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EXECUTIVE SUMMARY

This report demonstrates that the proposed development is not at significant flood risk, subject to the recommended flood mitigation strategies being implemented.

A review of flood data published by the Environment Agency (EA) and provided within the Strategic Flood Risk Assessment (SFRA) has been undertaken. The EA Flood Map for Planning shows the site is located entirely within Flood Zone 1; however, the combined climate change mapping shows portions of the site to be at risk of fluvial flooding attributed to the Baguley Brook, a designated EA Main River. The impacted development is considered to be 'Water Compatible' and areas of 'Less Vulnerable' and 'More Vulnerable' development are expected to be removed from the fluvial floodplain. As such, flooding from the Baguley Brook is expected to pose a low risk of flooding.

Strategic level flood data shows the site is at an overall low probability of surface water flooding, with isolated areas of surface water ponding within the site. Groundwater susceptibility mapping included within the Preliminary Flood Risk Assessment (PFRA) suggests the site is at a low to high susceptibility to flooding. A Phase 2 Geo-Environmental Assessment was completed by BWB Consulting in April 2025. Groundwater was encountered within six of the 11 taken boreholes at depths ranging between 0.80m and 2.00m bgl. Subsequent monitoring found groundwater present between 0.60m and 0.78m bgl. The groundwater levels are considered likely to be associated with perched water within the granular soils. The nature of the proposed development is such that the risk of groundwater flooding would be low; however, there may be potential to encounter shallow groundwater levels during the construction phase.

To manage surface water runoff generated from the development, it is proposed to provide any necessary upgrades to the existing drainage infrastructure such that runoff from the 1 in 100-year storm, including an allowance for future climate change, will be safely stored within the site. This will not only manage the surface water flood risk within the proposed development, but it will also prevent the development from adversely affecting downstream flood risk.

The report sets out a number of recommended measures which will help manage any residual risks.

In compliance with the requirements of the National Planning Policy Framework, and subject to the mitigation measures proposed, the development could proceed without being subject to significant flood risk. Moreover, the development will not increase flood risk to the wider area subject to the suitable management of surface water runoff discharging from the site.

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GLOSSARY & NOTATION

Abbreviation / Notation	Definition
AEP	Annual Exceedance Probability. The probability (%) of a flood event occurring in any year
m bgl	metres below ground level
BGS	British Geological Survey
BNG	Biodiversity Net Gain
Catchment	The land area that drains (normally naturally) to a given point on a river, drainage system or body of water
DTM	Digital Terrain Model
EA	Environment Agency
Floodplain	Any area of land over which water flows or is stored during a flood event
FRA	Flood Risk Assessment
LiDAR	Light Detection and Ranging aerial survey data
LLFA	Lead Local Flood Authority
mAOD	metres Above Ordnance Datum
Main River	A statutory type of watercourse in England and Wales, usually larger watercourses and rivers. The EA can carry out maintenance, improvement or construction work on main rivers to manage flood risk as part of its duties and powers
NPPF	National Planning Policy Framework
Ordinary Watercourse	A river, stream, ditch, drain, dyke, culvert/pipe (other than a public sewer) and passage through which water flows and which does not form part of a main river
OS	Ordnance Survey
PFRA	Preliminary Flood Risk Assessment. An assessment of floods that have taken place in the past and floods that could take place in the future. It generally considers flooding from surface water runoff, groundwater and ordinary watercourses, and is prepared by the LLFAs
PPG	Planning Policy Guidance. Specifically, the Flood Risk and Coastal Change category
Return period	A statistical term defining the probability of occurrence of a flood event. A 1 in 30-year flood is one likely to be equalled or exceeded on average only once in a 30-year period: a flood with a 3.33% AEP
RoFRS	Risk of Flooding from Rivers and Sea. A strategic level dataset published by the EA, illustrating the potential probability of flooding from the rivers and sea, including an allowance for climate change

Abbreviation / Notation	Definition
RoFSW	Risk of Flooding from Surface Water. A strategic level dataset published by the EA, illustrating the potential probability of flooding from surface water runoff, including an allowance for climate change
SFRA	Strategic Flood Risk Assessment. A study carried out by one or more local planning authorities to assess the risk of flooding from all sources, now and in the future within a defined area
LFRMS	Local Flood Risk Management Strategy is a study prepared by an LLFA to help understand and manage flood risk at a local level. The LFRMS aims to ensure that the knowledge of local flood risk issues is communicated effectively so that they can be better managed
Section 19 Flood Investigation Reports	Under their duties under the Flood and Water Management Act 2010, LLFAs have a duty to publish reports of investigations of flood incidents. A Section 19 flood investigation report is a public statement of the circumstances of a historical flood event and what parties have a role in managing the risks. The investigation does not always give an in-depth analysis of the flood risk or mechanisms, but it can provide a valuable record of past events
SuDS	Sustainable Drainage Systems. Surface water management techniques that are intended to reduce the risk of flooding and pollution from urban runoff
SWMP	Surface Water Management Plan. These are non-statutory plans which preceded the introduction of the Flood and Water Management Act 2010. They can provide an important evidence base of local flood risk issues which can include critical drainage areas, surface water drains, groundwater, and small watercourses
UOW	Unnamed Ordinary Watercourse. An ordinary watercourse that has no name published on OS maps or within the SFRA

1. INTRODUCTION

1.1 This FRA has been prepared on behalf of Etec Contract Services Limited to support a full planning application. The level of detail included is commensurate and subject to the nature of the proposals at the planning stage of the design process.

1.2 Summary information is included as **Table 1.1**.

Table 1.1: Site Summary

Site Name	Wythenshawe Park
Location	Manchester
NGR (approx.)	SJ810898
Application Site Area (ha)	6.1 (approx.)
Development Type	Sports Facilities
Flood Zone Classification	Flood Zone 1
NPPF Vulnerability	Water Compatible - Sports Facilities and BNG Area Less Vulnerable - Car Park More Vulnerable - Pavilion, inclusive of GP surgery and café
Anticipated Development Lifetime	75 years* (approx.)
Lead Local Flood Authority	Manchester City Council

**In accordance with PPG Flood Risk and Coastal Change Paragraph 006*

1.3 The site is located within Wythenshawe Park, approximately 3.1km north-west of Wythenshawe and 8.5km south of Manchester city centre. The site comprises two parcels: the main development site and a BNG area located to the south of the main site.

1.4 The main site is bound to the north by Wythenshawe Road (B5167), to the east by parkland, to the south by the Baguley Brook, and to the west by woodland and residential development. The BNG area is bound to the north by the Baguley Brook, to the south and west by residential development, and to the east by parkland. The site's location is illustrated within **Figure 1.1**.

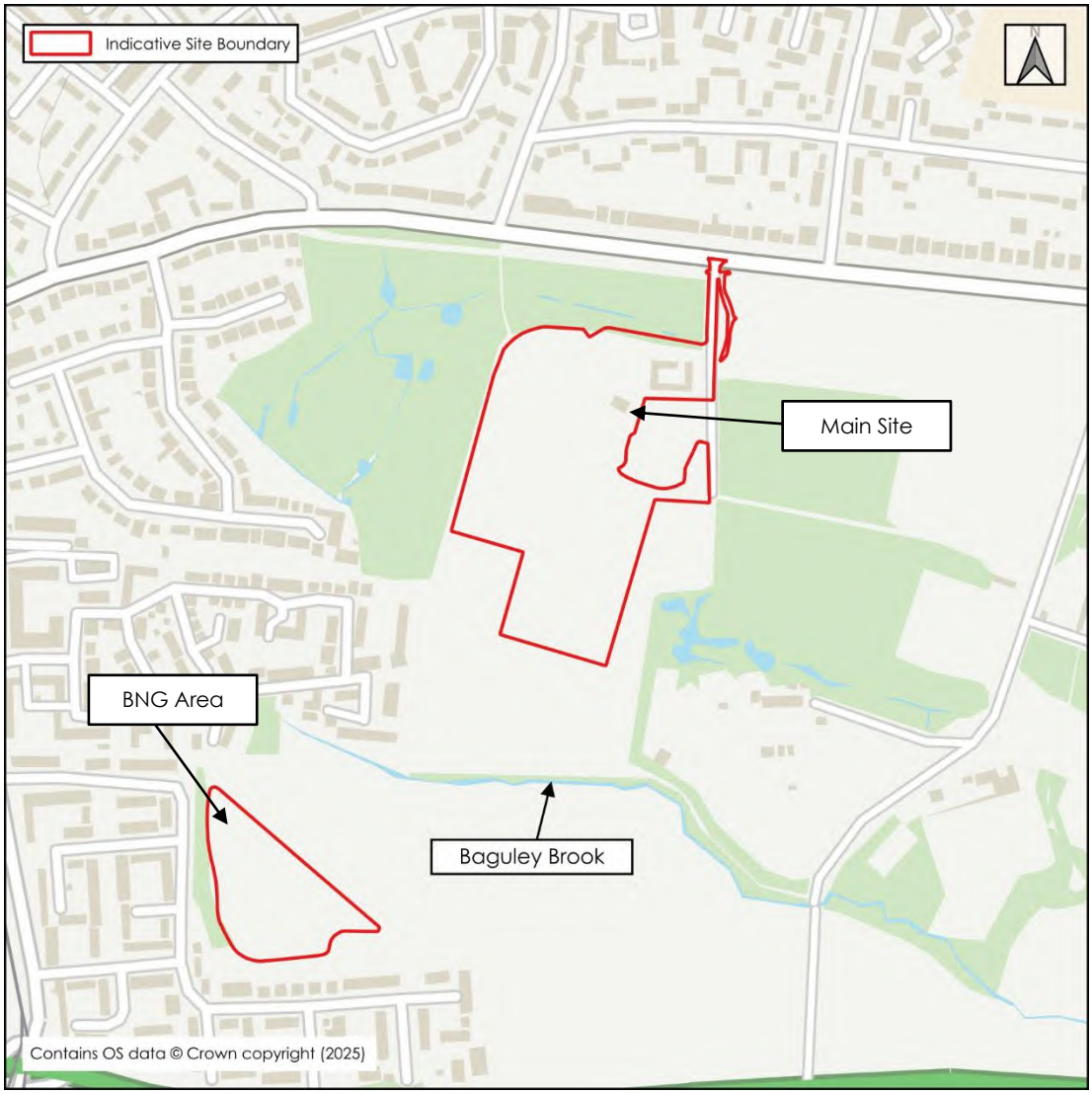


Figure 1.1: Site Location

Sources of Data

1.5 The following sources of data have been reviewed in the preparation of this FRA:

i. EA LiDAR (Composite 1m DTM 2022)
ii. Topographical Survey by Brightsurv Ltd undertaken in May 2023 (reference: BRI694-T01)
iii. EA Flood risk assessments: climate change allowances[1]
iv. EA Flood Map for Planning
v. EA RoFSW data
vi. EA Altrincham 2009 Model Information
vii. Level 1 SFRA for Greater Manchester – Update[2]

[1] Environment Agency, Flood risk assessments: climate change allowances: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances. Last Accessed September 2025.
[2] Level 1 Strategic Flood Risk Assessment for Greater Manchester - Update (JBA Consulting, March 2019)

viii. Greater Manchester Level 2 Hybrid SFRA[3]

ix. Manchester City Council PFRA[4] and Addendum[5]

x. Manchester City Council LFRMS[6]

xi. Greater Manchester SWMP – Stage 1[7]

xii. Manchester's Local Development Framework - Core Strategy Development Plan Document[8]

xiii. Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 to 2039[9]

xiv. United Utilities Sewer Records

xv. PAS128 Utility Survey & CCTV Survey undertaken by Solum Surveying Ltd in March 2025 (reference: 13898, rev 0)

xvi. BGS Drift & Geology Maps

xvii. BGS Groundwater Data

xviii. Phase 1 and Phase 2 Geo-Environmental Assessments by BWB Consulting in April 2025 (references: WPK-BWB-EGT-XX-RP-LE-0001 and WPK-BWB-EGT-XX-RP-LE-0002)

[3] Greater Manchester Level 2 Hybrid Strategic Flood Risk Assessment (JBA Consulting, October 2020)
[4] Manchester City Council Preliminary Flood Risk Assessment (JBA Consulting, May 2011)
[5] Manchester City Council Preliminary Flood Risk Assessment Addendum (Manchester City Council, December 2017)
[6] Manchester City Council Local Flood Risk Management Strategy (Manchester City Council, March 2014)
[7] Greater Manchester Surface Water Management Plan (JBA Consulting, January 2012)
[8] Manchester's Local Development Framework - Core Strategy Development Plan Document (Manchester City Council, July 2012)
[9] Places For Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 to 2039 (Greater Manchester Combined Authority, December 2024)

2. FLOOD RISK PLANNING POLICY & GUIDANCE

National Planning Policy Framework

2.1 The NPPF[10] sets out the Government's national policies on different aspects of land use planning in England in relation to flood risk.

2.2 Flood risk is identified as a combination of the probability and the potential consequences of flooding:

Flood Risk = Probability x Consequences

2.3 The probability is the chance of a flood occurring expressed as a return period or AEP, and the consequences are the potential impacts of the flood (for example, damage to buildings or risk to people's safety).

2.4 Potential sources of flood risk are rivers and the sea, direct rainfall on the ground surface resulting in surface water runoff, rising groundwater, overwhelmed sewers and drainage systems, reservoirs, canals and lakes, and other artificial sources.

2.5 The NPPF states that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere. When considering flood risk, the NPPF requires development to account for future climate change.

2.6 The NPPF identifies that development should only be allowed in areas at risk of flooding where it can be demonstrated that:

- within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;
- the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;
- it incorporates SuDS, unless there is clear evidence that this would be inappropriate;
- any residual risk can be safely managed; and
- safe access and escape routes are included where appropriate, as part of an agreed emergency plan.

National Planning Practice Guidance – Flood Risk and Coastal Change

2.7 The NPPF is accompanied by the PPG category entitled "Flood Risk and Coastal Change"[11]. This sets out the vulnerability to flooding of different land uses. It encourages development to be located in areas of lower flood risk where possible and stresses the importance of preventing increases in flood risk off site to the wider catchment area.

[10] Revised National Planning Policy Framework, Ministry of Housing, Communities & Local Government, amended February 2025
[11] Planning Practice Guidance: https://www.gov.uk/guidance/flood-risk-and-coastal-change, amended September 2025

2.8 The PPG requires development to be designed to include flood risk management and resilience against the "design flood" for its lifetime. The PPG also states that all potential sources of flooding should be considered when preparing an FRA.

2.9 The "design flood" is an event of a given probability generally defined as:

- river flooding likely to occur with a 1% AEP (a 1 in 100 chance each year); or
- tidal flooding likely to occur with a 0.5% AEP (1 in 200 chance each year); or
- surface water flooding likely to occur with a 1% AEP (a 1 in 100 chance each year),

plus, an appropriate allowance for climate change.

2.10 The PPG includes a series of tables that define Flood Zones (Table 1), the flood risk vulnerability classification of development land uses (Table 2) and 'compatibility' of development within the defined Flood Zones (Table 3).

2.11 This FRA is written in accordance with the NPPF and the associated PPG.

Flood Map for Planning

2.12 With particular reference to planning and development, and specifically the risk of flooding from rivers and the sea, the Flood Map for Planning identifies Flood Zones in accordance with Table 1 of the PPG. Further details on the Flood Zone classifications are outlined in **Table 2.1**.

Table 2.1: Flood Zone Classifications

Flood Zone	Description
Flood Zone 1 (Low Probability)	Land having less than a 1 in 1000 annual probability of river or sea flooding (<0.1% AEP). All land outside of Flood Zone 2 and 3.
Flood Zone 2 (Medium Probability)	Land having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1% AEP); or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% - 0.1% AEP).
Flood Zone 3a (High Probability)	Land having a 1 in 100 or greater annual probability of river flooding (>1% AEP); or land having a 1 in 200 or greater annual probability of flooding from the sea (>0.5% AEP). This is represented by "Flood Zone 3" on the Flood Map for Planning.
Flood Zone 3b (The Functional Floodplain)	Flood Zone 3b (The Functional Floodplain) is defined as land where water must flow or be stored in times of flood. This is not identified or separately distinguished from Zone 3a on the Flood Map for Planning.

2.13 The site is shown to be located entirely within Flood Zone 1, as shown in **Figure 2.1**.

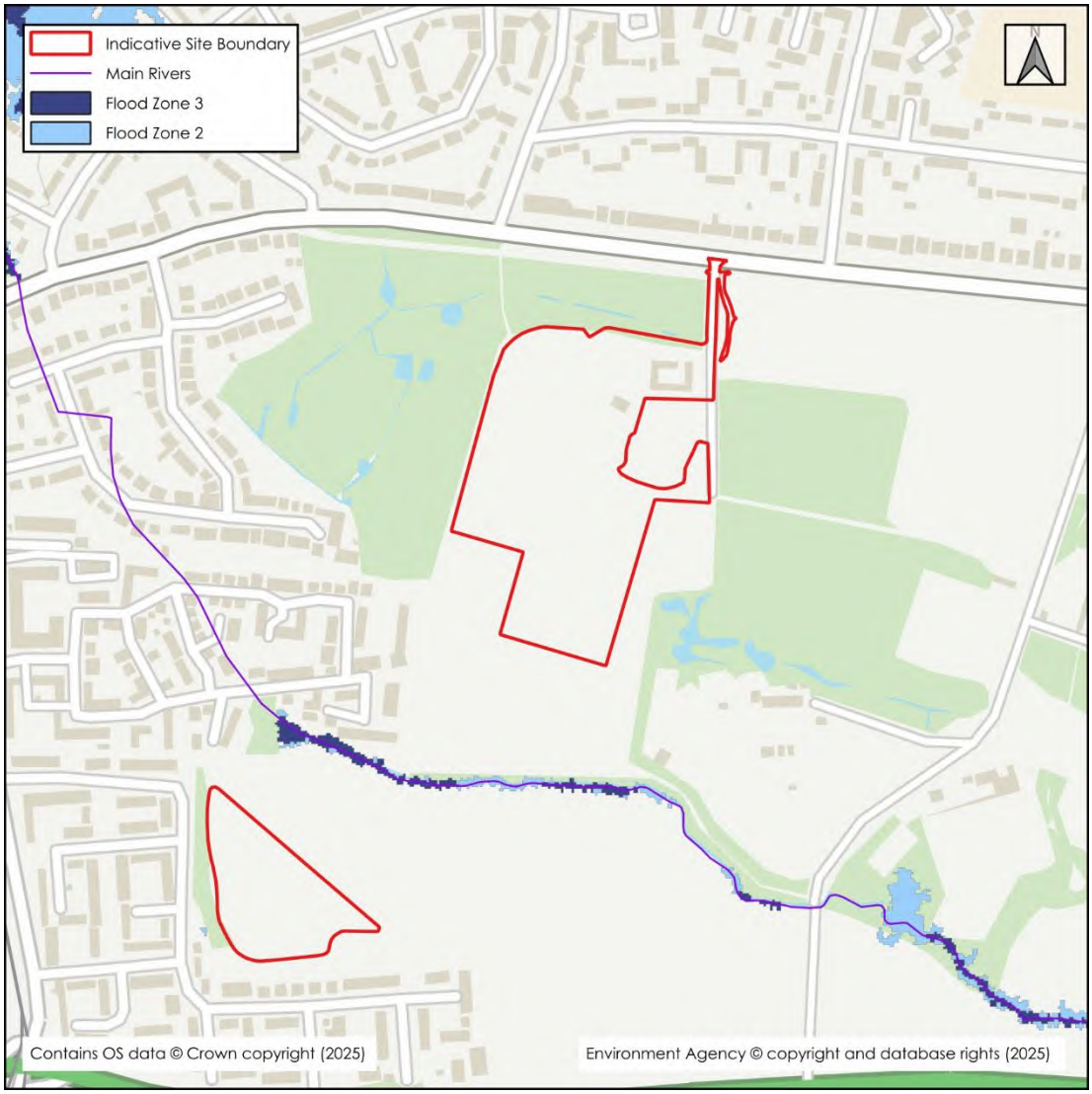


Figure 2.1: Flood Map for Planning

Flood Risk Assessments: Climate Change Allowances

2.14 Predicted future changes in sea levels, peak river flows, and rainfall intensities caused by climate change are provided by the EA online. A range of projections are applied to regionalised 'River Basin Districts', which are further subdivided into Management Catchments, to provide a series of climate change allowances. The appropriate climate change allowances are determined by a number of factors that include the source of flooding, the current level of risk, the vulnerability of the proposed development and the lifespan of the development.

The site falls within the Upper Mersey Management Catchment. The relevant peak river flow climate change allowances from this Management Catchment are identified in **Table 2.2**.

Table 2.2: Peak River Flow Climate Change Allowances for the Upper Mersey Management Catchment

Allowance Category	Total potential change anticipated for the '2020s' (2015 to 2039)	Total potential change anticipated for the '2050s' (2040 to 2069)	Total potential change anticipated for the '2080s' (2070 to 2125)
Upper End	27%	51%	85%
Higher Central	17%	31%	53%
Central	13%	22%	41%

2.15 When determining the appropriate allowance for use in an FRA, the Flood Zone classification, flood risk vulnerability, and the anticipated lifespan of the development should be considered. **Table 2.3** provides a matrix summarising the EA's guidance on determining the appropriate allowance(s).

Table 2.3: Application of Appropriate Peak River Flow Climate Change Allowances

<table>
<tr><th>Flood Zone</th><th>Essential Infrastructure</th><th>Highly Vulnerable</th><th>More Vulnerable</th><th>Less Vulnerable</th><th>Water Compatible</th></tr>
<tr><td>1</td><td colspan="5">Use the central allowance where a location may fall within Flood Zone 2 or 3 in the future.</td></tr>
<tr><td>2</td><td>Use the higher central allowance</td><td colspan="4">Use the central allowance</td></tr>
<tr><td>3a</td><td>Use the higher central allowance</td><td>Development should not be permitted</td><td colspan="3">Use the central allowance</td></tr>
<tr><td>3b</td><td>Use the higher central allowance</td><td colspan="3">Development should not be permitted</td><td>Use the central allowance</td></tr>
<tr><td colspan="6">If development is considered appropriate by the local authority when not in accordance with Flood Zone vulnerability categories, then it would be appropriate to use the higher central allowance.</td></tr>
</table>

2.16 The site is located entirely within Flood Zone 1; the proposed development is classified as a combination of 'Water Compatible', 'Less Vulnerable' and 'More Vulnerable', and is understood have an anticipated lifespan of approximately 75 years. Therefore, the Central allowance for the '2080s' epoch (41%) should be considered to ensure the proposed development is designed adequately for its lifetime.

Local Plan

2.17 The Core Strategy Development Plan Document, which formed part of Manchester's Local Development Framework, has been reviewed in the production of this FRA. The Local Plan was adopted July 2012 and sets out the spatial planning strategy for the city up to 2027.

2.18 The Places for Everyone Joint Development Plan was adopted in March 2024 and has partially superseded the Core Strategy and a number of policies. The Places for Everyone Joint Development Plan is a long-term plan relating to nine Greater Manchester Districts for jobs, new homes, and sustainable growth. The Plan provides an important opportunity to create conditions for inclusive economic growth, provide opportunities for the provision of homes and protect and enhance the nature environment.

2.19 The policies within the Manchester Core Strategy which related to flood risk have been superseded; however, any part of the policy that is not replaced remains part of Core Strategy. Key policies relating to flood risk from within the Places for Everyone Joint Development Plan are outlined below.

Policy JP-S4: Flood Risk and the Water Environment

2.20 It is stated that "*An integrated catchment-based approach will be taken to protect the quantity and quality of water bodies with reference to the North West River Basin Management Plan and managing flood risk*".

2.21 Developments are expected to manage surface water run-off through sustainable drainage systems and as close to source as possible. These should be designed to provide multifunctional benefits wherever possible, including for water quality, nature conservation and recreation.

Strategic Flood Risk Assessment

2.22 The Level 1 SFRA for Greater Manchester – Update and the Greater Manchester Level 2 Hybrid SFRA have been reviewed in the production of this FRA. The Level 1 SFRA includes flood risk policy and guidance for the area, which will be referenced where applicable.

2.23 The Level 2 Hybrid SFRA was produced to support the Greater Manchester Spatial Framework by highlighting the key strategic flood risks across Greater Manchester and recommending key priorities for intervention. The site is not referenced within the Level 2 SFRA. Upon review no applicable information in relation to flood risk at the site was identified.

3. SITE DETAILS AND PROPOSALS

3.1 The combined site area is approximately 6.1ha and comprises grassland, an athletics track, a bike pump track, a pavilion, car parking and sports pitches. It is understood that the site is positively drained by existing private drainage infrastructure. Access to the main site is via Wythenshawe Road (B5167) to the north. The existing land use is illustrated within **Figure 3.3**.



Figure 3.1: Existing Site Condition

Waterbodies & Watercourses

3.2 The surface waterbodies and watercourses within the immediate vicinity of the site are illustrated within **Figure 3.2**.

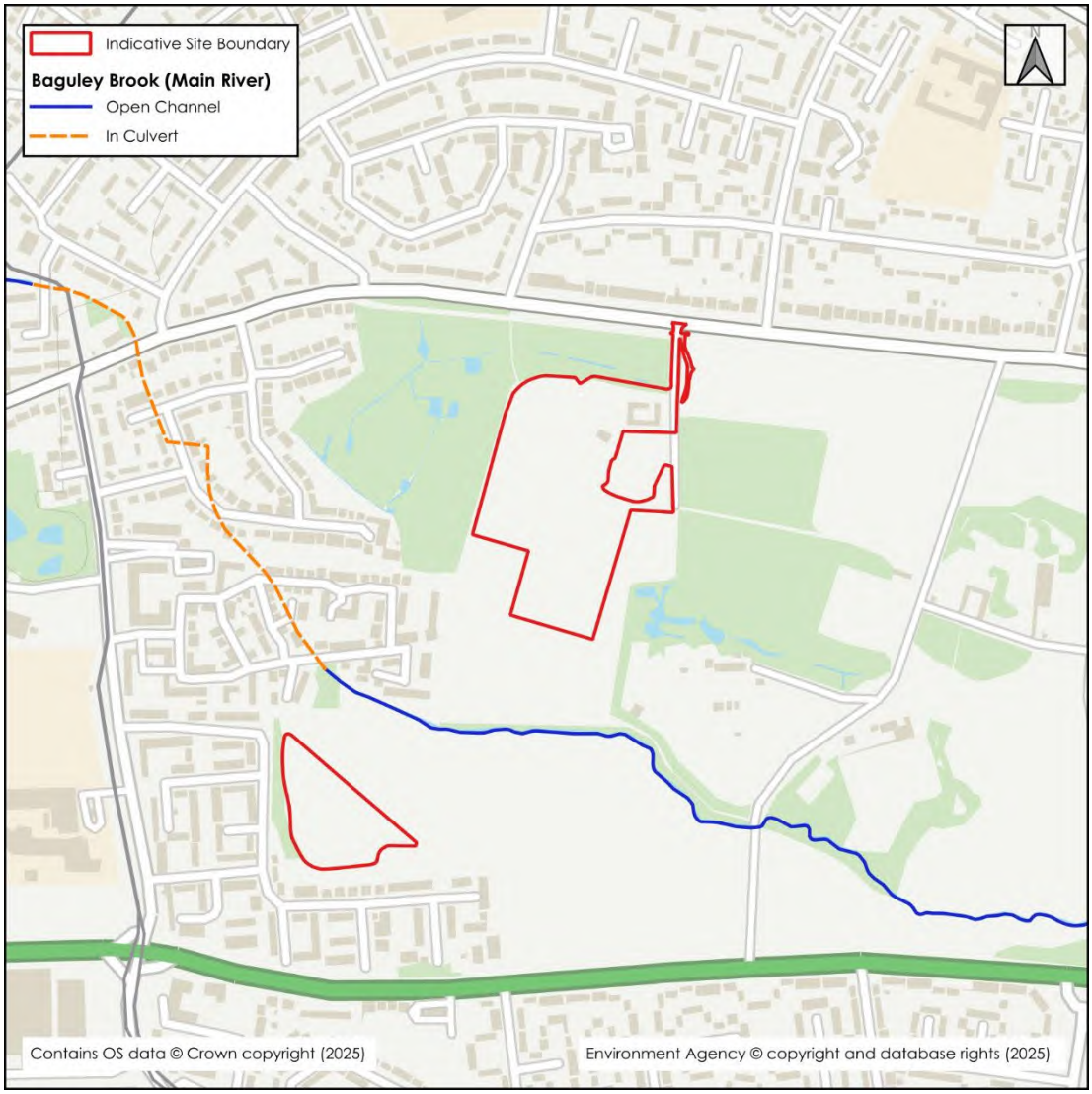


Figure 3.2: Indicative Waterbodies and Watercourses

3.3 The Baguley Brook, a designated EA Main River, is located to the south of the main site and flows in a westerly and north-westerly direction. The watercourse is understood to ultimately discharge to the Bridgewater Canal, located approximately 3km north-west of the site.

3.4 The Baguley Brook is culverted beneath the residential development to the west of the site; the approximate alignment and onward connectivity, shown in **Figure 3.2,** is based on OS mapping and EA data.

3.5 OS mapping and EA LiDAR data also shows a network of ordinary watercourses and waterbodies to be present to the west and east of the site, located within the surrounding park and green space. These are understood to be isolated and do not discharge directly to the Baguley Brook.

Topography

3.6 A topographical survey has been undertaken and is included as **Appendix 1**. The topographical survey does not cover the site access route and BNG area; therefore, EA LiDAR data has also been used to supplement site levels. An extract of the EA LiDAR data is included as **Figure 3.3**.

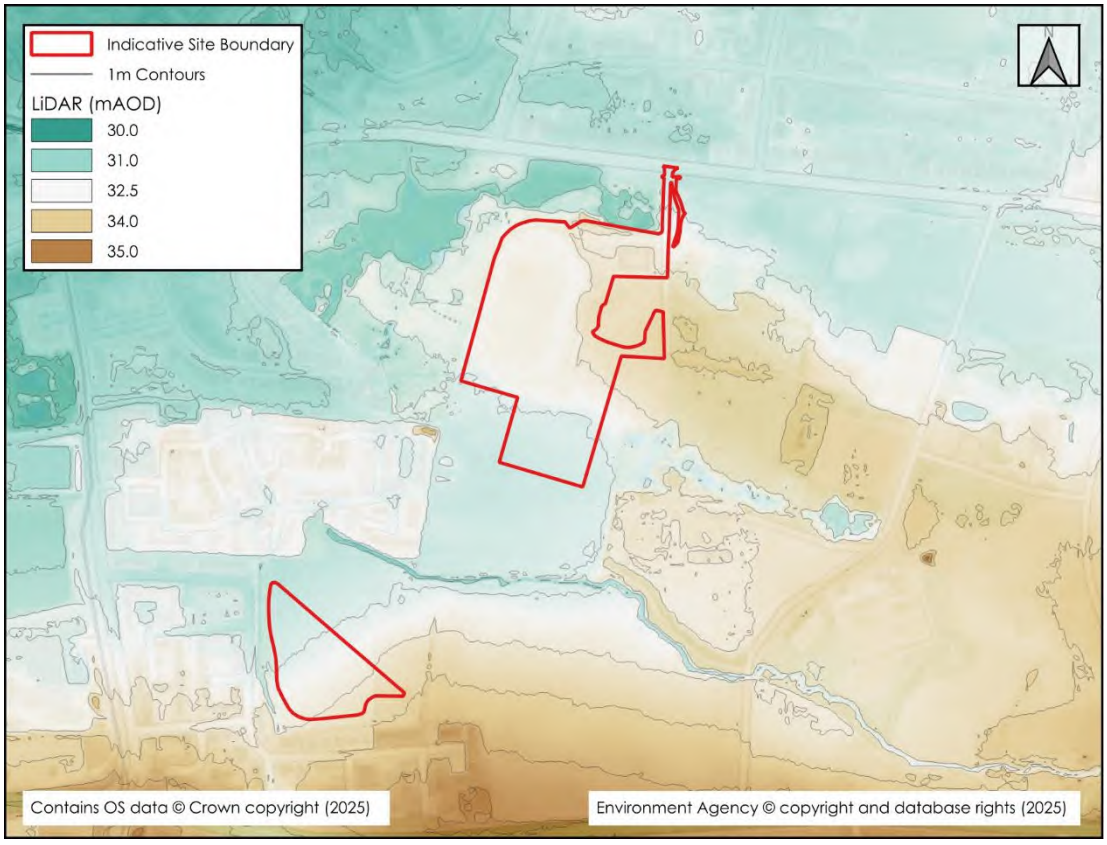


Figure 3.3: Site Topography

3.7 EA LiDAR data and the topographical survey shows ground levels for the main site to generally fall from a high point in the north east of the site in a northerly and southerly direction, falling from a high point of appropriately 34.0mAOD, to low points of approximately 31.5mAOD and 31.8mAOD in the north and south, respectively.

3.8 Levels in the BNG area are shown to fall in a northerly direction towards the Baguley Brook, falling from a high point of approximately 33.9mAOD in the south to a low point of approximately 31.3mAOD in the north.

Proposed Scheme

3.9 The proposals are for the redevelopment of existing sport facilities to include the construction of a new pavilion to provide shower/change facilities, a café, and GP clinic; relocation of the existing modular change and shipping containers, provision of 2x AGPS, and 1x MUGA; demolition of the existing weightlifting building; extension of the car park; widening of the access road and provision of a pedestrian access.

3.10 An indicative proposed development layout is included as **Appendix 2**. For ease of reference, this has been reproduced in **Figure 3.4**, which also includes the vulnerability classification for the development components that have been adopted for the purpose of this FRA.

3.11 The existing access route via Wythenshawe Road (B5167) is to be retained post development.



Figure 3.4: Indicative Development Layout & Vulnerability

4. HISTORICAL FLOODING INCIDENTS

4.1 A review of the data sources identified in **Section 1** was undertaken to identify any records of historical flooding incidents within the vicinity of the site. These are summarised within **Table 4.1**.

Table 4.1: Summary of Reported Historical Flooding Incidents

Data Source	Commentary
SFRA	The Level 1 SFRA[2] includes historical flood incidents for the Greater Manchester region. The 'historic flood incidents' mapping included within the SFRA shows there are no previous recorded flood events which have impacted the site or surrounding area. United Utilities provided information on historic incidents of flooding from the sewer network, due to hydraulic failure, as well as their hotspot dataset. Mapping shows the site is not located within a flood hotspot, and there are no previously reported sewer flood events which have impacted the site.
PFRA and Addendum	The PFRA[4] reports a number of flood events which impacted the Manchester City region between 1872 and 2007. The PFRA reports a flood incident attributed to the Baguley Brook in 1981; however, the magnitude and exact locations of flooding are not provided. The United Utilities DG5 database is provided as part of the PFRA. Mapping shows there are no previously reported sewer flood events which have impacted the site. There is shown to be one previous surface water flood incident within the residential development to the west, however, no further information is provided. The PFRA Addendum[5] does not report any further historical records.
SWMP	The Greater Manchester SWMP[7] reports historical surface water flood incidents which impacted the wider region between 1890 and 2007. There are no reported incidents which have impacted the site.
LFRMS	There are no previously recorded flood events reported within the LFRMS[6].
Section 19 Flood Investigation Reports	The Greater Manchester Combined Authority have published one Section 19 Flood Investigation Report which documents flooding in Greater Manchester on 26th December 2015[12]. The report has been reviewed and there is no evidence of the site being impacted.
EA Recorded Flood Outlines	The site is not located within a previously recorded flood outline. The nearest recorded flood outline is located approximately 1.3km north-east of the site attributed to flood events which occurred in 1964, 1965 and 1973. The source of flooding is not provided; however, it is in close proximity to the River Mersey.

4.2 It should be noted that a lack of recorded flooding incidents does not necessarily mean the site and local area have never experienced flooding. Flooding incidents may not have been reported or observed.

[12] Flood Investigation Report Greater Manchester 26 December 2015 (Greater Manchester Combined Authority, September 2016)

5. MAIN RIVERS (FLUVIAL)

Probability of Flooding

5.1 Flooding from watercourses occurs when flows exceed the capacity of the channel or conduits, or where a restrictive hydraulic structure is encountered, which leads to water overtopping the banks into the floodplain.

5.2 As shown within **Figure 2.1**, the site is located entirely within Flood Zone 1, land with less than a 1 in 1000 annual probability of river or sea flooding. The nearest Flood Zones are located approximately 140m south of the main site, attributed to the Baguley Brook, and are aligned to the watercourse channel.

5.3 The EA's Flood Map for Planning includes Flood Zones plus climate change data. This data, shown in **Figure 5.1**, shows how the combined extent of Flood Zones 2 and 3 could increase with climate change over the next century (using the '2080s' epoch), ignoring the benefits of any existing flood defences. This is considered to be the most precautionary data on rivers and sea currently published by the EA.

5.4 The mapping shows the south of the main site and a portion of the BNG area to be at risk of flooding from the Baguley Brook during the combined Flood Zone 2 and 3 climate change scenario. The areas shown to be at risk are aligned with the lower elevations of the site, as shown on the topographical survey (**Appendix 1**).

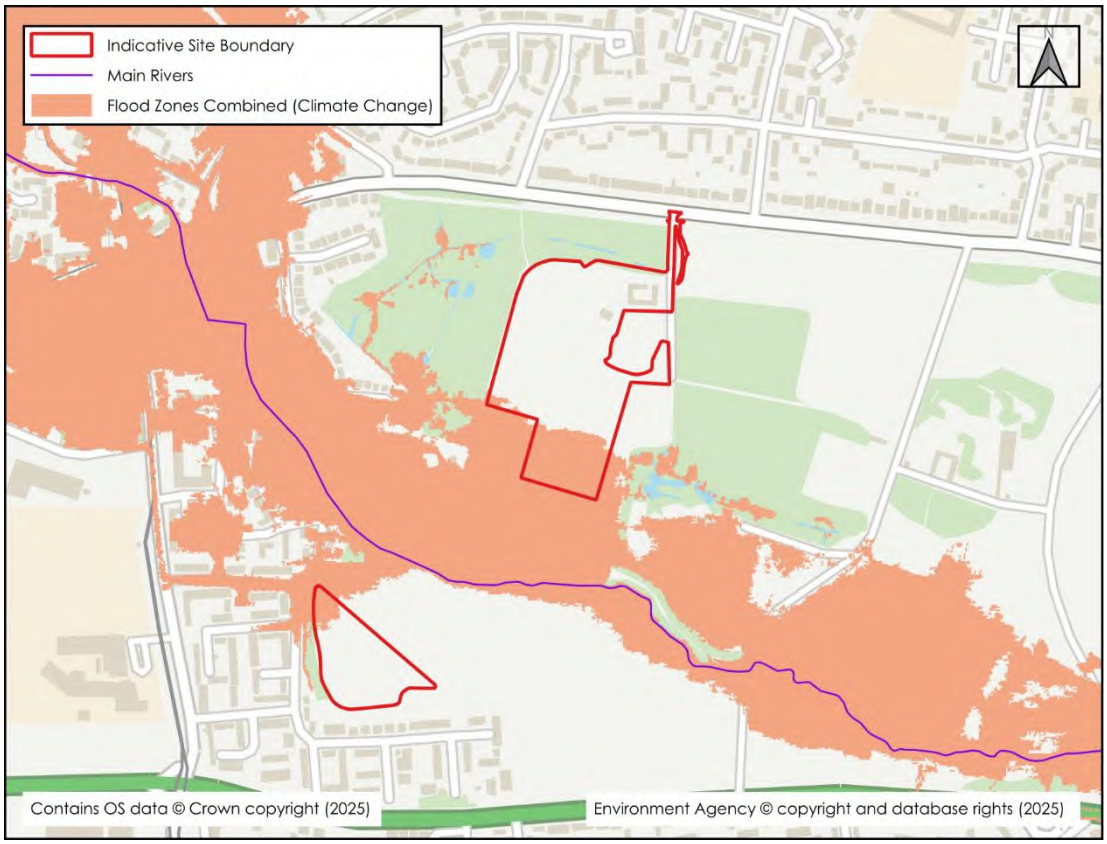


Figure 5.1: Flood Map for Planning - Flood Zones plus Climate Change

5.5 To further assess the fluvial flood risk posed to the site from the Baguley Brook, hydraulic model results from the Altrincham 2009 model have been obtained from the EA and are included as **Appendix 3**. The results are provided in the form of peak water levels at a series of nodes along the Baguley Brook, as shown in **Figure 5.1** and detailed in **Table 5.1**. In the absence of the '2080s' epoch climate change allowance (41%), the undefended 1 in 100-year +20% climate change and 1 in 1000-year events, provided within the EA model, have been reviewed.

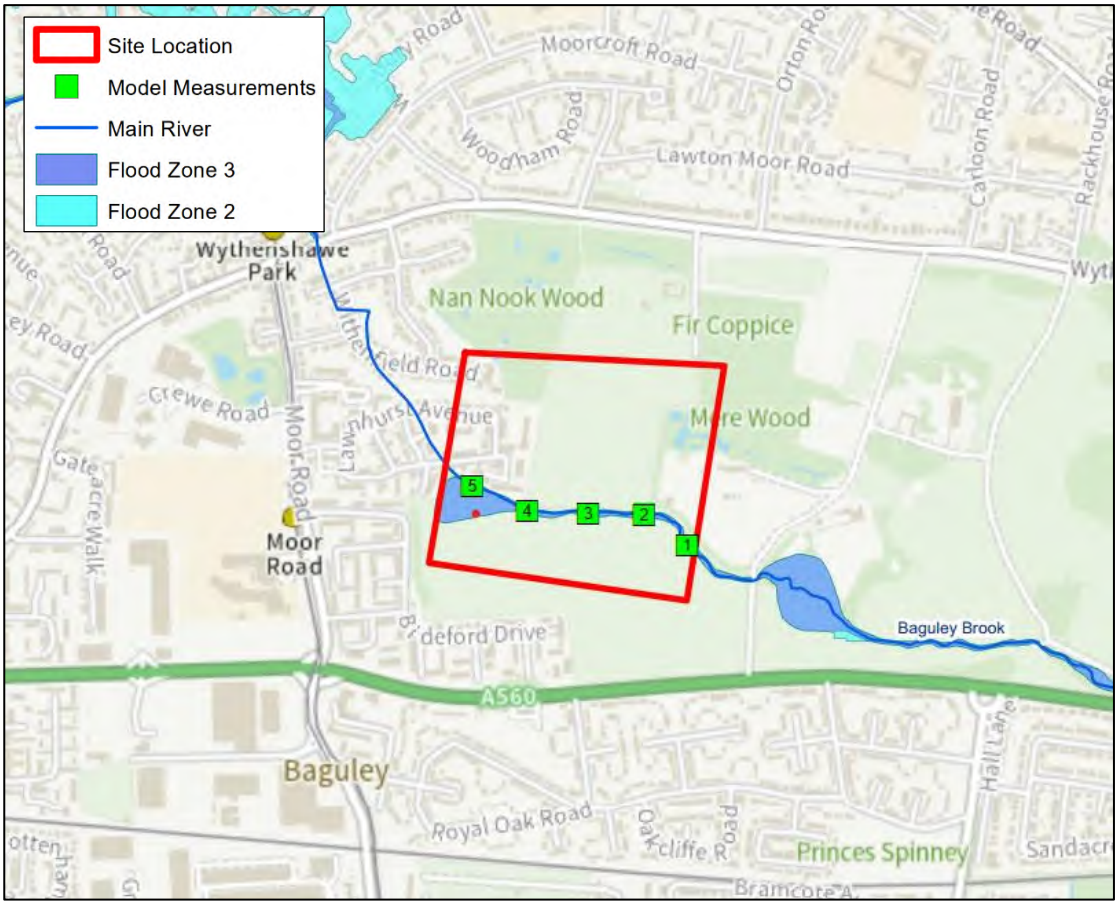


Figure 5.2: Baguley Brook Node Location Plan (Extracted from Environment Agency Product 4 Data)

Table 5.1: Baguley Brook Undefended Peak Water Levels (mAOD) (Extracted from Altrincham 2009 Model)

Node	1 in 100-Year	1 in 100-Year +20% Climate Change	1 in 1000-Year
1	31.94	32.00	32.05
2	31.73	31.78	31.83
3	31.59	31.63	31.68
4	31.50	31.53	31.58
5	31.46	31.48	31.51

5.6 The closest nodes to the main site are nodes 2 to 4; node 2 has been used within this assessment as it provides the more conservative flood levels. Node 2 reports peak water levels of between 31.78mAOD and 31.83mAOD during the in 100-year +20% climate change and 1 in 1000-year events. A review of the topographical survey (**Appendix 1**) against the peak water level suggests the southern portion of the site may be impacted during all modelled scenarios, similar to the Flood Map for Planning plus Climate Change.

5.7 The ordinary watercourses located to the east and west of the site are excluded from the Flood Map for Planning. This is because of their minor status and relatively small catchment areas. In such instances, the EA RoFSW mapping dataset can be used as a proxy of the potential floodplain associated with ordinary watercourses. This is discussed further within **Section 6**.

Flood Mitigation

5.8 The proposals within the southern portion of the main site and the BNG area comprise development considered to be 'Water Compatible'. Based on existing levels and model outputs, areas proposed for 'Less Vulnerable' and 'More Vulnerable' development are shown to be removed from the fluvial floodplain.

5.9 It is expected that there will be no land raising within the fluvial floodplain as part of the proposed development and floodplain conveyance is unlikely to be affected by the proposals. Therefore, it is not anticipated that the development proposals will have a detrimental impact on the capacity of the floodplain. Accordingly, the proposed development will not increase flood risk elsewhere and any displacement of flood water can be considered negligible. Finished floor levels of the pavilion should be raised a minimum of 600mm above the 1 in 100-year + climate change flood level. Ground levels around the proposed pavilion range from 32.5mAOD to 33.5mAOD and are considered to be sufficiently raised.

5.10 Therefore, no specific flood management or mitigation measures are required in relation to this source of flooding.

Flood Risk

5.11 A portion of the proposed development is identified to be at risk of flooding, attributed to the Baguley Brook. The impacted development is considered to be 'Water Compatible' and therefore, the site is considered to be at a low risk of flooding from Main Rivers.

Residual Flood Risk & Management

5.12 The available data shows that the existing access/egress route to the north of the site via Wythenshawe Road (B5167) is removed from areas at fluvial flood risk. Therefore, safe access and egress can be achieved.

5.13 The site is located in close proximity to the EA Flood Warning area known as 'Baguley and Fairywell Brooks at Timperley, Brooklands and Northern Moor' and the Flood Alert

Area known as 'Middle River Mersey catchment including areas near Bramhall, Stockport, Sale, Altrincham and Urmston'. Due to the potential fluvial flood risk to the site, it is recommended that the site management team and site users sign up to receive EA Flood Warnings so that appropriate preparation can be made in the event of a potential flooding incident.

6. SURFACE WATER (PLUVIAL) & MINOR WATERCOURSES

Probability of Flooding

6.1 Surface water flooding can occur during prolonged or intense storm events when the infiltration potential of soils, and/or the capacity of drainage infrastructure is overwhelmed leading to the accumulation of surface water and the generation of overland flow routes.

6.2 RoFSW mapping has been collated and published by the EA; this shows the potential probability of flooding which could occur when rainwater does not drain away through the normal drainage systems or soak into the ground but lies on or flows over the ground instead. The mapping shows the probability of flooding based on the Central climate change allowances up to the year 2060, which is the most precautionary data projection currently published by the EA. This data can also identify the potential floodplain associated with small watercourses omitted from the Flood Map for Planning. An extract from the mapping is included as **Figure 6.1**.

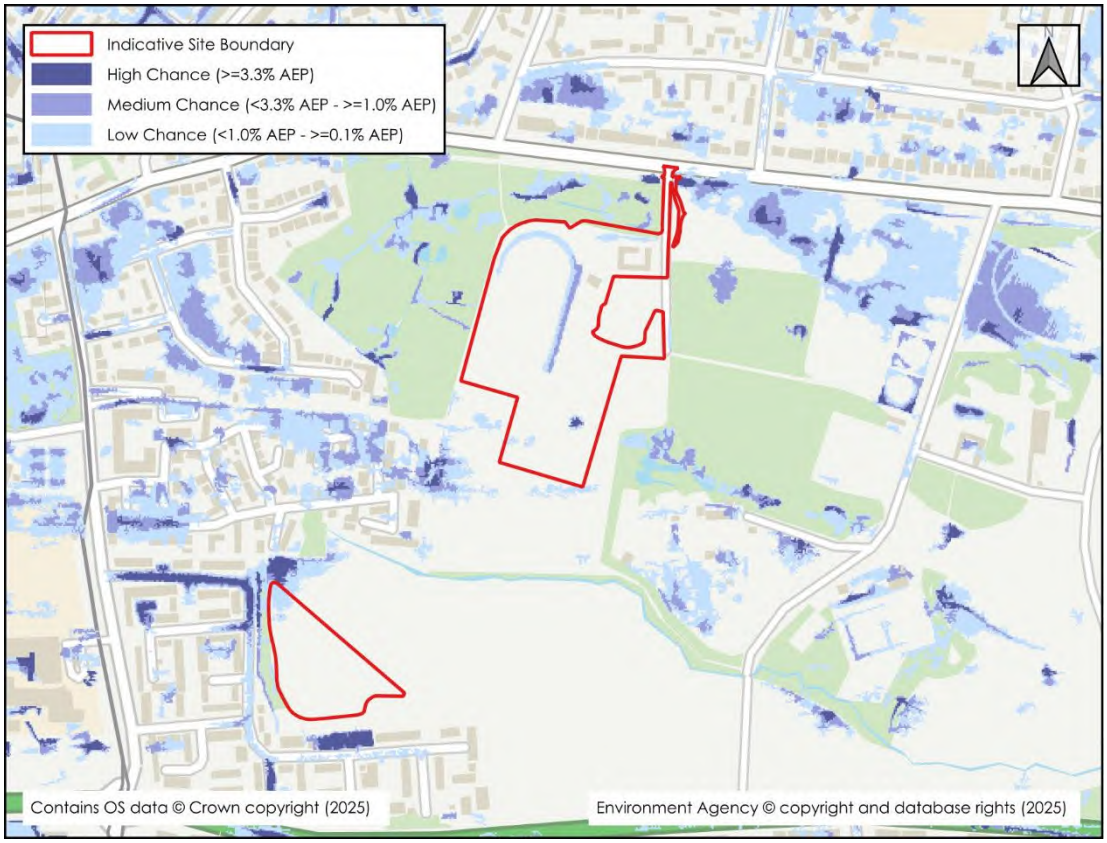


Figure 6.1: Risk of Flooding from Surface Water Mapping (Yearly Chance of Flooding Between 2040 and 2060)

6.3 The site is generally shown to be at a very low probability of surface water flooding. Isolated areas at low to high probability of surface water ponding are present within the site, which are considered to be associated with existing topographical low points, largely associated with the existing running track. Surface water depth mapping suggests areas of ponding within the site are generally less than 0.2m deep.

6.4 The RoFSW mapping shows the surrounding minor watercourses pose a low risk of flooding to the site, with areas of low to high probability largely depicted to be contained to the respective watercourse channels.

6.5 The site access route is shown to be at a very low probability of surface water flooding.

Flood Risk Mitigation

6.6 The site is positively drained, and it is proposed that the surface water drainage is upgraded to provide capacity for the 1 in 100-year storm event plus an allowance for climate change.

Flood Risk

6.7 Whilst isolated parts of the site are at a low to high probability of surface water flooding, the majority of the site is considered to be at a low probability of flooding. Given the majority of the main site and the BNG area comprises 'Water Compatible' development and subject to implementation of the flood risk mitigation measures, the surface water flood risk to the development is considered to be low.

Residual Flood Risk & Management

6.8 It is recommended that finished floor levels of the proposed pavilion are set a minimum of 150mm above surrounding ground levels and that ground levels are profiled to encourage runoff and overland flows away from the built development and towards the nearest drainage point.

7. SEWERS & DRAINAGE SYSTEMS

7.1 Sewer and flooding from drainage systems can occur when the capacity of the infrastructure is exceeded by excessive flows, because of a reduction in capacity due to collapse or blockage, or if the downstream system becomes surcharged. This can lead to the sewers flooding onto the surrounding ground via manholes and gullies, which can generate overland flows.

Probability of Flooding

7.2 The local sewerage undertaker is United Utilities; a copy of their asset plans are included as **Appendix 4**. The records shows a 2200mm diameter public combined sewer to flow through the site in a north easterly direction. A 525mm diameter public surface water sewer is also shown to originate within the site and flow in a south westerly direction where it outfalls to the Baguley Brook. No depth information was provided for these assets.

7.3 United Utilities have confirmed via a pre-developer enquiry, included within **Appendix 4**, that the sewer network within the site vicinity has previously been modelled. Flooding was modelled to occur during the 1 in 100-year event approximately 2.5km south of the site.

7.4 A Utility and CCTV Survey was undertaken by Solum Surveying Ltd in March 2025 (reference: 13898, rev 0), which is included as **Appendix 5**. The survey showed the existing pavilion and car park are served by private surface water and foul water drainage infrastructure. Depth to invert levels for the surface water and foul water infrastructure range between 0.55m to 1.88m. The existing private drainage infrastructure is shown to serve a small catchment and as such, flows are expected to be low.

7.5 In the event of exceedance of the public and private assets, flows are expected to be directed away from the site in a southerly and northerly direction, following the general topography.

Flood Risk Mitigation

7.6 The flood risk management measures previously described to address the surface water flood risk in **Section 6**, are also applicable to address the flood risk from sewers and drainage systems.

7.7 It is proposed to drain foul water from the development separately to surface water.

Flood Risk

7.8 Subject to implementation of the flood risk mitigation measures, the risk of sewer flooding to the development is low.

Residual Flood Risk

7.9 Any residual risk associated with the public sewerage assets should be mitigated by United Utilities, who have maintenance responsibilities associated with their assets. Appropriate inspection and repair should be undertaken by United Utilities where blockages and exceedance events occur, in order to limit potential future failure of the system which may lead to flooding.

7.10 United Utilities have confirmed that the public sewerage assets within the site will require an easement of 10m (5m either side of the pipe) where no development will be permitted.

8. GROUNDWATER

8.1 Groundwater flooding occurs when the water table rises above ground elevations, or it rises to depths containing basement level development. It is most likely to happen in low lying areas underlain by permeable geology. This is most common on regional scale chalk aquifers, but there may also be a risk on sandstone and limestone aquifers or on thick deposits of sands and gravels underlain by less permeable strata such as that in a river valley. The presence of springs and/or winterbourne streams near to a site are a good indicator that groundwater flooding may be an issue in the area.

Probability of Flooding

8.2 BGS mapping shows the main site is entirely underlain by Tarporley Siltstone Formation (Siltstone, Mudstone and Sandstone) and the BNG area is entirely underlain by Bollin Mudstone member (Mudstone). The EA classifies both bedrock geologies as a Secondary B Aquifer. Secondary B Aquifers comprise lower permeability layers that may store and yield limited amounts of groundwater.

8.3 Glaciofluvial Sheet Deposits (Sand and Gravel) are mapped across the majority of the site, with an area of Till (Diamicton) present within the east of the main site and the south-east of the BNG area. The EA classifies the Glaciofluvial Sheet Deposits as a Secondary A Aquifer and the Till as a Secondary (Undifferentiated) Aquifer. Secondary A Aquifers comprise permeable layers that can support local water supplies, and may form an important source of base flow to rivers. Secondary (Undifferentiated) are assigned where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value.

8.4 The 'Areas Susceptible to Groundwater Flooding' mapping included within the Manchester City Council PFRA[4] shows the site is situated within a susceptibility ranging between <25% and >=75%. It should be noted that the mapping is based on strategic scale mapping that uses a 1km^2 grid. It identifies areas susceptible to flooding from groundwater at a broad scale on the basis of geological and hydrogeological conditions. Therefore, the classification could potentially be based on another area within the particular cell.

8.5 BGS Groundwater Flooding data, included as **Figure 8.1**, shows the main site is situated within an area which is not considered to be prone to groundwater flooding. The BNG area to the southwest of the main site is shown to have the potential for groundwater to occur at the surface. It is noted that this susceptibility data should not be used on its own to make planning decisions at any scale and, in particular, should not be used to inform planning decisions at the site scale.

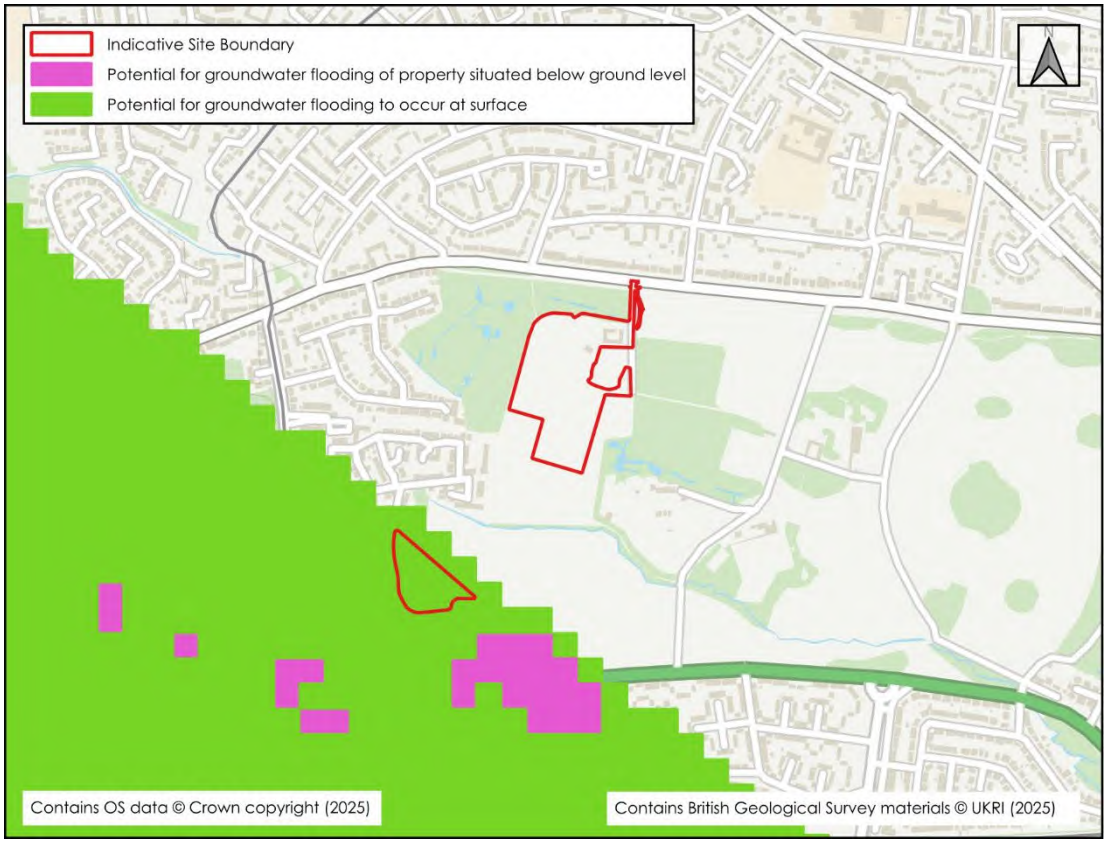


Figure 8.1: BGS Groundwater Flooding

8.6 Phase 1 and Phase 2 Geo-Environmental Assessments were completed by BWB Consulting in April 2025 (references: WPK-BWB-EGT-XX-RP-LE-0001 and WPK-BWB-EGT-XX-RP-LE-0002). The Groundsure groundwater flooding mapping, included within the Phase 1 assessment, shows the site is considered to be at a low to moderate risk of groundwater flooding.

8.7 As part of the Phase 2 investigation, 11 boreholes were taken across the main site to a maximum depth of 5.45m bgl. Groundwater was encountered within six of the boreholes at depths ranging between 0.80m and 2.00m bgl. It is noted that groundwater was only encountered where Glaciofluvial Sand deposits were found to be present within the boreholes.

8.8 Groundwater was subsequently monitored within three boreholes where the proposed pavilion is to be located. During the post-investigation groundwater monitoring, groundwater was recorded at levels ranging between 0.60m and 0.78m bgl. The groundwater levels are considered likely to be associated with perched water within the granular soils.

8.9 Based on the available data, the probability of groundwater flooding is considered to be medium. In the event of groundwater emergence, flows are expected to be directed away from the site in a southerly and northerly direction, following the general topography.

Flood Risk Mitigation

8.10 It is recommended that finished floor levels of the proposed pavilion are set a minimum of 150mm above surrounding ground levels to mitigate any residual flood risk.

Flood Risk

8.11 The probability of groundwater flooding in the site is medium. However, given the majority of the site and the BNG area comprise 'Water Compatible' development, the overall risk of groundwater flooding is therefore considered to be low.

8.12 If groundwater emergence were to occur, flows would be directed in a northerly and southerly direction towards the Baguley Brook and away from the site.

Residual Flood Risk & Management

8.13 There may be potential for groundwater to be encountered during any excavations required during the construction phase. Therefore, it is recommended that groundwater levels are monitored during the construction phase and that the potential to encounter shallow groundwater levels is considered during any required excavations.

8.14 Should shallow groundwater be encountered during construction, a groundwater specialist should be consulted, and appropriate dewatering techniques should be employed as necessary.

9. OTHER SOURCES OF FLOOD RISK

9.1 The site has been reviewed against data relating to other sources of flood risk, including the sea, canals, and reservoirs and large waterbodies.

9.2 The data available in the SFRA and published by the EA identity no flood risk to the site from these sources. Therefore, these have not been considered in any further detail.

10. CONCLUSIONS AND RECOMMENDATIONS

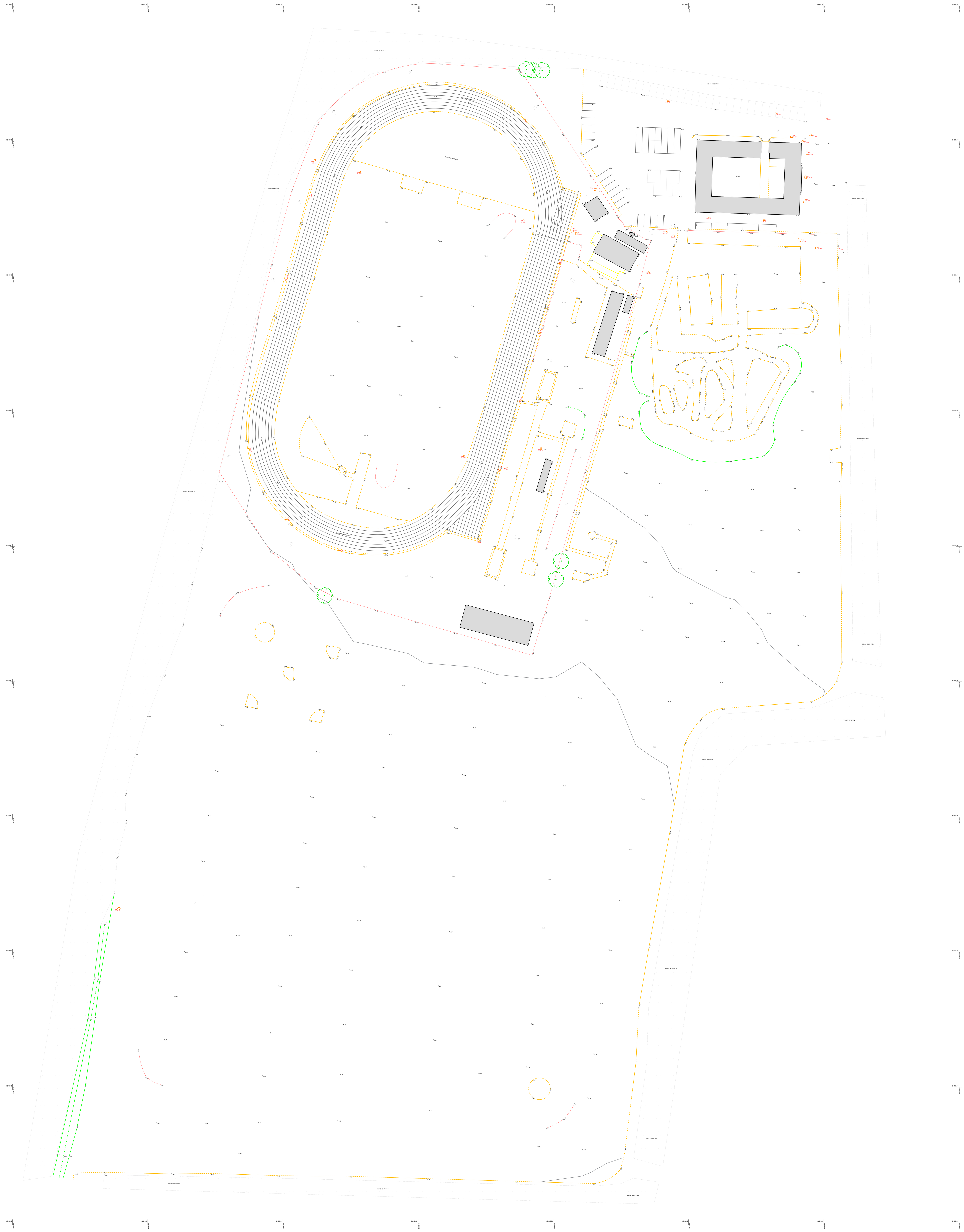
10.1 This report demonstrates that the proposed development is not at significant flood risk. In compliance with the requirements of the NPPF and the PPG, and subject to the mitigation measures proposed, the development could proceed without being subject to significant flood risk. Moreover, the development will not increase flood risk to the wider area subject to the suitable management of surface water runoff discharging from the site. A summary of the FRA is presented within **Table 10.1**.

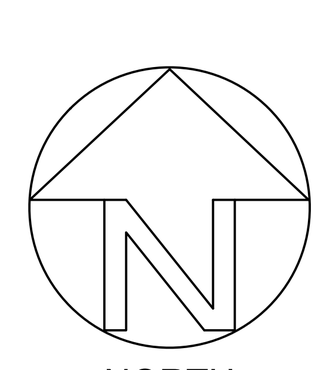
Table 10.1: Flood Risk Assessment Summary

Flood Source	Probability	Consequence	Mitigation Measures	Risk	Management of Residual Risk
The Sea	None	None	-	**None**	-
Main Rivers	Low	Low	• Areas proposed for 'Less Vulnerable' and 'More Vulnerable' development are shown to be removed from the fluvial floodplain. • It is expected that there will be no land raising as part of the proposed development and floodplain conveyance is unlikely to be affected by the proposals. • It is not anticipated that the development proposals will have a detrimental impact upon the capacity of the floodplain. Accordingly, the proposed development will not increase flood risk elsewhere and any displacement of flood water could be considered negligible.	**Low**	• The site is located in close proximity to the EA Flood Warning area known as 'Baguley and Fairywell Brooks at Timperley, Brooklands and Northern Moor' and the Flood Alert Area known as 'Middle River Mersey catchment including areas near Bramhall, Stockport, Sale, Altrincham and Urmston'. • Due to the potential fluvial flood risk to the site, it is recommended that the site management team and site users sign up to receive EA Flood Warnings so that appropriate preparation can be made in the event of a potential flooding incident.
Surface Water Ordinary Watercourses	Low to High *Isolated areas of ponding within topographical low spots*	Low	• Any necessary upgrades will be made to the drainage infrastructure to ensure it will have capacity for the 1 in 100-year storm plus climate change.	**Low**	• It is recommended that finished floor levels of the proposed pavilion are set a minimum of 150mm above surrounding ground levels and ground levels should be profiled to encourage runoff and overland flows away from the built development and towards the nearest drainage point.
Sewers & Drainage Infrastructure	Low	Low	• The flood risk management measures to address the surface water flood risk are also applicable to address the flood risk from sewers and drainage systems.	**Low**	• Any residual risk associated with the public sewerage assets should be mitigated by United Utilities, who have maintenance responsibilities associated with their assets. Appropriate inspection and repair should be applied by United Utilities where blockages and exceedance events occur in order to limit potential future failure of the system which may lead to flooding. • United Utilities have confirmed that the public sewerage assets within the site will require an easement of 10m (5m either side of the pipe) where no development will be permitted.
Groundwater	Medium	Low	• It is recommended that finished floor levels of the proposed pavilion are set a minimum of 150mm above surrounding ground levels to mitigate any residual flood risk.	**Low**	• It is recommended that groundwater levels are monitored during the construction phase and that the potential to encounter shallow groundwater levels is considered during any required excavations. • Should shallow groundwater be encountered during construction, a groundwater specialist should be consulted, and appropriate dewatering techniques should be employed as necessary.
Canals	None	None	-	**None**	-
Reservoirs and waterbodies	None	None	-	**None**	-

APPENDICES

Appendix 1: Topographical Survey




NORTH

GENERAL NOTES

This drawing is to be read and printed in full colour.

SURVEY NOTES

1. This plan should only be used for its original purpose. Brightsurv Ltd accepts no responsibility if supplied to any other party than the original client.
2. Certain areas of the site may have been inaccessible due to dense vegetation, vehicles etc on site at the time of survey, therefore not all services may be identified on the survey drawing.
3. Information Shown outside of the site boundary has been taken from Ordanance Survey records and would need verification to be relied upon.
4. The spread of vegetation shown is approximate only. Where canopy spread is critical then this shall be regularly checked. Generally only trees with a spread greater than 2.0m will be shown on the drawing.
5. Where the identity of a service is shown this is based on a visual id only. Where specific identification is required then additional survey work shall be undertaken.
6. Dimensions shown are in millimetres and levels in metres unless indicated.

Levels Levels relate to GPS observations.

LEGEND KEY

AV	Air Valve	FL	Floor Level	RE	Rodding Eye
B	Bollard	F/Lt	Flood Light	RL	Ridge Level
BH	Borehole	FW	Foul Water	RS	Road Sign
BL	Bed Level	G	Gully	RWP	Rainwater Pipe
BS	Bus Stop	GV	Gas Valve	St	Stump
BT	BT Cover	Ht.	Height	SL	Soffit Level
B/W	Brick Wall	IC	Inspection Chamber	SV	Stop Valve
CATV	Cable TV Cover	IL	Invert Level	SVP	Soil & Vent Pipe
C/B	Close Boarded	I/R	Iron Railing	SW	Surface Water
C/L	Chain Link	KO	Kerb Outlet	S/W	Stone Wall
CL	Cover Level	LB	Letter Box	THL	Threshold Level
Col.	Column	LP	Lamp Post	TL	Traffic Light
C/RW	Concrete Retaining Wall	MH	Manhole	TP	Telegraph Pole
C/W	Concrete Wall	Mkr	Marker Post	U/S	Underside
C/Pit	Catch Pit	NP	Name Plate	UTL	Unable To Lift
DPC	Damp Proof Course	O/H	Overhead	VP	Vent Pipe
Dr	Drain	P	Post	WL	Water Level
EL	Eaves Level	PI	Pipe	WM	Water Meter
ER	Earth Rod	P/R	Post & Rail	WO	Wash Out
EP	Electricity Pole	P/W	Post & Wire	WT	Water Tap
FH	Fire Hydrant	PL	Parapet Level		

Building
Vegetation
Control Station :
Bush/Shrub
Tree
Tree (Multi-Bole)
Gate

Tree Canopy
Fence
Boundary
Contours
OH Telecom
OH Electric
Foul Water
Surface Water

Brightsurv Ltd.

9 Thickwillow
Godmanchester
PE29 2LR

Contact: Richard@brightsurv.co.uk
Tel: 07843 411 341

Client Football Foundation

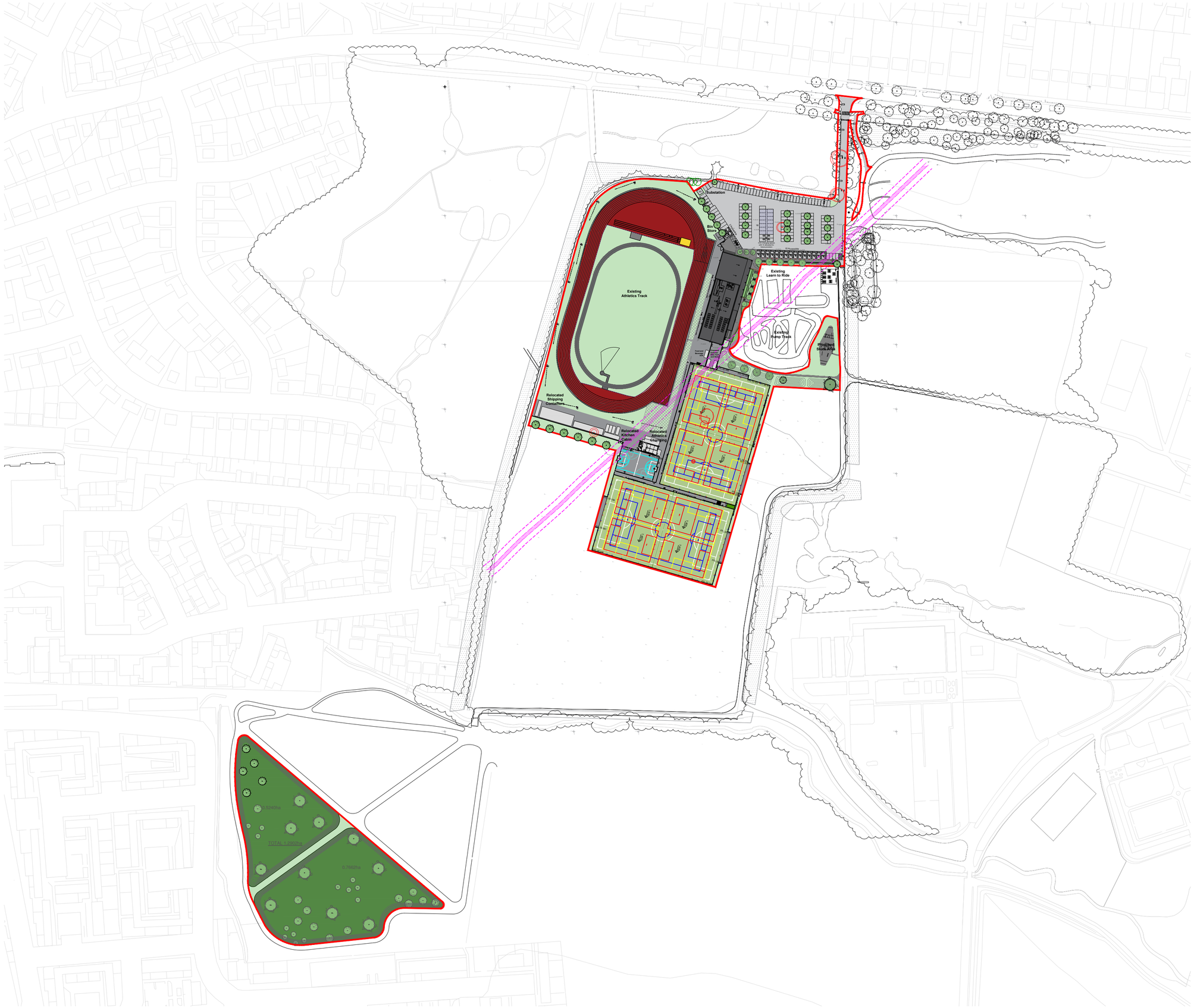
Project Wythenshawe Park Manchester

Title Topographical Survey

Scale at A0	Drawn by	Checked by	Date
1:500	RB	RB	May 2023

Status	Project ref	Drawing no.	Revision
For Information	BRI694	T01	

Appendix 2: Proposed Development Layout



RESPONSIBILITY IS NOT ACCEPTED FOR OTHERS SCALING DIRECTLY FROM THIS DRAWING. DO NOT SCALE FROM THIS DRAWING, USE WRITTEN DIMENSIONS ONLY.

0 20m 50m 100m

1:2000

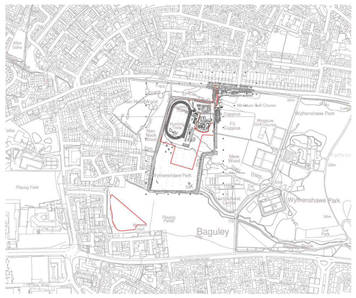
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KEY PLAN



Notes:

The site drawing is based on a combination of Ordnance Survey mapping and topographical survey. The initial topographical survey was carried out by BrightSurv Ltd in May 2023 and was updated in February 2025 to include the access road entrance. A further update to the topographical survey was completed in July 2025, extending coverage to the North-East of the site along Wythenshawe Road.

The location of the foul water main sewer is based on a traced survey undertaken by Solum Surveying Ltd. A 5 metre easement measured from the centerline of the sewer, has been indicated in accordance with the requirements of United Utilities.

Updated for planning submission						
P12	NN	23.09.25	MR	23.09.25	RB	23.09.25
REV	DRAWN	DATE	CHECKED	DATE	APPROVED	DATE

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280 Fifers Lane, Norwich, NR6 6EQ. Merrion House, Leeds, LS2 8BB
Tel: 0113 320 1630; **Email**: leeds@nps.co.uk; **web**:www.nps.co.uk

CLIENT
Manchester City Council

PROJECT
Wythenshawe Park Sports Hub

TITLE
Proposed Site Plan

SCALE	DISCIPLINE	PROJECT NUMBER
1:2000	Architect	118165

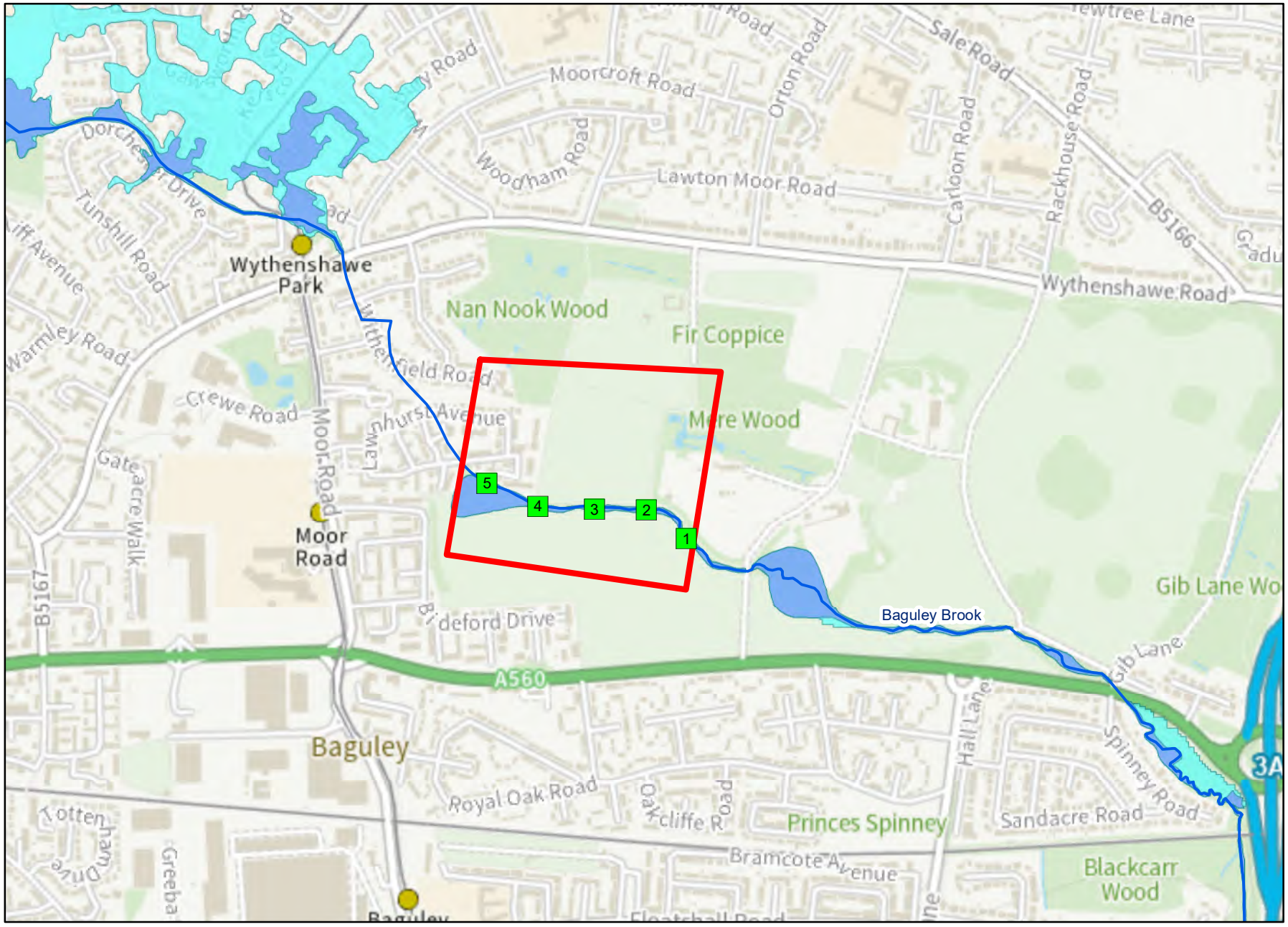
DRAWING NUMBER	REV CODE
NPS-XX-00-D-A-0803	P12

STATUS CODE	PURPOSE OF ISSUE	Drawn by	Approved by
S1	Planning	NN	RB
		Checked by MR	

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Appendix 3: Altrincham 2009 Model Results

Detailed Flood Map Centred on Lawnhurst Avenue, M26 9SA. Created 05/03/2025 [GMMC401094AB]



Environment Agency

1:10,001

N

Legend

- Site Location
- Model Measurements
- Main River
- Flood Zone 3
- Flood Zone 2

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Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

					Undefended			Defended
Map Reference	Model Node Reference	Easting	Northing	Data	1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + Climate Change*	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year)
1	BAGU01_5250	381143	389599	Modelled Water Level (m aodN)	31.94	32.00	32.05	31.94
				Modelled Flow (cumecs)	3.98	4.52	5.09	3.98
2	BAGU01_5145	381068	389654	Modelled Water Level (m aodN)	31.73	31.78	31.83	31.73
				Modelled Flow (cumecs)	4.02	4.39	5.20	4.02
3	BAGU01_5050	380972	389652	Modelled Water Level (m aodN)	31.59	31.63	31.68	31.59
				Modelled Flow (cumecs)	4.28	4.37	5.41	4.18
4	BAGU01_4950u	380872	389657	Modelled Water Level (m aodN)	31.50	31.53	31.58	31.50
				Modelled Flow (cumecs)	4.19	4.79	5.38	4.14
5	BAGU01_4851	380777	389702	Modelled Water Level (m aodN)	31.46	31.48	31.51	31.44
				Modelled Flow (cumecs)	5.04	5.94	6.70	5.22

Model data taken from Altrincham 2009

AEP - Annual Exceedence Probability

m aodN - metres above ordnance datum Newlyn

cumecs - cubic metres per second

Notes:

*Climate Change Scenario - We only hold climate change measurements based on the previous climate change guidance (20% increase in flow). The new climate change guidance is available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.

Appendix 4: United Utilities Sewer Records and Pre-developer Enquiry

United Utilities
Water for the North West

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: 13898
Our Ref: UUPS-ORD-634955
Date: 02/03/2025

Solum Surveying Limited

The Old Stables
The Old Stables, Solum Surveying Limited
Berkeley, Gloucestershire
GL13 9LE

FAO:

Dear Sirs

Location: NORTHERN MOOR MEDICAL PRACTICE 216 WYTHENSHAWE ROAD, MANCHESTER, M23 0PH

I acknowledge with thanks your request dated 25/02/2025 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

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

Water for the North West

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)".

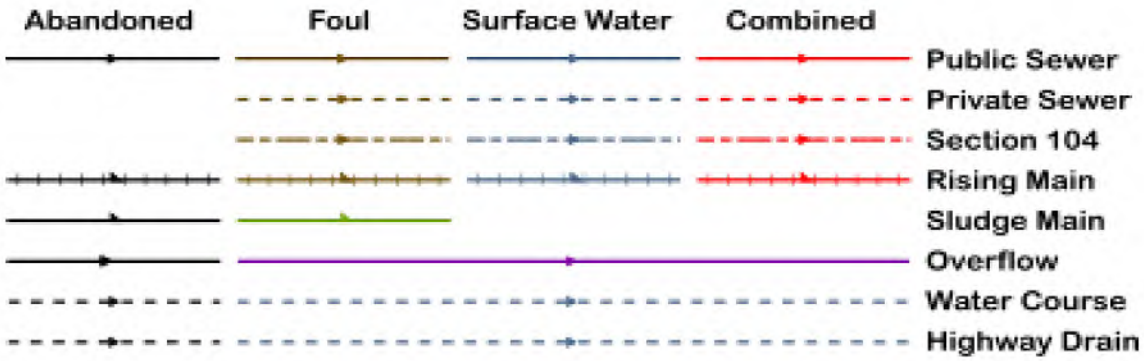
TERMS AND CONDITIONS:

- 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.

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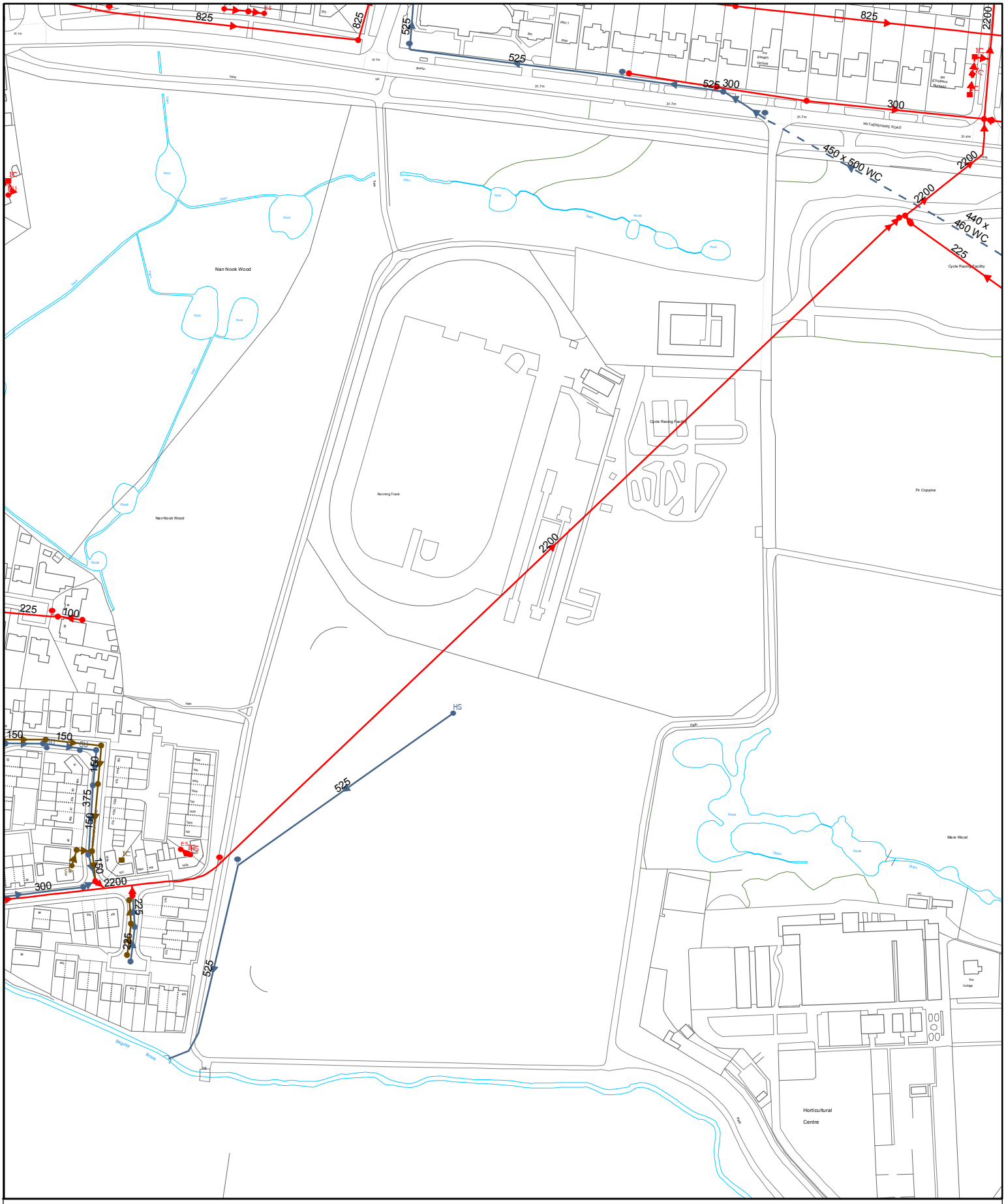
United Utilities
Water for the North West

Wastewater Symbology



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

- Manhole
- HS Head of System
- ES Extent of Survey
- RE Rodding Eye
- IN Inlet
- DP Discharge Point
- HY Vortex
- PE Penstock
- WO Washout Chamber
- VA Valve
- AV Air Valve
- NRV Non Return Valve
- SO Soakaway
- GU Gully
- CA Cascade
- FM Flow Meter
- HA Hatch Box
- OI Oil Interceptor
- SM Summit
- DS Drop Shaft
- OP Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- IC Inspection Chamber
- Bifurcation Chamber
- LH Lamp Hole
- T Junction / Saddle
- CA Catchpit
- VC Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- T Network Storage Tank
- V Sewer Overflow
- WwTW Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- CK Control Kiosk
- DNM Network Monitoring Point
- Change of Characteristic



Date: 02/03/2025

Printed By:
Property Searches

Extract from Map of Public Sewers

NORTHERN MOOR MEDICAL PRACTICE 216
WYTHENSHAWE ROAD, MANCHESTER, M23 0PH

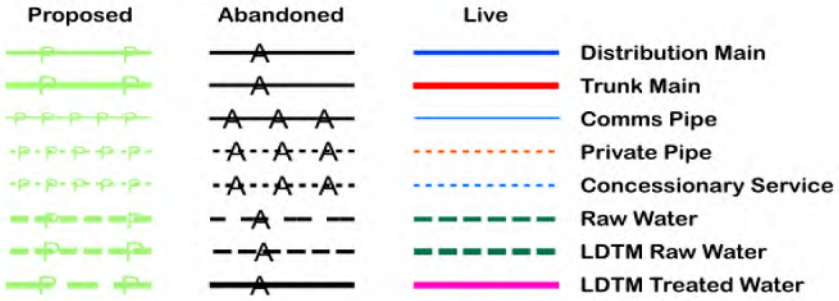
United Utilities
Water for the North West

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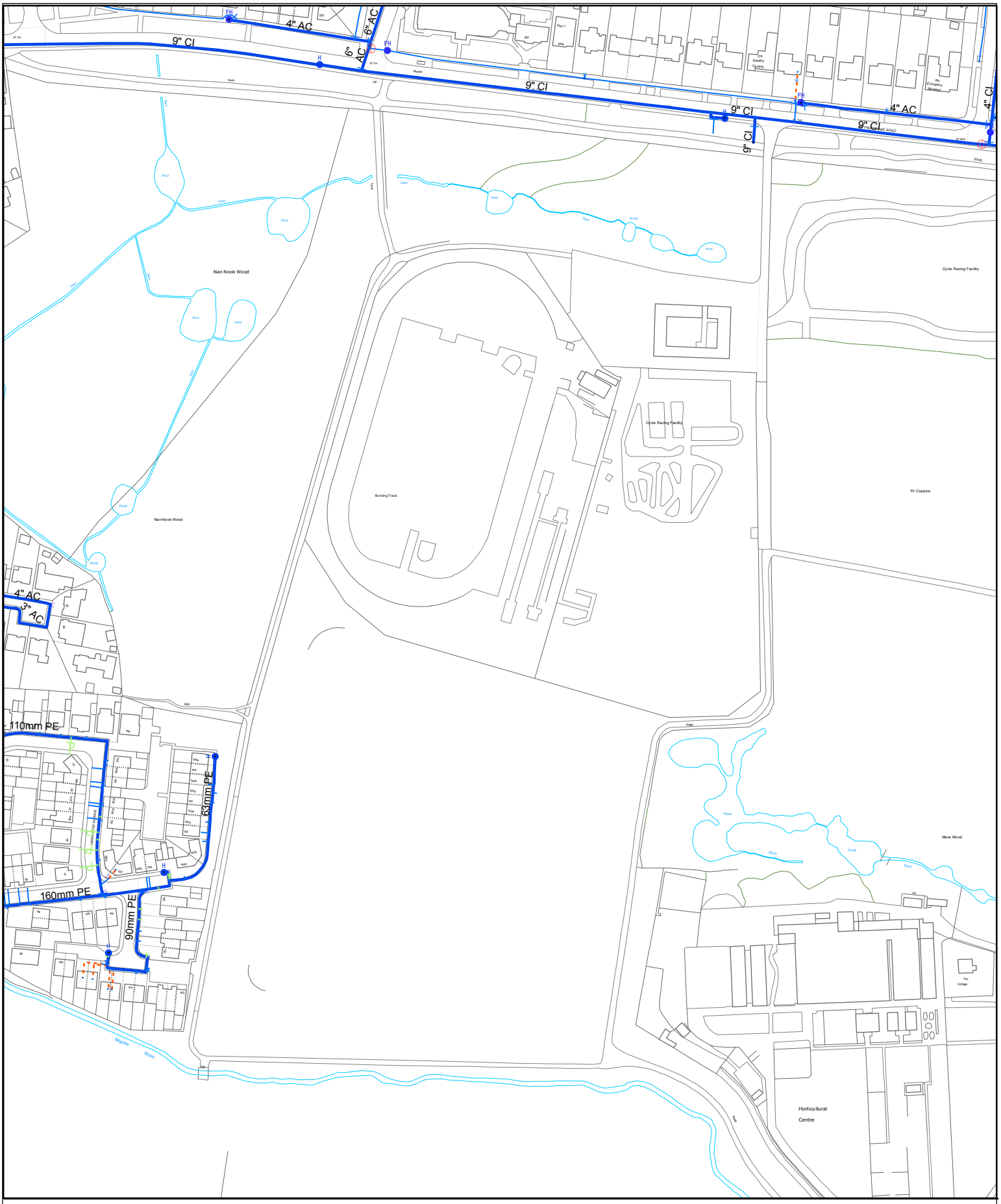
United Utilities
Water for the North West

Clean Water Symbology





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



Date: 02/03/2025

Printed By:
Property Searches

Extract from Map Of Water Mains

NORTHERN MOOR MEDICAL PRACTICE 216
WYTHENSHAWE ROAD, MANCHESTER, M23 0PH

United Utilities
Water for the North West

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WASTEWATER PRE-DEVELOPMENT ENQUIRY

United Utilities
Water for the North West

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

Response Date: 11/04/2025

Dear Louis

Pre-Development Enquiry for Wythenshawe Park

UU Reference Number: 07269704

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.

Modelled Flood Risk Please see the image on **page 3** for details

I can confirm that we have modelled flood risk within the vicinity of the proposed development. There is a modelled potential flood of 7120m3 in the 1 in 100 year storm at the south west of the site, this is from SJ80898701.

Please note that our modelling data is indicative, and only representative of the 1:100year storm event.

Please see **comment 2** of the attached guidance sheet

Asset Protection

According to our public sewer records, there are public sewers located within your site boundary. This requires an easement of **10m (5m either side of the pipe).** If you cannot achieve the required clearance, you may wish to consider diverting and or abandoning the public sewer.

Please see **comment 3** of the attached guidance sheet and **Working Near Our Pipelines Guidance document**

WASTEWATER PRE-DEVELOPMENT ENQUIRY

United Utilities
Water for the North West

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 2200mm Combined sewer located within your proposed development at an unrestricted rate.

Please see the images on **page 3** for clarification

Surface Water

Follow the National Planning Policy Guidance drainage hierarchy andPpovide 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

Infiltration

Please see comment **4** within the guidance sheet

Waterbody

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

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.

Public Sewer

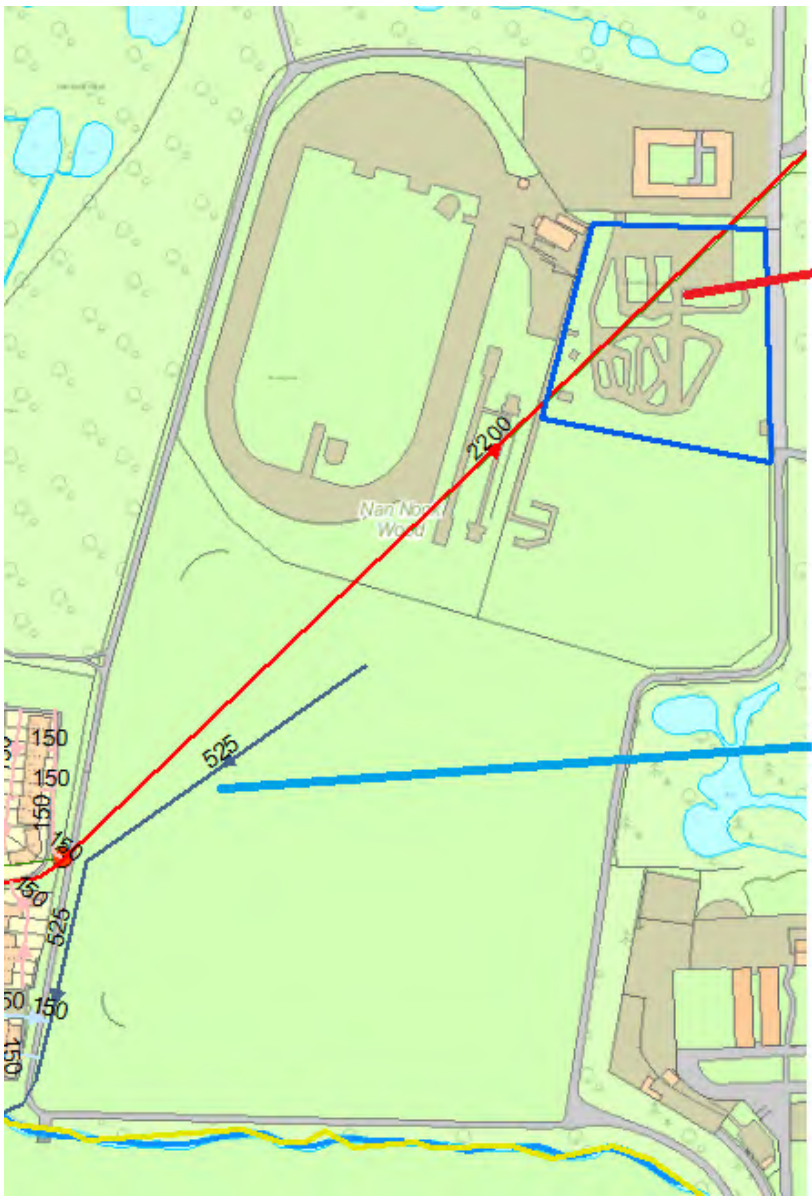
United Utilities will consider a connection to the 525mm diameter public surface water sewer within the proposed site at a pass forward flow to be agreed by the Lead Local Flood Authority. United Utilities requests that any agreed rate does not exceed **15l**/s.

Manhole reference SJ80898702, **Grid reference** 380888, 389767

Please see images on **page 3** for clarification

United Utilities
Water for the North West

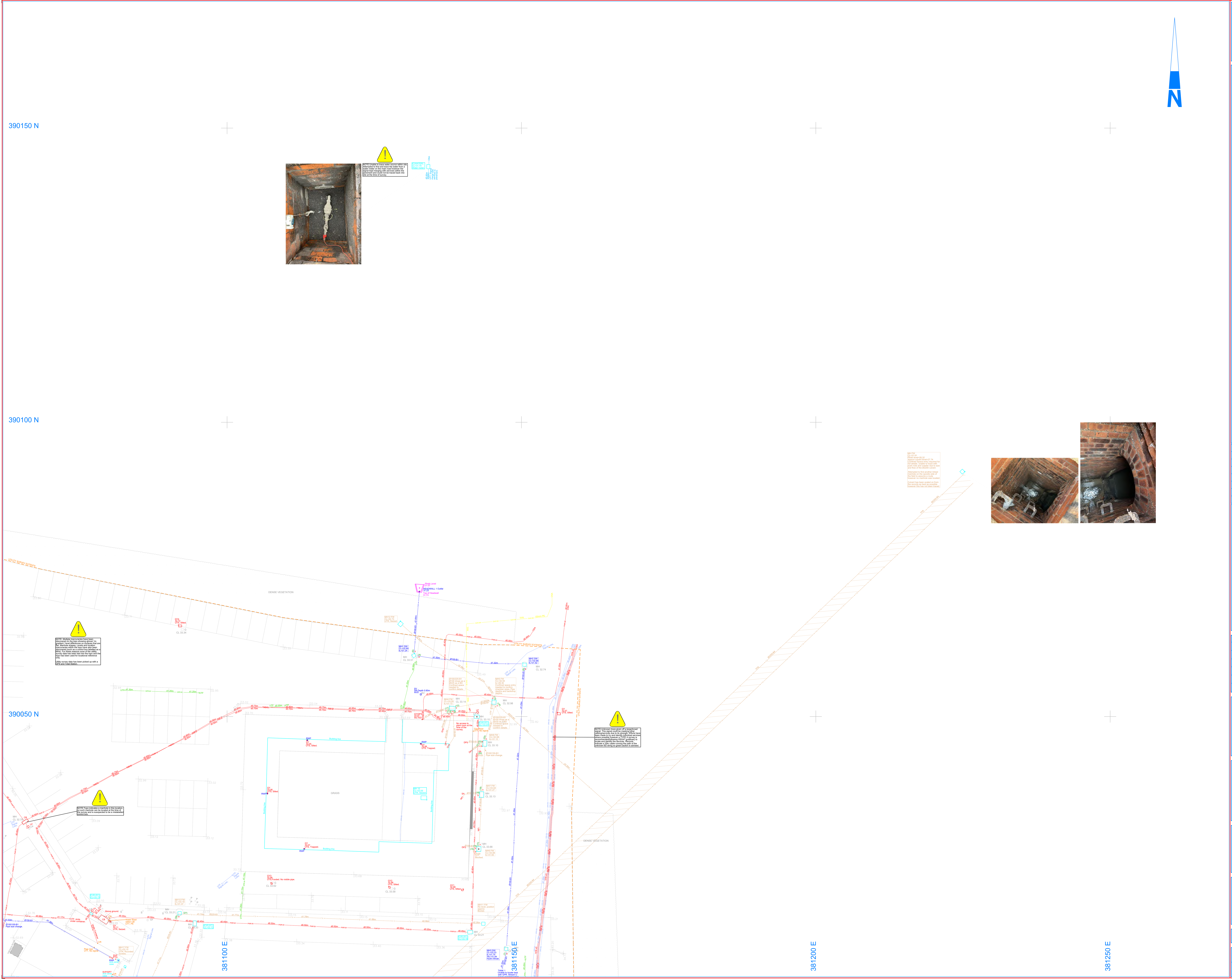
Site Images



Foul connection into 2200mm combined sewer

SW discharge to SW sewer if infiltration is ruled out.

Appendix 5: Utility and CCTV Survey



Datum Notes :

- GRID AND LEVELS BASED ON OSGB36 OS NATIONAL DATUM, DERIVED FROM THE NATIONAL GPS NETWORK.
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Private service pipes/connections and cables in highways may not be shown, but the presence should be anticipated.

Additional below ground structures or obstructions not shown on this drawing may be present. Review historical records/plans and any as built drawings. Excavations in the vicinity should be treated with extreme caution following the HSE documents on avoiding underground services.

Note the that ground conditions, proximity of other utilities, materials and method of construction have an influence on the ability and quality of the data collected onsite. Along with areas being accessible at time of survey. Inaccessible areas may contain access/manhole covers that may affect the survey area.

TSA Standards - "Even an appropriate and professionally executed survey may not be able to achieve a 100% detection rate".

UTILITY LINE TYPE KEY

BT B1 (PAS128)
BT B2 (PAS128)
BT B3 (PAS128)
BT B4 (PAS128)
CATV B1 (PAS128)
CATV B2 (PAS128)
CATV B3 (PAS128)
CATV B4 (PAS128)
CCTV B1 (PAS128)
CCTV B2 (PAS128)
CCTV B3 (PAS128)
CCTV B4 (PAS128)
COMMS B1 (PAS128)
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COMMS B4 (PAS128)
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OFFSET FUEL B2 (PAS128)
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HEATING PIPES B1 (PAS128)
HEATING PIPES B2 (PAS128)
HEATING PIPES B3 (PAS128)
HEATING PIPES B4 (PAS128)
HV B1 (PAS128)
HV B2 (PAS128)
HV B3 (PAS128)
HV B4 (PAS128)
POWER B1 (PAS128)
POWER B2 (PAS128)
POWER B3 (PAS128)
POWER B4 (PAS128)
SERVICE DUCT B1 (PAS128)
SERVICE DUCT B2 (PAS128)
SERVICE DUCT B3 (PAS128)
SERVICE DUCT B4 (PAS128)
STORM SEWER
TRAFFIC B1 (PAS128)
TRAFFIC B2 (PAS128)
TRAFFIC B3 (PAS128)
TRAFFIC B4 (PAS128)
UNKNOWN B1 (PAS128)
UNKNOWN B2 (PAS128)
UNKNOWN B3 (PAS128)
UNKNOWN B4 (PAS128)
VENT PIPE B1 (PAS128)
VENT PIPE B2 (PAS128)
VENT PIPE B3 (PAS128)
VENT PIPE B4 (PAS128)
WATER B1 (PAS128)
WATER B2 (PAS128)
WATER B3 (PAS128)
WATER B4 (PAS128)
GPR B1 (PAS128)
GPR B2 (PAS128)
GPR B3 (PAS128)
GPR B4 (PAS128)

DRAINAGE CCTV REFERENCE

(x) Indicates Pipe Reference
(1) CCTV Report Item Number

ABBREVIATIONS

Acoustic Connection	AC	Inspection Cover	IC	Stop Valve	SV
Assumed Route	AR	Lamp Post	LP	Soil Vent Pipe	SVP
Backdrop	BD	Manhole	MH	Taken From Records	TFR
Base Level	BL	No Further Information	NFI	Top Of Tank	TOT
Cover Level	CL	Off Survey Area	OSA	Top Of Pipe	TOP
Catchpit	CP	Pipe To Ground	PTG	Traffic Light	TL
Drainage Channel	DCH	Pipe To Surface	PTS	Telegraph Pole	TP
Electricity Pole	EP	Pipe Riser	PR	Unable to Locate	UTL
Earth Rod	ER	Rodding Eye	RE	Unable to Raise	UTR
Fire Hydrant	FH	Rain Water Pipe	RWP	Unable to Survey	UTS
Gas Valve	GV	Silt Level	SL	Unable to Trace	UTT
Gully	GY	Soil Pipe	SP	Unable to Trace Further	UTF
Internal Depth	ID	Sofit Height	SOF	Vent Pipe	VP
Invert Level	IL	Survey Abandoned	SA	Water Level	WL
Gas Riser	GR	Water Riser	WR	Cable Riser	CR
Plinth Level	PL	No Visible Service	NVS	Up Light (Spot Light)	UL

PAS UTILITY CLASSIFICATION

Quality	Description
BA	Service verified in an open excavation or inside an inspection chamber
B1	Horizontal and vertical location within +-150mm accuracy
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SHEET LAYOUT

(NOT TO SCALE)

Drawing Revision

No	Date	Description
R0	10/03/25	SITE SURVEY COMPLETE - RW/RB
R1		
R2		
R3		
R4		

Site Utility Notes :

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Solum Surveying Ltd

www.solumsurveying.com
tel: 01454 413592
email: info@solumsurveying.com
The Old Stables
Pines Courtyard
Stone
Berkeley
GL13 9LE

chartered ICES
Regulated by RICS

BWB

Wythenshawe Park and Gardens, athletics track, Wythenshawe, Manchester M23 0AB

PAS128 Utility Survey & CCTV Survey

Scale: 1:200	Sheet Size: A0	1 of 4		ALSO SEE DRAWING: CCTV Report
		Drawing Date: 17/03/25		
Project Number: 13898	Rev: R0	Surveyed By: RW/JT/RB	Drawn By: RW	CHECKED BY: MP

390100 N

390050 N

390000 N

381050 E

381100 E

381150 E

381200 E

N

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(NOT TO SCALE)

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R2		
R3		
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Solum Surveying Ltd

www.solumsurveying.com
tel: 01454 413592
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The Old Stables
Pines Courtyard
Stone
Berkeley
GL13 9LE

chartered ICES

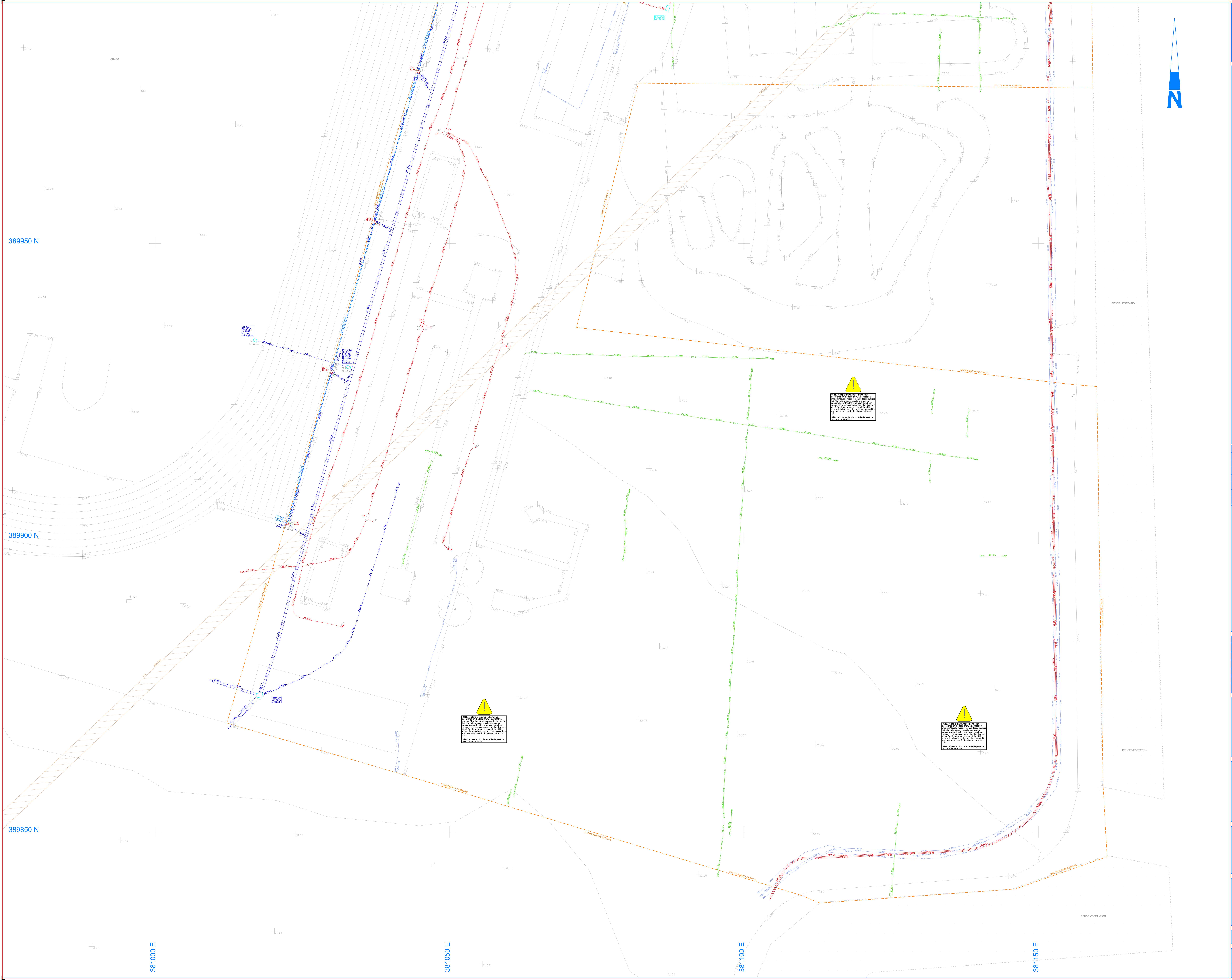
Regulated by RICS

BWB

Wythenshawe Park and Gardens, athletics track, Wythenshawe, Manchester M23 0AB

PAS128 Utility Survey & CCTV Survey

Scale: 1:200	Sheet Size: A0	2 of 4	ALSO SEE DRAWING: CCTV Report
Project Number: 13898	Rev: R0	Drawing Date: 17/03/25	CHECKED BY: MP
		Surveyed By: RW/JT/RB	
		Drawn By: RW	



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UTILITY LINE TYPE KEY

BT B1 (PAS128)
BT B2 (PAS128)
BT B3 (PAS128)
BT B4 (PAS128)
CATV B1 (PAS128)
CATV B2 (PAS128)
CATV B3 (PAS128)
CATV B4 (PAS128)
CCTV B1 (PAS128)
CCTV B2 (PAS128)
CCTV B3 (PAS128)
CCTV B4 (PAS128)
COMMS B1 (PAS128)
COMMS B2 (PAS128)
COMMS B3 (PAS128)
COMMS B4 (PAS128)
FUEL/OIL B1 (PAS128)
FUEL/OIL B2 (PAS128)
FUEL/OIL B3 (PAS128)
FUEL/OIL B4 (PAS128)
FOUL SEWER
GAUGE LINES B1 (PAS128)
GAUGE LINES B2 (PAS128)
GAUGE LINES B3 (PAS128)
GAUGE LINES B4 (PAS128)
GAS B1 (PAS128)
GAS B2 (PAS128)
GAS B3 (PAS128)
GAS B4 (PAS128)
GENERIC PIPE B1 (PAS128)
GENERIC PIPE B2 (PAS128)
GENERIC PIPE B3 (PAS128)
GENERIC PIPE B4 (PAS128)
OFFSET FUEL B2 (PAS128)
OFFSET FUEL B4 (PAS128)
HEATING PIPES B1 (PAS128)
HEATING PIPES B2 (PAS128)
HEATING PIPES B3 (PAS128)
HEATING PIPES B4 (PAS128)
HV B1 (PAS128)
HV B2 (PAS128)
HV B3 (PAS128)
HV B4 (PAS128)
POWER B1 (PAS128)
POWER B2 (PAS128)
POWER B3 (PAS128)
POWER B4 (PAS128)
SERVICE DUCT B1 (PAS128)
SERVICE DUCT B2 (PAS128)
SERVICE DUCT B3 (PAS128)
SERVICE DUCT B4 (PAS128)
STORM SEWER
TRAFFIC B1 (PAS128)
TRAFFIC B2 (PAS128)
TRAFFIC B3 (PAS128)
TRAFFIC B4 (PAS128)
UNKNOWN B1 (PAS128)
UNKNOWN B2 (PAS128)
UNKNOWN B3 (PAS128)
UNKNOWN B4 (PAS128)
VENT PIPE B1 (PAS128)
VENT PIPE B2 (PAS128)
VENT PIPE B3 (PAS128)
VENT PIPE B4 (PAS128)
WATER B1 (PAS128)
WATER B2 (PAS128)
WATER B3 (PAS128)
WATER B4 (PAS128)
GPR B1 (PAS128)
GPR B2 (PAS128)
GPR B3 (PAS128)
GPR B4 (PAS128)

DRAINAGE CCTV REFERENCE

(x) Indicates Pipe Reference
(1) CCTV Report Item Number

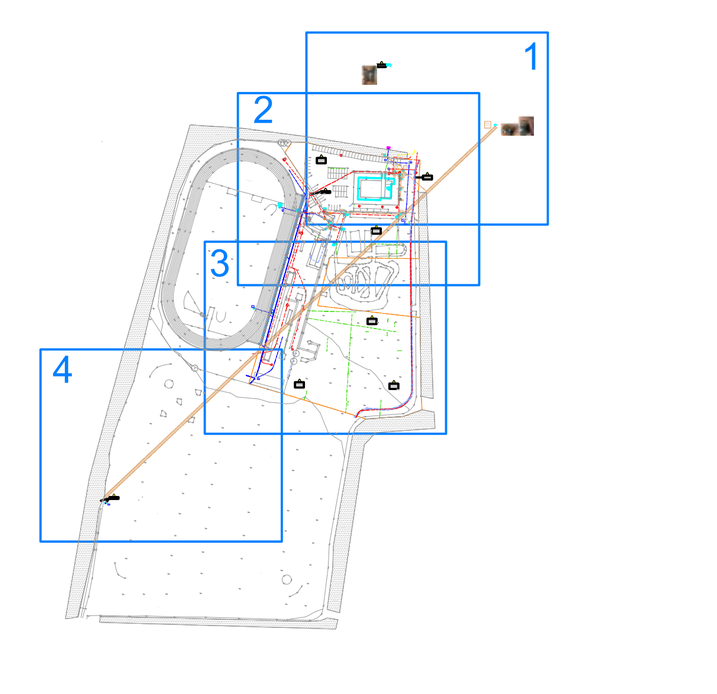
ABBREVIATIONS

Acoustic Connection	AC	Inspection Cover	IC	Stop Valve	SV
Assumed Route	AR	Lamp Post	LP	Soil Vent Pipe	SVP
Backdrop	BD	Manhole	MH	Taken From Records	TFR
Base Level	BL	No Further Information	NFI	Top Of Tank	TOT
Cover Level	CL	Off Survey Area	OSA	Top Of Pipe	TOP
Catchpit	CP	Pipe To Ground	PTG	Traffic Light	TL
Drainage Channel	DCH	Pipe To Surface	PTS	Telegraph Pole	TP
Electricity Pole	EP	Pipe Riser	PR	Unable to Locate	UTL
Earth Rod	ER	Rodding Eye	RE	Unable to Raise	UTR
Fire Hydrant	FH	Rain Water Pipe	RWP	Unable to Survey	UTS
Gas Valve	GV	Silt Level	SL	Unable to Trace	UTT
Gully	GY	Soil Pipe	SP	Unable to Trace Further	UTF
Internal Depth	ID	Sofit Height	SOF	Vent Pipe	VP
Invert Level	IL	Survey Abandoned	SA	Water Level	WL
Gas Riser	GR	Water Riser	WR	Cable Riser	CR
Plinth Level	PL	No Visible Service	NVS	Up Light (Spot Light)	UL

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SHEET LAYOUT



(NOT TO SCALE)

Drawing Revision

No	Date	Description
R0	10/03/25	SITE SURVEY COMPLETE - RW/RB
R1		
R2		
R3		
R4		

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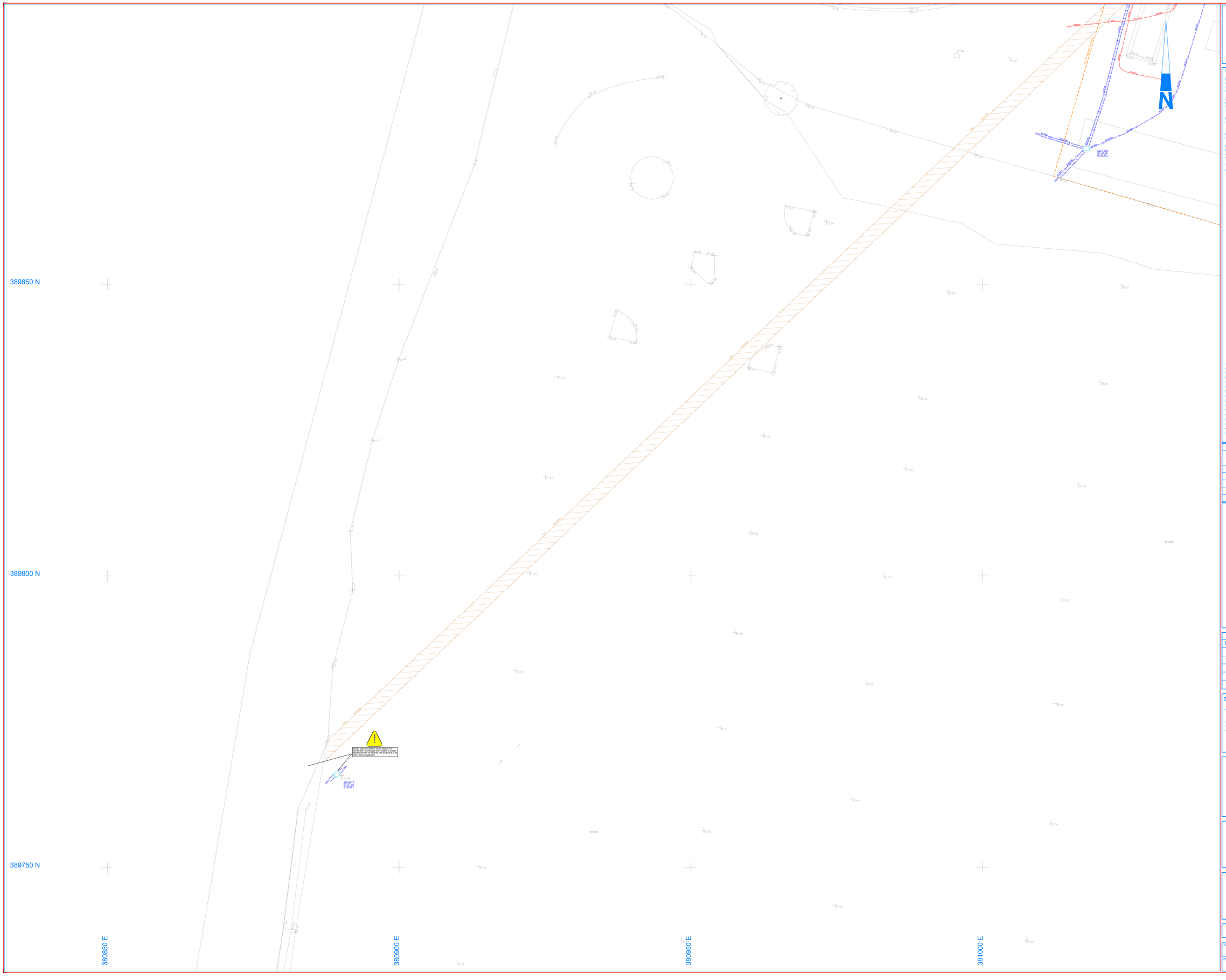
chartered ICES
Regulated by RICS

BWB

Wythenshawe Park and Gardens, athletics track, Wythenshawe, Manchester M23 0AB

PAS128 Utility Survey & CCTV Survey

Scale: 1:200	Sheet Size: A0	3 of 4	ALSO SEE DRAWING: CCTV Report
		Drawing Date: 17/03/25	
Project Number: 13898	Rev: R0	Surveyed By: RW/JT/RB	CHECKED BY: MP
		Drawn By: RW	



Datum Notes :

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COMMS B1 (PAS128)	SERVICE DUCT B1 (PAS128)
COMMS B2 (PAS128)	SERVICE DUCT B2 (PAS120)
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GAS B4 (PAS128)	VENT PIPE B4 (PAS128)
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GENERIC PIPE B2 (PAS128)	WATER B2 (PAS128)
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BWB

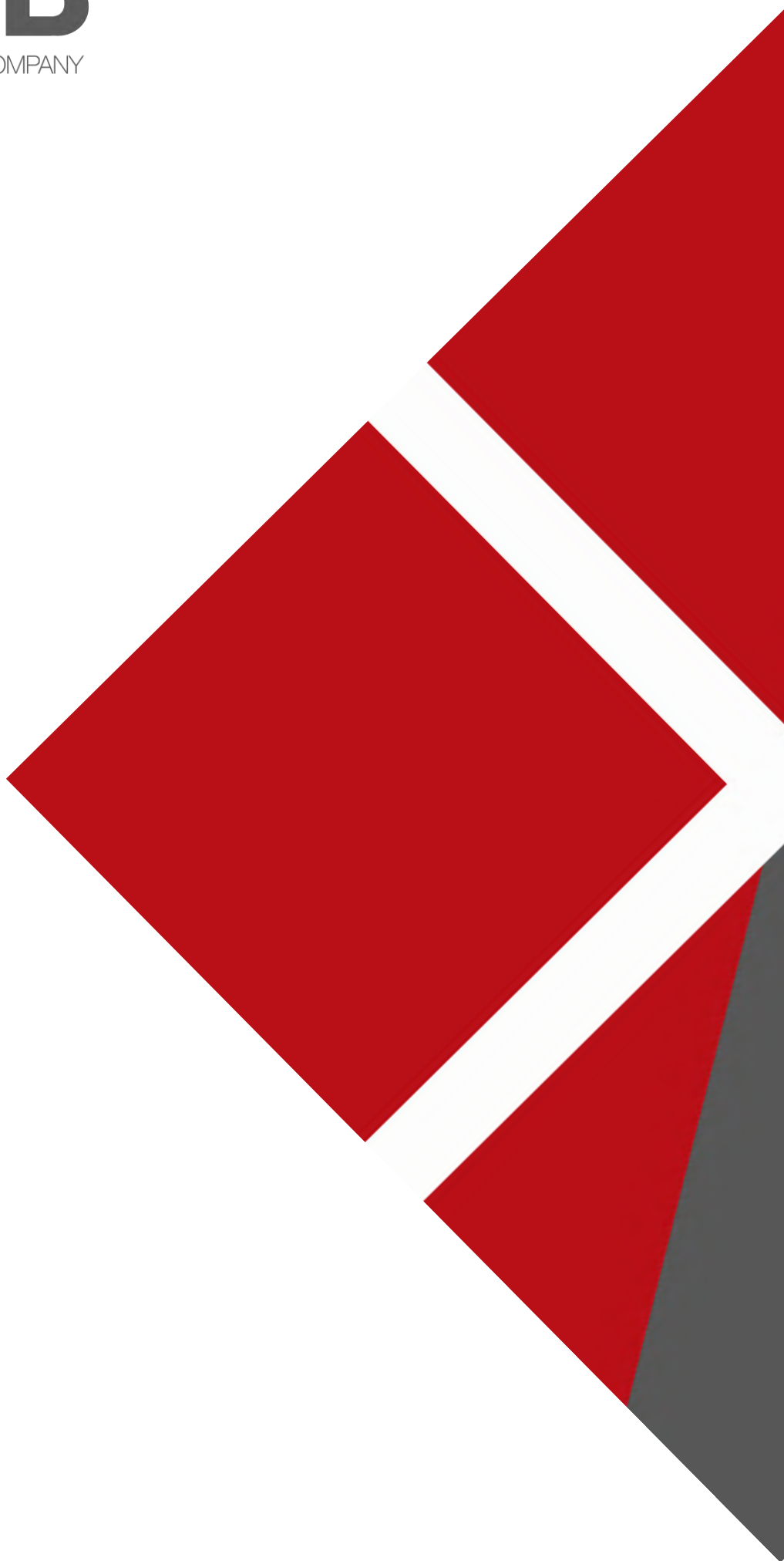
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BWB

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