Benchill Road, Wythenshawe
Flood Risk Assessment and Outline Drainage Strategy

Job Number	Report Date	Client
FRA251084	**30th July 2025**	**Black Cat Building Consultancy Ltd**

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Ground Investigation | Land Remediation | Project Management

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DOCUMENT QUALITY ASSURANCE

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Job Number	FRA 25 1084
Client	Black Cat Building Consultancy Ltd

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Written By	Alaika Yusaf / Dan Percival		
Approved By	Colin Crompton		

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EXECUTIVE SUMMARY

Scope and Background

This Flood Risk Assessment (FRA) and Drainage Strategy has been undertaken by LKC to support a planning application for a single storey extension on an existing school building.

LKC has prepared this FRA in line with the NPPF and Technical Guidance where appropriate.

In considering the proposals the following key principles have therefore been applied:

- Identification of flood risks.
- Protection of users of the new development.
- No increased flood risk to third parties.

Consultations

The Environment Agency (EA) has been consulted to inform the preparation of this report.

Manchester Council - Lead Local Flood Authority (LLFA) and United Utilities (UU) were also consulted concerning flood risk.

Flood Risk

The EA online Flood Map for Planning indicates the site is located within Flood Zone 1 and is therefore at a low risk of fluvial flooding. The EA Risk of Flooding from Surface Water Map indicates areas of low to medium chance of surface water flooding, The proposed extension will tie into levels of the existing building and will therefore be raised above potential surface water flooding, which would generally drain away from the building in a south westerly direction, therefore the overall risk of surface water flooding is considered to be low. The risk of flooding from all other sources is considered to be negligible to low.

Drainage Strategy

The proposed drainage strategy recommends utilising the existing surface water drainage system is considered the most appropriate and sustainable solution for the development. Opportunities for small-scale SuDS features within the amenity space will be explored to provide localised attenuation and water quality improvements, in line with best practice and planning policy.

Access

Safe access and egress is available via Benchill Road.

TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **ii**
TABLE OF CONTENTS ..... **iii**
1. Introduction **4**
1.1. Background 4
1.2. Site Details 4
2. Site Setting **5**
2.1. Vulnerability 5
2.2. The Sequential and Exception Tests 5
2.3. Environmental Setting 6
2.4. Geo-Environmental Site Investigation 6
2.5. Site and Access Levels 7
3. Consultation **8**
4. Assessment of Flood Risk. **9**
4.1. Sources of Flooding 9
4.2. Summary of Flood Risk 10
5. Mitigation Measures **11**
5.1. Proposed Site Levels and Development Level 11
5.2. Safe Access 11
5.3. Residual Risk 11
6. Surface Water Management **12**
6.1. Overview 12
6.2. Sustainable Drainage Hierarchy 12
6.3. Consideration of SuDS 13
6.4. Proposed Drainage in the Context of the Development Proposals 13
7. Conclusions **14**

Figures

Figure 1 – Site Location Plan
Figure 2 – EA Risk of Flooding from Surface Water Map

Appendices

Appendix A – Proposed Development Plan
Appendix B – Topographic Survey
Appendix C – EA Flood Map for Planning
Appendix D – United Utilities Public Sewer Records
Appendix E – Proposed Landscaping Plan
Appendix F – References

1. Introduction

1.1. Background

LKC were commissioned by Black Cat Building Consultancy to carry out a Flood Risk Assessment (FRA) and Outline Drainage Strategy for Benchill Road, Wythenshawe. The report was undertaken to support a planning application for the erection of a single-story extension on an existing school building.

The report will address the vulnerability to flooding from all possible sources and will also consider the impact of the development on surface water runoff accounting for climate change and the potential to increase flood risk elsewhere.

The site is located within the administrative boundary of Manchester City Council (MCC). On 11th July 2012, the Council adopted the Core Strategy plan which outlines the Council's vision and planning policies to deliver development across Manchester. Policy pertaining to flood risk and surface water drainage are contained within Policy EN14, Policy EN17. In March 2024, the Council adopted the Places for Everyone Joint Development Plan which sets out the framework for sustainable growth across Greater Manchester. Policy JP-S4 'Flood Risk and Water Environment' sets out the Plan's approach to flood risk and water management.

LKC has prepared this FRA in line with the NPPF and the PPG where appropriate. The level of detail entered into any flood risk assessment is dependent upon the scale and potential impact of the proposed development, and the vulnerability classification of the proposed land-use.

1.2. Site Details

A summary of the general site details is presented in Table 1-1. Figure 1 indicates the site location.

Location	Benchill Primary School, Benchill Road, Wythenshawe, Manchester M22 8EJ Centred at approximate National Grid Reference 382249E 388616N.
Topography	45.6-46.2m above ordnance datum (m AOD) Level change present on site, with a drop of 0.60m down to the playground in the south-west.
Current Site Use	The site is located within the grounds of Benchill Primary School and comprises a two storey standalone school building surrounded by hardstood tarmacadam with a playground to the south at approximately 0.6m below the level of the building.
Proposed Development	The proposed development is for a single storey extension on to the existing school building. The extension is to the southern elevation of the existing building and will comprise an additional classroom with ancillary rooms. A canopy is to be provided along southern elevation to create an external play area. Access to the site will be retained as per the existing situation via the wider school site. Proposed development plans are included as Appendix A.

Table 1-1: Summary of site details.

2. Site Setting

2.1. Vulnerability

As an initial phase in identifying whether a site is potentially at risk of flooding, LKC has consulted the EA's Flood Map for Planning. This mapping is based on a combination of local flood model outputs, recorded flood outlines and national flood model information to identify areas that are at risk of fluvial and/or tidal flooding for strategic planning purposes.

The Flood Map for Planning divides the floodplain into three categories of flood risk, and do not take flood defences into account. The PPG (Table 1: Flood Zones, Paragraph 78) defines the Flood Zones as:

- Flood Zone 1 – Very Low Risk, with annual probability of flooding from rivers and the sea of less than 0.1% (1 in 1000).
- Flood Zone 2 – Low Risk, with annual probability of flooding of 0.1 to 1.0% from rivers and 0.1 to 0.5% from the sea.
- Flood Zone 3 – Medium to High risk of flooding with an annual probability of flooding of 1.0% or greater from rivers, and 0.5% or greater from the sea.

The Flood Zone Mapping indicates the development area as being within Flood Zone 1. The proposed development is for an educational end use which is classified within the 'More Vulnerable' category in the NPPF (Annex 3).

It should be noted that the flood extents based on the Flood Map for Planning do not account for the impacts of climate change. Review of the Environment Agency guidance (Flood Risk Assessment: climate change allowances, last updated 27th May 2022)[i]. The site is located within the Upper Mersey Management Catchment and as such based on its location within Flood Zone 1 and a 'More Vulnerable' development, the Central Allowance for the 2080's epoch should be considered, thereby requiring an 41% uplift on the 1% AEP / 1 in 100-year event.

2.2. The Sequential and Exception Tests

The Sequential Test aims to steer new development to areas at the lowest risk of flooding. The site is located within Flood Zone 1 and is at a low risk of flooding from all sources and is therefore considered to meet the requirements of the Sequential Test.

Tabe 2 within the Flood Risk and Coastal Change Planning Practice Guidance identifies that 'More Vulnerable' development is acceptable within Flood Zone 1 without the requirement to apply the Exception Test.

The Local Planning Authority (LPA) will make the final decision with regard to any planning application.

2.3. Environmental Setting

LKC have undertaken a Combined Phase 1 Preliminary Risk Assessment and Phase 2 Geo Environmental Investigation, Risk Assessment and Remediation Strategy for the site[ii] (LKC251240-A1-PRAGI-Benchill Road, Wythenshawe R0, July 2025) and pertinent environmental information for the site is summarised in Table 2-1 below.

Summary of the Environmental Setting			
Geology	Artificial		No BGS recorded artificial.
	Superficial		Glaciofluvial deposits (sand and gravel).
	Bedrock		Tarporley siltstone formation - siltstone, mudstone and sandstone
	BGS Boreholes		No BGS boreholes within in the vicinity of the site.
	Defra Soilscape Mapping		Type 18 – slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils
Hydrogeology	Aquifer Designation	Superficial	Secondary A Aquifer.
		Bedrock	Secondary B Aquifer.
	Source Protection Zone (SPZ)		Site not within an SPZ.
Hydrology	All adjacent and internal surface water		A review of Ordnance Survey (OS) mapping indicates the nearest watercourse is Baguley Brook which is located approximately 160m west of the site its nearest point. Baguley Brook is an EA defined Main River and flows in a northerly direction within the vicinity of the site.
Site History			The development area is within the site boundary of Benchill School. The developable site area is a concrete playground.

Table 2-1: Summary of the Environmental Setting.

2.4. Geo-Environmental Site Investigation

An intrusive ground investigation was undertaken by LKC in May 2025 and the findings are summarised in the Combined Phase 1 Preliminary Risk Assessment and Phase 2 Geo Environmental Report. The investigation comprised the excavation of three window sample boreholes (referenced WS101 to WS103) to depths of between 2.36 metres below ground level (m bgl) and 2.92m bgl and the excavation of three trial pits (referenced FP101 to FP103) to depths of between 0.90m bgl to 1.2m bgl. Two falling head tests were undertaken in WS101 and WS102.

The ground conditions encountered during the site investigation are summarised below with relevant logs included within the Phase 1 & Phase 2 Report.

2.4.1 Made Ground

Made ground was recorded in all boreholes to depths of 1.20 – 1.80m bgl. The made ground comprised gravel (WS102 and WS103) and silt (WS101P) with anthropogenic material including ash, brick and glass.

2.4.2 Natural Strata

Superficial strata comprised firm becoming very stiff clay to 2.40-2.92m bgl. A strata of silty clayey sand was noted in WS102 at 0.70-0.90m bgl.

2.4.3 Groundwater

No groundwater strikes were recorded during the ground investigation.

2.4.4 Permeability Testing

Falling head testing was undertaken within WS101 and WS102 to calculate the permeability of the underlying ground. Due to slow draining in both WS101 and WS102, only one test was carried out in each borehole and permeability could not be calculated.

2.5. Site and Access Levels

A Topographic Survey of the site has previously been undertaken and is included as Appendix B. The Topographic Survey is described as follows:

- The finished floor level of the existing building is recorded as 46.15m AOD;
- Ground levels around the perimeter of the building are shown to be relatively flat, ranging between 46.12m AOD – 46.16m AOD; and
- Ground levels in the play ground to the south of the building are shown to range between 45.60m AOD located close to the building and 45.4m AOD to the south west. Ground levels across the playground are shown to fall in a generally south westerly direction;
- Ground levels across the external land to the east of the site are shown to range between approximately 46.40m AOD to 45.90m AOD.

3. Consultation

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

Source	Details	
Environment Agency (EA) Flood Map for Planning, Product 4 data, Surface Water Flood Maps	The EA Flood Map for Planning (Appendix C) indicates the site is located within Flood Zone 1: Very Low risk, with annual probability of flooding from rivers and the sea of less than 0.1% (1 in 1000).	
	Records of Flooding	EA historic flooding records indicate there have been no historic flooding incidents recorded within the site.
	Records of Flood Warning Service	The site is not within a flood warning area.
	Surface Water Flooding	The EA Long Term Surface Water Flood Map indicates the site is at a predominantly very low chance (less than 0.1% chance of a flood each year) of surface water flooding during the baseline event and future climate change scenarios. The playground immediately south of the site is shown to have a low (between a 1% and 0.1% chance of flooding each year) to medium (between a 1% and 3.3% chance of a flood each year) chance of surface water flooding during the baseline and climate change scenarios. An area of low to medium chance of surface water flooding is shown to be located adjacent to the north eastern corner of the existing building.
	Flooding from reservoirs	The site is located within an area that remains free from flooding in the event of reservoir failure.
Manchester City Council (LLFA)	Consultation has been undertaken with MCC in their role as LLFA, however, a response is yet to be received.	
United Utilities (UU)	Sewer map	Public sewer records obtained from UU (included as Appendix D) indicate the following sewers within the vicinity of the site: • A 750mm combined sewer within Greenwood Road approximately 15m to the west of the site, flowing from the south to the north; and • A 375mm combined sewer within Benchill Road 100m to the north of the site. This sewer flows in a westerly direction before discharging into the aforementioned 750mm diameter sewer;
Strategic Flood Risk Assessment (SFRA)[iii]	The Manchester City Council Strategic Flood Risk Assessment (SFRA) was published in March 2010. Given its publication date, some of the flood mapping contained within the SFRA has since been superseded by more recent Environment Agency (EA) online mapping. Nonetheless, the SFRA identifies significant surface water flooding hotspots in the Manchester and Trafford South region, specifically in Wythenshawe, primarily due to the presence of Baguley Brook. Three Critical Drainage Areas (CDAs) are noted to the south and west of the site; however, these predominantly affect nearby employment areas and do not directly impact the proposed development site. According to the SFRA Susceptibility to Groundwater Flooding maps, the site is not located within an area identified as being susceptible to groundwater flooding.	

Table 3-1: Summary consultee information.

4. Assessment of Flood Risk.

4.1. Sources of Flooding

The risk of flooding from the following flood sources has been considered:

Fluvial – The site is located within Flood Zone 1, as confirmed by the Flood Map for Planning provided by the EA (see Appendix C).

An area of Flood Zone 2 associated with Baguley Brook is located approximately 50m south west of the site. A review of ground elevation data indicates the site is raised approximately 2m above the maximum extent of Flood Zone 2.

Based on the above, the overall risk of fluvial flooding is considered to be low.

Tidal – The study area is remote from the sea and tidally influenced water bodies. Therefore, the flood risk associated with this source is considered to be negligible.

Surface Water (Overland flow) – This relates to surface water entering the site. The EA Risk of Flooding from Surface Water Map indicates the site is generally at a very low risk of surface water flooding. The playground immediately south of the building is shown to have a low to medium chance of surface water flooding which appears to be part of a wider surface water overland flow path. The Topographic Survey of the site indicates the existing building is raised approximately 0.6m above the existing playground. A review of corresponding depth mapping indicates flooding to a depth of up to 0.3m adjacent to the existing building. The depth of surface water flooding is shown to increase as the playground falls away from the site.

The proposed development will extend into the existing playground with the proposed extension tying into levels within the existing building. To facilitate this, ground levels within part of the existing playground will be raised. The Proposed Landscaping Plan (included as Appendix E) indicates externa ground levels around the south western perimeter of the proposed extension will range between approximately 45.130m AOD to 46.150m AOD. An access ramp will be provided along the southern elevation building which will slope from a level of 46.125m AOD adjacent to the southern entrance to a level of 45.65m AOD adjacent to the proposed external play area. The external play area will be set at levels of between 46.05m AOD and 46.150m AOD.

Based on the above, the overall risk of surface water flooding from overland flows is considered to be low.

Pluvial (Rainfall) – In addition to the above, the EA Risk of Flooding from Surface Water Map indicates an area of ponding with a low to medium chance of surface water flooding adjacent to the north eastern corner of the existing building which appears to be as a result of ponding within an existing topographic depression. A review of corresponding depth mapping indicates flooding would be relatively shallow (i.e. up to 75mm in depth).

The Topographic Survey indicates an existing finished floor level of 46.15m AOD with the north eastern corner of the building generally raised above external ground levels.

Based on the above, the overall risk of pluvial flooding is considered to be low.

Groundwater – Groundwater in the area is expected to drain naturally toward the nearby watercourse located to the north of the site, away from the proposed development. A ground investigation undertaken by LKD recorded no instances of groundwater strikes during borehole or trial pit excavations which were excavated to a maximum depth of 2.92m bgl. Based on the available evidence, the risk of groundwater flooding at the site is considered to be low.

Sewers – United Utilities sewer records show combined within the vicinity of the study area. In the event of surcharging of the public sewer network, it is anticipated that water would be contained within the public highway and would not impact the site. Levels within Greenwood Road (to the west)

and Benchill Road (to the north) slope away from the site thereby providing a preferential flow path for flooding. Based on the above, the overall risk of sewer flooding is considered to be low.

Artificial sources – According to the EA online maps, the site is located within an area that is shown to not be impacted by flooding in the event of reservoir failure. Therefore, the flood risk associated with artificial sources is considered negligible.

4.2. Summary of Flood Risk

Summary of Flood Risk

Source of Flooding	**Risk Assessment Level**
Fluvial	Low
Tidal	Negligible
Pluvial (Rainfall)	Low
Surface Water	Low
Groundwater	Low
Sewers	Low
Artificial Sources	Negligible

Table 4-1: Summary of Existing Risk Level.

5. Mitigation Measures

5.1. Proposed Site Levels and Development Level

Given the site's location within Flood Zone 1 and given the low negligible to low risk of flooding from all sources, no specific flood risk mitigation measures are considered to be required. Although extreme rainfall events beyond the design standard could occur, the overall flood risk is sufficiently low that flood resilience measures are not deemed necessary at this stage.

5.2. Safe Access

Access and egress is provided via the wider school grounds towards Benchill Road.

5.3. Residual Risk

It is impossible to completely guard against flooding since extreme events greater than the design standard event are always possible. However, it is likely that with the 1% annual probability flood event with allowance for climate change significantly below the lowest site levels, the relatively elevated position of the development will safeguard it from localised fluvial during extreme rainfall events and fluvial flooding events outside the scope of this assessment.

6. Surface Water Management

6.1. Overview

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

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

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

The Planning Practice guidance identifies that surface water runoff should be disposed of in the following order of preference:

1. Into the ground (infiltration);
2. To a surface water body;
3. To a surface water sewer, highway drain, or another drainage system; or
4. To a combined sewer

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

6.2. Sustainable Drainage Hierarchy

6.2.1 Infiltration

British Geological Survey (BGS) mapping indicates that the northern section of the site is underlain by superficial Glaciofluvial Deposits, comprising sand and gravel, which are typically associated with moderate to high permeability. The southern section is underlain by Devensian Till (Diamicton), a heterogeneous deposit generally characterised by low permeability due to its clay-rich composition. Beneath these superficial layers, the entire site is underlain by bedrock of the Tarporley Siltstone Formation, comprising siltstone, mudstone, and sandstone. While the granular nature of some of these strata may suggest potential for infiltration, this must be considered in the context of site-specific ground conditions.

Site investigation data from LKC (Ref: LKC251240-A1-PRAGI-Benchill Road, Wythenshawe R0), as detailed in Section 2.4, indicates the presence of Made Ground to a depth of approximately 0.90 m below ground level (bgl). Beneath this, the strata comprise very stiff, gravelly clay extending from approximately 2.10 m to 2.92 m bgl. Although granular materials are present, the low permeability of the underlying clay is likely to inhibit vertical infiltration.

Given these conditions, the site is unlikely to be suitable for infiltration-based surface water management techniques.

6.2.2 Watercourses

Baguley Brook is located 160m to the west of the site. It flows from south to north away from the site before turning westward. A connection to this watercourse would require significant engineering

works across the M56 which would be disproportionately costly and disruptive for the scale of this development. A connection to the watercourse has not been considered further in this report.

6.2.3 Surface water sewer, highway drain, or another drainage system

Public sewer records obtained from United Utilities indicate the presence of a 750mm diameter combined sewer located approximately 15m west of the site. However, connecting to this sewer would also require substantial engineering works, which are not considered proportionate to the scale of the proposed development.

The proposed development comprises an extension to an existing school building, which is already served by an established drainage system. It is therefore proposed that the existing surface water drainage system located to the east of the extension, on the eastern side of the existing building, be utilised as the most appropriate and practical outfall for surface water generated by the new development.

6.3. Consideration of SuDS

While the inclusion of Sustainable Drainage Systems (SuDS) is encouraged in all developments, the nature and use of the site impose certain constraints. The proposed development is located within a school environment, where the use of open SuDS features such as swales, ponds, or detention basins is considered inappropriate due to health and safety concerns. Furthermore, the development does not result in an increase in impermeable area, which reduces the justification for extensive attenuation infrastructure.

Geocellular storage systems (e.g., crates or tanks) have been considered as a potential solution for retaining surface water on-site. However, the installation and long-term maintenance of such systems are considered onerous and disproportionate, given the limited scale of the development and the absence of increased runoff.

Nonetheless, there may be opportunities to incorporate small-scale SuDS features within the external amenity space, such as tree pits, rain gardens, or planters, which could provide localised attenuation and water quality benefits.

6.4. Proposed Drainage in the Context of the Development Proposals

The proposed development involves a single-storey extension to an existing school building, along with the installation of a small external canopy and amenity area. A review of the existing drainage infrastructure and site constraints has informed the proposed drainage strategy.

It is proposed that surface water runoff from the roof of the extension be collected and discharged into the existing surface water drainage system located to the east of the extension, on the eastern side of the existing building. This approach is considered the most practical, cost-effective, and proportionate solution, given the scale and nature of the development.

7. Conclusions

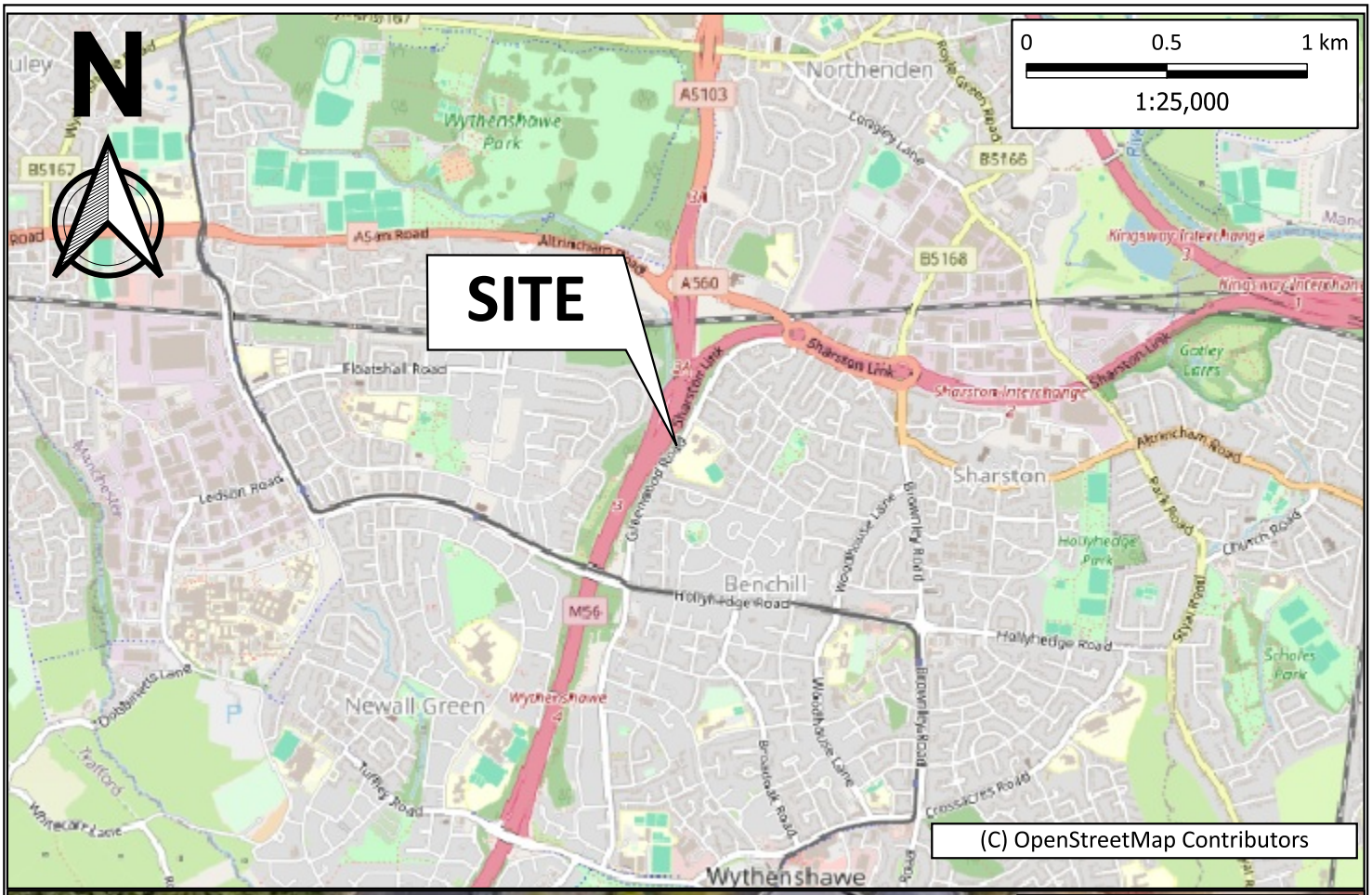
This report has been prepared to support the planning application for the proposed extension to the existing school building.

The EA online Flood Map for Planning indicates the site is located within Flood Zone 1 and is therefore at a low risk of fluvial flooding. The EA Risk of Flooding from Surface Water Map indicates areas of low to medium chance of surface water flooding, The proposed extension will tie into levels of the existing building and will therefore be raised above potential surface water flooding, which would generally drain away from the building in a south westerly direction, therefore the overall risk of surface water flooding is considered to be low. The risk of flooding from all other sources is considered to be negligible to low.

The proposed drainage strategy recommends utilising the existing surface water drainage system is considered the most appropriate and sustainable solution for the development. Opportunities for small-scale SuDS features within the amenity space will be explored to provide localised attenuation and water quality improvements, in line with best practice and planning policy.

Figures

Figure 1 – Site Location Plan

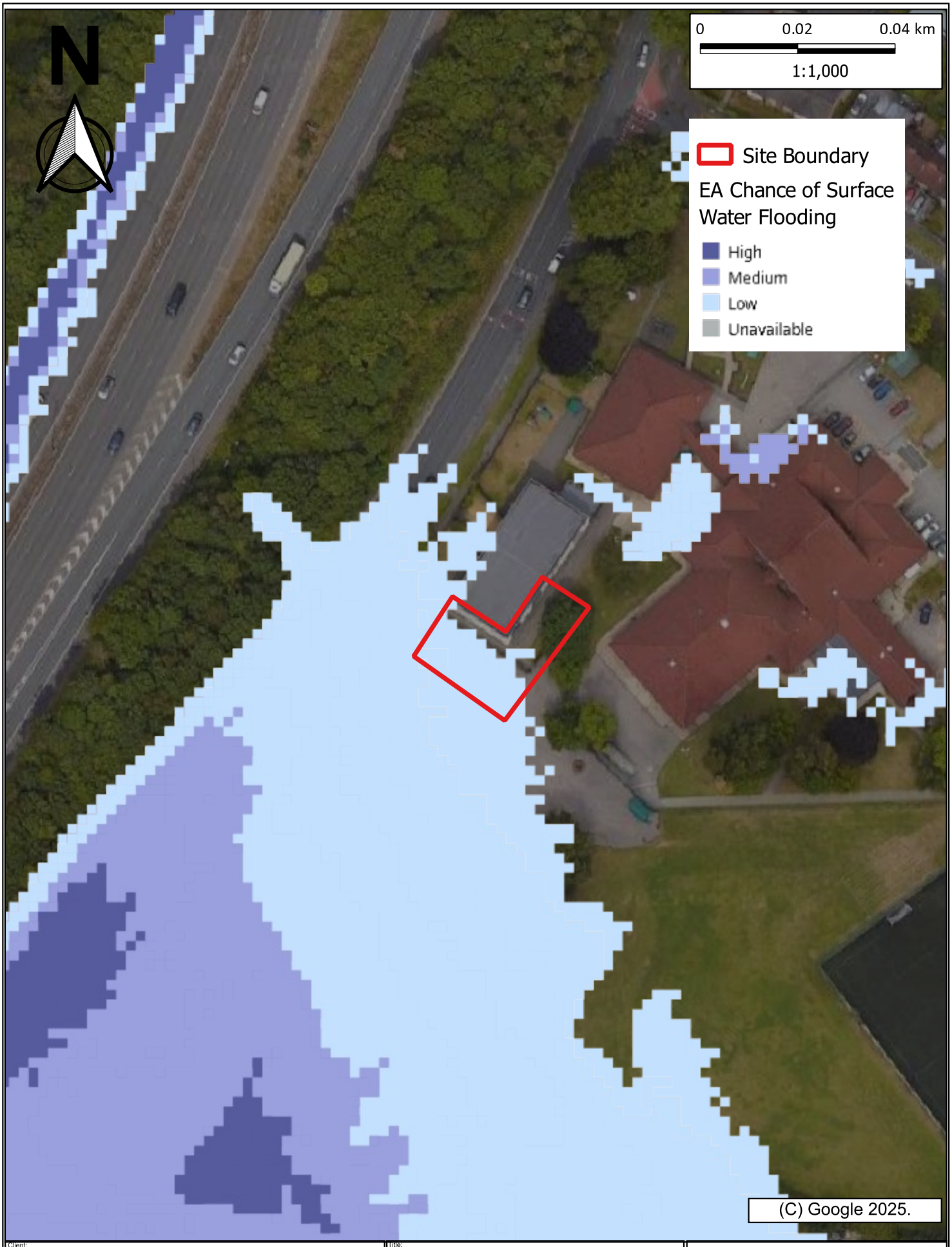




Client: Black Cat Building Consultancy Ltd		Title: Site Location & Boundary Plan	
Site: Benchill Road, Wythenshawe		Scale (see scale bar): 1:25,000 & 1:500 @ A4	Figure: 1
Job No.: LKC251240	Drawn By: JL / Checked By: JW / Drawn: May 2025		Revision:

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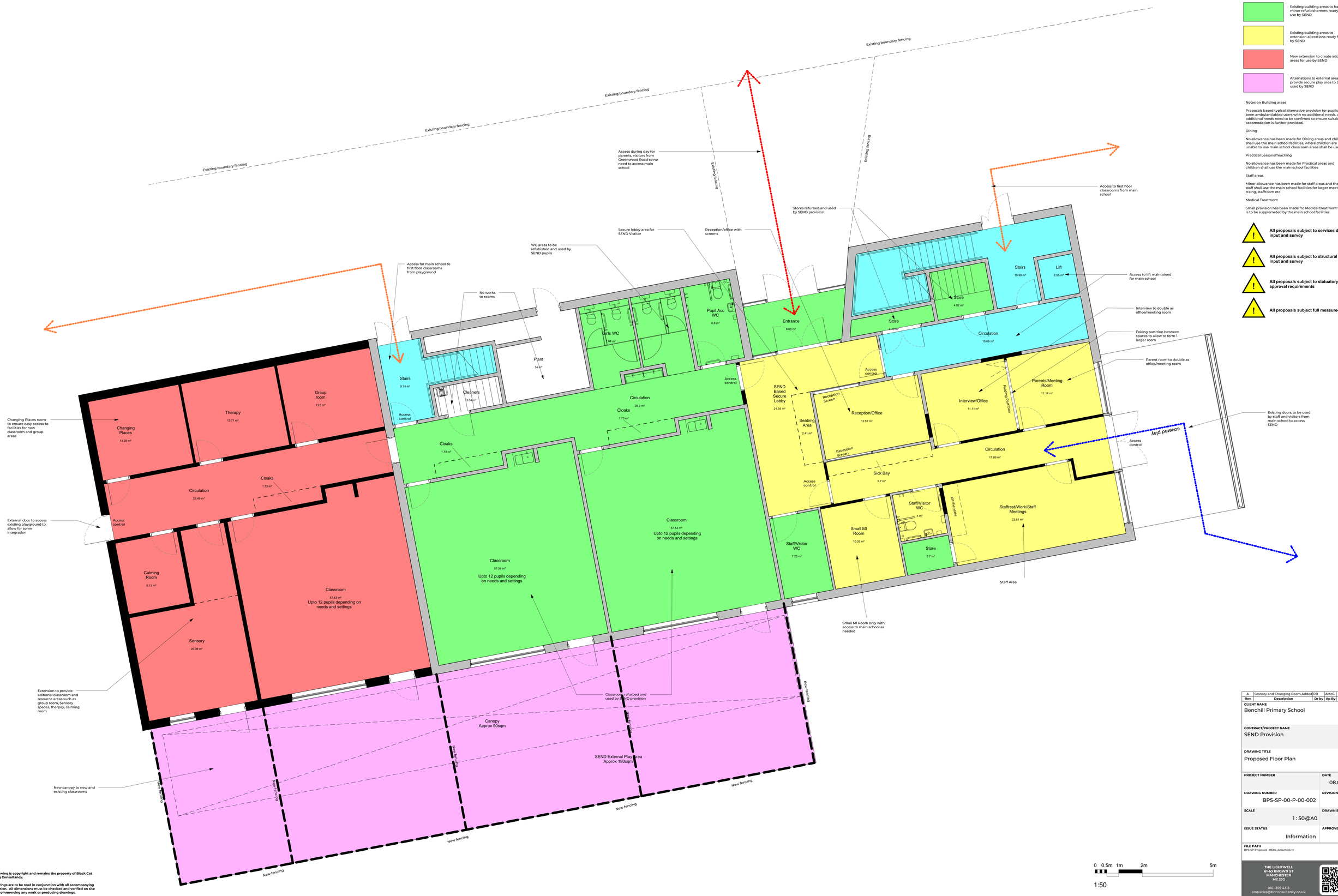
Figure 2 – EA Risk of Flooding from Surface Water Map



Client: Black Cat Building Consultancy Ltd				Title: EA Risk of Flooding from Surface Water Map	LK CONSULT
Site: Benchill Road, Wythenshaw				Scale (see scale bar): 1:1000 @ A4	Figure: 2
Job No.: FRA 251084	Drawn By: AY	Checked By: DP	Drawn: July 2025		Revision:

Appendices

Appendix A – Proposed Development Plans



This drawing is copyright and remains the property of Black Cat Building Consultancy.

All drawings are to be read in conjunction with all accompanying information. All dimensions must be checked and verified on site before commencing any work or producing drawings.

Any discrepancy's found should be imediately notified to Black Cat Building Consultancy.

Once drawing is in general circulation Black Cat Building Consultancy take no responsibility for the accuracy or information taken from them.

Rev	Description	Dr by	Ap By	Date
A	Sesnory and Changing Room Added	RB	AMcG	13.04.2025

CLIENT NAME
Benchill Primary School

CONTRACT/PROJECT NAME
SEND Provision

DRAWING TITLE
Proposed Floor Plan

PROJECT NUMBER	DATE
	08.04.2025
DRAWING NUMBER	**REVISION**
BPS-SP-00-P-00-002	A
SCALE	**DRAWN BY**
1 : 50@A0	RB
ISSUE STATUS	**APPROVED BY**
Information	AMcG

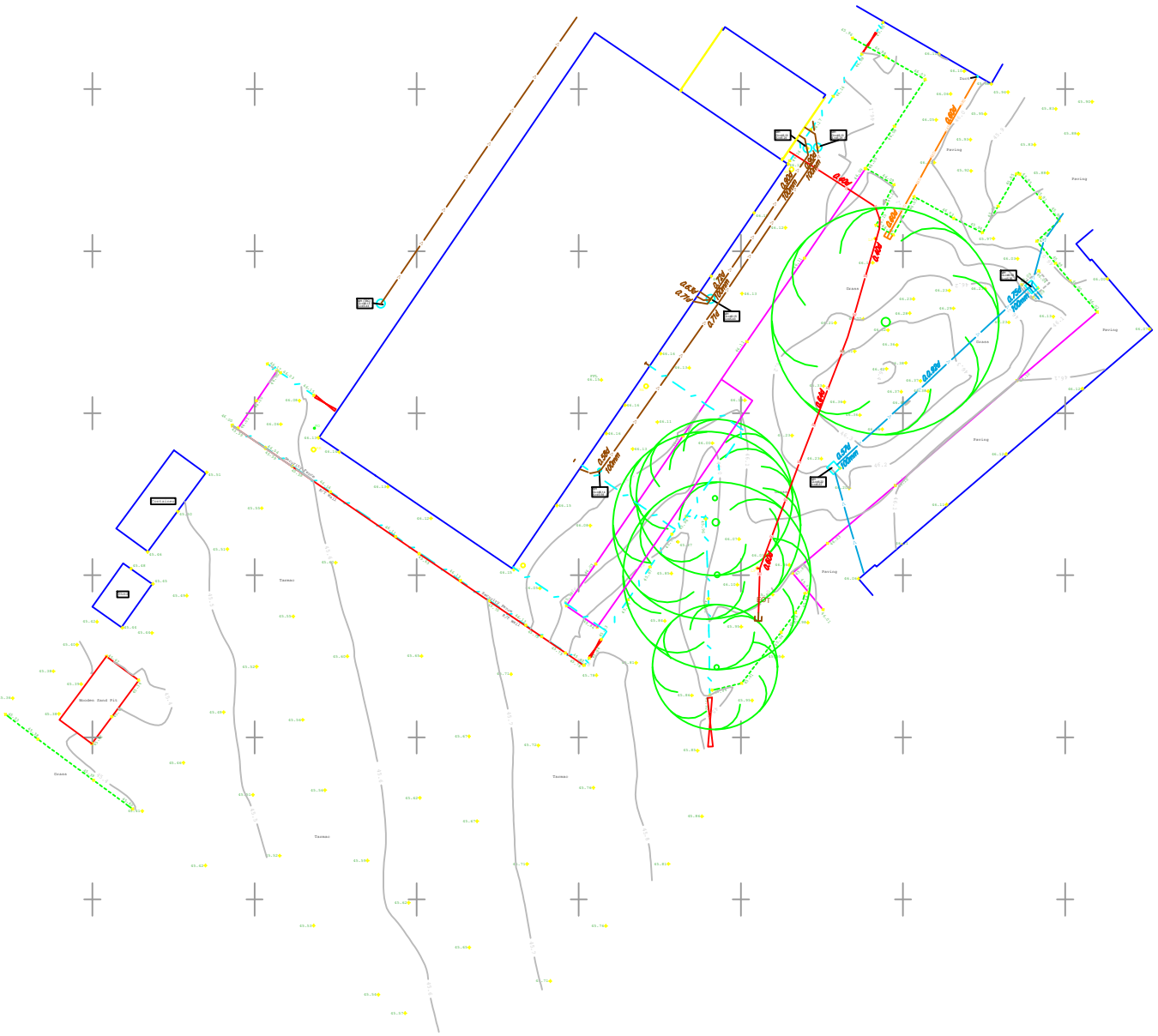
FILE PATH
BPS-SP-Proposed - 08.04_detached.rvt

THE LIGHTWELL
61-63 BROWN ST
MANCHESTER
M2 2JG

0161 359 4313
enquiries@bcconsultancy.co.uk

BLACK CAT
BUILDING CONSULTANCY

Appendix B – Topographic Survey



Appendix C – EA Flood Map for Planning

Flood map for planning

Your reference	Location (easting/northing)	Created
Unspecified	**382254/388606**	**15 May 2025 10:35**

Your selected location is in flood zone 2, an area with a medium probability of flooding.

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see https://www.gov.uk/guidance/flood-risk-assessment-standing-advice)

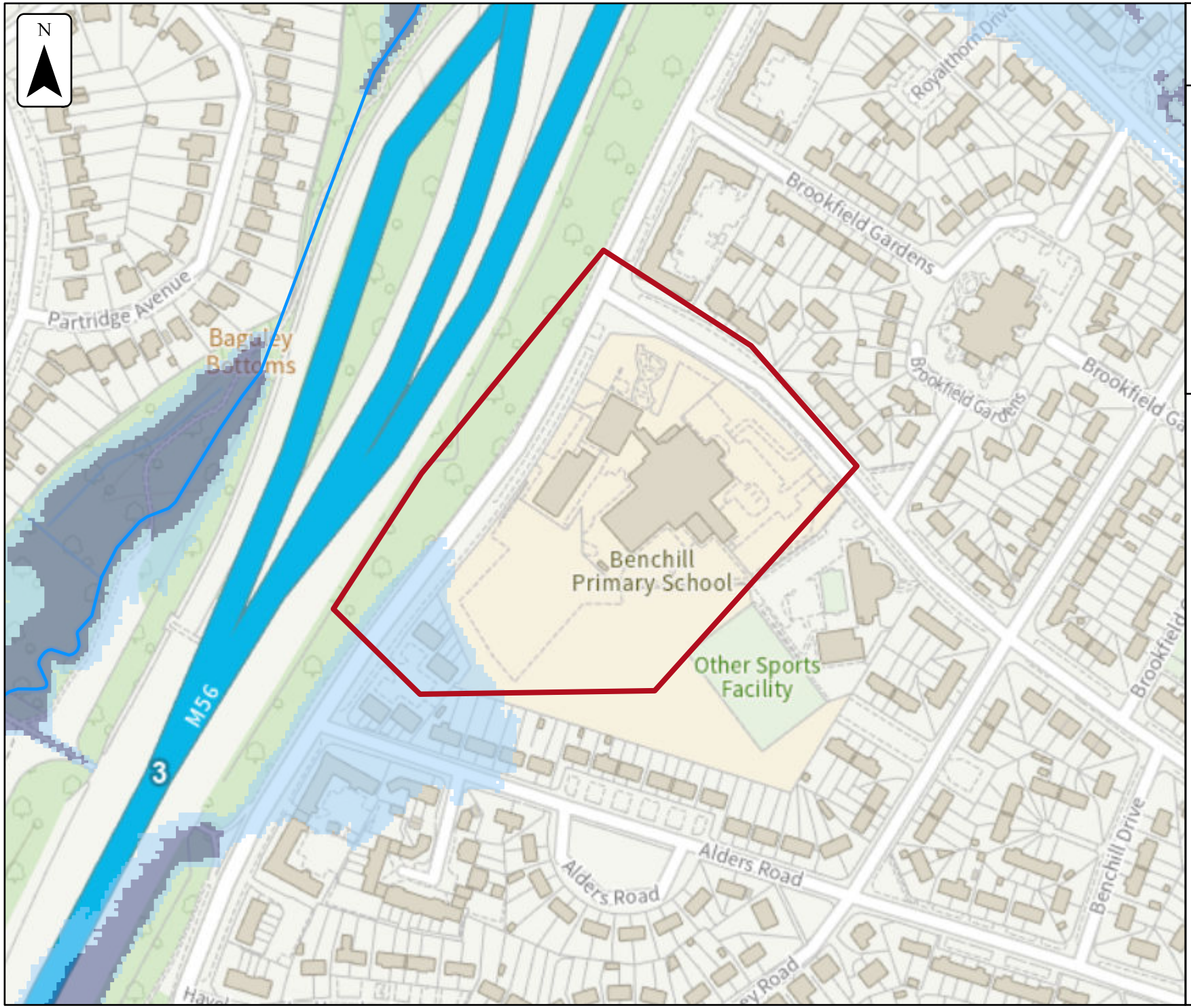
Notes

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



Environment Agency

Flood map for planning

Your reference
Unspecified

Location (easting/northing)
382254/388606

Scale
1:2,500

Created
15 May 2025 10:35

- Selected area
- Flood zone 3
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Water storage area

0 20 40 60 m

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Appendix D – Public Sewer Records

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

LKGroup

Unit 29
Eton Hill Road,
Radcliffe,
m26 2zs

FAO:

Your Ref: FRA251084
Our Ref: UUPS-ORD-653382
Date: 28/05/2025

Dear Sirs

Location: Benchill

I acknowledge with thanks your request dated 22/05/2025 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

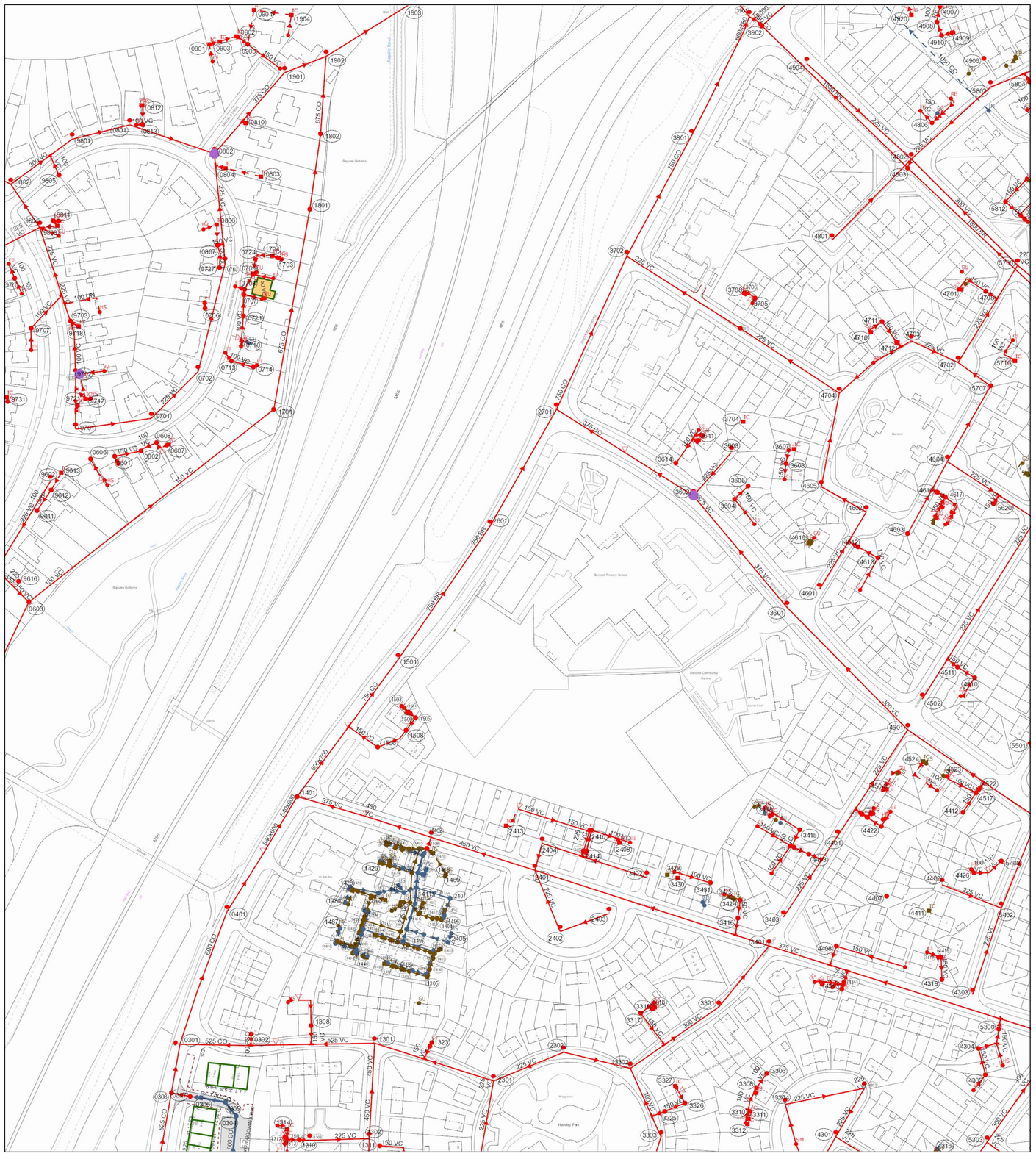
TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

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.

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



Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
3403	46.97	CO	45.03	225			VC	54.08327	1 in 142
1801		CO	0	675			CO	42.42641	
3901	38.8	CO	29.68	1850			BR	126.0357	
0306	46.84	SW	0	0			UN	0.2962235	
1435		FO		100			VC	3.126123	1 in
1802		CO	0	675			CO	43.10452	
3705		CO		100			VC	3.16059	
0308	46.62	CO	42.22	525			CO	27.44736	1 in 183
0304	47.21	SW	44.86	750			CO	9.787636	1 in 326
5812		CO		150			VC	10.63143	
4909		CO		100			PE	5.904505	
4613		CO		150			VC	12.66154	
1501	43.43	CO	39.78	750			BR	89.87213	
4604	42.21	CO	39.52	225			VC	48.37355	1 in 88
1508		CO		150			VC	19.00274	
4802	39	CO	35.23	300			VC	5.385165	
4612		CO		150			VC	6.025751	
1401	42.72	CO	40.21	600			BR	47.20169	1 in 225
3317		CO		150			VC	21.93321	
0601		CO		150			VC	14.87813	
2302	47.38	CO	44.66	225			VC	38.07887	1 in 57
0802	42.34	CO	39.13	375			CO	59.5483	1 in 259
9801	42.56	CO	40.14	300			VC	32.98484	
4301	48.12	CO	45.09	225			VC	70.49113	
2402	45.33	CO	0	225			VC	36.76955	
4305	47.82	CO	47.02	150			VC	15.16558	1 in 217
3603	43.56	CO	39.8	225			VC	31.89044	1 in 32
3802	43.29	CO	40.24	300			VC	42.2019	1 in 628
4303	47.58	CO	45.75	225			VC	50.59644	1 in 123
3601	45.62	CO	41.44	375			VC	80.91972	1 in 123
1309		CO		150			VC	10.41958	
0301	46.05	CO	42.03	600			CO	78.0787	1 in 95
1903	38.32	CO	35.39	675			CO	145.5782	
9701	45.7	CO	43.5	225			VC	42.42641	
0813		CO		100			VC	3.458251	
2404	44.55	CO	0	225			VC	15.52417	
5804		CO		150			VC	5.410901	
3902		CO	0	1850			CO	4.24264	
0702	45.15	CO	42.35	225			VC	61.84658	1 in 45
3416		CO		150			VC	9.376535	
2414		CO		225			VC	3.166209	
9804	44.3	CO	41.2	225			VC	28.84441	1 in 32
4412		CO		150			VC	13.06651	
1503		CO		100			VC	4.898812	
4403		CO		150			VC	7.707539	
4704	41.85	CO	39.65	225			VC	65.73431	1 in 97
0307	46.71	CO	44.72	150			PVC	10.67603	1 in 71
5402	47.61	CO	45.32	225			VC	53.85165	1 in 19
3401	46.7	CO	42.93	375			VC	136.6163	1 in 488
3421		CO		150			VC	9.106291	
5707	41.01	CO	38.94	225			VC	22.2036	1 in 85
0701	45.66	CO	0	225			VC	36.76955	
4601	45.02	CO	42.29	225			VC	50.2532	1 in 47
4803		CO	0	1850			BR	113.1459	
1504		CO		100			VC	5.071321	
4501	46.23	CO	42.16	300			VC	95.46204	1 in 136
1902	40.48	CO	35.72	675			CO	53	1 in 171
4517		CO		150			VC	2.531074	
3702	41.83	CO	37.86	750			CO	76.05919	1 in 691
1701		CO	0	675			CO	112.7874	
1505		CO		150			VC	8.639662	
1301	46.17	CO	42.49	525			VC	55.00909	1 in 250
0302		CO		100			PSC	6.268131	
4511		CO		150			VC	7.161465	
4904	38.56	CO	36.71	225			VC	78.56844	1 in 58
4502	45.72	CO	42.67	225			VC	118.1905	1 in 33
0709		CO		150			VC	9.33967	
4806		CO		150			VC	9.234725	
2302	47.38	CO	44.66	225			VC	42.15448	1 in 69
4311		CO		150			VC	6.646796	
3801	39.97	CO	37.23	750			CO	64.84597	
0703	43.73	CO	40.95	225			VC	61.29437	1 in 34
4310		CO		150			VC	1.402495	
0305	47.06	SW	44.83	750			CO	13.91864	1 in 464
0721		CO		100			VC	11.83299	
3402	45.46	CO	42.95	225			VC	61.03278	1 in 59
4602	43.41	CO	41.13	225			VC	28.6531	1 in 32
5303	48.14	CO	44.3	300			VC	71.02816	1 in 178
0905		CO		150			VC	22.45	
0707		CO		150			VC	3.019657	
4910		CO		100			PE	8.007389	
0714		CO		100			VC	12.89401	
4402	48.34	CO	45.81	225			VC	35.4683	1 in 74
0713		CO		100			VC	5.494696	
3302	47.89	CO	43.97	300			VC	59.64059	1 in 96
4302	47.92	CO	45.42	225			VC	31.38471	1 in 101
1310		CO		150			VC	5.802296	
4702	41.01	CO	38.66	225			VC	63.28507	1 in 23
2301	47.4	CO	44.03	225			VC	69.26038	1 in 48
5306	47.74	CO	46.39	150			VC	5.819275	
9612		CO		100			GRP	13.94538	
5802	38.79	CO	36	225			VC	59.46428	1 in 79
2410		CO		100			VC	22.54271	
4605	43.29	CO	40.21	225			VC	52.95281	1 in 98
2403	45.04	CO	43.44	225			VC	28.79236	
5501	45.68	CO	42.71	225			VC	112.1606	1 in 28
1901	41.14	CO	38.88	375			CO	24.69818	1 in 8
0801	42.09	CO	39.36	225			VC	49.64877	1 in 236
3301	47	CO	43.33	300			VC	44.04543	1 in 147
5706	39.31	CO	35.88	300			VC	83.4386	1 in 132
3405		CO		150			VC	2.14283	
9602	45.62	CO	43.28	225			VC	57.45433	1 in 41
3415		CO		150			VC	10.66411	
2601	45.81	CO	0	750			CO	74.79305	
2701	44.74	CO	38.76	750			CO	93.52005	1 in 156
9805		CO	0	100			VC	11.83155	
4304	47.95	CO	46.95	150			VC	10.4485	
1436		FO		100			VC	0.885183	1 in
1303	47.21	CO	44.98	225			VC	33.01515	1 in 22
3304	48.04	CO	46	225			VC	44.91102	1 in 80
4708		CO		150			VC	7.692852	
4522		CO		150			VC	4.877866	
4510		CO		150			VC	11.06856	
4408		CO		150			VC	11.08489	
1302	47.4	CO	43.39	450			VC	53.08484	1 in 82
3424		CO		150			VC	10.32891	
3701	41.79	CO	38.95	225			VC	74.62873	1 in 102
4801	40.07	CO	38.45	225			VC	62.93548	1 in 43
0708		CO		150			VC	5.525882	
3602	45.1	CO	40.76	375			VC	44.94441	1 in 51
3604		CO		150			VC	10.49795	
0401	44.29	CO	41.19	600			CO	37.73592	1 in 88
9603		CO	0	150			VC	173.0462	
2409		CO		100			VC	3.83417	
1323		CO		150			VC	7.695534	
1405		FO	0	225			VC	16.59937	
9703		CO	0	225			VC	54.70832	
1479		SW		100			VC	16.03531	1 in
1439		FO		100			VC	3.587077	1 in
1453		FO		100			VC	4.161782	1 in
4424		CO		150			VC	4.70385	
4401	47.78	CO	44.63	225			VC	70.7316	1 in 29
1472		SW		100			VC	7.757408	1 in
4616		CO		150			VC	3.570167	
1458		FO		100			VC	4.460776	1 in
1475		SW		100			VC	7.292089	1 in
1438		FO		100			VC	1.862678	1 in
2407		SW		100			VC	19.70512	1 in
1443		FO		100			VC	1.235655	
1482		SW		100			VC	10.17219	1 in
4426		CO		100			VC	8.442891	
4711		CO		150			VC	13.66871	
1434		SW		100			VC	3.39611	1 in
9715		CO		100			VC	4.767566	
9727		CO		100			VC	8.618761	
1425		FO		100			VC	5.282482	
1443		FO		100			VC	1.821393	1 in
1450		FO		100			VC	5.98048	1 in
1403		FO	0	225			VC	16.92055	
1492		SW		100			VC	17.66844	1 in
1423		FO		100			VC	2.160169	1 in
4908		CO		100			PE	8.637182	
1491		SW		100			VC	13.73169	1 in
1451		FO		100			VC	7.006021	1 in
0727		CO		100			VC	12.75109	
1477		SW		100			VC	7.053843	1 in
1481		SW		100			VC	2.402481	1 in
1426		FO		100			VC	1.422787	1 in
1428		FO		100			VC	2.83972	1 in
3303	48.51	CO	44.2	300			VC	41.62932	1 in 198
0608		CO		100			VC	10.34042	
1427		FO		100			VC	7.942043	1 in
1495		SW		100			VC	9.980497	1 in
1456		FO		100			VC	6.309245	1 in
1461		FO		100			VC	2.371963	1 in
4907		CO		100			PE	1.105294	
9702	45.97	CO	43.86	225			VC	30	1 in 88
1433		FO		100			VC	21.61069	1 in
1305		FO		100			VC	4.457754	1 in
1462		FO		100			VC	2.827078	1 in
1463		FO		100			VC	8.015007	1 in
1464		FO		100			VC	7.876878	1 in
2410		CO		150			VC	11.76312	
0807		CO		150			VC	3.355008	
3326		CO		150			VC	12.0612	
1406		FO	0	225			VC	14.01596	
2401	45.45	CO	42.63	450			VC	60.47033	1 in 6047
1402	45.02	CO	42.6	450			VC	38.2009	1 in 36
3606		CO		150			VC	8.925908	
1459		FO		100			VC	4.954172	1 in
4423		CO		150			VC	3.563792	
1432		FO		100			VC	2.145431	1 in
1506		CO		150			VC	19.75419	
1474		SW		100			VC	8.430638	1 in
1485		SW		100			VC	8.934081	1 in
1421		FO		100			VC	12.84943	1 in
1424		FO		100			VC	4.981057	1 in
1449		FO		100			VC	6.078848	1 in
1490		SW		100			VC	7.836844	1 in
9707		CO		100			VC	24.98155	
1413		SW		0			UN	0.2930029	
5620		CO		150			VC	5.643749	
1412		SW		750			CO	10.27747	
4422		CO		150			VC	8.963715	
1430		FO		100			VC	0.885921	1 in
1494		SW		100			VC	1.438658	1 in
1452		FO		100			VC	2.39662	1 in
1441		FO		100			VC	2.686721	1 in
1493		SW		100			VC	7.344503	1 in
1442		FO		100			VC	5.730205	1 in
1457		FO		100			VC	10.32678	1 in

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
1448		FO		100			VC	6.00422	1 in
1484		SW		100			VC	3.118885	1 in
4603	43.4	CO	40.92	225			VC	45.65085	1 in 33
1478		SW		100			VC	7.503591	1 in
1455		FO		100			VC	2.775926	1 in
3308		CO		100			VC	9.83727	
1483		SW		100			VC	23.09455	1 in
1431		FO		100			VC	3.91819	1 in
1407		FO	0	225			VC	4.215515	
3706		CO		100			VC	7.804468	
4703	40.95	CO	38.97	225			VC	28.63564	1 in 99
1410		SW	0	750			CO	9.028296	
1486		SW		100			VC	12.28737	1 in
3325		CO		150			VC	7.686513	
5810		CO		150			VC	2.571276	
1447		FO		100			VC	4.141693	1 in
1437		FO		100			VC	6.440524	1 in
4617		CO		150			VC	4.905808	
4419		CO		150			VC	12.40181	
1446		FO		100			VC	4.725035	1 in
1411		SW	0	750			CO	8.130374	
1408		CO	0	225			VC	6.688342	
4712		CO		150			VC	3.670648	
1409		SW	0	750			CO	14.83713	

LEGEND

Abandoned | Foul | Surface Water | Combined

- Public Sewer
- Private Sewer
- Section 104
- Rising Main
- Sludge Main
- Overflow
- Water Course
- Highway Drain

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

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

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

AC	Asbestos Cement
BR	Brick
PE	Polyethylene
RP	Reinforced Plastic Matrix
CO	Concrete
CSB	Concrete Segment Bolted
CSU	Concrete Segment Unbolted
CC	Concrete Box Culverted
PSC	Plastic / Steel Composite
GRC	Glass Reinforced Plastic
DI	Ductile Iron
PVC	Polyvinyl Chloride
CI	Cast Iron
SI	Spun Iron
ST	Steel
VC	Vitrified Clay
PP	Polypropylene
PF	Pitch Fibre
MAC	Masonry, Coursed
MAR	Masonry, Random
U	Unspecified

Address or Site Reference:

Benchill,

Scale: 1:1250 **Date:** 28/05/2025

Sheet: 1 of 1

Printed by: Property Searches

SEWER RECORDS

United Utilities
Water for the North West

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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Appendix E – Proposed Landscaping Plan

N

Shed

Container

New retaining Wall to edge of path

New Coupling

New Drainage channel

New Path

Connect foul drainage into existing

IN/LVRO
CL:45.98
IL:45.63

New Drainage channel

Access Hole

New Path

Door Guard

New Coupling

New retaining Wall to edge of path

New Path

New Fencing

New Playground

Existing canopy extended

New Playground

New Fencing

New Fencing

Concrete Edging

Concrete Edging

New Artificial Grass

New Artificial Grass

New Gate

New Fencing

New Fencing

Concrete Flag on Edge

New retaining Wall to edge of play area

T.B.T.TARMAC

Connect surface water drainage into existing

IN/LVRO
CL:46.14
IL:45.90

IN/LVRO
CL:46.15
IL:45.63

IN/LVRO
CL:46.13
IL:45.23

IN/LVRO
CL:46.13
IL:45.23

IN/LVRO
CL:46.22
IL:45.57

FFL
46.15+

Grass

Grass

0.58d
100mm

0.71d

0.72d
100mm

0.90d
100mm

0.90d
100mm

0.40d

0.40d

0.60d

0.64d

0.60d

0.57d
100mm

0 0.5m 1m 2m 5m

1:50

Landscape Work Notes

New Tarmac

Allow for new tarmac path, play area and making good existing playground.

Artificial Grass

Allow for installing new artificial grass. Allow for excavating down to required levels and removing new grass, Geotextial membrane, 50mm TYPE 1 Sub base, 20mm granite dust followed by installation of artificial grass

Edgings

Allow for installing new 50mm concrete edgings to BS EN 1340:2003 within ST3 concrete haunchings to perimeter of all new tarmac.

Door Guards

Allow for supply and installing of door barriers in location shown, door barrier to be Door Barrier BX1439 By Broxap to be root fixed and to be powdercoated colour TBC.

Fencing and Gates

Allow for the supply and installation of 2.4m high weldmesh fencing and gates to match existing as shown. Gates to provide 1200mm clear opening. Fencing and gates to be Securas Lite SL1 by CLD or equal and approved. Colour to be green to match existing.

Guarding

Allow for the supply and installation of 1.2m high weldmesh fencing as shown to act as guarding compete with finger safe top. Fencing and gates to be Securas Lite SL1 by CLD or equal and approved. Colour to match existing.

Access Control

Allow for supplying and installing access control to new gates.

Levels

+
45.000

Indicates proposed levels. Allow for providing level access to external doors, all levels are to be reviewed onsite.

Canopy

Allow for the installtion of new canopy in location shown by Twin Fix, refer to seperate Twin Fix information for additional details.

Drainage

Allow for the installation of new gullies allow for connection of rainwater downpipes to new drainage internal rainwater pipes and foul drainage to upgrying pipework in classroom sink, include below ground drainage connecting into existing, Refer to Structural Engineers details for additional info

Rev	Description	Dr by	Ap By	Date

CLIENT NAME
Benchill Primary School

CONTRACT/PROJECT NAME
SEND Provision
Phase 2

DRAWING TITLE
Proposed Landscape Plan

PROJECT NUMBER	DATE
	23.06.2025
DRAWING NUMBER	**REVISION**
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THE LIGHTWELL
61-63 BROWN ST
MANCHESTER
M2 2JG

0161 359 4313
enquiries@bcconsultancy.co.uk

BLACK CAT
BUILDING CONSULTANCY

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Appendix F - References

[i] Environment Agency, 2022, “Flood risk assessments: climate change allowances”.
[ii] LKC (2025), Phase 1 Preliminary Risk Assessment.
[iii] JBA Consulting, March 2010, “Manchester City, Salford City an Trafford Councils, Level 2 Hybrid SFRA: Level 1 SFRA

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

Manchester (Head Office)

Unit 29
Eton Business Park
Eton Hill Rd, Radcliffe
M26 2ZS

0161 763 7200
info@thelkgroup.com

Manchester (Ancoats Office)

84 Silk Street
Ancoats
Manchester
M4 6BJ

0161 763 7200
info@thelkgroup.com

Glasgow

Wright Business Centre
1 Lonmay Road
Glasgow
G33 4EL

0141 773 6269
info@thelkgroup.com

Swindon

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

01793 987390
info@thelkgroup.com

LK GROUP