the IH124 method (Institute of Hydrology, 1994) and the above hydrological characteristics, the greenfield runoff rate has been applied to the area of the site which was previously greenfield (5.6Ha).

Table 3 – Greenfield runoff rates

QBAR	43.5 l/s
Q(1)	37.9 l/s
Q(30)	74.0 l/s
Q(100)	90.6 l/s

The remaining area of the plot which is currently hardstanding will be reduced to 30% of the current brownfield runoff rate calculated using the Modified Rational Method (MRM) as below. The runoff from the remaining 3.03Ha which is currently hardstanding calculated using a 30% reduction of the current existing brownfield rate calculated using MRM.

$$\text{MRM} = 2.78 \times 25 \times 3.03 \times 0.9 = 189.5 \text{ l/s}$$

$$30\% \text{ reduction} = 132.7 \text{ l/s}$$

As such, the maximum runoff rate from the developed site will not exceed 176.2 l/s for all storms up to and including the 1 in 100-year storm plus 30% allowance for climate.

5.7 – Attenuation storage

In order to achieve the restriction in peak rate of surface water runoff from the developed site as described above, on site surface water attenuation storage will be required in order to temporarily store the residual volume of surface water for rainfall events resulting in a peak runoff rate greater than the allowable rate stated in section 5.6.

Attenuation will be provided in the form of detention ponds and attenuation tanks.

The attenuation storage will be designed to ensure that there is no surface water flooding on site for rainfall events up to and including the 1 in 30-year storm event. The attenuation storage will be designed to ensure

that surface water runoff for storm events up to and including the 100-year storm plus a 30% allowance will not cause a risk of flooding to properties or increase the flood risk outside of the site.

5.8 – Water quality

Water quality has been considered and the following measures have been included within the surface water drainage proposals:

- All drainage from car park areas, which are considered low risk, will pass through either a Class 1 bypass separator prior to discharging to the main attenuation pond, where levels allow, which will provide a second stage of treatment for all runoff from these areas.
- All drainage from service yards, which are considered high risk, will pass through a Class 1 full retention separator prior to discharging to the main attenuation pond, where levels allow, which will provide a second stage of treatment for all runoff from these areas.
- All drainage from the site road and other hard surfaces will pass through the main attenuation pond, where levels allow, which will provide treatment for runoff from these areas.
- Silt will be prevented from entering the system by the use of channels with silt traps and catch pits where required.

5.9 – Maintenance

Reference should be made to the Drainage Inspection and Maintenance Schedule in Appendix E, which includes required actions and typical frequencies for all drainage infrastructure serving the development.

The drainage will be managed and maintained by an appointed Management Company.

6.0 – Foul water drainage strategy

It is currently proposed to discharge the foul flows generated from the development to the existing adopted foul/combined pumping station to the west of the site.

Any new connections (including the re-use of existing connections) to the public sewerage system will require Section 106 agreement for an indirect connection.

Based on an anticipated gross internal floor space of circa 51,717 square metres, it is anticipated that the average foul flow from the development will be 0.98 l/s.

$$6DWF = 6PG + I + 3E$$

Where:

6DWF = foul drainage design flow (l/d)

P = population= 165 persons per hectare

G = water consumption = 90 l/person/day

I = dry weather infiltration = 10%

E = trade effluent = 0 l/s/ha

7.0 - MITIGATION / MANAGEMENT OF FLOOD RISK

7.1 – Access and egress

Details of access to and egress from the site are reserved at this stage, but the proposed development will utilise the existing road infrastructure within Heywood Distribution Park connecting to Pilsworth Road.

Pilsworth Road and the proposed site access road are located within flood zone 1. Therefore, a safe means of access / egress is available to the site at all times.

7.2 - Drainage & exceedance flow routes

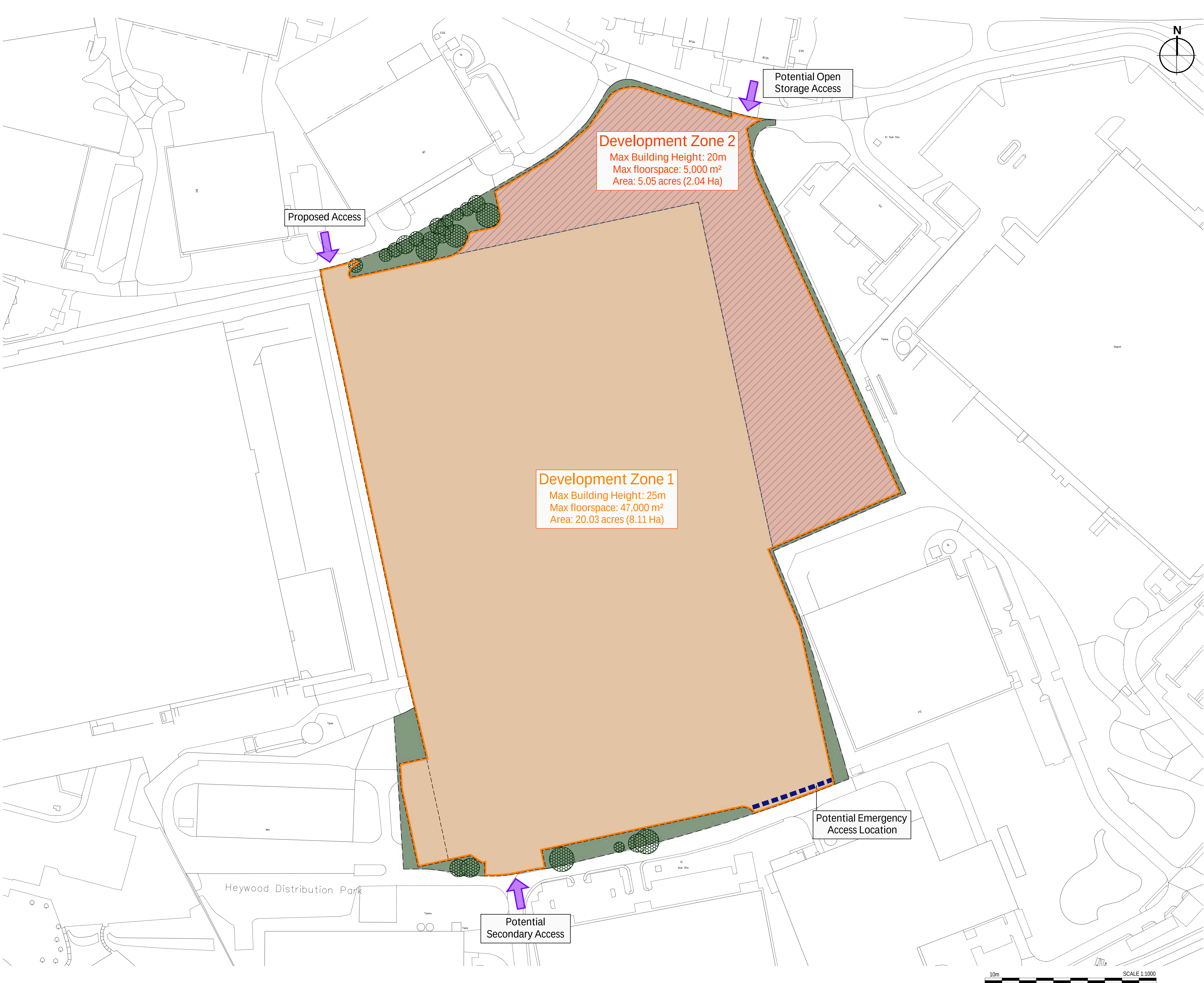
The proposed surface water drainage system will be designed in accordance with the drainage strategy set out in Section 4 of this report. This will ensure that there is no increase in flood risk to the site or elsewhere in the local catchment for all storm events up to and including the 100-year storm plus 30% climate change.

It should be noted that if storm events in excess of the 100-year storm plus 30% climate change or blockages occur, this will result in flood water arising from the site drainage system. If the site drainage system were to flood, it is considered that any surface water arising from the site drainage system would be contained within the area of dock levellers which are below ground or directed to the existing ditches that surround the site.

8.0 – CONCLUSION

This Flood Risk Assessment and Drainage Strategy has concluded that the development is appropriate and can be occupied safely subject to implementation of the flood risk mitigation described in this report being carried out.

APPENDIX A – PARAMETERS PLAN



- Dimensions are in millimeters, unless stated otherwise.
- Scaling of this drawing is not recommended.
- It is the recipient's responsibility to print this document to the correct scale.
- All relevant drawings and specifications should be read in conjunction with this drawing.

KEY

Development Zone - Area for Use Classes:
Use Classes: E(g)(iii) industrial processes / B2 general industrial / B8 storage and distribution.

To include buildings, earthworks, hard and soft landscaping, car parking, road and SUDS features

Development Zone 1
Maximum Height (to ridge): 25m
Maximum Floor Space: 47,000m²

Development Zone 2
Maximum Height (to ridge): 20m
Maximum Floor Space: 5,000m²

Potential Open Storage Zone
Area: 5.05 acres (2.04 ha)

Landscaping & Trees
Existing and proposed landscaping incorporating drainage infrastructure.

Proposed Access

Potential Emergency Access Location
Potential access required for fire access to the site.

P.07	Client logo updated	RS	TDA	19.07.24
P.06	Annotation alterations	RS	TDA	18.06.24
P.05	Open storage added, zone extents updated	RS	TDA	22.05.24
P.04	Landscaping key added. Extent of development to SE updated.	JWY	TDA	18.03.24
P.03	Areas of perimeter landscaping excluded from development zone.	JWY	TDA	15.03.24
P.02	Southern access included	LBR	TDA	14.03.24
P.01	Initial Issue	RS	TDA	13.03.24
rev	amendments	by	ckd	date

Heywood Distribution Park, Heywood

Information Container LOD:	LOD 100
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RIBA POW Stage:	2 - Concept Design
Document Suitability:	S1
Drawn / Checked:	RS / TDA
Date:	13.03.24
Scale:	1:1000 A1
UMC Project Number:	23103
Document Reference:	Drawing no: Revision:
23103 - UMC - ZZZZ - SI - DR - A	0648 P.07

APPENDIX B – TOPOGRAPHICAL SURVEY



Castle Keep Surveys Drawing Legend

Topographical Landmarks:

..... Road	 Wall
..... Drop Kerb	 Skel Drain
..... Top of Step	 ACO Drain
..... Bottom of Step	 Channel Drain
..... Top of Bank	 New Surface Type
..... Bottom of Bank	 Vague Line
..... Building Line	 Tree Canopy Line
..... Building Canopy	 Tree Canopy Line
..... Track	 Push Canopy Line
..... Channel	 Fender
..... Kerb	 Surface Feature
..... Concrete	 Survey Easement
..... Footpath	
..... Surface Change	
..... Tactile Paver	
..... Barrier	
..... Chain Fence	
..... Metal Fence	
..... Plastic & Wire Fence	
..... Wooden Fence	
..... Overhead Drink Trough	
..... Overhead Electric	

Symbol:

TP	Telegraph Pole	CL 000.000	Manhole
LP	Lamp Post	IL 000.000	Manhole
EP	Electric Post	IC 000.000	Inspection Chamber
TL	Traffic Light	CATV CL 000.000	Cable TV Cover
FL	Fluorescent	BT CL 000.000	BT Cover
CTV	Cable TV C	RS 000.000	Road Gully
SC	Stop Cock	GS 000.000	Gully
GV	Gas Valve	GS 000.000	Gully
GU	Gully	GS 000.000	Circular Gully
BOL	Bollard	RS 000.000	Circular Road Gully
0.000	Spot Level	SV CL 000.000	Stop Valve
Post	Post	WM CL 000.000	Water Meter
Column	Column	AV CL 000.000	Air Valve
ER	Earth Road	FH CL 000.000	Fire Hydrant
GR	Gas Pipe	GV CL 000.000	Gas Valve
RWP	Rain Water Pipe	Cabinet	Cabinet
RS	Road Sign	CL 100.000	Circular Manhole
SIGN	Sign Post	IL 000.000	Transformer
SVP	Set Valve Pipe	CL 100.000	Transformer
RS	Rocking Fan	Chamber Extent	Chamber Extent
Duct	Duct	WSL 000.000	Water Spout Level
SIGN	Sign	IL 000.000	Insert Level
STAY	Stay	EOS	Tree
PIPE	Pipe	EOS	End of Tapal
SWES	SWES Building Site	Spot	Spot
ngse	Building Floor Level	Tree Stump	Tree Stump
FFL	Finished Floor Level	BORE HOLE	Bore Hole
THL	Threshold Level	CKS1	Station Control Details
SOFT	Soft Level	Level=00.000	
Top Of Wall	Top of Wall Height		
Cope Level	Cope Level Height		

Approximate National Grid North

Job Title

Heywood Distribution Park

Client Name

Drawing Title

Topographical Survey

Scale	1:500 @ A1	Surveyor	HE
Date	30/01/2024	Approved	PK

Castle Keep Surveys Ltd
Unit 7
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Peterslee
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Revised/Amendments	By	Checked
CKS - 1836		001
Project Number		Drawing No. Revision

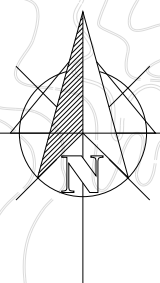
Castle Keep Surveys Drawing Legend

Topographical Landmarks

	Step Bank		Wall
	Rock		Sink Drain
	Top of Step		ACID Drain
	Bottom of Step		Chimney
	Top of Bank		Above Surface Foot
	Bottom of Bank		Village Line
	Rubble Line		Tree Canopy Line
	Rubble Canopy		Road Canopy Line
	Track		Hedge
	Channel		Surface Feature
	Kerf		Survey Elevation
	Concrete		
	Fountain		
	Surface Change		
	Tactical Edge		
	Blower		
	Chain Fence		
	Wood Fence		
	Plant & Wire Fence		
	Wooden Fence		
	Overhead Drink Telson		
	Overhead Electric		

Symbols

	Topographic File		Manhole
	Lump Pile		Impression Chamber
	Electric Post		Cable TV Cover
	Traffic Light		PT Cover
	Flashlight		Road Gully
	Cable TV IC		Gully
	Step Crack		Circular Gully
	Gully Valve		Circular Road Gully
	Gully		Step Valve
	Ballast		Water Meter
	Spot Level		Air Valve
	Post		Fire Hydrant
	Column		Gully Valve
	Earth Road		Cabinet
	Grass Paver		Circular Manhole
	Road Water Pipe		Triangular Manhole
	Road Valve		Chamber Extent
	Sign Post		Water Spot Level
	Spot Valve Pipe		Insert Level
	Rolling Pipe		
	Tap		Gate
	Duct		End of Sewal
	Sign		Tree Stump
	Stay		Bore Hole
	Pipe		
	EYES Paving Sheet		
	HPOE Paving Sheet		
	Finished Floor Level		
	Threshold Level		
	Top of Wall		
	Top of Wall		
	Cape Level		



Approximate National Grid North



Job title

Heywood
Distribution Park

Clot No.



Drawing title

Topographical Survey

1:500 @ A1

HE

On

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Revision Amendments

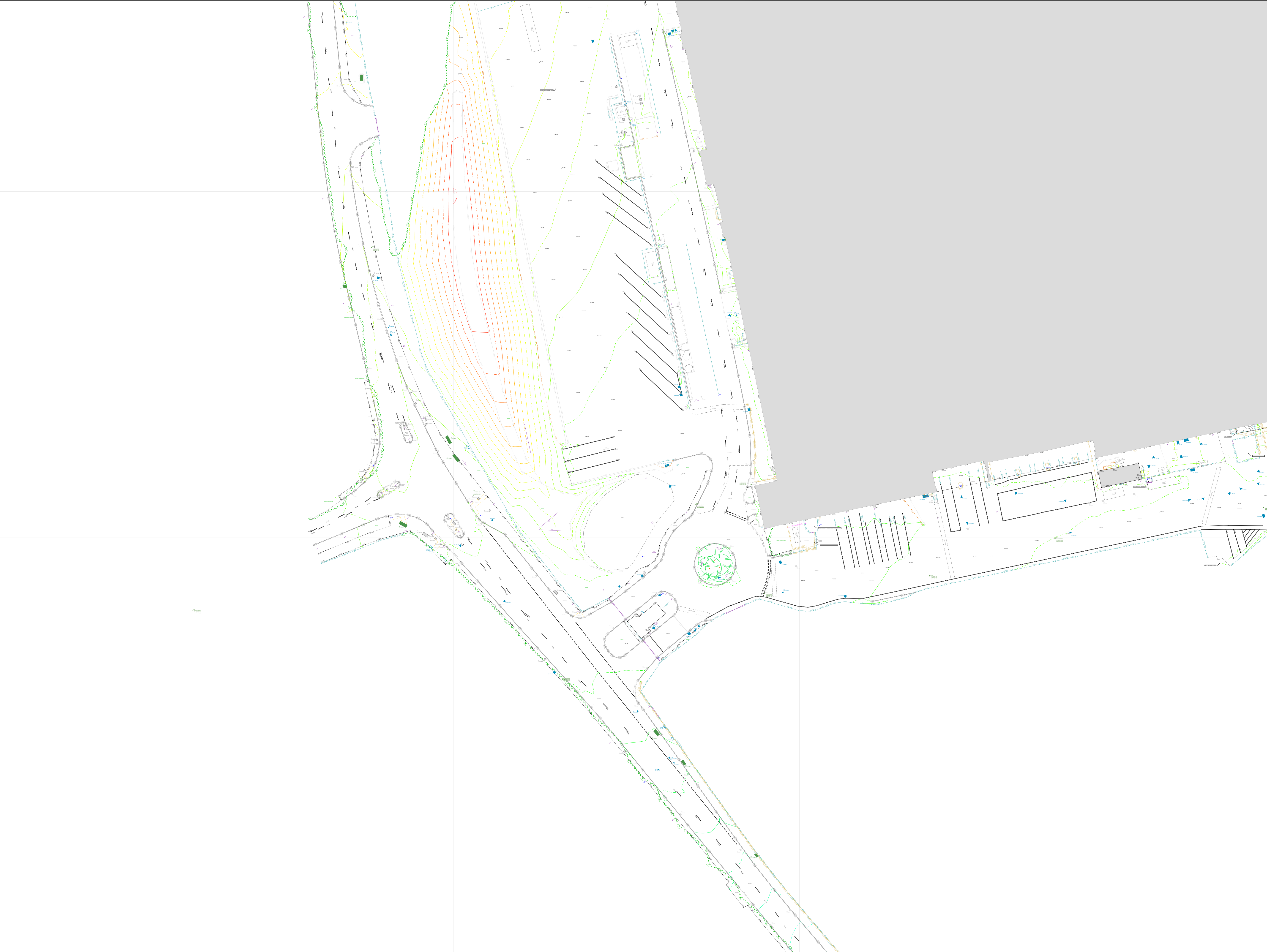
CKS - 1836

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002

Project Number

Drawing No. R0



Castle Keep Surveys Drawing Legend

Topographical Landmarks:

..... Road	 Drop Kerb	 Top of Step	 Bottom of Step	 Top of Bank	 Bottom of Bank	 Building Line	 Building Contour	 Track	 Channel	 Kerb	 Contour	 Footpath	 Surface Change	 Tactile Paver	 Barrier	 Chain Fence	 Plastic & Wire Fence	 Wooden Fence	 Overhead Drainage	 Overhead Electric
..... Wall	 Skip Drain	 ACO Drain	 Channel Drain	 House Surface Type	 Vase Line	 Tree Canopy Line	 Tree Canopy Line	 Push Canopy Line	 Polder	 Surface Feature	 Survey Easement									

Symbols:

TP	Telegraph Pole	CL 000.000	Manhole
LP	Lamp Post	IL 000.000	Inspection Chamber
EP	Electric Post	IC 000.000	Cable TV Cover
TL	Traffic Light	CL 000.000	PT Cover
FL	Fluorescent	BT 000.000	Road Gully
CTV	Cable TV C	CL 000.000	Gully
SC	Stop Cook	CL 000.000	Crater Gully
GV	Gas Valve	CL 000.000	Crater Road Gully
GU	Gully	CL 000.000	Stop Valve
BOL	Boiler	CL 000.000	Water Meter
0.000	Spot Level	CL 000.000	Air Valve
Post	Post	CL 000.000	Fire Hydrant
Column	Column	CL 000.000	Gas Valve
ER	Earth Road	CL 000.000	Cabinet
GR	Gas Pipe	CL 000.000	Crater Manhole
RWP	Rain Water Pipe	CL 000.000	Transformer
RS	Road Sign	CL 000.000	Manhole
SIGN	Sign Post	CL 000.000	Chamber Extent
SVP	Set Valve Pipe	CL 000.000	Water Spout Level
RS	Road Sign	CL 000.000	Inset Level
Duct	Duct	CL 000.000	Tree
SIGN	Sign	CL 000.000	End of Topog
STAY	Stay	CL 000.000	Spot
PIPE	Pipe	CL 000.000	Tree Stamp
CAVES	CAVES Building Site	CL 000.000	Tree Hole
ngce	Building Floor Level	CL 000.000	BORE HOLE
FFL	Finished Floor Level	CL 000.000	Top of Wall Height
THL	Threshold Level	CL 000.000	Cape Level Height
SOFT	Soft Level	CL 000.000	CKS1
Top Of Wall	Top of Wall Height	CL 000.000	CKS1
Cape Level	Cape Level Height	CL 000.000	CKS1

Approximate National Grid North

Heywood Distribution Park

Client Name

Drawing Title

Topographical Survey

Scale	1:500 @ A1	Surveyor	HE
Date	30/01/2024	Approved	PK

Castle Keep Surveys Ltd
Unit 7
Fenn Court
Preston
Lancashire
PR1 2BB
T: 01429 855098
E: info@castlekeepsurveys.co.uk

Revision/Amendment	By	Checked
CKS - 1836		003
Project Number		Drawing No. Revision

APPENDIX C – PUBLIC SEWER RECORDS & EXISTING DRAINAGE INFORMATION

Commercial drainage and water enquiry

Responses to a drainage and water enquiry for commercial premises or development sites.

Client:

Client ref: SF28964243000

Searchflow

Searchflow, 42
Kings Hill Avenue,
Kings Hill, Kent
ME19 4AJ

Order number: UUPS-ORD-191235

Received date: 28/08/2020

Response date: 09/09/2020

FAO:

The following records were searched in compiling this report:

The map of public sewers
The map of waterworks
Water and sewerage billing records
Adoption of public sewers records
Building over public sewer records
Adoption of public water mains records
Water supply clarification

Property address: Heywood Business Park, Heywood

Please Note - We must make you aware that due to the introduction of the open market with effect from 1st April 2017 for commercial customers, Property Searches will no longer be able to resolve issues regarding some discrepancies within the report. Due to the change in the structure of the market the retailer is now responsible for taking ownership of certain issues, particularly relating to billing/tariff charges as well as, but not limited to change of usage of a property.

Enquiries and Responses

The records were searched by Joanne Jones for United Utilities who does not have, nor is likely to have, any personal or business relationship with any person involved in the sale of the property.

This search report was prepared by Joanne Jones for United Utilities who does not have, nor is likely to have, any personal or business relationship with any person involved in the sale of the property.

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

What is included:

1. Summary of findings and key
2. Detailed findings of the CON29DW
3. Guidance for interpretation
4. Terms and conditions
5. Complaints policy

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

To help understand the implications of the drainage and water enquiries report a summary guide to the content of the full report is provided below.

✓ This response represents the typical situation for a property.

⚠ The attention of the purchaser is drawn to this response. The purchaser may wish to make further investigations into this situation.

✗ This response represents an uncommon situation for a property and the purchaser should carefully consider its implications.

Question	Report Schedule	Answer	
1	Where relevant, please include a copy of an extract from the public sewer map.	Yes & in vicinity	✓
2	Where relevant, please include a copy of an extract from the map of waterworks.	Yes & in vicinity	✓
3	Does foul water from the property drain to a public sewer?	Plot of land	⚠
4	Does surface water from the property drain to a public sewer?	Plot of land	✗
5	Is a surface water drainage charge payable?	No	✗
6	Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the property?	None	✓
6.1	Does the public sewer map indicate any pumping station or any other ancillary apparatus within the boundaries of the property?	None	✓
7	Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?	Public	✓
7.1	Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres of any buildings within the property?	None	✓
8	Are any foul sewers or lateral drains serving or which are proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?	No	✓
8	Are any surface water pipes or lateral drains serving, or which are proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?	No	✓
9	Has a sewerage undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?	None	✓
10	Is the building which is or forms part of the property at risk of internal flooding due to overloaded public sewers?	No	✓
11	Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.	Yes	✓
12	Is the property connected to mains water supply?	Plot of land	⚠
13	Are there any water mains, resource mains or discharge pipes	Yes	✗

Question	Report Schedule	Answer	
14	Is any water main or service pipe serving or which is proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?	No	✓
15	Is the building at risk of receiving low water pressure or flow?	No	✓
16	What is the clarification of the water supply for the property?	Very soft	✓
18	Please include details of the location of any water meter serving the property.	No meter	✓
19.1	Who is responsible for providing the sewerage services for the property?	United Utilities	✓
19.2	Who is responsible for providing the water services for the property?	United Utilities	✓
20	Who bills the property for sewerage services?	Retailer Sewer	✓
21	Who bills the property for water services ?	Retailer Water	✓
22	Has a customer been granted a trade effluent consent at this property?	No	✓
23	Is there an easement affecting the property?	Yes	✗

Question 1 **Where relevant, please include a copy of an extract from the public sewer map.**

Answer **A copy of an extract of the public sewer map within the vicinity of the property is included.**

Guidance

1. The Water Industry Act 1991 defines Public Sewers as those which (United Utilities) have responsibility for. Other assets and rivers, water courses, ponds, culverts or highway drains may be shown for information purposes only.
2. Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the developer.
3. The Sewerage Undertaker has a statutory right of access to carry out work on its assets, subject to notice. This may result in employees of the Sewerage Undertaker or its contractors needing to enter the property to carry out work.

Question 2 **Where relevant, please include a copy of an extract from the map of waterworks.**

Answer **A copy of an extract of the map of waterworks is included, showing water mains, resource mains or discharge pipes in the vicinity of the property.**

Guidance

The "water mains" in this context are those which are vested in and maintainable by the Water Undertaker under statute.

Assets other than public water mains may be shown on the plan, for information only. Water Undertakers are not responsible for private supply pipes connecting the property to the public water main and do not hold details of these. These may pass through land outside of the control of the seller, or may be shared with adjacent properties. The buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.

If an extract of the public water main record is enclosed, it will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

The presence of a public water main running within the boundary of the property may restrict further development within it. Water Undertakers have a statutory right of access to carry out work on their assets, subject to notice. This may result in employees of the Water Undertaker or its contractors needing to enter the property to carry out work.

Question 3 **Does foul water from the property drain to a public sewer?**

Answer **This enquiry appears to relate to a plot of land or a recently built property. It is recommended that drainage proposals are checked with the developer.**

Guidance

Sewerage Undertakers are not responsible for any private drains or sewers that connect the property to the public sewerage system, and do not hold details of these.

The property owner will normally have sole responsibility for private drains serving the property and may have shared responsibility, with other users, if the property is served by a private sewer which also serves other properties. These may pass through land outside of the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.

If foul water does not drain to the public sewerage system the property may have private facilities in the form of a cesspit, septic tank or other type of treatment plant.

If an extract from the public sewer map is enclosed, this will show known public sewers in the vicinity of the property and it should be possible to estimate the likely length and route of any private drains and/or sewers connecting the property to the public sewerage system.

Question 4	Does surface water from the property drain to a public sewer?
Answer	This enquiry appears to relate to a plot of land or a recently built property. It is recommended that drainage proposals are checked with the developer. If the property was constructed after the 6th April 2015 the surface water drainage may be served by a sustainable drainage system.
Guidance	Sewerage Undertakers are not responsible for any private drains or sewers that connect the property to the public sewerage system and do not hold details of these. The property owner will normally have sole responsibility for private drains serving the property and may have shared responsibility with other users, if the property is served by a private sewer which also serves other properties. These may pass through land outside of the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal. In some cases, Sewerage Undertakers' records do not distinguish between foul and surface water connections to the public sewerage system. If on inspection the buyer finds that the property is not connected for surface water drainage, the property may be eligible for a rebate of the surface water drainage charge. Details can be obtained from the Sewerage Undertaker. If surface water does not drain to the public sewerage system the property may have private facilities in the form of a soakaway or private connection to a watercourse. If an extract from the public sewer map is enclosed, this will show known public sewers in the vicinity of the property and it should be possible to estimate the likely length and route of any private drains and/or sewers connecting the property to the public sewerage system.
Question 5	Is a surface water drainage charge payable?
Answer	Records indicate that a surface water drainage charge is not applicable for the property.
Guidance	Since 1st April 2017 commercial customers can choose their retailer for clean, waste or both services. For more information on any applicable surface water charges you will need to contact the current owner of the property to find out who the current retailer is. Details of the retailer for a property can be found on the current occupiers bill. For a list of all potential retailers of water and waste water services for the property please visit www.open-water.org.uk. Please note if the property was constructed after 6th April 2015 the Surface Water drainage may be served by a Sustainable Drainage System. Further information may be available from the Developer.
Question 6	Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the property?
Answer	The public sewer map included indicates that there are no public sewers, disposal mains or lateral drains within the boundary of the property. However from the 1st October 2011 there may be additional public sewers, disposal mains or lateral drains which are not recorded on the public sewer map which may further prevent or restrict development of the property. If you are considering any future development at this property which may require build over consent, please complete the enquiry form by accessing the following link http://www.unitedutilities.com/planning-wastewater-guidance.aspx.
Guidance	The approximate boundary of the property has been determined by reference to the Ordnance Survey record. A property of this type will normally be served by a shared sewer passing through the boundaries of several properties. It is therefore likely that a public sewer or lateral drain is present within the property boundary. Please note that from 1st October 2011 the majority of private sewers and lateral drains connected to the public network as of 1st July 2011 transferred into public ownership and therefore it is possible there may be additional public assets which may not be shown on the public sewer plan. The presence of public assets running within the boundary of the property may restrict further development. If there are any plans to develop the property further enquiries should be made to United Utilities Build Over department.

United Utilities Water has a legal right of access to carry out work on its assets, subject to notice. This may result in employees of the Company or its contractors needing to enter the property to carry out work.

Question 6.1 Does the public sewer map indicate any pumping station or any other ancillary apparatus within the boundaries of the property?

Answer The public sewer map included indicates that there is no public pumping station or other ancillary apparatus within 50 metres of any buildings within the property. However, from 1st October 2016 private pumping stations which serve more than one property will be transferred into public ownership but may not be recorded on the public sewer map until that time.

Guidance From 1 October 2016 United Utilities will be responsible for private pumping stations (though we may take ownership of some stations before this date) that either:

- * serve a single property, and are outside the property boundary or
- * serves two or more properties

Only private pumping stations installed before 1st July 2011 will be transferred into our ownership. United Utilities will be responsible for all associated costs, maintenance, repairs and any necessary upgrade work.

Where the property is part of a very recent or ongoing development and the sewers/pumping station are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains, sewers and pumping stations for which they will hold maintenance and renewal liabilities.

Question 7 Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?

Answer The public sewer map included indicates that there are public sewers within 30.48 metres (100 feet) of a building within the boundary of the property. However from the 1st October 2011 there may be additional public sewers, disposal mains or lateral drains which are not recorded on the public sewer map which may further prevent or restrict development of the property. Please refer to Q2.4 sewer in boundary for further details.

Guidance From 1st October 2011 there may be additional lateral drains and/or public sewers which are not recorded on the public sewer map but are also within 30.48 metres (100 feet) of a building within the property.

The presence of a public sewer within 30.48 metres (100 feet) of the building(s) within the property can result in the Local Authority requiring a property to be connected to the public sewer.

The measure is estimated from the Ordnance Survey record, between the building(s) within the boundary of the property and the nearest public sewer.

Sewers indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended that these details are checked with the developer, if any.

Assets other than public sewers may be shown on the copy extract for information only.

Question 7.1 Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres of any buildings within the property?

Answer The public sewer map included indicates that there is no public pumping station or other ancillary apparatus within 50 metres of any buildings within the property. However, from 1st October 2016 private pumping stations which serve more than one property will be transferred into public ownership but may not be recorded on the public sewer map until that time.

Guidance	From 1 October 2016 United Utilities will be responsible for private pumping stations (though we may take ownership of some stations before this date) that either: * serve a single property, and are outside the property boundary or * serves two or more properties. Only private pumping stations installed before 1st July 2011 will be transferred into our ownership. United Utilities will be responsible for all associated costs, maintenance, repairs and any necessary upgrade work. If you think there might be a private pumping station on your land or near your business property, please let us know by completing this questionnaire with as much information as possible, please visit our website http://www.unitedutilities.com/ppstransfer.aspx. Where the property is part of a very recent or ongoing development and the sewers/pumping station are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains, sewers and pumping stations for which they will hold maintenance and renewal liabilities.
Question 8	Are any foul sewers or lateral drains serving or which are proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?
Answer	Records confirm that foul sewers and/or lateral drains serving the development, of which the property forms part are not the subject of an existing adoption agreement or an application for such an agreement.
Guidance	This enquiry is of interest to purchasers of new property who will want to know whether or not the property will be linked to a public sewer. Where the property is part of a very recent or ongoing development and the sewers are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains and sewers for which they will hold maintenance and renewal liabilities. Final adoption is subject to the developer complying with the terms of the adoption agreement under Section 104 of the Water Industry Act 1991.
Question 8	Are any surface water pipes or lateral drains serving, or which are proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?
Answer	Records confirm that the surface water sewer(s) and/or surface water lateral drain(s) are not the subject of an adoption agreement and it is recommended that responsibility for maintenance of these is checked with the developer as this may be due to a Sustainable Drainage Scheme (SUDS)
Guidance	This enquiry is of interest to purchasers of new property who will want to know whether or not the property will be linked to a public sewer. Where the property is part of a very recent or ongoing development and the sewers are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains and sewers for which they will hold maintenance and renewal liabilities. Final adoption is subject to the developer complying with the terms of the adoption agreement under Section 104 of the Water Industry Act 1991.
Question 9	Has a sewerage undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?
Answer	There are no records in relation to any approval or consultation about plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain. However, the sewerage

undertaker might not be aware of a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain.

Guidance

From the 1st October 2011 private sewers, disposal mains and lateral drains were transferred into public ownership and the sewerage undertaker may not have granted approval or been consulted about any plans to erect a building or extension on the property over or in the vicinity of these assets.

Prior to 2003 United Utilities Water Limited had sewerage agency agreements with the local authorities therefore details of any agreements/consents or rejections may not have been forwarded on to our offices before this date.

Buildings or extensions erected over a sewer in contravention of building controls may have to be removed or altered.

Question 10

Is the building which is or forms part of the property at risk of internal flooding due to overloaded public sewers?

Answer

The building is not recorded as being at risk of internal flooding due to overloaded public sewers. From the 1st October 2011 private sewers, disposal mains and lateral drains were transferred into public ownership it is therefore possible that a property may be at risk of internal flooding due to an overloaded public sewer which the sewerage undertaker is not aware of. For further information it is recommended that enquiries are made of the vendor.

Guidance

1. A sewer is "overloaded" when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Flooding as a result of temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded.

2. "Internal flooding" from public sewers is defined as flooding, which enters a building or passes below a suspended floor. For reporting purposes, buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes.

3. These are defined as properties that have suffered or are likely to suffer internal flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant reference period (either once or twice in ten years) as determined by the Sewerage Undertaker's reporting procedure.

4. Flooding as a result of storm events proven to be exceptional and beyond the reference period of one in ten years are not included.

5. Properties may be at risk of flooding but not included where flooding incidents have not been reported to the Sewerage Undertaker.

6. Public sewers are defined as those for which the Sewerage Undertaker holds statutory responsibility under the Water Industry Act 1991.

7. It should be noted that flooding can occur from private sewers and drains which are not the responsibility of the Sewerage Undertaker.

8. This report excludes flooding from private sewers and drains and the Sewerage Undertaker makes no comment upon this matter. For reporting purposes buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes.

Question 11

Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.

Answer

The nearest Sewage Treatment Works is 1.35 miles (2.17 km), South East of the property. The name of the Sewage treatment works is Doctor Fold WwTW. The owner is United Utilities

Guidance

The nearest sewage treatment works will not always be the sewage treatment works serving the catchment within which the property is situated i.e. the property may not necessarily drain to this works.

The Sewerage Undertaker's records were inspected to determine the nearest sewage treatment works.

It should be noted therefore that there may be a private sewage treatment works closer than the one detailed above that has not been identified. As a responsible utility operator, United Utilities Water Limited seeks to manage the impact of odour from operational sewage works on the surrounding area.

This is done in accordance with the "Code of Practice on Odour Nuisance from Sewage Treatment Works" issued via the Department of Environment, Food and Rural Affairs (DEFRA).

This Code recognises that odour from sewage treatment works can have a detrimental impact on the quality of the local environment for those living close to works.

However DEFRA also recognises that sewage treatment works provide important services to communities and are essential for maintaining standards in water quality and protecting aquatic based environments. For more information visit www.unitedutilities.com.

Question 12 **Is the property connected to mains water supply?**

Answer **This enquiry relates to a plot of land or a recently built property. It is recommended that the water supply proposals are checked with the developer.**

Guidance If the property is supplied by private water mains please note that details of private supplies are not kept by the Water Undertaker. The situation should be checked with the current owner of the property.

Question 13 **Are there any water mains, resource mains or discharge pipes**

Answer **The map of waterworks indicates that there are water mains, resource mains or discharge pipes within the boundaries of the property.**

Guidance The boundary of the property has been determined by reference to the Ordnance Survey record.

The presence of a public water main within the boundary of the property may restrict further development within it. Water Undertakers have a statutory right of access to carry out work on their assets, subject to notice.

This may result in employees of the Water Undertaker or its contractors needing to enter the property to carry out work.

Question 14 **Is any water main or service pipe serving or which is proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?**

Answer **Records confirm that water mains or service pipes serving the property are not the subject of an existing adoption agreement or an application for such an agreement.**

Guidance This enquiry is of interest to purchasers of new premises who will want to know whether or not the property will be linked to the mains water supply.

Question 15 **Is the building at risk of receiving low water pressure or flow?**

Answer **Records confirm that the building is not recorded by the water undertaker as being at risk of receiving low water pressure or flow.**

Guidance The boundary of the property has been determined by reference to the Ordnance Survey record. "Low water pressure" means water pressure below the regulatory reference level which is the minimum pressure when demand on the system is not abnormal. Water undertakers report properties receiving pressure below the reference level, provided that allowable exclusions do not apply (i.e. events which can cause pressure to temporarily fall below the reference level). Reference level: The reference level of service is a flow of 9l/min at a pressure of 10m head on the customer's side of the main stop tap (mst). The reference level applies to a single property. The reference level of

service must be applied on the customer's side of a meter or any other company fittings that are on the customer's side of the main stop tap. Where a common service pipe serves more than one property, the flow assumed in the reference level must be appropriately increased to take account of the total number of properties served. Surrogate for the reference level: Because of the difficulty in measuring pressure and flow at the mst, companies may measure against a surrogate reference level. Companies should use a surrogate of 15m head in the adjacent distribution main unless a different level can be shown to be suitable. In some circumstances companies may need to use a surrogate pressure greater than 15m to ensure that the reference level is supplied at the customer's side of the mst (for example in areas with small diameter or shared communication pipes).

There are a number of circumstances under which properties identified as receiving low pressure should be excluded from the reported figure. The aim of these exclusions is to exclude properties which receive a low pressure as a result of a one-off event and which, under normal circumstances (including normal peaks in demand), will not receive pressure or flow below the reference level. Companies must maintain verifiable, auditable records of all the exclusions that they apply in order to confirm the accuracy and validity of their information. Allowable exclusions includes Abnormal demand, Planned maintenance, One off incidents, Low pressure incidents of short duration and common supply.

Abnormal demand:

This exclusion is intended to cover abnormal peaks in demand and not the daily, weekly or monthly peaks in demand, which are normally expected. Water undertakers exclude figures from properties which are affected by low pressure only on those days with the highest peak demands. During the yearly report water undertakers may exclude, for each property, up to five days of low pressure caused by peak demand.

Planned maintenance:

Water undertakers will not report low pressures caused by planned maintenance. It is not intended that water undertakers identify the number of properties affected in each instance. However, water undertakers must maintain sufficiently accurate records to verify that low-pressure incidents that are excluded because of planned maintenance, are actually caused by maintenance.

One-off incidents:

This exclusion covers a number of causes of low pressure; mains bursts; failures of company equipment (such as pressure reducing valves or booster pumps); fire fighting and action by a third party. However, if problems of this type affect a property frequently, they cannot be classed as one-off events and further investigation will be required before they can be excluded.

Low pressure incidents of short duration:

Properties affected by low pressures that only occur for a short period, and for which there is evidence that incidents of a longer duration would not occur during the course of the year, may be excluded.

A company must maintain a minimum pressure in the communication pipe of seven metres static head (0.7 bar). If pressure falls below this on two occasions, each occasion lasting more than one hour, within a 28-day period, the company must automatically make a GSS payment to the customer. There are exceptions to the requirement to make a GSS payment if the pressure standard is not met. These are: a payment has already been made to the same customer in respect of the same financial year; it is impractical for the company to have identified the particular customer as being affected, and the customer has not made a claim within three months of the date of the latter occasion; industrial action by the company's employees makes it not feasible to maintain the pressure standard; the act or default of a person other than the company's representative make it not feasible to maintain the pressure standard; or the pressure falls below the minimum standard due to necessary works taking place or due to a drought.

It should be noted that low water pressure can occur from private water mains, private supply pipes (the pipework from the external stop cock to the property) or internal plumbing which are not the responsibility of the Water Undertaker. This report excludes low water pressure from private water mains, supply pipes and internal plumbing and the Water Undertaker makes no comment upon this matter. For reporting purposes buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes.

Question 16

What is the clarification of the water supply for the property?

Answer

The water supplied to the property has an average water hardness of 25mg/l calcium carbonate, which is defined as very soft by United Utilities

Guidance

The hardness of water is due to the presence of calcium and magnesium minerals that are naturally present in the water. The usual signs of a hard water supply are scaling inside kettles, poor lathering of soaps and scum.

What is water hardness?

Hard water is formed when water passes through or over limestone or chalk areas and calcium and magnesium ions dissolve into the water. The hardness is made up of two parts: temporary (carbonate) and permanent (non-carbonate) hardness. When water is boiled, calcium carbonate scale can form, which can deposit on things like kettle elements. The scale will not stick to kettles that have a plastic polypropylene lining but will float on the surface. The permanent hardness that comprises calcium and magnesium sulphate does not go on to form scale when heated or boiled.

How is water hardness measured?

Hardness is usually expressed in terms of the equivalent quantity of calcium carbonate (CaCO₃) in milligrams per litre or parts per million. You may also see hardness expressed as degrees of hardness in Clark (English) degrees, French or German degrees. Interconversion between the different measurements can be made by using the appropriate conversion factors below. There are no standard levels as to what constitutes a hard or a soft water. Table 1 gives an indication of the equivalents of calcium and calcium carbonate and the relative degree of hardness.

Water quality standards

There are no regulatory standards for water hardness in drinking water.

Water hardness in the North West

The majority of raw water in the United Utilities region comes from upland surface water reservoirs. The water in the reservoirs has little chance of passing through rocks and to dissolve the minerals that make water hard. Therefore, the majority of water in this region is soft or very soft. We supply water from a number of boreholes in the south of the region that are reasonably hard, but these tend to be blended with softer sources to meet demand. No water supply in the North West is artificially softened.

Can hard water be softened?

Yes, water can be softened artificially by the installation of a water softener or the use of 'jug type' filters. Medical experts recommend that a non-softened supply is maintained for drinking purposes because softened water may contain high levels of sodium. Softeners should be fitted after the drinking water tap and comply with the requirements of the Water Supply (Water Fittings) Regulations 1999. They should be maintained in accordance with manufacturers' instructions.

If you're interested in finding out more about the quality of your drinking water, please visit www.unitedutilities.com/waterquality and enter your postcode.

The Drinking Water Inspectorate is responsible for ensuring the quality of public water supplies. Visit their website at: www.dwi.defra.gov.uk.

Question 18

Please include details of the location of any water meter serving the property.

Answer

Records indicate that the property is not served by a water meter.

Guidance

Where the property is not served by a meter the current occupier can contact the retailer directly to advise on the current charging method, details of the retailer can also be found on the current occupiers bill.

Question 19.1

Who is responsible for providing the sewerage services for the property?

Answer **United Utilities Water Limited, Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP**

Guidance Not Applicable

Question 19.2 **Who is responsible for providing the water services for the property?**

Answer **United Utilities Water Limited, Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP.**

Guidance Not Applicable

Question 20 **Who bills the property for sewerage services?**

Answer **Since 1st April 2017 commercial customers can choose their retailer. If you wish to know who currently bills the property for sewerage services you will need to contact the current owner of the property to find out who the current retailer is.**

Guidance Details of the retailer for a property can be found on the current occupiers bill. For a list of all potential retailers of waste water services for the property please visit www.open-water.org.uk

Question 21 **Who bills the property for water services ?**

Answer **Since 1st April 2017 commercial customers can choose their retailer. If you wish to know who currently bills the property for water services you will need to contact the owner of the property to find out who the retailer is.**

Guidance Details of the retailer for a property can be found on the current occupiers bill. For a list of all potential retailers of water services for the property please visit www.open-water.org.uk

Question 22 **Has a customer been granted a trade effluent consent at this property?**

Answer **There is no record of a Trade Effluent consent at this property. Applications for Trade Effluent consents should be submitted via your retailer for info please visit <https://www.unitedutilities.com/services/wholesale-services/trade-effluent/>**

Guidance The owner/occupiers of Trade Premises do not have the right to discharge Trade Effluent to the public wastewater network. Any Trade Effluent Discharge Consent will be issued under Section 118 of the Water Industry Act 1991 and will be subject to conditions set by the Sewerage Undertaker.

Generally these conditions are to ensure:

- a) The Health and Safety of staff working within the wastewater network and at wastewater treatment plants.
- b) The apparatus of the wastewater network is not damaged.
- c) The flow of the contents of the wastewater network is not restricted.
- d) Equipment, plant, and processes at treatment works are not disrupted or damaged.
- e) Treatment of sewage sludge is not impeded and sludges are disposed of in an environmentally friendly manner.
- f) Final effluent discharge from wastewater treatment plants has no impact on the environment or prevents the receiving waters from complying with EU Directives.

g) Potential damage to the environment via storm water overflows is minimised.

Disputes between an occupier of a Trade Premise and the Sewerage Undertaker can be referred to the Director General of Water Services (OFWAT).

Protecting Public Sewers - Discharges Section 111 of the Water Industry Act 1991, places prohibition on the discharge of the following into a public sewer, drain or a sewer that communicates with a public sewer.

i) Any matter likely to injure the sewer or drain, to interfere with the free flow of its contents or to affect prejudicially the treatment or disposal of its contents.

ii) Any chemical refuse or waste steam or any liquid of temperature higher than 43.3 degrees Celsius (110 degrees Fahrenheit).

iii) Any petroleum spirit or carbide of calcium. On summary conviction offences under this Section carry a fine not exceeding the statutory maximum or a term of imprisonment not exceeding two years, or both.

Please note any existing consent is dependant on the business being carried out at the property and will not transfer automatically upon change of ownership.

Question 23

Is there an easement affecting the property?

Answer

There appears to be a formal easement agreement relating to apparatus affecting this property. For further details and certified copy documents, if applicable, please contact the Legal Department, United Utilities, Grasmere House, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP including a location plan. Please note that a further charge will be made for this service.

Guidance

Not Applicable.

Appendix 1- General interpretation

1. (1) In this Schedule-

"the 1991 Act" means the Water Industry Act 1991(a);

"the 2000 Regulations" means the Water Supply (Water Quality) Regulations 2000(b);

"the 2001 Regulations" means the Water Supply (Water Quality) Regulations 2001(c);

"adoption agreement" means an agreement made or to be made under Section 51A(1) or 104(1) of the 1991 Act (d);

"bond" means a surety granted by a developer who is a party to an adoption agreement;

"bond waiver" means an agreement with a developer for the provision of a form of financial security as a substitute for a bond;

"calendar year" means the twelve months ending with 31st December;

"discharge pipe" means a pipe from which discharges are made or are to be made under Section 165(1) of the 1991 Act;

"disposal main" means (subject to Section 219(2) of the 1991 Act) any outfall pipe or other pipe which-

- (a) is a pipe for the conveyance of effluent to or from any sewage disposal works, whether of a sewerage undertaker or of any other person; and
- (b) is not a public sewer;

"drain" means (subject to Section 219(2) of the 1991 Act) a drain used for the drainage of one building or any buildings or yards appurtenant to buildings within the same curtilage;

"effluent" means any liquid, including particles of matter and other substances in suspension in the liquid;

"financial year" means the twelve months ending with 31st March;

"lateral drain" means-

- (a) that part of a drain which runs from the curtilage of a building (or buildings or yards within the same curtilage) to the sewer with which the drain communicates or is to communicate; or
- (b) (if different and the context so requires) the part of a drain identified in a declaration of vesting made under Section 102 of the 1991 Act or in an agreement made under Section 104 of that Act (e);

"licensed water supplier" means a company which is the holder for the time being of a water supply licence under Section 17A(1) of the 1991 Act(f);

"maintenance period" means the period so specified in an adoption agreement as a period of time-

- (a) from the date of issue of a certificate by a Sewerage Undertaker to the effect that a developer has built (or substantially built) a private sewer or lateral drain to that undertaker's satisfaction; and
- (b) until the date that private sewer or lateral drain is vested in the Sewerage Undertaker;

"map of waterworks" means the map made available under Section 198(3) of the 1991 Act (g) in relation to the information specified in subsection (1A);

"private sewer" means a pipe or pipes which drain foul or surface water, or both, from premises, and are not vested in a Sewerage Undertaker;

"public sewer" means, subject to Section 106(1A) of the 1991 Act(h), a sewer for the time being vested in a Sewerage Undertaker in its capacity as such, whether vested in that undertaker-

- (a) by virtue of a scheme under Schedule 2 to the Water Act 1989(i);
- (b) by virtue of a scheme under Schedule 2 to the 1991 Act (j);
- (c) under Section 179 of the 1991 Act (k); or
- (d) otherwise;

"public sewer map" means the map made available under Section 199(5) of the 1991 Act (l);

"resource main" means (subject to Section 219(2) of the 1991 Act) any pipe, not being a trunk main, which is or is to be used for the purpose of-

- (a) conveying water from one source of supply to another, from a source of supply to a regulating reservoir or from a regulating reservoir to a source of supply; or
- (b) giving or taking a supply of water in bulk;

"sewerage services" includes the collection and disposal of foul and surface water and any other services which are required to be provided by a Sewerage Undertaker for the purpose of carrying out its functions;

"Sewerage Undertaker" means the company appointed to be the Sewerage Undertaker under Section 6(1) of the 1991 Act for the area in which the property is or will be situated;

"surface water" includes water from roofs and other impermeable surfaces within the curtilage of the property;

"water main" means (subject to Section 219(2) of the 1991 Act) any pipe, not being a pipe for the time being vested in a person other than the water Undertaker, which is used or to be used by a Water Undertaker or licensed water supplier for the purpose of making a general supply of water available to customers or potential customers of the undertaker or supplier, as distinct from for the purpose of providing a supply to particular customers;

"water meter" means any apparatus for measuring or showing the volume of water supplied to, or of effluent discharged from any premises;

"water supplier" means the company supplying water in the water supply zone, whether a water undertaker or licensed water supplier;

"water supply zone" means the names and areas designated by a Water Undertaker within its area of supply that are to be its water supply zones for that year; and

"Water Undertaker" means the company appointed to be the Water Undertaker under Section 6(1) of the 1991 Act for the area in which the property is or will be situated.

(2) In this Schedule, references to a pipe, including references to a main, a drain or a sewer, shall include references to a tunnel or conduit which serves or is to serve as the pipe in question and to any accessories for the pipe.

- (a) 1991 c. 56.
- (b) S.I. 2000/3184. These Regulations apply in relation to England.
- (c) S.I. 2001/3911. These Regulations apply in relation to Wales.
- (d) Section 51A was inserted by Section 92(2) of the Water Act 2003 (c. 37). Section 104(1) was amended by Section 96(4) of that Act.
- (e) Various amendments have been made to Sections 102 and 104 by Section 96 of the Water Act 2003.
- (f) Inserted by Section 56 of and Schedule 4 to the Water Act 2003.
- (g) Subsection (1A) was inserted by Section 92(5) of the Water Act 2003.
- (h) Section 106(1A) was inserted by Section 99 of the Water Act 2003.
- (i) 1989 c. 15.
- (j) To which there are various amendments made by Section 101(1) of and Schedule 8 to the Water Act 2003.
- (k) To which there are various amendments made by Section 101(1) of and Schedule 8 to the Water Act 2003.
- (l) Section 199 was amended by Section 97(1) and (8) of the Water Act 2003.

Appendix 2 - DRAINAGE AND WATER ENQUIRY (COMMERCIAL) AGREEMENT

The Customer, the Client and the Purchaser are asked to note this Agreement which govern the basis on which this drainage and water report is supplied

Definitions

'Company' means United Utilities Water Limited who produce the Report; its registered office being at Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington WA5 3LP, company number 2366678.

'Order' means any request completed by the Customer requesting the Report.

'Report' means the drainage and water report prepared by the Company in respect of the Property.

'Property' means the address or location supplied by the Customer in the Order.

'Customer' means the person, company, firm or other legal body placing the Order, either on their own behalf as Client, or, as an agent for a Client.

'Client' means the person, company or body who is the intended recipient of the Report with an actual or potential interest in the Property.

'Purchaser' means the actual or potential purchaser of the Property including their mortgage lender.

Agreement

1.1 The Company agrees to supply the Report to the Customer and the Client subject to this Agreement. The scope and limitations of the Report are described in clause 2 of this Agreement.

Where the Customer is acting as an agent for the Client then the Customer shall be responsible for bringing this Agreement to the attention of the Client and the Purchaser.

1.2 The Customer, the Client and the Purchaser agree that the placing of an Order for a Report and the subsequent provision of a copy of the Report to the Client and/ or the Purchaser indicates their acceptance of this Agreement.

The Report

Whilst the Company will use reasonable care and skill in producing the Report, it is provided to the Customer, the Client and the Purchaser on the basis that they acknowledge and agree to the following:

2.1 The information contained in the Report can change on a regular basis so the Company cannot be responsible to the Customer, the Client and the Purchaser for any change in the information contained in the Report after the date on which the Report was produced and sent to the Client.

2.2 The Report does not give details about the actual state or condition of the Property nor should it be used or taken to indicate or exclude actual suitability or unsuitability of the Property for any particular purpose, or relied upon for determining saleability or value, or used as a substitute for any physical investigation or inspection. Further advice and information from appropriate experts and professionals should always be obtained.

2.3 The information contained in the Report is based upon the accuracy, completeness and legibility of the address and/or plans supplied by the Customer or Client or Purchaser.

2.4 The Report provides information as to the location and connection status of existing services and other information in relation to drainage and water enquiries and should not be relied on for any other purpose. The Report may contain opinions or general advice to the Customer, the Client and the Purchaser. The Company cannot ensure that any such opinion or general advice is accurate, complete or valid and therefore accepts no liability in relation thereto.

2.5 The position and depth of apparatus shown on any maps attached to the Report are approximate and are furnished as a general guide only, and no warranty as to its correctness is given or implied. The exact positions and depths should be obtained by excavation trial holes and the maps must not be relied on in the event of excavation or other works made in the vicinity of the Company's apparatus.

Liability

3.1 The Company shall not be liable to the Client or the Purchaser for any failure defect or non-performance of its obligations arising from any failure to provide or delay in providing the Report to the extent that such failure or delay is due to an event or circumstance beyond the reasonable

control of the Company including but not limited to any delay, failure of or defect in any machine, processing system or transmission link or any failure or default of a supplier or sub-contractor of the Company or any provider of any third party Information except to the extent that such failure or delay is caused by the negligence of the Company.

3.2 Where a Report is requested for an address falling within a geographical area where two different companies separately provide Water and Sewerage Services, then it shall be deemed that liability for the information given by either company will remain with that company in respect of the accuracy of the information supplied.

A company supplying information which has been provided to it by another company for the purposes outlined in this agreement will therefore not be liable in any way for the accuracy of that information and will supply that information as an agent for the company from which the information was obtained.

3.3 The Report is produced for use in relation to individual commercial property transactions where the property is used solely for carrying on a trade or business, the property is intended to be developed for commercial gain or the property is not a single residential, domestic property. The Company's entire liability (except to the extent provided by clause 3.5) in respect of all causes of action arising by reason of or in connection with the Report (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) shall be limited to £2,000,000

In any event, the Company shall not have any liability in contract, negligence or any other tort or for breach of statutory duty or otherwise in respect of any loss of profit, loss of revenue, loss of opportunity or anticipated savings, or any indirect or consequential loss or damage that may be suffered by the Customer, the Client or the Purchaser howsoever arising. The plans attached to the report are provided pursuant to the Company's statutory duty to make such plans available for inspection (notwithstanding the provisions of this clause) and attention is drawn to the notice on the plan(s) attached to the report which applies to the plan and its contents.

3.4 Where the Customer sells this Report to a Client or Purchaser under its own name or as a reseller of the Company (other than in the case of a bona fide legal adviser recharging the cost of the Report as a disbursement) the Company shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty, restitution or otherwise at all) be liable to the Customer for any loss (whether direct, indirect or consequential loss (all three of which terms include without limitation, pure economic loss, loss of profit, loss of business, depletion of goodwill and like loss)) or damage whatsoever caused in respect of the Report or any use of the Report or reliance placed upon it and the Customer shall indemnify and keep indemnified the Company in respect of any claim by the Client or the Purchaser that the Company may incur or suffer.

3.5 Nothing in this Agreement shall exclude the Company's liability for death or personal injury arising from its negligence or for fraud.

Copyright and Confidentiality

4.1 The Customer, the Client and the Purchaser acknowledge that the Report is confidential and is intended for the personal use of the Client and the Purchaser. The copyright and any other intellectual property rights in the Report shall remain the property of the

Company. No intellectual or other property rights are transferred or licensed to the Customer, the Client or the Purchaser except to the extent expressly provided herein.

4.2 The Customer or the Client or the Purchaser is entitled to make copies of the Report but may only copy Ordnance Survey mapping or data contained in or attached to the Report if they have an appropriate licence from the originating source of that mapping or data.

4.3 The Customer, The Client and the Purchaser agree (in respect of both the original and any copies made) to respect and not to alter any part of the Report including but not limited to the trademark, copyright notice or other property marking which appears on the Report.

4.4 The maps contained in the Report are protected by Crown Copyright and must not be used for any purpose outside the context of the Report.

4.5 The enquiries in the Report are protected by copyright by the Law Society of 113 Chancery Lane, London WC2A 1PL and must not be used for any purpose outside the context of the Report.

4.6 The Customer, the Client and the Purchaser agree to indemnify the Company against any losses, costs, claims and damage suffered by the Company as a result of any breach by either of them of the provisions of clauses 4.1 to 4.4 inclusive.

Payment

5.1 Unless otherwise stated all prices are inclusive of VAT. The Customer shall pay the price of the Report specified by the Company, without any set off, deduction or counterclaim.

5.2 Payment must be received in advance unless an account has been set up with the Company. In these cases, payment terms will be as agreed with the Company, but in any event any invoice must be paid within 30 days.

5.3 The Company reserves the right to increase fees on reasonable prior written notice at any time.

Data Protection

6.1 We will process any personal data you provide to us in accordance with applicable data protection laws and our Data Protection and Privacy Notice (<https://www.unitedutilities.com/privacy/>). In addition we will use your personal data to manage and administer the provision of the Report under this Agreement and to develop and improve the business and services we provide to our customers. We may also disclose it to other companies in the United Utilities group (being United Utilities Water Limited, its holding companies (and their subsidiary companies) and its subsidiary companies) and their sub-contractors in connection with those purposes, but it will not be processed for other purposes or disclosed to other third parties without your express permission or without lawful purpose under data protection law.

General

7.1 If any provision of this Agreement is or becomes invalid or unenforceable, it will be taken to be removed from the rest of this Agreement to the extent that it is invalid or unenforceable. No other provision of this Agreement shall be affected.

7.2 This Agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts.

7.3 Nothing in this Agreement and conditions shall in any way restrict the Customer's the Client's or the Purchaser's statutory or any other rights of access to the information contained in the Report.

7.4 This Agreement and conditions may be enforced by the Customer, the Client and the Purchaser.

7.5 Before you agree to this Agreement, please note it is your responsibility to ensure your client/customer is aware of them and that any objections are raised accordingly.

Property Searches complaints procedure

In the event of any queries relating to this Report please e-mail, write or phone our customer team quoting the United Utilities reference detailed on the Report, We will endeavor to resolve any telephone contact or complaint at the time of the call.

Whilst we always try to resolve all complaints straight away, if this is not possible and you are not happy with the course of action taken by us you can ask us to escalate the issues internally via the complaints process detailed below.

We will listen to your complaint and do our best to deal with it immediately.

If we fail to give you a written substantive response within 5 working days the Company will compensate the Customer or the Client (as applicable) the amount of the original fee paid to the Company for the Report, regardless of the outcome of your complaint.

If it is a complex issue requiring more time, we will still get back to you within 5 working days and notify you of progress and update you with the new timescales.

If we consider your complaint to be justified or we have made any errors that substantially change the outcome of the search we will:

- Refund your Report fee
- Provide you with a revised Report (if requested)
- Take the necessary action within our power to put things right which may (where appropriate) include, at our complete discretion, financial compensation or the relocation/removal/installation of our affected water or sewerage assets.
- Keep you informed of any action required

If your complaint has gone through our full internal complaints procedure and you are not satisfied with the response or you believe that we have failed to comply with our internal complaints procedure you may be able to refer your complaint for consideration under The Property Ombudsman Scheme (TPOs). You can obtain further information by visiting www.tpos.co.uk or email admin@tpos.co.uk



Refo	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
4905	118.97	CO	118.97	150	100	VC	18.9597	1 in 88	
1904	122.5	CO	118.25	300	100	VC	38.22154	1 in 86	
8005	122.5	CO	118.25	300	100	VC	38.22154	1 in 86	
3902	117.17	CO	113.89	750	100	CO	82.85529	1 in 32	
1901	120.63	CO	126.61	225	100	VC	69.05054	1 in 73	
2907	120.93	CO	117.99	375	100	VC	25.52507	1 in 73	
0903	120.93	CO	117.99	375	100	VC	18.24829	1 in 73	
0903	120.93	CO	117.99	375	100	VC	18.24829	1 in 73	
1901	129.48	CO	125.36	225	100	VC	26.74235	1 in 55	
0009	129.48	CO	125.36	225	100	VC	46.46691	1 in 55	
0009	129.48	CO	125.36	225	100	VC	24.87674	1 in 55	
4906	125.94	CO	122.27	225	100	VC	16.19331	1 in 25	
2905	119.47	SW	117.6	225	100	VC	26.57069	1 in 25	
9903	119.47	SW	117.6	225	100	VC	14.73866	1 in 151	
0004	123.34	CO	120.55	375	100	VC	34.36568	1 in 382	
0004	123.34	CO	120.55	375	100	VC	34.36568	1 in 382	
2902	126.11	CO	115.05	675	100	CO	14.67262	1 in 382	
2904	124.06	CO	118.86	375	100	VC	11.09488	1 in 308	
3003	124.06	CO	118.86	375	100	VC	37.01351	1 in 9	
3002	119.66	CO	116.78	375	100	VC	27.51363	1 in 9	
0915	119.66	CO	116.78	375	100	VC	13.41098	1 in 9	
0915	119.66	CO	116.78	375	100	VC	13.41098	1 in 9	
0912	119.66	CO	116.78	375	100	VC	14.15073	1 in 194	
3005	119.09	SW	116.62	225	100	VC	25.22886	1 in 194	
0901	124.41	FO	121.9	225	100	VC	14.86607	1 in 124	
0901	124.41	FO	121.9	225	100	VC	21.436	1 in 40	
0901	124.41	FO	121.9	225	100	VC	80.656	1 in 117	
0904	120.81	CO	117.56	450	100	CO	35.51056	1 in 117	
1802	124.02	CO	115.42	675	100	VC	29.16476	1 in 45	
4907	124.02	CO	115.42	675	100	VC	41.01618	1 in 67	
4001	118.88	CO	113.46	750	100	CO	28.83226	1 in 0.7036301	
1002	120.45	CO	127.99	150	100	VC	1.162278	1 in 45	
0902	123.09	CO	121.18	225	100	VC	80.05623	1 in 67	
3901	126.02	CO	125.83	225	100	VC	17.81119	1 in 168	
2910	126.02	CO	125.83	225	100	VC	77.33692	1 in 0.7036301	
4001	118.88	CO	113.46	750	100	VC	48.08978	1 in 117	
3004	121.95	CO	118.24	375	100	VC	48	1 in 89	
0005	124.3	SW	121.33	225	100	VC	37.46333	1 in 109	
8902	119.21	CO	116.79	300	100	VC	15.29705	1 in 109	
8902	119.21	CO	116.79	300	100	VC	15.29705	1 in 109	
0006	122.34	CO	118.65	375	100	VC	54.23099	1 in 83	
0006	122.34	CO	118.65	375	100	VC	54.23099	1 in 83	
2001	125.44	CO	122.87	225	100	VC	22.02271	1 in 29	
3009	118.63	CO	115.6	675	100	VC	23.647	1 in 212	
0801	118.63	CO	115.6	675	100	VC	87.0919	1 in 212	
0801	118.63	CO	115.6	675	100	VC	87.0919	1 in 212	
8904	118.23	CO	116.12	675	100	VC	79.21396	1 in 140	
8006	118.23	CO	116.12	675	100	VC	3.889362	1 in 140	
0910	121.49	CO	115.18	675	100	VC	10.90181	1 in 15	
1801	118.82	CO	115.64	225	100	VC	66.37017	1 in 917	
1003	118.82	CO	115.64	225	100	VC	41.01219	1 in 15	
0005	118.82	CO	115.64	225	100	VC	27.07397	1 in 15	
4002	118.82	CO	115.64	225	100	VC	15.65048	1 in 15	
3006	118.02	CO	113.52	750	100	VC	36.67424	1 in 917	
1006	118.02	CO	113.52	750	100	VC	9.926938	1 in 917	
8901	118.02	CO	113.52	750	100	VC	47.28313	1 in 150	
8901	118.02	CO	113.52	750	100	VC	47.28313	1 in 150	
4904	118.02	CO	113.52	750	100	VC	24.2971	1 in 150	
1903	118.02	CO	113.52	750	100	VC	21.68016	1 in 211	
5001	118.67	CO	115.3	300	100	PVC	18.95647	1 in 211	
5001	118.67	CO	115.3	300	100	PVC	18.95647	1 in 211	
5001	118.67	CO	115.3	300	100	PVC	18.95647	1 in 211	
5902	118.95	CO	115.36	225	100	PVC	29.59815	1 in 99	
5902	118.95	CO	115.36	225	100	PVC	29.59815	1 in 99	
5902	118.95	CO	115.36	225	100	PVC	29.59815	1 in 99	
0002	118.95	CO	115.36	225	100	PVC	29.59815	1 in 99	
0002	118.95	CO	115.36	225	100	PVC	29.59815	1 in 99	
4910	117.55	CO	116	225	100	PVC	32.35153	1 in 148	
4912	117.85	CO	115.81	225	100	PVC	44.9441	1 in 100	
4912	117.85	CO	115.81	225	100	PVC	44.9441	1 in 100	
4912	117.85	CO	115.81	225	100	PVC	44.9441	1 in 100	
0018	117.85	CO	115.81	225	100	VC	10.62286	1 in 100	
5007	118.77	CO	114.38	375	100	CO	22.10508	1 in 246	
5007	118.77	CO	114.38	375	100	CO	22.10508	1 in 246	
0007	124.57	CO	123.46	225	100	VC	50.7659	1 in 246	
5002	118.64	CO	115.13	375	100	VC	21.95498	1 in 100	
5002	118.64	CO	115.13	375	100	VC	21.95498	1 in 100	
5002	118.64	CO	115.13	375	100	VC	21.95498	1 in 100	
4911	118.35	CO	115.78	225	100	PVC	37.43524	1 in 150	
4008	118.73	CO	115.4	300	100	PVC	31.09115	1 in 311	
4008	118.73	CO	115.4	300	100	PVC	31.09115	1 in 311	
4008	118.73	CO	115.4	300	100	PVC	31.09115	1 in 311	
5008	118.92	CO	114.29	375	100	CO	12.33427	1 in 247	
5008	118.92	CO	114.29	375	100	CO	12.33427	1 in 247	
5008	118.92	CO	114.29	375	100	CO	12.33427	1 in 247	

Refo	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
4905	118.97	CO	118.97	150	100	VC	18.9597	1 in 88	
1904	122.5	CO	118.25	300	100	VC	38.22154	1 in 86	
8005	122.5	CO	118.25	300	100	VC	38.22154	1 in 86	
3902	117.17	CO	113.89	750	100	CO	82.85529	1 in 32	
1901	120.63	CO	126.61	225	100	VC	69.05054	1 in 73	
2907	120.93	CO	117.99	375	100	VC	25.52507	1 in 73	
0903	120.93	CO	117.99	375	100	VC	18.24829	1 in 73	
0903	120.93	CO	117.99	375	100	VC	18.24829	1 in 73	
1901	129.48	CO	125.36	225	100	VC	26.74235	1 in 55	
0009	129.48	CO	125.36	225	100	VC	46.46691	1 in 55	
0009	129.48	CO	125.36	225	100	VC	24.87674	1 in 55	
4906	125.94	CO	122.27	225	100	VC	16.19331	1 in 25	
2905	119.47	SW	117.6	225	100	VC	26.57069	1 in 25	
9903	119.47	SW	117.6	225	100	VC	14.73866	1 in 151	
0004	123.34	CO	120.55	375	100	VC	34.36568	1 in 382	
0004	123.34	CO	120.55	375	100	VC	34.36568	1 in 382	
2902	126.11	CO	115.05	675	100	CO	14.67262	1 in 382	
2904	124.06	CO	118.86	375	100	VC	11.09488	1 in 308	
3003	124.06	CO	118.86	375	100	VC	37.01351	1 in 9	
3002	119.66	CO	116.78	375	100	VC	27.51363	1 in 9	
0915	119.66	CO	116.78	375	100	VC	13.41098	1 in 9	
0915	119.66	CO	116.78	375	100	VC	13.41098	1 in 9	
0912	119.66	CO	116.78	375	100	VC	14.15073	1 in 194	
3005	119.09	SW	116.62	225	100	VC	25.22886	1 in 194	
0901	124.41	FO	121.9	225	100	VC	14.86607	1 in 124	
0901	124.41	FO	121.9	225	100	VC	21.436	1 in 40	
0901	124.41	FO	121.9	225	100	VC	80.656	1 in 117	
0904	120.81	CO	117.56	450	100	CO	35.51056	1 in 117	
1802	124.02	CO	115.42	675	100	VC	29.16476	1 in 45	
4907	124.02	CO	115.42	675	100	VC	41.01618	1 in 67	
4001	118.88	CO	113.46	750	100	VC	28.83226	1 in 0.7036301	
1002	120.45	CO	127.99	150	100	VC	1.162278	1 in 45	
0902	123.09	CO	121.18	225	100	VC	80.05623	1 in 67	
3901	126.02	CO	125.83	225	100	VC	17.81119	1 in 168	
2910	126.02	CO	125.83	225	100	VC	77.33692	1 in 0.7036301	
4001	118.88	CO	113.46	750	100	VC	48.08978	1 in 117	
3004	121.95	CO	118.24	375	100	VC	48	1 in 89	
0005	124.3	SW	121.33	225	100	VC	37.46333	1 in 109	
8902	119.21	CO	116.79	300	100	VC	15.29705	1 in 109	
8902	119.21	CO	116.79	300	100	VC	15.29705	1 in 109	
0006	122.34	CO	118.65	375	100	VC	54.23099	1 in 83	
0006	122.34	CO	118.65	375	100	VC	54.23099	1 in 83	
2001	125.44	CO	122.87	225	100	VC	22.02271	1 in 29	
3009	118.63	CO	115.6	675	100	VC	23.647	1 in 212	
0801	118.63	CO	115.6	675	100	VC	87.0919	1 in 212	
0801	118.63	CO	115.6	675	100	VC	87.0919	1 in 212	
8904	118.23	CO	116.12	675	100	VC	79.21396	1 in 140	



Refo	Cover	Func	Invert	Size x	Size y	Shape	Mail	Length	Grad
7302	113.66	CO	113.66	150			7302	113.66	150
8301	113.78	CO	113.78	150			8301	113.78	150
7514	113.59	CO	113.59	150			7514	113.59	150
4304	113.66	CO	113.66	150			4304	113.66	150
7518	113.76	CO	113.76	150			7518	113.76	150
7202	113.66	CO	113.66	150			7202	113.66	150
6106	113.34	CO	113.34	150			6106	113.34	150
7519	113.34	CO	113.34	150			7519	113.34	150
6012	113.34	CO	113.34	150			6012	113.34	150
6012	113.34	CO	113.34	150			6012	113.34	150
7310	113.47	CO	113.47	225			7310	113.47	225
8403	113.47	CO	113.47	225			8403	113.47	225
6101	115.03	CO	115.03	150			6101	115.03	150
7309	114.65	CO	114.65	300			7309	114.65	300
7401	112.8	CO	112.8	300			7401	112.8	300
6215	112.8	CO	112.8	300			6215	112.8	300
5513	116.76	CO	116.76	225			5513	116.76	225
7206	114.94	CO	114.94	300			7206	114.94	300
6104	115.74	CO	115.74	300			6104	115.74	300
0107	116.98	FO	116.98	225			0107	116.98	225
5511	119.41	CO	119.41	150			5511	119.41	150
6001	115.39	CO	115.39	300			6001	115.39	300
7309	113.18	FO	113.18	150			7309	113.18	150
4305	118.91	CO	118.91	150			4305	118.91	150
4215	118.91	CO	118.91	150			4215	118.91	150
7103	115.17	CO	115.17	300			7103	115.17	300
9402	108.87	CO	108.87	750			9402	108.87	750
9505	109.65	CO	109.65	525			9505	109.65	525
7307	113.45	SW	113.45	150			7307	113.45	150
9214	113.45	SW	113.45	150			9214	113.45	150
7311	113.64	CO	113.64	300			7311	113.64	300
9101	116.1	SW	116.1	150			9101	116.1	150
6004	116.25	SW	116.25	150			6004	116.25	150
6009	116.08	SW	116.08	150			6009	116.08	150
9304	111.34	CO	111.34	525			9304	111.34	525
7523	113.43	CO	113.43	225			7523	113.43	225
9901	121.21	CO	121.21	300			9901	121.21	300
9901	121.21	CO	121.21	300			9901	121.21	300
4405	114.99	CO	114.99	100			4405	114.99	100
4214	114.99	CO	114.99	100			4214	114.99	100
6105	114.99	CO	114.99	100			6105	114.99	100
7201	113.34	CO	113.34	225			7201	113.34	225
6205	114.21	CO	114.21	225			6205	114.21	225
8507	112.13	CO	112.13	300			8507	112.13	300
9403	115.24	CO	115.24	300			9403	115.24	300
6010	117.24	SW	117.24	750			6010	117.24	750
4503	121.4	CO	121.4	150			4503	121.4	150
0102	118.69	SW	118.69	225			0102	118.69	225
8309	118.69	SW	118.69	225			8309	118.69	225
5303	118.69	SW	118.69	225			5303	118.69	225
9413	118.69	SW	118.69	225			9413	118.69	225
6302	111.25	CO	111.25	1200			6302	111.25	1200
6014	117.31	FO	117.31	150			6014	117.31	150
6014	117.31	FO	117.31	150			6014	117.31	150
6510	118.91	CO	118.91	150			6510	118.91	150
4203	116.51	CO	116.51	450			4203	116.51	450
7512	113.61	CO	113.61	150			7512	113.61	150
8505	111.66	CO	111.66	625			8505	111.66	625
6005	117.93	SW	117.93	750			6005	117.93	750
7306	115.5	SW	115.5	225			7306	115.5	225
9303	109.47	CO	109.47	150			9303	109.47	150
9114	114.99	CO	114.99	100			9114	114.99	100
6007	117.35	SW	117.35	750			6007	117.35	750
6007	117.35	SW	117.35	750			6007	117.35	750
7507	113.99	CO	113.99	150			7507	113.99	150
9209	114.99	CO	114.99	100			9209	114.99	100
5101	117.49	CO	117.49	450			5101	117.49	450
8510	110.31	CO	110.31	1275			8510	110.31	1275
8405	111.64	CO	111.64	225			8405	111.64	225
9107	116.08	CO	116.08	100			9107	116.08	100
9505	109.65	CO	109.65	525			9505	109.65	525
0404	116.08	CO	116.08	750			0404	116.08	750
6017	118.21	SW	118.21	225			6017	118.21	225
6017	118.21	SW	118.21	225			6017	118.21	225
6205	115.18	SW	115.18	225			6205	115.18	225
5209	115.38	CO	115.38	300			5209	115.38	300
5201	115.39	CO	115.39	300			5201	115.39	300
9108	118.21	SW	118.21	225			9108	118.21	225
6401	113.51	CO	113.51	300			6401	113.51	300
9207	115.13	CO	115.13	300			9207	115.13	300
9104	119.85	SW	119.85	225			9104	119.85	225
8603	119.86	SW	119.86	150			8603	119.86	150
8603	119.86	SW	119.86	150			8603	119.86	150
6105	115.27	CO	115.27	300			6105	115.27	300
9204	116.19	SW	116.19	300			9204	116.19	300
5209	115.38	OV	115.38	300			5209	115.38	300
9404	112.7	CO	112.7	300			9404	112.7	300
6520	112.7	CO	112.7	450			6520	112.7	450
4413	118.69	CO	118.69	100			4413	118.69	100
5512	118.97	CO	118.97	150			5512	118.97	150
8114	114.02	CO	114.02	100			8114	114.02	100
6302	114.02	CO	114.02	100			6302	114.02	100
4403	119.92	CO	119.92	300			4403	119.92	300
6202	114.04	CO	114.04	150			6202	114.04	150
9102	117.24	SW	117.24	225			9102	117.24	225
8303	116.08	CO	116.08	100			8303	116.08	100
8105	114.99	CO	114.99	100			8105	114.99	100
7003	117.63	FO	117.63	150			7003	117.63	150
6003	117.63	FO	117.63	150			6003	117.63	150
4102	115.85	CO	115.85	225			4102	115.85	225
9509	110.08	CO	110.08	1200			9509	110.08	1200
5519	118.69	SW	118.69	150			5519	118.69	150
8402	115.02	CO	115.02	225			8402	115.02	225
5203	115.02	CO	115.02	825			5203	115.02	825
6103	115.6	CO	115.6	150			6103	115.6	150
6202	115.04	CO	115.04	525			6202	115.04	525
7402	112.62	CO	112.62	825			7402	112.62	825
7517	112.86	CO	112.86	225			7517	112.86	225
9404	110.82	CO	110.82	1200			9404	110.82	1200
6006	117.58	SW	117.58	750			6006	117.58	750
9119	117.97	CO	117.97	100			9119	117.97	100
0101	117.97	CO	117.97	225			0101	117.97	225
5506	118.4	CO	118.4	300			5506	118.4	300
7301	113.55	CO	113.55	300			7301	113.55	300
7308	113.37	FO	113.37	225			7308	113.37	225
0212	117.94	SW	117.94	225			0212	117.94	225
6102	115.02	CO	115.02	150			6102	115.02	150
8112	114.02	CO	114.02	100			8112	114.02	100
9206	116.72	SW	116.72	150			9206	116.72	150
9111	114.16	CO	114.16	100			9111	114.16	100
8302	113.76	CO	113.76	150			8302	113.76	150
0303	112.82	SW	112.82	300			0303	112.82	300
5505	118.07	SW	118.07	150			5505	118.07	150
0210	117.67	FO	117.67	225			0210	117.67	225
9403	108.55	CO	108.55	630			9403	108.55	630
8002	115.3	CO	115.3	300			8002	115.3	300
8002	115.3	CO	115.3	300			8002	115.3	300
9103	117.37	FO	117.37	150			9103	117.37	150
8802	119.81	CO	119.81	300			8802	119.81	300
8802	119.81	CO	119.81	300			8802	119.81	300
6011	117.6	FO	117.6	150			6011	117.6	150
9101	115.07	CO	115.07	150			9101	115.07	150
9506	110.73	CO	110.73	225			9506	110.73	225
9212	114.16	CO	114.16	225			9212	114.16	225
7520	114.16	CO	114.16	225			7520	114.16	225
5507	118.61	CO	118.61	300			5507	118.61	300
7205	114.57	SW	114.57	150			7205	114.57	150
7510	114.98	CO	114.98	225			7510	114.98	225
9402	115.96	CO	115.96	150			9402	115.96	150
7112	110.98	CO	110.98	150			7112	110.98	150
9401	109.98	CO	109.98	680			9401	109.98	680
9511	110.09	CO	110.09	640			9511	110.09	640

Refo	Cover	Func	Invert	Size x	Size y	Shape	Mail	Length	Grad
500	118.64		114.1	400	450		VC	40.05376	1
5105	118.64		116.62	225			VC	45.03776	1 250
5105	118.64		116.62	225			VC	32.21874	1 18
5105	118.64		114.67	375			VC	30.50876	1 268
5008	118.92		114.29	375			VC	24.27171	1
5008	118.92		114.29	375			VC	12.32427	1 247
5008	118.92		114.29	375			VC	12.32427	1 247
5008	118.92		114.29	375			VC	12.32427	1 247
5008	118.92		114.29	375			VC	27.7469	1 247
4317			100				VC	27.74924	
5008	118.67		115.3	300			PVC	18.65647	1 211
5008	118.67		115.3	300			PVC	18.65647	1 211
5008	118.67		115.3	300			PVC	18.65647	1 211
5008	118.67		115.3	300			PVC	18.65647	1 211
5307			100				VC	28.21544	
5008	118.63		113.92	300			VC	20.35256	1 254
5008	117.32		114.98	225			VC	73.34648	1 126
6203	141.08		121.11	225			VC	74.04053	1 176
5304			100				VC	3.65279	
5007	118.77		114.34	375			VC	22.10508	1 246
5104	118.75		116.26	225			VC	32.48169	1 161
5104	118.75		116.26	225			VC	45.47071	1 161
4911	118.35		115.78	225			PVC	37.43524	1 150
4911	118.35		115.78	225			PVC	31.69115	1 151
4911	118.35		115.4	300			PVC	31.69115	1 151
4908	118.73		115.4	300			PVC	31.69115	1 151
4908	118.73		115.4	300			PVC	18.6866	1 211
5001	118.47		114.91	375			VC	39.28417	1 262
5001	118.47		114.91	375			VC	39.28417	1 262
4305			100				VC	10.2558	
5008	118.59		114.45	375			VC	16.57514	1 237
5008	118.59		114.45	375			VC	16.57514	1 237



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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Reho Cover Func Invert Size x Size y Shape Mat Length Grad

Reho Cover Func Invert Size x Size y Shape Mat Length Grad

LEGEND

Abandoned	Foul	Surface Water	Combined	Public Sewer
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----

All point assets follow the standard colour convention:
red - combined
brown - foul
blue - surface water
purple - overflow

Manhole	Side Entry Manhole
Head of System	Outfall
Extent of Survey	Screen Chamber
Roading Eye	Inspection Chamber
Inlet	Bifurcation Chamber
Discharge Point	Lamp Hole
Vortex	T Junction / Saddle
Penstock	Catchpit
Washout Chamber	Valve Chamber
Valve	Vent Column
Air Valve	Vortex Chamber
Non Return Valve	Penstock Chamber
Skewway	Network Storage Tank
Gully	Sewer Overflow
Cascade	We Treatment Works
Flow Meter	We Pumping Station
Hatch Box	Septic Tank
Oil Interceptor	Control Kiosk
Summit	
Drop Shaft	Change of Characteristic
Orifice Plate	

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 Culvert
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	Polycarbonate
PF	Plush Fibre
MAC	Masonry, Coursed
MAR	Masonry, Random
U	Unspecified

Address or Site Reference:

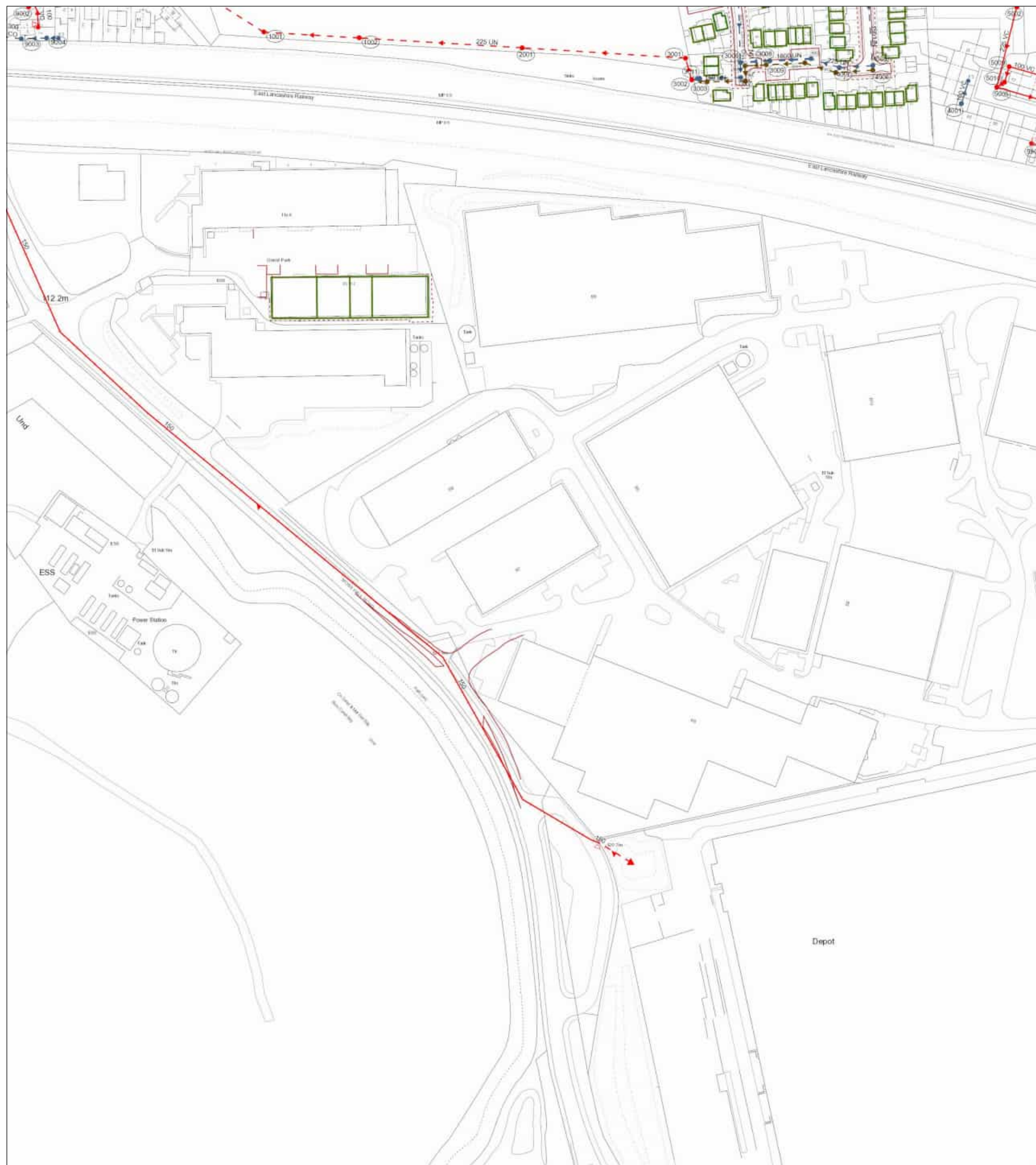
Heywood Business Park Heywood Business Park,
Heywood,

OS sheet SD8309SW
Number:
Scale: 1:1250 Date: 09/09/2020
Nodes: 535
Sheet: 3 of 8

Printed by: Property Searches

SEWER
RECORDS





Year	Cover	Func	Invert	Size	x size	Shape	Matt	Length	Grad
5609		CO		100			VC	8.950601	
5610		CO		100			VC	8.950601	
5602		CO	0	225			VC	4.554434	
5603		CO	0	225			VC	4.554434	
5904		CO		300			VC	7.884433	
5905		CO		300			VC	7.884433	
5903		SW	300				CO	22.39272	
5904		SW	300				CO	5.079548	
5910		SW	300				CO	5.079554	
4001		SW	100				VC	13.02445	
4002		SW	100				VC	13.02445	
3002	111.68	CO	100.68	155			VC	18.00448	117.79
3003	111.68	CO	100.68	155			VC	18.00448	117.79
3005	121.5	SW	109.65	225			VC	39.60008	117.172
3006	121.5	SW	109.65	225			VC	39.60008	117.172
3007		SW	119.19	225			VC	38.10003	118.168
9004		SW					CO	13.90691	
9005		SW	115.64	225			VC	89.59255	117.172
4005	121.35	CO	119.19	155			VC	17.76206	118.168
4006	121.35	CO	119.19	155			VC	17.76206	118.168
3001	41.25	SW	116.19	225			VC	89.66122	118.163
3003	119.4	CO	117.15	155			VC	8.520172	118.39
3004	120.26	CO	118.03	155			VC	11.71163	118.39
3005	119.4	CO	117.15	155			VC	21.06262	118.39
3006	120.26	CO	118.03	155			VC	22.78133	118.39
3008	128.57	CO	115.1	225			VC	52.32527	118.64
3009	128.57	CO	115.1	225			VC	18.38983	118.67
3008	128.52	SW	116.48	1800			VC	16.00016	118.40
4007	121.79	SW	119.43	225			VC	22.63467	118.40
4004	120.9	CO	119.46	155			VC	21.02544	118.40
4005	121.79	SW	120.42	225			VC	20.4241	118.40
4007	121.64	SW	120.42	225			VC	15.11863	118.40
4008	121.64	SW	120.42	225			VC	4.400172	118.40
3005	119.3	CO	118.46	155			VC	12.41516	117.77
3005	119.3	CO	118.46	155			VC	8.20367	117.77
3006	119.3	CO	118.46	155			VC	65.76036	117.77

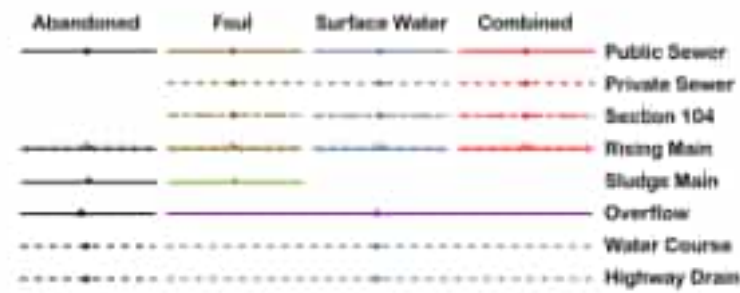


United Utilities
helping life flow smoothly



Refo	Cover	Func	Inert	Size	z	Shape	Matl	Length	Grad	Refo	Cover	Func	Inert	Size	z	Shape	Matl	Length	Grad
6906				CO	150		VC	8.002024											
6902	123.45	CO	118.73	300		CO	23.08879	CO											
5007	122.11	CO	119.38	225		VC	41.4367	1 in 244											
5010				CO	100		VC	5.079654											
5010				CO	100		VC	5.079654											
9005	122.5	CO	118.25	300		VC	36.2154	1 in 86											
9005	122.5	CO	118.25	300		VC	36.2154	1 in 86											
5015				CO	100		VC	15.39401											
7902				CO	0	675	CO	17.11724											
0008	122.65	CO	117.99	225		VC	12.83806												
0003	120.93	CO	117.99	375		VC	18.24820	1 in 73											
0003	120.93	CO	117.99	375		VC	18.24820	1 in 73											
7004	124.92	CO	118.19	675		VC	54.02026	1 in 142											
0009				CO	100		VC	24.87674											
0009				CO	100		VC	24.87674											
6903				CO	0	375	VC	24.18677											
9003	119.47	SW	117.6	225		CO	32.36540	1 in 151											
0004	123.34	CO	120.65	375		VC	34.36568	1 in 382											
0004	123.34	CO	120.65	375		VC	34.36568	1 in 382											
5014				CO	100		VC	4.513749											
7002				CO	0	225	VC	57.31402											
0915				CO	100		VC	13.41098											
0915				CO	100		VC	13.41098											
5009				CO	100		VC	8.969061											
5009				CO	100		VC	8.969061											
9801				CO	150		VC	21.436											
9801				CO	150		VC	21.436											
9004	124.41	FO	121.9	225		CO	80.895	1 in 124											
5904				CO	150		VC	7.888433											
5904				CO	150		VC	7.888433											
6001				CO	0	600	CO	50.8902											
7003	124.97	CO	120.13	600		CO	46.04346	1 in 177											
6904	124.33	CO	122.08	225		VC	28.07154												
5003	123.62	CO	120.37	225		VC	34	1 in 179											
6901	120.38	SW	12	600		CO	14.37782	1 in 65											
5001	120.25	SW	117.94	225		VC	33.37654	1 in 115											
5005	124.3	SW	12	333		VC	37.46333	1 in 69											
5004	123.17	CO	119.33	225		CO	21.06502	1 in 141											
7005	125.48	CO	117.1	225		VC	49.64877												
9902	119.21	CO	116.79	300		CO	15.29706	1 in 109											
9902	119.21	CO	116.79	300		CO	15.29706	1 in 109											
0006	122.34	CO	118.85	375		VC	54.23099	1 in 83											
0006	122.34	CO	118.85	375		VC	54.23099	1 in 83											
5002				CO	0	225	VC	45.35416											
5002				CO	0	225	VC	45.35416											
9910				SW	100		VC	6.676227											
0801	118.63	CO	115.6	675		CO	87.919	1 in 212											
0801	118.63	CO	115.6	675		CO	87.919	1 in 212											
9904	118.23	CO	116.12	675		VC	70.21396	1 in 140											
9006				CO	100		VC	3.689362											
9006				CO	100		VC	3.689362											
9909				CO	150		VC	7.507593											
4001				SW	100		VC	13.02645											
4001				SW	100		VC	13.02645											
6002	122.78	CO	118.95	300		CO	39.35754	1 in 187											
5005	121.5	CO	119.65	225		VC	39.96008	1 in 172											
5005	121.5	CO	119.65	225		VC	39.96008	1 in 172											
8901				CO	0	675	CO	100.8752											
8901				CO	0	675	CO	100.8752											
9801				CO	150		VC	47.25313											
9801				CO	150		VC	47.25313											
5008				CO	100		VC	36.10003											
5013				CO	150		VC	13.95022											
7901	124.17	CO	118.42	375		VC	11	1 in 69											
7903	122.98	CO	117.38	675		CO	91.21404												

LEGEND



All point assets follow the standard colour convention:

red - combined blue - surface water
brown - fault purple - overflow

- | | | | |
|---|------------------|---|--------------------------|
|  | Manhole |  | Side Entry Manhole |
|  | Head of System |  | Outfall |
|  | Extent of Survey |  | Screen Chamber |
|  | Rushing Eye |  | Inspection Chamber |
|  | Inlet |  | Bifurcation Chamber |
|  | Discharge Point |  | Lamp Hole |
|  | Vortex |  | T Junction / Saddle |
|  | Penstock |  | Catchpit |
|  | Washout Chamber |  | Valve Chamber |
|  | Valve |  | Vent Column |
|  | Air Valve |  | Vortex Chamber |
|  | Non Return Valve |  | Penstock Chamber |
|  | Sewerage |  | Network Storage Tank |
|  | Outlet |  | Sewer Overflow |
|  | Cascade |  | We Treatment Works |
|  | Flow Meter |  | We Pumping Station |
|  | Hatch Box |  | Septic Tank |
|  | Oil Interceptor |  | Control Kiosk |
|  | Summit | | |
|  | Drop Shaft |  | Change of Characteristic |
|  | Orifice Plate | | |

MANHOLE FUNCTION

FO	Fow
SW	Swat
CO	Con
OV	Ove

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	Horsehoe
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 Culvert
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	Fiberglass
MAC	Masonry, Coursed
MAR	Masonry, Random
U	Unspecified

Address or Site Reference:

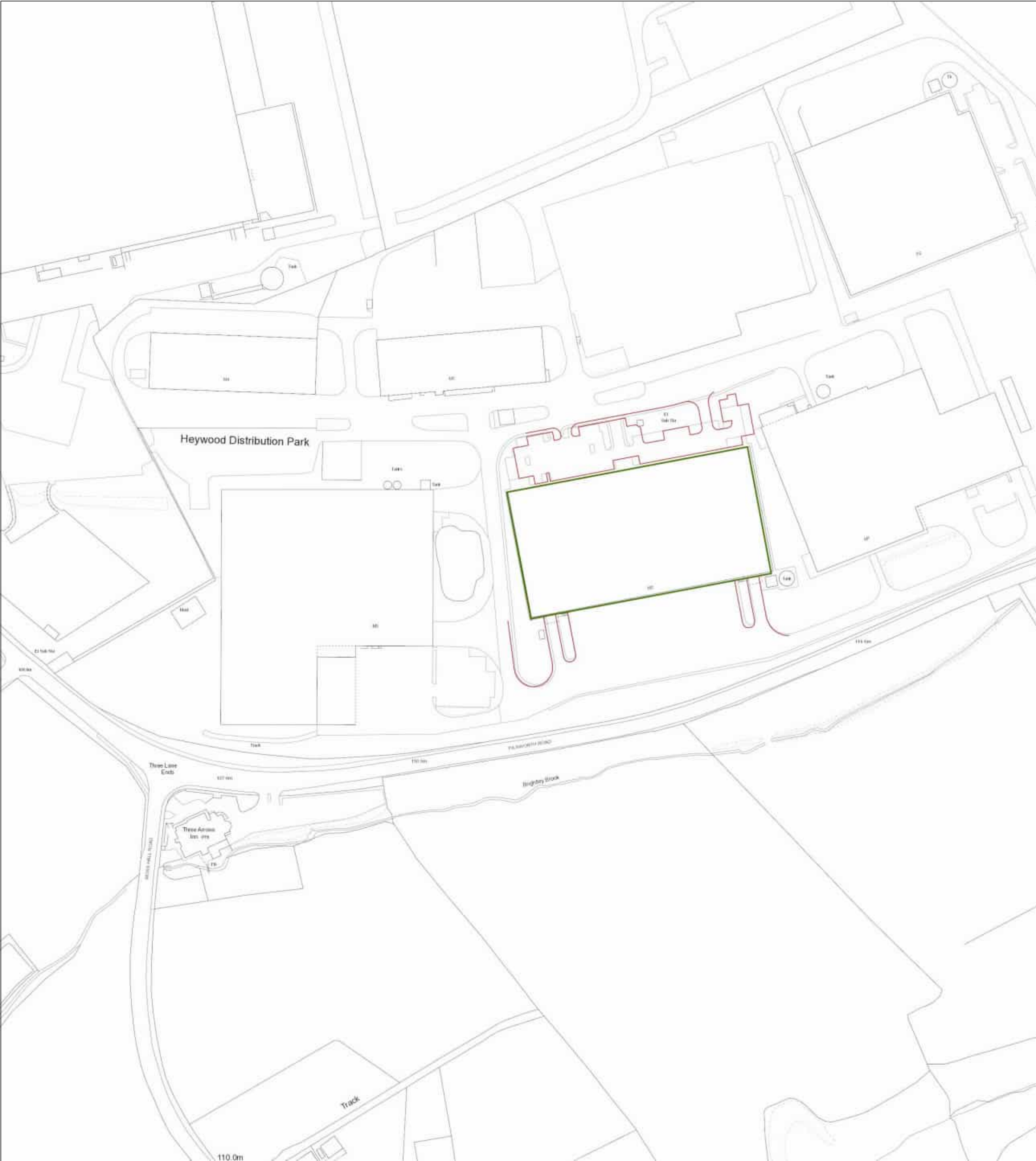
Heywood Business Park Heywood Business Park,
Heywood,

OS sheet SD8309NE
Number:
Scale: 1:1250 Date: 09/09/2020
Nodes: 535
Sheet: 5 of 8

Printed by: Property Searches

SEWER RECORDS





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Reho Cover Func Invert Size x Size y Shape Mat Length Grad

Reho Cover Func Invert Size x Size y Shape Mat Length Grad

LEGEND

Abandoned	Foul	Surface Water	Combined	Public Sewer
-----	-----	-----	-----	-----
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-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----
-----	-----	-----	-----	-----

All point assets follow the standard colour convention:
red - combined
blue - surface water
brown - foul
purple - overflow

- Manhole

Head of System

Extent of Survey

Roading Eye

Inlet

Discharge Point

Vortex

Penstock

Washout Chamber

Valve

Air Valve

Non Return Valve

Skidaway

Gully

Cascade

Flow Meter

Hatch Box

Oil Interceptor

Summit

Drop Shaft

Office Plate
- Side Entry Manhole

Outfall

Screen Chamber

Inspection Chamber

Bifurcation Chamber

Lamp Hole

T Junction / Saddle

Catchpit

Valve Chamber

Vent Column

Vortex Chamber

Penstock Chamber

Network Storage Tank

Sewer Overflow

We Treatment Works

We Pumping Station

Septic Tank

Control Kiosk

Change of Characteristic

MANHOLE FUNCTION

- FQ Foul
- SW Surface Water
- CO Combined
- OV Overflow

SEWER SHAPE

- CQ Circular
- EQ Egg
- OV Oval
- FT Flat Top
- RE Rectangular
- SQ Square
- TR Trapezoidal
- AR Arch
- BA Barrel
- HO Horseshoe
- UN Unspecified

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 Culvert
- PSC Plastic / Steel Composite
- GRC Glass Reinforced Plastic
- DI Ductile Iron
- PVC Polyvinyl Chloride
- CI Cast Iron
- SI Spun Iron
- ST Steel
- VC Vitified Clay
- PP Polypropylene
- PF Fibre Glass
- MAC Masonry, Coursed
- MAR Masonry, Random
- U Unspecified

Address or Site Reference:

Heywood Business Park Heywood Business Park,
Heywood,

OS sheet Number: SD8309SE

Scale: 1:1250

Date: 09/09/2020

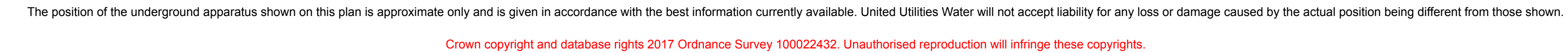
Nodes: 535

Sheet: 6 of 8

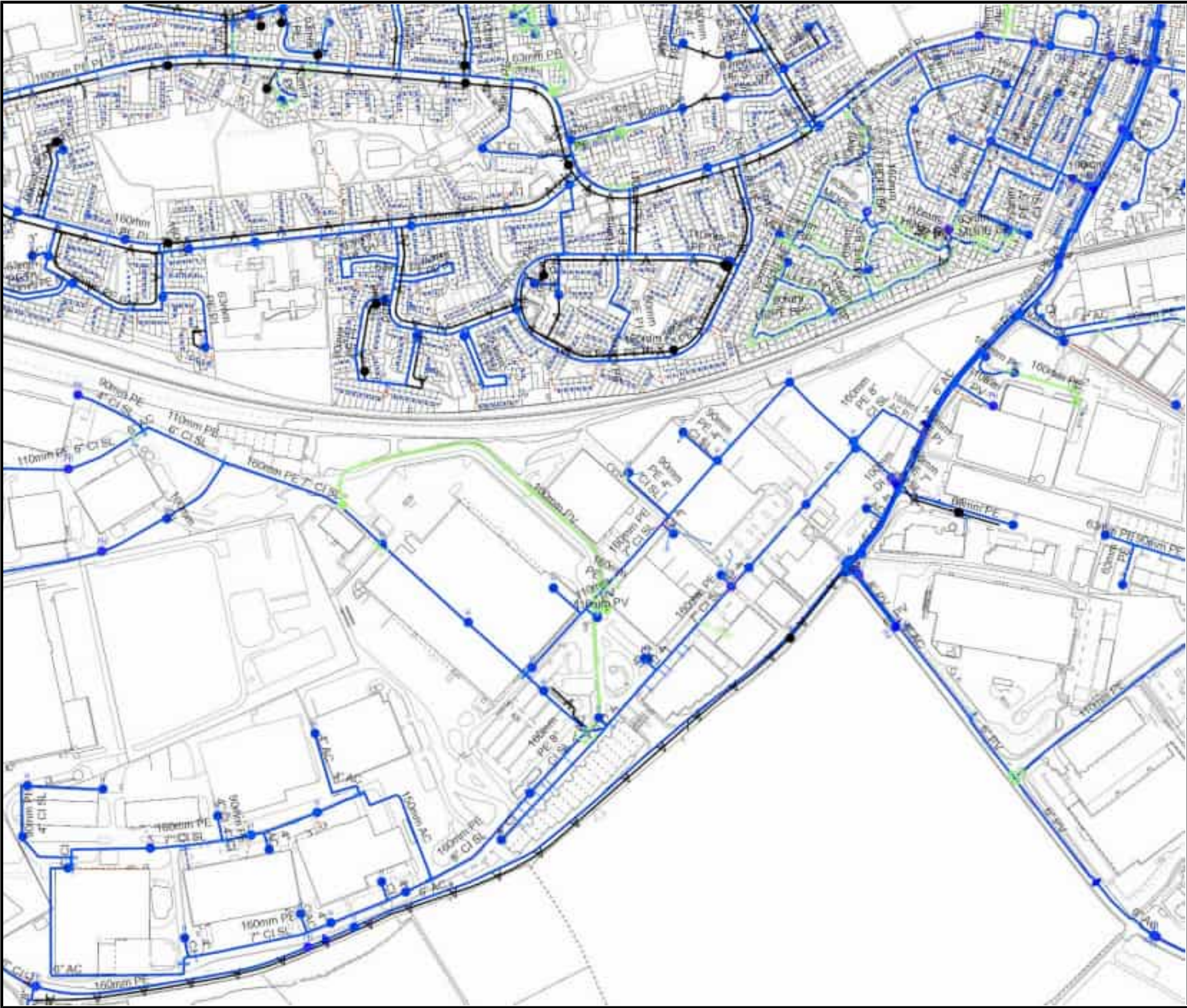
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SEWER
RECORDS





SEWER RECORDS  United Utilities



**WATER MAIN
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Address or Site Reference

Heywood Business Park Heywood
Business Park,
Heywood,

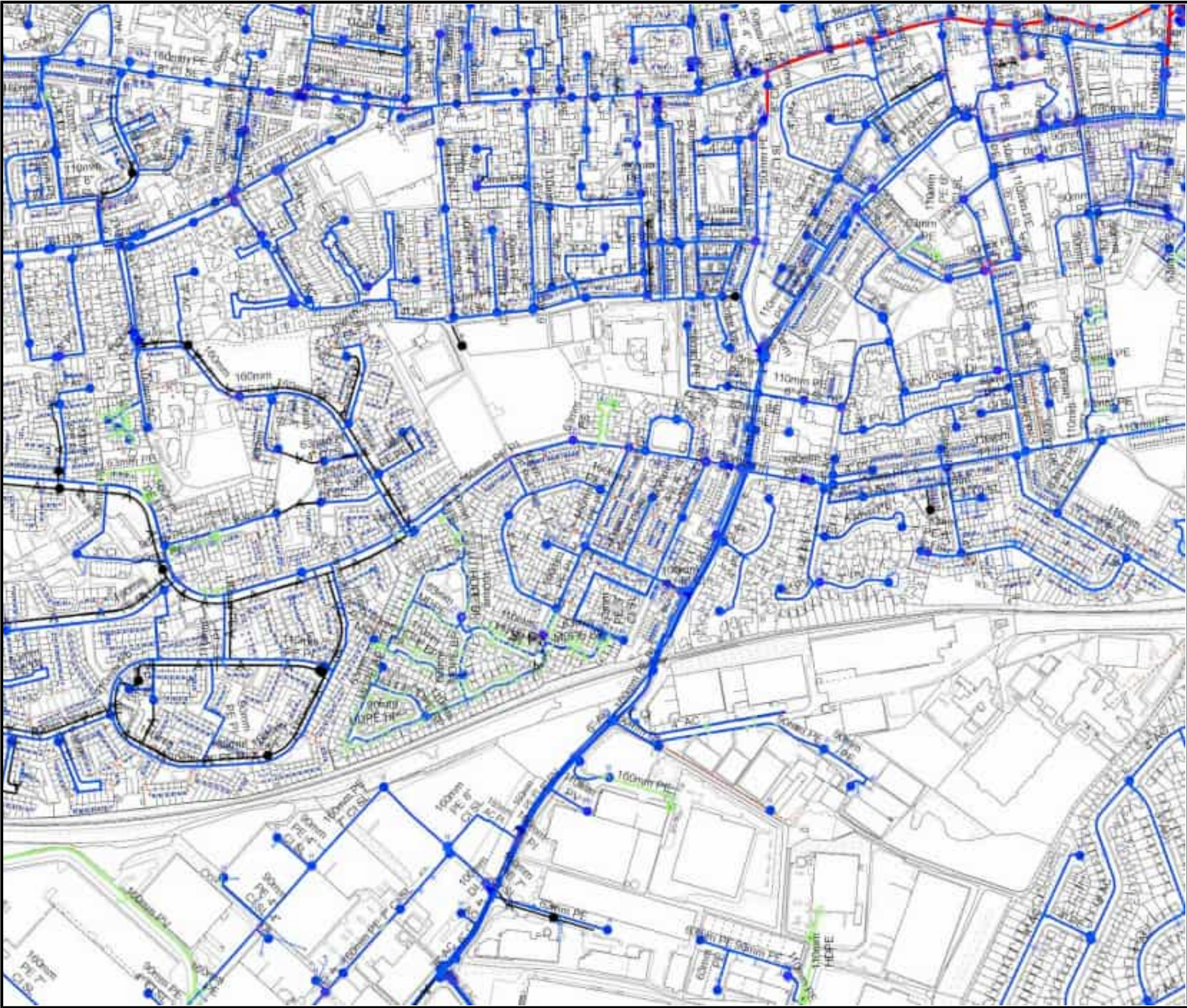
SD8409NW

Scale: 1:5000
Date: 09/09/2020

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**WATER MAIN
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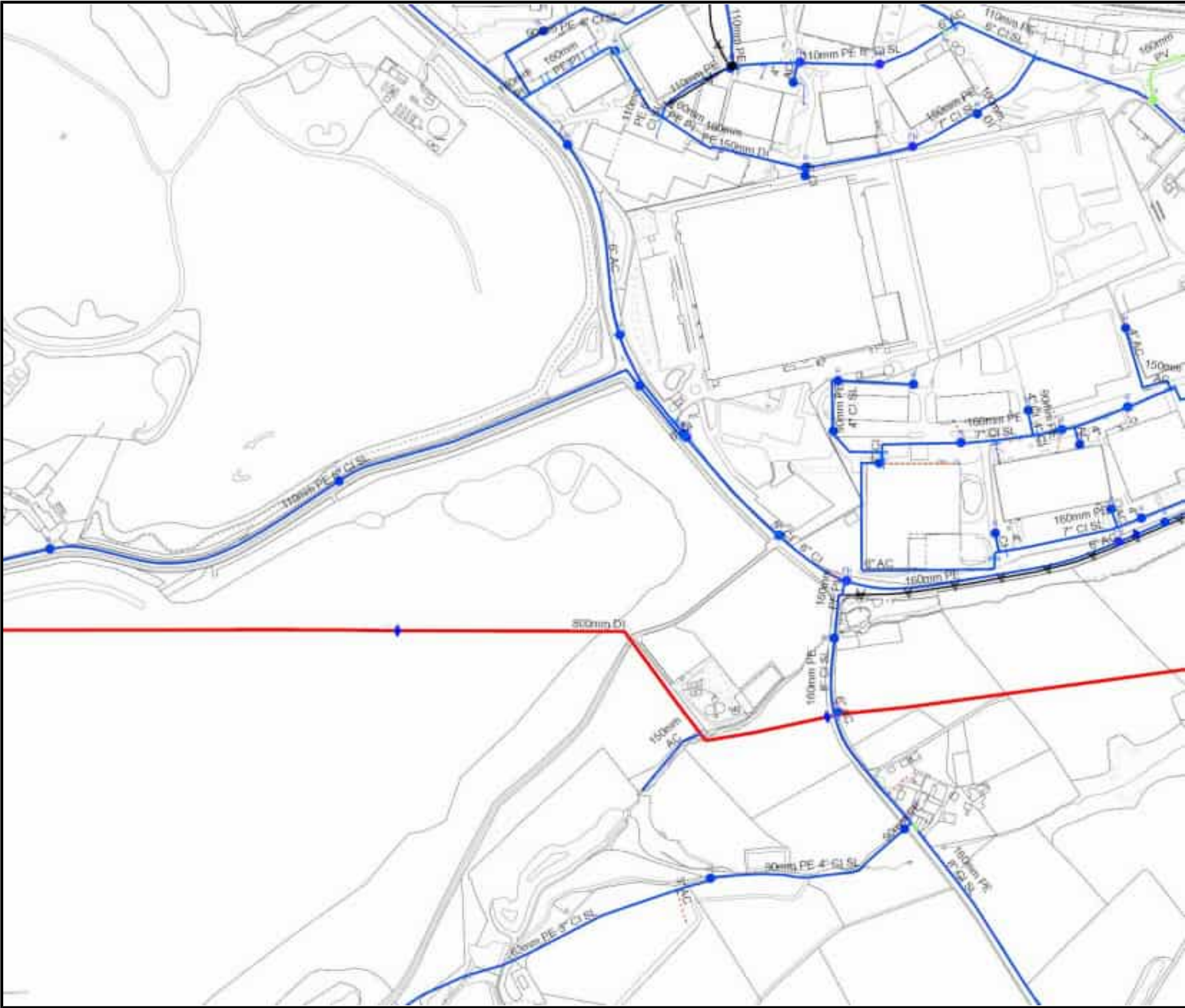
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SD8410SE
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Date: 09/09/2020

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Heywood,

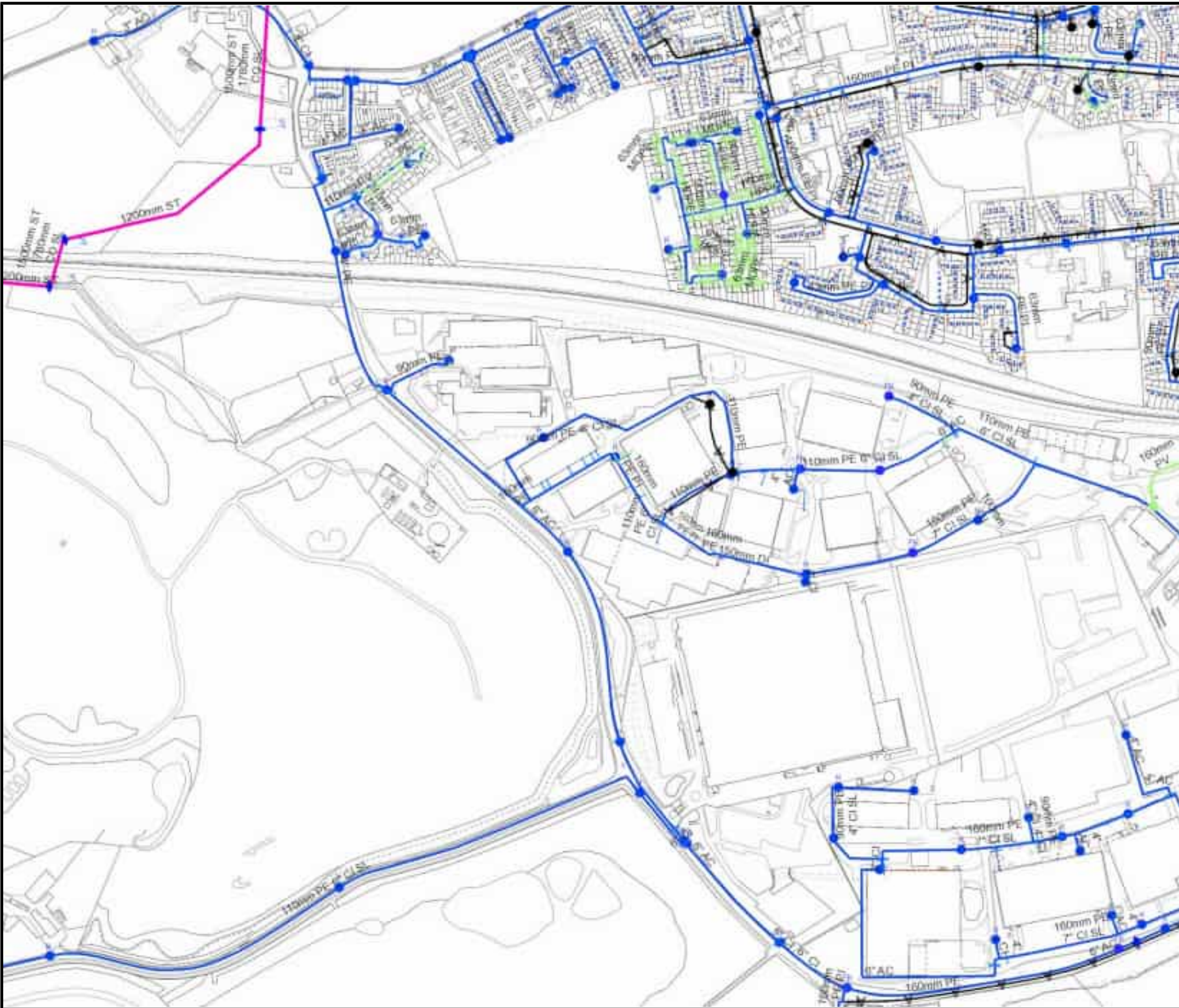
SD8309SW

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Business Park,
Heywood,

Heywood Business Park Heywood
Business Park,
Heywood,

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Date: 09/09/2020

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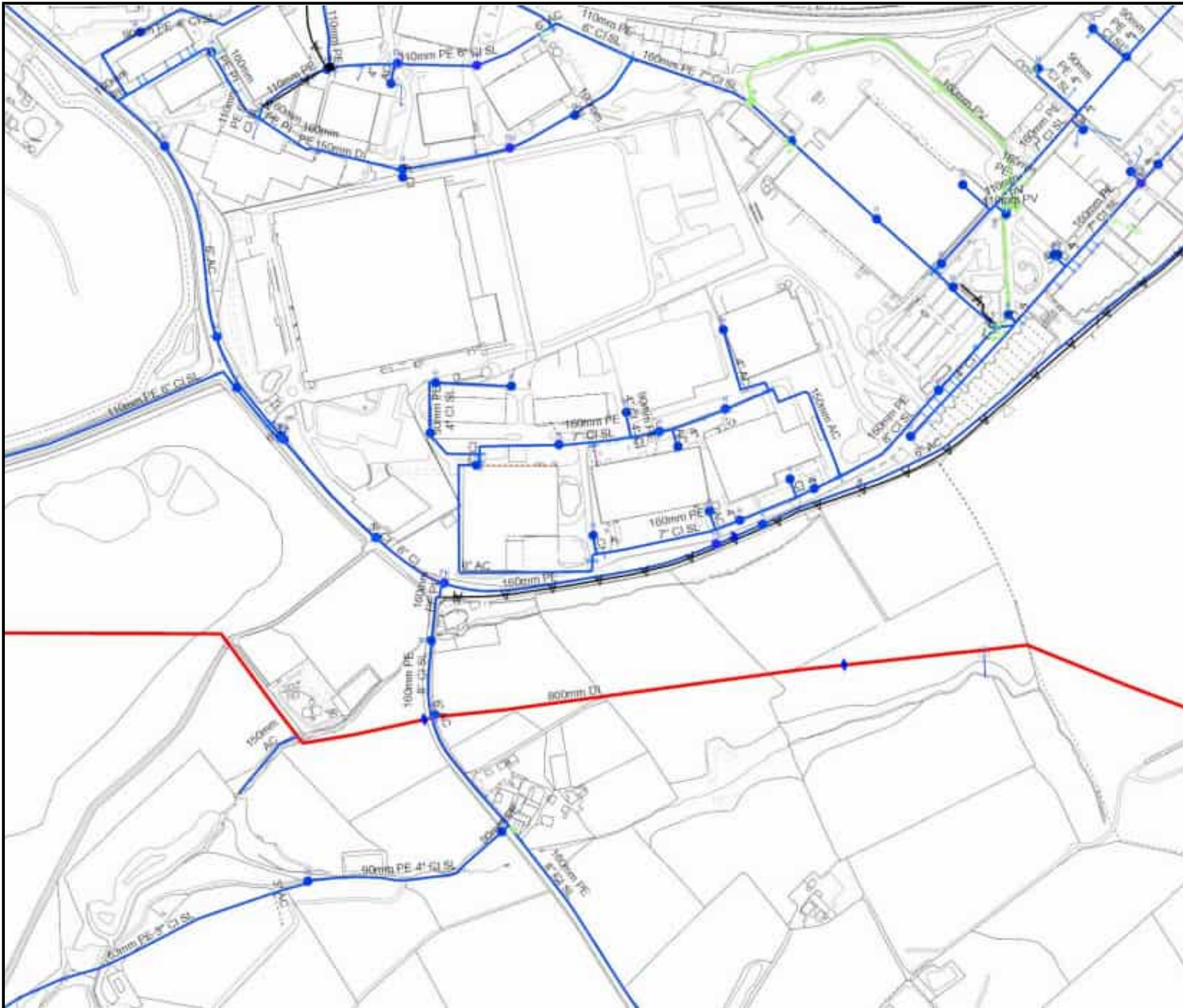
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Business Park,
Heywood,

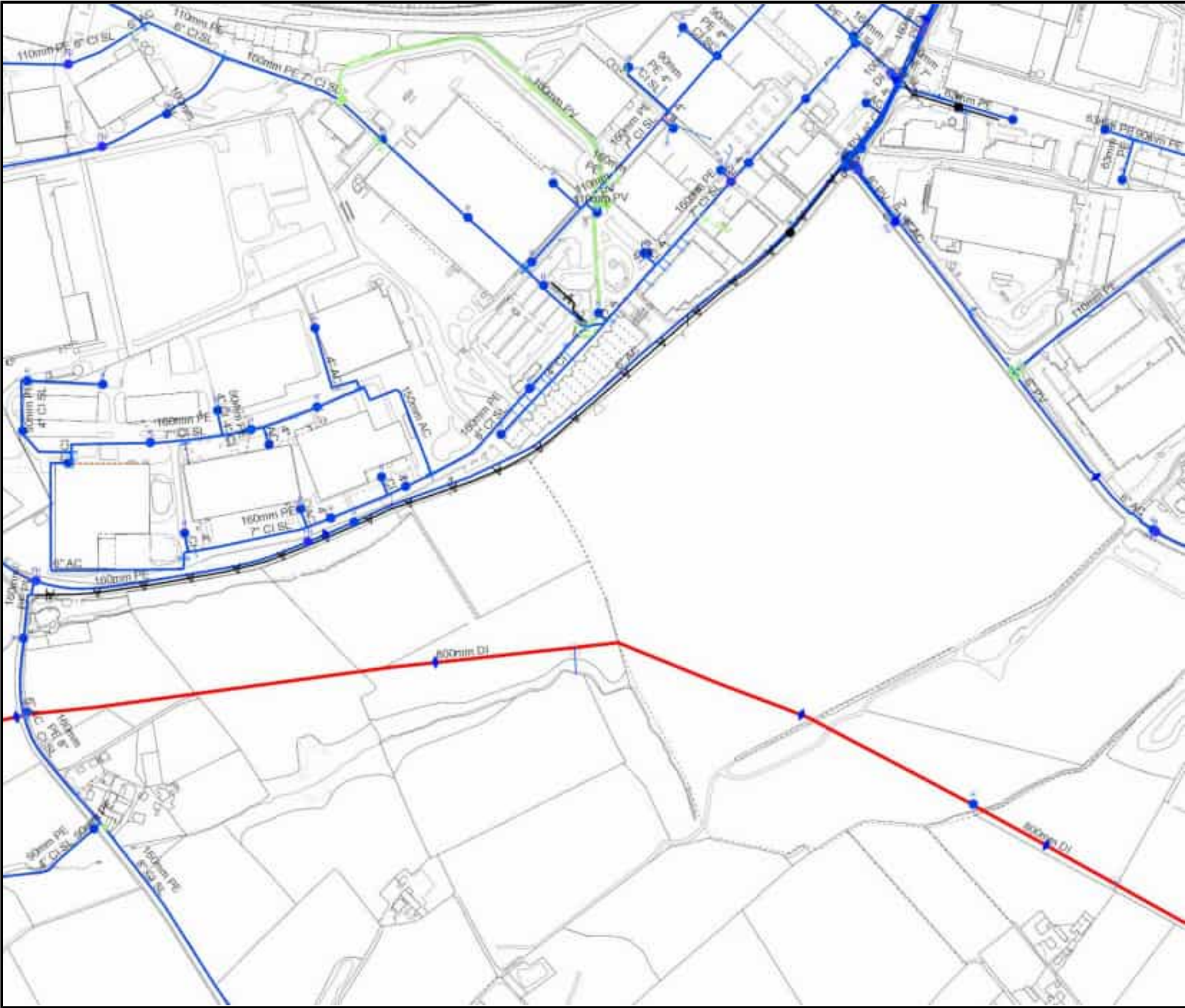
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Date: 09/09/2020

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SD8409NE

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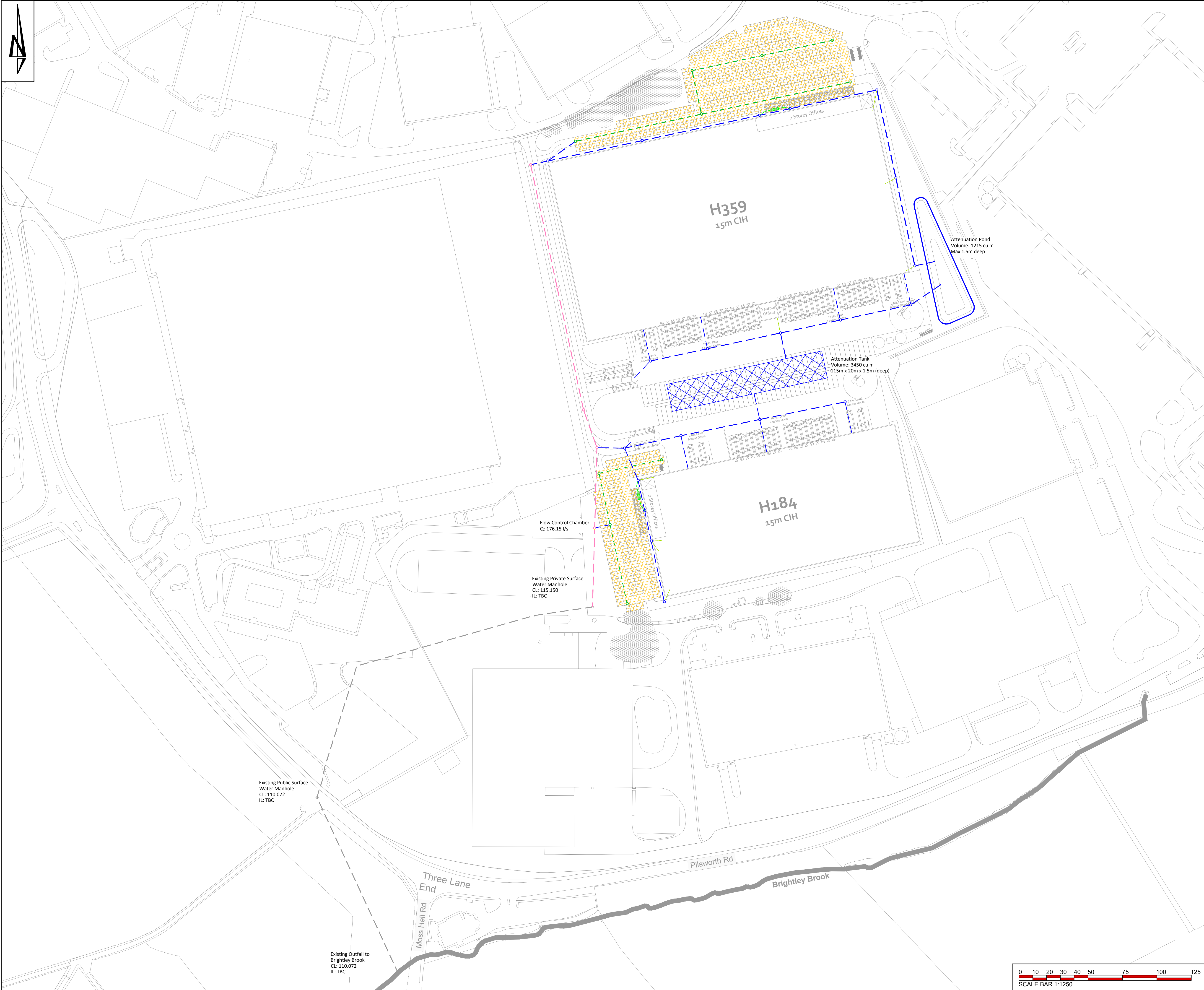
Date: 09/09/2020

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APPENDIX D – OUTLINE DRAINAGE STRATEGY



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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

CONSTRUCTION

MAINTENANCE

DEMOLITION

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT

Site Wide Surface Water Sewer

Site Wide Surface Water Manhole

Surface Water Sewer

Surface Water Manhole

Siphonic Drainage

Surface Water Attenuation Tank

Perforated Pipe

Permeable Paving Catchpit

Permeable Paving

Downstream Defender

Rain Water Harvesting Tank

Existing Public Surface Water Manhole

Existing Public Surface Water Sewer

P02

29.07.2024

RO

Client logo updated, tank reshaped

JW

P01

14.06.2024

RO

Preliminary

JW

REV

DATE

BY

DESCRIPTION

CHKD

Burrows Graham

North Office:
5 Ambassador Place, Stockport Road,
Attrincham WA15 8DB
Tel: +44 (0)161 804 8046
South Office:
Buckland House, Dower Mews,
High Street, Berkhamsted HP4 2BL
Tel: +44 (0)161 804 8046

CLIENT

INDURENT

PROJECT

HEYWOOD

DRAWING TITLE

OPTION 2
OUTLINE DRAINAGE STRATEGY

BGL PROJECT NUMBER

30042

DRAWING STATUS

PRELIMINARY

OFFICE

NORTH

SCALE @ A1

1:1250

DATE

14.06.2024

DRAWN BY

RO

CHECKED BY

JW

DRAWING No

30042-BGL-XX-XX-SK-C-00009

REV

P02

APPENDIX E – DRAINAGE INSPECTION & MAINTENANCE SCHEDULE

Maintenance Schedule	Required Action	Typical Frequency
Below Ground Drainage Pipes, Manholes, Outfall headwalls, ditches, trash screens etc		
Regular Maintenance	Lift covers and inspect manholes for evidence of debris and silt deposits and evidence of blockages (standing water). Carry out CCTV survey if required. Inspect ditches, trash screens, headwalls etc. and clear debris and silt deposits to avoid restriction to flow.	Quarterly or following significant rainfall events.
Remedial Actions	High pressure jetting and/or remove minor blockages and silt build up	As required – 20% loss of pipe cross-section
	Replace broken access covers, remove major blockages, repair structurally defective pipework	As required
Flow control chamber		
Regular Maintenance	Lift covers and inspect chamber for evidence of debris and silt deposits and evidence of blockages. Test bypass door operating correctly.	Quarterly or following significant rainfall events.
Remedial Actions	High pressure jetting and or remove minor blockages and silt build up	As required
	Replace broken access covers, remove major blockages, repair/replace defective flow control devices	As required
Linear channel drains and gullies		
Regular Maintenance	Lift access covers and inspect for silt/debris accumulation	Quarterly or following significant rainfall events.
Remedial Actions	Replace broken access covers, gratings	Annually
	High pressure jetting and/or remove minor blockages and silt build up	As required
Rainwater pipes		
Regular Maintenance	Inspect rainwater goods for evidence of leaking pipework	Monthly (or as required)
Occasional Maintenance	Remove rodding eyes and carry out high pressure jetting to remove any debris	Quarterly
Remedial Actions	Replace cracked / leaking pipework	As required
Ponds		
Regular Maintenance	Remove litter and debris	Monthly (or as required)
	Cut the grass – public areas	Monthly (during growing season)

Maintenance Schedule	Required Action	Typical Frequency
	Cut the meadow grass	Half yearly (spring, before nesting season, and autumn)
	Inspect marginal and bankside vegetation and remove nuisance plants (for first 3 years)	Monthly (at the start, then as required)
	Inspect inlets, outlets, banksides, structures, pipework etc for evidence of blockage and/or physical damage	Monthly
	Inspect water body for signs of poor water quality	Monthly (May – October)
	Inspect silt accumulation rates in any forebay and in main body of the pond and establish appropriate removal frequencies; undertake contamination testing once some build-up has occurred, to inform management and disposal options	Half yearly
	Check any mechanical devices, e.g. penstocks	Half yearly
	Hand cut submerged and emergent aquatic plants (at minimum of 0.1m above pond base; include max 25% of pond surface)	Annually
	Remove 25% of bank vegetation from water's edge to a minimum of 1m above water level	Annually
	Tidy all dead growth (scrub clearance) before start of growing season (Note: tree maintenance is usually part of overall landscape management contract)	Annually
	Remove sediment from any forebay.	Every 1 to 5 years, or as required
	Remove sediment and planting from one quadrant of the main body of ponds without sediment forebays.	Every 5 years, or as required
Occasional Maintenance	Remove sediment from the main body of big ponds when pool volume is reduced by 20%	With effective pre-treatment, this will only be required rarely, eg every 25–50 years
Remedial actions	Repair erosion or other damage	As required
	Replant, where necessary	As required
	Aerate pond when signs of eutrophication are detected	As required

Maintenance Schedule	Required Action	Typical Frequency
	Realign rip-rap or repair other damage	As required
	Repair / rehabilitate inlets, outlets and overflows	As required
Attenuation Tank (Maintenance activities recommended by the manufacturer should be added to this schedule where not included)		
Regular maintenance	Remove litter and debris and inspect for sediment, oil and grease accumulation.	Six monthly
	Change the filter media	As recommended by manufacturer
Remedial actions	Replace malfunctioning parts or structures	As required
Monitoring	Inspect for evidence of poor performance	Six monthly
	Inspect sediment accumulation rates and filter media and establish appropriate replacement frequencies.	Monthly during first half of the year, then every six months