AVISON YOUNG

Flood Risk Assessment

Birthwaite Business Park, Huddersfield Road, Darton, Barnsley, S75 5JS

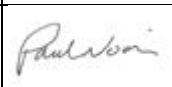
Premdor Crosby Limited

October 2023

Preface

Site Address:	Birthwaite Business Park, Huddersfield Road, Darton, Barnsley, S75 5JS
NGR:	E: 430430 N: 410340
Site Use:	Potential development land (currently undeveloped)
Proposed Use	New warehouse and car parking
Site Area:	Approximately 5 Hectares (12.35 Acres)
Date of Inspection:	12th June 2021
Avison Young Contact:	David Hoppe DD: 0121 609 8828 Email: david.hoppe@avisonyoung.com
Instruction Number:	01C100385

Report Control:

Status:		**Date:**
Version 2 – report updated ready for planning application submission with site layout and reference to the drainage strategy completed by Alan Wood Partners		October 2023
Version 1		September 2021
Prepared By:		David Hoppe BSc MCIWEM C.WEM FRGS MEPS Flood Risk & Resilience Manager
Checked and Authorised By:		Paul Nixon BSc MSc LLM Director
For and on behalf of Avison Young (UK) Limited		
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Contents

Appendices

1. Scope of Instruction and Brief

Objectives

1.1 Instructions were received from Premdor Crosby Limited (the Client) to undertake a Flood Risk Assessment to support a planning application for two new warehouses with associated car parking within an undeveloped parcel of land, located within the eastern portion of Birthwaite Business Park.

Development

1.2 The proposed development includes the erection of 2no. B2 / B8 (11,010 sq.m GIA) employment units with access works, parking, service yards, pallet store, relocation of an existing security hut, vehicle canopy, hard and soft landscaping and associated works.

1.3 A copy of the site layout and proposed site levels can be found in **Appendix I.**

Data Sources

1.4 This report is based upon a detailed review of the following readily available documentation:

- Barnsley Metropolitan Borough Council, Preliminary Flood Risk Assessment, July 2011;
- Barnsley Metropolitan Borough Council Strategic Flood Risk Assessment, Level 1, September 2010;
- Barnsley Metropolitan Borough Council, Local Flood Risk Management Strategy, September 2017; and
- Yorkshire Water's sewer map.

1.5 Regulatory enquiries with the Environment Agency, Barnsley Metropolitan Borough Council (Lead Local Flood Authority) and Yorkshire Water have been undertaken to obtain historic flood records and an understanding of the local flood risk (if any).

1.6 The findings and opinions conveyed in this report are based on information obtained from a variety of sources as detailed in the report and which Avison Young assumes to be reliable but has not been independently confirmed. Therefore, Avison Young cannot and does not guarantee the authenticity or reliability of third-party information it has relied upon.

Report Preparation

1.8 The Government's National Planning Policy Framework (NPPF) requires a Flood Risk Assessment to be submitted in support of planning applications in areas with elevated risk of flooding and/or for sites greater than 1 hectare in area.

1.9 Therefore, this report has been prepared to assess the requirements of the NPPF through:

- Assessing whether the proposed development is likely to be affected by flooding;
- Assessing whether the proposed development is appropriate in the suggested location; and
- Proposing measures to mitigate any flood risk identified, to confirm that the proposed development and occupants would be safe, whilst ensuring that flood risk would not be increased elsewhere.

2. Site Location

2.1 The following site location plan and table provides a summary of the site's location and surrounding land uses.

Item	Description	
Site Location	The property is located off the A637 Huddersfield Road and lies immediately to the west of Junction 38 Business Park in Darton, South Yorkshire. Site location and layout plans are provided below.	
Surrounding Land Uses	North	Premdor Crosby offices and factory
	East	Junction 38 Business Park and M62 motorway beyond
	South	A637 Huddersfield Road
	West	Undeveloped land with Birthwaite Hall beyond

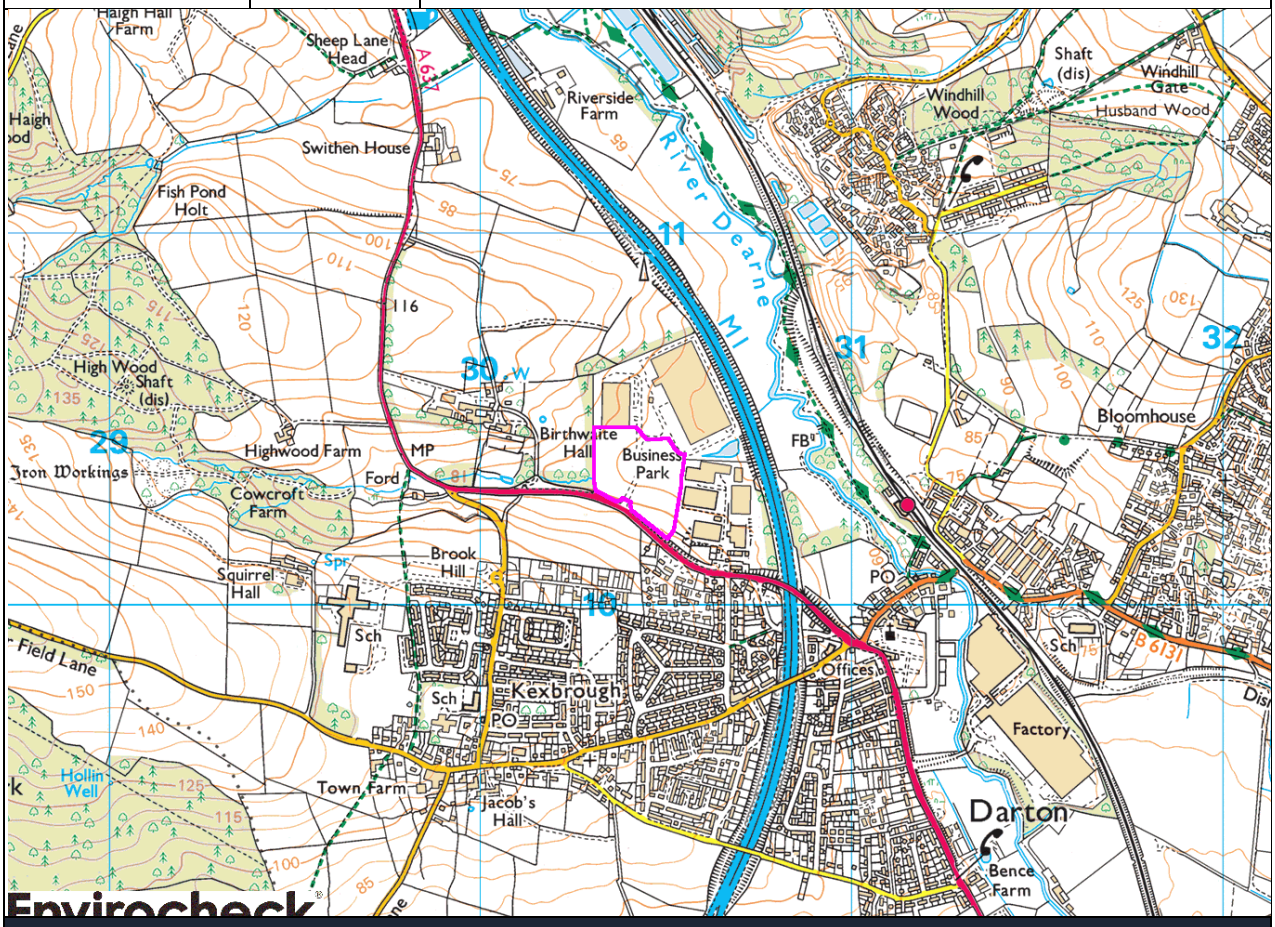


Figure 1: Site Location Plan (boundaries shown are indicative only)

3. Site Setting

3.1 The following site layout plan and table provides a summary of the site's condition and setting.

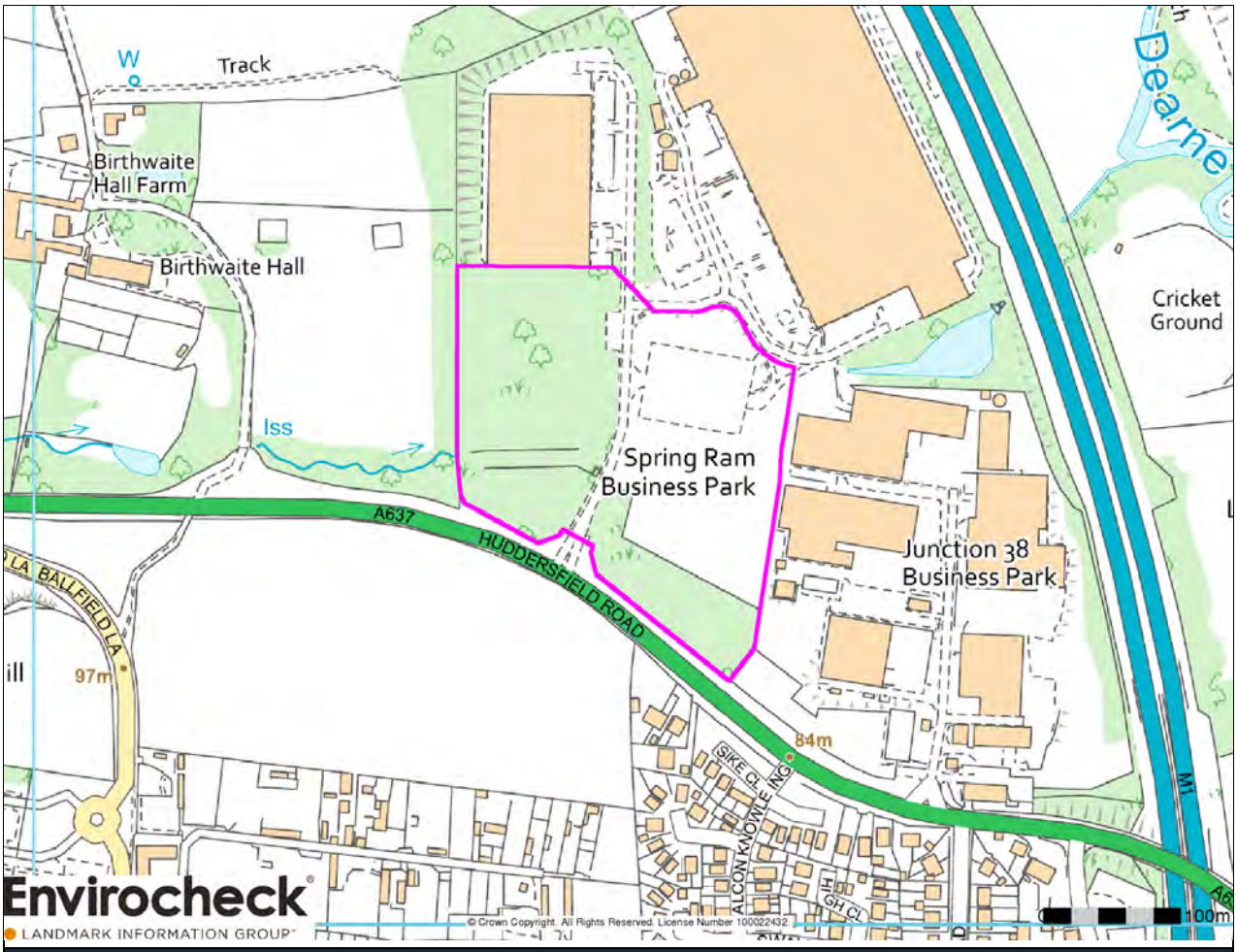
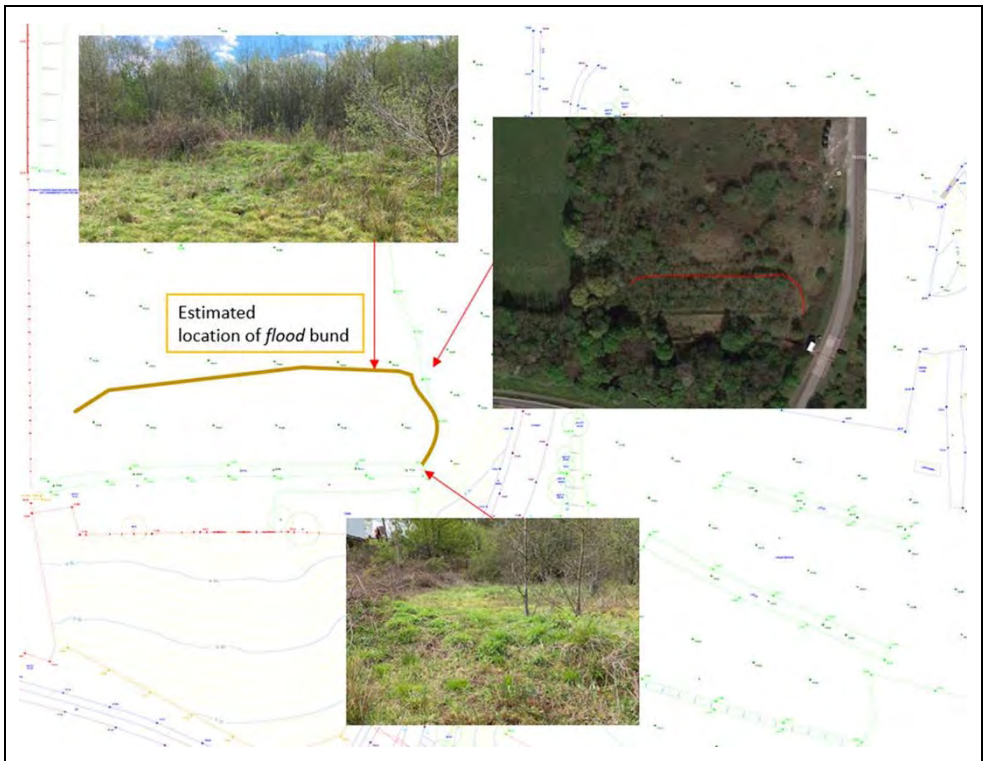


Figure 2: Site Layout Plan (boundaries shown are indicative only)

Item	Description
General Description	The development site measures approximately 5.0 hectares/12.35 acres in total and is covered primarily by scrub woodland in the east and west with an area of concrete hardstanding used for vehicle parking in the north east. The two plots are currently split by the main site access road leading from Huddersfield Road to the south. <u>Western Parcel of land</u> The land to the west of the access road was covered in scrub vegetation, sedges and mature trees. The ground surface was marshy and waterlogged. An unnamed watercourse enters the site on the western boundary and flows in an open channel for approximately 5m before it enters a 1050mm diameter culvert which runs beneath the southern portion of the western parcel of land, access road and lorry park before becoming an open channel once more before discharging into a large attenuation pond located adjacent to the M1 in the east.

Item	Description
General Description (Continued)	Eastern Parcel of land The land to the east of the access road is split to the north by concrete hardstanding in fair condition, used for car parking and the south, by scrub vegetation, sedges and mature trees. Within the southern portion the ground surface was also marshy and waterlogged. In this area were a number of rectangular shaped pits that were holding surface water.
Topography	A topographical survey of the site has been carried out by Level Turner Cowdell in May 2021 (Ref 11-16221). In summary: *Western Parcel of land* The survey indicates that this parcel of land is generally flat with ground levels ranging from 70.50 to 70.60m AOD. However, the southern boundary is marked by an embankment with levels at the bottom and top of the embankment at 70.50m AOD and 78.00m AOD respectively. The site access road marks the eastern boundary of this parcel of land. The levels within the road fall from 77.00m AOD along the south eastern corner to 70.00m AOD along the north east of the site. Although not picked up in the topographical survey, there is a historic flood bund towards the southern part of the site, designed to stop flood water from flowing across the site and ultimately flowing downhill into the Premdor buildings. The location of the bund is shown in below.  **Figure 3 – Location of flood bund**

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Topography (continued)</td><td><u>Eastern Parcel of land</u>

Within the car park area, levels are generally level at approximately 70.20m AOD. Within the southern portion of the site, associated with the scrub land, levels gently fall in a north-easterly direction from 71.00m AOD along the southern boundary to 70m AOD along the northern boundary.

Similar to the Western Parcel of land, the southern boundary is marked by a steep slope that rises from 70.50m AOD to 78.00m AOD.

A copy of the topographical survey can be found in Appendix II.</td></tr>
<tr><td>Geology</td><td>From a review of the British Geological Survey (BGS) Solid & Drift Sheet 87, Barnsley at a scale of 1:50,000 and the online GeoIndex, the following geological succession has been identified at the site.
<table>
<tr><th>Strata</th><th>Description</th><th>Approx. Thickness</th></tr>
<tr><td>Worked Ground

Majority of Site</td><td>The site is indicated to be underlain by ‘Worked Ground’ associated with mineral railway and spreading of spoil from adjacent coal mine.</td><td><5m</td></tr>
<tr><td>Alluvium

Former course of stream</td><td>Comprising of sand, silt and clay with varying quantities of gravel and larger clasts.</td><td><5m</td></tr>
<tr><td>Pennine Lower Coal Measures Formation

Northern Portion</td><td>Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.

There is also a geological fault shown running west to east across the central portion of the site.</td><td>>100m</td></tr>
<tr><td>Haigh Moor Rock

Southern Portion</td><td>Commonly fine-grained and false bedded sandstone, locally flaggy, with impersistent bands of sandy mudstone.</td><td>>100m</td></tr>
</table>
No previous ground investigation reports are available for the site. However, we have undertaken a search of the British Geological Survey online database for historical borehole records. Boreholes have been drilled (by open hole, shell and auger and coring techniques) across the site and wider area by North West Holst in June 1991.

In summary, the underlying ground conditions comprises a variable thickness of Made Ground (up to 5.2m across central portion) that coincide with the infilled former mineral railway lines. Underlying the Made Ground (where present) is a cyclical sequence of Mudstone, Siltstone and Sandstones that form the Lower Pennine Coal Measures in the north and Haigh Moor Rock in the south.</td></tr>
</table>

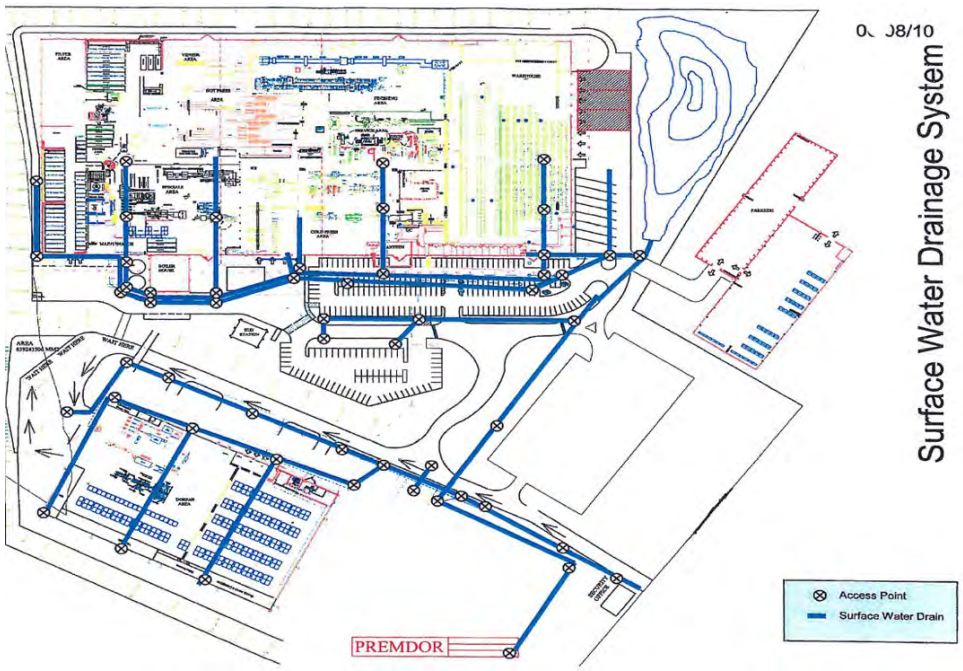
<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Catchment Hydrology</td><td>
The closest Main River to the site is the River Dearne that is located approximately 310m to the north east of the development site. The watercourse flows from north to south.

A small ordinary watercourse flows along the south western corer of the development site. This feature flows into a 1050mm diameter circular culvert where it ultimately discharges into the attenuation pond located in the eastern corner of the site. From here, water then flows beneath the M1 through a culvert before discharging into the River Dearne.

A CCTV survey was undertaken by UK Land and Underground in July 2021 to confirm the location of the culvert. The location of the culvert is shown below in Figure 4 and a copy of the CCTV Survey can be found in Appendix III.

Figure 4 – Location of flood culvert
</td></tr>
<tr><td>Catchment Hydrogeology</td><td>
According to the Groundsure Insight Report, the following aquifer designations are assigned to the geological units beneath the site.
<table>
<tr><th>Geological Unit</th><th>Aquifer Designation</th></tr>
<tr><td>Alluvium</td><td>Secondary Undifferentiated Aquifer which may have permeable or lower permeability layers and the Environment Agency has not been able to assign either a Secondary A or B Aquifer classification to it.</td></tr>
<tr><td>Pennine Lower Coal Measures Formation
Northern Portion</td><td rowspan="2">Secondary A Aquifer with permeable layers capable of supporting water supplies and base flow to rivers on a local scale.</td></tr>
<tr><td>Haigh Moor Rock
Southern Portion</td></tr>
</table>
</td></tr>
</table>

Item	Description
Catchment Hydrogeology (continued)	The Environment Agency's Groundwater Vulnerability maps show the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties of the local area. The underlying Pennine Lower Coal Measures and Haigh Moor Rock are indicated to have a high groundwater vulnerability, which means that groundwater resources have very limited natural protection and there is a high pollution risk to groundwater should spillages occur at the surface. Additional measures over and above good practice pollution prevention measures should be employed to ensure groundwater isn't impacted. The site is not located within a Groundwater Source Protection Zone.
Existing Site Drainage	Private Sewers We have been provided with a surface water drainage layout of the business park. According to the drawing, the culvert which runs through the site has been identified as a surface water drain. A drainage CCTV survey of the culvert was undertaken by UK Land and Underground Surveys Limited in July 2021. The survey identified several surface water connections from the access road and the parking areas. Based on the above drawing, CCTV survey report and site visit observations, the existing drainage system is described in the following paragraphs. *Western Parcel of Land* The western parcel of the development site is undeveloped and naturally drained. However, due to the impermeable nature of the underlain geology, waterlogged areas were evident during site visit. Therefore, this parcel of land can be considered as Greenfield in drainage terms. *Access Road* The existing access road is drained by road gullies that discharge into the culverted watercourse. *Eastern Parcel of Land* The car parking areas in the eastern parcel of the land are not drained by a surface water collection system at surface level. However, the levels of the parking areas slope toward the nearby grassed area. The drainage CCTV survey identified an incoming pipe discharging into the culvert which was likely taking flow from the parking areas. Therefore, it is likely that surface water flow from the parking areas is drained by a land drain that discharges into the culvert. Existing Developed Areas The existing buildings, car parking and hard standing areas of the Birthwaite Business Park are drained by a network of carrier drains that carry flows into an attenuation pond located toward the south-east corner of the park which ultimately discharges into the River Dearne. An extract from the existing surface water drainage system is included in the following figure.

Item	Description
Existing Site Drainage (continued)	 **Figure 5 – Private Surface Water Drainage** *Public (Yorkshire Water) Sewers* According to Yorkshire Water Asset records, the closest surface water sewer is a 375mm sewer which runs in a westerly direction in Huddersfield Road, approximately 10m to the south of the site. The sewer discharges into the unnamed watercourse, immediately outside of the south-western corner of the western development land. A photo of the sewer discharging into the watercourse through a 300mm pipe can be found below (Photo 5). Copies of the private sewer records and Yorkshire Water Asset Plans are included in **Appendix IV**.

Site Photographs

3.2 A selection of site photographs taken on 12th June 2021 is presented below.

Photo 1: View looking south along access road splitting eastern and western plots

Photo 2: View of western plot looking north

Photo 3: View of flood bund within western plot

Photo 4: View of unnamed stream entering western plot from the west

Photo 5: View of small 300mm culvert discharging into unnamed stream adjacent the culvert

Photo 6: View of waterlogged ground on western plot

Photo 7: View looking east towards lorry park – note water issuing at surface on western plot

Photo 8: View of drainage inspection cover on eastern plot

Photo 9: View of waterfilled pits on eastern plot

Photo 10: View of waterlogged ground on eastern plot

Photo 11: View of unnamed stream flowing eastwards towards attenuation pond and M1 motorway

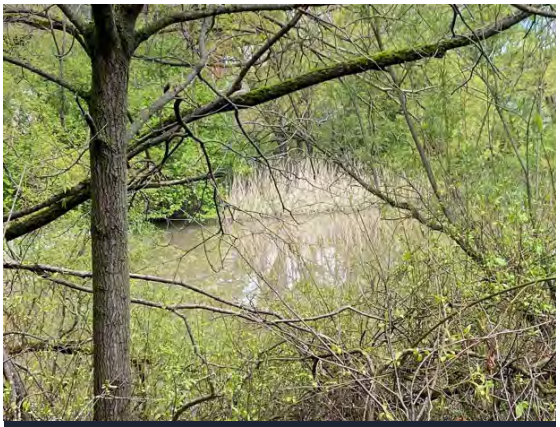


Photo 12: View of attenuation pond off-site to the north east

4. Flood Risk

4.1 This section identifies what potential sources of flooding could affect the site and includes further details on how flooding might occur.

Fluvial

4.2 According to the publically available Environment Agency Flood Map for Planning, the entire site is located within Environment Agency Flood Zone 1 (land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding in any year).

4.3 In addition, according to the Barnsley Metropolitan Borough Council Strategic Flood Risk Assessment, Level 1, September 2010, the site falls in Flood Zone 1.

Figure 6: Flood Map for Planning

4.4 Upon review of the Environment Agency's Long Term Flood Risk Map, the site is at 'Very Low' risk of flooding with an annual probability of river or sea flooding of less than 1 in 1,000. This takes into account the effect of any flood defences that may be in this area. However, whilst flood defences reduce the risk they do not completely stop the chance of flooding and they can overtop or fail.

4.5 The Environment Agency has no records of the site having been affected by flooding and there is no mention of the site having been flooded within the council's Strategic Flood Risk Assessment.

Unnamed Watercourse

4.6 A small ordinary watercourse runs along the south western boundary. This feature flows into a 1050mm diameter circular culvert where it ultimately discharges into the onsite attenuation pond located in the eastern corner of the site. Because this watercourse is not Main River, the Environment Agency have not hydraulically modelled the feature and therefore, there are no flood maps showing potential flood extents.

4.7 Based on site visit observations, we consider that during heavy rain, it is likely that the water backs up around the entrance to the culvert. As shown in Figure 4 above, we understand that a historic flood bund was created to contain the flood water, preventing it from flowing in a north-easterly direction towards the existing buildings.

4.8 There is also a trash screen across the entrance to the culvert (Photo 4). During heavy rain it is likely this become partially blocked by fallen trees and debris which will contribute the water backing up around the culvert. During high flows, we consider that it would be too dangerous to attempt to remove any blockages.

4.9 The risk of flooding from fluvial flooding is considered as '**low to medium'**.

Surface Water

4.10 According to the Environment Agency Surface Water Flood Map, majority of the site is at 'very low' risk of surface water flooding (land assessed as having a chance of flooding of less than 1 in 1,000 (0.1%)).

4.11 However, the central portion of the western plot and the access road to the north of the eastern plot is at 'medium' risk of surface water flooding with an annual chance of flooding between 1 in 100 and 1 in 30 and 'high' risk of surface water flooding with an annual chance of flooding of greater than 1 in 30.

4.12 Standing water at several locations was observed during site inspections. This indicates poor permeability of the soil and therefore it is unlikely that soakaways will be suitable for discharging surface water runoff from any future development into the ground.

4.13 No records of surface water flooding are held by the Environment Agency. Site management have no records of the site having been affected by surface water flooding.

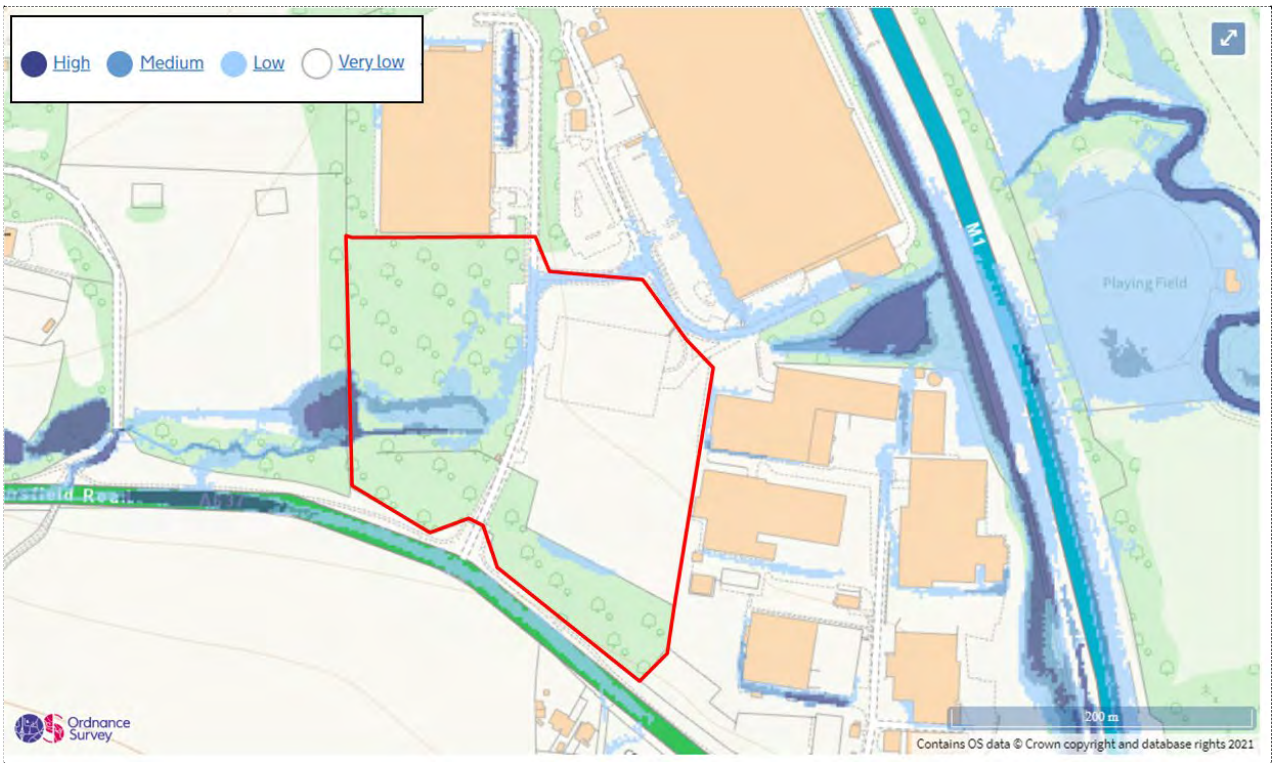


Figure 7: Environment Agency Surface Water Risk

4.14 The risk of surface water flooding to the site is considered as **'low'**.

Groundwater

4.15 From a review of the BGS Groundwater Flooding data contained in the Landmark Envirocheck Report based on the anticipated geological conditions of the site, there is a negligible risk of groundwater flooding.

4.16 The risk of groundwater flooding is considered to be **'negligible'**.

Sewer

4.17 There are no public sewers located on site, the closest public sewer to the site is located in Huddersfield Road, approximately 10m from southern boundary of the site. This sewer discharges into the unnamed watercourse located close to the south-west corner of the site. In the event this sewer was to surcharge, flood water may enter the site via the access road. During such scenario, any flood water will be intercepted by the existing highway drains of the access road.

4.18 The risk of sewer flooding to the site is considered to be **'low'**.

Reservoirs

4.19 The Environment Agency Reservoir Flood Map shows that the site is not at risk from reservoir flooding.

4.20 The risk of flooding from reservoirs is considered to be **'negligible'**.

Artificial Sources

4.21 There are no canals in close proximity (1km) to the subject site.

4.22 The risk of flooding from artificial sources is considered to be **'negligible'.**

5. Flood Risk Classification

5.1 This section identifies if the site is suitable for development in line with the National Planning Policy Framework which was revised in September 2023.

Sequential Test

5.2 The risk based sequential test is a planning tool found within the National Planning Policy Framework. It is used to steer new development to areas at the lowest probability of flooding, known as Flood Zone 1 (1 in 1,000 annual probability of river or sea flooding). The Flood Zones are the starting point for the sequential test is summarised below.

Flood Zone	Associated Flood Risk
Zone 1	This zone comprises land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding in any year.
Zone 2	This zone comprises land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding or between 1 in 200 and 1 in 1,000 annual probability of sea flooding in any year.
Zone 3a	This zone comprises land assessed as having a 1 in 100 or greater probability of river flooding or a 1 in 200 or greater probability of flooding from the sea in any year.
Zone 3b	This zone comprises of the functional floodplain. This land comprises land where water has to flow or be stored in times of flood.

5.3 According to the Environment Agency flood maps the site is located within **Flood Zone 1.**

Vulnerability Table

5.4 National Planning Policy Framework groups development types into different vulnerability classifications:

- Essential Infrastructure such as essential utility infrastructure;
- Highly Vulnerable such as residential caravans and basement dwellings;
- More Vulnerable such as dwelling houses, short stay holiday caravans and educational establishments;
- Less Vulnerable such as offices, shops, restaurants and cafes; and
- Water Compatible such as water treatment plants and amenity open space.

5.5 Warehouse Developments are classed as **'Less Vulnerable'**.

5.6 For each Flood Zone within the Technical Guidance, the table below sets out whether development of the various different vulnerability classifications is appropriate.

Flood Zone	Flood Risk Vulnerability Classification				
	Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a	Exception Test required	×	Exception Test required	✓	✓
Zone 3b	Exception Test required	×	×	×	✓
✓ Development is appropriate × Development is not appropriate					

5.7 The site is located within Flood Zone 1 and in accordance with the National Planning Policy, development is deemed appropriate.

Exception Test

5.8 The Exception Test, as set out in paragraph 164 of the National Planning Policy Framework, is a method to demonstrate and help ensure that flood risk to people and property will be managed satisfactorily, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.

5.9 In accordance with National Planning Policy Framework, an Exception Test is not required for the proposed site.

6. Developer Recommendations

Hydraulic Flood Modelling Exercise

6.1 We recommend that a hydraulic flood modelling exercise is a condition of planning to check that the finished floor level of both buildings is sufficiently elevated. Blockage scenario testing will be required to understand the flood extent and depths in the event the culvert was to block.

Overland Flow Route

6.2 The Environment Agency surface water flood map shows an overland flow route along the southern portion of the western parcel (Figure 7). The proposed development will alter the ground levels and as such the overland flow route.

6.3 We understand Alan Woods and Partners who have designed the drainage strategy and ground levels have taken the flow route into consideration, with potential surface water being intercepted by the roads and conveyed away from the building. However, this should be confirmed as part of the above conditioned modelling study.

Finished Floor Level

6.4 The finished floor levels have been set by Alan Woods and Partners.

6.5 The proposed level of the Unit A warehouse has been set at 70.985m AOD (reference Proposed Finished Floor Levels Unit A). The finished floor level of Unit B has been set at 71.00m AOD (reference Proposed Finished Floor Levels Unit B).

6.6 We recommend that these levels are checked to ensure the FFL is above the 1 in 100-year as part of the flood modelling exercise discussed above.

Flood Warning Sensor

6.7 We recommend that a flood warning sensor is installed to the trash screen located to the south west corner of Unit A. The sensor should be configurated and trigger levels set to notify future tenants when levels rise.

Trash Screen Maintenance

6.8 To reduce the risk of the culvert blocking, it is recommended that once a week (more frequently during wet periods), any debris is removed from the trash screen.

Flood Plan

6.9 We recommend that a flood plan is written to include information on the flood warning sensor with a checklist of associated actions such as channel maintenance.

Culvert Easements

6.10 A minimum of 5m easement on either side from the centreline of the culverted watercourse has been provided within the proposed site layout.

Surface Water Drainage Strategy

6.11 A septate Surface Water and Foul Water Drainage Strategy has been undertaken by Alan Wood and Partners, reference Drainage Assessment Report for Proposed New Industrial Buildings in Barnsley, document BBP-AWP-XX-XX-T-C-00001-P02 dated October 2023.

7. Conclusion

7.1 Instructions were received from Premdor Crosby Limited (the Client) to undertake a Flood Risk Assessment to support a planning application for two new warehouses with associated car parking within an undeveloped parcel of land, located within the eastern portion of Birthwaite Business Park.

7.2 The Flood Risk Assessment has been prepared in accordance with the National Planning Policy Framework

Flood Risk

7.3 Following the completion of this assessment, the following conclusions can be drawn:

- The Environment Agency Flood Maps show that the entire site is located within Flood Zone 1.
- In accordance with National Planning Policy Framework 'less vulnerable' development types are deemed appropriate within Flood Zone 1.
- However, a small ordinary watercourse runs along the south western boundary. This feature flows into a 1050mm diameter circular culvert where it ultimately discharges into the onsite attenuation pond located in the eastern corner of the site. In the event that the culvert was to block or become overwhelmed, it is likely flood water would flow across the southern portion of the western parcel of land.
- Alan Woods and Partners who have designed the drainage strategy and ground levels for the scheme have taken this overland flow route into consideration, with potential surface water being intercepted by the roads and conveyed away from the building. However, we recommend that a hydraulic flood modelling exercise is a condition of planning to check that the finished floor level of both buildings is sufficiently elevated.
- In terms of other forms of flooding there is a low or very low flood risk to the whole site from surface water, groundwater, sewer, reservoirs and artificial sources of flooding.
- Although flood risk from other sources is generally low, standing water at several locations was observed during site inspections. This indicates poor permeability of the soil.

Drainage

- A septate Surface Water and Foul Water Drainage Strategy has been undertaken by Alan Wood and Partners, reference Drainage Assessment Report for Proposed New Industrial Buildings in Barnsley, document BBP-AWP-XX-XX-T-C-00001-P02 dated October 2023.

Recommendations

- We recommend that a hydraulic flood modelling exercise is a condition of planning to check that the finished floor level of both buildings is sufficiently elevated.
- We have provided further developer recommendations which can be found in Section 6 of this report.

Appendix I
Site Layout and Finished Floor Levels

Key

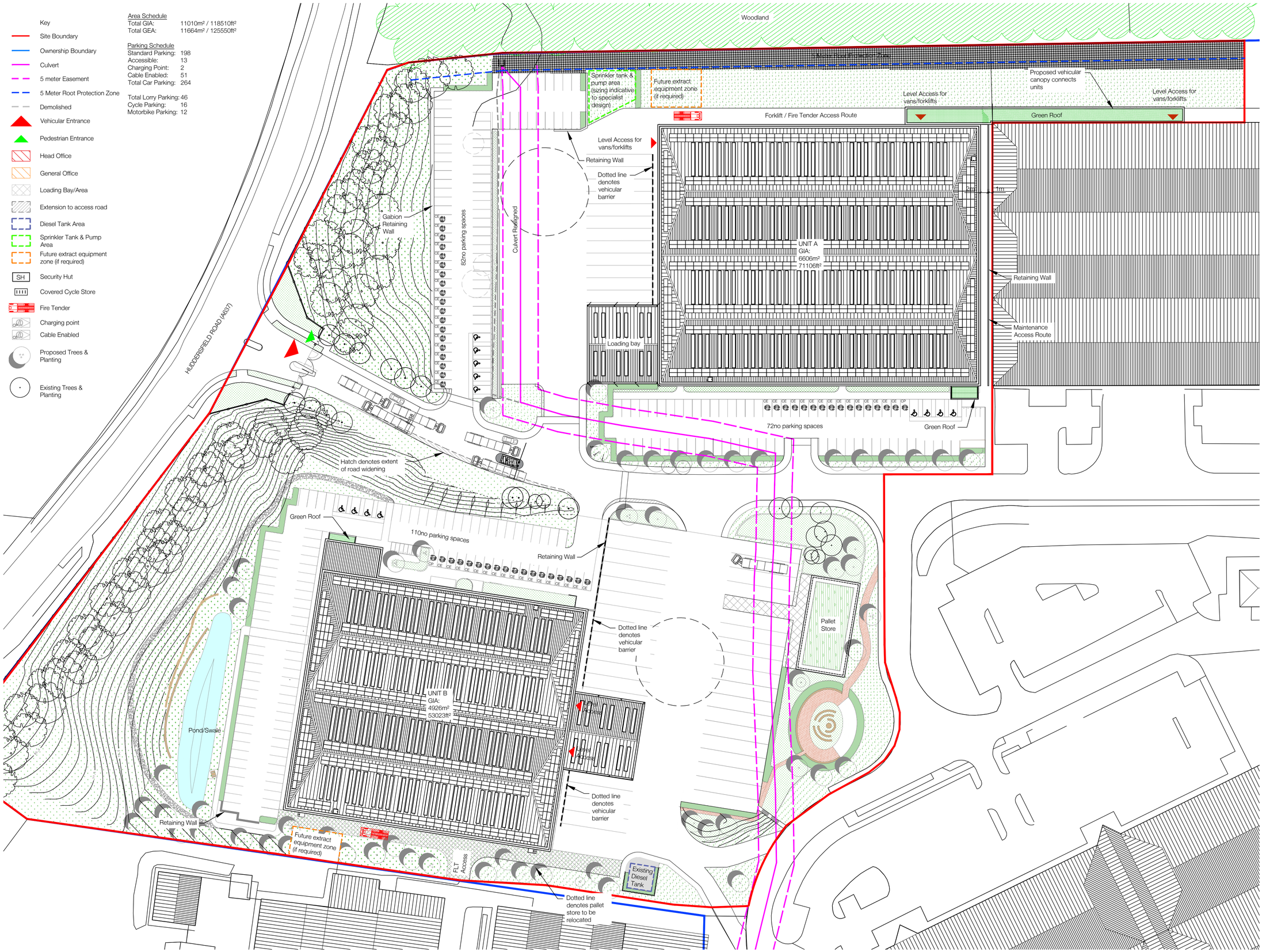
- Site Boundary
- Ownership Boundary
- Culvert
- 5 meter Easement
- 5 Meter Root Protection Zone
- Demolished
- Vehicular Entrance
- Pedestrian Entrance
- Head Office
- General Office
- Loading Bay/Area
- Extension to access road
- Diesel Tank Area
- Sprinkler Tank & Pump Area
- Future extract equipment zone (if required)
- SH — Security Hut
- Covered Cycle Store
- Fire Tender
- Charging point
- Cable Enabled
- Proposed Trees & Planting
- Existing Trees & Planting

Area Schedule

Total GIA:	11010m² / 118510ft²
Total GEA:	11664m² / 125550ft²

Parking Schedule

Standard Parking:	198
Accessible:	13
Charging Point:	2
Cable Enabled:	51
Total Car Parking:	264
Total Lorry Parking:	46
Cycle Parking:	16
Motorbike Parking:	12



00-0003 Proposed Site Plan
Scale - 1:500

Notes

A1

Contractor must verify all dimensions on site before commencing any work or shop drawings.If this drawing exceeds the quantities taken in any way the Architects are to be informed before the work is initiated.
Only figured dimensions to be taken from this drawing.Do not scale off this drawing.Drawings based on Ordnance Survey and / or existing record drawings - design and drawing content subject to Site Survey, Structural Survey, Site Investigations, Planning and Statutory Requirements and Approvals. Authorised reproduction from Ordnance Survey Map with permission of the Controller of Her Majesty's Stationery Office. Crown Copyright reserved.

Location Plan

Rev.	Des.	By	Date	Ch.
P11	Levels & Retaining walls further coordinated following workshop with Civils & Landscape	JOE	12.10.23	AAH
P10	Green roofs to canopies & retaining walls indicated, stepped access to Unit B fire escapes indicated after civil's coordination	JOE	09.10.23	AAH
P09	PV's Indicated & Drawing Coordinated with landscape architect's design	EMTJ	29.09.23	JOE
P08	FLT & Fire tender access combined	JOE	11.09.23	AAH
P07	Coordinated with landscape architects plan	JOE	08.09.23	AAH
P06	Coordinated with landscape architects plan, 5 meter root protection buffer indicated at arboriculturalists request	JOE	01.09.23	AAH
P05	Unit B Roof Plan Updated	JOE	14.08.23	AAH
P04	Unit A Roof Plans Updated & position of Unit realigned following Structural workshop, Existing tree removed.	JOE	07.08.23	AAH
P03	Future Extract Equiptment zone indicated at client request	JOE	24.07.23	AAH
P02	Drawing naming amended to ISO convention formerly (00)003. Culvert realigned, entrance road amended, vehicular barriers indicated, entrance canopy indicated, 2.5 meter service access between units indicated, FLT access indicated, security hut relocated following DTM	JOE	07.07.23	AAH
P01		JOE	17.05.23	AAH

Client:
Premdor

Project:
JUGGERNAUT
Barnsley

Title:
Proposed Site Plan

Scale:	Status:	Drawn by:	Checked by:	Date:
1:500 @A1		JOE	AAH	Sep 2023

Job No:	Drawing No:	Rev No:
23005	-A-CJCT-ZZ-XX-PL-00-0003	P11

Carey Jones Chapman Tolcher
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London EC1V 7LQ
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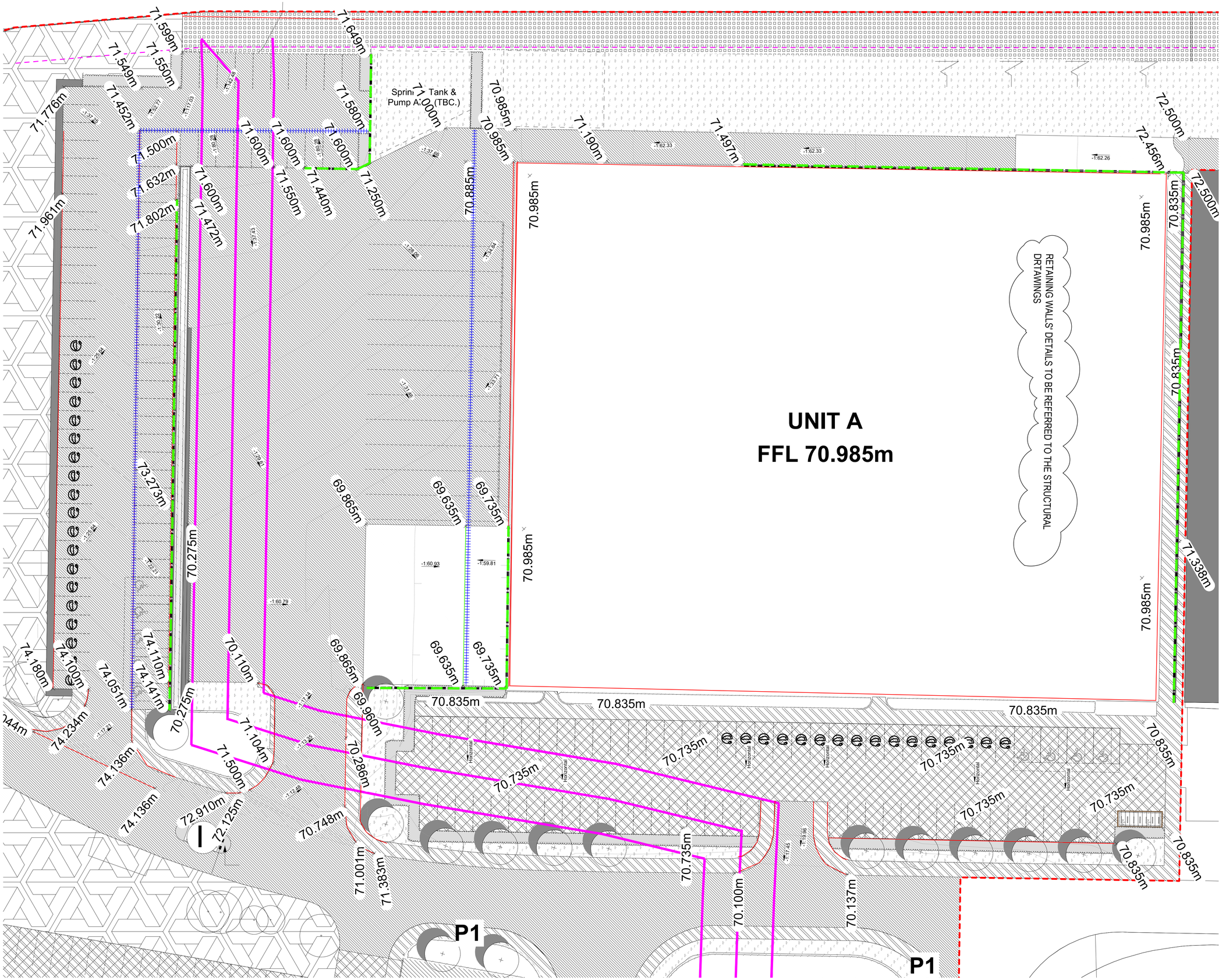
Studio 2, 56 Wellington St.
Leeds LS1 2EE
Tel +44(0)113 224 5000
www.cjctstudios.com

PLANNING



NOTES:

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2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS AND ARCHITECTS DRAWINGS.
3. DRAWINGS NOT TO BE SCALED. ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR. ANY DISCREPANCIES TO BE NOTIFIED TO THE ENGINEER AND FURTHER INSTRUCTIONS OBTAINED BEFORE WORK IS COMMENCED.
4. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCE AND ENSURE THAT THE BUILDING AND ITS COMPONENTS ARE SAFE DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS WHICH MAY BE NECESSARY, SUCH MATERIAL REMAINING THE THE PROPERTY OF THE CONTRACTOR ON COMPLETION, AND FOR ENSURING THAT THE WORKS AND ANY ADJACENT PROPERTIES ARE SAFE IN THE TEMPORARY CONDITION.

LEGEND

- DEVELOPMENT BOUNDARY
- PROPOSED ACCO DRAIN CHANNEL
- PROPOSED RETAINING WALLS
- PROPOSED FINISHED LEVELS
- × 0.000m

Rev	Description	Date	By	Chk	App
P4	UPDATED TO THE LOCATION OF THE RETAINING WALLS	12.10.23	MM	KH	KH
P3	UPDATED THE LOCATION OF THE RETAINING WALL ON TOP OF THE CULVERT	11.10.23	MM	KH	KH
P2	UPDATED TO MATCH THE LEVEL ACCESS FOR VANS & FORKLIFTS	05.10.23	MM	KH	KH
P1	FIRST ISSUE	22.09.23	MM	KH	KH

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Project Managers
Building Surveyors

Leeds T. 01135 311098
Lincoln T. 01522 300210
Scarborough T. 01723 865484
Sheffield T. 01142 440077
York T. 01904 611594

Project: BIRTHWAITE BUSINESS PARK

Client: PREMDOR CROSBY LTD

Drawing: PROPOSED FINISHED LEVELS - UNIT A

Role: CIVIL ENGINEER

Drawing Status: FOR INFORMATION

Suitability Code: -

Job. no. 49145

Scale@ A1: 1:250

Rev. P4

Project	Originator	Zone	Level	Type	Role	Number
BBP	AWP	XX	XX	DR	C	3500

100mm at A1

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RETAINING WALLS' DETAILS TO BE REFERRED TO THE STRUCTURAL DRTAWINGS

LEGEND
- DEVELOPMENT BOUNDARY
- PROPOSED RETAINING WALLS
- 0.000m PROPOSED FINISHED LEVELS

Rev	Description	Date	By	Chk	App
P2	UPDATED TO THE EXACT LOCATION OF RETAINING WALLS	12.10.23	MM	KH	KH
P1	FIRST ISSUE	22.09.23	MM	KH	KH

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York T. 01904 611594

Project: BIRTHWAITE BUSINESS PARK

Client: PREMDOR CROSBY LTD

Drawing: PROPOSED FINIHED LEVELS- UNIT B

Role: CIVIL ENGINEER

Drawing Status: FOR INFORMATION

Suitability Code: -

Job. no. 49145

Scale@ A1: 1:250

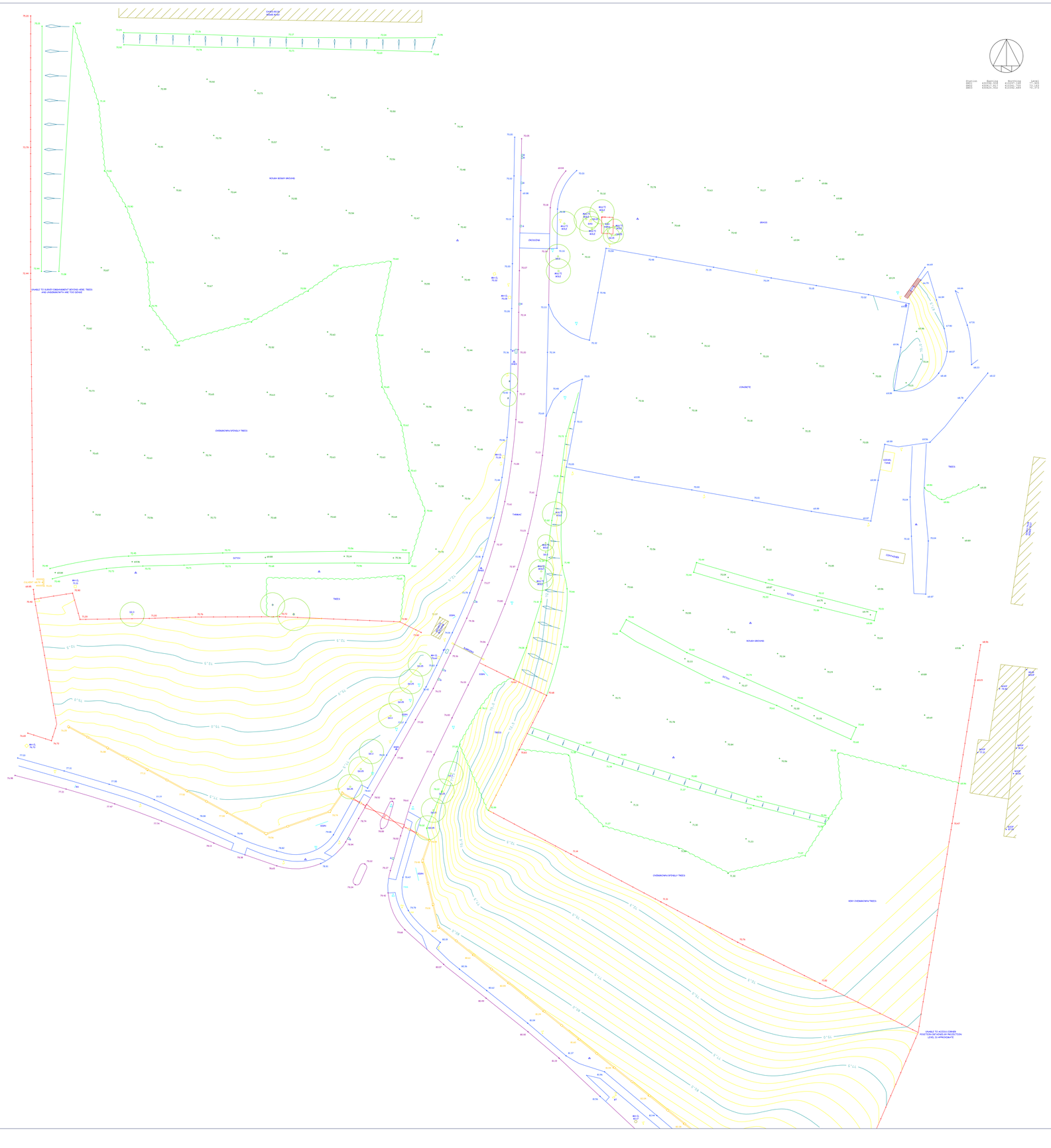
Rev. P2

Project Originator Zone Level Type Role Number
BBP- AWP - XX - XX - DR - C - 3501

100mm at A1

Appendix II
Topographical Survey

A1



revisions:

A	Data added: Road detail, culvert, adjacent buildings with roof levels	J.L.	06.05.21

client

AVISON YOUNG

project name

BIRTHWAITE BUSINESS PARK
HUDDERSFIELD ROAD
DARTON

drawing name

TOPOGRAPHIC SURVEY

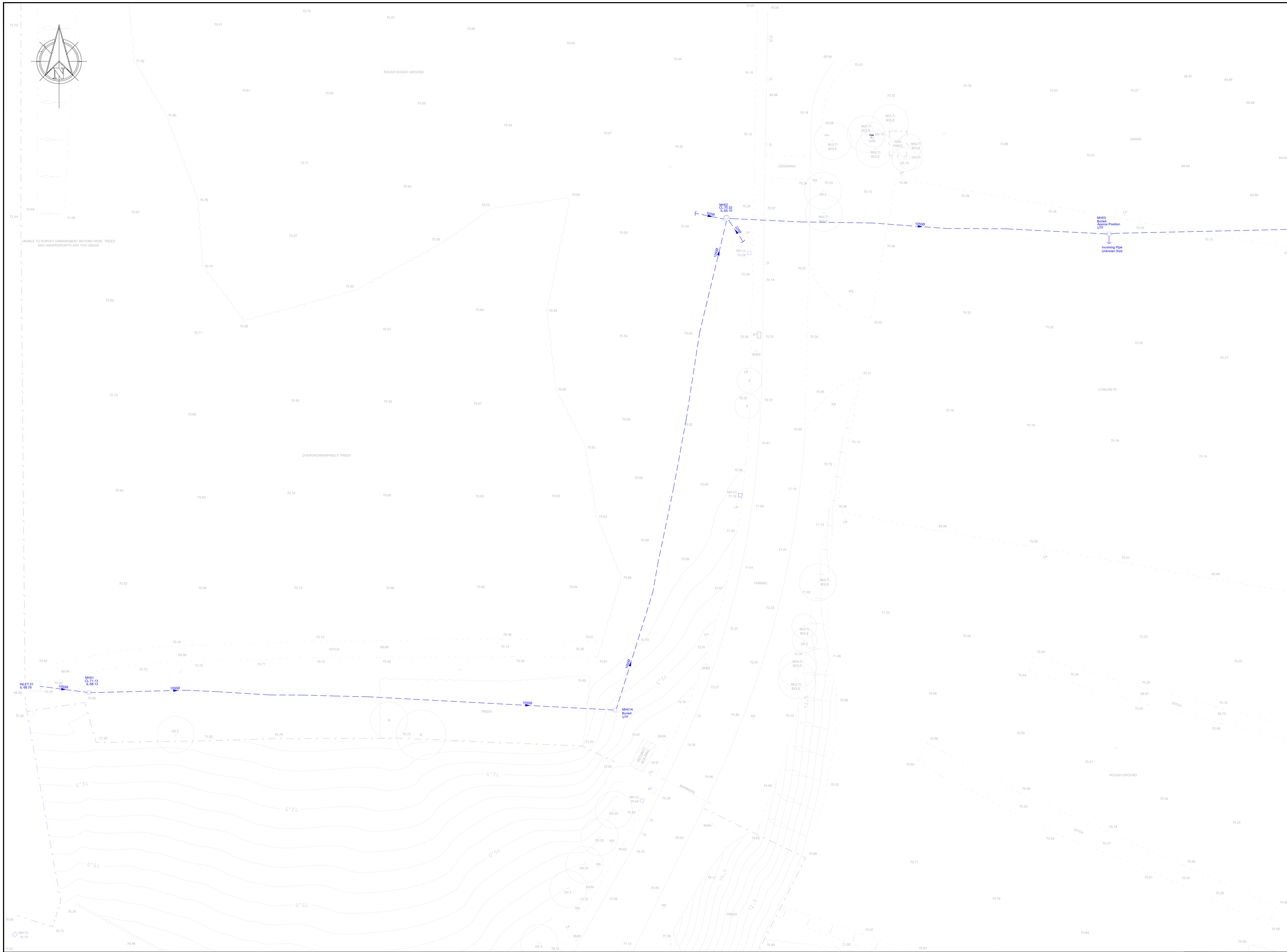
project no.	scale
11 - 16221	1:500
drawing no.	revision
01	A
date	drawn by
MAY 21	J.L.

leverturnercowdell

ARCHITECTURE BUILDING SURVEYING TOWN PLANNING

Centrix@Keys Keys Business Village Keys Park Road
Hednesford Staffordshire WS12 2HA
01543 495717 info@leverturnercowdell.co.uk
www.leverturnercowdell.co.uk

Appendix III
CCTV Survey



ALWAYS USE SAFE DIGGING PRACTICES. ALWAYS CONSULT A TRAINED AND COMPETENT PERSON TO CHECK YOUR EXCAVATION AREA BEFORE BREAKING GROUND

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DRAINAGE LEGEND

FOUL SEWER

SURFACE WATER SEWER

COMBINED SEWER

RM RM RISING MAIN

ADDITIONAL SERVICE INFORMATION

AR AR ASSUMED ROUTES

TFR TFR SERVICES TAKEN FROM RECORDS

SERVICES SURVEY AREA

END OF TRACE

INFORMATION SHOWN AS TFR OR AR HAS NOT BEEN PROVEN ON SITE

UTILITIES ABBREVIATIONS

3D 1ED	3 DUCTS OF WHICH 1 IS EMPTY	IL	INVERT LEVEL
AC	ASBESTOS CEMENT	LP	LAMP POST
AR	ASSUMED ROUTE	MH	MANHOLE
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BD	BACK DROP	OH	OVERHEAD
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CPT	CATCHPIT	S/A	SOAKAWAY
CWS	COMBINED WATER SEWER	SI	SPUN IRON
d	DEPTH	ST	STOP TAP
DCr	DEPTH TO CROWN	S.T	STEEL
DI	DUCTILE IRON	SV	SLUICE VALVE
dia	DIAMETER	SVP	SOIL VENT PIPE
DP	DOWN PIPE	SWS	SURFACE WATER SEWER
DTB	DEPTH TO BASE	TE	TRAPPED EXIT
ED	EMPTY DUCT	TFR	TAKEN FROM RECORD
EOT	END OF TRACE	TL	TRAFFIC LIGHT
ER	EARTHING ROD	TP	TELEGRAPH POLE
EP	ELECTRICITY POLE	UTF	UNABLE TO FIND
FH	FIRE HYDRANT	UTL	UNABLE TO LIFT
FL	FLOOD LIGHT	UTS	UNABLE TO SURVEY
FWS	FOUL WATER SEWER	UTT	UNABLE TO TRACE
G	GULLY	VC	VITRIFIED CLAY
GPR	GROUND PENETRATING RADAR	VP	VENT PIPE
GRP	GLASS REINFORCED PLASTIC	VR	VAPOUR RECOVERY
GV	GAS VALVE	WL	WATER LEVEL
HL	HIGH LEVEL	WM	WATER METER
HOR	HEAD OF RUN	WO	WASH OUT HYDRANT
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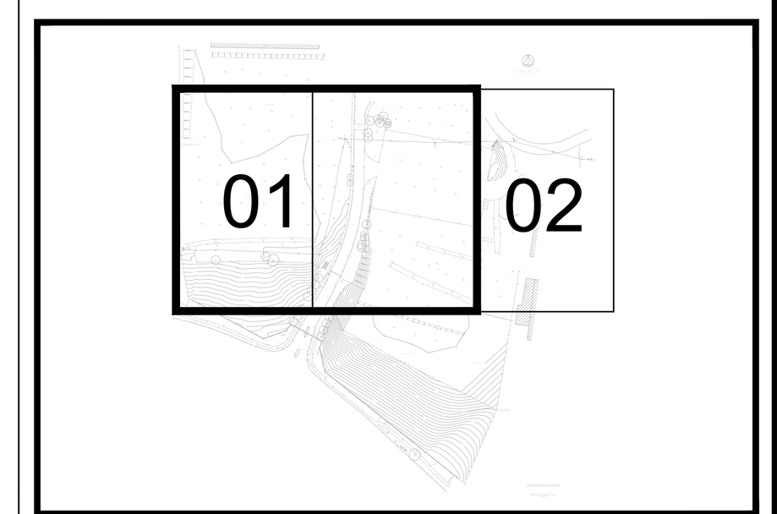


CLIENT
IWJS

PROJECT TITLE
BIRTHWAITE BUSINESS PARK
BARNSLEY

DRAWING DETAIL
CCTV DRAINAGE SURVEY

DRAWING STATUS
INFORMATION

UK LAND & UNDERGROUND LTD
TOPOGRAPHIC | UTILITY | CCTV | GPR SURVEYS
BUSINESS INNOVATION CENTER, BINLEY BUSINESS PARK
HARRY WESTON ROAD, COVENTRY, CV3 2TX
ENQUIRIES@UKLANDANDUNDERGROUND.CO.UK
WWW.UKLANDANDUNDERGROUND.CO.UK
TEL: 02476 385745

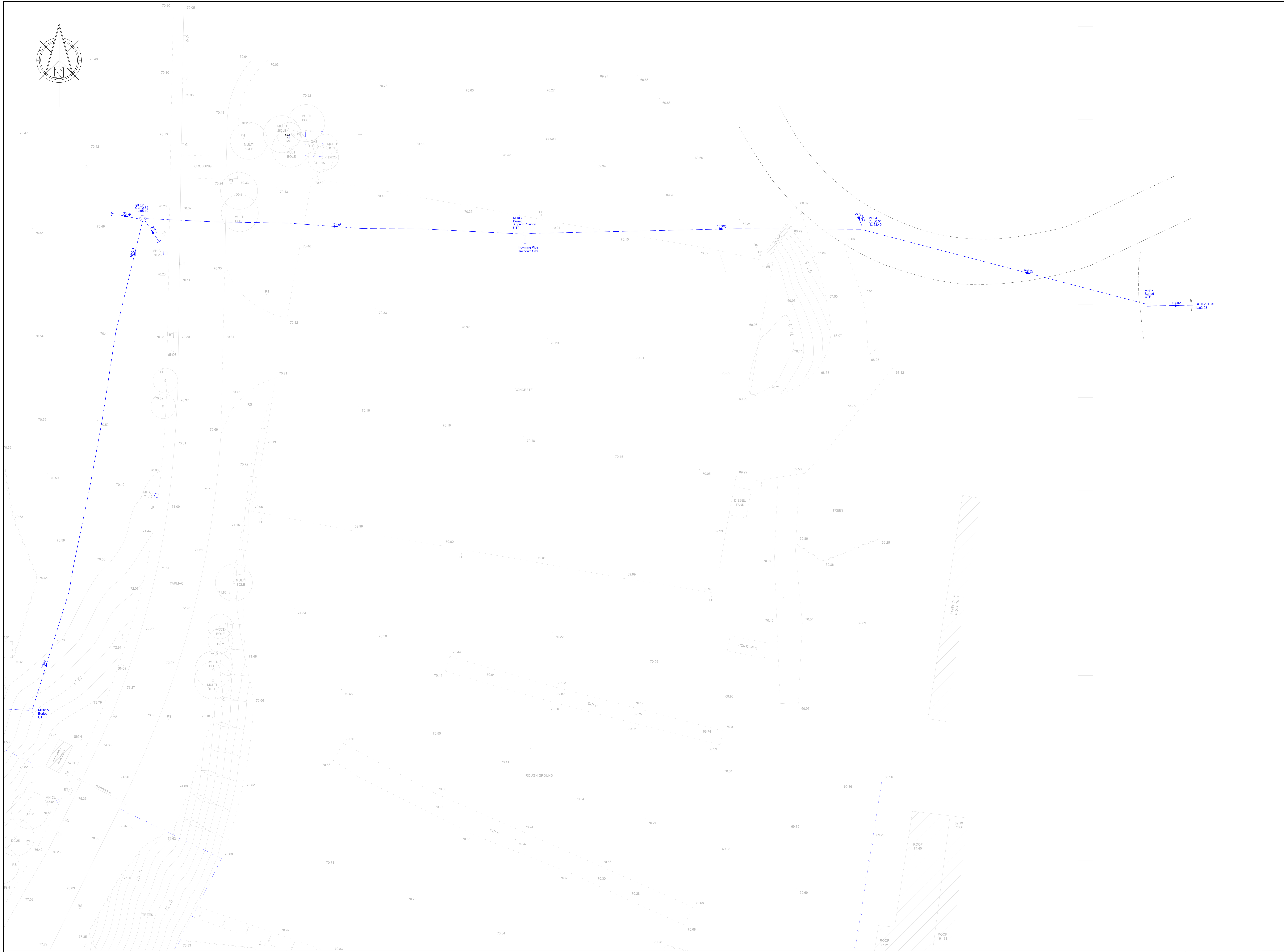
DRAWN	RL	DATE	02/07/2021
PROJECT ENGINEER	RL		
CHECKED	MAJ	SCALE	1:200 (WHEN PLOTTED @ A0)
APPROVED	MAJ		

DESCRIPTION	REV	DATE	DRWN	CHKD	APPR

TO BE USED IN CONJUNCTION WITH CTB FILE
UKUG_UTILITY.CTB

DRAWING NUMBER
UKUG_1517_01_CCTV

SHEET NUMBER
1 OF 2



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DRAINAGE LEGEND

- FOUL SEWER
- SURFACE WATER SEWER
- COMBINED SEWER
- RM — RM RISING MAIN

ADDITIONAL SERVICE INFORMATION

- AR — AR ASSUMED ROUTES
- TFR — TFR SERVICES TAKEN FROM RECORDS
- SERVICES SURVEY AREA
- (END OF TRACE

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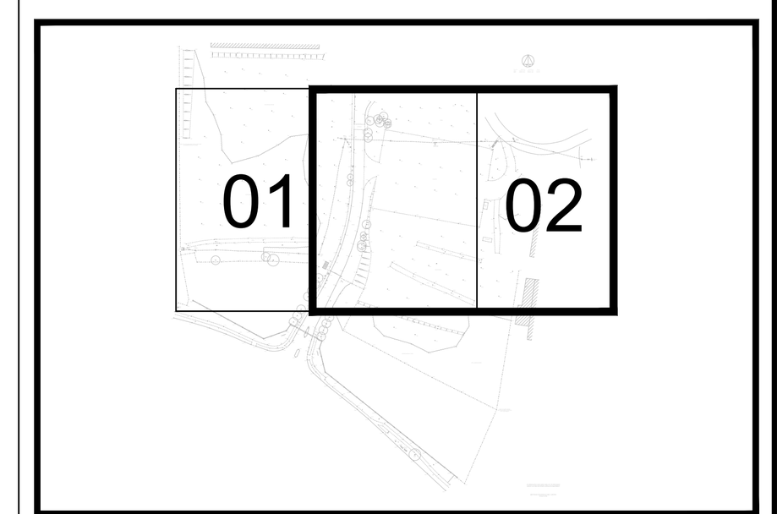

CLIENT
IWJS

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BIRTHWAITE BUSINESS PARK
BARNSLEY

DRAWING DETAIL
CCTV DRAINAGE SURVEY

DRAWING STATUS
INFORMATION

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APPROVED	MAJ		

DESCRIPTION	REV	DATE	DRWN	CHKD	APPR

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TO BE USED IN CONJUNCTION WITH CTB FILE
UKUG_UTILITY.CTB

DRAWING NUMBER
UKUG_1517_02_CCTV

SHEET NUMBER
2 OF 2

Appendix IV

Yorkshire Water Asset Maps and Existing Private Sewer Plan

YORKSHIRE WATER
PROTECTION OF MAINS AND SERVICES

1. The position of Yorkshire Water Services Ltd (YWS) apparatus shown on the existing mains record drawing(s) indicates the ***general*** position and nature of our apparatus and the accuracy of this information cannot be guaranteed. Any damage to YWS apparatus as a result of your works may have serious consequences and you will be held responsible for all costs incurred. Prior to commencing major works, the exact location of apparatus must be determined on site, if necessary by excavating trial holes. The actual position of such apparatus and that of service pipes which have not been indicated must be established on site by contacting the Customer Helpline on 0845 124 24 24 for both water and sewerage.

2. The public sewer and water network is lawfully retained in its existing position and the sewerage and water undertaker is entitled to have it remain so without any disturbance. The provisions of section 159 of the Water Industry Act 1991 provides that the undertaker may "inspect, maintain, adjust, repair or alter" the network. Those rights are given to enable the undertaker to perform its statutory duties. Any development of the land or any other action that unacceptably hindered the exercise of those rights would be unlawful. The provisions contained in Section 185 of the Water Industry Act 1991 state that where it is reasonable to do so, a person may require the water supply undertaker to alter or remove a pipe where it is necessary to enable that person to carry out a proposed change of use of the land. The provisions contained in Section 185 also require the person making the request to pay the full cost of carrying out the necessary works.

3. Ground levels over existing YWS apparatus are to be maintained. Sewers in highways will ***generally*** be laid to give 1200mm of cover from finished ground level working to kerb races, other permanent identification of the limits of the road or to an agreed line and level. Substantial increases or decreases to this 1200mm depth of cover will result in the sewer being re-laid at your expense. Water mains and services will ***generally*** be laid with a minimum of 750mm depth of cover however some mains and services usually those installed over 50 years ago may have less ground cover.

4. If surface levels are to be decreased / increased significantly the effects on existing water supply apparatus will be carefully considered and if any alterations are necessary, the costs of the alterations will be recharged to you in full. Outlets on fire hydrants must be no more than 300mm below the new levels and all surface boxes must be adjusted as part of the scheme.

5. To enable future repair works to be carried out without hindrance; any pipe, cable, duct, etc. installed parallel to a water main or service pipe should not be installed directly over or within 300mm of a water main or service pipe or 1000mm of a waste water asset. Where a pipe, cable, duct, etc. crosses a main or service it should preferably cross perpendicular or at an angle of no less than 45o and with a minimum clearance of 150mm. These requirements apply to activities within an existing highway and are relevant to the installation of pipes, cables, ducts, etc. up to and including 250mm in diameter *(see illustration below)*. Necessary protection measures for installations greater than 250mm in diameter and/or in private land will need to be agreed on an individual basis. Installations within a new development site must comply with the National Joint Utilities Group publication Volume 2: NJUG Guidelines On The Positioning Of Underground Utilities Apparatus For New Development Sites.

6. All excavation works near to YW apparatus should be by hand digging only.

7. Backfilling with a suitable material to a minimum 300mm above YW apparatus is required.

8. Adequate support must be provided where any works pass under YW apparatus.

9. Jointing chambers, lighting columns and other structures must be installed in such a way that future repair or maintenance works to YW apparatus will not be hindered.

10. Apparatus such as; railings, sign posts, etc. must not be placed in such a way that they prevent access to or full operation of controlling valves, hydrants or similar apparatus. YWS surface boxes must not be covered or buried. Any adjustment, alteration or replacement of manhole covers must be agreed on site prior to the commencement of the works with a YWS Inspector who may be contacted via our Call Centre on 0845 124 24 24.

11. Explosives shall not be used within 100 metres of any Yorkshire Water Services apparatus or installations.

12. Vibrating plant should not be used directly over any apparatus. Movement or operation by vehicles or heavy plant is not to be permitted in the immediate vicinity of YWS plant or apparatus unless there has been prior consultation and, if necessary, adequate protection provided without cost to YWS.

13. ***Under no circumstances*** should thrust boring or similar trenchless techniques commence until the actual position of the Company's mains/services along the proposed route have been confirmed by trial holes.

14. Any alterations to the highway should be notified following the procedures outlined in the New Road and Street Works Act 1991 Code of Practice; Measures Necessary Where Apparatus Is Affected By Major Works (Diversionary Works).

15. You will be held responsible for any damage or loss to YWS apparatus during and after completion of work, caused by yourselves, your servant or agent. Any damage caused or observed to YWS plant or apparatus should be immediately reported to YWS. Should YW incur any costs as a result of non-compliance with the above, all costs will be rechargeable in full.

16. You should ensure that nothing is done on the site to prejudice the safety or operation of YWS employees, plant or apparatus.

17. In accordance with the New Roads and Street Works Act 1991, Chapter 22, Part 3, Section 80. The location of any identified YW asset "*which is not marked, or is wrongly marked, on the records made available*" should be communicated back to Yorkshire Water. The location of the apparatus should be identified on copies of the supplied plans which should be returned to Yorkshire Water (Asset Records Team) with photographic supporting evidence where possible.

18. The Government has decided that responsibility for private sewers serving two or more properties and lateral drains (the section of pipe beyond the boundary of a single property, connecting it to the public sewer) will be transferred to the water companies on Oct 1 2011.

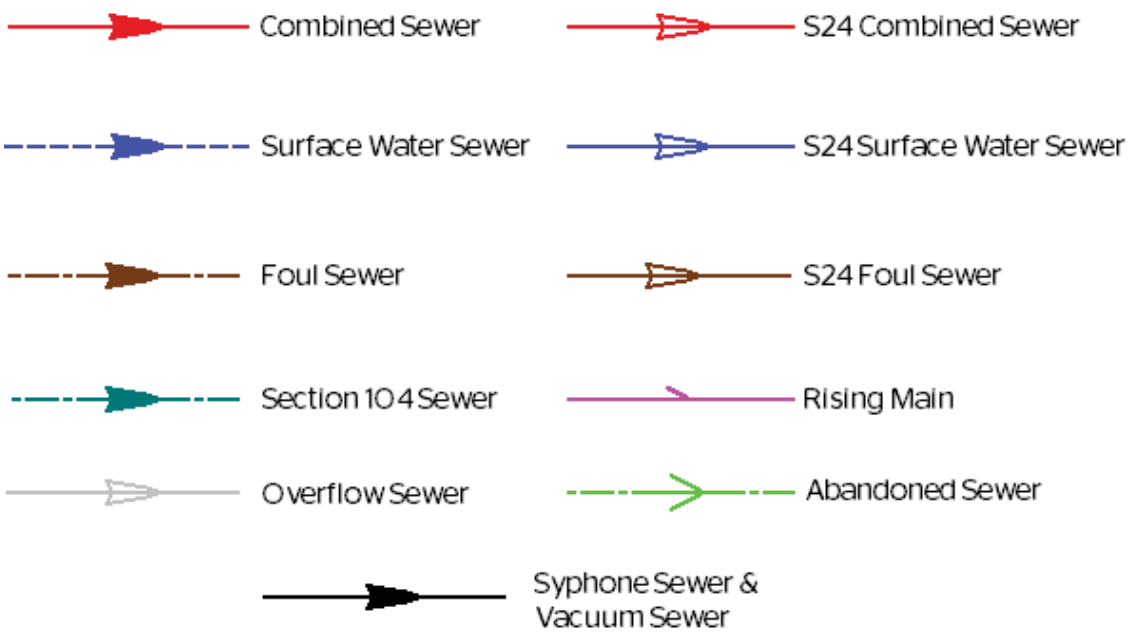
Private pumping stations will also transfer during the period 1 October 2011 – 1 Oct 2016. Records of these assets may not yet be shown on the existing mains record drawing(s). If you encounter any of these assets you must inform Yorkshire Water Services Ltd (YWS).

19. Please note that the information supplied on the enclosed plans is reproduced from Ordnance Survey material with the permission of the Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Licence Number 1000019559.

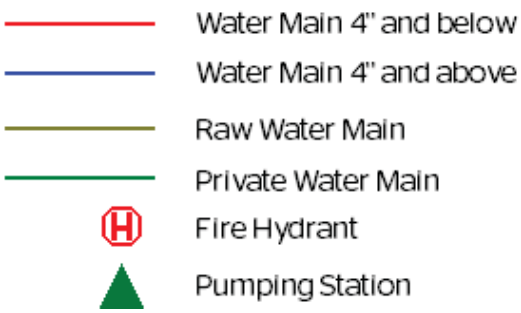
20. This information is for guidance only and the position and depth of any YW apparatus is approximate only. Likewise, the nature and condition of any YW apparatus cannot be guaranteed. YW has no responsibility for recording the locations of privately owned apparatus. As of 1 October 2011, there may be some lateral drains and/or public sewers which are not documented on YW records but may still be present. For the avoidance of doubt, this information is not a substitute for appropriate professional and/or legal advice. YW accepts no responsibility for any inaccuracy or omissions in this information. The actual position of YW apparatus must be determined on site by excavating trail holes by hand. YW requires a minimum of two working days' written notice of the intention to excavate any trial holes before any excavation can be undertaken. If there are any queries in this respect please contact Yorkshire Water on 0845 124 24 24.

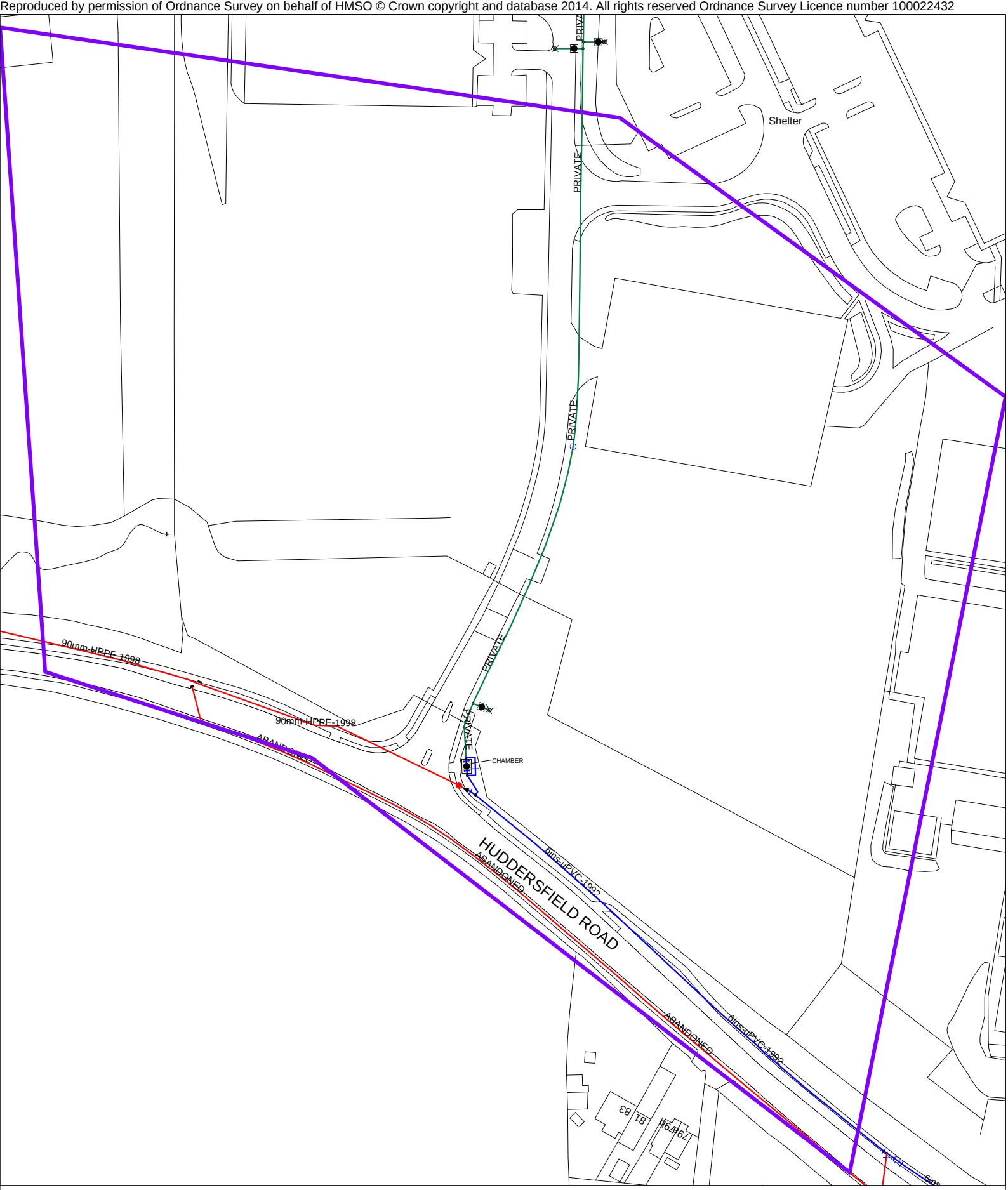
Property Identfier

Sewer Legend

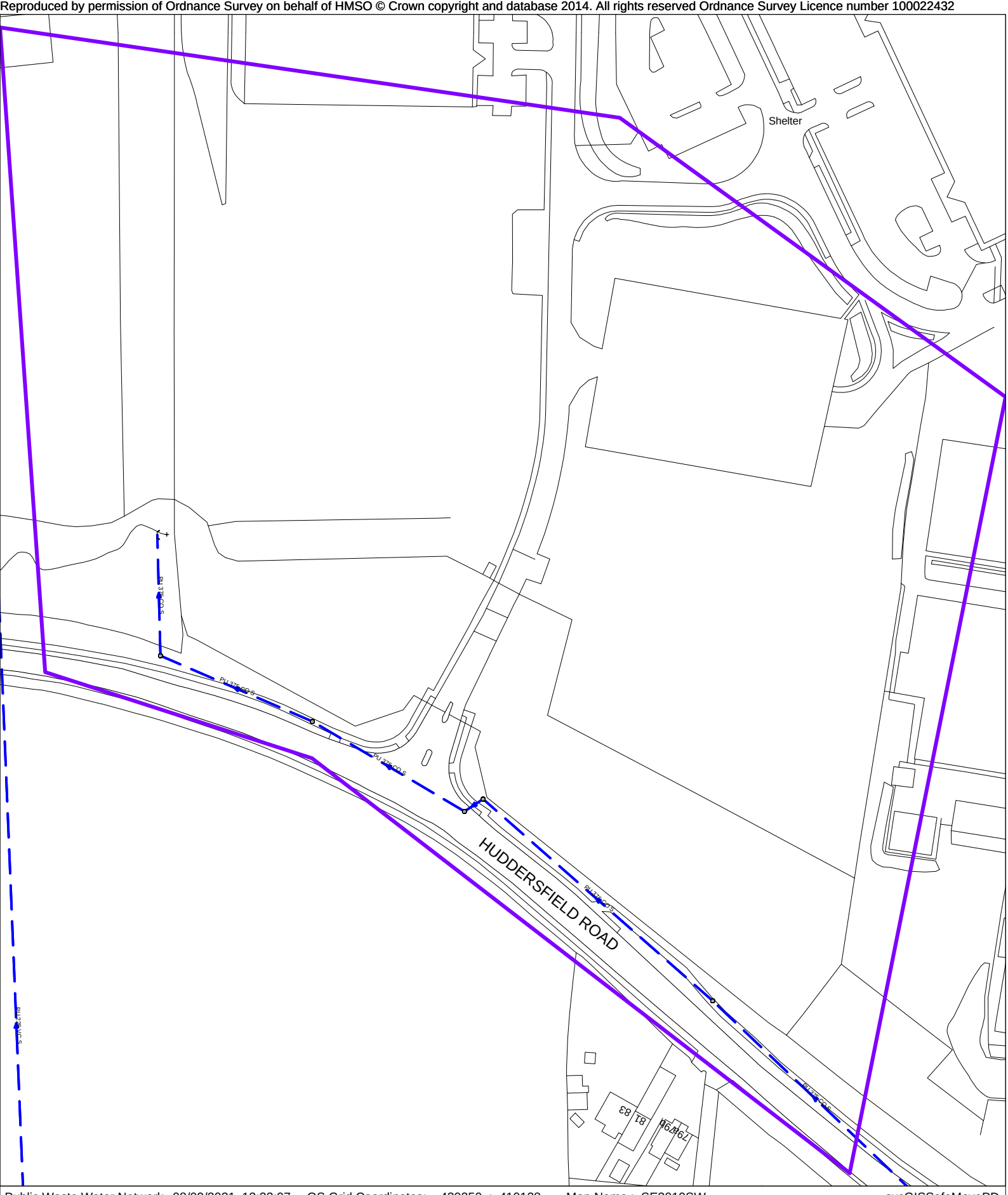


Water Legend





Public Clean Water Network 08/09/2021 13:23:04 OS Grid Coordinates: 430250 : 410128 Map Name : SE3010SW svcGISSafeMovePD



Public Waste Water Network 08/09/2021 13:23:07 OS Grid Coordinates: 430250 : 410128 Map Name : SE3010SW svcGISSafeMovePD

Appendix V
Definitions and Reservations

Environmental Definitions

1. Environmental Reports

Any reference to environmental reports should be taken to mean one or all of the following types of report:

Phase 1

This is a desk-based study (supported by a site inspection if agreed) of past and present uses of the site, geological and hydrogeological conditions, regulatory review and qualitative risk assessment.

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties.

The opinions given in the report have been dictated by the finite data on which it is based and is relevant only to the purpose for which the report was commissioned.

The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions.

Should additional information become available which may affect the opinions expressed in this report, Avison Young reserves the right to review such information and, if warranted, to modify the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Phase 2

This is an intrusive phase of works involving the drilling of boreholes/trial pits and the testing of soil, groundwater and soil gas samples for environmental and geotechnical purposes.

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, geotechnical characteristics, and ground and groundwater conditions to provide a reasonable assessment of the environmental risks together with engineering and development implications. If costs have been included in relation to site remediation these must be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, which investigate only a small volume of the ground in relation to the size of the site can only provide a general indication of site conditions.

The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site of each of the exploratory holes.

There may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.

The comments made on groundwater conditions are based on observations made at the time that site work was carried out.

It should be noted that groundwater levels will vary owing to seasonal, tidal and weather related effects.

The scope of the investigation was selected based on the specific development proposed by the Client and may be inappropriate to another form of development or scheme.

The risk assessment and opinions provided, inter alia, take into consideration currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

Avison Young accepts no liability what so ever for the content or conduct of the Environmental Consultant/Engineer of Sub Consultants/ Contractors appointed on behalf of the client by us.

2. Geology and Mining

2.1. Ground Conditions

Ground conditions consider the underlying geology, the presence of mining or quarrying, geological faults and the potential for contaminated land.

2.2. Superficial Deposits

Superficial deposits are the youngest geological deposits that rest on older deposits or rocks referred to as bedrock. They generally comprise unconsolidated sediments such as gravels, sand, silt and clay. They may be present as relatively thin discontinuous patches or larger spreads.

2.3. Bedrock Geology

The bedrock geology (sometimes referred to as solid geology) is the term used for the main units of rocks that have formed the Earth over millions of years. They may be present at the surface or concealed beneath younger superficial deposits. Bedrock is classified as either igneous, metamorphic or sedimentary.

2.4. Geological Fault

A fracture in the rock along which movement takes place.

Environmental Definitions

2.5. **Underground Workings**

Areas where coal or other minerals and rock has been mined, or is currently being mined under the surface. Historic mining may have been undertaken from bell pits, pillar and stall workings or longwall techniques.

2.6. **Mine Entries**

Refers to a mineshaft or adit which provides an opening to gain access to underground workings.

2.7. **Brine Compensation District**

Formed by the Cheshire Brine Pumping (Compensation for Subsidence) Act 1952 as a District within which a person can serve a notice on the Brine Board if they think their property has suffered damage resulting from subsidence caused by extraction of brine.

3. Hydrogeology and Hydrology

3.1. **Controlled Water**

Section 104 of the Water Resources Act 1991 defines Controlled Waters as all inland freshwaters, i.e. rivers, watercourses, lakes and ponds (other than public sewers or sewers or drains which drain into a public sewer), groundwater, coastal waters (extending landward from the limit of the highest tide or freshwater limit) and relevant territorial waters (extending seaward for three miles from the baseline from which the breadth of the territorial sea is measured).

3.2. **Groundwater**

Groundwater is all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

3.3. **Surface Water**

Any inland freshwaters, coastal waters or relevant territorial waters i.e. water that is above the surface of the ground.

3.4. **Tributary**

A stream or river that flows into a larger stream or river.

3.5. **Confluence**

The point at which two rivers or streams join together.

3.6. **Catchment**

The total area from which rainfall flows into a river or stream.

3.7. **Discharge Consents**

For England, discharge consents to Controlled Waters (surface water and groundwater) are authorised by the Environment Agency under the Environmental Permitting (England and Wales) Regulations 2010. In considering whether or not to grant consents the Environment Agency takes account of whether the point source discharges into the water environment has the potential to cause pollution relevant to quality standards and whether it will affect the appropriate uses of the water. These consents do not apply to discharges to sewers, since the sewerage undertaker regulates these.

Discharges for sewage effluent are exempt where they are 5m3/day or less to surface water or 2m3/day to ground. Exempt discharges are not required to be reported and as such they are not considered within our assessments.

3.8. **Water Abstractions**

The Environment Agency has a duty under the Water Resources Acts 1963 and 1991 to take action, when necessary, in order to conserve, re-distribute, or increase water resources in England, and to secure its proper use. They may also draw up provisions for determining acceptable flows or minimum volumes for inland waters. Those wishing to abstract water above a specified quantity must apply to the Agency for Abstraction Licences and adhere to the conditions that apply. Premises abstracting less than 20m3 water per day from watercourses and the ground can do so without the need of a licence and as such these locations are not recorded.

These records are held under Scottish legislation to protect the public water supply. These records therefore relate only to public water supplies.

3.9. **Water Industry Act Referrals**

The Environment Agency is given powers to regulate some discharges to public sewers or certain dangerous substances under the Water Industry Act 1991.

3.10. **Aquifer Designations**

An aquifer is a geological unit containing sufficient saturated permeable rock that will yield water. The following aquifer designations are consistent with the Water Framework Directive and reflect their importance in terms of groundwater as a resource (drinking water supply) but also their role in supporting surface water flows and wetland ecosystems.

<u>Unproductive Strata</u>

Defined as rock layers or drift deposits with low permeability that has negligible significance for water supply or river base flow.

Environmental Definitions

Principal Aquifer

Defined as rock layers or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.

Secondary Aquifers

These include a wide range of rock layers or drift deposits with an equally wide range of water permeability and storage. Secondary aquifers are subdivided into two types ('A' and 'B').

Secondary 'A' Aquifers

Defined as rock layers or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.

Secondary 'B' Aquifers

Defined as predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

Secondary Undifferentiated

The Secondary Undifferentiated classification is assigned in cases where it has not been possible to attribute either category Secondary A or Secondary B to a rock type.

3.11. **Groundwater Source Protection Zones**

The Environment Agency has defined Source Protection Zones (SPZ) for 2000 groundwater sources such as wells, boreholes and springs used for public water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. There are three main zones:

Inner Zone (Zone 1) – defined as the 50 day travel time from any point below the water table to the source. This zone has a minimum radius of 50m;

Outer Zone (Zone 2) – defined as a 400 day travel time from a point below the water table. The previous methodology gave an option to define SPZ2 as the minimum recharge area required to support 25% of the protected yield;

Total Catchment (Zone 3) – defined as the area around a source within which all groundwater recharge is presumed to be discharged at the source. In confined aquifers, the source catchment may be displaced some distance from the source. For heavily exploited aquifers, the final source catchment protection zone can be defined as the whole aquifer recharge area where the ratio of the groundwater abstraction to aquifer recharge is >0.75.

In the past, the Environment Agency has also applied a fourth zone of special interest:

Special Interest (Zone 4) – this represents a surface water catchment which drains into the aquifer feeding the groundwater supply.

3.12. **Groundwater Vulnerability**

The pollution hazard of an activity will be greater in certain hydrological, geological and soil situations than in others. Superficial aquifers are the most vulnerable to pollution due to their shallow water table and little or no protective cover. Bedrock aquifers can be equally vulnerable where drift deposits are absent and where the unsaturated zone is thin or fractured.

Activities in areas of unproductive strata do not represent a risk to groundwater resources and therefore are not assigned a groundwater vulnerability.

High

These are high priority groundwater resources that have very limited natural protection. This results in a high overall pollution risk to groundwater from surface activities. Operations or activities in these areas are likely to require additional measures over and above good practice pollution prevention requirements to ensure that groundwater isn't impacted.

Medium-high

These are high priority groundwater resources that have limited natural protection. This results in a medium-high overall pollution risk to

groundwater from surface activities. Activities in these areas may require additional measures over and above good practice to ensure they do not cause groundwater pollution.

Medium

These are medium priority groundwater resources that have some natural protection resulting in a moderate overall groundwater risk. Activities in these areas should as a minimum follow good practice to ensure they do not cause groundwater pollution.

Medium-low

These are lower priority groundwater resources that have some natural protection resulting in a moderate to low overall groundwater pollution risk. Activities in these areas should follow good practice to ensure they do not cause groundwater pollution.

Low

These are low priority groundwater resources that have a high degree of natural protection. This reduces their overall risk of pollution from surface activities. However, activities in these areas may be a risk to surface water due to increased run-off from lower permeability soils and near-surface deposits. Activities in these areas should be adequately managed to ensure they do not cause either surface or groundwater pollution.

Further information relating to groundwater vulnerability is provided in the Environment Agency report (Ref: SC040016/R) 'New groundwater vulnerability mapping methodology in England and Wales'.

3.13. **Soil Leaching**

The potential for soil leaching considers a range of soil properties such as moisture content, soil clay content and carbon content. There are three soil leaching classes:

High (H)

Soils of high leaching potential with little ability to attenuate diffuse soil pollutants and in which non-adsorbed diffuse source pollutants and liquid discharges have the potential to move rapidly to underlying strata or groundwater. Three subclasses are recognised:

H1 – soils that readily transmit liquid discharges because they are either shallow or susceptible to rapid flow;

H2 – deep, permeable, coarse-textured soils that readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential;

H3 – coarse-textured or moderately shallows soils that rapidly transmit non-adsorbed pollutants and liquid discharges, but which have some ability to attenuate adsorbed pollutants because of their clay or organic matter.

Intermediate (I)

Soils of intermediate leaching potential that have a moderate ability to attenuate diffuse source pollutants or in which it is possible that some non-adsorbed diffuse source pollutants and liquid discharges could penetrate the soil layer. Two subclasses are recognised:

I1 – soils that can potentially transmit a wide range of pollutants;

I2 – Soils that can potentially transmit a wide range of pollutants and liquid discharges but are unlikely to transmit absorbed pollutants.

Low (L)

Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal or they have a significant ability to attenuate diffuse source pollutants.

4. Flood Risk

4.1. National Planning Policy Framework (Flooding)

This relates to the National Planning Policy Framework and the associated Technical Guidance.

4.2. Floodplain

A floodplain is the area that would naturally be affected by flooding if a river rises above its banks, or high tides and stormy seas cause flooding in coastal areas.

4.3. Flood Zones

Flood Zone 1

The area where flooding from rivers or sea is very unlikely as defined by the Environment Agency. There is less than 0.1% (1 in 1000) chance of flooding occurring each year.

Flood Zone 2

The area of medium probability of flooding as defined by the Environment Agency – a flood with an annual chance of occurring of between 1% (1 in 100) to 0.1% (1 in 1000) for river flooding and 0.5% (1 in 200) to 1% (1 in 1000) for coastal flooding.

Flood Zone 3A

The area of high probability of flooding as defined by the Environment Agency – a flood with an annual chance of occurring of 1% (1 in 100) or greater for river flooding and 0.5% (1 in 200) or greater for coastal flooding.

Flood Zone 3B

The boundary between 3a and 3b is a planning decision made by the Local Authority. This information is usually in the strategic flood risk assessment. This area is a functional floodplain as defined by the Environment Agency. It is an area which is designed to flood – a flood return period of 1 in 20 or less.

4.4. Flood Return Period

A return period is an estimate of the likelihood of an event occurring. Flood return periods are commonly expressed as either a ratio or a percentage, for example, a 1% or 1 in 100 year event, means there is a 1% (1 in 100) chance of flooding occurring each year.

Environmental Definitions

4.5. **Pluvial (Surface Water) Flooding**

Pluvial flooding results from rainfall running over ground before entering a watercourse or sewer. It is usually associated with high intensity rainfall events (typically greater than 30mm per hour) but can also occur with lower intensity rainfall or melting snow where the ground is already saturated, frozen, developed (for example in an urban setting) or otherwise has low permeability.

4.6. **Groundwater Flooding**

Groundwater flooding is defined as the emergence of groundwater at the surface, rising up from the underlying rocks and tends to after long periods of sustained rainfall.

4.7. **Flood Risk Rating**

Low – The site is at little or no risk of flooding from any sources.

Low to Moderate – It is possible that flooding could arise and the presence of features such as watercourses, canals, flood defences or flood storage areas in the locality may suggest that the site could be at risk of flooding. Flood resilient materials may be required in the construction of properties.

Moderate - Information from existing datasets suggests that there are certain features which may present a risk of flooding to the site and its occupants. Appropriate measures to manage flood risk may be required in addition to the use of water resistant materials in the construction of properties.

Moderate to High - Information from existing datasets suggests that there are certain features which may present a significant risk to the site and its occupants. Flood defences may be required to reduce the risk of flooding and flood storage areas may be required.

High – There is a risk to life and property. This means that existing datasets reveal significant flood risk issues which will need to be addressed.

4.8. **Flood Resistance**

Flood resistance refers to products that may be permanent or temporary and are designed to stop water entering a property through existing openings (doors, windows, vents and pipes). Permanent measures do not need to be deployed, whilst temporary measures need to installed before flood water arrives.

4.9. **Flood Resilience**

Flood resilience measures are designed to reduce the amount of damage to a property when water enters a building. They will enable the clean-up to take place more easily without the need for major refurbishment.

4.10. **Flood Defence**

Infrastructure used to protect an area against floods such as floodwalls and embankments. They are designed to a specific standard of protection (design standard).

4.11. **Standard of Protection**

The flood event return period above which significant damage and possible failure of the flood defences could occur.

4.12. **Flood Storage**

A temporary area that stores excess runoff or river flow, which are often ponds or reservoirs.

5. Drainage

5.1. **Attenuation**

The storing of water to reduce the peak discharge of water.

5.2. **Below Ground Attenuation Storage**

Large below ground voided spaces used to temporarily store surface water runoff before infiltration, controlled release to the public sewer network or re-use. The storage structure can be formed by a tank, oversized pipework or geocellular modular crates.

5.3. **Brownfield Site**

A site that has been previously developed as either residential, commercial or industrial use.

5.4. **CCTV Survey**

A survey of inaccessible below ground drainage assets by controlled closed-circuit television, which is operated remotely.

5.5. **Culvert**

A tunnel (pipe or box-shaped) carrying a stream or open drain under a road, railway or land.

5.6. **Design for Exceedance**

Designing a system to manage effectively events that exceed (bigger or rarer than) the drainage systems required level of service so that they do not impact upon life or property.

5.7. **Design Life**

The period of time during which a component or product is expected by its designers to work within it specified parameters.

Environmental Definitions

5.8. **Detention Basins**

During a rainfall event, surface water runoff drains to a landscaped depression with an outlet that restricts flow, so that the basin fills and provides attenuation. Basins are generally designed to be vegetated dry features, except during and immediately following the rainfall event. Runoff is treated filtered as it flows across the vegetation in the base of the basin.

5.9. **Exceedance Flow**

Surface water flows during rainfall events bigger or rarer than the design standard of the drainage system.

5.10. **Filter Strips**

Runoff from an impermeable area is allowed to flow across a grassed of planted area to promote sedimentation and filtration.

5.11. **Filter Drains**

Runoff is temporarily stored below the surface in a shallow trench filled with stone / gravel and provides attenuation, conveyance and treatment.

5.12. **Flow Control Device**

A device used to limit the flow rate on surface water from the outlet of drainage or SuDS component. This is usually limited to meet a required discharge rate.

5.13. **Freeboard**

The height above the designed water level in a pond or infiltration basin or the distance between the base of a soakaway and the resting groundwater level.

5.14. **Greenfield**

Land that has never been developed and has only been used for agricultural or recreational use.

5.15. **Greenfield Run-off**

The rate of surface water run-off from a site before development.

5.16. **Green Roofs**

A planted soil layer constructed on the roof of a building to create a living roof. Water is stored in the soil layer and absorbed by the vegetation.

5.17. **Infiltration Systems**

These systems collect and store runoff allowing it to infiltrate into the ground. Pollution risk to underlying groundwater can be reduced by the overlying vegetation or unsaturated soils.

5.18. **Peak Discharge Rate**

The highest rate of flow of water from a given rainfall event.

5.19. **Pervious Pavements**

Surface water runoff is allowed to soak through structural paving i.e. the gaps between block paving or porous paving where water filters through the block itself. Water can be stored in the sub-base of the pavement/roadway and potentially allowed to infiltrate to the ground or passed forward to a carrier drain.

5.20. **Ponds and Wetlands**

Features that have a permanent pool of water that can be used to provide attenuation. The outfall has a controlled discharge and the water levels increase following rainfall events. Ponds and wetlands also enhance the treatment of rainwater and promote biodiversity.

5.21. **Rainwater Harvesting Systems**

Rainwater is collected from the roof of a building or other paved impermeable surfaces in an over ground or underground tank, which then allows the water to be reused either for landscape irrigation or for flushing or toilets. Some treatment may be required depending on the reuse of the water.

5.22. **Return Period (Drainage)**

An estimate of the likelihood of a particular event occurring. A 100 year storm refers to the storm that occurs on average once every hundred years. In other word, its annual probability of exceedance is 1% (or 1 in 100 years).

5.23. **Sewer Flooding**

Flooding caused by a blockage or overflowing in a sewer or urban drainage system.

5.24. **Surface Water Runoff**

The flow of water from rainfall over the ground surface.

5.25. **Sustainable Drainage Systems (SuDS)**

Sustainable Drainage Systems are designed to manage and use rainwater close to where it falls on the surface incorporating vegetation to improve water quality, amenity and biodiversity. They can take the form of both above and below ground features and most SUDS schemes use a combination of components to achieve the overall design objectives.

5.26. **Swales**

A grassed channel used to convey and treat surface water runoff at the surface. They can be designed to infiltrate water to the ground or lined so that water is passed forward to other SuDS features. Swales can be designed to be wet or dry features.

Environmental Definitions

6. Environmental Regulatory Information

6.1. Pollution Incidents

The Environment Agency and Natural Resource Wales have a duty to investigate pollution incidents reported to them by members of the public, emergency services, local authorities, government departments, other regulators, industry, and agency staff. Substantiated incidents are held on a public register of information and relate to specific events that fall within their responsibility given that they may have an environmental and/or operational impact.

Examples may include reports that may affect land, air, and water, fish kills, illegal abstraction, low river flows, speeding vessels, and flooding. Public register information is provided by regional offices.

Incidents are graded from category 1 (Major Incident) to category 4 (No Impact). An impact category must be assigned for each affected environmental media; air, land, and water. An impact level is assigned to a particular incident but is determined by the maximum severity affecting one of the three media.

6.2. Landfill

Sites accepting waste were not required to be licensed until the introduction of the Control of Pollution Act 1974 and landfilling prior to this is often unrecorded unless captured through planning records or on historic plans.

Information on landfill sites relates to open and closed site and is captured from a number of sources within the Landmark Envirocheck Report to include:

- A survey of active landfill sites conducted on behalf of the Department of Environment in 1973, which over 3,000 sites accepting waste prior to the Control of Pollution Act 1974, and would therefore not have been subject to any strict regulation or monitoring;
- Information sourced from individual Local Authorities that were able to provide information on sites operating prior to the introduction of the Control of Pollution Act 1974;
- Information from the British Geological Survey which includes outline plans, site descriptions, waste types and tipping histories;
- Consents for landfill sites issued by the Environment Agency under Section 64 of the Environmental Protection Act 1990 (Part 2), prescribed by Regulation 10 of SI No.1056 the Waste Management Licensing Regulations 1994 and the Environmental Permitting (England Wales) Regulations 2010; and
- Information sourced from consents that were issued by the Environment Agency and the Scottish Environment Protection Agency, under the Control of Pollution Act 1974 and Section 36 of the Environmental Protection Act 1990.

6.3. Environmental Permitting

The Environmental Permitting (England and Wales) Regulations 2010 (as amended) (EPR 2010) have been introduced over a number of years so that they now encompass licences that were previously held under the several sets of legislation. The Landmark Envirocheck Report provides information on open and closed sites under each of the following pieces of legislation:

- Integrated Pollution Controls (IPC) held under the former Environment Protection (Prescribed Processes and Substances) Regulations 1991;
- Records of Local Authority Integrated Pollution Prevention and Control (LAIPPC) and Integrated Pollution Prevention and Control (IPPC) were previously maintained under the Pollution Prevention and Control Act 1999, originally set up under the Environmental Protection Act 1990. LAIPPC continue to be regulated by the Local Authority and are referred to as PartA2 Installations and Part B Installations, whilst the IPPC continue to be regulated the Environment Agency and are referred to as Part A1 Installations.
- Registered Waste Transfer, Treatment and Disposal Sites were previously recorded under the Control of Pollution Act (COPA) 1974, Section 36 of the Environmental Protection Act (EPA) 1990 and the Environmental Permitting (England and Wales) Regulations 2007.
- All waste activities now fall within EPR 2010 under a number of waste exemptions, standard rules environmental permits and bespoke environmental permits.

6.4. Waste Exemptions

Waste exemptions allow the use, storage, disposal and treatment of specific wastes that only create a low risk of pollution, when the quantities of waste are limited and stored in a specific manner.

6.5. Standard Rules Environmental Permits

Standard Rules environmental permits allow low to medium risk waste storage, transfer and treatment activities to occur at specific locations and are issued where the Environment Agency does not need to make a site specific decision about whether the regulated activity can take place at a specific location.

Environmental Definitions

6.6. Bespoke Environmental Permits

A Bespoke Environmental Permit is required where there are no exemptions or Standard Rules Environmental Permits available for the proposed activity. The Environment Agency makes a site specific assessment about the proposed regulated activity in relation to its environment to ensure waste and emissions do not have a detrimental effect.

7. Land Designations

7.1. Areas of Outstanding Natural Beauty (AONB)

The National Parks and Access to the Countryside Act 1949 as amended by the Countryside Act 1968, Wildlife and Countryside Act 1981 and Environment Act 1995, allowed for the designation of Areas of Outstanding Natural Beauty (AONB). The equivalent designations for Scotland are National Scenic Areas.

AONBs are landscapes of national conservation importance for their distinctive character and natural beauty. They are generally smaller than National Parks, and are owned by individuals e.g. farmers. Some are adjacent to National Parks and many include areas of Heritage Coast. Planning law protects development within them.

7.2. Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSI) have been designated under the Wildlife and Countryside Act 1981 Section 28 to protect areas of important flora, fauna, geological and/or physiographical features. They provide the basis for other national and international designations. Parties notified include site owner(s) and occupier(s), local planning authorities, water and sewerage companies, and the appropriate Secretary of State. The Land Registry also records these as local land changes.

The appropriate party must be consulted on developments, or notified of potentially damaging operations, which may affect an SSSI.

Most SSSIs are privately owned or managed. Others are owned or managed by public bodies such as the Forestry Commission, Ministry of Defence and the Crown Estate, or by the voluntary conservation movement. Some SSSIs are also designated as Special Protection Areas and Ramsar Sites.

7.3. RAMSAR Sites

Under the Convention on Wetlands of International Importance especially as Waterfowl Habitat, the Government is committed to designate 'Wetlands of International Importance'. The Convention was adopted in Ramsar, Iran in 1971 and ratified by the UK Government in 1976.

The purpose is to stem progressive encroachment on and loss of wetlands now and in the future. Aims include the conservation, management and wise use of migratory wildfowl stocks and to promote the conservation of wetlands.

Wetlands are areas of peat land, fen, marsh or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water.

7.4. Local Nature Reserves

These reserves are areas created by Local Authorities in conjunction with their appropriate national authority in the interest of conservation, amenity value and public enjoyment of the countryside. Some, but not all Local Nature Reserves (LNRs) are also designated SSSIs. They are controlled by bylaws.

7.5. National Nature Reserves

These reserves have been designated under the Wildlife and Countryside Act 1981 or the National Parks and Access to the Countryside Act 1949, Section 19, as areas of high national or international importance for nature conservation. They are designated by Natural England, Scottish Natural Heritage and the Countryside Council for Wales.

National Nature Reserves are Sites of Special Scientific Interest, and may have coastal frontage or be offshore islands.

7.6. Special Areas of Conservation

Special Areas of Conservation are lands designated under the ECC Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (92/43/EEC), commonly known as the Habitats and Species Directive. These sites are to be afforded absolute protection subject to 'imperative reasons of overriding public interest, including those of a social or economic nature.

7.7. Special Protection Areas

Special Protection Areas are classified under Article 4 of the EC Directive on the Conservation of Wild Birds 1979, commonly known as the Wild Birds Directive.

The purpose of Special Protection Areas is to safeguard the habitats of migratory and certain particularly threatened bird species. Together with Special Areas of Conservation, they constitute 'Natura 2000' areas for protection.

Environmental Definitions

8. Hazardous Substances

8.1. Asbestos Containing Materials (ACM's)

Includes any of the following materials; crocidolite, amosite, chrysotile, fibrous actinolite, fibrous anthophyllite, fibrous tremolite and any mixture containing any of these materials.

8.2. Asbestos Surveys

Any reference to asbestos surveys is given the same meaning as that given in HSE Guidance Document HSG 264 entitled 'Asbestos: The Survey Guide'.

8.3. Control of Major Accident Hazard Sites

The Health and Safety Executive in conjunction with the Environment Agency and the Scottish Environment Protection Agency keeps records of those sites, which manufacture or store dangerous toxic or flammable chemicals (including petrochemicals, pharmaceuticals and agrochemicals) and explosives in excess of threshold quantities specified in the Control of Major Accident Hazards (COMAH) Regulations 2015. Sites are divided into upper and lower tier sites based on the type and quantities of substances being stored or manufactured.

The COMAH Regulations require emergency plans to be kept up to date and regularly tested.

8.4. Planning Hazardous Substance Consents

This data is collected, collated and geo-coded by Landmark. The records relate to consents granted under the Planning (Hazardous Substances) Act 1990 as amended, for England and Wales and the Planning (Hazardous Substances) (Scotland) Act 1997, in Scotland.

The regulations require a consent to be granted by the Local Authority for sites where the storage of certain hazardous substances is above the specified or controlled quantity.

9. Non-Native Invasive Plants

The Wildlife and Countryside Act 1981 (as amended) is the principal legislation which regulates the release of non-native species. Section 14(2) prohibits the release of certain invasive non-native plants into the wild in Great Britain; it is an offence under Section 14(2) to "plant or otherwise cause to grow in the wild" any plants listed on Part II of Schedule 9. The most common plant species found on brownfield and urban sites include Japanese Knotweed, Giant Hogweed and Himalayan Balsam.

Japanese Knotweed

Japanese knotweed is a strong-growing, clump-forming perennial, with tall, dense stems. Stem growth is renewed each year from the existing crown of the rhizomes which grows underground. Japanese Knotweed is a particular problem as not only does is out compete native species, it also has the potential to damage buildings, pavements, roads, etc.

Himalayan Balsam

This is an non-native invasive terrestrial plant species that has spread to most parts of UK, particularly along the banks of watercourse and in damp woodland. Individual plants reach 2m in height and its rapid growth shades out most of our native species.

Giant Hogweed

Giant Hogweed is part of the same family as Cow Parsley and Hogweed, but is significantly larger in size extending up to 4m in height. The sap of Giant Hogweed contains toxic chemicals known as furanocoumarins, which when contact with the skin, and in the presence of sunlight cause a condition called phyto-photodermatitis (reddening of the skin, burns and blistering).

10. Environmental Risk Assessment

10.1. Contamination

This is taken to mean specifically, the presence of toxic, noxious or polluting substances in, on or under land.

10.2. Contaminated Land

Any reference to contaminated land should be construed in the statutory sense.

Land is defined as being contaminated land under Section 78 of the Environmental Protection Act 1990 where any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land that:

Significant harm is being caused or there is a significant possibility of such harm being caused; or

Significant pollution of controlled waters is being, or is likely to be caused.

10.3. Conceptual Site Model (CSM)

The conceptual site model is the initial phase of the environmental risk assessment process which identifies the all potential sources of contamination, the receptors capable of being harmed and the pathways capable of exposing a receptor to the contaminant source. Only where there are complete source-pathway-receptor linkages is there considered to be a potential risk.

Environmental Definitions

10.4. **Environmental Risk**

Any reference to environmental risk shall be taken to mean:

High Risk

Those properties where environmental risks have been identified that will affect land value, business interruption, lead to regulatory intervention and/or result in material financial expenditure by the client in the short term.

Moderate Risk

Those properties where environmental risks have been identified that have the potential to affect land value, lead to regulatory intervention and/or result in material financial expenditure by the client in the medium to long term.

Low Risk

Those properties where no environmental risks have been identified that have the potential to affect land value, lead to regulatory intervention and/or result in material financial expenditure by the client.

Environmental Reservations

Composite Panels and Insurance

We will not test any panels within the property to see whether there are any polystyrene insulated composite panels. The presence of such panels may result in the property being uninsurable, which would have an adverse impact on value.

Enquiries

Where necessary, any enquiries (verbal and written) undertaken by Avison Young of local authorities and statutory undertakers are made in respect of environmental issues. Local searches are not undertaken and no responsibility is accepted for any inaccurate information provided.

Environmental Liability

Any reference to environmental liability should be taken to mean a combination of the following types of liabilities:

Actual Liabilities

These are known present obligations of the business arising from past or future events, the settlement of which will require future expenditure.

These will include costs associated with regulatory compliance e.g. known monitoring, decommissioning requirements, fines, damages, and surrender provisions imposed by statute and /or contract.

Latent and Contingent Liabilities

These are unknown obligations arising from past or future events that exist, but where the outcome will only be known following the occurrence or non-occurrence of future events that are outside the control of the business.

These might include, unknown costs associated with site remediation, decommissioning and the possibility of unforeseen future events such as a pollution incident.

Ground Conditions

Any discussion of ground conditions in this report have been based on a review of existing documentary information prepared by British Geological Survey, the Coal Authority and/or other parties. Avison Young accepts no responsibility for the accuracy or completeness of information prepared by third parties.

Information

All information supplied by the Client, the Client's staff and professional advisers, local authorities, other statutory bodies, investigation agencies and other stated sources is accepted as being correct unless otherwise specified.

Legal issues

Any interpretation of leases and other legal documents and legal assumptions is given in our capacity as Property Consultants (including Chartered Surveyors and Chartered Town Planners) and must be verified by a suitability qualified lawyer if it is to be relied upon. No responsibility or liability is accepted for the true interpretation of the legal position of the client or other parties.

Where opinions expressed in this report are based on current available guidelines and legislation, no liability can be accepted by Avison Young for the effects of any future changes to such guidelines and legislation.

Plans

Any plans supplied are for identification purposes only unless otherwise stated. The Report assumes site boundaries are as indicated to us. The reproduction of Ordnance Survey sheets has been sanctioned by the Controller of Her Majesty's Stationery Office, Crown Copyright reserved.

Property Condition

Our inspection of a property does not constitute a structural survey. When preparing our report we have regard to apparent defects and wants of repair and take into account the age of the property. We do not however carry out a detailed search for defects which is undertaken as part of the structural survey neither do we necessarily set out the various defects when making the report. We do not inspect woodwork or other parts of the structure which are covered, unexposed or inaccessible. We do not arrange for any investigation to be carried out to determine whether or not high alumina cement concrete or calcium chloride additive or any other deleterious materials or permanent woodwool shuttering or composite panelling has been used in the construction.

Unless so instructed we do not arrange for any investigations to be carried out to determine whether or not any deleterious or hazardous material or techniques have been used in the construction of the property or has since been incorporated and the services are not tested.

We are therefore unable to report that the property is free from defect in these respects.

For reporting purposes we assume unless otherwise stated that the property (including associated plant and machinery, fixtures and fittings) is in serviceable order and will remain so for the foreseeable future. It will be assumed that the building(s) is/are in good repair, except for defects specifically noted.

Environmental Reservations

Services Installations

Unless otherwise instructed, we do not inspect or test any of the water, mechanical, heating, electrical or drainage installations. Where appropriate we will make recommendations in relation to the execution of specialist tests to establish the condition. The implementation of such work would normally involve an additional fee.

Site Areas

Site areas are normally computed from plans or the Ordnance Survey and not from a physical site survey. They are approximate unless otherwise indicated.

Tenure

Title Deeds and Leases are not inspected (unless specifically stated) and, unless we are informed to the contrary, it is assumed that a property is free of any onerous covenants, easements, other restrictions or liabilities including mortgages, grants and capital allowances that may affect the value.

Warranties

The client warrants and represents that, to the best of its knowledge, information and belief, the information supplied by and on its behalf to Avison Young is true and accurate and that it will advise and instruct its third party advisers to advise Avison Young in the event that it and/they receive notice that any such information is either misleading or inaccurate.

Contact Details

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