

FLOOD RISK RESILIENCE REPORT

Site Address

101 Beresford Road
Levenshulme
Manchester
M13 0TA

Client

Gregory Oldham
Spence & Oldham Architects Ltd

Date

31/10/2025



1 Document Control



FLOOD RISK RESILIENCE REPORT



Site Address:	101 Beresford Road Levenshulme Manchester M13 0TA
National Grid Reference:	386675, 394945
STM Reference:	FR – 2025 – 000019
Version No:	1.0
Prepared for:	Gregory Oldham Spence & Oldham Architects Ltd
Date:	31/10/2025
Report Author:	Joanna Hackett (BSc) Flood Risk and Drainage Consultant
Reviewed By:	Yonas Makoni (BSc) Flood Risk and Drainage Consultant
Authorised By:	Matthew Ashdown (BSc) Senior Flood Risk and Drainage Consultant

2 Disclaimer

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3 Executive Summary

SECTION	SUMMARY
Location	101 Beresford Road, Levenshulme, Manchester, M13 0TA Grid Reference: 386675, 394945
Area	203m ²
Proposed Development	Single-storey front extension.
Flood Zone	The site is located across Flood Zones 1 and 2. The proposed development is located entirely within Flood Zone 1.
Topography	48.54mOAD (northwest) to 48.87mAOD (southeast).
Main Sources of Flooding	The culverted Chorlton Platt Gore located approximately 298m northwest of the site.
Fluvial (River) and Tidal (Sea) Flood Risk	Very Low – The site remains dry during all modelled events.
Pluvial (Surface Water) Flood Risk	Low – During the Climate Change (2040 - 2060) modelled event, the site and proposed development are at 'Low' risk of surface water flooding. The proposed development is at 'Low' risk of witnessing flood depths of less than 0.2m depth.
Flood Risk from Artificial (Canals and Reservoirs) Sources	Low – The EA indicates that the site is at risk of reservoir flooding when river levels are normal. MCC indicates that the risk of reservoir flooding is residual.
Groundwater Flood Risk	Low – There is potential for groundwater flooding to occur at surface. The groundwater level may be approximately less than 3mbgl.
Proposed Flood Risk Mitigation Measures	<ul style="list-style-type: none"> The finished floor level can remain at the current ground floor finished level set at approximately 48.70mAOD (TBC); Construction will utilise flood resistant materials and services will be placed as high as practicable to reduce impact of flooding.
Conclusions	Based on the information reviewed and taking into account the proposed mitigation measures, it is considered that overall flood risk to the proposed development is considered to be 'Low'.

4 Introduction

STM Environmental Consultants Limited (STM) were appointed by Gregory Oldham of Spence & Oldham Architects Ltd (Client) to provide a Flood Risk Resilience Report (FRR) at a site located at 101 Beresford Road, Levenshulme, Manchester, M13 0TA.

5 Development Proposal

The FRR is required to support a planning application for a single storey front extension.

Further details including drawings of the development plans are available in [Appendix 2](#).

6 Site Description and Environmental Characteristics

6.1 Site Location and Area

The site is located at 101 Beresford Road, Levenshulme, Manchester, M13 0TA and is centred at national grid reference 386675, 394945. The site has an area of 203m².

6.2 Hydrology

The nearest main watercourse is the culverted Chorlton Platt Gore, which is located approximately 298m northwest of the site.

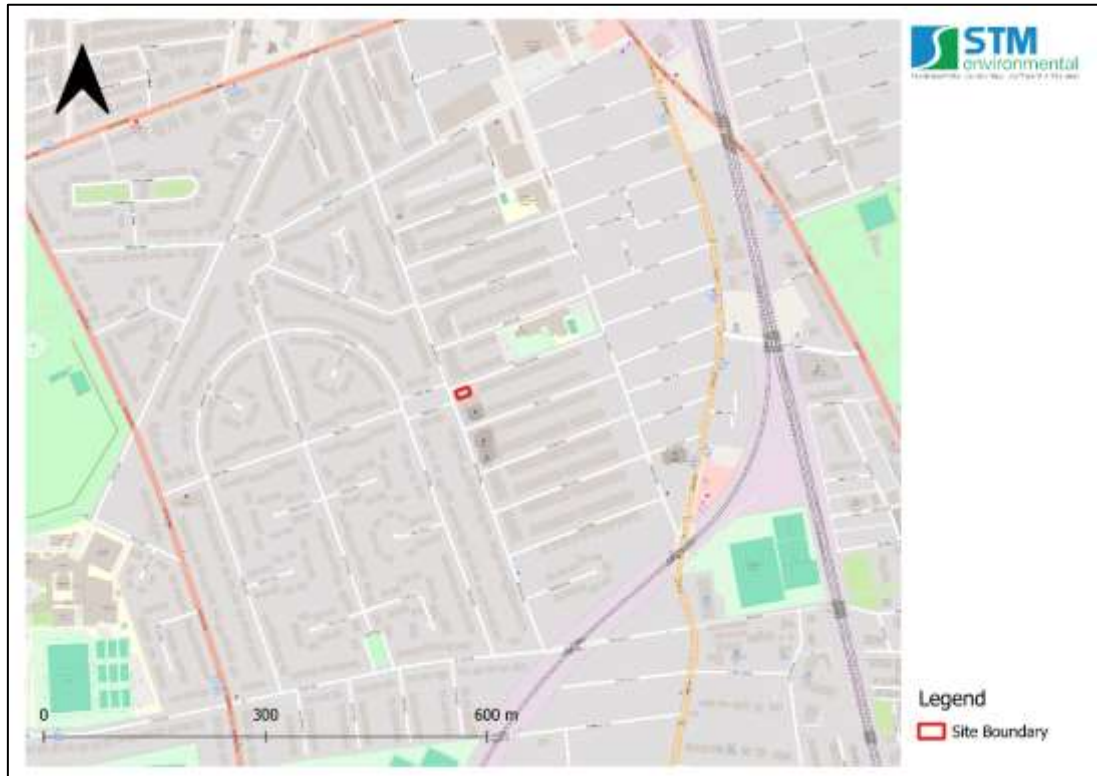


Figure 1 Site Location Map



Figure 2 Aerial Map

6.3 Flood Zone

The site is located across Flood Zones 1 and 2.

The proposed development is located entirely within Flood Zone 1.

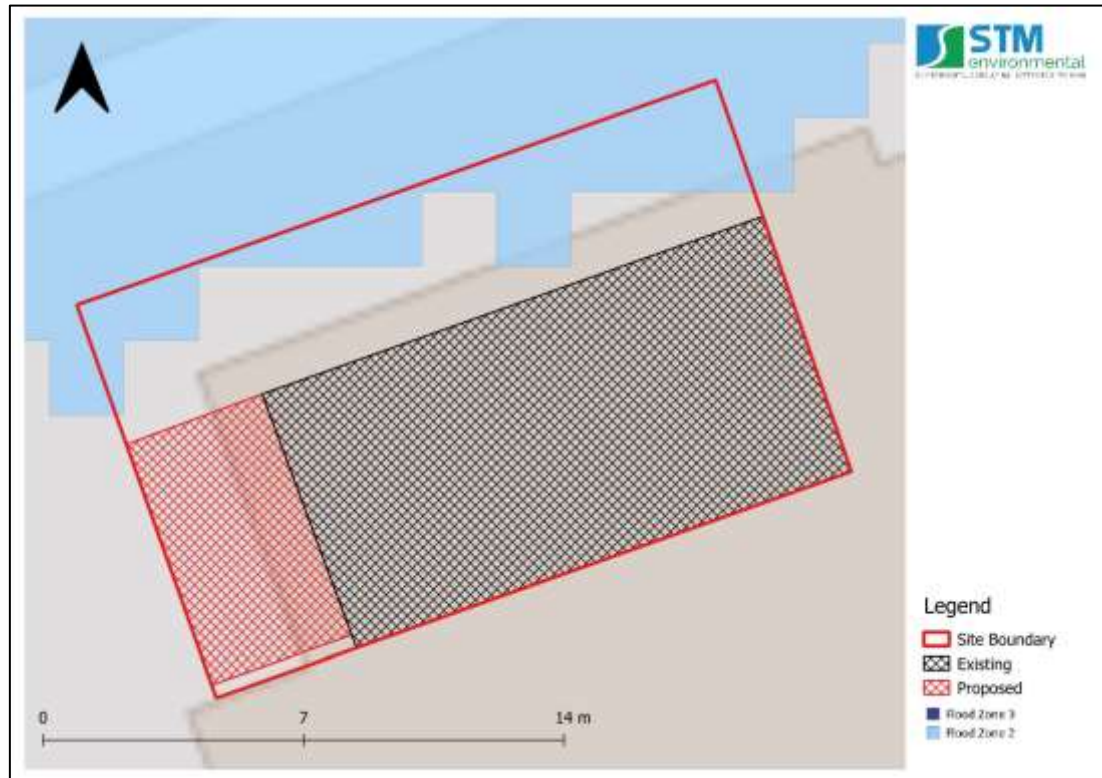


Figure 3 EA Flood Zone Map

6.4 Topography

The ground level ranges from a low of 48.5mOAD (northwest), along Montgomery Road, to a high of 48.9mAOB (southeast), along the rear boundary with 103 Beresford Road.

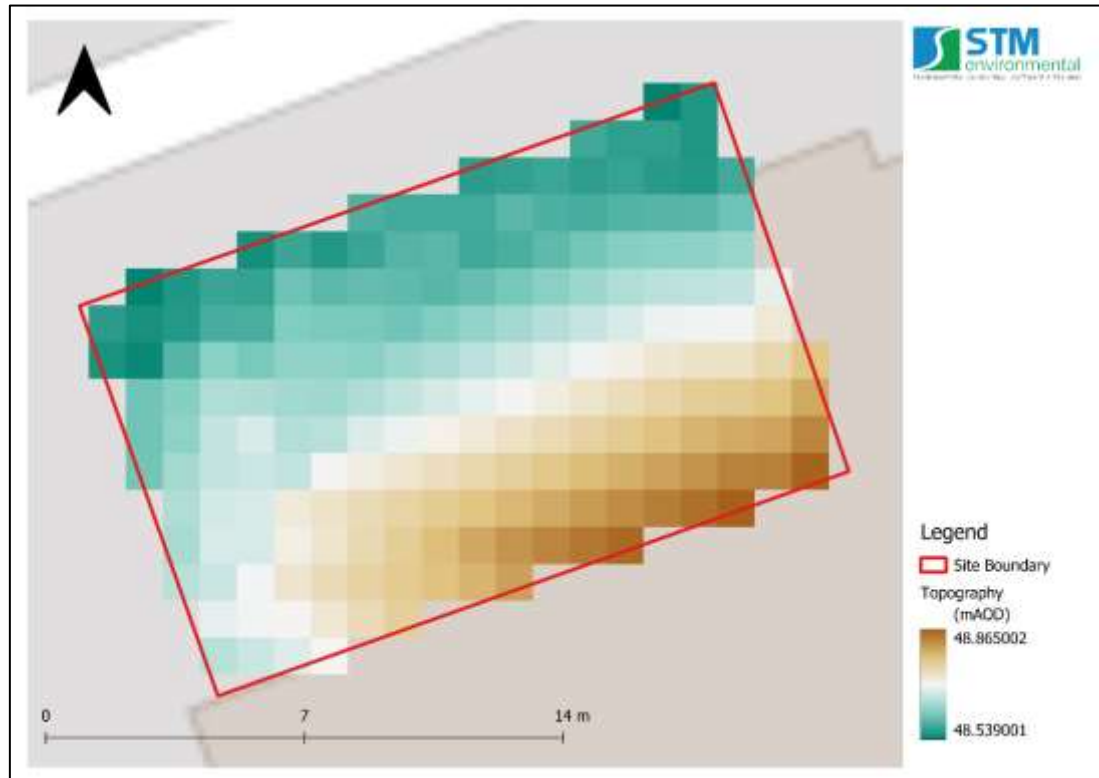


Figure 4 Topography within the Site Boundary

7 Site Specific Flood Risk Analysis

7.1 Fluvial (River) and Tidal (Sea) Flood Risk

7.1.1 Main Potential Sources of Local Fluvial Flooding

The nearest potential source of fluvial flooding to the site is considered to be the Chorlton Platt Gore.

7.1.2 Fluvial (River) and Tidal (Sea) Flood Risk and Climate Change - EA Modelled Predictions of Fluvial and Tidal Flood Levels and Extents

The EA indicate that they do not have any flood risk data available for this location.

The LLFA, Manchester City Council (MCC), was contacted. No response was available at the time of writing.

In the absence of modelled data, the EA's 1% AEP + CC and 0.1% AEP Modelled Flood Extents were assessed.



Figure 5 EA 1% AEP + CC Flood Extent



Figure 6 EA 0.1% AEP Flood Extent

During both the 1% AEP + CC and 0.1% AEP EA modelled flood extents, the site remains dry.

7.1.3 Long Term Fluvial Flood Risk Considering Flood Defences

The EA's long term flood risk maps indicate that the long-term risk from fluvial flooding to the site is 'Very Low' during both the Present Day (2025) and Climate Change (2036 – 2069) modelled events.

7.2 Pluvial (Surface Water) Flood Risk

7.2.1 Main Potential Sources of Local Pluvial Flooding

The main potential source of pluvial flooding to the site is considered to be the culverted Chorlton Platt Gore.

7.2.2 Surface Water Flood Risk from Artificial Sources (Reservoirs and Canals)

The EA's reservoir flood risk map indicates that the site is at risk of reservoir flooding when river levels are normal. MCC indicates that the risk of reservoir flooding is residual.

An examination of OS mapping revealed 3no. significant reservoirs (Gorton Lower Reservoir, Gorton Upper Reservoir and Audenshaw Reservoirs) and 3no. canals (Bridgewater Canal, Rochdale Canal and Ashton Canal) within the 5km of the site.

7.2.3 Climate Change - Modelled Predictions of Surface Water Run-off Flooding

During the Present Day (2025) modelled event, the site is at 'Low' risk of surface water flooding. The proposed development remains dry.

During the Climate Change (2040 - 2060) modelled event, the site and proposed development are at 'Low' risk of surface water flooding. The proposed development is at 'Low' risk of witnessing flood depths of less than 0.2m depth.

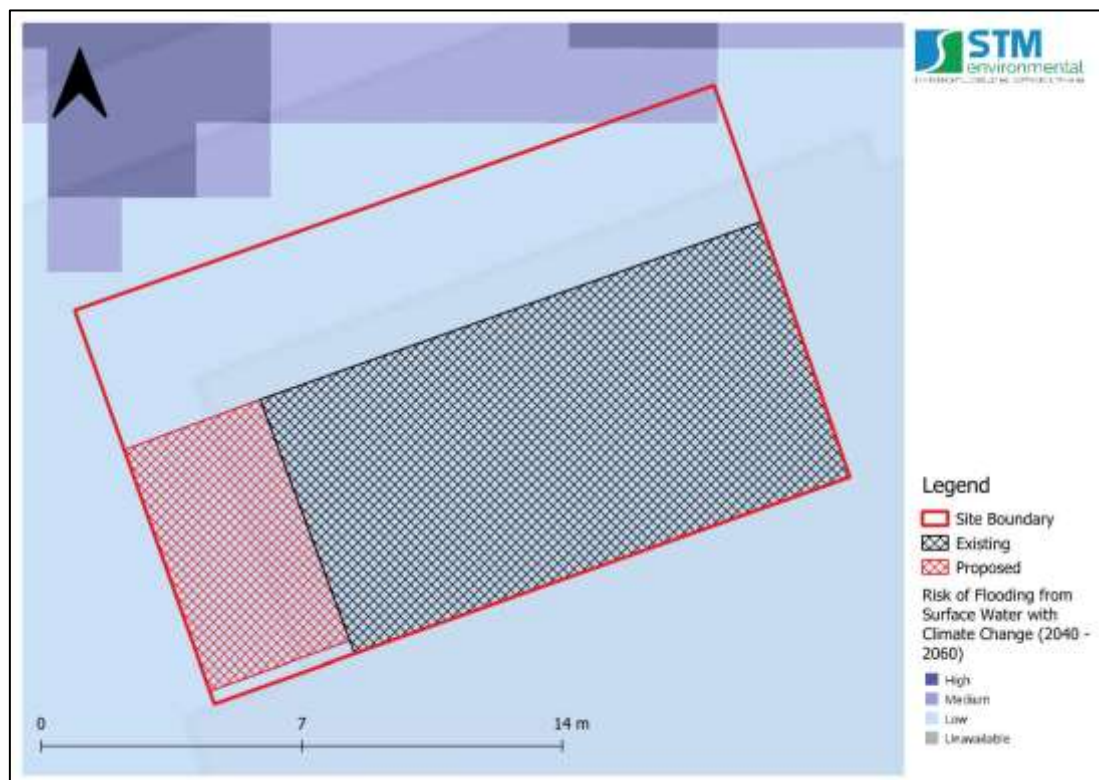


Figure 7 Risk of Flooding from Surface Water (2040 - 2060) Extent

7.2.4 Long Term Surface Water Flood Risk

The EA's long term flood risk maps indicate that the long-term risk of flooding from surface water is considered to be 'Very Low' during the Present Day (2025) modelled event and 'Low' during the Climate Change (2040 – 2060) modelled event.

7.3 Groundwater Flood Risk

The Groundwater Flood Susceptibility Map indicates that there is potential for groundwater flooding to occur at the surface. The Groundwater Depth map also provided by BGS indicates that the groundwater level may be approximately less than 3mbgl.

7.4 Critical Drainage Area

The site is located within a Critical Drainage Area. However, no further details were provided by MCC.

8 Potential Impacts of the Development on Local Flood Risk

8.1 Changes to Impermeable Area and Building Footprint

Changes in ground cover arising from the development are presented in Table 1.

Table 1 Break down of existing and proposed site uses

Use	Existing (m ²)	Proposed (m ²)	Difference (m ²)
Building	103	130	27
Hard Standing	100	73	-27
Soft Landscaping	0	0	0
Total	203	203	-

Although the proposed development will increase the built-up up area of the site by 27m², it is considered unlikely to impact local flood risk as it is not impacted by the 1% AEP + CC modelled fluvial and pluvial events.

9 Flood Risk Mitigation Measures

9.1 Finished Floor Levels

Given the level of flood risk witnessed onsite, the finished floor level can remain at the current ground floor finished level set at approximately 48.70mAOD (TBC).

9.2 Water Exclusion Strategy

There are two main strategies, whose applicability is dependent on the water depth the property is subjected to and the potential for structural damage it may cause.

-  Water Exclusion (Flood Resistance) Strategy - should be employed where predicted flood depths are less than 0.3m and are likely to be for short duration. Emphasis is placed on minimising water entry and giving occupants time to relocate ground floor contents, maintaining structural integrity, and on using materials and construction techniques to facilitate drying and cleaning;
-  Water Entry (Flood Resilience) Strategy - Flood resilience measures are designed to allow water in but to limit damage and allow rapid re-occupancy. Resilience measures should be employed where flood depths are greater than 0.6m and where it is likely that structural damage will occur due to excessive water pressure.

As the indicative flood depths are less than 0.3m in extreme scenarios, water exclusion is considered most applicable for this site.

Water Exclusion Strategy:

There are a range of flood protection devices/methods that can be used in the Water Exclusion Strategy including:

-  Using materials and construction with low permeability;
-  Flood gates with waterproof seals;
-  Door guards and airbrick covers.

9.3 Flood resilience design and measures

Flood resilience design and measures that may be implemented are outlined below. Water-resistant and resilient materials that should be utilized throughout the construction to minimize the flood risk and potential impacts.

Floor construction:

-  Use of resilient flooring materials as ceramic tiles or stone floor finishes;
-  Use of a concrete slab 150mm thick;
-  Use of ceramic tiles or stone floor finishes is recommended;
-  Maintain existing under floor ventilation by UPVC telescopic vents above 400 mm to external face of extension;
-  Damp proof membrane of impermeable polythene at least 1200 gauge;
-  Avoid the use of MDF carpentry.

Wall construction:

-  Include in the external face of the extension a damp – proof course, 250 mm above ground level, to prevent damp rising through the wall;
-  Use rigid closed – cell material for insulation above the DPC;
-  Spread hardcore over the site within the external walls of the building to such thickness as required to raise the finished surface of the site concrete. The hardcore should be spread until it is roughly level and rammed until it forms a compact bed for the oversite concrete. This hardcore bed will be 100 mm thick and composed by well compacted inert material, blinded with fine inert material.

Doors:

-  Seal doors around edges and openings. UPVC or composite material will be used with passive protection meaning that minimal intervention will be required in the event of flooding.

Underground drainage:

-  Avoid use of metal for any underground piping;
-  Use closed cell insulation for pipes that are below the predicted flood level;
-  Provide non – return valves for the drainage system to prevent back water flow;
-  Use UPVC or clay pipework for foul and surface water drainage.

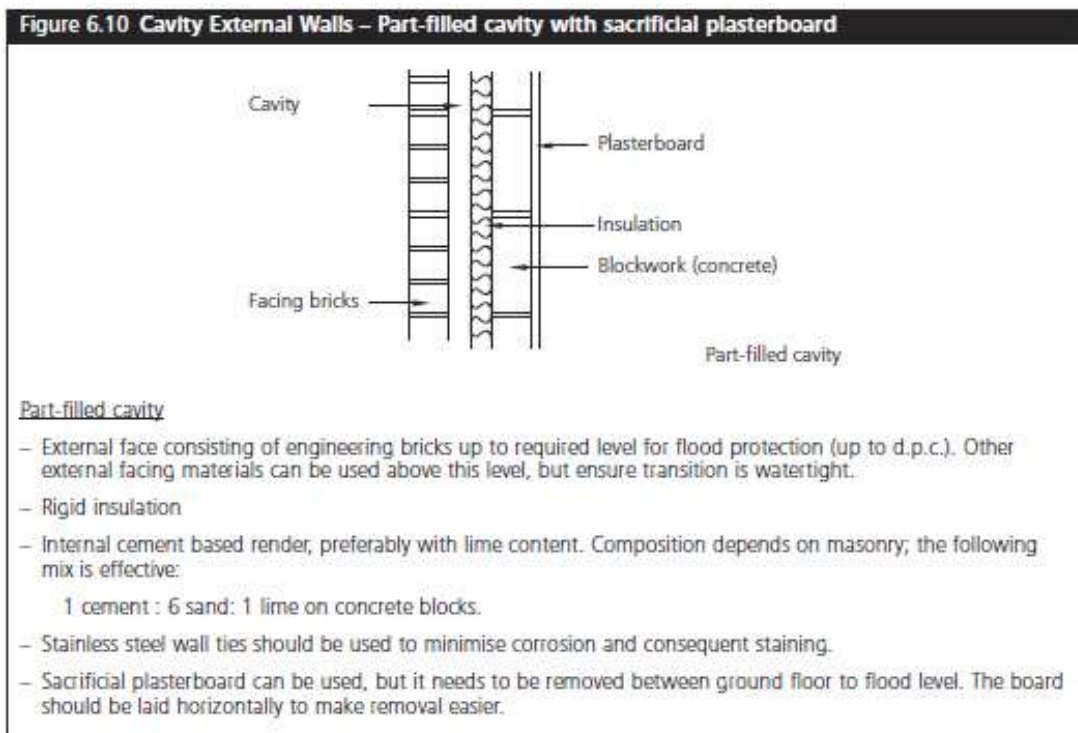


Figure 8 Cavity External Walls

As well as the above the following flood resilience features should be applied as part of the development:

-  Electrical sockets should be installed above flood level for the ground floor;
-  Utility services such as fuse boxes, meters, main cables, gas pipes, phone lines and sockets will be positioned as high as practicable;
-  All external openings for pipes or vents below 400mm to be sealed around pipe or vent with expanding foam and mastic.

10 Conclusions and Recommendations

Based on the information reviewed and taking into account the proposed mitigation measures, it is considered that overall flood risk to the proposed development is considered to be 'Low'.

11 References

1. Communities and Local Government - National Planning Policy Framework NPPF, July, 2021.
2. Communities and Local Government - Planning Practice Guidance: Flood Risk and Coastal Change, Updated 06 March 2014.
3. CIRIA, Defra, Environment Agency – UK SuDS Manual, 2015.
4. Manchester City Council, JBA Consulting – Level 1 Strategic Flood Risk Assessment for Greater Manchester – Update, Final Report, March 2019.

12 Appendices

12.1 Appendix 1 – Development Plans

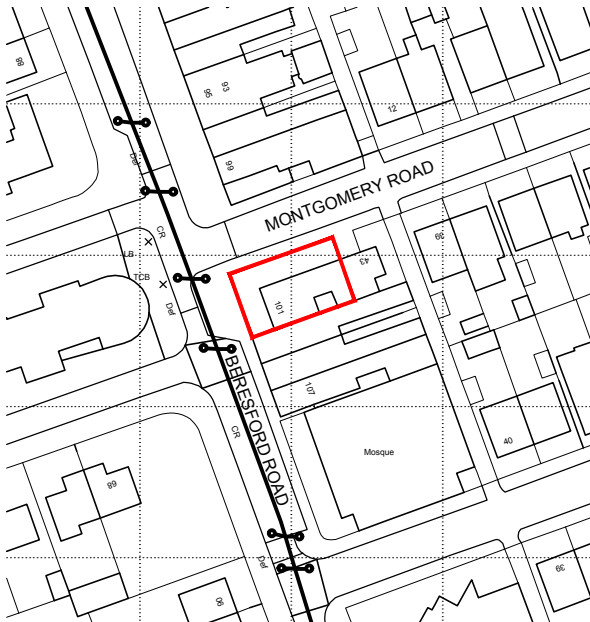
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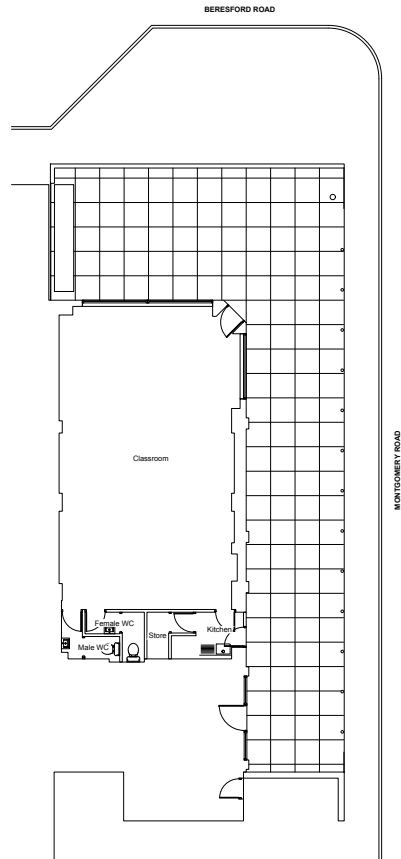
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0 10m 20m 50m

Scale 1:1250 @ A4





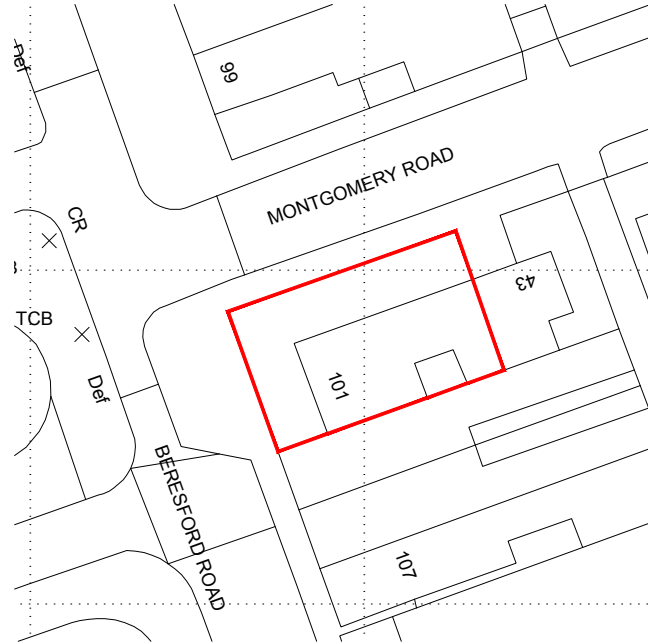
01 EXISTING GROUND FLOOR PLAN
Scale 1:100 @ A1



02 EXISTING FRONT ELEVATION (BERESFORD ROAD)
Scale 1:100 @ A1



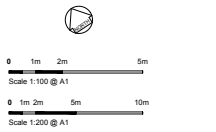
03 EXISTING SIDE ELEVATION (MONTGOMERY ROAD)
Scale 1:100 @ A1



00 EXISTING SITE PLAN
Scale 1:200 @ A1

NOTES

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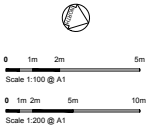
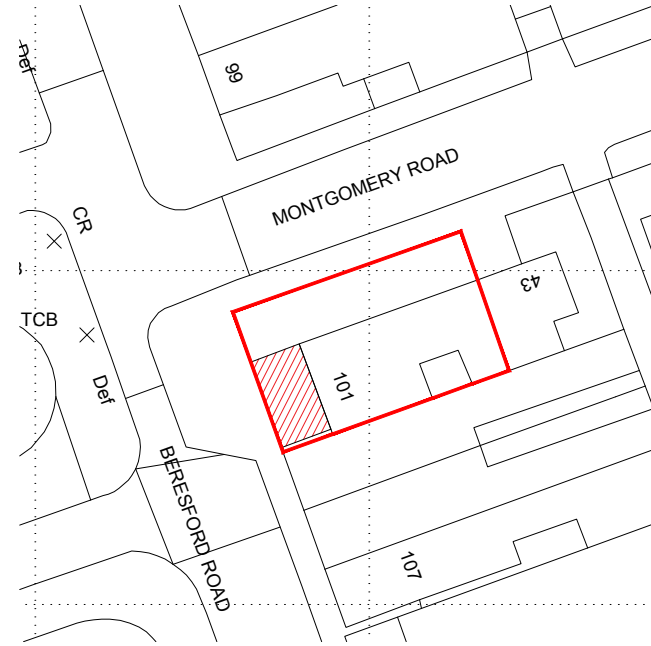


stage	RIBA Stage 3 - Planning		
status	Approval		
client	Private		
project	101 Beresford Road M13 OTA		
title	Existing Plans & Elevations		
date	27/08/25	drawn	GO
scale	Varies @ A1	checked	JSE

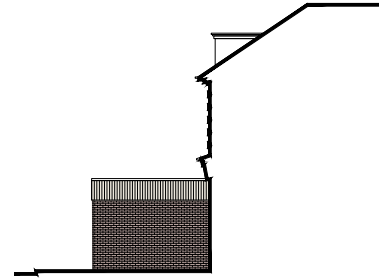
25 Cosgrove Crescent Manchester M35 0JX
info@SOarchitects.co.uk

Job No	DWG No	Rev
0038-03	(02)002	/

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00 PROPOSED SITE PLAN
Scale 1:200 @ A1



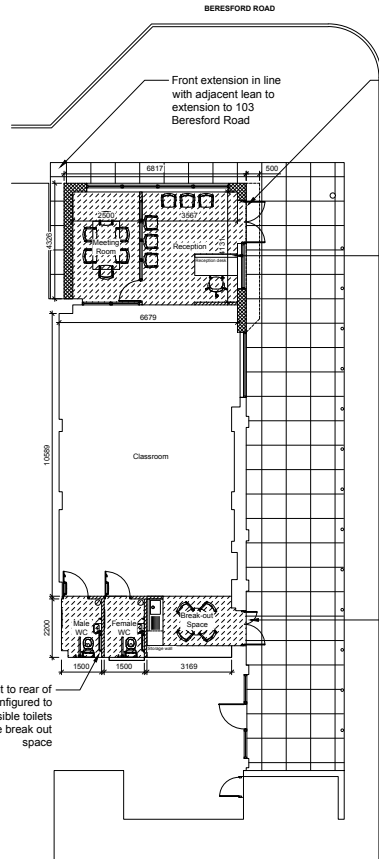
04 PROPOSED SIDE ELEVATION (ADJACENT BOUNDARY)
Scale 1:100 @ A1



02 PROPOSED FRONT ELEVATION (BERESFORD ROAD)
Scale 1:100 @ A1



03 PROPOSED SIDE ELEVATION (MONTGOMERY ROAD)
Scale 1:100 @ A1



01 PROPOSED GROUND FLOOR PLAN
Scale 1:100 @ A1

stage	RIBA Stage 3 - Planning		
status	Approval		
client	Private		
project	101 Beresford Road M13 0TA		
title	Proposed Plans & Elevations		
date	06/10/25	drawn	GO
scale	Varies @ A1	checked	JSE
			
25 Cosgrove Crescent Manchester M35 0JX info@SOarchitects.co.uk			
Job No	DWG No	Rev	
0038-03	(02)003	A	

12.2 Appendix 2 - EA Product 4 (Detailed Flood Risk) Data

See next page.

Info

From: Greater Manchester, Merseyside and Cheshire Enquiries
<inforequests.gmmc@environment-agency.gov.uk>
Sent: 22 October 2025 12:39
To: Info
Subject: Request for information - Ref: EIR2025/36066
Attachments: EIR202536066 DFM.pdf

Categories: Flood Risk Team

Dear Yonas Makoni,

I am writing in response to your request for information, received 17 October 2025 regarding EA Product 4/6 Data Request - 101 Beresford Road M13 0TA.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

We do not have any flood risk data for this location and have provided a detailed Flood Map for reference.

We hold no record of flooding in this area.

However, this does not mean flooding has not occurred in the past or that it will not flood in future.

There are no flood defences in the vicinity of the site.

There are no 2D levels available for this site.

We recommend that you also contact United Utilities and Lead Local Flood Authority Manchester Council,

who may hold additional information (the former especially in relation to sewer flooding).

Lead Local Flood Authority Manchester Council is responsible for issues relating to surface water and hold information on surface water flooding.

For further surface information: [Surface water map - Check your long term flood risk - GOV.UK](#)

For further information on your property's flood risk, visit:

Check Your Long Term Flood Risk: [Check the long term flood risk for an area in England - GOV.UK](#)

Check for Flooding: [Check for flooding in England - GOV.UK](#)

Sign up for flood warnings: [Sign up for flood warnings - GOV.UK](#)

Flood Map for Planning: <https://flood-map-for-planning.service.gov.uk/>

For additional flood risk information, advice and support in your area, please visit:

<https://thefloodhub.co.uk/>

For more information on how the rivers and sea dataset is used and its limitations, we recommend you visit [How to use rivers and sea data - Flood map for planning - GOV.UK](#)

Please refer to the [Open Government Licence](#) which explains the permitted use of this information.

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Yours sincerely,

Sarah Walters

GMMC Area Customers and Engagement Team

Environment Agency

Please tell us how we did

To help improve your experience as a customer we are currently gathering feedback. If you would like to take part in a short customer satisfaction survey, please click the link below:

[Environment Agency FOI Customer Satisfaction Survey](#)