

Flood Risk Assessment and Drainage Strategy Report

HAWTHORN MEDICAL CENTRE

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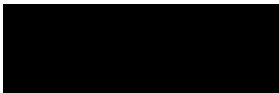
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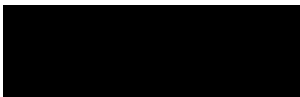
Client Address: 99 Gresham Street London EC2V 7NG

Site Address: Land on Molesey Road, Fallowfield Manchester , M14 6PE

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V01	First Issue – for comments	MW	MW	01.05.25
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1 INTRODUCTION

1.1 Project Background

Curtins has been appointed by the NHS Property Ltd to provide a Flood Risk Assessment (FRA) and Drainage Strategy for the proposed development located adjacent to Molesey Road, Fallowfield, Manchester M14 6PE.

The report provides information on the nature of flood risk at the site and follows Government guidance regarding development and flood risk.

The report is based on currently available information and preliminary discussions.

Proposals contained or forming part of this report represent the design intent and may be subject to alteration or adjustment in completing the detailed design for this project. Where such adjustments are undertaken as part of the detailed design and are deemed a material deviation from the intent contained in this document, prior approval shall be obtained from the relevant authority in advance of commencing such works.

1.2 Scope of Assessment

The assessment is to be undertaken in accordance with the standing advice and requirements of the Environment Agency (EA) for Flood Risk Assessments as outlined in the Communities and Local Governments Planning Policy Guidance to the National Planning Policy Framework (NPPF).

The assessment will:

- Investigate all potential risks of flooding to the site,
- Consider the impact the development may have elsewhere with regard to flooding,
- Consider design proposals to mitigate any potential risk of flooding determined to be present; and
- Consider foul and surface water drainage proposals for the proposed development.

The total site area is approximately 0.27 hectares, and following scrutiny of the Environment Agency flood maps it has been identified that development is located within Flood Zone 1 within the Critical Drainage Area. The Local Flooding Authority has confirmed that a Flood Risk Assessment (FRA) is not required for the planning submission, as the site area is less than 0.5 hectares. However, a Flood Risk Assessment has been undertaken to meet the requirements for achieving BREEAM credits.

In April 2015, the Government made changes to the National Planning Policy Framework, which made Sustainable Urban Drainage Systems (SuDS) a material consideration in the determination of planning applications for all developments.

A Drainage Strategy will therefore be required as part of the Planning Application for the development, as the site is considered to be 'major' development by the Town and Country Planning Order 2015.

This Flood Risk Assessment and Drainage Strategy reviews the following information:

- Environment Agency flooding maps for rivers, sea flooding and surface water flooding
- Long-term flood risk Gov information, Groundwater, and Reservoir flooding.
- Manchester City, Salford City and Trafford Councils Level 1 Hybrid Strategic Flood Risk Assessment (SFRA) published in March 2010.
- Manchester City, Salford City and Trafford Councils Level 2 Hybrid SFRA, User Guide, Final, dated May 2010.
- Manchester City, Salford City and Trafford Councils Level 2 Hybrid Strategic Flood Risk Assessment (SFRA) published in March 2011.
- Preliminary Flood Risk Assessment (PFRA) for Manchester County Council dated May 2011.
- Manchester City Council SuDS Requirements for New Developments.
- Topographical Survey by Survey Solution Ltd dated March 2025.
- GPR Survey carried out by Survey Solution Ltd dated March 2025.
- United Utilities Sewer records
- Phase 1 Preliminary Risk Assessment 087546-CUR-XX-XX-T-GE-00002 dated June 2025

The proposed development consists of the construction of a medical facility, together with an adjacent car park.

The Proposed Site Layout, Site Levels and Site section drawings are enclosed in Appendix A.

2 EXISTING SITE DETAILS

2.1 History and Current Use

The site is located at Moseley Road, Fallowfield, M14 6PE (Easting 386361, Northing 393955; Grid Reference SJ863939). It is a greenfield site, historically forming part of the wider Manchester University and Athletics Campus.

The site is bounded by Moseley Road to the south, the University sports fields to the north and west, the Car Dealership and residential properties to the east. A substantial brick boundary wall is present along the southern and eastern edges of the site.

The proposed vehicular access to the site will be from Moseley Road.

Figure 1 – Site Location Plan



2.2 Existing Watercourses and Other Waterbodies

No watercourses have been identified within the proposed site.

Fallowfield Brook, a culverted watercourse, runs beneath the University Sports Fields a short distance north of the development. Its exact location is currently unknown; however, an indicative route is shown on Figure 2.

A drainage survey was carried to survey the existing culverted watercourse through the university site.

Three manholes (Noted as MH1, MH1A and MH1B) are located to the north of the site, adjacent to the sports pitches. A survey of these manholes confirmed that the watercourse is 1.2m diameter and is approximately 2.1m depth to invert.

It was not possible to perform a CCTV survey of the culvert, due to a lack of vehicular access to the site.

The manholes are located in an area outside the extents of the topographical survey, and the existing cover levels are not known. An additional topographical survey is required to provide the cover levels and allow the invert levels to be confirmed.

Drainage Survey Information is enclosed in Appendix B.

The Cringle Brook, classified as a main river, is located approximately 338m to the south of the site.

The Gore Brook, classified as a main river, is located approximately 1.15km north of the site.

The Audenshaw Reservoir is located 5.30km to the east of the development.

Figure 2 – Hidden Manchester Map



2.3 Existing Drainage

The United Utilities public sewer records have been obtained for the site and surrounding area and confirm that there is no public sewer located within the site boundary. An extract is shown in Figure 3, and the records are enclosed in *Appendix B*.

Figure 3 – United Utilities Sewer Records



The records indicate that three public combined sewers run parallel to each other in a westerly direction beneath Moseley Road:

- A 525mm sewer located at an approximate depth of 6.8m
- A 990mm sewer located at an approximate depth of 12.3m
- A 300mm sewer located at an approximate depth of 3.53m

Two manholes, UU3901 (depth 1.49m bgl) and UU2901 (depth 6.68m bgl), are located in close proximity to the site and appear to be connected to a 525mm diameter combined public sewer.

A CCTV survey was carried to survey the existing 525mm sewer. It was not possible to lift manhole UU3901, but manhole UU2901 was lifted. It was revealed that this was an offset chamber; due to this, an accurate measure of the sewer depth was not able to be determined. However, it was estimated that the depth was between 12 and 15m deep.

Further investigations may be required to this sewer to confirm and agree the discharge connection details with UU.

Drainage Survey Information is enclosed in *Appendix B*

There are further public sewers identified on the public sewer records within the wider vicinity of the site, but these are not considered relevant to the scheme.

No surface water sewers have been identified in close proximity.

A GPR Utilities Survey has been carried out and is enclosed in *Appendix C*.

As it is a greenfield site, there is no existing drainage within the site.

2.4 Topography

A Topographical Survey of the site was completed by Survey Solution in March 2025 and is enclosed in *Appendix C*.

The topography indicates that the site slopes from approximately 44.00m AOD in the south-west to 43.69m AOD in the north.

2.5 Geology

At the time of writing, only a Phase 1 Preliminary Risk Assessment has been produced. Reference has also been made to British Geological Survey (BGS) mapping.

The Phase 1 report indicates that the site is underlain by superficial deposits of Till, Devensian – Diamicton, which consists of a heterogeneous mixture of clay, sand, and gravel. These superficial deposits overlie bedrock of the Collyhurst Sandstone Formation, comprising predominantly red to pink, medium- to coarse-grained sandstone, typically coloured by iron oxides.

Historical BGS borehole record SJ89SE7, located adjacent to the site, indicates the presence of clay beneath the topsoil extending to a depth of approximately 16m below ground level (bgl).

3 DEVELOPMENT AND FLOOD RISK

3.1 National Planning Policy Framework (NPPF) and Planning Practice Guidance

In July 2022, the Department of Communities and Local Government published the National Planning Policy Framework document (NPPF), and the Planning Practice Guidance was published in March 2014 and updated in September 2023, which provides guidance on how flood risk should be assessed during the development process.

Table 1: (Extract from Planning Practice Guidance) Flood Zone Classifications

These Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences. They are shown on the Environment Agency’s Flood Map for Planning (Rivers and Sea ) , available on the Environment Agency’s web site, as indicated in the table below.

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as ‘clear’ on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or Land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on the Flood Map)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding. (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)

Table 2: (Extract from Planning Practice Guidance) Flood Risk Vulnerability Classification

Essential Infrastructure • Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk. • Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood. • Wind turbines.
Highly Vulnerable • Police and ambulance stations; fire stations and command centres; telecommunications installations required to be operational during flooding. • Emergency dispersal points. • Basement dwellings. • Caravans, mobile homes and park homes intended for permanent residential use. • Installations requiring hazardous substances consent. (Where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or water-side locations, or need to be located in other high flood risk areas, in these instances the facilities should be classified as 'Essential Infrastructure').
More Vulnerable • Hospitals • Residential institutions such as residential care homes, children's homes, social services homes, prisons and hostels. • Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels. • Non-residential uses for health services, nurseries and educational establishments. • Landfill* and sites used for waste management facilities for hazardous waste. • Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.

Less Vulnerable

- Police, ambulance and fire stations which are **not** required to be operational during flooding.
- Buildings used for shops; financial, professional and other services; restaurants, cafes and hot food takeaways; offices; general industry, storage and distribution; non-residential institutions not included in the 'More Vulnerable' class; and assembly and leisure.
- Land and buildings used for agriculture and forestry.
- Waste treatment (except landfill* and hazardous waste facilities).
- Minerals working and processing (except for sand and gravel working).
- Water treatment works which do not need to remain operational during times of flood.
- Sewage treatment works, if adequate measures to control pollution and manage sewage during flooding events are in place.

Water-Compatible Development

- Flood control infrastructure.
- Water transmission infrastructure and pumping stations.
- Sewage transmission infrastructure and pumping stations.
- Sand and gravel working.
- Docks, marinas and wharves.
- Navigation facilities.
- Ministry of Defence defence installations.
- Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location.
- Water-based recreation (excluding sleeping accommodation).
- Lifeguard and coastguard stations.
- Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms.
- Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan.

Table 3: (Extract from Planning Practice Guidance) Flood Risk Vulnerability and Flood Zone Compatibility

Flood Zones	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 *	✗	✗	✗	✓*

Key:

✓ Development is appropriate

✗ Development should not be permitted.

Notes to table 3:

- This table does not show the application of the Sequential Test which should be applied first to guide development to Flood Zone 1, then Zone 2, and then Zone 3; nor does it reflect the need to avoid flood risk from sources other than rivers and the sea;
- The Sequential and Exception Tests do not need to be applied to minor developments and changes of use, except for a change of use to a caravan, camping or chalet site, or to a mobile home or park home site;
- Some developments may contain different elements of vulnerability and the highest vulnerability category should be used, unless the development is considered in its component parts.

† In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

* In Flood Zone 3b (functional floodplain) essential infrastructure that has to be there and has passed the Exception Test, and water-compatible uses, should be designed and constructed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows and not increase flood risk elsewhere.

3.2 Site Specific NPPF Flood Risk Categorisation

To assess the NPPF flood risk classification for the site, the first step was to inspect the UK Government web based 'Flood Map for Planning' which is used to inform planning of a site's Flood Zone(s) and the probability of flooding from rivers or sea taking into account the presence of flood defences or climate change. The map also indicates surface water flooding. However, the web based 'Long Term Flood Risk Assessment for Locations in England' should also be used to identify the long-term flood risks from rivers and seas, surface water and reservoirs.

The Flood Map for Planning report is enclosed in *Appendix D*, and it can be seen that the pre-development site and the surrounding area is located in an area classified as Flood Zone 1 (low probability of flooding from rivers or sea).

Further site-specific review of the flood risk to the site is provided in section 4.

3.3 Site Specific Flood Zone Compatibility

The proposals for the development site are likely to fall within the following category:

- **No-residential use for health service.**

Health Service is classed as 'more Vulnerable' development in the Flood Risk Vulnerability Classification (Table 2)

The site is located within Flood Zone 1 for which a 'More Vulnerable' development is deemed to be appropriate. Therefore, the development does not trigger the requirement for a sequential test/exception test (refer to the Flood Zone compatibility table in the NPPF technical guidance).

4 HYDROLOGICAL ASSESSMENT

4.1 Sources of Flood Risk

This study assesses the risk from different types of flooding to the development and the risk of flooding from the development, taking into consideration climate change, as well as how flood risks should be managed. The approach to assessing flood risk at the development site was informed by the requirements of NPPF in conjunction with the client and Environment Agency requirements.

4.2 Fluvial Flooding (Rivers and Streams)

Flooding to the site from rivers and sea is indicated below in Figure 4, taken from the UK Government's Long-Term Flood Risk Information.

Figure 4 - Long Term Flood Risk Assessment Map – Flood Risk from Rivers or Sea (© Crown Copyright)

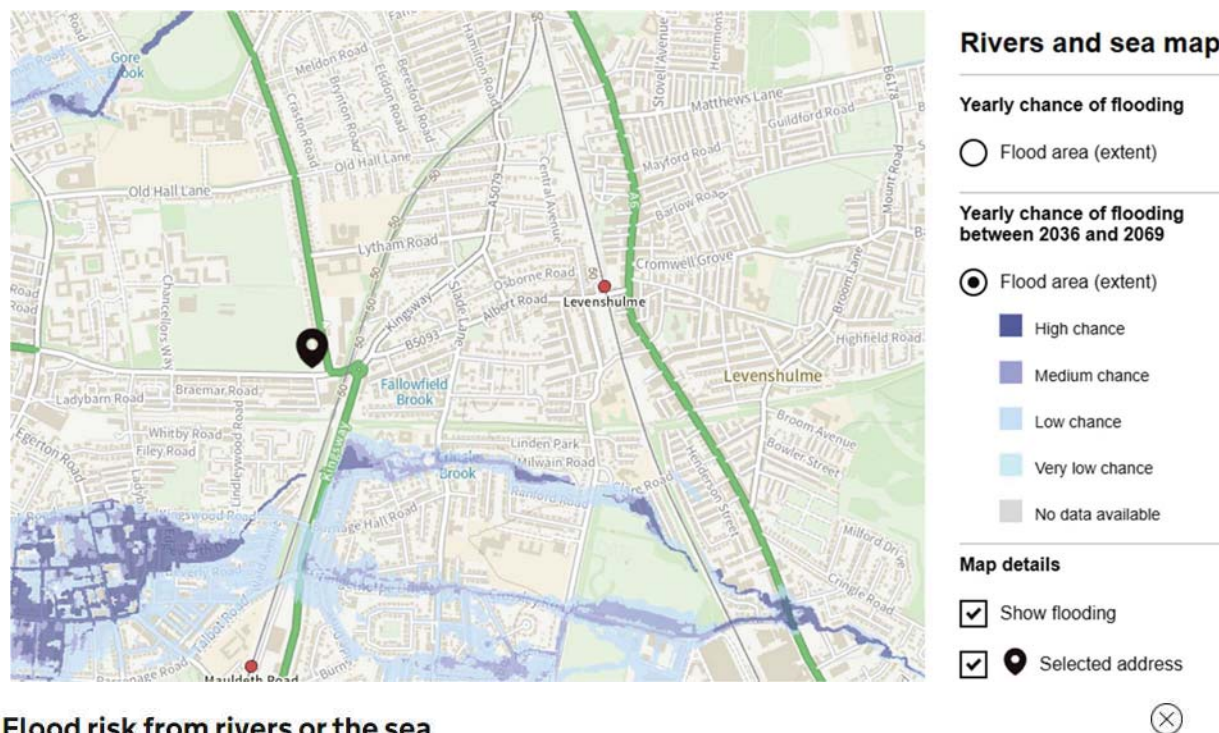


Figure 4 shows that the site is located in Flood Zone 1 (low probability of flooding from rivers or sea).

4.3 Tidal Flooding (Coastal or Estuarine)

There is currently no flood risk identified on the UK Government flood maps for the site, and it is therefore regarded to be at **very low** risk from tidal flooding.

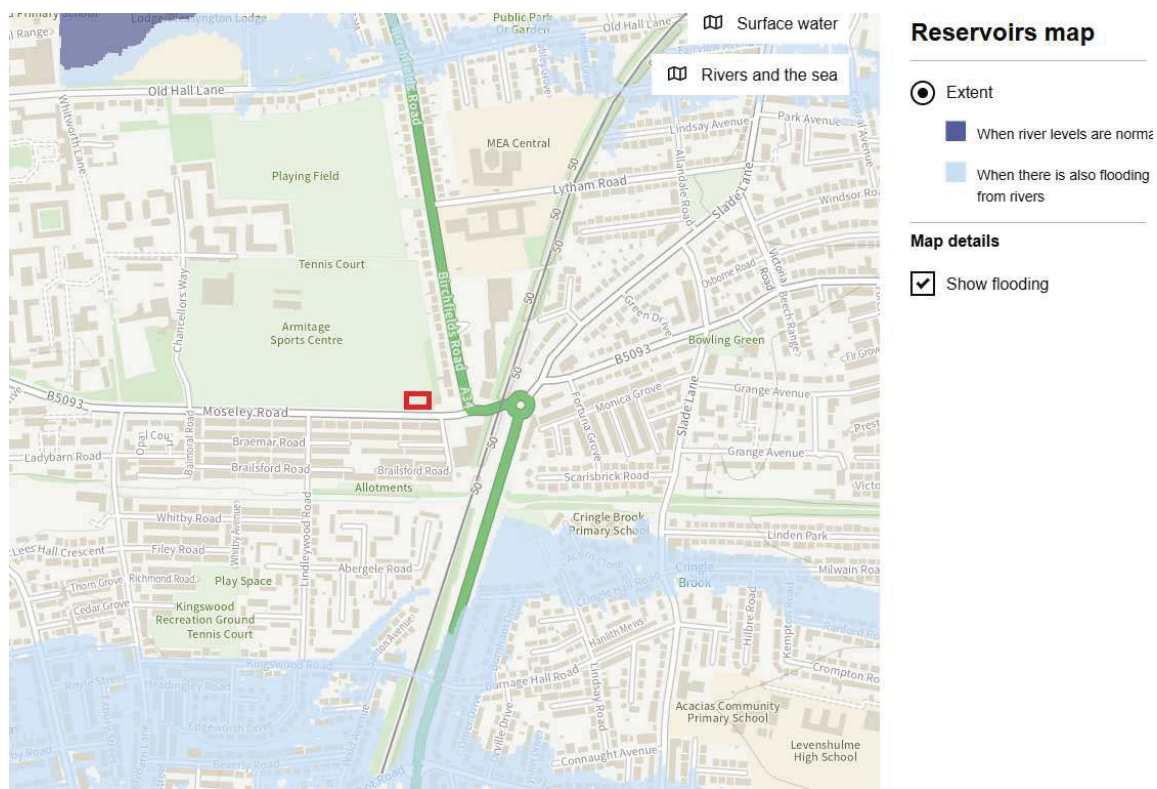
4.4 Reservoir Flooding

Reservoir flooding is extremely unlikely to happen and there has been no loss of life in the UK from reservoir flooding since 1925. The Environment Agency is the enforcement authority and ensures that reservoirs are inspected regularly, and essential safety work is carried out.

The Long-Term Flood Risk Assessment (Flood Risk from Reservoirs) map Figure 5 shows the largest area that might be flooded if a reservoir were to fail and release the water it holds. Since this is a prediction of a worst-case scenario, it is very low risk that a reservoir flood would be this large.

The site is located outside the reservoir, flooding therefore risk is considered **very low**.

Figure 5 - Long Term Flood Risk Assessment Map – Flood Risk from Reservoir (© Crown Copyright)



4.5 Canal Flooding

There are no canals adjacent to the site.

The Manchester SFRA identifies areas within the Canal Hazard Breach zones.

The site is not located within the extent of the breach; therefore, based on the above information, canal flooding to the site is unlikely.

4.6 Groundwater Flooding

No site investigation has been completed at this stage.

Manchester SFRA maps indicate the site is not located within the area of groundwater flooding.

Given the proximity of the Fallowfield Brook, it would be anticipated that the groundwater table might be present therefore groundwater monitoring is required.

The existing ground levels slope from approximately 44.00m AOD in the south, adjacent to Moseley Road, to around 43.00m AOD in the north, towards the sports fields. The proposed building and external car park levels will be set as close as possible to the adjacent public footway to ensure step-free access for disabled users of the medical centre.

Any potential groundwater flooding would be expected to occur at the lowest point on the site, adjacent to the sports fields. No basement is proposed as part of the medical centre development.

Based on the existing topography and proposed design, the risk of groundwater flooding to the site is assessed to be very low.

Based on the above groundwater flooding to the site is assessed to be **very low**.

4.7 Sewers or Highway Drainage Flooding (Infrastructure Failure)

There are no highway drains recorded within the site. The Utility Survey indicates the presence of gullies within the carriageway, which appear to be connected directly to the public combined sewer.

United Utilities and Manchester City Council have not provided any records of flooding to the site or the vicinity.

Providing United Utilities and Manchester City Council maintain their drainage assets within and in the vicinity of the site, the risk of flooding to the proposed development site from public sewers or highway drainage is considered as **low**.

4.8 Surface Water Flooding to the site

Surface water flooding can be caused when rainwater during extreme rainfall events does not drain away through the normal drainage system or soak into the ground with flooding occurring, principally from manholes and gullies. Surcharging sewers can result in overland flows which if originating at a higher elevation than a development site can potentially pose a flood risk.

From the UK Government's Flood Risk from Surface Water (extent of flooding) map:

- Where a site is located in a dark blue shaded zone, this indicates that the site is at high risk of flooding, where flooding occurs as a result of rainfall with a greater than 1 in 30 (3.3%) chance in any given year.
- Where a site is located in a mid-blue shaded zone, this indicates that the site is at medium risk of flooding, where flooding occurs as a result of rainfall of between 1 in 100 (1%) and 1 in 30 (3.3%) chance in any given year.

- Where a site is located in a light blue shaded zone, this indicates that the site is at low risk of flooding, where flooding occurs as a result of rainfall of between 1 in 1000 (0.1%) and 1 in 100 (1%) chance in any given year.
- Where a site is located in a clear (unshaded) area; this indicates that the site is at very low risk of flooding, where flooding occurs as a result of rainfall with less than 1 in 1000 (0.1%) chance in any given year.

Figures 6 and 7 illustrate the extent of potential surface water flooding at the site. Surface water accumulation is shown near the eastern boundary. The mapping suggests possible overland flow from roads to the south-east. However, an existing brick wall along the southern and eastern boundaries prevents surface water from entering the site from adjacent streets, contrary to what Figures 6 and 7 may imply.

The existing eastern boundary wall will be retained, and a new brick wall will be constructed along the roadside boundary. These measures will prevent any surface water ingress from the surrounding roads. On this basis, the risk of surface water flooding to the site is considered very low.

According to the Long-Term Flood Risk Map (Figure 7), flooding depths of approximately 0.20–0.30m are predicted at the northern edge of the development, adjacent to the sports pitches, along with areas of surface water flooding up to 0.20m in depth within the site itself.

As part of the proposed development, surface water will be captured and attenuated on site. As these pitches lie at a lower elevation than the development site, surface water will collect in the intervening valley and will not flow toward the site. Therefore, the risk of flooding from the sports pitches is considered to be very low.

Figure 6- Planning maps– Flood Risk from Surface water (© Crown Copyright)

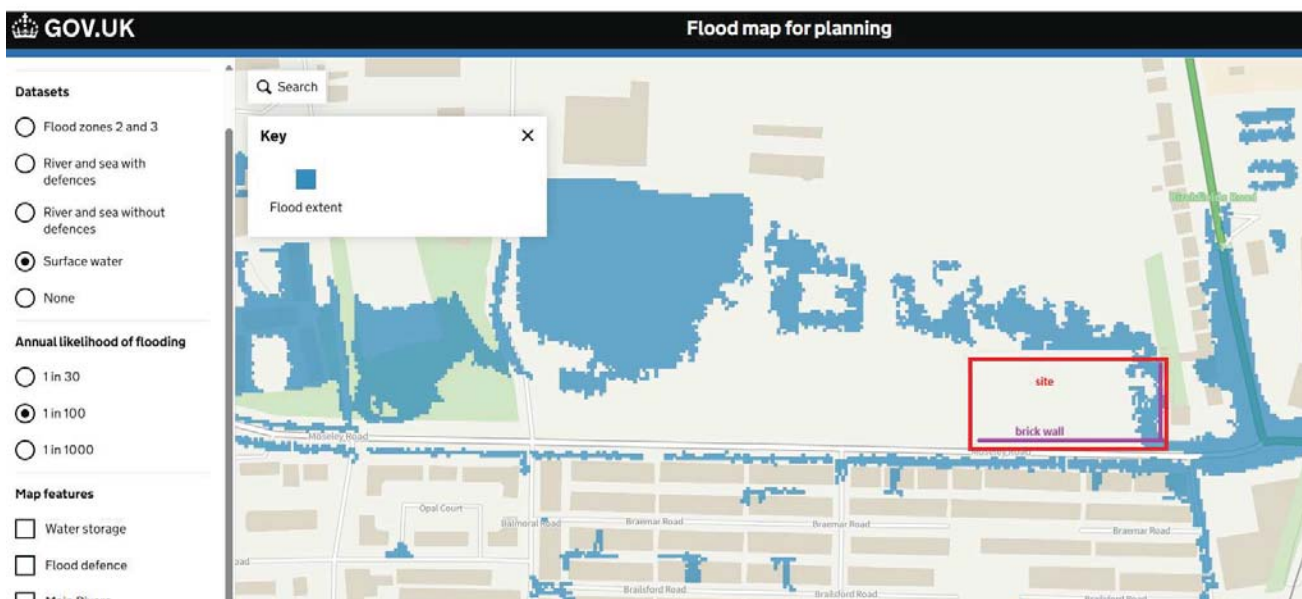
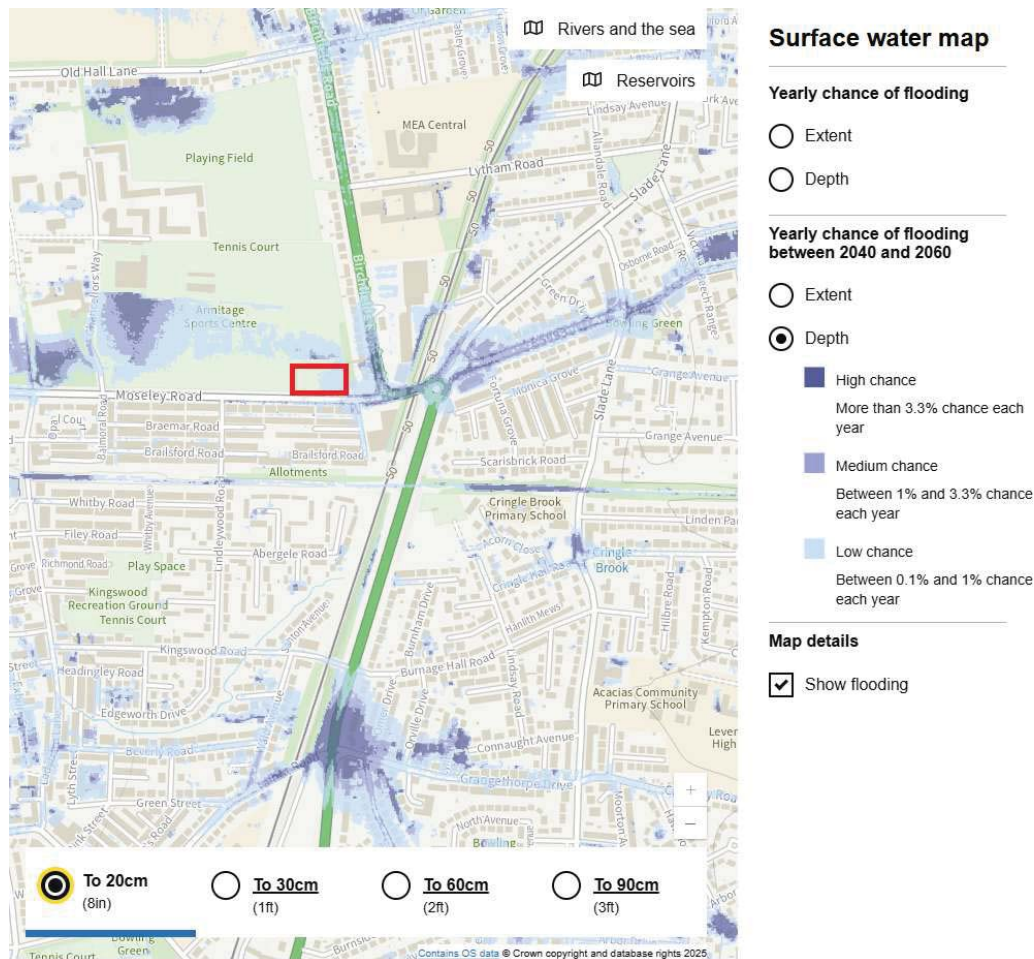


Figure 7 - Long Term Flood Risk Assessment Map – Flood Risk from Surface water (© Crown Copyright)



The area around the site is also generally identified as being at very low risk from surface water flooding. Considering the above, the risk of surface water flooding to the site is considered **very low**.

4.9 Surface Water Flooding from the site

Developers are responsible for ensuring that new development does not increase the flood risk elsewhere. Where new development is proposed, the new surface water drainage network shall be designed to not flood for the critical 1 in 30-year storm event and flood water generated up to the critical 1 in 100-year plus climate change storm event shall be constrained within areas on site so as not to cause damage to buildings, essential services or adjoining developments and services.

The development proposals indicate a significant change to the impermeable areas, The development has the potential to increase flood risk where additional run-off from proposed roads, paved areas and building roofs are discharged freely into the watercourse. It is therefore encouraged to propose permeable areas, landscaping areas and incorporate sustainable drainage features where possible.

It is proposed that surface water from the site will be limited to a greenfield rate, attenuated using Suds and discharged to a culverted watercourse. The surface water drainage will be designed not to flood for 1 in 100+45CC therefore risk of surface water flooding from the site is very low.

A detailed assessment of the proposed surface flows and strategy is carried out within the drainage strategy within section 6 of this report.

4.10 Historical Flooding

No historic records of flooding for the site were received at the time of writing this report.

4.11 Summary of Flood Risk

From the evidence collated and subsequent negotiations, the main types of flooding that may apply to the proposed development site are as follows:

- Surface water flooding to the site (residual risk); and
- Surface water flooding from the site (potential).

5 MITIGATION

5.1 Surface Water Flooding to the site Mitigation

The UK Government Long Term Flood Risk Assessment surface water flood maps indicate that the site is at very low risk of surface water flooding. However, the site topography is likely to be reprofiled as part of the development proposals, and the site is located within a CDA. Therefore, measures outlined in this section are recommended in order to ensure that the risk of surface water flooding to the post-development site shall not be increased.

Existing footway levels along the outside perimeter of the site are determined by the highway authority. It is recommended that these levels should be maintained, in order that surface water shall fall away from the site boundary and into the highway gullies. It is assumed that the highway drainage will be subject to the local highway authority regular drainage maintenance schedule.

Section 4.8 of the report confirms that the risk of surface water flooding to the site is considered very low. To ensure that the 'very low' risk any site access should be positioned outside the surface water flow paths indicated in Figures 6 and 7. Proposed ground levels in the northern part of the site should be set higher than the existing levels within the adjacent valley, or alternatively, a brick wall with railings should be provided to prevent surface water from entering the site. The proposed surface water drainage network shall be designed to accommodate flows generated from within the site.

Providing the above measures are implemented, the flooding risk to the development site from surface water is therefore considered **very low** post development.

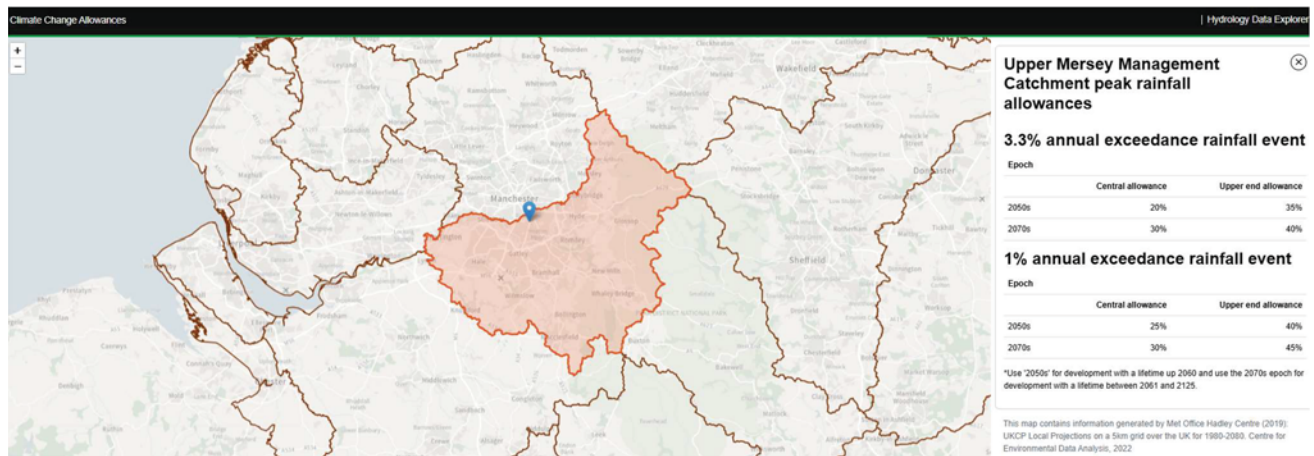
5.2 Surface Water Flooding from the site Mitigation

Developers are responsible for ensuring that new development does not increase the flood risk elsewhere. Any new development site drainage should be designed in accordance with current best practice to provide adequate capacity not to flood for the critical 1 in 30-year storm event and flood water generated from up to the critical 1 in 100-year plus climate change storm event shall be constrained within the areas on site so not to cause damage to buildings, essential services, or adjoining developments & services.

In May 2022, the Environment Agency released updated climate change allowances for peak rainfall intensities which should be applied to new developments. Rather than nationwide allowances, each area has its own peak rainfall allowances. In the case of the proposed site area, this is the Upper Mersey Management Catchment. Figure 9 demonstrates the climate change allowances with central and upper end allowances for 2020s, 2050, and 2080s.

Based on the nature of the development, a lifespan in excess of 100 years is anticipated. Therefore, the potential climate change allowance for the 2070's ranges between 25% for the central allowance and 45% for the upper end allowance. As such, an allowance of 45% for climate change on peak rainfall intensity will be included in calculations. LLFA has confirmed that 45% climate change should be used for development.

Figure 8: (Extract Environment Agency Guidance) Peak Rainfall Intensity Allowance in small and urban catchments



In following the standard hierarchy of drainage solutions, consideration should firstly be given to the discharge of surface water runoff by sustainable methods such as infiltration.

Section 6 reviews the surface water discharge options, and it is proposed that the surface water will discharge to the culverted watercourse Fallowfield Brook.

To minimise localised flooding within the site, the drainage design should ensure that gullies, drainage channels and drains are all suitably sized to accommodate peak storm flows. Also, all inlet features should have suitably sized sumps to catch silts and should be subject to a documented routine maintenance and cleansing regime. Flood water exceedance routes should be identified, both on and off site.

For any sustainable drainage systems employed in the development, an appropriate management and maintenance plan for the sustainable drainage system for the lifetime of the development should be submitted which should include:

- Any arrangements for management and maintenance
- Arrangements concerning appropriate funding mechanisms for its on-going maintenance of all elements of the sustainable drainage system (i.e. inspections, regular maintenance)

Assuming that the proposed drainage system is designed to provide adequate capacity, and that the private drainage will be maintained by their chosen maintenance company, it can be assumed risk of flood from blockage or overloading is minimal.

The final design of the drainage networks shall be in accordance with the legislation set by the Environment Agency, Manchester City Council and United Utilities.

6 DRAINAGE STRATEGY

6.1 Proposed Foul Water Drainage

A separate foul and surface water system is proposed.

Two manholes, UU3901 (depth 1.49m bgl taken from UU records) and UU2901 (depth 6.68m bgl from UU records), are located in close proximity to the site and appear to be connected to a 525mm diameter combined public sewer.

A CCTV survey was carried to survey the existing 525mm sewer. It was not possible to lift manhole UU3901, but manhole UU2901 was lifted. It was revealed that this was an offset chamber; due to this, an accurate measure of the sewer depth was not able to be determined. However, it was estimated that the depth was between 12 and 15m deep.

Further investigations may be required to this sewer to confirm and agree the discharge connection details with UU.

United Utilities, in their pre-development enquiry response, have confirmed that they have no objection in principle to the proposed connection to the 525mm combined sewer in Moseley Road at an unrestricted discharge rate.

A copy of the United Utilities correspondence is enclosed in *Appendix E*.

It is assumed that the site will remain under a single ownership, therefore sewers cannot be offered for adoption by United Utilities. Connection(s) to the public sewer network will be subject to a Section 106 Agreement with United Utilities

The proposed drainage strategy is enclosed in *Appendix F*.

6.2 Proposed Surface Water Drainage

Any new development site drainage should be designed in accordance with current best practice to provide adequate capacity not to flood for the critical 1 in 30-year storm event and flood water generated for up to the critical 1 in 100-year plus climate change storm event shall be constrained within the areas on site so not to cause damage to buildings, essential services or adjoining developments and services.

As discussed in Section 5.2, based on the nature of the development, a lifespan in excess of 100 years is anticipated. Therefore, the potential climate change allowance for the 2070's ranges between 25% for the central allowance and 45% for the upper end allowance. As such, an allowance of 45% for climate change on peak rainfall intensity will be included in the calculations.

In following the standard hierarchy of drainage solutions, consideration should firstly be given to the discharge of surface water runoff by sustainable methods such as infiltration.

Infiltration

In-situ infiltration testing was undertaken by Structural Soils LTD on the 27th of August 2025. 5no. in-situ CBR tests in accordance with BS1377:Part 9:1990, Clause 4.3 and 2 no. soakaway testing to BRE Digest 365. Based on test results it is evident that the infiltration properties of the soil are very poor. Drainage design to account for poor infiltration properties of the soil.

Watercourse

The culverted watercourse, Fallowfield Brook, is located a short distance north of the site boundary.

A drainage survey was carried to survey the existing culverted watercourse through the university site.

Three manholes (Noted as MH1, MH1A and MH1B) are located to the north of the site, adjacent to the sports pitches. A survey of these manholes confirmed that the watercourse is 1.2m diameter and is approximately 2.1m depth to invert.

It was not possible to perform a CCTV survey of the culvert, due to a lack of vehicular access to the site.

The manholes are located in an area outside the extents of the topographical survey, and the existing cover levels are not known. An additional topographical survey is required to provide the cover levels and allow the invert levels to be confirmed.

Drainage Survey Information is enclosed in Appendix B.

It is proposed that surface water from the site will be discharged to this watercourse, subject to confirmation of a suitable outfall point and agreement with LLFA and University.

Surface Water Sewer

No surface water sewers have been identified in the vicinity of the site. In accordance with the drainage hierarchy, surface water runoff should therefore be discharged to a nearby watercourse.

Combined Water sewer

Although there are several existing combined public sewers in the vicinity of the development site, the drainage hierarchy dictates that surface water should be discharged to a watercourse as the preferred option.

Table 5 summarises the options for surface water disposal.

Table 5: Surface Water Disposal

Surface Water Disposal	Potential	Description
Infiltration	X	Infiltration is not considered a suitable drainage method due to ground conditions.
Watercourse	✓	The culverted watercourse, Fallowfield Brook, is located a short distance north of the site boundary.
Surface Water Public Sewer	X	No surface water sewers have been identified in the vicinity of the site.
Combined Public Sewer	X	While there are several combined public sewers nearby, discharge of surface water to a combined sewer is the least preferred option under the drainage hierarchy

It is therefore proposed that surface water runoff from the site will discharge to the culverted watercourse. An additional topographical survey is required to provide the cover levels of the manholes on the watercourse and allow the invert levels of the to be confirmed.

Any connection to the watercourse will be subject to Land Drainage Consent from Manchester City Council's Flood Management Team.

The existing site is greenfield site. The existing greenfield rates included in Appendix G are lower than 5 l/s, it is proposed to increase to 5 l/s for all storm events to reduce the risk of blockage of flow control device. The restriction of 5.l/s has been accepted by the LLFA.

6.3 Sustainable Drainage Systems and Green Infrastructure

In accordance with the National Planning Policy Framework (NPPF) a sustainable drainage system (SuDS) should be provided unless demonstrated to be inappropriate. The following options have been considered for the site:

Infiltration Systems:

Surface water management options such as infiltration trenches and soakaways were considered during the development of the drainage strategy. However, based on ground conditions indicated by British Geological Survey (BGS) mapping, infiltration systems are not considered suitable for this site.

Green/Blue roofs:

Green and blue roof systems were considered as part of the surface water management strategy. However, due to the limited roof area available due to the location of M&E equipment, their implementation was deemed not economically viable relative to the potential benefits, and they have therefore been omitted from the proposed design.

Swales, Wetlands and Attenuation Ponds:

Due to the nature of the site and the limited space available, pre-treatment steps and retention systems such as swales, wetlands and ponds are not considered suitable for the site due to their space requirements.

Permeable Paving

Permeable asphalt has been proposed for the car parking bays to provide water quality treatment. However, due to the steep gradient of the bays, attenuation within the sub-base will be minor.

Rain Gardens and Drained Soft Landscaping

There are no external soft landscaped areas on site to implement any rain gardens.

Greywater Recycling

There are currently no proposals to include for rainwater harvesting within the scheme.

SuDS Conclusion

The development is proposing to include:

- Permeable asphalt

In addition to the sustainable drainage features, attenuation measures will be required to accommodate the necessary volumes generated up to the 100 year + 45% CC event due to the limiting discharge of 5l/s.

A model of the proposed drainage has been created and modelled in Causeway Flow Drainage Design Software. This was then modelled for storms up to the 100-year + 45% CC event.

A cellular attenuation tank is proposed to provide 118m³ attenuation storage. Further attenuation is provided by the permeable asphalt sub-base; however, the permeable asphalt is primarily utilised as a pollution control measure.

A copy of the proposed drainage network details and results are enclosed in Appendix G.

The detailed drainage design will be developed following confirmation of the watercourse invert levels.

6.4 Pollution control

Surface water run-off from hard paved areas at risk of contamination should receive water quality treatment. External areas are considered as a low hazard in terms of contamination and roof areas as a very low hazard. Figure 10 illustrates the pollution hazard indices for different land use classifications from The CIRIA SuDS Manual C753 (2015).

Figure 10: Pollution Hazard indices for land use classification (Table 26.2 the CIRIA SuDS manual 2015)

TABLE 26.2 Pollution hazard indices for different land use classifications				
Land use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydro-carbons
Residential roofs	Very low	0.2	0.2	0.05
Other roofs (typically commercial/ industrial roofs)	Low	0.3	0.2 (up to 0.8 where there is potential for metals to leach from the roof)	0.05
Individual property driveways, residential car parks, low traffic roads (eg cul de sacs, homezones and general access roads) and non-residential car parking with infrequent change (eg schools, offices) ie < 300 traffic movements/day	Low	0.5	0.4	0.4
Commercial yard and delivery areas, non-residential car parking with frequent change (eg hospitals, retail), all roads except low traffic roads and trunk roads/motorways ¹	Medium	0.7	0.6	0.7
Sites with heavy pollution (eg haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites), sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured; industrial sites; trunk roads and motorways ¹	High	0.8 ²	0.8 ²	0.9 ²

Figure 11 illustrates the SuDS Component mitigation indices from The CIRIA SuDS Manual C753 (2015)

Figure 11: Indicative SuDS mitigation indices (Table 26.3 the CIRIA SuDS manual 2015)

TABLE 26.3	Indicative SuDS mitigation indices for discharges to surface waters ¹			
	Type of SuDS component	Mitigation indices ¹		
		TSS	Metals	Hydrocarbons
	Filter strip	0.4	0.4	0.5
	Filter drain	0.4 ²	0.4	0.4
	Swale	0.5	0.6	0.6
	Bioretention system	0.8	0.8	0.8
	Permeable pavement	0.7	0.6	0.7
	Detention basin	0.5	0.5	0.6
	Pond ⁴	0.7 ³	0.7	0.5
	Wetland	0.8 ³	0.8	0.8
	Proprietary treatment systems ^{5,6}	These must demonstrate that they can address each of the contaminant types to acceptable levels for frequent events up to approximately the 1 in 1 year return period event, for inflow concentrations relevant to the contributing drainage area.		

Notes

- 1 SuDS components only deliver these indices if they follow design guidance with respect to hydraulics and treatment set out in the relevant technical component chapters.
- 2 Filter drains can remove coarse sediments, but their use for this purpose will have significant implications with respect to maintenance requirements, and this should be taken into account in the design and Maintenance Plan.
- 3 Ponds and wetlands can remove coarse sediments, but their use for this purpose will have significant implications with respect to the maintenance requirements and amenity value of the system. Sediment should normally be removed upstream, unless they are specifically designed to retain sediment in a separate part of the component, where it cannot easily migrate to the main body of water.
- 4 Where a wetland is not specifically designed to provide significantly enhanced treatment, it should be considered as having the same mitigation indices as a pond.
- 5 See Chapter 14 for approaches to demonstrate product performance. A British Water/Environment Agency assessment code of practice is currently under development that will allow manufacturers to complete an agreed test protocol for systems intended to treat contaminated surface water runoff. Full details can be found at: <http://tinyurl.com/qf7yuj7>
- 6 SEPA only considers proprietary treatment systems as appropriate in exceptional circumstances where other types of SuDS component are not practicable. Proprietary treatment systems may also be considered appropriate for existing sites that are causing pollution where there is a requirement to retrofit treatment. SEPA (2014) also provides a flowchart with a summary of checks on suitability of a proprietary system.

The selection of treatment should ensure that the SuDS mitigation component index (Figure 11) exceeds the pollution hazard index (Figure 10). The area of the car park and access road is 1040 m²(40 parking bays) It is proposed that the access road will be graded to slope toward the parking bays, which are designed with a permeable asphalt surface to provide pollution treatment.

The Proposed Drainage Strategy is enclosed in *Appendix F*.

The final design of the drainage networks shall be in accordance with the legislation set by the Manchester City Council, and United Utilities.

7 MAINTENANCE

This section is intended to give an overview of the operation and maintenance for the drainage features included with the drainage strategy and in relation to typical details. Where proprietary products are specified, the manufacturer's instructions and recommendations should be followed in priority to this document unless specifically noted otherwise due to project constraints.

The recommended operations and frequencies are typical only and should be more frequent initially to ensure that there are no unforeseen issues with the operation and then adjusted to suit the site requirements.

The surface water network has been designed to accommodate the 1 in 100-year storm rainfall event plus an allowance for climate change particular to the requirements of the site. As the flows are being attenuated on site and within SuDS features there will be a period of time after storm events where the network is still partially or fully surcharged and is draining down. Where this surcharging is still present after 48hrs appropriate action should be taken as noted in this section.

7.1 Components

The following components have been included within the drainage design for the proposed development:

- Inspection, Manhole and Catchpit Chamber
- Pipes
- Gullies, Sumps Access, and Outlet Units
- Linear Drainage
- Attenuation tank
- Flow control
- Permeable pavement

For the locations of the drainage components, refer to drainage layout in Appendix F.

The maintenance strategy should be implemented to ensure the drainage network is cleaned regularly and the routine maintenance and cleansing regime should be documented.

The maintenance strategy should be adopted to ensure the drainage network is cleaned regularly and the routine maintenance and cleansing regime should be documented.

Maintenance of the drainage network will be the responsibility of an on-site facilities management team.

It is recommended that the drainage system is inspected as a minimum twice a year, with the system also being inspected after any major storm event.

Significant sediment deposition is likely in areas used for storage, so a post clean-up operation may be required including the removal of litter, vegetation, sewerage debris and larger objects.

Long-term management practices include monthly sweeping of external paved areas. The sweeping program will remove sand and contaminants directly from paved surfaces before they become mobilised during storm events and transported to the drainage system.

During the winter months, drainage features such as gullies and channels should be cleared of ice, snow, debris, or litter.

Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols; especially where run-off is taken from potentially contaminated areas such as the filter drains and the upstream/downstream chambers.

Inspection, Manhole and Catchpit Chambers

Access points have been located at the head of each run, at a change in direction and at a change of pipe size in accordance with Building Regulations Part H.

The appropriate barriers and signage should be installed during any opening of manholes to warn pedestrians.

Typically chambers with a minimum working space of 900mm can be accessed by personnel; however, a winch must be used. Where 1050mm of working space is provided, manholes should be accessed using steps and where 1200mm working space is provided; manholes should be accessed using ladders, this is in accordance with Building Regulations Part H.

Inspection Chambers, which are 450mm diameter, should have access restrictions (350mm diameter or 300 x 300mm) fitted if the depth to invert is more than 1.2m.

When accessing chambers, the latest Health and Safety legislation should be adhered to.

The appropriate health and safety equipment must be used when accessing manholes. Confined space certificates must be held by any personnel entering a manhole and the appropriate permits should be obtained from the Facilities Maintenance Manager prior to any access.

Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols; especially where run-off is taken from potentially contaminated areas.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required)	Initial inspection should be provided as post construction CCTV survey.	N/A
	Inspect for evidence of poor operation via water level in chambers. If required, take remedial action.	3-monthly, 48 hours after large storms.
Occasional maintenance	Check and remove large vegetation growth near pipe runs.	6 monthly
Remedial actions	Rod through poorly performing runs as initial remediation.	As required.
	If continued poor performance jet and CCTV survey poorly performing runs.	As required.
	Seek advice as to remediation techniques suitable for the type of performance issue and location.	As required If above does not improve performance.

Pipes

Pipes are proprietary products, and the materials can vary across the site and as such where used the manufacture's recommendations should be followed. Regardless of the product used the pipes will be fully compliant with the Curtins drainage specification.

Pipes are intended to be the main conveyance across the development and where oversized they form the attenuation volume required by the limitation of the discharge rate. They are intended to be dry except for during

rainfall events. These have been designed to be self-cleaning where possible for smaller diameter pipes, and for larger diameters the risk is reduced due to the overall pipe size.

Access for maintenance is provided through access chambers and manholes.

Regular inspection and maintenance are important to identify areas which may have been obstructed/clogged and may not be drainage correctly thus exposing the development to a greater level of flood risk.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required)	Initial inspection should be provided as post construction CCTV survey.	N/A
	Inspect for evidence of poor operation via water level in chambers. If required, take remedial action.	3-monthly, 48 hours after large storms.
Occasional maintenance	Check and remove large vegetation growth near pipe runs.	6 monthly
Remedial actions	Rod through poorly performing runs as initial remediation.	As required.
	If continued poor performance jet and CCTV survey poorly performing runs.	As required.
	Seek advice as to remediation techniques suitable for the type of performance issue and location.	As required If above does not improve performance.

Gullies / Sump, Outlet and Access Units

Channels and gullies should be inspected and cleaned in accordance with the manufacturer's details. Channel units can be cleaned through the use of a high-pressure hose; this can be fed into the channel system through access units strategically placed along the channel run. The throat section of channel units should be kept clear at all times to ensure uninterrupted flow of surface water into the drainage channel and any debris within the throat should be removed.

Locking bolts should be replaced and sufficiently tightened, taking care that the bolt heads do not stand above the top surface of the cover or grate. If covers are allowed to move within their frame, this may cause damage to the frame or seating.

Linear Slot Drainage

Linear channel drainage systems should be inspected and cleaned in accordance with the manufacturer's maintenance guide as below:

- Slot drain channels should be inspected regularly to ensure that the system continues to operate effectively and is free from damage and blockage by debris or solid objects.
- The system should be cleaned at least once a year and incorporated into a planned maintenance schedule. The frequency of inspection and maintenance depends on the local environment and conditions.
- Channel units can be cleaned through the use of a high-pressure hose. This can be fed into the channel system through access units strategically placed along the channel run.

- The throat section of channel units should be kept clear at all times to ensure uninterrupted flow of water into the drainage channel. Any debris within the throat should be removed.
- The seating areas for covers and grates should be cleaned before they are replaced. The covers and grates should be locked into position to prevent these being removed, stolen, or dislodged by traffic. Locking bolts should be replaced and sufficiently tightened, taking care that the bolt heads do not stand above the top surface of the cover or grate. If grates/covers are allowed to move within their frame, this may cause damage to the frame or seating.

Below Ground Attenuation Storage

Access for maintenance has been provided by an access shaft located on the tank and from the manhole chambers downstream of the tank.

Geocellular units are proprietary products and therefore manufacturer's recommendations should also be taken into consideration. Additionally different manufacturers may have different connection types and arrangements which will need to be taken into consideration.

Regular inspection and maintenance are important for the effective operation of attenuation tanks as designed. As the feature is buried, a regular inspection regime is very important to ensure the correction functionality of the surface water drainage network.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required).	Inspect inlets, outlets and overflows for blockages, and clear if required. If faults persist jetting and CCTV survey may be required.	Monthly and after large storms.
Regular maintenance\ inspection	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly.
	Debris removal from catchment surface (where may cause risks to performance).	Monthly
	Remove sediment from pre-treatment structures.	Annually (or as required after heavy rainfall events)
Remedial Actions	Repair/rehabilitation of inlets, outlets and overflows.	As required.

Permeable Pavement/Asphalt

The pavement should be inspected regularly for clogging, litter, weeds, and water ponding, preferably during and after heavy rainfall to check effective operation. Permeable pavements need to be regularly cleaned of silt and other sediments to preserve their infiltration capacity. The SuDS Manual indicates that sweeping once per year is sufficient for most sites, however the sweeping frequency should be adjusted to suit site specific conditions and should also be informed by annual inspection reports.

The below table outlines the proposed operation and maintenance regime for permeable pavements. This is adapted from The SuDS Manual (C753).

Maintenance Schedule	Required Action	Frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall or reduced frequency as required, based on site- specific observations of clogging - pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediments
Occasional maintenance	Stabilise and mow contributing and advancement areas	As required
	Removal of weeds or management using glyphosphate applied directly into the weeds by an applicator rather than spraying	As required –once per year on less frequently used pavements
Remedial actions	Remediate any landscaping which through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving	As required
	Remedial work to any depressions rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required

Flow Control

The flow control units are intended for flood control and flow restriction.

The flow controls are specified as Hydro-brake or similar approved and are proprietary products; therefore, manufacturer's recommendations should also be taken into consideration.

Access for maintenance has been provided by locating within manhole chambers.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required).	Inspect inlets for blockages, and clear if required. If faults persist jetting and CCTV survey may be required.	Monthly and after large storms.
Regular maintenance\ inspection	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly.
	Debris removal from catchment surface (where may cause risks to performance).	Monthly
	Remove sediment from pre-treatment structures and flow control chambers.	Annually (or as required after heavy rainfall events)
Remedial Actions	Repair/rehabilitation of inlets.	As required.

APPENDICES

Appendix A – Proposed Site Layout

Appendix B – United Utilities Sewer Records

Appendix C – Topographical Survey

GPR survey

Borehole BGS

Appendix D – Environment Agency Flood Map for Planning

Appendix E – United Utilities & LLFA Correspondence

Appendix F – Drainage Strategy

Appendix G – Greenfield rates calculations

Appendix H – CBR and Soakaway Test Results

Appendix A – Proposed Site Layout

Appendix B – United Utilities Sewer Records, Drainage Survey Information.

Curtins Consulting Ltd

**51-55
Tithebarn Street,
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L2 2SB**

FAO:

How to contact us:

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

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

**Your Ref: PO 22403
Our Ref: UUPS-ORD-643004
Date: 07/04/2025**

Dear Sirs

Location: THE CAR CENTRE 227 MOSELEY ROAD, FALLOWFIELD, MANCHESTER, M14 6PD

I acknowledge with thanks your request dated 03/04/2025 for information on the location of our services.

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

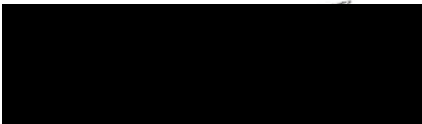
The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

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

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

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

Yours Faithfully,



Karen McCormack
Property Searches Manager

TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

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

TERMS AND CONDITIONS:

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



SURVEY & ENGINEERING PROJECTS

HEAD OFFICE:

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Project Information

Survey and Engineering Projects Ltd
Unit 3D Selby Place
Stanley Industrial Estate
Skelmersdale
Lancashire
WN88EF

Job Number
S26205

Surveyed by (Operator)
JOE COLLINS

Base Unit
LSDUKESDT

Date
29/05/2025

Client Details:

CURTINS CONSULTING

Site Details:

HAWTHORN LANE

Contractor Details:

Survey and Engineering Projects Ltd
Unit 3D Selby Place
Stanley Industrial Estate
Skelmersdale
Lancashire
WN88EF

Office Contact Number: 01695 729835

Purpose of Survey:



Contents Page

Survey and Engineering Projects Ltd
Unit 3D Selby Place
Stanley Industrial Estate
Skelmersdale
Lancashire
WN88EF

Job Number S26205	Surveyed by (Operator) JOE COLLINS	Base Unit LSDUKESDT	Date 29/05/2025
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Report Contents

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Page 6	Job Summary
Page 7	Survey Run Sheet(Survey 1 - UU2901 to X)
Page 9	Grading Overview
Page 11	Rear Cover Page

View via iTouch Live 



Site Drawings/Photos

Survey and Engineering Projects Ltd
Unit 3D Selby Place
Stanley Industrial Estate
Skelmersdale
Lancashire
WN88EF

Job Number S26205	Surveyed by (Operator) JOE COLLINS	Base Unit LSDUKESDIT	Date 29/05/2025
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This sketch is not to scale and does not represent the exact routing of the drainage system





Defect Grade Descriptions

Job Number S26205	Surveyed by (Operator) JOE COLLINS	Base Unit LSDUKESDT	Date 29/05/2025
1: Occurences without damage. For example, laterals, joints,etc. NO DEFECTS WERE DETECTED.			
2: Constructional deficiencies or occurences with insignificant influence to tightness, hydraulic or static pressure or pipe: Eg. wide joints, badly torched intakes, minor deformation of plastic pipes, minor erosions etc. REHABILITATION CAN BE SCHEDULED LONG-TERM.			
3: Constructional deficiencies diminishing static, hydraulic and tightness: Eg. untorched intakes, cracks, minor drainage obstructions such as calcite build ups, protruding laterals, minor damages to pipe wall, individual root penetrations, corroded pipe walls etc. REHABILITATION IS NECESSARY MEDIUM-TERM WITHIN 3 TO 5 YEARS.			
4: Constructional damages with insufficient static safety, hydraulic or tightness: Eg. axial/radial pipe bursts, pipe deformations, visually noticeable infiltration/exfiltration, cavities, in pipe-wall, severe protruding, laterals severe root penetrations, severe corrosion of pipe wall etc. REHABILITATION PROCEDURE IS URGENT AND HAS TO BE COMPLETED WITHIN 1 TO 2 YEARS. NECESSITY FOR EMERGENCY OPERATIONS HAS TO BE EXAMINED.			
5: Pipe is already or will shortly be impermeable: Eg. collapsed pipe, deeply rooted pipe or other drainage obstructions. Pipe loses water or danger of backwater in basements etc. REHABILITATION IS URGENT AND SHORT-TERM. IN ORDER TO PREVENT FURTHER DAMAGE, NECESSARY TEMPORARY SPOT REPAIR HAS TO BE CONDUCTED ON EMERGENCY LEVEL.			



Report Summary

Job Number S26205	Surveyed by (Operator) JOE COLLINS	Base Unit LSDUKESDT	Date 29/05/2025
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Job Information

Total Distance Surveyed: **9 metres**
Engineer: **JOE COLLINS**
Number of Surveys: **1**
Number of Surveys grade 4 or above: **0**

Section 1 Overview (29/05/2025)

Manholes: **UU2901 to X**
Pipe Length: **9 metres**
Structural Grade: **0**
Service Grade: **0**
Material: **Brick**
Pipe Size: **0mm**
Use: **Combined**

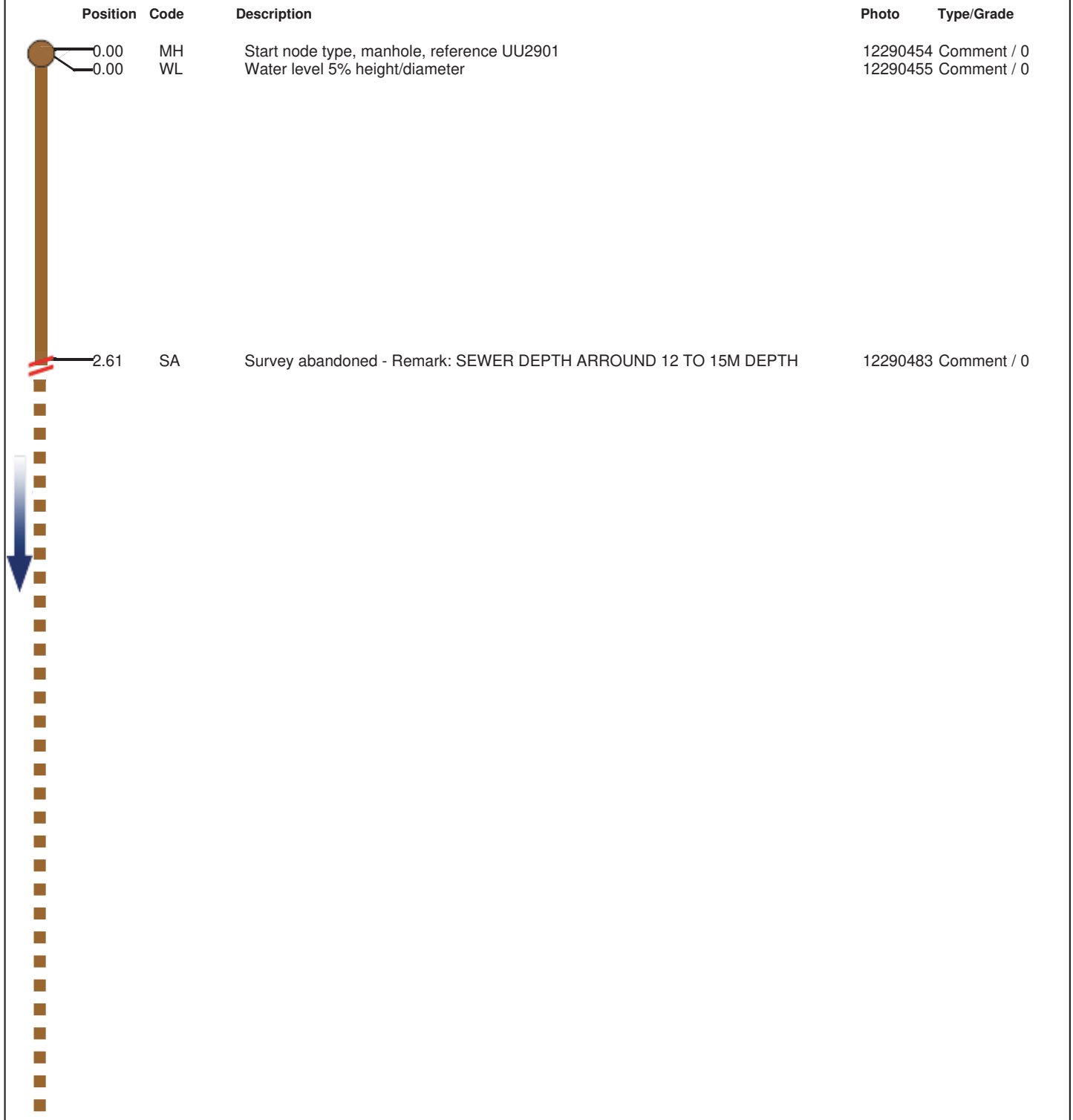


CCTV Inspection Report

Survey and Engineering Projects Ltd
Unit 3D Selby Place
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Skelmersdale
Lancashire
WN88EF

Surveyed by (Operator) JOE COLLINS	Job Number S26205	Pipe Length Reference(PLR) UU2901 X	Date 29/05/2025	Pre Cleaned Not Cleaned
Weather 1 - Dry	Customer Present	Service Grade/Structural Grade 0/0	Base Unit LSDUKESDT	Section Number 1
Road HAWTHORN LANE Place Location		Division District Location Details		
Purpose Duty Combined Catchment	Shape/Size 0mm Material Brick Category		Start Node UU2901 End Node X Total length 9 metres	
Scale 1:0.47 Direction Downstream		View via iTouch Live Download		

Start Node Ref:UU2901 | I/L : metres | Depth: 2.91 metres



End Node Ref:X | I/L : metres

CCTV Inspection Photos

Job Number S26205	Surveyed by (Operator) JOE COLLINS	Base Unit LSDUKESDT	Date 29/05/2025
 Start node type, manhole, reference UU2901		 Water level 5% height/diameter	
From: UU2901 / To: X Size: 0mm  Survey abandoned - Remark: SEWER DEPTH ARROUND 12 TO 15M DEPTH			



Structural Defects (SRM 4)

Survey and Engineering Projects Ltd
Unit 3D Selby Place
Stanley Industrial Estate
Skelmersdale
Lancashire
WN88EF

Job Number S26205				Surveyed by (Operator) JOE COLLINS			Base Unit LSDUKESDT			Date 29/05/2025			
No.	PLR	Dir.	Use	Shape/Size	Date	Mat.	Total Length	Inspection Length	Cat.	Peak Score	Grade	Mean Score	Total Score
1	UU2901 X	D	C	0	29/05/2025	Brick	9 metres	2.61		0	1	0	0



Service Defects (SRM 4)

Survey and Engineering Projects Ltd
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Lancashire
WN88EF

Job Number S26205				Surveyed by (Operator) JOE COLLINS			Base Unit LSDUKESDT			Date 29/05/2025			
No.	PLR	Dir.	Use	Shape/Size	Date	Mat.	Total Length	Inspection Length	Cat.	Peak Score	Grade	Mean Score	Total Score
1	UU2901 X	D	C	0	29/05/2025	Brick	9 metres	2.61		0	1	0	0



SURVEY & ENGINEERING PROJECTS

HEAD OFFICE:

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Stanley Industrial Estate
Skelmersdale
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WN8 8EF

info@sepsurvey.com • 01695 729835 • sepsurvey.com

Botanical Grounds,
University of Manchester

The Armitage Sports
Centre - University of

Diversity driving
school Julie Toner

Hawthorn Medical
Urgent Care

1000
2000
3000

1000

2000



Survey and Engineering Projects Ltd Manhole Survey Card

Card No	1	Map No	
Catchment		MH No	UU2901
Location	HAWTHORN FALLOWFIELD		
Town	MANCHESTER		

★ PU	Status		Syphon	★ C	Function	★ MH	MH Type	29/05/2025	Date of Survey
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COVER DETAILS

☒ Square	☐ Rectangle	☐ Triangle	☐ Dbl Triangle	☐ Circular	☐ Oval	☐ Other	☐ Multiple	☐ Hinged	☐ Lockable
Cover Level		m	H / M / L Cover Duty	★ H	Initials	DP			

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X	Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm)		Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
	A			C	Height	X Width	PVC			
	B					X				
	C					X				
	D					X				
	E					X				
	F					X				

Outgoing Pipes

X			C		X		PVC			
Y					X					

Cover Opening at narrowest	600X600	mm	Chamber Dimension		mm	Evidence of Surge	
Shaft at narrowest	600X600	mm	Shaft Depth (from CL)	1500	mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

☒ Pre Cast Concrete	☐ In Situ Concrete	☐ Brick	☐ GRP	☐ Arch	☐ Corbel	☐ Taper	☐ Side Entry
☐ Reducing Slab	☐ Segments	1	No. of Landings	7	No. of Step Irons		No. of Ladders
☐ No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel		
OK	☒	☒	☒	☒	☒	☒		
Needs attention	☐	☐	☐	☐	☐	☐		
Urgent attention	☐	☐	☐	☐	☐	☐		
Depth of Flow		mm	Depth of Silt		mm	Height of Surge from CL		mm

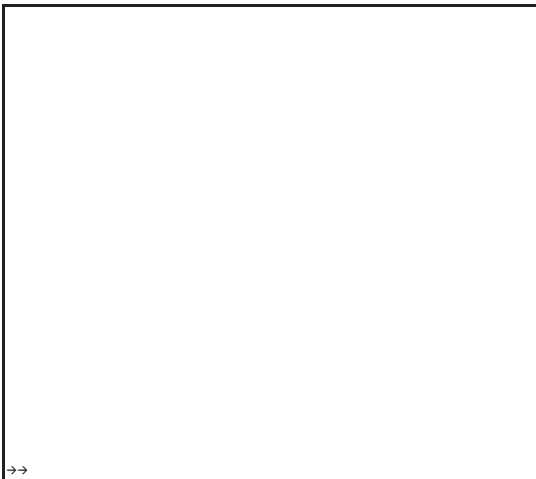
REMARKS

DEPTH TO LANDING STAGE 2.91

★ See Overleaf for Key

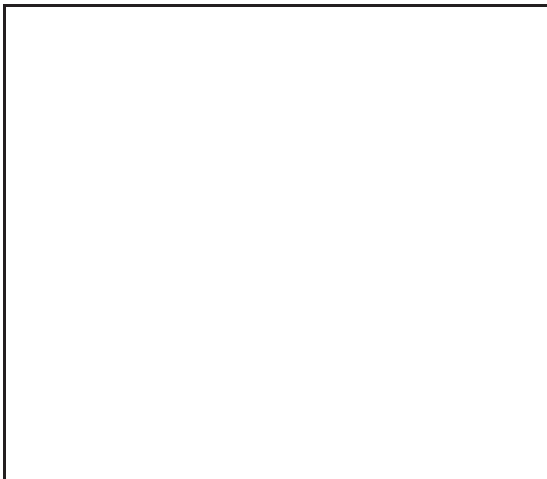
LOCATION SKETCH

N



PLAN OF MANHOLE

N



LOCATION PHOTO



PHOTO OF MANHOLE

N



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	} Applies to main outlet
	24 : Section 24	HD : Highway Drain		
FUNCTION	F : Foul	C : Combined	S : Surface Water	} Applies to main outlet
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO : Consented Sewer Overflow
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS : Dual system Manhole
	GU : Gully	OF : Outfall	SA : Soakaway	PS : Pumping Station
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty	
SHAPE	C : Circular	E : Egg	R : Rectangular	
	S : Square	T : Trapezoidal	A : Arched	
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top	
	X : Other (state in words)			
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick	
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete	
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert	
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic	
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene	
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay	
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed	
	MAF : Masonry, Random Courses	XXX : Other (State in remarks)		
LINING	BL : Bitumen	RL : Resin	IS : Insituform	
	CL : Cement	PI : Plastic		



Survey and Engineering Projects Ltd Manhole Survey Card

Card No	2	Map No	
Catchment		MH No	UU3901
Location	HAWTHORN FALLOWFIELD		
Town	MANCHESTER		

★ PU	Status		Syphon	★ C	Function	★ MH	MH Type	29/05/2025	Date of Survey
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COVER DETAILS

☒ Square	☐ Rectangle	☐ Triangle	☐ Dbl Triangle	☐ Circular	☐ Oval	☐ Other	☐ Multiple	☐ Hinged	☐ Lockable
Cover Level		m	H / M / L Cover Duty	★ H	Initials	DP			

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X	Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm)		Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
	A			C	Height	X Width	PVC			
	B					X				
	C					X				
	D					X				
	E					X				
	F					X				

Outgoing Pipes

X			C		X		PVC			
Y					X					

Cover Opening at narrowest	600X600	mm	Chamber Dimension		mm	Evidence of Surge	
Shaft at narrowest		mm	Shaft Depth (from CL)		mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

☒ Pre Cast Concrete	☐ In Situ Concrete	☐ Brick	☐ GRP	☐ Arch	☐ Corbel	☐ Taper	☐ Side Entry
☐ Reducing Slab	☐ Segments	☐ No. of Landings	☐ No. of Step Irons	☐ No. of Ladders			
☐ No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel		
OK	☒	☒	☒	☒	☒	☒		
Needs attention	☐	☐	☐	☐	☐	☐		
Urgent attention	☐	☐	☐	☐	☐	☐		
Depth of Flow		mm	Depth of Silt		mm	Height of Surge from CL		mm

REMARKS

★ See Overleaf for Key

LOCATION SKETCH

N



PLAN OF MANHOLE

N



LOCATION PHOTO



PHOTO OF MANHOLE

N



STATUS

PU : Public
24 : Section 24

PR : Private
HD : Highway Drain

WC : Culverted Watercourse

} Applies to main outlet

FUNCTION

F : Foul

C : Combined

S : Surface Water

} Applies to main outlet

MANHOLE TYPE

IF : Infall
LH : Lamphole
GU : Gully

MH : Manhole
RE : Rodding Eye
OF : Outfall

CP : Catchpit
SO : Storm Overflow
SA : Soakaway

CSO :Consented Sewer Overflow
DS :Dual system Manhole
PS :Pumping Station

COVER DUTY

L : Light Duty

M : Medium Duty

H : Heavy Duty

SHAPE

C : Circular
S : Square
B : Barrel
X : Other (state in words)

E : Egg
T : Trapezoidal
H : Horseshoe (Inverted U)

R : Rectangular
A : Arched
U : U-shaped with flat top

PIPE (OR LINING)
MATERIAL

AK : Alkathene
CI : Cast Iron
CSB : Concrete Segments (Bolted)
DI : Ductile Iron
PSC : Plastic/Steel Composite
RPM : Reinforced Plastic Matrix
PP : Polypropylene
MAF : Masonry, Randon Courses

AC : Asbestos Cement
SI : Spun (Grey) Iron
CSU : Concrete Segments (Unbolted)
GRC : Glass Reinforced Concrete
PVC : Polyvinyl Chloride
ST : Steel
PF : Pitch Fibre
XXX : Other (State in remarks)

BR : Brick
CO : Concrete
CC : Concrete Box Culvert
GRP : Glass Reinforced Plastic
PE : Polyethylene
VC : Vitrified Clay
MAC : Masonry, Coursed

LINING

BL : Bitumen
CL : Cement

RL : Resin
PI : Plastic

IS : Insituform



Survey and Engineering Projects Ltd Manhole Survey Card

Card No	3	Map No	
Catchment		MH No	MH1
Location	HAWTHORN FALLOWFIELD		
Town	MANCHESTER		

★ PU	Status		Syphon	★ S	Function	★ MH	MH Type	29/05/2025	Date of Survey
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COVER DETAILS

☒ Square	☐ Rectangle	☐ Triangle	☐ Dbl Triangle	☐ Circular	☐ Oval	☐ Other	☐ Multiple	☐ Hinged	☐ Lockable
Cover Level		m	H / M / L Cover Duty	★ H	Initials	DP			

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X	Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm)		Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
	A	2.22		C	1200	X	PVC			
	B					X				
	C					X				
	D					X				
	E					X				
	F					X				

Outgoing Pipes

X	2.24		C	950	X		PVC			
Y	2.24		C	950	X		PVC			

Cover Opening at narrowest	680X680	mm	Chamber Dimension	2.25X1.14	mm	Evidence of Surge	
Shaft at narrowest	680X680	mm	Shaft Depth (from CL)	500	mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

☒ Pre Cast Concrete	☐ In Situ Concrete	☐ Brick	☐ GRP	☐ Arch	☐ Corbel	☐ Taper	☐ Side Entry
☐ Reducing Slab	☐ Segments	☐ No. of Landings	☐ No. of Step Irons	☐ No. of Ladders			
☐ 3	No. of Regulating Brick Courses						

CONDITION INFORMATION (specific in remark)

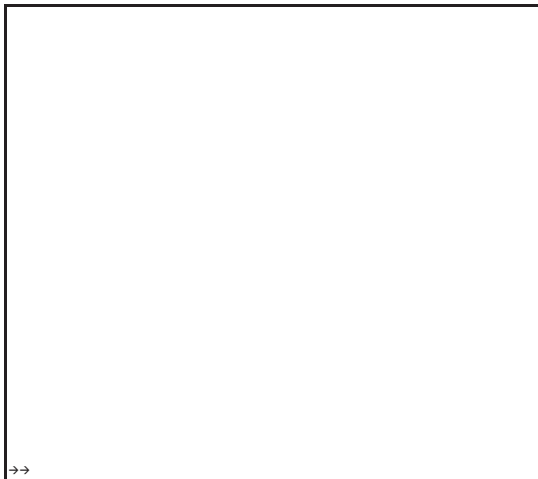
OK	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel		
	☒	☒	☒	☒	☒	☒		
Needs attention	☐	☐	☐	☐	☐	☐		
Urgent attention	☐	☐	☐	☐	☐	☐		
Depth of Flow		mm	Depth of Silt		mm	Height of Surge from CL		mm

REMARKS

★ See Overleaf for Key

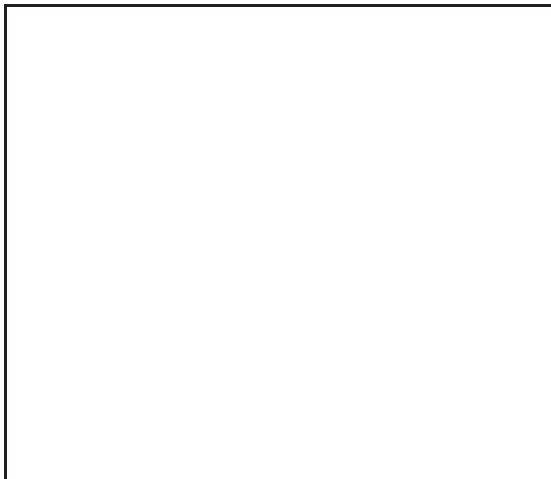
LOCATION SKETCH

N



PLAN OF MANHOLE

N

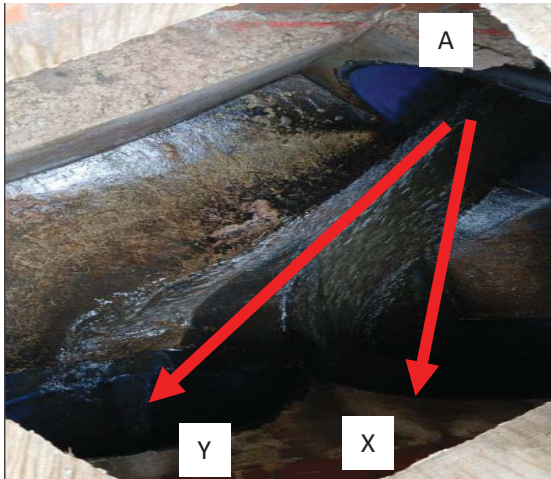


LOCATION PHOTO



PHOTO OF MANHOLE

N



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	} Applies to main outlet
	24 : Section 24	HD : Highway Drain		
FUNCTION	F : Foul	C : Combined	S : Surface Water	} Applies to main outlet
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO : Consented Sewer Overflow
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS : Dual system Manhole
	GU : Gully	OF : Outfall	SA : Soakaway	PS : Pumping Station
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty	
SHAPE	C : Circular	E : Egg	R : Rectangular	
	S : Square	T : Trapezoidal	A : Arched	
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top	
	X : Other (state in words)			
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick	
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete	
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert	
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic	
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene	
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay	
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed	
	MAF : Masonry, Random Courses	XXX : Other (State in remarks)		
LINING	BL : Bitumen	RL : Resin	IS : Insituform	
	CL : Cement	PI : Plastic		



Survey and Engineering Projects Ltd Manhole Survey Card

Card No	4	Map No	
Catchment		MH No	MH1A
Location	HAWTHORN FALLOWFIELD		
Town	MANCHESTER		

★ PU	Status		Syphon	★ S	Function	★ MH	MH Type	29/05/2025	Date of Survey
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COVER DETAILS

☒ Square	☐ Rectangle	☐ Triangle	☐ Dbl Triangle	☐ Circular	☐ Oval	☐ Other	☐ Multiple	☐ Hinged	☐ Lockable
Cover Level		m	H / M / L Cover Duty	★ H	Initials	DP			

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X	Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm)		Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
	A	2.03		C	1200	X	CO			
	B					X				
	C					X				
	D					X				
	E					X				
	F					X				

Outgoing Pipes

X	2.04		C	1200	X		PVC			
Y					X					

Cover Opening at narrowest	680X680	mm	Chamber Dimension	1.30X1.50	mm	Evidence of Surge	
Shaft at narrowest	680X680	mm	Shaft Depth (from CL)	600	mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

☒ Pre Cast Concrete	☐ In Situ Concrete	☐ Brick	☐ GRP	☐ Arch	☐ Corbel	☐ Taper	☐ Side Entry
☐ Reducing Slab	☐ Segments	☐ No. of Landings	☐ No. of Step Irons	☐ No. of Ladders			
☐ 4 No. of Regulating Brick Courses							

CONDITION INFORMATION (specific in remark)

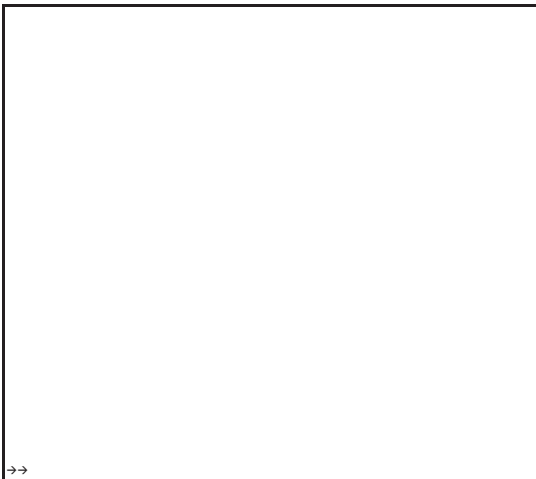
	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel		
OK	☒	☒	☒	☒	☒	☒		
Needs attention	☐	☐	☐	☐	☐	☐		
Urgent attention	☐	☐	☐	☐	☐	☐		
Depth of Flow		mm	Depth of Silt		mm	Height of Surge from CL		mm

REMARKS

★ See Overleaf for Key

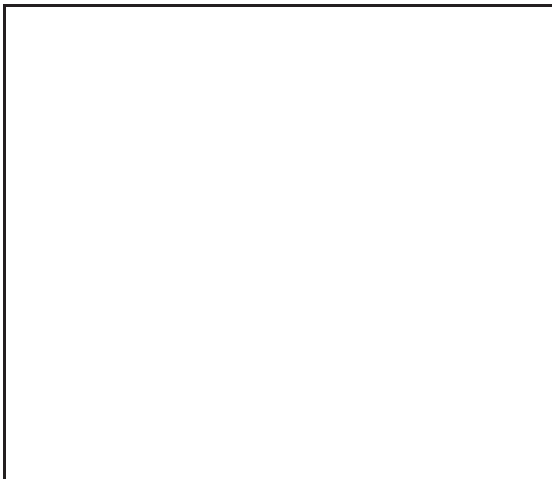
LOCATION SKETCH

N



PLAN OF MANHOLE

N

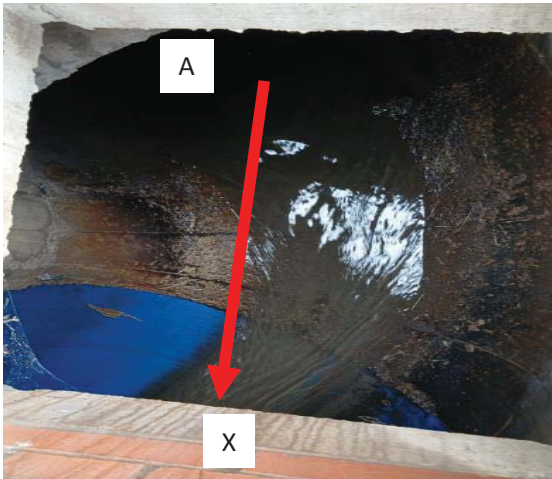


LOCATION PHOTO



PHOTO OF MANHOLE

N



STATUS

PU : Public
24 : Section 24

PR : Private
HD : Highway Drain

WC : Culverted Watercourse

} Applies to main outlet

FUNCTION

F : Foul

C : Combined

S : Surface Water

} Applies to main outlet

MANHOLE TYPE

IF : Infall
LH : Lamphole
GU : Gully

MH : Manhole
RE : Rodding Eye
OF : Outfall

CP : Catchpit
SO : Storm Overflow
SA : Soakaway

CSO :Consented Sewer Overflow
DS :Dual system Manhole
PS :Pumping Station

COVER DUTY

L : Light Duty

M : Medium Duty

H : Heavy Duty

SHAPE

C : Circular
S : Square
B : Barrel
X : Other (state in words)

E : Egg
T : Trapezoidal
H : Horseshoe (Inverted U)

R : Rectangular
A : Arched
U : U-shaped with flat top

PIPE (OR LINING)
MATERIAL

AK : Alkathene
CI : Cast Iron
CSB : Concrete Segments (Bolted)
DI : Ductile Iron
PSC : Plastic/Steel Composite
RPM : Reinforced Plastic Matrix
PP : Polypropylene
MAF : Masonry, Randon Courses

AC : Asbestos Cement
SI : Spun (Grey) Iron
CSU : Concrete Segments (Unbolted)
GRC : Glass Reinforced Concrete
PVC : Polyvinyl Chloride
ST : Steel
PF : Pitch Fibre
XXX : Other (State in remarks)

BR : Brick
CO : Concrete
CC : Concrete Box Culvert
GRP : Glass Reinforced Plastic
PE : Polyethylene
VC : Vitrified Clay
MAC : Masonry, Coursed

LINING

BL : Bitumen
CL : Cement

RL : Resin
PI : Plastic

IS : Insituform



Survey and Engineering Projects Ltd Manhole Survey Card

Card No	5	Map No	
Catchment		MH No	MH1B
Location	HAWTHORN FALLOWFIELD		
Town	MANCHESTER		

★ PU	Status		Syphon	★ S	Function	★ MH	MH Type	29/05/2025	Date of Survey
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COVER DETAILS

☒ Square	☐ Rectangle	☐ Triangle	☐ Dbl Triangle	☐ Circular	☐ Oval	☐ Other	☐ Multiple	☐ Hinged	☐ Lockable
Cover Level		m	H / M / L Cover Duty	★ H	Initials	DP			

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X	Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm)		Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
	A	2.05		C	1200	X	CO			
	B					X				
	C					X				
	D					X				
	E					X				
	F					X				

Outgoing Pipes

X	2.06		C	1200	X	CO			
Y					X				

Cover Opening at narrowest	620X900	mm	Chamber Dimension	1600X800	mm	Evidence of Surcharge	
Shaft at narrowest	590X840	mm	Shaft Depth (from CL)	600	mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

☒ Pre Cast Concrete	☐ In Situ Concrete	☐ Brick	☐ GRP	☐ Arch	☐ Corbel	☐ Taper	☐ Side Entry
☐ Reducing Slab	☐ Segments	☐ No. of Landings	☐ No. of Step Irons	☐ No. of Ladders			
☐ 4	No. of Regulating Brick Courses						

CONDITION INFORMATION (specific in remark)

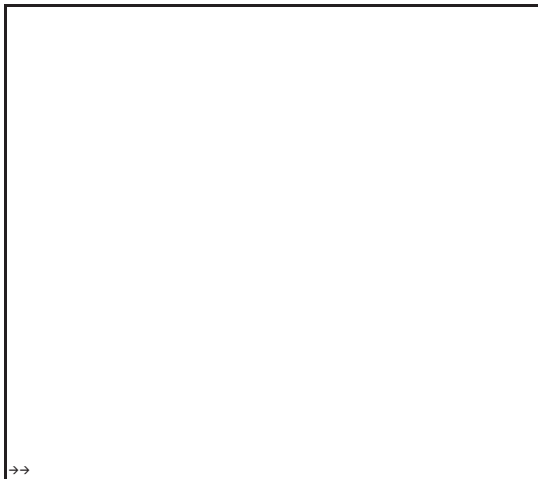
	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel		
OK	☒	☒	☒	☒	☒	☒		
Needs attention	☐	☐	☐	☐	☐	☐		
Urgent attention	☐	☐	☐	☐	☐	☐		
Depth of Flow		mm	Depth of Silt		mm	Height of Surcharge from CL		mm

REMARKS

★ See Overleaf for Key

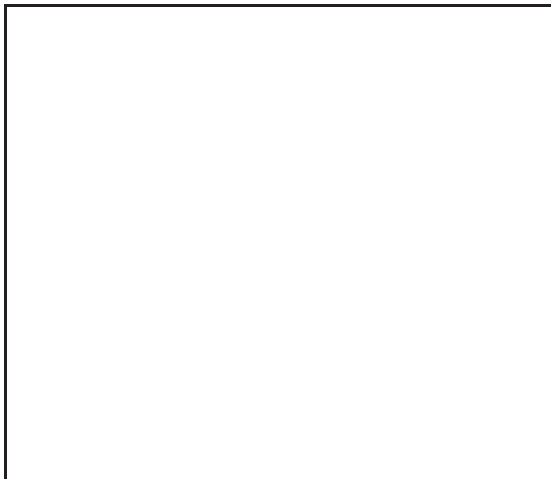
LOCATION SKETCH

N



PLAN OF MANHOLE

N

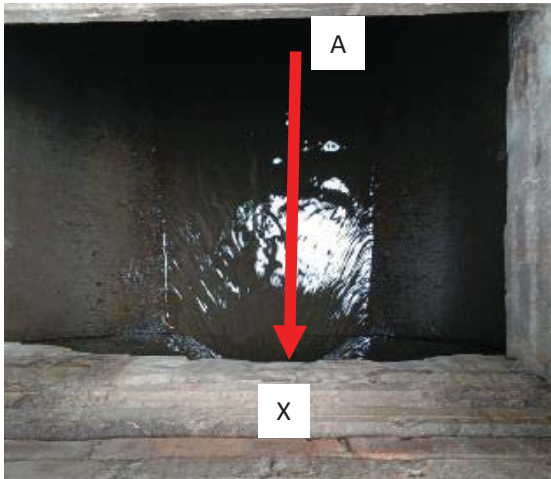


LOCATION PHOTO



PHOTO OF MANHOLE

N



STATUS	PU : Public	PR : Private	WC : Culverted Watercourse	} Applies to main outlet
	24 : Section 24	HD : Highway Drain		
FUNCTION	F : Foul	C : Combined	S : Surface Water	} Applies to main outlet
MANHOLE TYPE	IF : Infall	MH : Manhole	CP : Catchpit	CSO : Consented Sewer Overflow
	LH : Lamphole	RE : Rodding Eye	SO : Storm Overflow	DS : Dual system Manhole
	GU : Gully	OF : Outfall	SA : Soakaway	PS : Pumping Station
COVER DUTY	L : Light Duty	M : Medium Duty	H : Heavy Duty	
SHAPE	C : Circular	E : Egg	R : Rectangular	
	S : Square	T : Trapezoidal	A : Arched	
	B : Barrel	H : Horseshoe (Inverted U)	U : U-shaped with flat top	
	X : Other (state in words)			
PIPE (OR LINING) MATERIAL	AK : Alkathene	AC : Asbestos Cement	BR : Brick	
	CI : Cast Iron	SI : Spun (Grey) Iron	CO : Concrete	
	CSB : Concrete Segments (Bolted)	CSU : Concrete Segments (Unbolted)	CC : Concrete Box Culvert	
	DI : Ductile Iron	GRC : Glass Reinforced Concrete	GRP : Glass Reinforced Plastic	
	PSC : Plastic/Steel Composite	PVC : Polyvinyl Chloride	PE : Polyethylene	
	RPM : Reinforced Plastic Matrix	ST : Steel	VC : Vitrified Clay	
	PP : Polypropylene	PF : Pitch Fibre	MAC : Masonry, Coursed	
	MAF : Masonry, Random Courses	XXX : Other (State in remarks)		
LINING	BL : Bitumen	RL : Resin	IS : Insituform	
	CL : Cement	PI : Plastic		



Survey and Engineering Projects Ltd Manhole Survey Card

Card No	6	Map No	
Catchment		MH No	MH2
Location	HAWTHORN FALLOWFIELD		
Town	MANCHESTER		

★ PU	Status		Syphon	★ S	Function	★ MH	MH Type	29/05/2025	Date of Survey
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COVER DETAILS

☒ Square	☐ Rectangle	☐ Triangle	☐ Dbl Triangle	☐ Circular	☐ Oval	☐ Other	☐ Multiple	☐ Hinged	☐ Lockable
Cover Level		m	H / M / L Cover Duty	★ H	Initials	DP			

PIPE DETAILS

Incoming Pipes

Clockwise from pipe X	Pipe	Depth from Invert (m)	Upstream / Downstream MH Ref	Shape	Size (mm)		Pipe Mat	Lining Mat	Back Drop Dia (mm)	Back Drop Depth (m)
	A	2.74		C	1500	X	BR			
	B					X				
	C					X				
	D					X				
	E					X				
	F					X				

Outgoing Pipes

X	2.75		C	1500	X		BR			
Y					X					

Cover Opening at narrowest	690X690	mm	Chamber Dimension	1600X1600	mm	Evidence of Surge	
Shaft at narrowest	700X700	mm	Shaft Depth (from CL)	570	mm	OX / H2S / METH Toxic atmosphere	

MANHOLE CONSTRUCTION DETAILS

☒ Pre Cast Concrete	☐ In Situ Concrete	☐ Brick	☐ GRP	☐ Arch	☐ Corbel	☐ Taper	☐ Side Entry
☐ Reducing Slab	☐ Segments	☐ No. of Landings	☐ No. of Step Irons	☐ No. of Ladders			
☐ 3	No. of Regulating Brick Courses						

CONDITION INFORMATION (specific in remark)

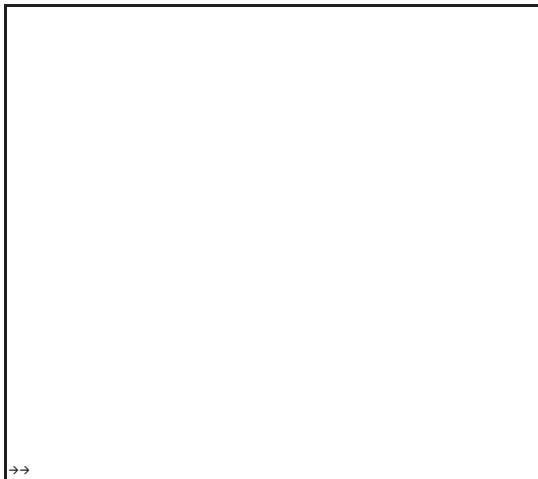
OK	Cover	Shaft	Irons / Ladders	Chamber	Benching	Channel		
	☒	☒	☒	☒	☒	☒		
Needs attention	☐	☐	☐	☐	☐	☐		
Urgent attention	☐	☐	☐	☐	☐	☐		
Depth of Flow		mm	Depth of Silt		mm	Height of Surge from CL		mm

REMARKS

★ See Overleaf for Key

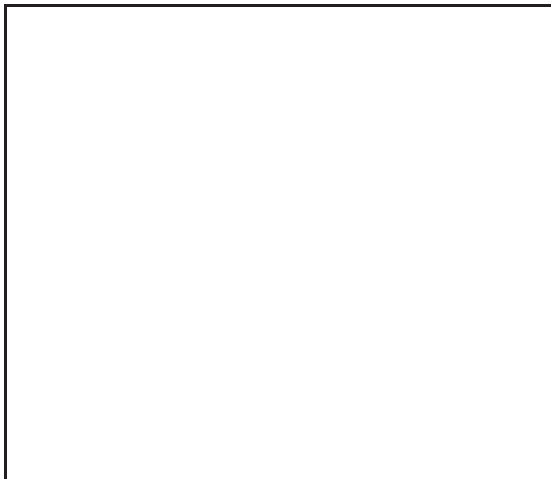
LOCATION SKETCH

N



PLAN OF MANHOLE

N

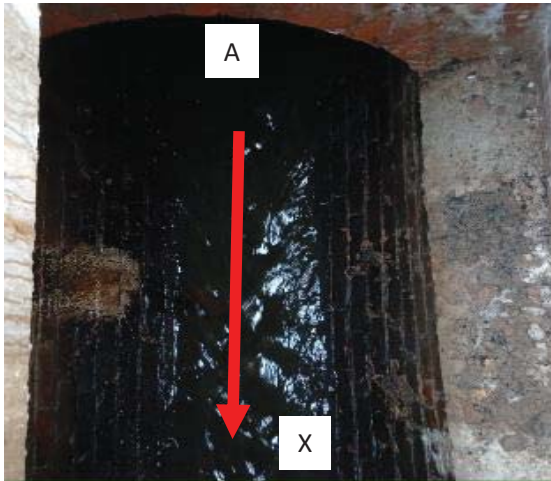


LOCATION PHOTO



PHOTO OF MANHOLE

N



STATUS

PU : Public
24 : Section 24

PR : Private
HD : Highway Drain

WC : Culverted Watercourse

} Applies to main outlet

FUNCTION

F : Foul

C : Combined

S : Surface Water

} Applies to main outlet

MANHOLE TYPE

IF : Infall
LH : Lamphole
GU : Gully

MH : Manhole
RE : Rodding Eye
OF : Outfall

CP : Catchpit
SO : Storm Overflow
SA : Soakaway

CSO :Consented Sewer Overflow
DS :Dual system Manhole
PS :Pumping Station

COVER DUTY

L : Light Duty

M : Medium Duty

H : Heavy Duty

SHAPE

C : Circular
S : Square
B : Barrel
X : Other (state in words)

E : Egg
T : Trapezoidal
H : Horseshoe (Inverted U)

R : Rectangular
A : Arched
U : U-shaped with flat top

PIPE (OR LINING)
MATERIAL

AK : Alkathene
CI : Cast Iron
CSB : Concrete Segments (Bolted)
DI : Ductile Iron
PSC : Plastic/Steel Composite
RPM : Reinforced Plastic Matrix
PP : Polypropylene
MAF : Masonry, Randon Courses

AC : Asbestos Cement
SI : Spun (Grey) Iron
CSU : Concrete Segments (Unbolted)
GRC : Glass Reinforced Concrete
PVC : Polyvinyl Chloride
ST : Steel
PF : Pitch Fibre
XXX : Other (State in remarks)

BR : Brick
CO : Concrete
CC : Concrete Box Culvert
GRP : Glass Reinforced Plastic
PE : Polyethylene
VC : Vitrified Clay
MAC : Masonry, Coursed

LINING

BL : Bitumen
CL : Cement

RL : Resin
PI : Plastic

IS : Insituform

Appendix C – Topographical Survey, GPR Survey, Borehole BGS

DO NOT WRITE IN THESE SPACES

CCTV DRAINAGE SURVEY

All access/riser manholes and inspection chambers have had their respective covers lifted with pipe sizes, inverts, chamber size/type and service data recorded from ground level. Pipework has been traced, accessed and collected for post processing. Drainage layout, including manhole covers not located by topographical survey, may be taken from CCTV drainage and will be shown as indicative only.

[illegible]

Fire Ops. FO cables will have been predominantly located using GPS methodology. This is due to the materials used within fire optic cabling. In some rare instances, tracer cabling or conductive non fire optic cabling will be present within some or all cabling. When this is the case, both EML and GPS methodology will be combined to identify service network and achieve greater quality levels.

GWS & Walter Inc., Fuel Pipes and Hot Water Pipes
GMGS and Walter's pipe work will have been designed and located using both EML & GPR methodology with electronically derived depths shown for the former and depths to crown levels shown for the latter.
When the GWS pipe work is constructed using conductible materials, then we are able to employ multiple geophysical techniques to identify service network and achieve greater quality levels. When a non conductible material is used, GPR methodology will be employed to locate and plot the fluid service lines.

Ground Penetrating Radar
GPR methodology is used to identify and locate all non-metallic, non-conductive objects in the ground. GPR is used to locate buried objects, such as pipes, conduits, and cables. We also employ GPR to obtain a greater accuracy/levels on EMI, located services. The GPR has a greater success rate on pipe or service diameter upward of 603mm (24in), as size increments increase, so does the chance of detection. The GPR can produce varying results and as such, would be used as an independent utility surveying instrument.

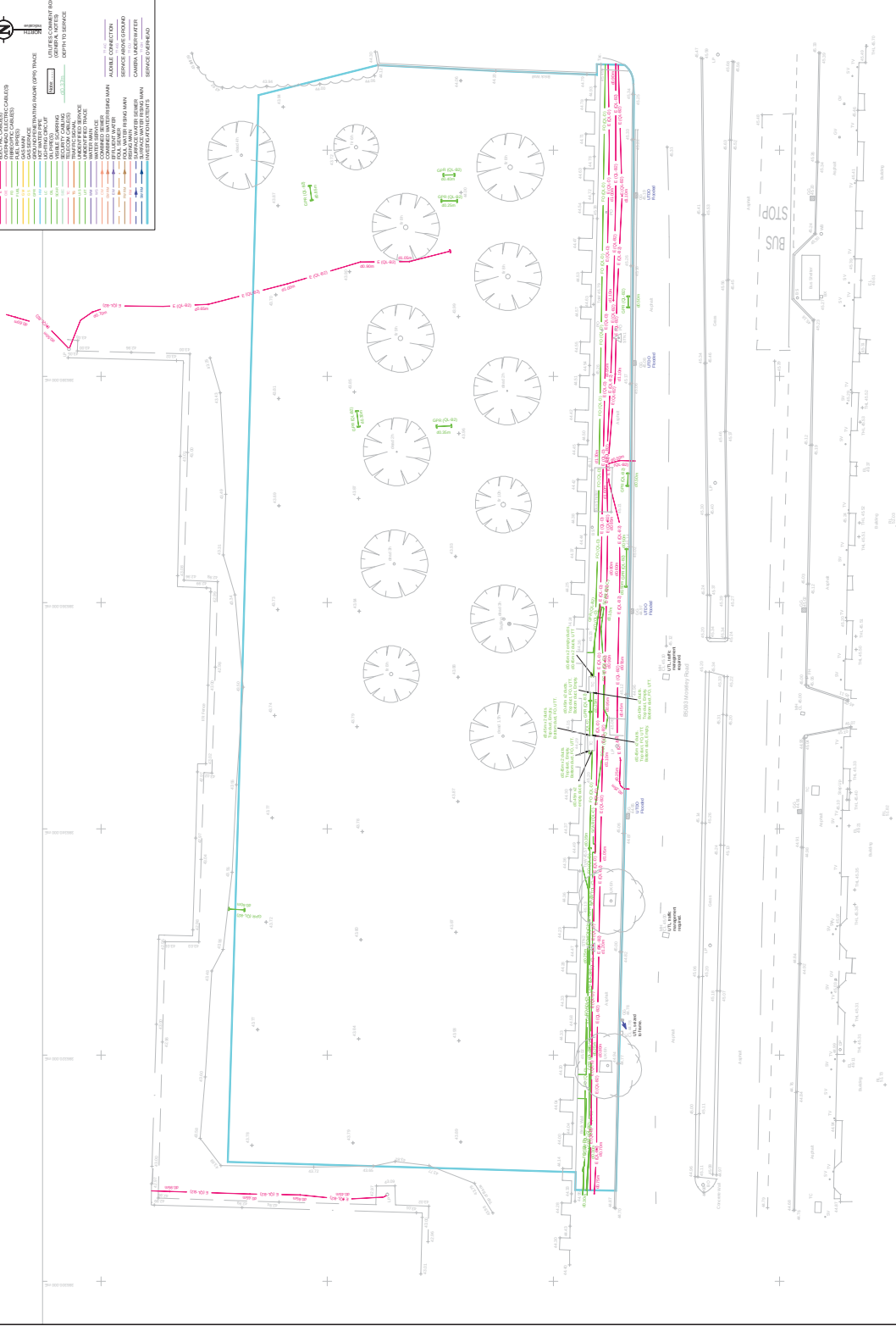
Unidentified Traces

Scanning (QL-C)
Scanning has been identified on site with a potential of an undetectable service

Assumed Routes & Taken from Records (QL-840)

Assumed routes (AR) are shown if there is evidence that a service exists but we are unable to trace it whilst on site. The surveyor will attempt to locate various landmarks/valued features (service evidence) etc. around the area to successfully determine an assumed route between these points. If there is little evidence on site but they believe a service is still present, then a common sense approach to an assumed route shall be employed.

Due to the geophysical nature of subsurface technology, we always recommend excavation works to be carried out within critical areas for verification and to eliminate the possibility of undetectable services present.

[illegible]

DRAWING NOTES

All below ground details shown here have been identified from above ground visual observations and/or aerial photography. The following information is provided for your information and is not intended to be used as a basis for design or construction. The information is provided for your information and is not intended to be used as a basis for design or construction. The information is provided for your information and is not intended to be used as a basis for design or construction.

All services, drainage and utilities routes are assumed straight between access points, unless otherwise stated. The numbers of cables in runs will not be shown unless specifically requested. All services are below ground unless indicated.

Services, utilities and features may not have been surveyed if obstructed or not reasonably visible or accessible at the time of survey.

Survey Solutions accept no responsibility for the completeness or accuracy of either the topographical survey or base mapping on this project.

This survey has been carried out in accordance with PAS 128: 2014 & our version of the Royal Institution of Chartered Surveyors (RICS) specification for Measured Surveys of Land, Buildings and Utilities. Our survey extents have been agreed and confirmed with formal acceptance of 741.93 from NHS PROPERTY SERVICES LTD. If you have any queries regarding the final services layout, please may we ask you to carefully read all the information within this life block in its entirety before continuing to do so.

TOPOGRAPHICAL/DWG DRAWING INFORMATION	
TOPOGRAPHICAL SURVEY DATE 14/03/2025	
SURVEY TYPE	DESCRIPTION
TOPO	SURVEY SOLUTIONS
OUTDATED	
OS	
NTS	

GENERAL SITE CONDITIONS	
EXCELLENT	
ADDITIONAL INFORMATION	EFFECT ON SURVEY RESULTS

UTILITY	AVAILABILITY	UTILITY COMPANY PROVIDER
SEWER	NO	N/A
WATER MAIN	NO	N/A
GAS MAIN	YES	CACENT GAS
TELECOM	YES	BRITISH TELECOM, CITIPRSE, VERISON, VERIZON MEDIA
ELECTRICITY	YES	EDISON
TELEPHONE	YES	TELECOM PHOENIX WEST, MANCHESTER CITY COUNCIL
OTHER	YES	N/A
	NO	ENVIRONMENT AGENCY, QUATC, GTC, NETWORKRAIL, COU

REV	DESCRIPTION	DRAWN	CHECKED	APP	SURVEY DATE

SURVEY SOLUTIONS

LAND SURVEILLANCE
UNDERGROUND SURVEYING
SITE ENGINEERING
MONITORING

0845 040 5969
www.survey-solutions.co.uk

PINCHBEED COTT, BRIMCOMB ROAD, CHORLEY, LANCASHIRE, ENGLAND

PROJECT TITLE LAND ON MOLEYSEY ROAD, FALLOWFIELD, MANCHESTER, M14 6PD.		SCALE 1:200	
DRAWING DETAIL UTILITIES AND DRAINAGE SURVEY.		PWS STATUS FINAL	
SHEET 1 OF 1		ISSUE DATE 21.03.2025	
CLIENT NHS PROPERTY SERVICES LTD		APPROVED BY DMR	
SURVEY NO VPH		CHECKED BY BC	
SURVEY DATE 20/02/25		REVISION	
DRAWING NUMBER 74193MCGU-01			



32 G.S.M. Nos. 7-9 on standard

7-9
SJ89SE 17-9 1-3

(B11857) W.L. 17852-8164-5,000 12/20 Gp. 180. O.A.

SECTION OF Boreholes at Fallowfield, Manchester

Maps: One-inch 85 Six-inch 111 N.E.W. County Lancashire

Height above O.D. _____ Latitude _____ Longitude _____

Communicated by Manchester Corporation Date of Sinking _____

Made by _____ Dip of Strata _____

		Thickness.		Depth from Surface.	
Site No. 7 <u>No. 3</u> on standard <u>No. 32</u> 146.53 ft. O.D. 7 III N.E.W.	In Hazeley Road, near S.E. corner of Owen's College Athletic Ground				
	Soil	2	-	2	-0.61
	Soft red touch.	25	-	27	-8.23
Site No. 8 <u>No. 2</u> on standard <u>No. 20</u> 127.55 ft. O.D. 8 III N.E.W.	Corner of Sherwood St. & Wilmslow Road, FALLOWFIELD.				
	Dark soil	1	-	1	-0.30
	Clay	8	-	9	-2.74
	Dark clay.	5	-	14	-4.23
	Soft red sand.	3	-	17	-5.18
	Hard light sand. (Water level at 24 ft.)	8	-	25	-7.62
	Soft red sandstone.	12	-	37	-11.28
Site No. 9 <u>No. 33</u> 135.78 ft. O.D. 9 III N.E.W.	Corner of Old Hall Lane and Wilmslow Road, FALLOWFIELD.				
	made ground	3	-	3	-0.91
	Plastic clay. (Water level 12 ft.)	10	-	13	-3.96
	Hard clay.	3	-	16	-4.88
	Hard red sand.	5	-	21	-6.40
	Hard light sand	9	-	30	-9.14
	Loamy red sand.	13	-	43	-13.11

SJ89/121A-C

7-9

GSM No. 7-9 a. w. k. g.

1-3 on standard

(B11807) WL 17982-8154-5000 12/26 Sp. 100. O.A.

SECTION OF Boulders at Fallowfield, Manchester

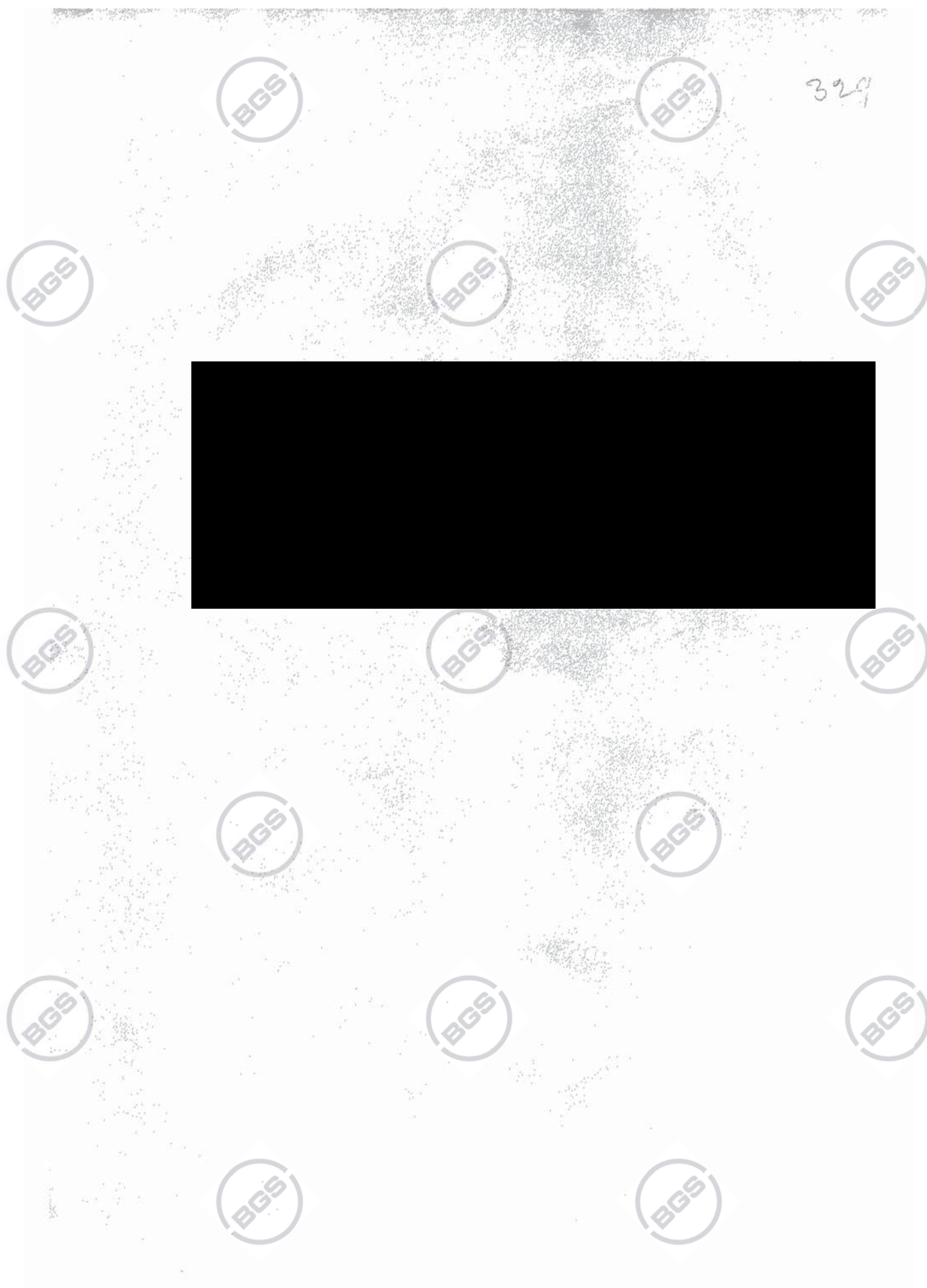
Maps: One-inch 85 Six-inch 111 N.E.W. County Lancashire

Height above O.D. _____ Latitude _____ Longitude _____

Communicated by Manchester Corporation Date of Sinking _____

Made by _____ Dip of Strata _____

		Thickness.	Depth from Surface.
<u>No. 3</u> <u>on standard</u> <u>SJ8618 9392</u> <u>No. 32.</u> <u>146.50 ft. O.D.</u> <u>In hoseley road, near S.E. corner of Green's College Athletic Ground</u> <u>LINE A</u> <u>3 = 7</u>		Soil 2 -	2 -
		Soft red sand. 25 -	27 -
<u>No. 2</u> <u>on standard</u> <u>SJ8551 9388</u> <u>No. 30.</u> <u>127.55 ft. O.D.</u> <u>Corner of Shawcross St. & Wilmslow Road, FALLOWFIELD.</u> <u>B</u> <u>LINE W</u> <u>2 = 8</u>		Dark soil 1 -	1 -
		Clay 8 -	9 -
		Dark clay. 5 -	14 -
		Soft red sand. 3 -	17 -
		Hard light sand. (Water level 2 ft.) 8 -	25 -
		Soft red sandstone. 12 -	37 -
<u>No. 4</u> <u>on standard</u> <u>SJ8561 9445</u> <u>No. 33.</u> <u>135.78 ft. O.D.</u> <u>Corner of Old Hall Lane and Wilmslow Road, FALLOWFIELD.</u> <u>C</u> <u>LINE W</u> <u>1 = 9</u>		made ground 3 -	3 -
		Plastic clay (Water level 2 ft.) 10 -	13 -
		Hard clay. 3 -	16 -
		Hard red sand. 5 -	21 -
		Hard light sand 9 -	30 -
		Loamy red sand. 13 -	43 -



Appendix D – Environment Agency Flood Map for Planning

Flood map for planning

Your reference
Unspecified

Location (easting/northing)
386358/393953

Created
17 April 2025 09:14

Your selected location is in flood zone 1, an area with a low probability of flooding.

You will need to do a flood risk assessment if your site is **any of the following**:

- bigger than 1 hectare (ha)
- in an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

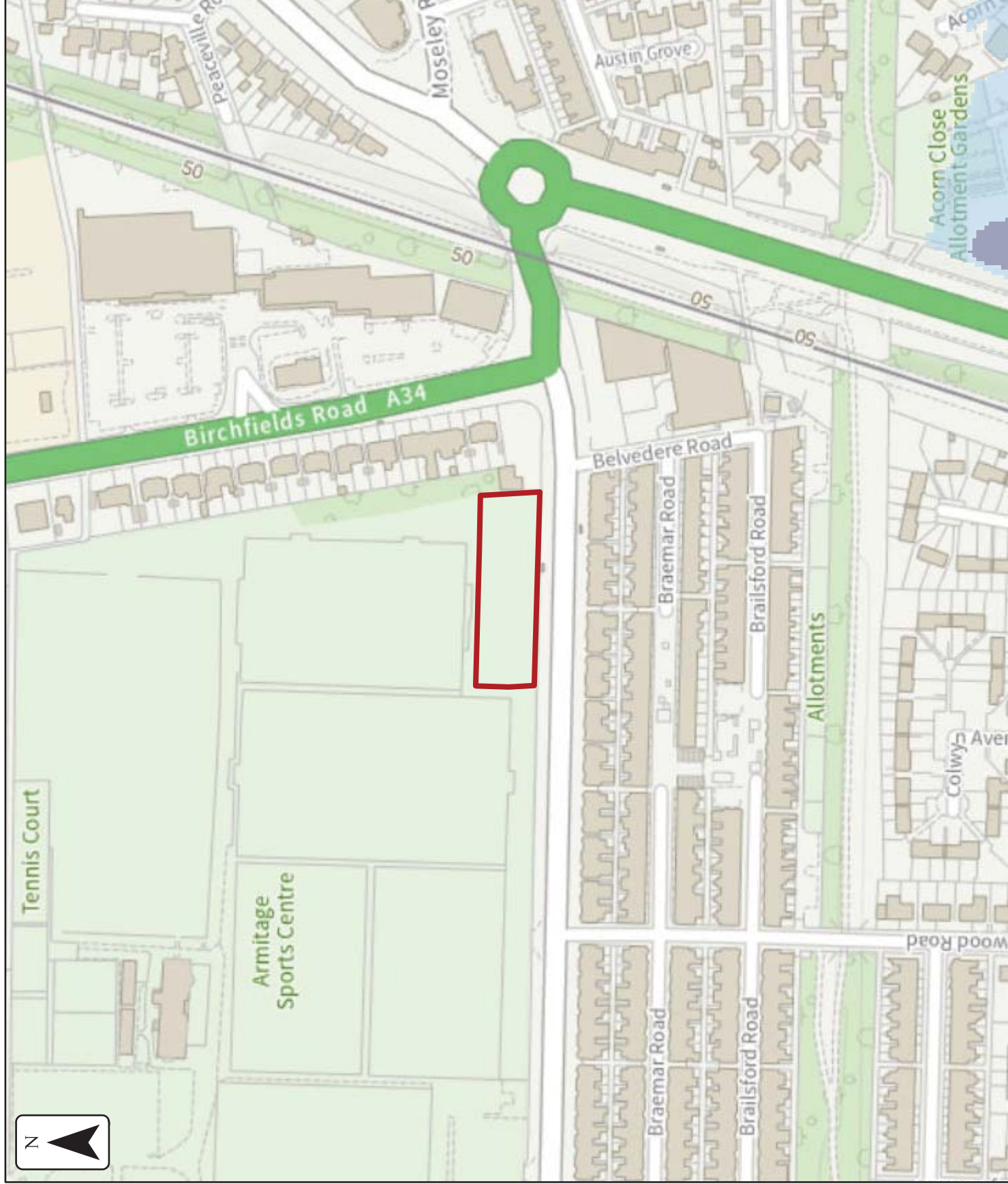
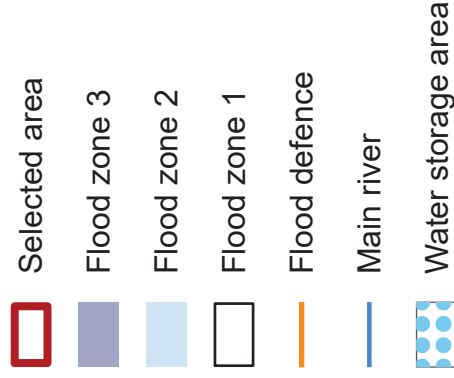
Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2025 AC0000807064. <https://flood-map-for-planning.service.gov.uk/os-terms>

**Your reference
Unspecified**

Scale
1:2,500

Created
17 Apr 2025 09:15



Appendix E – United Utilities & LLFA Correspondence

Pre Development Enquiry Guidance

Version 1 (September 24)

(This document should be read in conjunction with PDE response letter)



Water for the North West

Comment no.	Technical Guidance
General Guidance	
1	Sewer Access If your investigations require access to our public sewer network, we ask that you contact our network engineers with a request for an access certificate via our main contact telephone number 0345 6723 723 or refer to the link below: https://www.unitedutilities.com/builders-developers/working-near-our-assets/ Sewer Adoption Under S104 If you intend to offer sewers for adoption, design per current Design and Construction and local practices which have now replaced Sewers for Adoption 6th Edition.. S104 Pre-Design Assessment We recommend submitting a pre-design assessment. This is a free service to discuss the high level design and potential challenges. Please see link to application form in guidance sheet. Adoption of Sewers • Designs must comply with current Design & Construction Guidance. • S104 1b Pre-design assessment, and S104 for adoption of new sewers applications can be found at Sewer adoptions - United Utilities • Submit pre-design assessment to SewerAdoptions@uuplc.co.uk. • No construction should commence until detailed design is approved in writing. Sewer Connections: • Formal S106 application required for sewer connections. Application details available at: www.unitedutilities.com/builders-developers/wastewater-services/sewer-connections/ Water Assets • Contact DeveloperServicesWater@uuplc.co.uk regarding clean water assets on site. • Further information: Water pre-development - United Utilities Additional Considerations • Land drainage, overland flows, and track drainage are not accepted into public sewer network. Useful Resources: • Codes for Adoption: www.water.org.uk/technical-guidance/developers-services/codes-for-adoption/ • Design & Construction Guidance: www.water.org.uk/sewerage-sector-guidance-approved-documents/ • United Utilities website: www.unitedutilities.com/builders-developers/ Contact Information: • Main contact number: 0345 6723 723 • Sewer Adoptions and Pre-Development: SewerAdoptions@uuplc.co.uk
2	Flooding Events Please note that United Utilities Water Limited (Uuw) can only record and check flooding events which are reported to us, and we must comply with our Regulators instructions on the qualification of flooding events. Our response does not include: • any sewer flooding events caused by blockages or collapses which are the result of third-party actions, natural events, or other actions over which Uuw has no control and not a facet of sewer capacity; or • any historical sewer flooding events that have been resolved from investment in our infrastructure.

	Further consideration. - For low-lying sites, care should be taken to ensure that the property is not at increased risk of flooding. It could affect the detailed design of your site and result in the need to incorporate appropriate mitigating measures in your drainage scheme. - Consult Lead Local Flood Authority (LLFA) for surface water drainage concerns. - Check Environment Agency guidelines if site is in a Groundwater Source Protection Zone.
3	Asset Protection - Due to the accuracy of the records and the public sewer transfer legislation in 2011, not all public sewers are shown on our records. We ask that you proceed with caution and conduct adequate site investigation works. If any uncharted sewers are identified while conducting your investigation, we ask that you contact United Utilities at the earliest opportunity so that we can offer guidance and update our records. - Obtain asset data records before planning development United Utilities - Property Search : - Please be aware that any proposed diversion may require modelling. This process may take up to 6 months to reach an acceptable design. - Maintain minimum easement in line with our easement local practice, unless there is a formal easement in place, in which case the specified easement width would apply. easement-local-practice.pdf (unitedutilities.com) - Contact United Utilities for guidance on work near assets or if diversion is necessary.
4	Surface Water Drainage Hierarchy Follow the hierarchy as per National Planning Practice Guidance: 1. Infiltration 2. Discharge to waterbody 3. Discharge to surface water sewer or highway drain 4. Discharge to combined sewer (last resort) For guidance, The Northwest SuDS Pro-Forma provides information on the appropriate evidence required at each stage of the hierarchy, to demonstrate how each level has been discounted. The Lead Local Flood Authority has responsibility for all surface water drainage concerns and their input to your proposal is critical. You should also consider whether it is necessary to discuss your proposal with the Environment Agency, or Internal Drainage Board (if operating in your area). The Local Planning Authority are the determining authority for any application for planning permission and the appropriate authority for determining the cost viability of a proposed drainage scheme, such assessments are outside of the jurisdiction of United Utilities. SuDS (Sustainable Drainage Systems) - Prioritise multi-functional SuDS in accordance with national planning policy. - Design SuDS components as per CIRIA SuDS Manual (C753). - Consult the North West SuDS Pro-Forma for required evidence at each stage of the drainage hierarchy. Infiltration Surface water runoff generated from this development should discharge to the ground via infiltration system where feasible. A detailed evidence-based feasibility assessment must be carried out in line with Chapter 25 of the CIRIA SuDS Manual 2015 to determine whether infiltration is a suitable method of surface water disposal. Particular attention must be paid to Ground Water Source Protection Zones to ensure that the risk of pollution to these valuable resources is not compromised. Details can be obtained from the government website: https://www.gov.uk/guidance/groundwater-source-protection-zones-spzs#find-groundwater-spzs If your site is in a Groundwater Source Protection Zone, you should have regard to the Environment Agency's approach to Groundwater Protection. Information on this is available via the link below: https://www.gov.uk/government/publications/groundwater-protection-position-statements Please note that such a location could have implications for the principle of your development and the need for additional mitigating measures to protect the groundwater environment and public water supply in the detailed design of your site. Surface Water Discharge Rates Please note the given discharge rate is based on the site area believed to be developed. If there are significant areas of the site that will not be developed, the discharge rate should be reduced accordingly.
5	Please note that this guidance is current as of the date of issue. Always check for the most up-to-date regulations and guidelines when planning your development.

United Utilities Grasmere House, 2nd Floor
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

17/04/2025

Dear **Jacob**,

Pre-Development Enquiry for **Hawthorn Medical Centre, Modeley Road, M14 6PE** UU Reference Number: **07328732**

We have assessed your application based on the information provided. This pre-development advice on your drainage strategy will be valid for 12 months. Your strategy will need review by other authorities as part of the planning process. We advise conducting necessary site investigations to confirm viability of your proposals.

Asset Protection

1. We have reviewed our records and can confirm that there does not appear to be any charted public sewers located within the boundary of the proposed development.

Please see [comment 3](#) of the attached guidance sheet and [Working Near Our Pipelines Guidance document](#)

Foul Water

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

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

Manhole reference SJ86933901, **Grid reference** 386353, 393927

Please see the images at the end of this letter for clarification

Surface Water

Follow the National Planning Policy Guidance drainage hierarchy and Provide evidence for discounting higher options before considering public sewer discharge. Consult the Lead Local Flood Authority regarding surface water concerns.

Please see [comment 4](#) within the guidance sheet

Please see comment 4 within the guidance sheet

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

A connection to the public sewer would not be considered until higher options in the drainage hierarchy are sufficiently discounted.

Marta Wolska

From: Flood Risk Management <[REDACTED]>
Sent: 01 May 2025 13:00
To: Marta Wolska
Subject: RE: Hawthorn below ground drainage required information

Hi Marta,

Thanks for highlighting my mistake. You're right it seems to be flowing the opposite way. Please disregard what I said. 20m from your manhole in the downstream direction will be fine.

Surcharge on just the 1 in 30 will be fine.

Kind Regards
Laura

Laura Peacock
Flood Risk Team (LLFA) Manager
Email: [REDACTED]

Highways Service
Neighbourhoods Directorate
Manchester City Council
PO Box 532
Town Hall
Manchester
M60 2LA
Web: <http://www.manchester.gov.uk>

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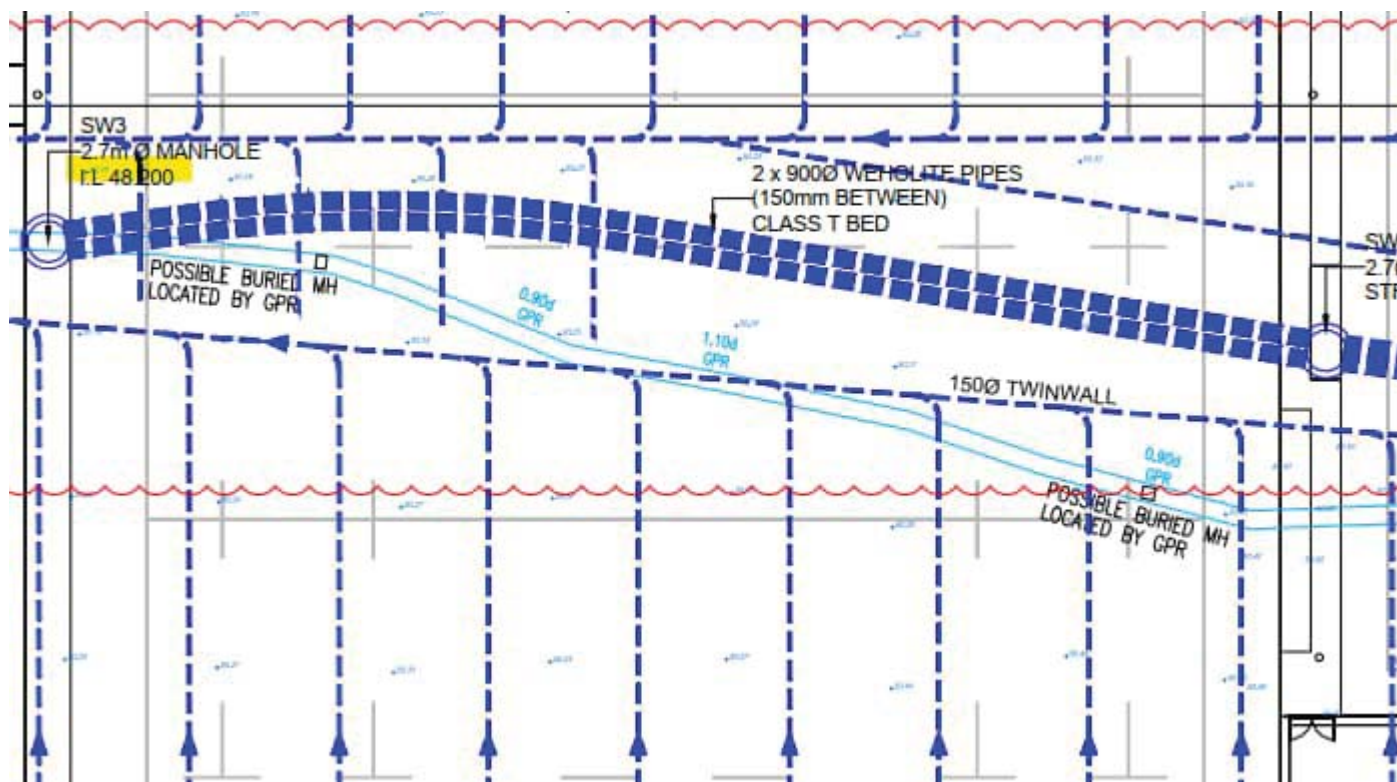
From: Marta Wolska <[REDACTED]>
Sent: 01 May 2025 12:07
To: Flood Risk Management <[REDACTED]>
Subject: RE: Hawthorn below ground drainage required information

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Hi Laura

Thank you for your response. Should the surcharge level be included for 1 in 100+45 CC as well?

Just to double-check, which direction does the watercourse flow? I was under the impression the watercourse is flowing towards the sports fields, and we will carry out survey from the manhole towards the sports field fence. Whereas you indicated the green line as downstream towards residential properties.



Marta Wolska
Principal Civil Engineer

[curtins.com](https://www.curtins.com)

Working hours:
Monday, Wednesday, Thursday 7:30-3:30
Not working on Tuesday/Friday

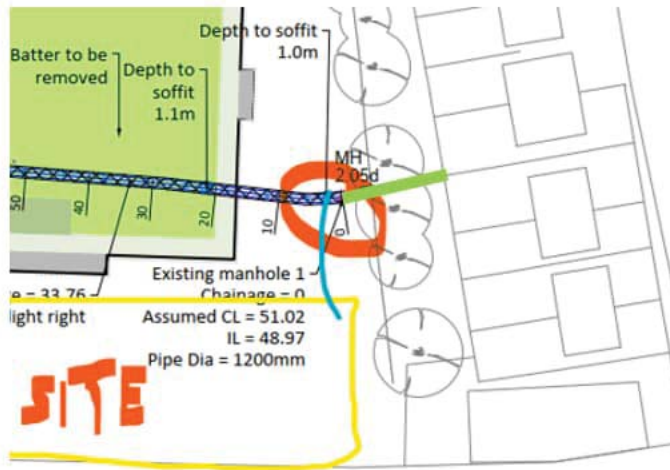
From: Flood Risk Management [REDACTED]
Sent: 01 May 2025 11:56
To: Marta Wolska <[REDACTED]>
Subject: RE: Hawthorn below ground drainage required information

Hi Marta,

Responses to your remaining queries:

Surcharged outfall: Please use a 1 m surcharged outfall level, measured above the soffit of the receiving culvert. Please run hydraulic simulations for the 1 in 30 year with surcharged outfall to ensure adequate performance of your network.

How far to survey culvert downstream from the manhole: it appears to be c.20m from the manhole to the edge of the University's land ownership, surveying this stretch would be sufficient. Please see green line below.



Kind Regards,
Laura

Laura Peacock
Flood Risk Team (LLFA) Manager
Email: [REDACTED]

Highways Service
Neighbourhoods Directorate
Manchester City Council
PO Box 532
Town Hall
Manchester
M60 2LA
Web: <http://www.manchester.gov.uk>

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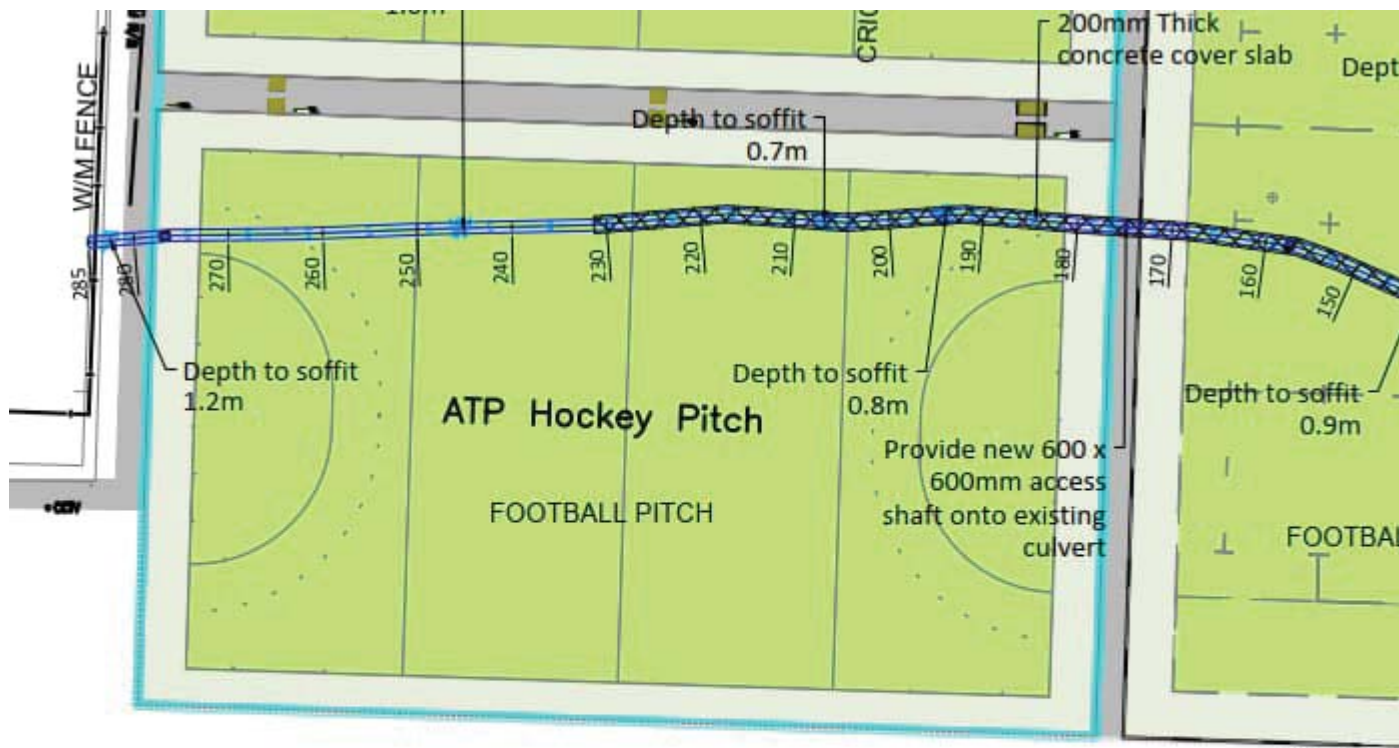
From: Marta Wolska [REDACTED]
Sent: 23 April 2025 08:30
To: Flood Risk Management [REDACTED]
Cc: Jennifer Connor [REDACTED]
Subject: RE: Hawthorn below ground drainage required information

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Dear Laura

I am scoping the additional surveys. We want to propose connecting to the existing manhole. The existing watercourse runs through sports fields and therefore, maintenance of the watercourse will be under riparian ownership

I would scope the survey to include cover level, invert level, size of watercourse, and manhole card. How far would you require us to survey the watercourse downstream from the manhole to prove it is suitable for connection?



Proposed La

Marta Wolska
Principal Civil Engineer

curtins.com

Working hours:
Monday, Wednesday 7:30-3:30
Thursday 8-12
Not working on Tuesday/Friday

From: Flood Risk Management [REDACTED]
Sent: 17 April 2025 16:44
To: Marta Wolska [REDACTED]
Cc: Jennifer Connor <[REDACTED]>
Subject: RE: Hawthorn below ground drainage required information

Hi Marta,

No problem.

- 5 l/s is acceptable for your design, but please note a culvert survey will be needed to show its condition is able to support your connection.
- Please use the CIRIA SuDS manual pollution & mitigation indices, and include your assessment in your drainage strategy. We will accept your pollution control measures in line with this assessment. The assessment will determine if permeable surfacing is sufficient or if other measures such as interceptor are required.
- Surcharged outfall – we will need longer to advise, a colleague will review and we will confirm w/c 28th.

Kind Regards,
Laura

Laura Peacock
Flood Risk Team (LLFA) Manager
Email: [REDACTED]

Highways Service
Neighbourhoods Directorate
Manchester City Council
PO Box 532
Town Hall
Manchester
M60 2LA

Web: <http://www.manchester.gov.uk>

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From: Marta Wolska [REDACTED]
Sent: 17 April 2025 15:34
To: Flood Risk Management [REDACTED]
Cc: Jennifer Connor [REDACTED]
Subject: RE: Hawthorn below ground drainage required information

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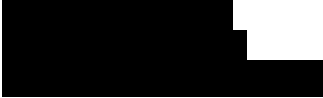
Hi Laura
Thank you , that is very useful.
Could you please advise:

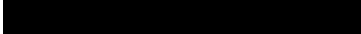
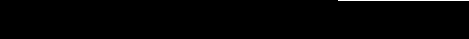
1. The existing site is a greenfield site, but the rates are lower than 5l/s, would you accept 5l/s for all storm events to be discharged to culverted watercourse
2. Should we consider surcharge level on the culverted watercourse? If yes, what surcharged level should be considered.

3. The proposed site is a medical centre The proposed car park with access road is 1040m2 (40 parking bays). The access road will slope towards the parking bays, which I am trying to agree with Client to be a permeable pavement solution. Would a petrol interceptor be required, or would permeable asphalt on parking bays be sufficient as pollution treatment?

Kind regards

Marta Wolska
Principal Civil Engineer


curtins.com

From: Flood Risk Management <
Sent: 17 April 2025 09:19
To: Marta Wolska 
Cc: Jennifer Connor 
Subject: RE: Hawthorn below ground drainage required information

Morning Marta,

Thank you for confirming, please find attached.

Pre app advice service is free (no charge).

Kind Regards,
Laura

Laura Peacock
Email: 

Highways Service
Neighbourhoods Directorate
Manchester City Council
PO Box 532
Town Hall
Manchester
M60 2LA
Web: <http://www.manchester.gov.uk>

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From: Marta Wolska 
Sent: 16 April 2025 20:52
To: Flood Risk Management 
Cc: Jennifer Connor <
Subject: RE: Hawthorn below ground drainage required information

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Hi Laura

Thank you for your response.

We understand that we will need to carry out additional investigations; any information about the watercourse will help us to scope the further investigation extent and give us some idea of what the drainage strategy and levels within the site will be.

Please send me the files as soon as possible.

Is pre-submission drainage advice chargeable?

Kind regards

Marta Wolska
Principal Civil Engineer



From: Flood Risk Management [REDACTED]
Sent: 16 April 2025 16:24
To: Marta Wolska <[REDACTED]>
Cc: Jennifer Connor [REDACTED]
Subject: RE: Hawthorn below ground drainage required information

Hi Marta,

I hope you're well, we are in receipt of the below thread.

We've located a developer-issued drawing for previous application 109519/FO/2015/N2, which shows the culvert routing and other specifics.

We can't guarantee the accuracy of this survey so would be providing it on a guidance-only basis. It would not remove the potential need for new survey to support a new planning application (e.g. to confirm the route/levels and the condition 10 years since this survey). Please confirm if you happy to accept a copy of the drawing on this basis?

Regarding other queries in your attached email 07/04:

- As the site is < 0.5 Ha an FRA is not required.
- Climate change is 45% please.
- If connection to culverted watercourse is proposed, please see our [LDC requirements](#).
- Other planning requirements for drainage strategy - A proposal discussion with the LLFA is recommended to de-risk the project. If you would like a view pre-submission, please contact us at this email address and we will arrange a meeting and written memo. Prior to such a meeting, if you could provide as much information about your proposal as possible it would be beneficial, as a minimum a formalised red line boundary drawing.

Kind Regards,
Laura

Laura Peacock

Flood Risk Team (LLFA) Manager

Email: [REDACTED]

Highways Service
Neighbourhoods Directorate
Manchester City Council
PO Box 532
Town Hall
Manchester
M60 2LA

Web: <http://www.manchester.gov.uk>

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From: Jennifer Connor [REDACTED]
Sent: Wednesday, April 16, 2025 11:11 AM
To: Marta Wolska [REDACTED]; Mark Lloyd <[REDACTED]> Des Jones
[REDACTED]; Benjamin Smith [REDACTED] Annie Rigg
Cc: Claire Stelmachowicz [REDACTED] Alex Hulme [REDACTED] David
Sandbrook [REDACTED]; Megan Balshaw <[REDACTED]> Rebecca
Marwood [REDACTED] Musab Ainekar [REDACTED]>
Subject: Re: Hawthorn below ground drainage required information

Dear Marta,

I shall ask them to make contact with you.

Kind Regards

Jen

Jennifer Connor (she/her)
Area Team Group Manager
Planning, Building Control and Licensing
Growth and Development
Manchester City Council
PO Box 532
Town Hall Extension
Manchester
M60 2LA
[REDACTED]
[REDACTED]

Equality Ambassador for Planning