

Flood Risk Assessment



Single Storey Side and Front Extensions, Raising of Roof

Project Address:	11 Rose Cottage Road, Fallowfield, Manchester, M14 6DJ
Date:	07.03.2024
Planning Authority:	Manchester City Council

The Proposal

HOMZ (The agent) has been instructed to submit a planning application to Manchester City Council (the Local Planning Authority) for a Single Storey Side and Front Extensions, Raising of Roof at 11 Rose Cottage Road, Fallowfield, Manchester, M14 6DJ (the site). In support of this application, the following Planning, Design and Access Statement has been constructed to demonstrate the suitability of this site for this proposal and evaluate its accordance with national and local planning policy along with supplementary design guidance.

Flood Risk Assessment

The objectives of this FRA are to demonstrate the following:

- * Whether the proposed development is likely to be affected by current or future flooding.
- * Whether the proposed development will increase flood risk elsewhere.
- * Whether the flood risks associated with the proposed development can be satisfactorily managed.
- * Whether the measures proposed to deal with the flood risk are sustainable.

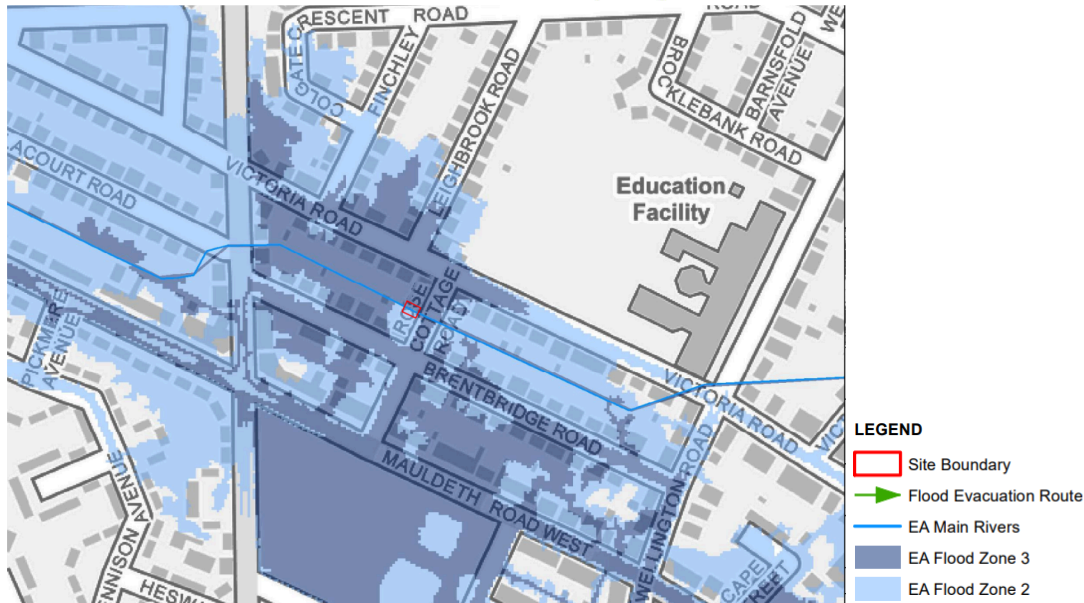
To achieve these objectives the following documents have been consulted and/or referenced:

- * The National Planning Policy Framework (NPPF) CIRIA C753 document The SuDS Manual, 2015
- * Local Flood Risk Management Strategy (LFRMS) Level 1 Strategic Flood Risk Assessment (SFRA)
- * Aerial photographs and topographical survey of the site British Geological Society Records
- * Local Council flood Maps Environment Agency flood maps
- * The CIRIA publication 'C635 Designing for exceedance in urban
- * drainage— Good practice'

Development Site and Location

The site is located at Rose Cottage Road, Manchester. The nearest post code is M14 6DJ. Refer to appendix A for site location plan.

The current use of the site is a one-bedroom dwelling. The current use vulnerability classification of the site is Water compatible. The site is located in the River Flood 3 Refer to Appendix B for more details.



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Development Proposals

The proposed development includes the extension of the property. The total development area is shown in within the red line. Refer to Appendix B for layout of the proposed development.

Site Hydrology and Hydrogeology

The Platt Brook is located approximately 350 m away from the development.

The development is located within a secondary undifferentiated aquifer. The aquifer's layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

The site is not located within a Source Protection Zone.

The ground water levels for this site are unknown.

Site Geology

The British Geological Society records of the site show that it is located within the Chester Formation - Sandstone.

The British Geological Society records show that the superficial deposits are Till, Devensian – Diamicton.

National Planning Policy Framework (NPPF)

The NPPF and its technical guidance is a set of planning policies with the key objective to contribute to the achievement of sustainable development. As part of it, they ensure that flood risk and sustainability are taken into account during the planning process. This ensures that developments are not located in flood risk areas and directs developments to lower risk areas. The NPPF applies a sequential risk- based approach to determining the suitability of land for

development in flood risk areas. The NPPF also encourages developers to seek opportunities to reduce the overall level of flood risk through the layout of the development and the application of Sustainable Drainage Systems (SuDS).

The Flood and Water Management Act (2010)

The Flood and Water Management Act aims to reduce the flood risk associated with extreme weather events. It provides a robust management of flood risk for people, homes and businesses and also encourages the use of SuDS for developments. A robust SuDS strategy should take into account the recommendations given in this Flood Risk Assessment.

Planning policy with regard to development and flood risk in the area is detailed in the Strategic Flood Risk Assessment (SFRA) which was published in 2010. The proposed development site is located within the administrative boundary of the Manchester City.

The SFRA commits to direct new development to locations at lowest flood risk. The SFRA provides information on the levels and flood hazards that could result from flooding. The Environment Agency flood zone maps and the SFRA ignore the presence of existing flood defences when defining the potential extent of flooding.

This report follows the guidance given in the Strategic Flood Risk Assessment by evaluating the flood risk and providing relevant flood mitigation.

Flood hazard assessment

The development has been assessed for all potential flood risks such as river and tidal flood risk, surface water flooding, flooding from groundwater, reservoir flood risk and drainage systems.

The site does not benefit from flood defenses. The Environment Agency records show that the area around the site has not been flooded in the past.

Flooding from River and Sea

The proposed development falls within The Environment Agency Flood Zone 3. The Flood Zone 3 is considered to have a high probability of flooding with a 100 years or less annual probability or >1%AEP.

The climate change allowances are as per the vulnerability of the development , the design life of the building , and the flood zone classification. The climate change allowance for this development is 41%.

Surface Water (Overland Flows) Flood Risk

The Environment Agency maps show that the flood risk from surface water is low. A residual risk of localised shallow ponding remains likely. The Environment Agency surface water flood risk maps are defined through application of a specific procedure based on digital terrain models and assumptions regarding losses to infiltration and/or urban drainage. The surface water flood maps is defined by the Environment Agency as follows.

The nationally produced surface water flood mapping only indicates where surface water flooding could occur as a result of local rainfall. It does not fully represent flooding that occurs from:

- Ordinary watercourses

- Drainage systems or public sewers caused by catchment-wide rainfall events
- Rivers
- Groundwater

The nationally produced surface water flood mapping does not take account of the effect of pumping stations in catchments with pumped drainage. No allowance is made for tide locking, high tidal or fluvial levels where sewers cannot discharge in to rivers or the sea."

The strategic flood risk for the Manchester City confirms that the flood risk for the site is Low.

On the basis of the Environment Agency and the Strategic flood risk assessment's surface water mapping, together with the presence of surface water drainage systems at the site and surrounding area it is concluded that the site is at Low risk of flooding from surface water sources.

Flooding from Drainage Systems in Adjacent Areas

The council records have been reviewed. The flooding from drainage incidents maps were not found in the Strategic Flood Risk Assessment. Therefore, for the purpose of this report, it has been assumed that the risk of flooding from drainage systems is low.

Reservoir Risks

The Reservoir Flood Map (RFM) produced by the Environment Agency do not show the risk to individual properties of dam breach flooding. The maps do not indicate or relate to any particular probability of dam breach flooding. The maps were prepared for emergency planning purposes and can be used to help reservoir owners produce on-site plans and the Local Resilience Forum produce off-site plans, and to prioritize areas for evacuation/early warning in the event of a potential dam failure. The RFM shows that the development could be within the possible dam breach flooding path.

Groundwater Flood Risk

The British Geological Survey's flood risk susceptibility maps show that the development has limited susceptibility to groundwater flooding. The risk from groundwater flood to the site is considered very low.

Critical Drainage Area

The development falls within a Critical Drainage Area. The risks of critical problems and increase of downstream flooding is high. Critical Drainage Area (CDA) is an area that has critical drainage problems and which has been notified to the local planning authority by the Environment Agency.

The Flood hazard assessment has demonstrated that the site is:

- In Flood Zone 3
- At Low risk of surface flooding

- At very low risk of groundwater flooding
- Within a critical drainage area
- Outside of an area with sewer flooding

Under the NPPF it is necessary to demonstrate that, for any new development on the site, it is possible to provide an adequate level of flood protection for personnel working or living at the development.

Site Access and Public Safety

This assessment has demonstrated that the proposed development will have no adverse impact on flood risk in the area surrounding the site. Available evidence indicates that the development would result in no change in surface water generation. There is therefore no basis to indicate that, with respect to flood risk, the proposed development would have adverse impact on public safety.

It will be necessary to ensure that all building users are fully informed of procedures to be implemented during the threat of imminent flooding.

Conclusion

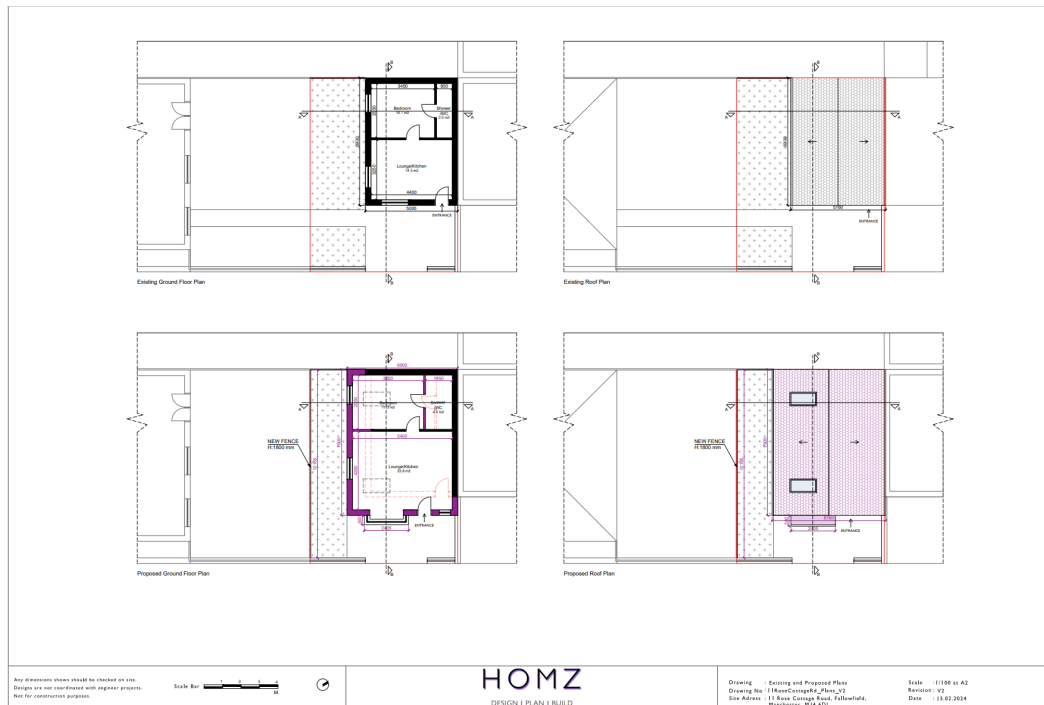
It is concluded that subject to the proposed mitigation measures, the site can be developed in accordance with the provisions of the NPPF and the requirements of the Environment Agency and the local planning authority

This report demonstrates that the proposal will be safe, in terms of flood risk, for its design life and will not increase the flood risk elsewhere.

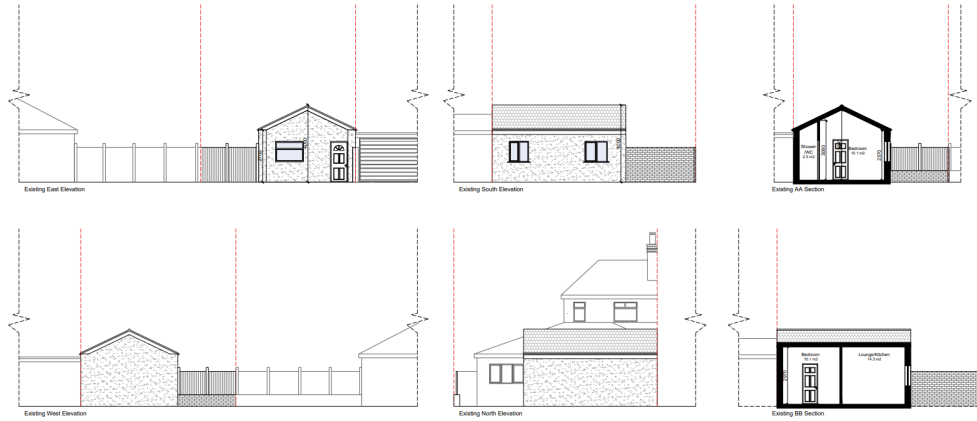
Appendix A – Site Location Plan



Appendix B



DESIGN | PLAN | BUILD



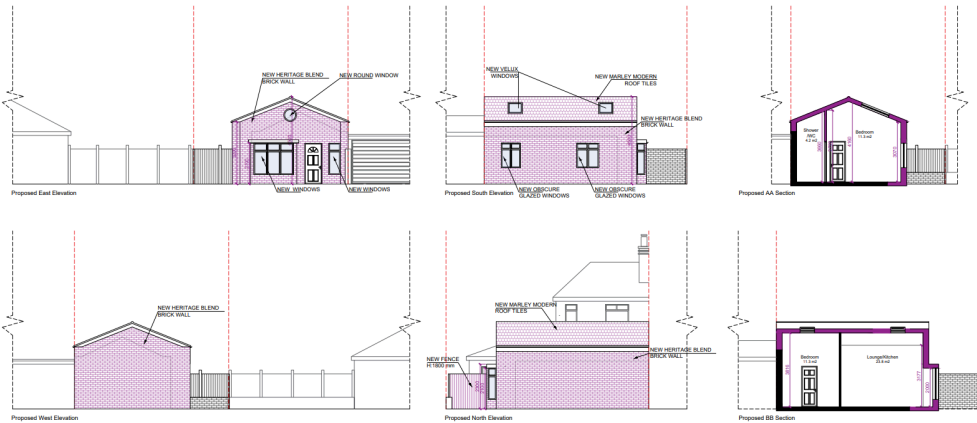
Any dimensions shown should be checked on site.
Designs are not coordinated with engineer projects.
Not for construction purposes.



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Drawing : Existing Elevations And Sections
Drawing No : 11 Rose Cottage Rd_Existing Elevations_V2
Site Address : 11 Rose Cottage Road, Fallowfield,
Manchester, M14 4DJ

Scale : 1/100 at A2
Revision: V2
Date : 13.02.2024



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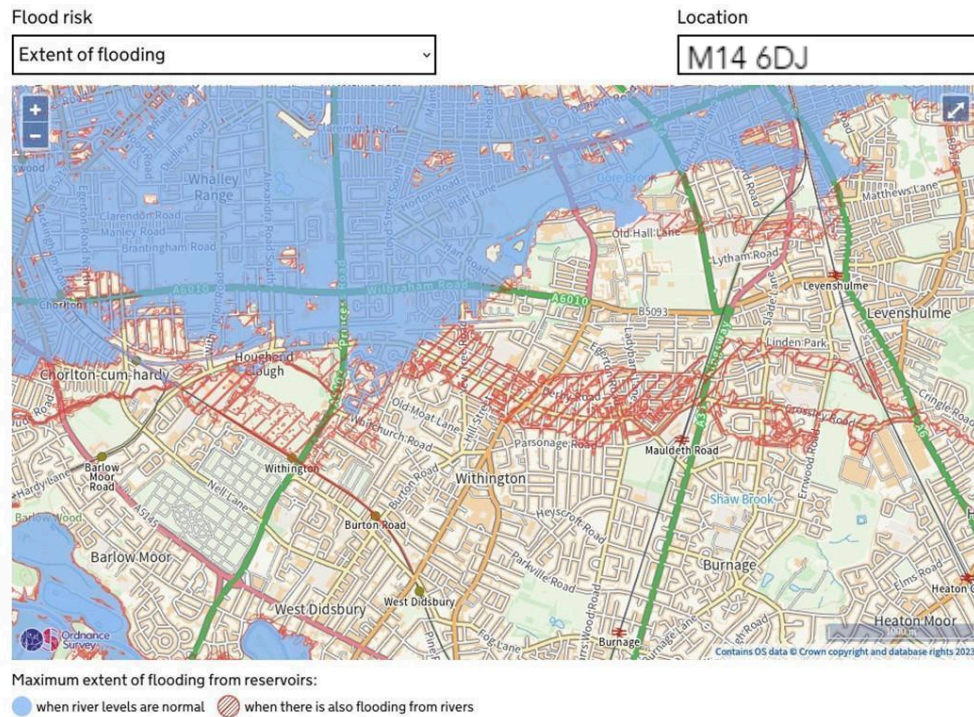


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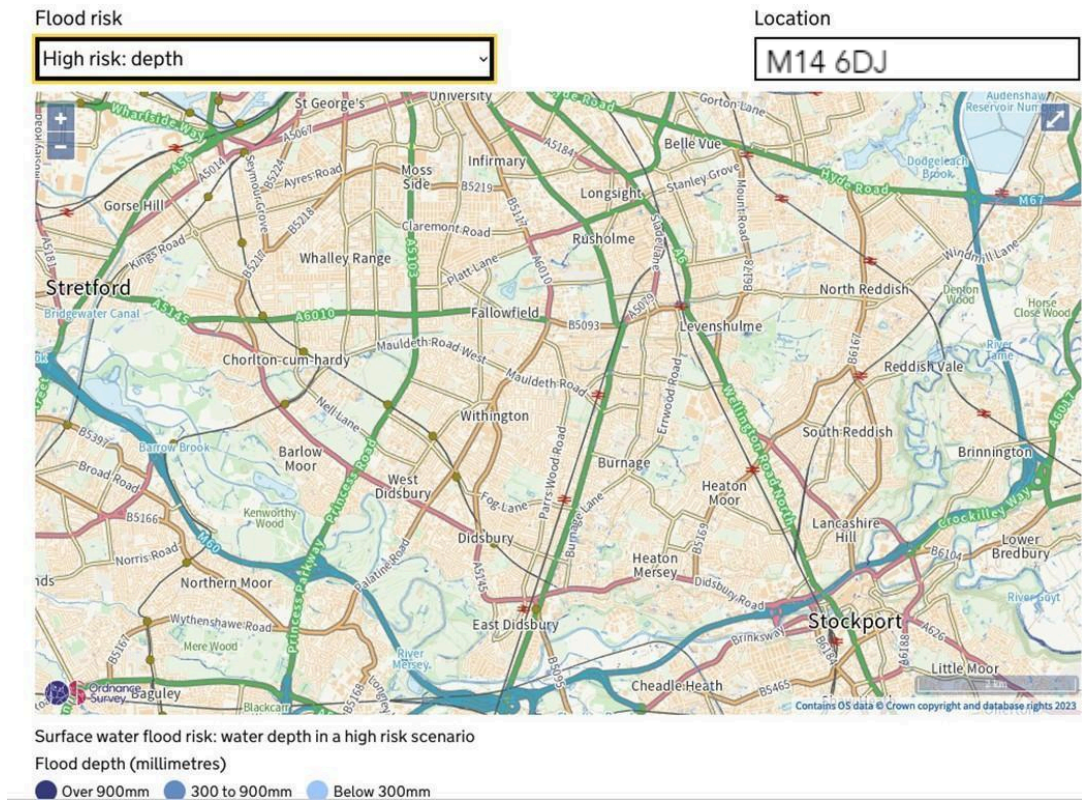
Drawing : Proposed Elevations and Sections
Drawing No 31 Rose Cottage Rd_Proposed Elevations_V2
Site Address : 11 Rose Cottage Road, Fallowfield,
Manchester, M14 6DJ

Scale : 1/100 at A2
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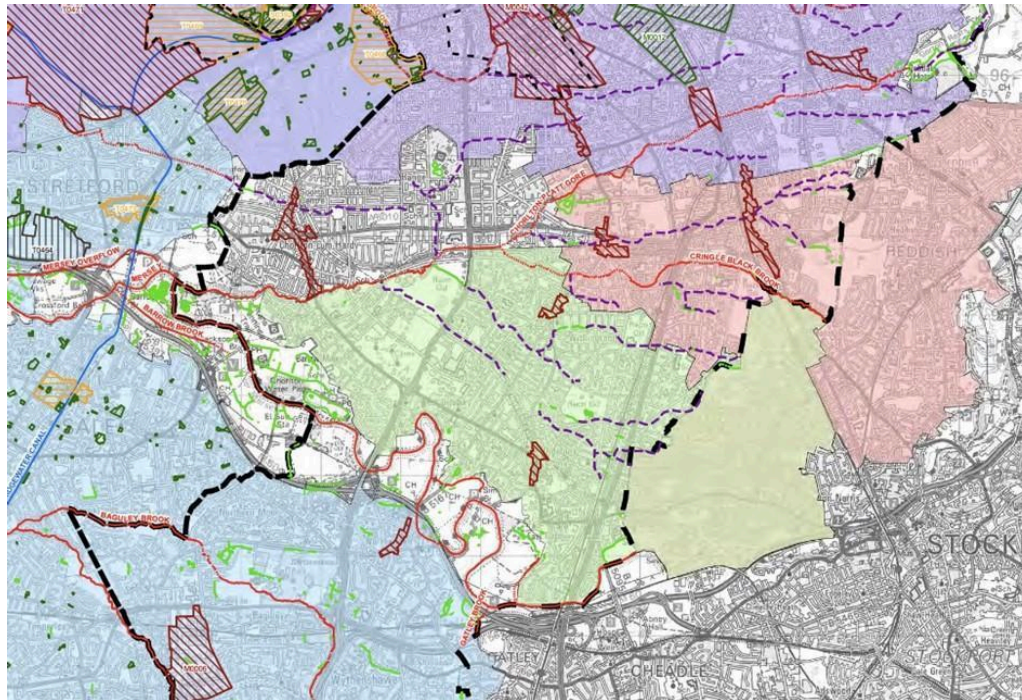
Flood Risk from Reservoirs



Site Surface Water Flood Risk



Critical Drainage Area



Historic Flood Map



Ground Water Flood Risk

Groundwater

Flooding from groundwater is unlikely in this area

▼ What groundwater flooding is and how we can check an area's risk

Flooding caused by groundwater happens when water underground that is usually held in the rocks and soil (known as the water table) gets so high that it flows above the surface.

We use flood alert data to check the risk of flooding from groundwater.

This location is in flood zone 3

What flood zone 3 means

Land within flood zone 3 has a high probability of flooding from rivers and the sea.

You need to carry out a flood risk assessment (FRA) as part of the planning application for this development.

To find out about other factors that might affect the flood risk of this location, you should also check:

- [surface water, groundwater and reservoir flood risk](#)
- Manchester planning authority's strategic flood risk assessment (SFRA), which includes future flood risk

Flood map showing the flood zone your site is in

The map shows the flood risk to your site and the surrounding area.

Flood defences

Flood defences have been built to protect against flooding from rivers or the sea (shown as an orange line on the map). Flood defences reduce, but do not completely stop the chance of flooding because they can be overtopped or fail.

Find out more about [flood defences, flood zones and what they mean](#).