

Flood Risk Assessment

151 Mary Street, Cheetham Hill, Manchester

Date	Prepared For	Reference
January 2026	Shadow Padel Limited	73554



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Contract

GeoSon Limited were instructed by Brendan Dowling of Dowling Building Consultancy Ltd, on behalf of Shadow Padel Limited, by an email dated 8th January 2026 to undertake a Site Specific Flood Risk Assessment to support a proposed planning application for development at 151 Mary Street, Cheetham Hill, Manchester.

Project	Flood Risk Assessment for Planning
Prepared For	Shadow Padel Limited
Location	151 Mary Street, Cheetham Hill, Manchester M3 1DZ
Application	Change of Use from a warehouse into a leisure and fitness facility
Our Reference	73554
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Issued To	Usama Saleh (Shadow Padel Limited) and Brendan Dowling (Dowling Building Consultancy Ltd)
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Purpose

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Introduction

Context

GeoSon Limited have been instructed by Shadow Padel Limited to undertake a Site Specific Flood Risk Assessment (FRA) to support a proposed planning application for development at 151 Mary Street, Cheetham Hill, Manchester.

This FRA has been undertaken in accordance with the revised National Planning Policy Framework (NPPF) December 2024 and the associated Planning Practice Guidance (PPG).

The level of flood risk to and from the site has been determined using third party information including Environment Agency flood data, national government mapping, LiDAR topography data and Local Authority documentation.

National FRA Requirements

In accordance with the National Planning Policy Framework (NPPF), a Flood Risk Assessment is required to accompany a planning application when a development site is:

- located within flood zones 2 or 3 (including minor development and change of use)
- more than 1 hectare (ha) in size
- less than 1 ha in flood zone 1 however includes a change of use in development type to a more vulnerable class (for example from commercial to residential) which could be affected by sources of flooding other than rivers and the sea
- located within an area which has been identified to have critical drainage problems by the Environment Agency

The site is located within Flood Zone 2 and 3 on the Environment Agency's Flood Map for Planning. As such, in accordance with NPPF guidance the applicant is required to submit a Flood Risk Assessment with any planning application at the site.

The Flood Risk Assessment is required to consider the proposed use of the site and assess the potential flood risk posed to the intended development from multiple sources of flooding including rivers, sea, surface water, groundwater, reservoir failure, sewer surcharge and any other artificial sources.

The Flood Risk Assessment will assess the risk posed from all potential sources of flooding so that site users and third-party land will be safe now and for the expected lifetime of the development, taking climate change into account.

Objectives

The objectives of this document are to determine:

- Whether the site is at significant risk of flooding from any source currently or in the future, taking climate change into account
- Whether the development will increase flood risk elsewhere

If the site is identified to be at risk of flooding from any source this FRA will:

- Outline appropriate mitigation measures, compliant with NPPF and PPG, which would be suitable to incorporate within the proposed development to alleviate flood risk on and off site
- Determine whether safe ingress and egress can be achieved and maintained for the lifetime of the development

Site Details

Site Description

The proposed application site is located at 151 Mary Street, Cheetham Hill, Manchester M3 1DZ.

The site measures approximately 890m² in size and is occupied by a warehouse in the north west and external yard space in the east. Car parking is located adjacent south of the built footprint. However, this area does not appear to form part of the application and will remain as is post development. Therefore, the wider car park area has not been considered within this Flood Risk Assessment.

The site is accessed via Thompson Street which is located adjacent north of the application boundary.

Having reviewed aerial imagery, the surrounding area is predominately characterised by industrial and commercial units.

Site Address	151 Mary Street, Cheetham Hill, Manchester M3 1DZ
Current Use	Warehouse
Proposed Use	Leisure and Fitness Facility
OS NGR	SJ 83541 99430
County	Manchester
Local Planning Authority	Manchester City Council
Lead Local Flood Authority	Manchester City Council

Table 1: Site Details



Figure 1: View of the Site from Thompson Street (Source: Google)

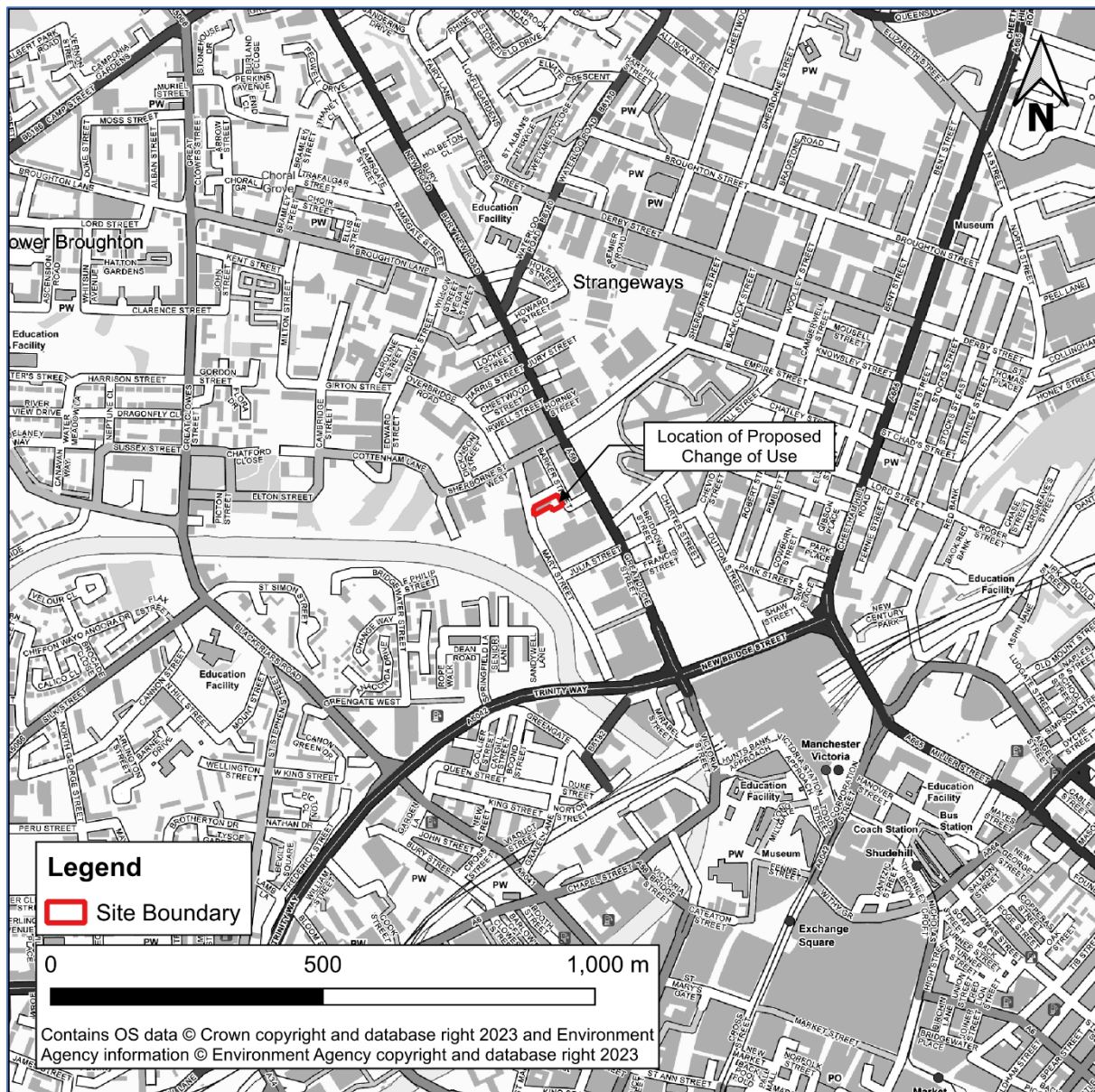


Figure 2: Site Location

Topography and Existing Finished Floor Level

Topographic LiDAR data has been obtained from the Environment Agency to assess the ground elevation profile across the site and within the wider area.

Light Detection and Ranging (LiDAR) is an airborne remote sensing technique, which accurately measures the height of the terrain and surface objects on the ground through the use of a laser, scanner and GPS receiver. The mapping technique measures the distance between the aircraft and the ground to generate precise, three-dimensional information of the terrain and surface objects. Hundreds of thousands of measurements per second are made of the ground, allowing highly detailed surface and terrain models to be generated at different spatial resolutions ranging between 25cm and 2.0 metres.

The LiDAR dataset can be supplied in two forms by the EA:

1. As a Digital Surface Model (DSM), which includes surface objects, such as vehicles, buildings and vegetation, as well as the terrain surface. Or;
2. As a Digital Terrain Model (DTM) produced by removing surface objects such as buildings from the Digital Surface Model through application of bespoke algorithms and manual filtering techniques.

For the purposes of this study the 1.0m resolution Digital Terrain Model has been used.

Whilst the application boundary is predominantly occupied by built footprint, Environment Agency 1.0m LiDAR data indicates that the external ground levels surrounding the property are relatively flat.

According to EA data, external ground levels associated with the hardstanding area adjacent east of the built footprint have an elevation of approximately 27.50mAOD to 27.70mAOD.

Thompson street, located adjacent north of the red outline boundary, is reported to have an elevation range of approximately 27.40mAOD to 27.45mAOD.

The applicant has confirmed that the existing unit does not have a raised threshold. Therefore, adopting a conservative approach, the Finished Floor Level of the warehouse (proposed to be converted) is estimated to be 27.50mAOD.

Figure 3 shows the elevation profile of the site and surrounding area.

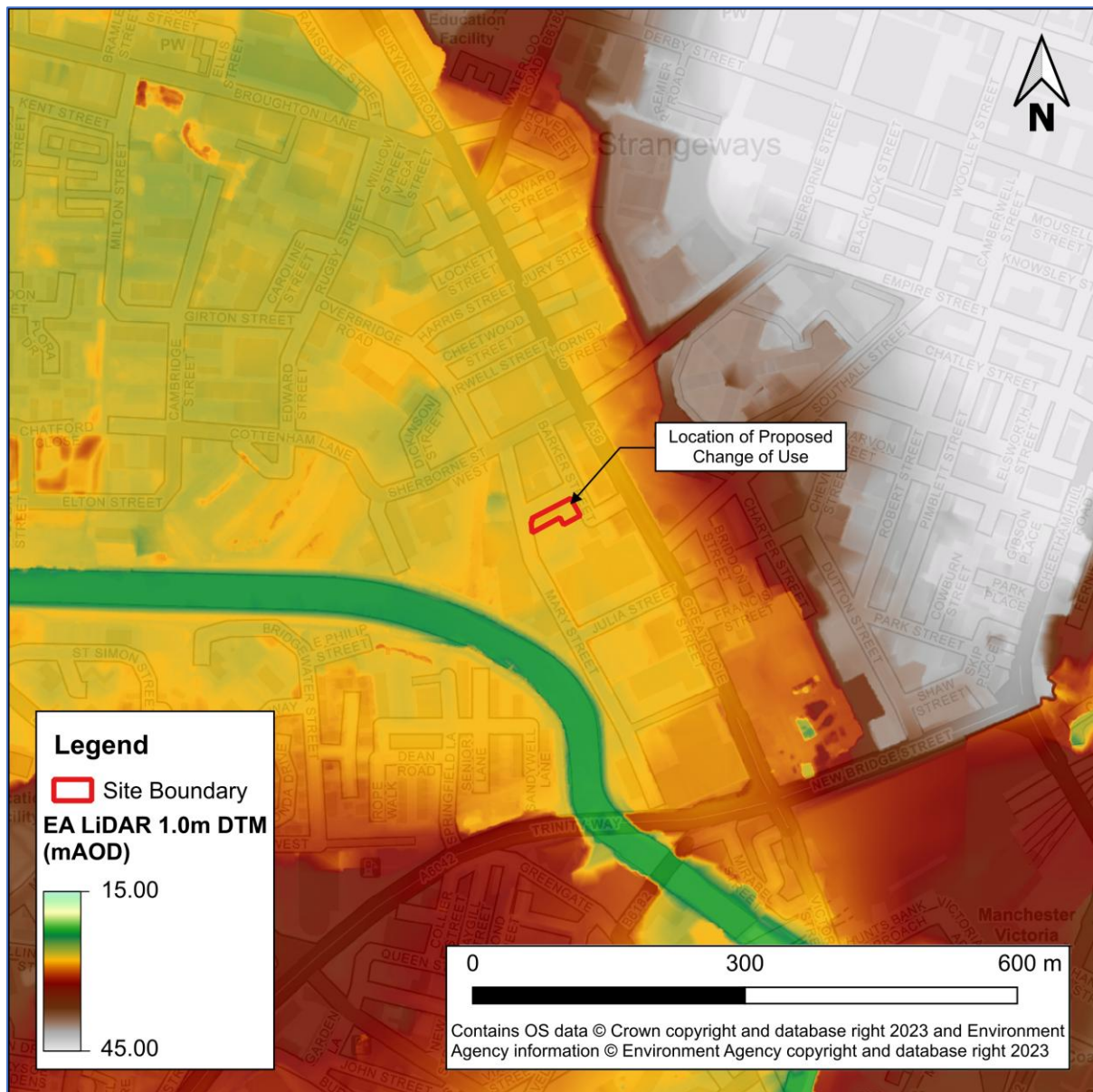


Figure 3: Topography of the Surrounding Area

Geology and Hydrogeology

Review of online British Geological Survey (BGS) records indicate that the site is located upon Chester Formation (Sandstone) bedrock. This geological strata was formed during the Olenekian Age some 246.7 to 249.9 million years ago.

Records state that Chester Formation is typically characterised by *red-brown, yellow, or yellow-mottled, very fine- to coarse-grained sandstones that are commonly cross-bedded, locally micaceous, silty or argillaceous, pebbly or conglomeratic, and generally friable.*

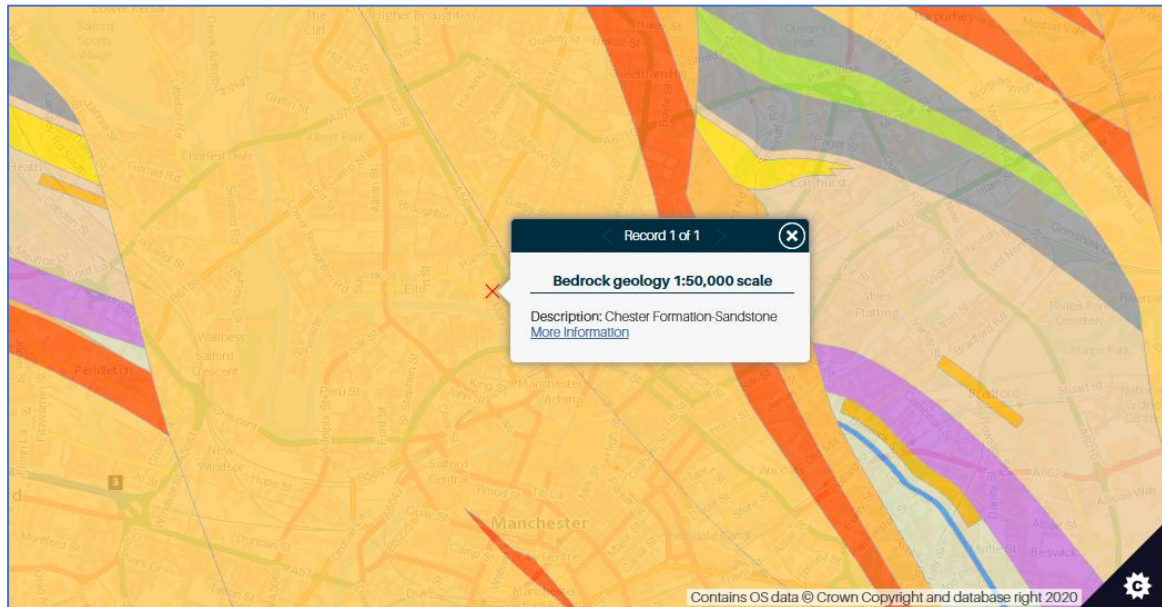


Figure 4: Bedrock Geology Map (Source: British Geological Survey)

According to BGS data the site is also underlain by Alluvium (Clay, Silt, Sand and Gravel) superficial deposits.

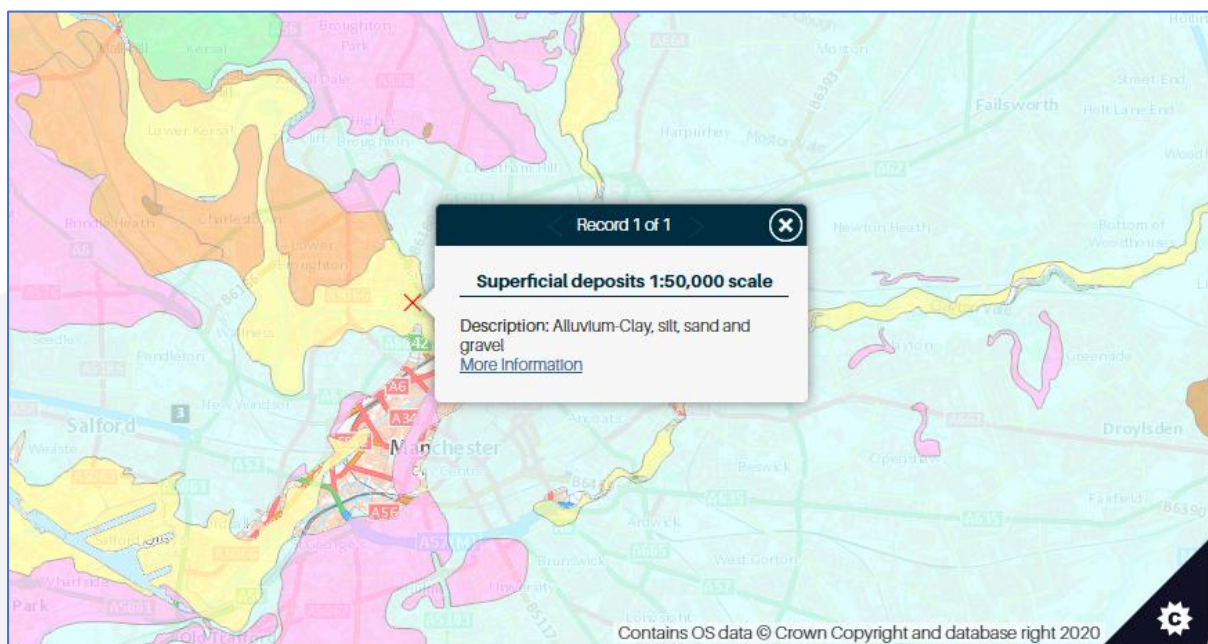


Figure 5: Superficial Deposit Geology Map (Source: British Geological Survey)

Review of Landis Soilscales online viewer suggests that the site is located within an area where the soils are classified as 'Naturally wet very acid sandy and loamy soils'.

DEFRA 'Magic Maps' indicate that the site is not located within a groundwater Source Protection Zone. According to DEFRA 'Magic Maps' the closest Source Protection Zone to the development is located approximately 1.70km south and is classified as a Zone III – Total Catchment.

Nearby Watercourses

Review of aerial imagery indicates that there are no open watercourses at, or along the boundaries of, the site. However, several water features have been identified within a 1.0km radius of the red outline boundary, including:

- The River Irwell 120m south west
- The River Irk approximately 600m south east, and
- The Grey Irwell 650m south.

The River Irwell and the River Irk are classified as Main Rivers and are therefore managed by the Environment Agency.

The watercourses nearest to the site are shown in Figure 6 (below).

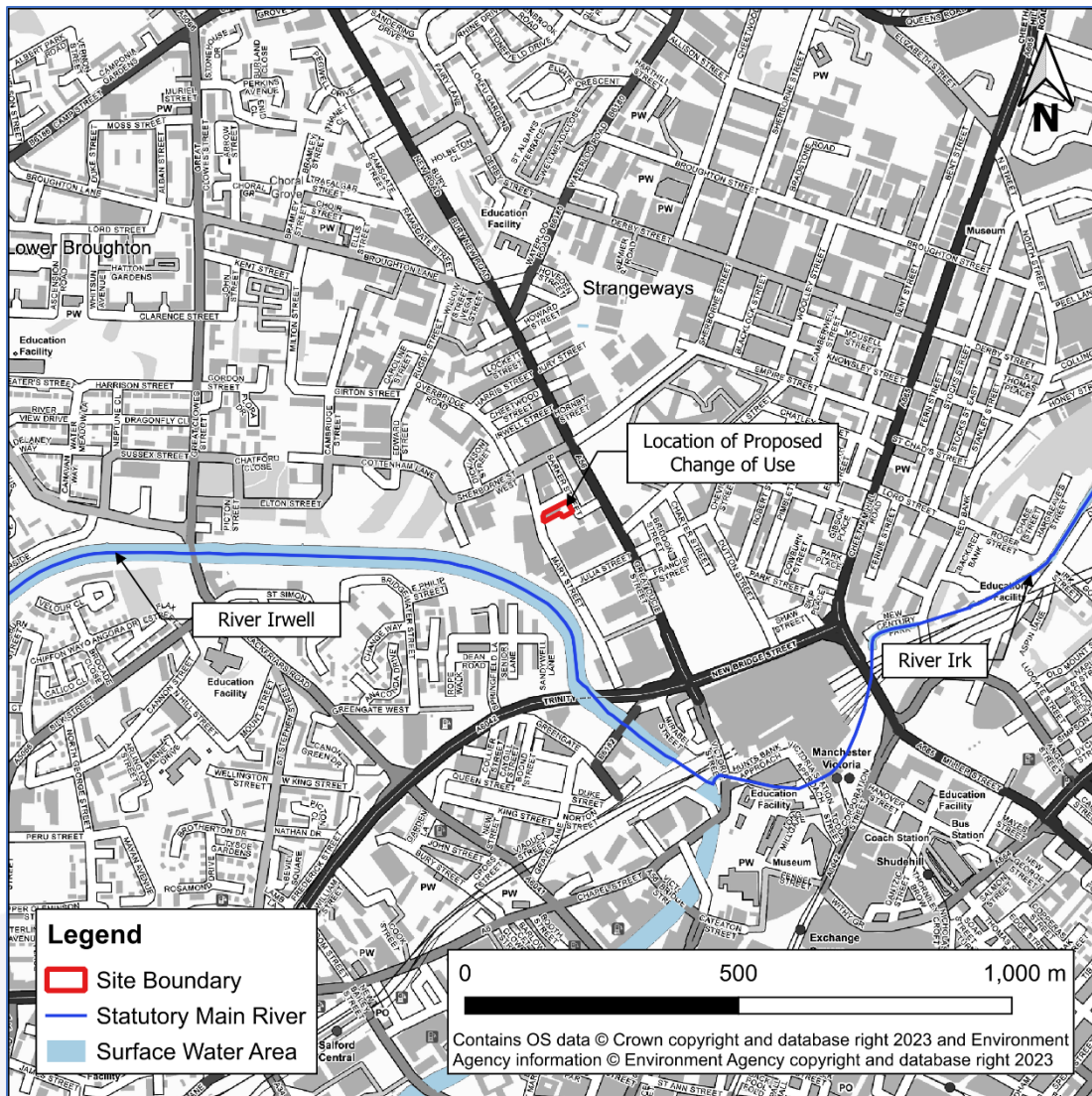


Figure 6: Watercourses Near the Site

Proposed Development

Development Proposals

The proposed planning application comprises Change of Use of the existing building from a warehouse into a leisure and fitness facility with associated parking.

The applicant has confirmed that all works will be internal and there will be no increase in built footprint or external impermeable surfacing as a result of the proposals.

Given the nature of the development, it is assumed that the Finished Floor Levels within the building will remain as is.

The proposed site plans are shown in Figure 7, Figure 8, and Appendix A.

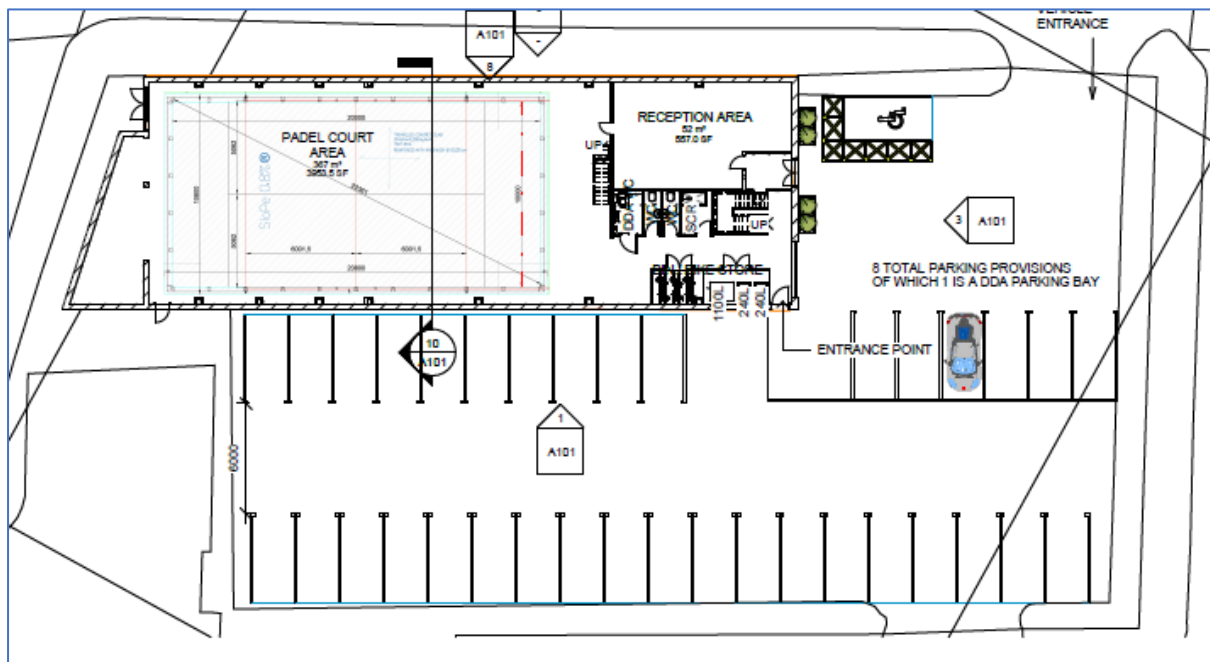


Figure 7: Proposed Ground Floor Layout Plan (Source: NK Architectural)

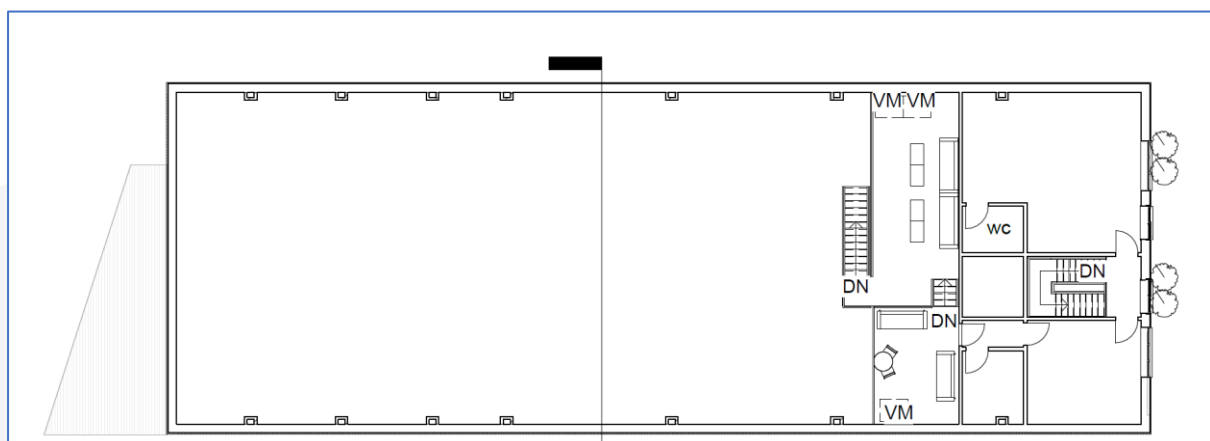


Figure 8: Proposed First Floor Layout Plan (Source: NK Architectural)

Development Vulnerability Classification

The National Planning Policy Framework classifies land use type in terms of vulnerability to flooding. Annex 3 of the NPPF details the flood risk vulnerability classification for each land use type (refer below).

Essential infrastructure

- Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk.
- Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including infrastructure for electricity supply including generation, storage and distribution systems; including electricity generating power stations, grid and primary substations storage; and water treatment works that need to remain operational in times of flood.
- Wind turbines.
- Solar farms.

Highly vulnerable

- Police and ambulance stations; fire stations and command centres; telecommunications installations required to be operational during flooding.
- Emergency dispersal points.
- Basement dwellings.
- Caravans, mobile homes and park homes intended for permanent residential use.
- Installations requiring hazardous substances consent. (Where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or water-side locations, or need to be located in other high flood risk areas, in these instances the facilities should be classified as 'Essential Infrastructure'.)

More vulnerable

- Hospitals
- Residential institutions such as residential care homes, children's homes, social services homes, prisons and hostels.
- Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels.
- Non-residential uses for health services, nurseries and educational establishments.
- Landfill* and sites used for waste management facilities for hazardous waste.
- Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.

Less vulnerable

- Police, ambulance and fire stations which are not required to be operational during flooding.
- **Buildings used for shops; financial, professional and other services; restaurants, cafes and hot food takeaways; offices; general industry, storage and distribution; non-residential institutions not included in the 'more vulnerable' class; and assembly and leisure.**
- Land and buildings used for agriculture and forestry.
- Waste treatment (except landfill* and hazardous waste facilities).

- Minerals working and processing (except for sand and gravel working).
- Water treatment works which do not need to remain operational during times of flood.
- Sewage treatment works, if adequate measures to control pollution and manage sewage during flooding events are in place.
- Car parks.

Water-compatible development

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

Table 2: Flood Risk Vulnerability Classification (Source: NPPF)

The site is currently occupied by a warehouse. Therefore, in terms of flood risk vulnerability, the property as a whole is considered "Less Vulnerable".

The proposals comprise Change of Use of the building into leisure and fitness facility. As such, according to NPPF guidance the building will remain classified as "Less Vulnerable" post conversion.

In light of this, it is considered that the vulnerability of the site as a whole will not change as a result of the development.

Sequential and Exception Test Guidance

In accordance with the National Planning Policy Framework, and associated Planning Practice Guidance, the Sequential and Exception Tests should be undertaken to determine the most appropriate location for a development and used to inform the proposed design layout.

The Sequential Test is designed to steer new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account.

The Exception Test is undertaken when development in a flood risk area cannot be avoided. The Exception Test comprises of two elements which need to be satisfied before a development can be permitted. It needs to be demonstrated that:

1. A development will provide wider sustainability benefits to the community that outweigh flood risk; and
2. A development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test Required	✓	✓	✓
Zone 3a	Exception Test Required	X	Exception Test Required	✓	✓
Zone 3b	Exception Test Required	X	X	X	✓

Table 3: Flood risk vulnerability and flood zone 'incompatibility' (Source: PPG)

Given the nature of the proposals the development is considered 'Less Vulnerable'.

According to Table 3 (above) 'Less Vulnerable' development is considered suitable within Flood Zone 1, 2 and 3a.

EA Standing Advice

Environment Agency Standing Advice guidance applies to household or non-domestic extensions where the additional footprint created by the development is no more than 250 square metres.

The proposals relate to Change of Use of an existing building into a leisure and fitness facility.

There will be no increase in the built footprint at the site as a result of the development. As such, it is considered that EA standing advice applies.

In accordance with the EA's Standing Advice, the following information is required within the Flood Risk Assessment:

- Plans showing the Finished Floor Levels (FFL) and estimated flood levels
- Assurance that the floor levels will be set at least 600 millimetres (mm) above the estimated flood level. This may be able to be reduced to 300mm if there is a high level of certainty about the estimated flood level. However, in instances where there is a particularly high level of uncertainty the threshold may need to be increased.
- Details of appropriate flood resistance and resilience measures up to at least 600mm above the estimated flood level. Resilience measures should be recommended in accordance with Construction Industry Research and Information Association (CIRIA) Property Flood Resilience Code of Practice guidance.
- Confirmation that the development will not be flooded by surface water runoff or groundwater. This could be by diverting water away from the property (but managing the diverted water safely within the wider site) or by raising finished floor levels above the estimated flood depths.

If the minor extension is considered to be at increased flood risk as a result of multiple minor extensions in the area, the FRA will also need to include an assessment of off-site flood risk.

Assessment of Flood Risk

Flood risk is a combination of:

- the probability (likelihood or chance) of a flood event happening; and
- the potential consequences (impact) if an event were to occur.

In accordance with guidance set out in the Flood Risk and Coastal Change section of the PPG, areas at risk of flooding should be considered as those at risk of flooding from any source, now or in the future.

This study uses publicly available data (including EA flood maps and Local Authority documentation) to assess the potential flood risk posed to the intended development from multiple sources of flooding and the risk of flooding elsewhere, as a result of the proposals.

Where flood risks are identified this study outlines appropriate mitigation measures, compliant with NPPF and PPG, which would be suitable to incorporate within the proposed development to manage said flood risk(s).

Document Review

The following Local Authority documents have been reviewed as part of this study:

- Manchester City, Salford City and Trafford Councils Level 1 Strategic Flood Risk Assessment (2010)
- Manchester City, Salford City and Trafford Councils Level 2 Hybrid Strategic Flood Risk Assessment (2011)
- Manchester City Council Local Flood Risk Management Strategy (2014)
- Greater Manchester Combined Authority Strategic Flood Risk Management Framework (2019)
- Greater Manchester Combined Authority Level 1 Strategic Flood Risk Assessment Update (2019)
- Greater Manchester Combined Authority Level 2 Hybrid Strategic Flood Risk Assessment (2020)
- Manchester City Council Section 19 Flood Investigation Report (2025)

Historical Flooding

Historical flood incident information within the area has been assessed based on a review of Manchester City Council and Greater Manchester Combined Authority documentation along with the Environment Agency's Historic Flood Map and Manchester City Council's Section 19 Flood Investigation Report.

According to the Environment Agency's Recorded Flood Outline and Historic Flood Map datasets the site was impacted by fluvial flooding in November 1866, September 1946 and December 2015; caused by The River Irwell exceeding capacity and overtopping defences, respectively. Flood extent mapping has been provided by the Environment Agency as part of the Product 4 response. Refer to Figure 9.

Manchester City Council's Level 1 SFRA (2010) states that the 1946 flood event impacted 5,300 properties and 243ha of land.

Details of historic flood incidents were not made available by Manchester District for inclusion within the 2019 Greater Manchester Combined Authority SFRA. Therefore, there are no further details relating to the 2015 flood event.

A Section 19 Flood Investigation Report was published by Manchester City Council in response to a storm event which occurred in December 2024 / January 2025. The Flood Investigation Report summarised that heavy rainfall impacted Manchester from the 1st to 31st of December 2024, leading to 103.6mm of recorded rainfall. Between the 31st of December 2024 to the 1st of January 2025 81.4mm of rainfall was recorded causing rivers to exceed capacity and surface water flooding.

Review of the Section 19 Investigation shows that whilst areas in the north and south of Manchester were impacted the site itself along with the immediate surrounding area is not recorded to have suffered flooding during this period.

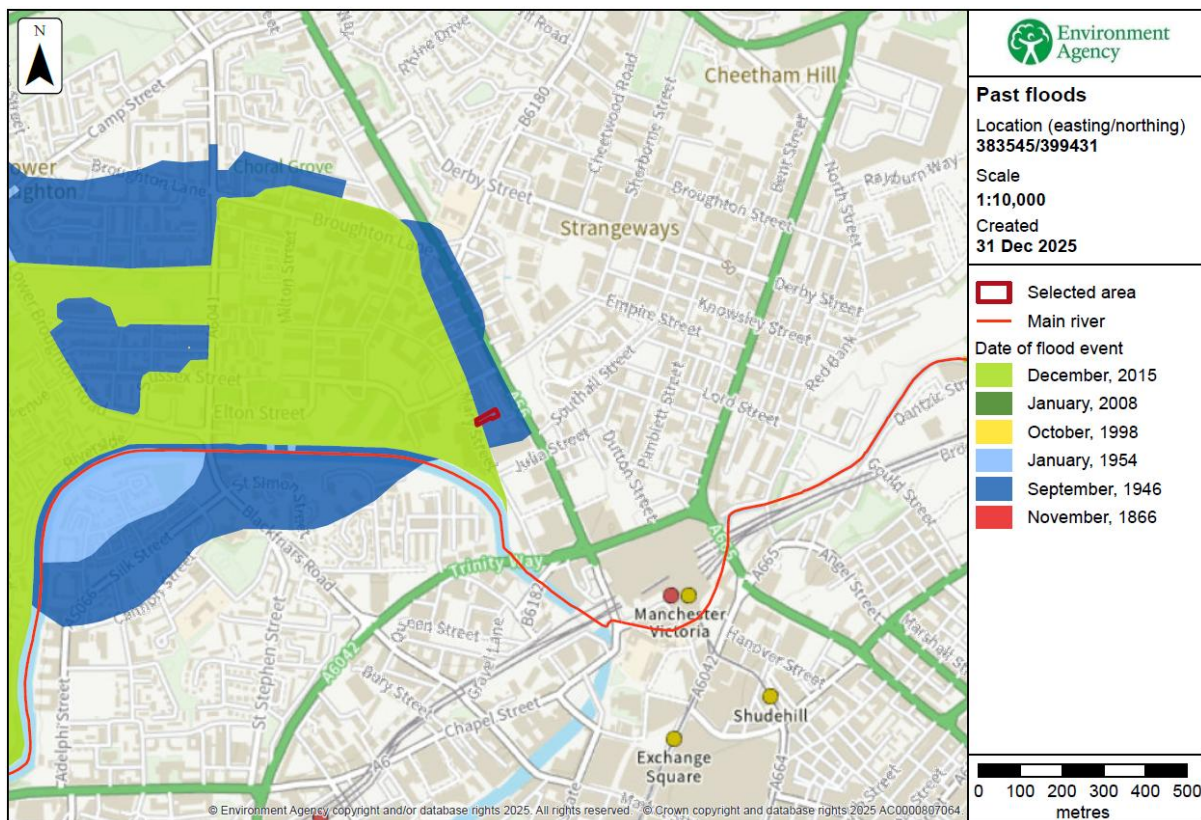


Figure 9: Historic Flood Map (Source: EA)

Fluvial (River) / Tidal (The Sea)

Environment Agency Flood Zones

The Environment Agency has created a set of Flood Zones which show the risk of flooding from rivers and sea in England, for several return period events, ignoring the presence of defences. The Flood Zones are shown on the EA's Flood Map for Planning which forms the basis for assessing flood risk and development suitability under the National Planning Policy Framework.

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than a 1 in 1000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map for Planning – all land outside Zones 2, 3a and 3b)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1000 annual probability of tidal flooding. (Land shown in light blue on the Flood Map)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of tidal flooding. (Land shown in dark blue on the Flood Map)
Zone 3b Functional Floodplain	This zone comprises land where water from rivers or the sea has to flow or be stored in times of flood. The identification of functional floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. The functional floodplain will normally comprise: • land having a 1 in 30 or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively; or • land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 1 in 1000 annual probability of flooding). Areas of functional floodplain should be identified by local planning authorities within Strategic Flood Risk Assessments, in agreement with the Environment Agency. (Note, Zone 3b is not separately distinguished from Zone 3a on the Flood Map).

Table 4: Flood Zone Definitions (Source: Planning Practice Guidance)

The Flood Map for Planning was updated on the 25th March 2025.

The updated Flood Map for Planning continues to show Flood Zones 1, 2 and 3 for the present day (ignoring the benefits of defences).

However, the Environment Agency's mapping tool now also displays the following information:

- Rivers and sea with defences for the present day and climate change scenarios
- Rivers and sea without defences for the present day and climate change scenarios
- Surface water flood extents for the present day

According to the Environment Agency's Flood Map for Planning (refer to Figure 10) the site is predominantly located within Flood Zone 2 with the external hardstanding area shown to be situated within Flood Zone 3.

Flood Zone 2 and 3 are defined as follows:

- Flood Zone 2 - land which has between a 1 in 100 and 1 in 1000 annual probability of river flooding.
- Flood Zone 3 - land which has a 1 in 100 or greater annual probability of river flooding.

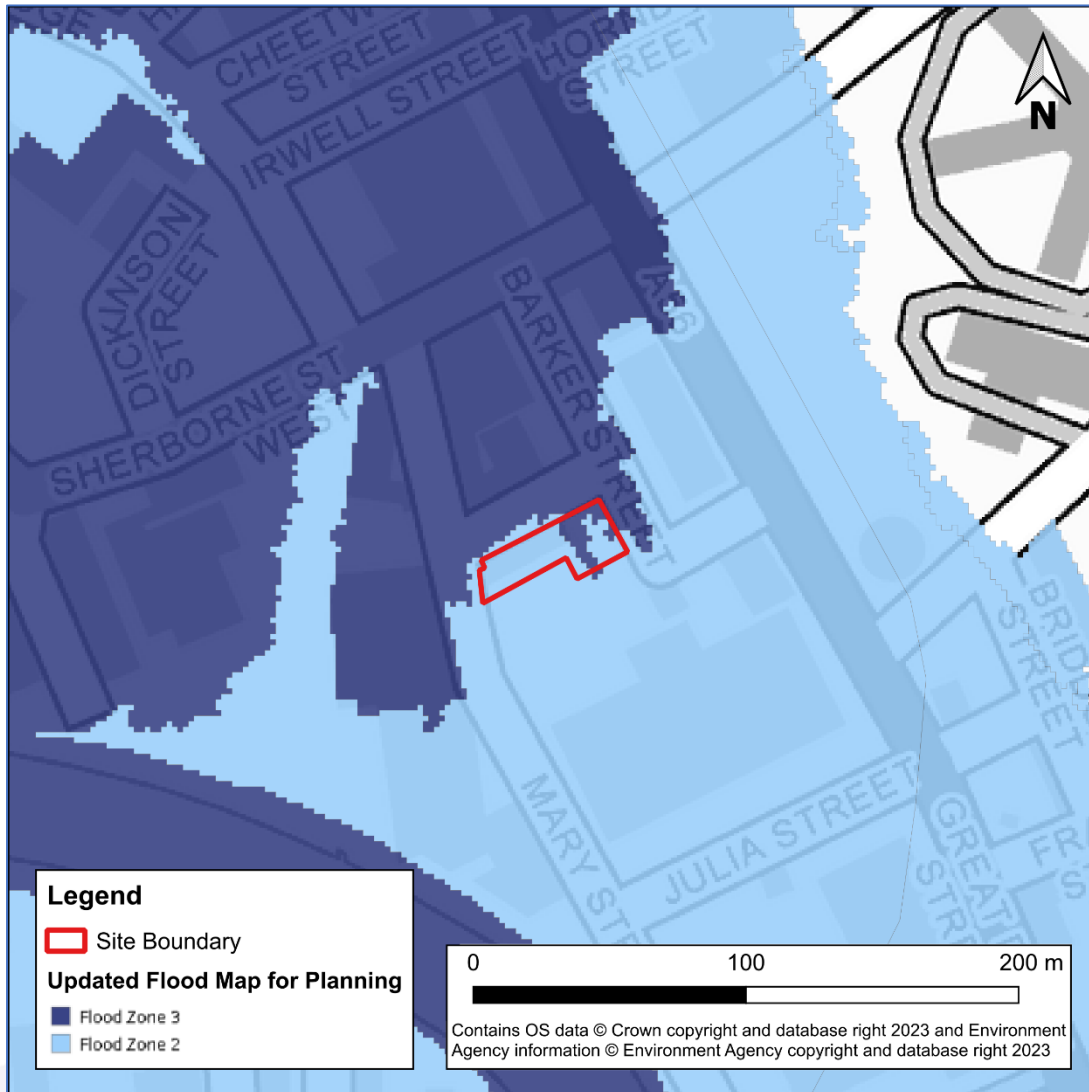


Figure 10: Environment Agency Flood Map for Planning (Source: EA)

Environment Agency Product 4 Response

Considering that the site has been modelled within Flood Zone 2 and 3 on the EA's Flood Map for Planning a Product 4 enquiry has been raised with the Environment Agency to obtain detailed flood model information in the relation to the development.

A Product 4 response (EA reference: CKYA2XV4YYRD) was received in January 2026, refer to Appendix B. Within which the Environment Agency provided details of in-channel flood levels and flows as well as 2D floodplain levels extracted from the Lower Irwell (2017) flood model.

Defended and undefended 2D floodplain levels and corresponding depths have been provided for 24 node points across the site and within the immediate surrounding area for several return period events including the 1% AEP (1 in 100 year), 0.1% AEP (1 in 1000 year) and three 1% AEP (1 in 100 year) plus climate change scenarios. Refer to Figure 11.

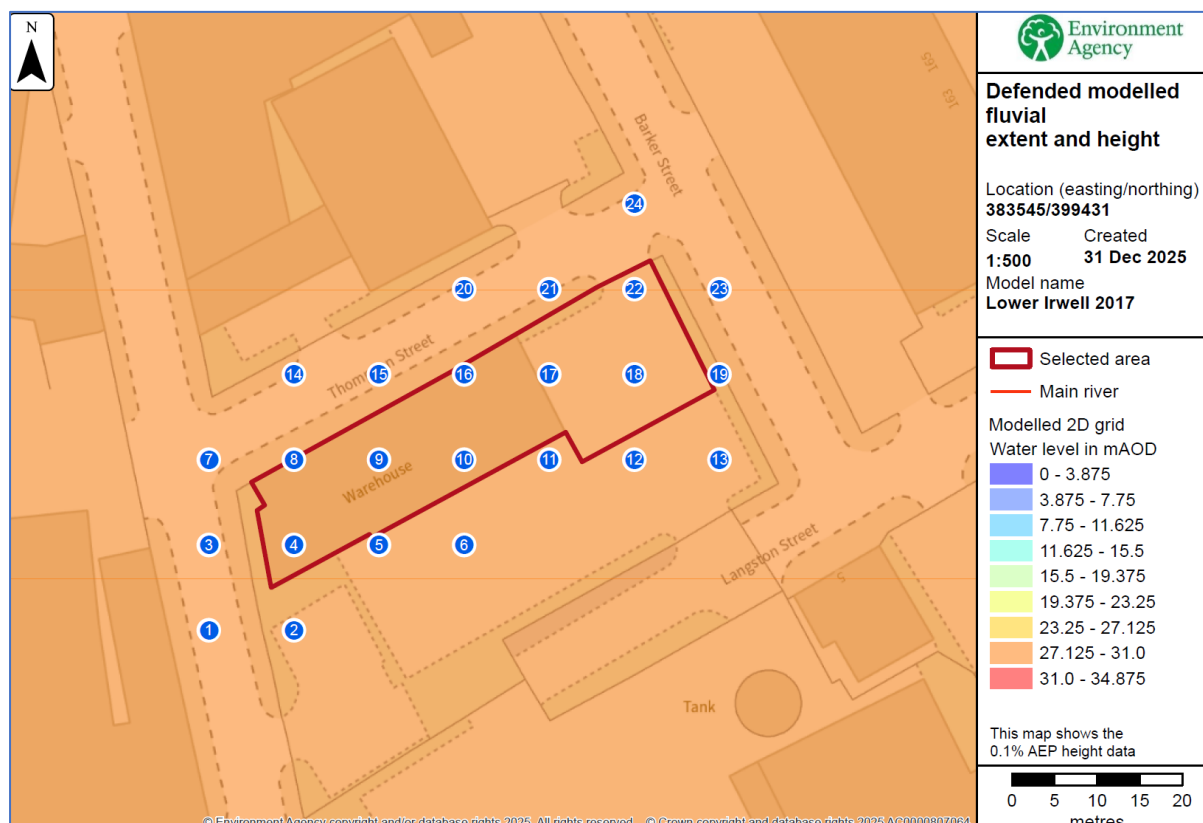


Figure 11: Node Point Locations (Source: EA)

Table 5 shows the maximum reported fluvial 2D floodplain level at the site for each return period event.

The full list of floodplain levels and depths at the site along with in-channel flood levels and flows can be seen in Appendix B.

Return Period Event	Highest Modelled Floodplain Levels at the Site (mAOD)	
	Defended	Un defended
20% (1 in 5) AEP	-	-
10% (1 in 10) AEP	-	-
4% (1 in 25) AEP	-	-
2% (1 in 50) AEP	-	-
1.33% (1 in 75) AEP	-	27.37
1% (1 in 100) AEP	-	27.49
1% (1 in 100) AEP +30% CC	27.81	28.31
1% (1 in 100) AEP +35% CC	27.92	28.52
1% (1 in 100) AEP +70% CC	29.54	29.96
0.5% (1 in 200) AEP	-	27.73
0.1% (1 in 1000) AEP	30.25	30.60

Table 5: Modelled Floodplain Levels at the Site (Source: Lower Irwell 2017 Flood Model)

Climate Change Uplifts

In July 2021 the Environment Agency issued revised peak river flow allowances for management catchments in England. As part of the update the EA published the Peak River Flow Map which shows anticipated changes to peak river flows over time based on management catchment. Management catchments are sub-catchments of river basin districts.

According to the EA's Peak River Flow Map the development and the sections of watercourse within proximity to the site are located within the Irwell Management Catchment. Updated peak river flow allowances for this catchment are as follows:

Epoch	Central	Higher	Upper
2020s	12%	15%	24%
2050s	19%	26%	43%
2080s	35%	46%	75%

Table 6: Irwell Management Catchment Peak River Flow Allowances

The specific Climate Change allowance required to be assessed within the Flood Risk Assessment, to account for future change in peak river flows, is dependent on the development's design lifetime and vulnerability classification.

In accordance with the development lifetime guidance, commercial developments should be considered to have a minimum lifetime of 75 years. Therefore, the allowances for the 2080s epoch (design life between 2070 and 2125) are considered most appropriate for use within this assessment.

Additionally, given that the development comprises Change of Use into a leisure and fitness facility the proposals are considered 'Less Vulnerable'. In line with government guidance Less Vulnerable developments located in Flood Zones 2 and 3a should use the Central Allowance to account for future climate change.

As such, considering the nature of the proposals, the development should be assessed against the 1% (1 in 100) AEP +35% Climate Change fluvial event.

Having reviewed the outputs from the Lower Irwell (2017) flood model, 2D floodplain levels are available for the defended and undefended 1% (1 in 100) AEP +35% Climate Change scenario.

Comparison of the highest undefended 1% AEP plus 35% CC floodplain level (28.52mAOD) with the elevation of external ground levels at the site (27.50mAOD to 27.70mAOD, taken from EA LiDAR data) indicates that land outside of the built footprint may experience depths of between 0.82m and 1.02m during the undefended 1 in 100 year (+35%) climate change event.

However, it is important to note that the site is offered protection by defences located within the surrounding area. As reflected in the defended model results.

Comparison of the highest defended 1% AEP plus 35% CC floodplain level (27.92mAOD) with the elevation of the site indicates that land outside of the built footprint may experience depths of between 0.22m and 0.42m during the undefended 1 in 100 year (+35%) climate change event.

Defences

According to information provided within the Environment Agency's Product 4 response, flood defences in the form of walls, embankment and engineered high ground are located along the banks of the River Irwell.

These defences are reported to offer the site and the surrounding area a design standard of protection of 75 years.

The closest sections of wall and engineered high ground located along the eastern bank of the River Irwell (labelled 3, 5 and 7 in Figure 12) are reported to have a crest height of 27.07mAOD and 27.66mAOD.

Figure 12 shows the closest formal flood defences to the development based on the EA's AIMS Spatial Flood Defences dataset. Further information relating to the formal flood defences can be found in Appendix B.

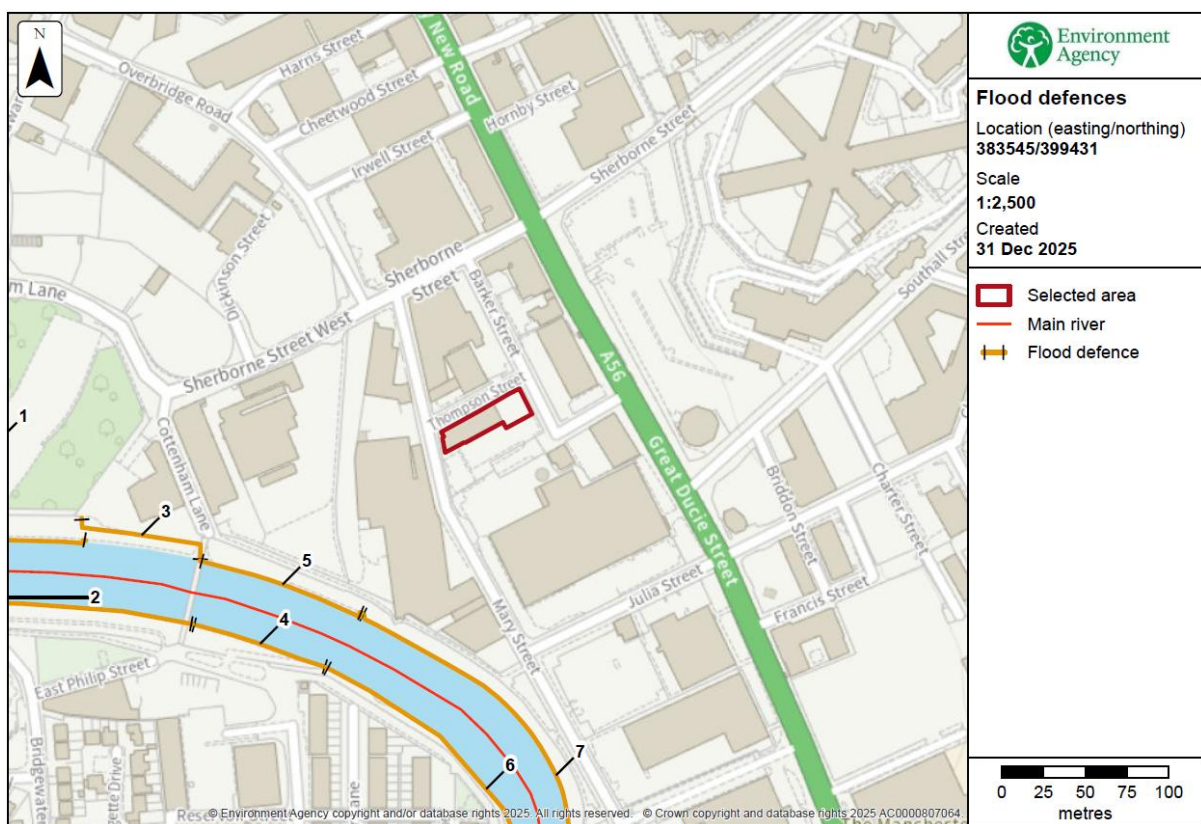


Figure 12: Formal Flood Defences Near the Site (Source: EA)

Pluvial (Surface Water)

Pluvial flooding occurs as a result of excess overland flow and stormwater ponding. Surface water flooding can happen when water does not have time to soak into the underlying ground or cannot infiltrate at all, for instance because the ground is already fully saturated.

This mechanism of flooding can also arise when the volume of precipitation exceeds the capacity of the drainage system meaning that water is unable to drain away through the sewer network and instead flows overland.

Overland flow will follow the local topography and can therefore pose a risk to both the development and surrounding third party land.

The risk posed to the site from surface water flooding has been assessed using the new National Flood Risk Assessment (NaFRA) 'Risk of Flooding from Surface Water' dataset. The updated Risk of Flooding from Surface Water maps were published on the 28th January 2025 by the Environment Agency and were subsequently integrated into the Flood Map for Planning on 25th March 2025.

The revised mapping is considered to represent a significant improvement on previous iterations of the surface water flood maps, both in terms of method and representation of the risk of flooding.

The NaFRA dataset was created by combining the best available flood models (including locally produced detailed model information and national flood modelling) to generate the probability of flood risk for each 2m grid square of land, with the aim of using the best available flood risk information in any one location.

Considerable improvements have been made when compared to the previous iterations of the RoFSW dataset including a more accurate representation of buildings within the model terrain to better capture the influence of built footprints on flow routes, the correction of misinterpretations in earlier surface water maps that wrongly suggested some buildings would remain dry, and a focus toward assessing flood risk to land rather than individual properties.

The new RoFSW dataset includes details of the annual chance of flooding to a specific depth. The dataset presents the likelihood (categorised as High, Medium or Low) of flooding to reach the following depth increments at a set location in any given year:

- 0.2m
- 0.3m
- 0.6m
- 0.9m
- 1.2m

Risk is displayed as one of the following likelihood categories:

High	An area which has more than 3.3% chance of flooding each year
Medium	An area which has between 1% and 3.3% chance of flooding each year
Low	An area which has between 0.1% and 1% chance of flooding each year
Very Low	An area which has less than a 0.1% chance of flooding each year

The 2025 RoFSW dataset includes modelled outputs for both the present day and climate change scenarios. The newly introduced climate change map shows the predicted impacts of climate change on future flood risk for the 2050's epoch (2040 – 2060) where the central allowances have been used to support short and medium-term decisions informed by the highest flood likelihood projections.



Figure 13: Risk of Flooding from Surface Water Extents (Source: EA)

The EA's Risk of Flooding from Surface Water data (Figure 13) shows that the entire site is located within an area modelled to be at 'Very Low' risk of flooding from surface water.

Parts of Thompson Street adjacent north of the application boundary, Mary Street adjacent west, and Barker Street adjacent east are modelled to be at 'Low' to 'High' risk of surface water flooding.

Review of Manchester City, Salford City and Trafford Councils Level 2 Hybrid Strategic Flood Risk Assessment (2011) shows that Cheetham Hill is located within Conurbation Core CDA (Critical Drainage Area).

Additionally, Greater Manchester Combined Authority Level 1 SFRA (2019) shows the site to be located on the edge of a surface water hotspot.

Despite the above, no information has been provided to suggest that the site itself has historically been subject to surface water flooding.

Groundwater

Groundwater flooding occurs when the water table rises up from the underlying rocks and emerges at the ground surface or within subsurface infrastructure (such as basements). Low lying areas that are underlain by permeable bedrock, superficial geology and aquifers are particularly susceptible to this form of flooding, especially during the winter months and after periods of heavy, sustained precipitation.

Unlike other mechanisms of flooding, groundwater flooding takes longer to dissipate as the water table needs to lower before any emerged flood water can soak back into the ground. As a result of this, whilst groundwater flooding does not pose a significant risk to life, flood waters can last for many months and can cause considerable damage to property.

According to Greater Manchester sub-regional SFRA there are no known reports of groundwater flooding in the Manchester, Trafford and Salford authorities. However, a number of areas within Trafford appear to suffer from a high water table or standing water, including:

- Stamford Brook Development.
- South of Edge Lane, Stretford.
- Areas of Timperley in the vicinity of Heyes Lane and Fairywell Brook.

Manchester City, Salford City and Trafford Council's Level 2 Hybrid Strategic Flood Risk Assessment (2011) includes a map which shows areas at risk of groundwater flooding, areas of shallow groundwater and areas at risk of groundwater rebound.

According to the Level 2 Hybrid SFRA groundwater map, the site is located within an area identified at risk of groundwater flooding (refer to Figure 14).

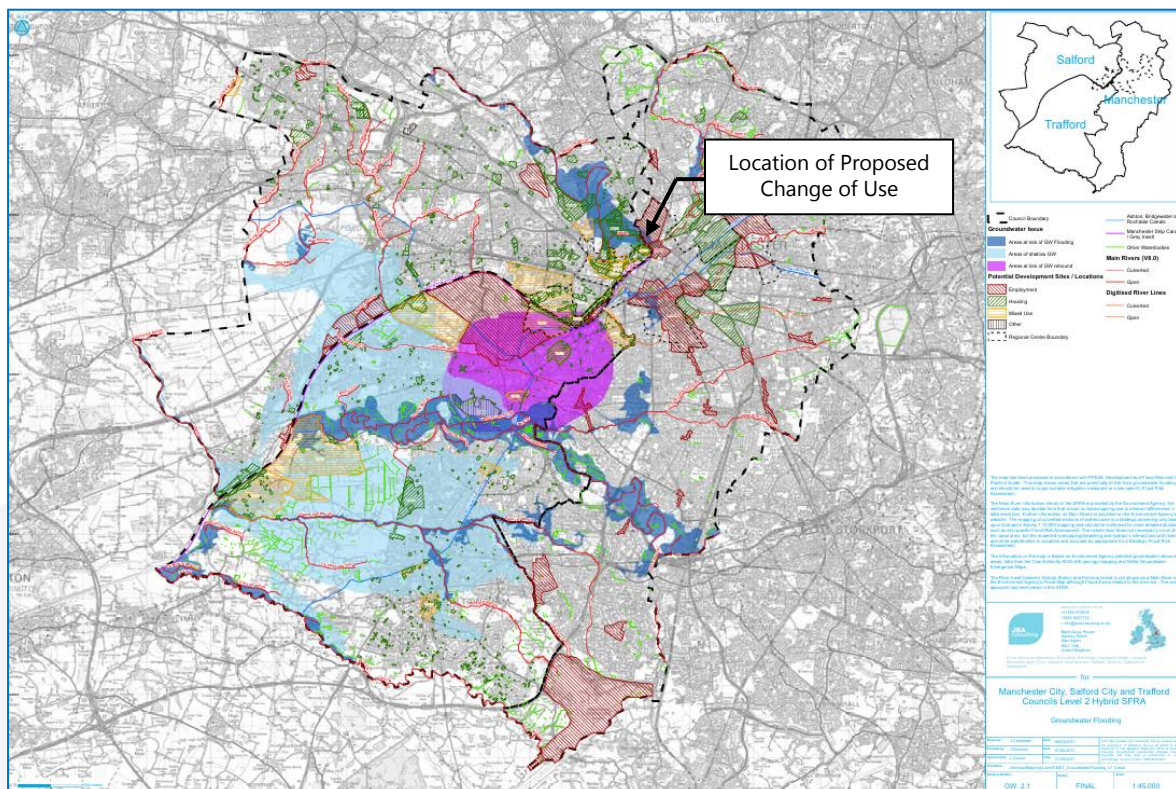


Figure 14: Areas at Risk of Groundwater Flooding (Source: MST Hybrid SFRA Level 2)

However, no further information has been provided to suggest that the site or surrounding area has historically been subject to groundwater emergence.

Sewer Surcharge

Sewer flooding occurs when the volume of water entering a drainage system is greater than the capacity of the sewer network. It is often experienced during periods of heavy rainfall, when a large amount of precipitation falls within a short period of time, and overloads the sewer system capacity causing a surcharge and localised short-term flooding.

Sewer flooding can also occur when the sewerage system is unable to discharge as intended. This is frequently caused by problems such as high water levels within the receiving watercourse, blockages, siltation and structural defects.

Historical incidents of sewer flooding are detailed by water companies in a DG5 register which records incidents of internal and external flooding relating to public foul, combined or surface water sewers and displays which properties suffered flooding.

As part of Greater Manchester Combined Authority SFRA (2019), United Utilities provided details of sewer network flooding. However, due to the sensitivity of this information the incidents have been combined into 100m² grid squares. This data has been presented within the SFRA based at the Greater Manchester level.

Review of the SFRA Recorded Flood Incident map shows that there have been no recorded reports of sewer flooding within proximity to the site.

Reservoir

Reservoirs are artificially created lakes, typically formed by building a dam across an existing watercourse to hold water back. Whilst unlikely, flooding from reservoirs can occur as a result of water exceeding the reservoir capacity or structural failure of the dam or bank.

All large reservoirs are regulated under the Reservoirs Act 1975 and undergo regular maintenance to minimise the possibility of reservoir failure. This legislation is enforced by the Environment Agency and requires reservoirs to be routinely inspected and maintained to an appropriate standard. As an enforcement authority the Environment Agency is responsible for some 2,000 reservoirs in England and Wales.

The Environment Agency have produced a flood map which shows where water may go in the unlikely event of a dam or reservoir failure. Two flooding scenarios are shown on the reservoir flood maps:

- A 'dry-day' scenario which shows the predicted flood extents if a dam or reservoir failed when rivers are at normal levels
- A 'wet-day' scenario which shows how much greater the flood extent might be if a downstream river is already experiencing an extreme flood event

Review of the Environment Agency's Risk of Flooding from Reservoirs map indicates that the site is located within the 'maximum extent of flooding from reservoirs when river levels are normal'.

As such, whilst unlikely to occur, the site is considered to be susceptible to reservoir failure.

Other Sources

No canals or other artificial infrastructure have been identified within the surrounding area which could pose a risk of flooding to the development.

Flood Risk Management

Finished Floor Levels

The proposed planning application relates to Change of Use of the existing building from a warehouse into a leisure and fitness facility.

The applicant has confirmed that given that the application relates to conversion of an existing structure the Finished Floor Level within the building will remain as is.

As such, it is considered that the unit will retain a Finished Floor Level of approximately 27.50mAOD, post conversion.

Modelled Flood Levels

Considering that the site has been modelled within Flood Zone 2 and 3 on the EA's Flood Map for Planning a Product 4 enquiry has been raised with the Environment Agency to obtain detailed flood model information in the relation to the development.

The Environment Agency have provided details of in-channel flood levels and flows as well as 2D floodplain levels extracted from the Lower Irwell (2017) flood model.

In accordance with the latest guidance, considering the nature of the proposals, the development should be assessed against the 1% (1 in 100) AEP +35% Climate Change fluvial event.

Having reviewed the outputs from the Lower Irwell (2017) flood model, 2D floodplain levels are available for the defended and undefended 1% (1 in 100) AEP +35% Climate Change scenario.

Comparison of the highest undefended 1% AEP plus 35% CC floodplain level (28.52mAOD) with the elevation of external ground levels at the site (27.50mAOD to 27.70mAOD, taken from EA LiDAR data) indicates that land outside of the built footprint may experience depths of between 0.82m and 1.02m during the undefended 1 in 100 year (+35%) climate change event.

However, it is important to note that the site is offered protection by defences located within the surrounding area. As reflected in the defended model results.

Comparison of the highest defended 1% AEP plus 35% CC floodplain level (27.92mAOD) with the elevation of external land within the application boundary indicates that land outside of the built footprint may experience depths of between 0.22m and 0.42m during the undefended 1 in 100 year (+35%) climate change event.

Mitigation Measures

In accordance with guidance published by the Environment Agency and the Department for Communities and Local Government (DCLG) flood resistance measures should be designed to keep water out of a property (by sealing off points of entry) to a maximum height of 600mm above the FFL. Holding back greater flood depths than 600mm may impact the structural integrity of a building. Therefore, in situations where flood depths are greater than 600mm it is advised that flood resilience measures are considered.

In order to offer protection for the conversion during an extreme flood event it is recommended that the following mitigation measures are considered in consultation with the Local Authority:

- Non-return valves fitted on drains and pipes
- Any chambers fitted with a double seal screw down cover and frame
- Seals/bungs on hand to install in toilets and on pipes, should a flood event occur
- Where possible, all new electrics and sockets are raised at least 1.30m above the Finished Floor Level (set at 28.80mAOD or higher) thus are installed at least 300mm above the undefended 1% AEP plus 35% CC event
- If possible, boilers, gas meters and electrical incomer/meters are installed above the undefended 1% AEP plus 35% CC event Flood resilient materials (for example lime plaster) used for the ground floor fitout
- Water resistant materials such as stainless steel, plastic or solid wood used for the fitout
- External walls rendered resistant to flooding to first floor level
- Any cracks and holes in the external walls, including service and drainage entry points are sealed with mortar/sealant and made watertight
- Covers are provided for airbricks and appliance vents
- Where possible, the use of MDF carpentry is avoided
- Ensure there is access to all spaces to enable drying and cleaning, should a flood event occur

The applicant should also consider installation of demountable flood defence barriers to protect entry thresholds against flood water ingress up to a maximum depth of 0.6m.

Additionally, important items and documents (including insurance policies and photographs) should be stored above the design flood level.

Surface Water Flood Risk Mitigation

The site is shown to be located entirely outside of the Environment Agency's modelled 1 in 30 year, 1 in 100 year and 1 in 1000 year surface water flood extents.

Despite this, it is recommended that linear drains are installed in front of any new building entry points and the external landscaping is designed to slope away from the built footprint.

These measures will help mitigate the risk of stormwater ponding at threshold entry points and stormwater ingress.

Groundwater Flood Risk Mitigation

The applicant has confirmed that there will be no lowering of the floor levels as part of the proposals. Therefore, it is considered that the building will not be at an increased risk of groundwater flooding as a result of the development.

Furthermore, no information has been provided to suggest that the property has ever experienced groundwater ingress.

Flood Warnings and Alerts

The application site is located within an EA Flood Warning and Alert area.

Therefore it is recommended that future owners and senior staff sign up to the Environment Agency's free Targeted Flood Warning Service at <https://www.gov.uk/sign-up-for-flood-warnings>.

Warning	Meaning / Response Actions
 Flood Alert	What it means: Flooding is possible – be prepared. When it is used: The Environment Agency will issue a Flood Alert status when flooding is possible. It is usually issued between 2 hours and 12 hours in advance of flooding, dependant on the form and characteristics of the flood risk. Triggers: Forecasts that indicate that flooding from rivers and/or high tides, surges or strong winds at sea. How is it issued: This will be issued through the Environment Agency website and via the Flood Warnings Direct service, based upon weather, river and sea conditions. Actions: When a Flood Alert is issued, individuals should: • Be prepared to act on Flood Warning and Evacuation Plans. • Prepare to relocate or move to an area outside of the modelled Flood Zone extent. • Prepare a flood kit of essentials and have it ready if needed. • Monitor local water levels and forecasts on the Environment Agency website and on the Local TV/radio stations.
 Flood Warning	What it means: Flooding expected – immediate action is required. When it is issued: Flood Warnings will be issued when water levels are rising, heavy rain is anticipated to cause rivers to flash flood or there are high tides / surges coupled with strong winds at sea. It is usually issued between 30 minutes to 2 hours in advance of flooding. Triggers: Heavy rainfall forecast to cause flash flooding of rivers, and forecast flooding from rivers or the sea. How it is issued: This will be issued through the Environment Agency website and via the Flood Warnings Direct service, based upon weather and river/sea conditions. Actions: When a Flood Warning is issued, individuals should: • If necessary, move possessions, valuables and pets higher or to a safe place. • Locate keys to lock windows and tools to switch off gas and electricity supplies in the event evacuation is required. • If flood protection measures are available (e.g. flood gates and airbrick covers) put them in place. • Consider moving any vehicles to a higher level or to an area outside of the Flood Zone. • Contact the Local Authority to find out whether evacuation is considered necessary, and if so, where they are providing rest centres for evacuees. • If evacuation is required, switch off the gas and electricity supply before leaving the property (if safe to do so).

 Severe Flood Warning	What it means: Severe flooding. Danger to life. When it is used: When flooding poses a significant threat to life. Triggers: Actual flooding where the conditions pose a significant risk to life and/or widespread disruption to communities, onsite observations from flooded locations or a breach in defences or failure of a barrier that is likely to cause significant risk to life. How it is issued: This will be issued through the EA website and via the Flood Warnings Direct service based upon weather and river conditions. In this location a Severe Flood Warning may also be received via the Local Authority. Actions: When a Severe Flood Warning is issued, individuals should: • Stay in a safe place with a means of escape. • Be ready should you need to evacuate the property. • Cooperate with the emergency services. • Call 999 if you are in immediate danger.
Warning No Longer in Force	What it means: No further flooding is currently expected in your area. When it is used: When a Severe Flood Warning, Flood Warning or Flood Alert is no longer in force. Triggers: The risk of flooding has passed, water levels have dropped below the warning level and no further flooding is affected. How it is issued: This will be issued through the EA website, local TV/radio stations and news bulletins. Actions: When a 'Warnings No Longer in Force' status is issued, site owners should: • If evacuation has occurred, check with the Local Authority that it is safe to return to the property/building. • Be careful as flood water may still be around for a few days and could be contaminated. • If there has been flooding to the property contact your landlord/management company for advice (if applicable), take photographs of any damage and contact your insurance company. If you need to make an insurance claim do not throw anything away until the insurance company says so.

Table 7: EA Flood Warnings and Flood Alerts

Should a flood alert be issued it is recommended that the site owner and senior staff monitor the situation and advise staff / visitors where appropriate.

Future site owners and staff should also be advised to monitor weather forecasts by signing up to the Met Office weather warnings.

Considering the proposed use of the site, it is recommended that the applicant develops a Flood Warning and Evacuation Plan in accordance with the Environment Agency's Flood Plan template (refer to Appendix C).

The Flood Warning and Evacuation Plan will outline the site-specific actions which will be followed in the event of a flood warning being issued. As a precautionary measure, it is recommended that operations cease at the site and the premises is closed during the period that a flood warning is active / during a flood event.

Emergency Flood Kit

It is recommended that the owner of the property puts together a flood kit. Provision of an emergency kit will help site users and senior staff to prepare and react quickly in the event of flooding.

It is important to remember that in a flood event people may not have time to find essential items. Therefore, it is vital to prepare a small easy-to-carry bag with essentials in advance.

The Environment Agency recommend that you create a grab bag of essential items including:

- Important documents in a waterproof bag such as insurance certificates, passports, driving licences and other hard to replace documents
- A copy of the emergency action plan
- Emergency contact numbers: Insurance helpline, local council and emergency services
- Contact details for your water, electricity and gas suppliers
- Spare keys for the building and any cars
- Torch and batteries (in case it floods in the early morning/late evening and you lose power)
- Portable radio (wind-up preferable) for local station updates
- Fully charged mobile phone and charging lead
- Small power bank or portable charger
- Additional batteries for torches and radios
- Camera (if phone doesn't have one) to record damage for insurance purposes
- First aid kit and essential prescription medication (including respiratory aids)
- Anti-bacterial hand wipes/gel
- Hearing aids
- Spare glasses and/or contact lenses
- Whistle
- Bottled water (check use-by date)
- Non-perishable food items (including tinned goods and energy or cereal bars)
- Blankets and sleeping bags
- Wash kit and essential toiletries (including toilet paper and wet wipes)
- Bank cards and emergency cash
- Notebook and pen

It is recommended that the information in this document is used to help the applicant complete a business flood plan (refer to the Environment Agency guidance in the report appendix).

The details within this Flood Risk Assessment should assist with deciding what practical actions to take before and during a flood event, with the aim of reducing the damage flooding could cause to the site.

Safe Access and Egress

The NPPF requires all new residential developments in areas at risk of flooding to demonstrate a route of safe escape for residents and site users which can be maintained for the lifetime of the development.

The proposed planning application relates to Change of Use of an existing building from a warehouse into a leisure and fitness facility. No residential units will be created as part of the proposals. Therefore, a route of safe escape is not required.

Despite this, given that the building includes a first-floor level which is shown to be elevated approximately 3.80m higher than the external ground levels, it is considered that safe refuge can be provided within the building itself.

In the event of a severe flood warning, an evacuation route can be provided via Barker Street adjacent east. If safe to do so, it is recommended that site users travel east along Barker Street before heading south along Great Ducie Street and then east along Southall Street.

This route is located entirely outside of the undefended 1% AEP plus 35% CC flood extent from 90m east of the site onwards.

If flooding occurs and water exceeds 25cm anywhere along the evacuation route (including on site) site users should seek refuge and await further instruction from the emergency services.

It is recommended that future owners and senior staff are made aware of the evacuation route.

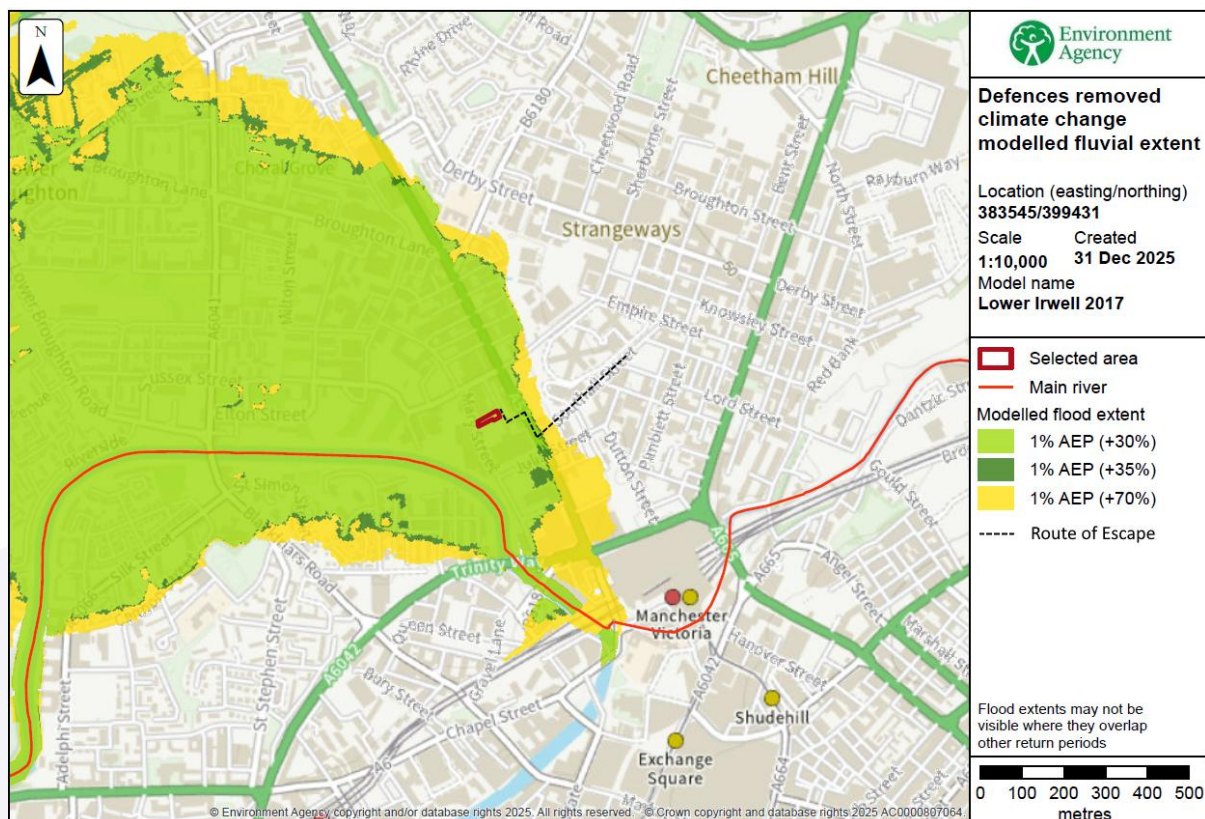


Figure 15: Evacuation Route

Offsite Impacts

Increases in Surface Water Runoff

The proposals relate to Change of Use of an existing building. The applicant has confirmed that there will be no increase in built footprint or alterations to the external impermeable surfacing as part of the development.

Therefore, there will be no increase in the total impermeable surfaced area at the site when compared to the pre-developed situation.

As a result, it is considered that the proposed application in its current form will not increase surface water runoff rates and volumes when compared to the existing situation, and a surface water drainage strategy is not required.

Despite this, in order to reduce existing surface water runoff rates and offer additional protection to site users the applicant may wish to consider the following surface water measures:

- Incorporating rainwater harvesting, rainwater butts (to provide a source of non-potable water) and raingardens into the scheme.
- Designing external landscaping to slope away from the building.
- Installing linear drains in front of all building entry points.

These measures will help mitigate against overland flows being directed towards the building during storm events and will reduce the risk of stormwater ponding at threshold entry points and stormwater ingress.

Floodplain Displacement

Whilst the site is located within the 1% AEP plus 35% CC flood extent, there will be no change to the existing built footprint.

As such, there will be no loss in floodplain storage as a result of the development and compensatory storage is not required.

Conclusions and Recommendations

Conclusions

GeoSon Limited have been instructed by Usama Saleh of Shadow Padel Limited to undertake a Site Specific Flood Risk Assessment (FRA) to support a proposed planning application for development at 151 Mary Street, Cheetham Hill, Manchester.

This FRA has been undertaken in accordance with the revised National Planning Policy Framework (NPPF) December 2024 and the associated Planning Practice Guidance (PPG).

The proposed application site is located at 151 Mary Street, Cheetham Hill, Manchester M3 1DZ. The site is occupied by a warehouse in the north west and external yard space in the east underlain by hardstanding.

The proposed planning application comprises Change of Use of the existing building from a warehouse into a leisure and fitness facility with associated parking. The applicant has confirmed that all works will be internal and there will be no increase in built footprint or external impermeable surfacing as a result of the proposals.

According to the Environment Agency's Flood Map for Planning the site is predominantly located within Flood Zone 2 with the external hardstanding area shown to be situated within Flood Zone 3.

Considering that the site has been modelled within Flood Zone 2 and 3, a Product 4 enquiry has been raised with the Environment Agency to obtain detailed flood model information in the relation to the development.

A Product 4 response (EA reference: CKYA2XV4YYRD) was received in January 2026, refer to Appendix B. Within which the Environment Agency provided details of in-channel flood levels and flows as well as 2D floodplain levels extracted from the Lower Irwell (2017) flood model.

Defended and undefended 2D floodplain levels and corresponding depths have been provided for 24 node points across the site and within the immediate surrounding area for several return period events including the 1% AEP (1 in 100 year), 0.1% AEP (1 in 1000 year) and three 1% AEP (1 in 100 year) plus climate change scenarios.

The highest 1 in 100 year plus 35% Climate Change flood plain level at the site during the defended and undefended scenarios are as follows:

- Defended: 27.92mAOD
- Undefended: 28.52mAOD

Comparison of the highest undefended 1% AEP plus 35% CC floodplain level (28.52mAOD) with the elevation of external ground levels at the site (27.50mAOD to 27.70mAOD, taken from EA LiDAR data) indicates that land outside of the built footprint may experience depths of between 0.82m and 1.02m during the undefended 1 in 100 year (+35%) climate change event.

However, it is important to note that the site is offered protection by defences located within the surrounding area. As reflected in the defended model results.

Comparison of the highest defended 1% AEP plus 35% CC floodplain level (27.92mAOD) with the elevation of the site indicates that land outside of the built footprint may experience depths of between 0.22m and 0.42m during the undefended 1 in 100 year (+35%) climate change event.

The EA's Risk of Flooding from Surface Water data shows that the entire site is located within an area modelled to be at 'Very Low' risk of flooding from surface water.

Additionally, according to Manchester City, Salford City and Trafford Councils Level 2 Hybrid Strategic Flood Risk Assessment (2011) Cheetham Hill is located within Conurbation Core CDA (Critical Drainage Area).

No information has been provided within the Local Authority documentation to suggest that the site itself has been subject to a sewer surcharge incident.

Review of the Environment Agency's Risk of Flooding from Reservoirs map indicates that the site is located within the 'maximum extent of flooding from reservoirs when river levels are normal'. As such, whilst unlikely to occur, the site is considered to be susceptible to reservoir failure.

According to the Manchester City, Salford City and Trafford Council's Level 2 Hybrid Strategic Flood Risk Assessment (2011) the site is located within an area identified at risk of groundwater flooding. However, no information has been provided to suggest that the site has historically been subject to groundwater emergence.

In addition, no canals or other artificial infrastructure have been identified within the surrounding area which could pose a risk of flooding to the development.

Summary and Recommendations

- The proposed planning application comprises Change of Use of the existing building from warehouse into a leisure and fitness facility with associated parking. No extensions or additions to the built footprint are proposed. As such, the applicant has confirmed that the Finished Floor Level within the building will remain as is.
- The unit will retain a Finished Floor Level of approximately 27.50mAOD post conversion (level estimated from EA LiDAR data and the entry threshold measurement provided by the applicant).
- The highest 1 in 100 year plus 35% Climate Change floodplain level at the site for the defended and undefended scenarios are as follows:
 - Defended: 27.92mAOD
 - Undefended: 28.52mAOD
- Comparison of the defended and undefended 1 in 100 year plus 35% Climate Change flood levels with the approximate Finished Floor Level of the existing building (27.50mAOD, estimated using EA LiDAR data and the provided threshold measurement) indicates that the unit may experience internal flood depths of 0.42m and 1.02m during the defended and undefended 1 in 100 year (+35%) Climate Change scenarios, respectively.
- In order to offer protection to the leisure and fitness facility during an extreme flood event mitigation measures have been suggested on Page 31.
- Any external landscaping should be designed to slope away from the property.
- Linear drains should be installed in front of all building entry points.
- Where possible, all new electrics and sockets should be raised at least 1.30m above the Finished Floor Level (set at 28.80mAOD or higher) thus are installed at least 300mm above the undefended 1% AEP plus 35% CC event.
- Any cracks and holes in the external walls, including service and drainage entry points are sealed with mortar/sealant and made watertight.
- Demountable flood defence barriers should be installed to protect entry thresholds against flood water ingress up to a maximum depth of 0.6m.
- The site is located within an EA Flood Warning and Alert area. Therefore it is recommended that future owners and staff sign up to the Environment Agency's free Targeted Flood Warning Service at <https://www.gov.uk/sign-up-for-flood-warnings>.
- Future site owners and staff should also be advised to monitor weather forecasts by signing up to the Met Office weather warnings.
- Should a flood alert be issued it is recommended that the site owner and senior staff monitor the situation and advise staff / visitors where appropriate.
- As a precautionary measure, it is recommended that operations cease at the site and the premises is closed during the period that a flood warning is active / during a flood event.
- It is recommended that the applicant develops a Flood Warning and Evacuation Plan in accordance with the Environment Agency's Flood Plan template (refer to Appendix).
- In the event of a severe flood warning, an evacuation route can be provided via Barker Street adjacent east. If safe to do so, it is recommended that site users travel east along Barker Street before heading south along Great Ducie Street and then east along Southall Street.
- There will be no increase in built footprint or impermeable surfacing as part of the proposals. As such, it is considered that the application will not lead to an increase in surface water runoff rates and volumes when compared to the existing situation, and a surface water drainage strategy is not required.
- There will be no loss in floodplain storage as a result of the proposals.

Appendix

- A. Existing and Proposed Site Layout Plans
- B. Environment Agency Product 4 Response
- C. Environment Agency Flood Plan Template

Appendix A

Notes

GENERAL NOTES

THE CONTRACTOR IS ADVISED TO VISIT THE SITE PRIOR TO TENDERING & ASCERTAIN ALL LOCAL CONDITIONS & RESTRICTIONS LIKELY TO AFFECT THE EXECUTION OF THE WORKS. NO CLAIMS ARISING FROM FAILURE TO DO SO WILL BE CONSIDERED.

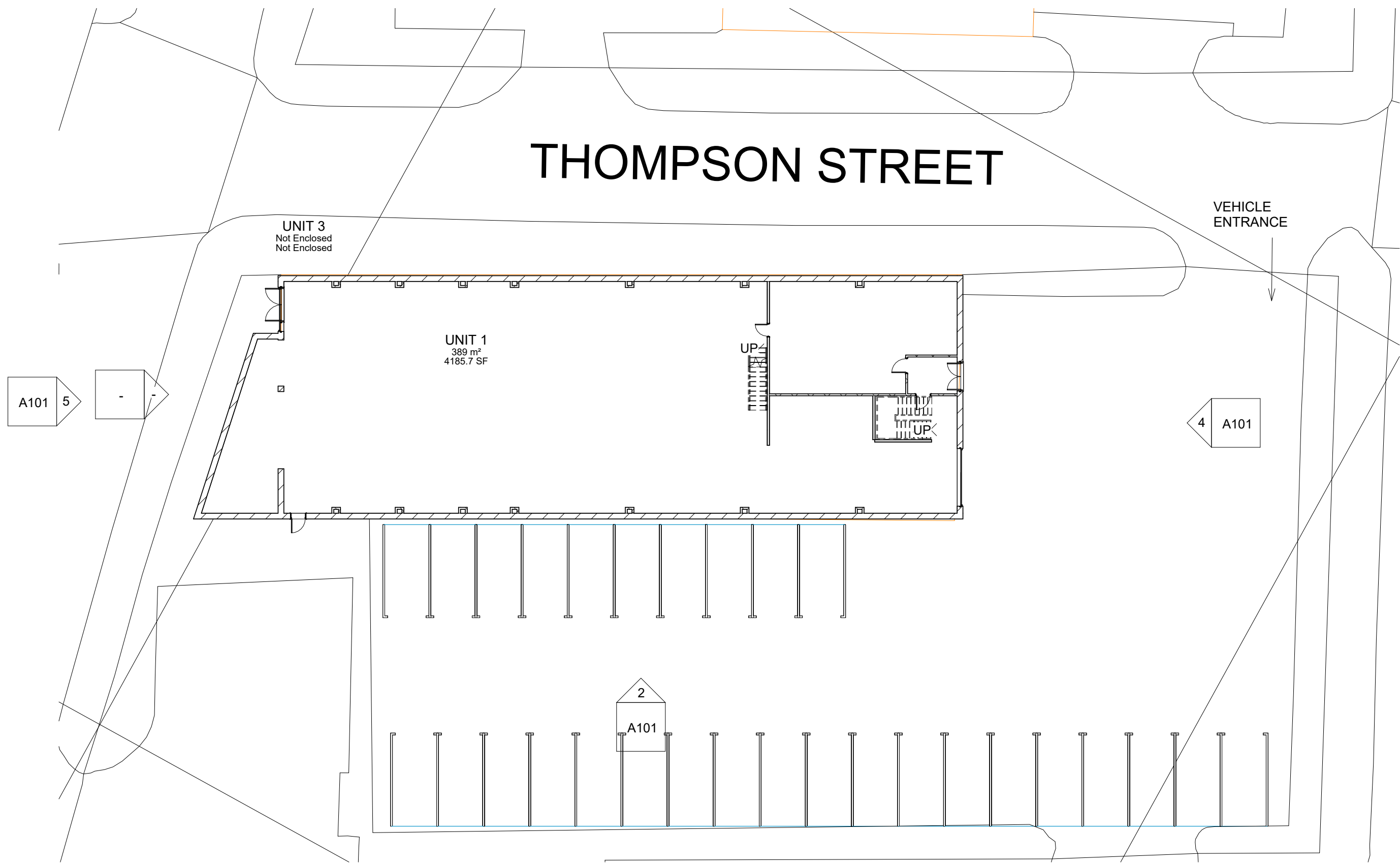
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, SCHEDULES & SPECIFICATIONS RELATING TO THE PROJECT AND ANY DISCREPANCIES NOTIFIED TO THE CONTRACT ADMINISTRATOR IMMEDIATELY.

THE CONTRACTOR IS TO CHECK ALL DIMENSIONS ON SITE PRIOR TO COMMENCING WORKS OR ORDERING ANY MATERIALS. DO NOT SCALE OFF DRAWINGS.

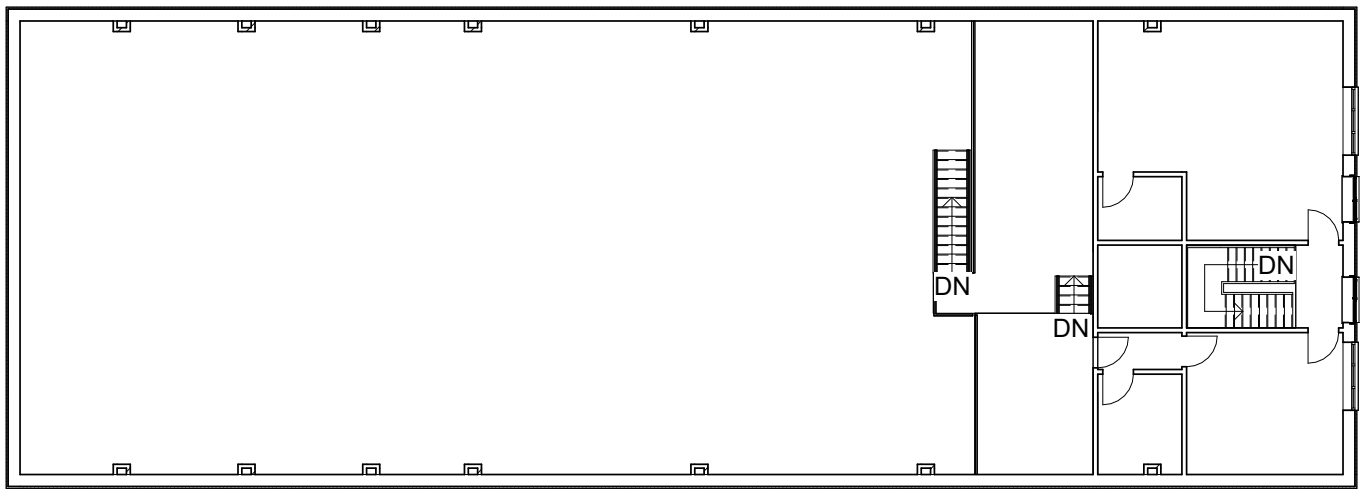
ALL WORKMANSHIP AND MATERIALS TO COMPLY WITH BUILDING REGULATIONS, BRITISH STANDARDS, CODES OF PRACTICE, MANUFACTURERS INSTRUCTIONS, AGREEMENT CERTIFICATES ETC. ALL MATERIALS SHALL BE SUITABLE FOR PURPOSE.

THE CONTRACTOR IS TO MAKE GOOD ALL WORKS DISTURBED.

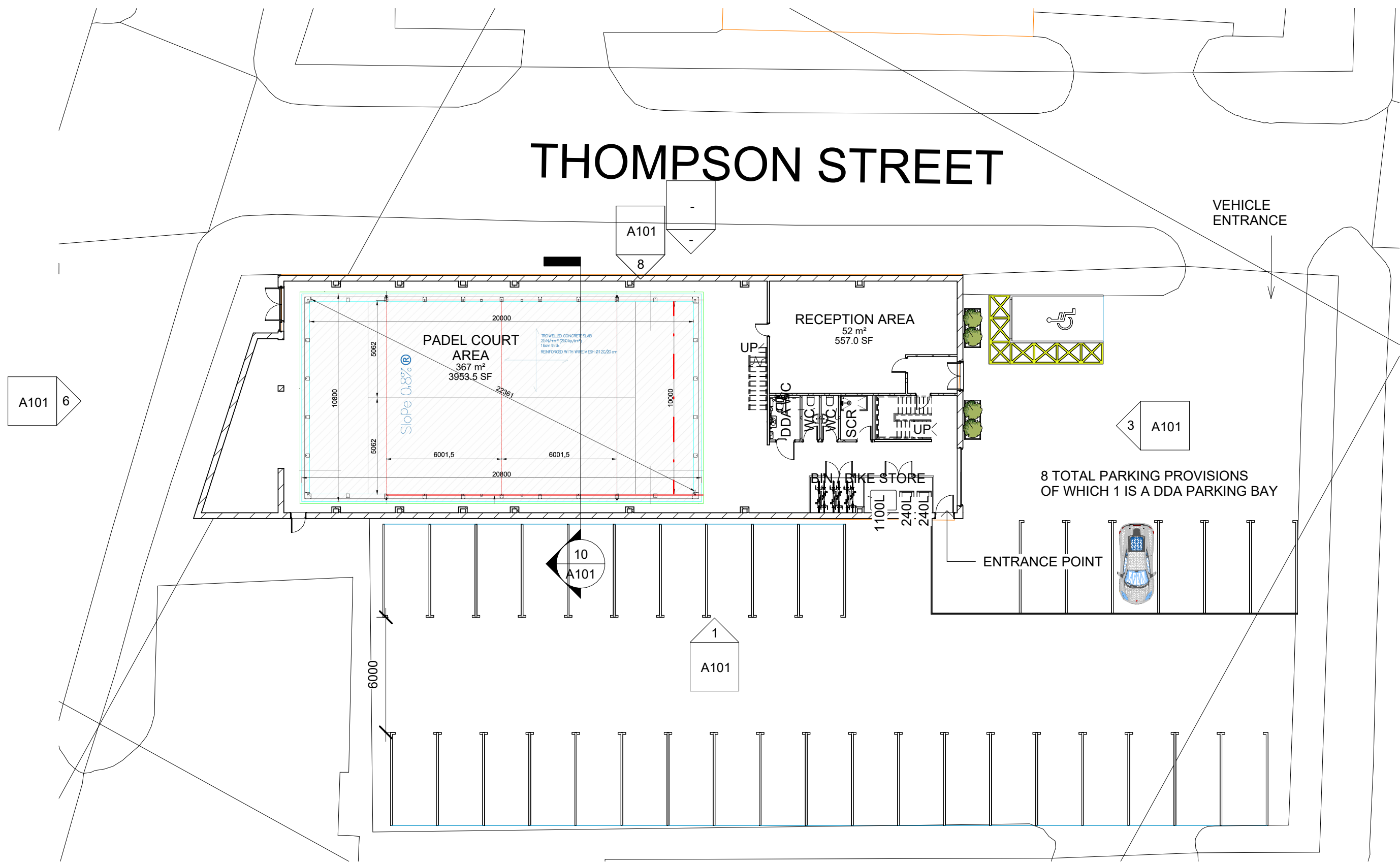
THE CONTRACTOR TO COMPLY WITH CDM REGULATIONS AND HEALTH AND SAFETY REQUIREMENTS WHERE APPROPRIATE.



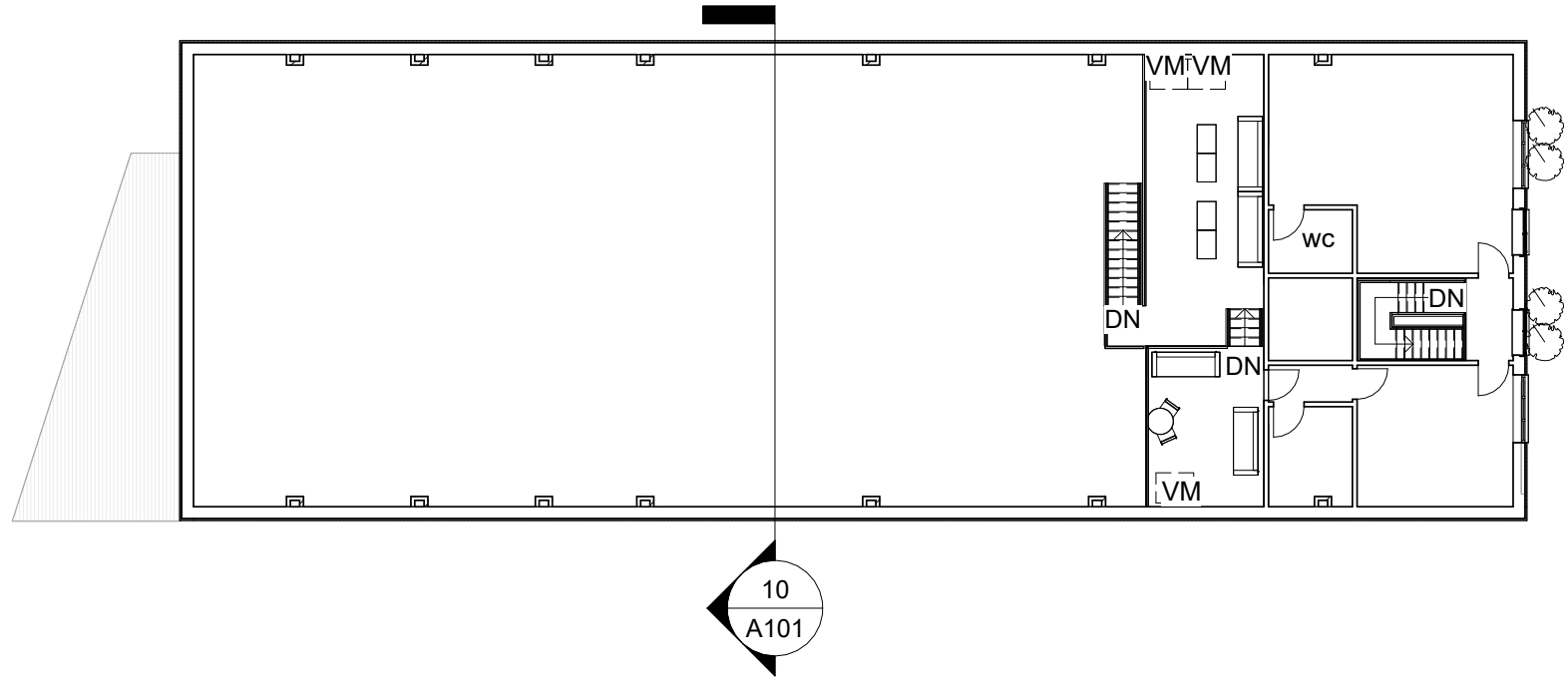
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1 : 200



4 EXISTING UPPER 1ST FLOOR PLAN
1 : 200



2 PROPOSED GF GA PLAN - PADEL COURT 01
1 : 200



5 PROPOSED UPPER 1ST FLOOR PLAN
1 : 200

Rev	Description	Date	Dr	App
original by		date created	by	by
NK		27/08/25	NK	



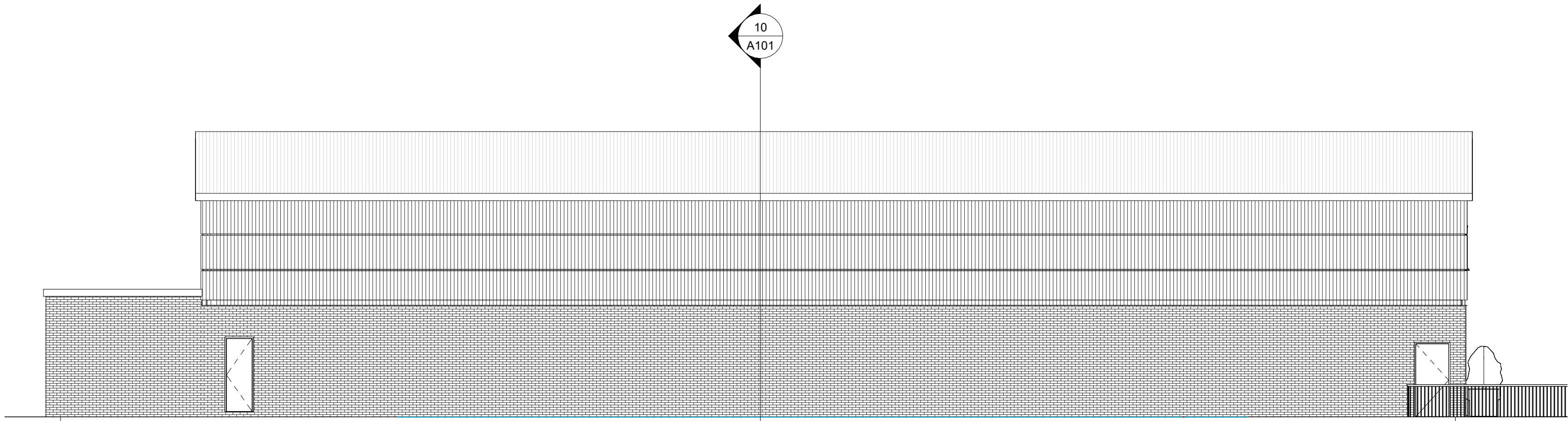
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client name	OWNER
project	151 MARY STREET MANCHESTER M3 1DZ - TEMP PADEL COURT
drawing	EXISTING AND PROPOSED GF AND 1ST FLOOR PLAN
computer file	C:\Users\NKAR02\Documents\NKAR02\151 Mary Street Manchester M3 1DZ\151 Mary Street Manchester M3 1DZ.dwg
project number	2025.100362.03821
scale	1 : 200 @A1
drawing number	A100
rev	A
issue status	PLANNING

This drawing is to be read in conjunction with all related drawings. All dimensions must be checked and verified on site before commencing any work or producing shop drawings. The originator should be notified immediately of any discrepancy. This drawing is copyright and remains the property of NK Architectural.



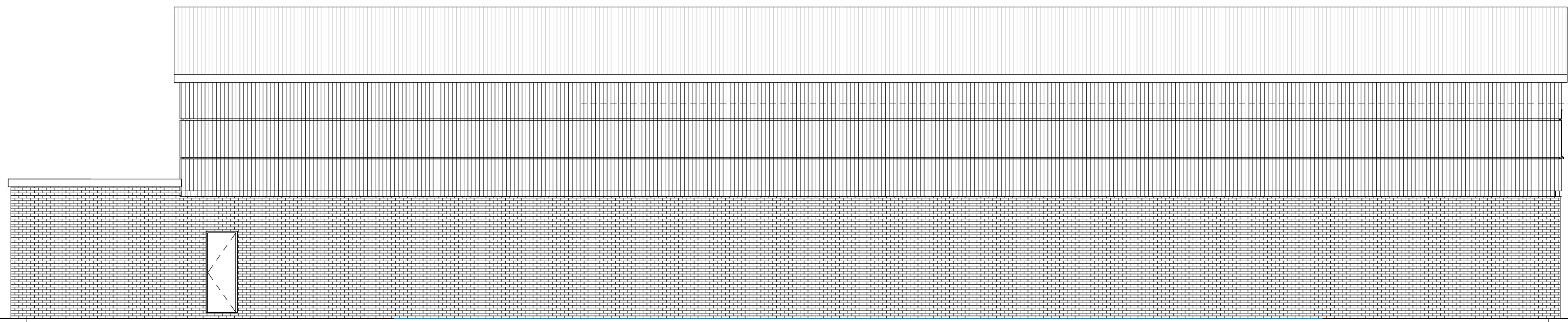
1 NORTH - Elevation 9 - a - PROPOSED
1 : 100



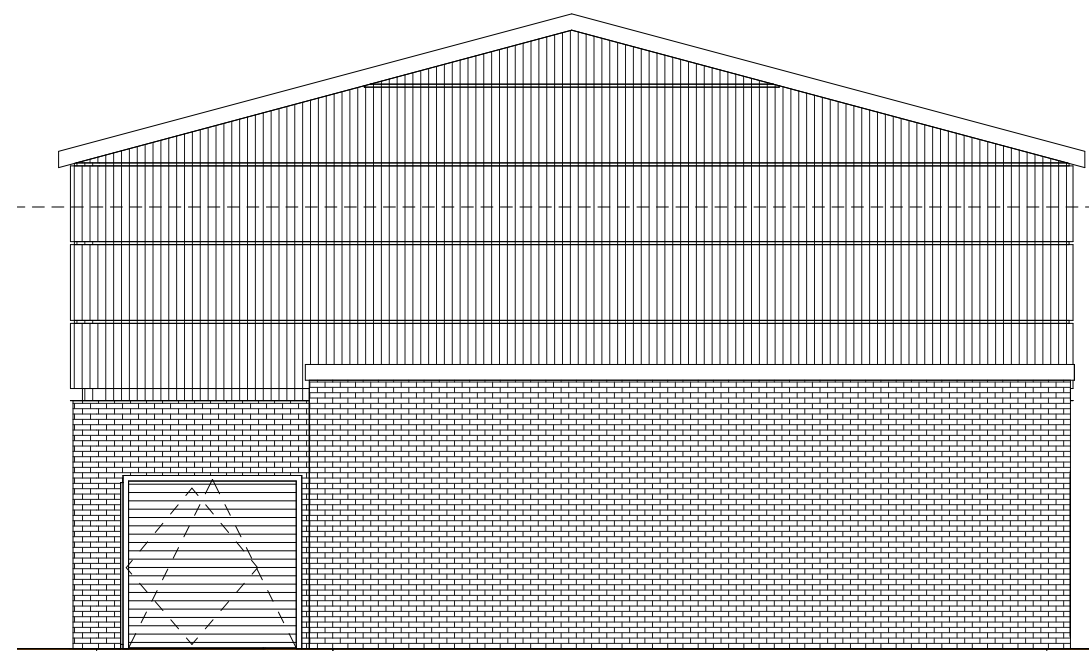
3 WEST - Elevation 10 - a PROPOSED
1 : 96



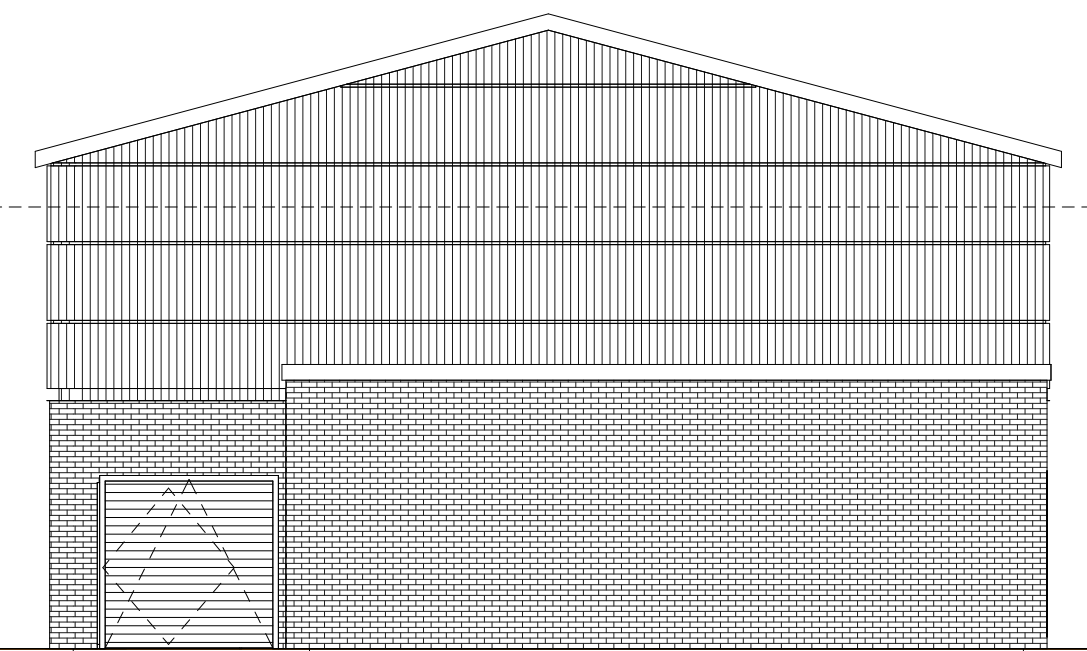
4 WEST - Elevation 10 - a
1 : 96



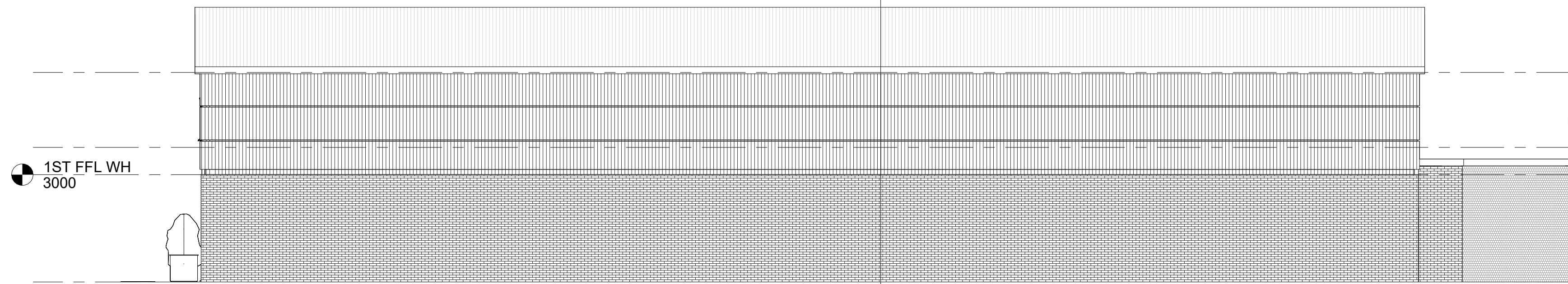
2 NORTH - Elevation 9 - a
1 : 100



6 EAST - Elevation 8 - a - PROPOSED
1 : 96



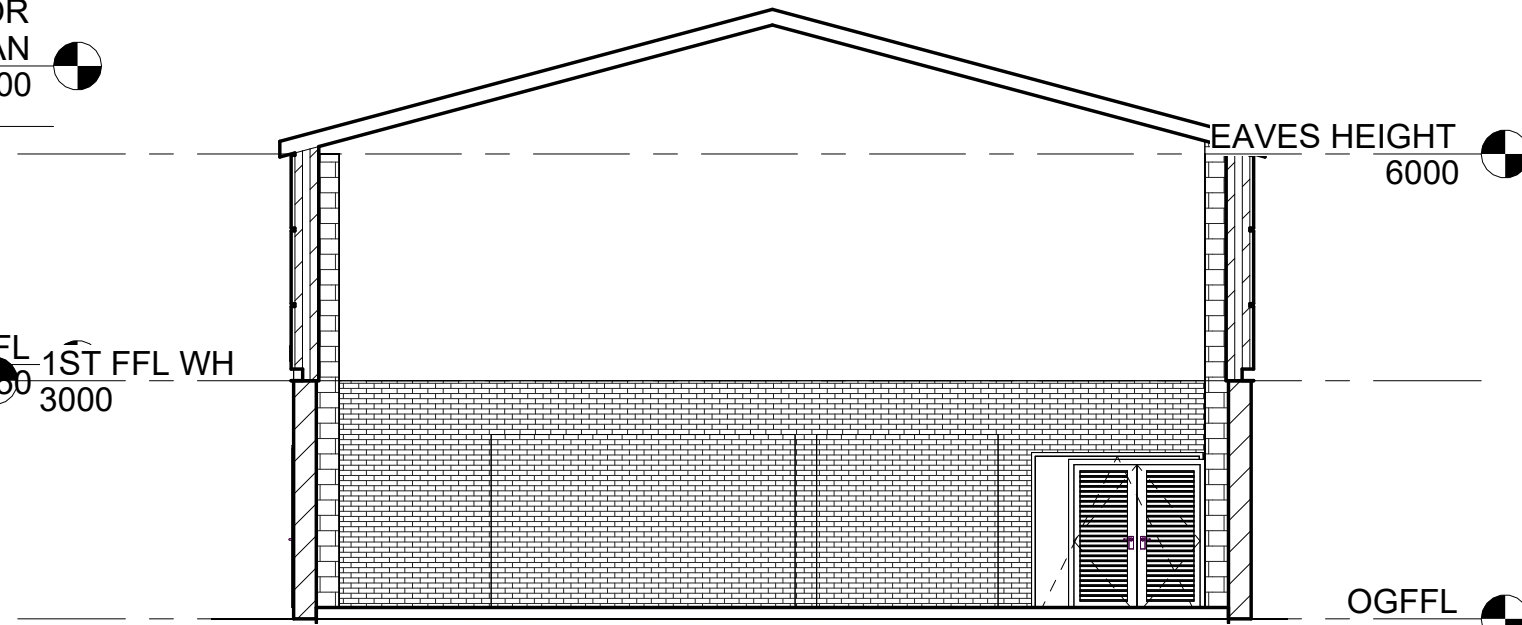
EAST - Elevation 8 - a - PROPOSED Copy
1 : 96



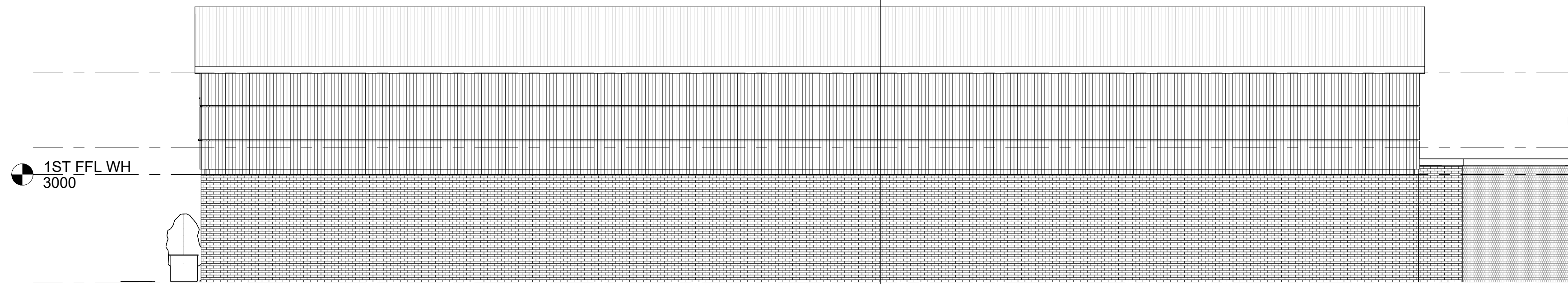
9 Elevation 9 - a
1 : 100

EAVES HEIGHT
6000
PROPOSED
UPPER 1ST FLOOR
PLAN
3800

OGFFL
-150
1ST FFL WH
3000



Section 1 - PROPOSED WAREHOUSE
FRONT ELEVATION
1 : 100



EAVES HEIGHT
6000
PROPOSED
UPPER 1ST FLOOR
PLAN
3800

OGFFL
-150
1ST FFL WH
3000

8 Elevation 9 - a EXISTING
1 : 100

Rev	Description	Date	Dr	App
original by	date created	07/08/25	by	by
NK			NK	



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client name OWNER			
project 151 MARY STREET MANCHESTER M3 1DZ - TEMP PADEL COURT			
drawing EXISTING AND PROSED ELEVATIONS AND SECTION			
computer file C:\Users\NKAR02\OneDrive\NKAR02\151 Mary Street Manchester M3 1DZ\151 Mary Street Manchester M3 1DZ.dwg		plot date	
project number 2025.100362.03821		scale As indicated @A1	
drawing number A101		rev	issue status

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Appendix B

Flood risk assessment data



Location of site: 383545 / 399431 (shown as easting and northing coordinates)

Document created on: 31 December 2025

This information was previously known as a product 4.

Customer reference number: CKYA2XV4YYRD

Map showing the location that flood risk assessment data has been requested for.



How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

We recommend that you work with a flood risk consultant to get your flood risk assessment.

Included in this document

In this document you'll find:

- how to find information about surface water and other sources of flooding
- information on the models used
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- past floods
- flood defences and attributes
- information to help you assess if there is a reduced flood risk from rivers and the sea because of defences
- modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

Surface water and other sources of flooding

When using the surface water map on the [check your long term flood risk service](#) the following considerations apply:

- surface water extents are suitable for use in planning
- surface water climate change scenarios may help to inform risk assessments, but the available data fall short of what is required to assess planned development
- surface water depth information should not be used for planning purposes

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

- [reservoir flood risk](#)
- groundwater flood risk - you could use the [British Geological Survey groundwater flooding data](#), [groundwater: current status and flood risk](#) and the guide on [mining and groundwater constraints for development](#) - further information may be available from the lead local flood authority (LLFA)
- your local planning authority's SFRA, which includes future flood risk

Your Lead Local Flood Authority is Manchester District.

For information about sewer flooding, contact the relevant water company for the area.

About the models used

Model name: Lower Irwell 2017

Scenario(s): Defended fluvial, defences removed fluvial, defended climate change fluvial, defences removed climate change fluvial

Date: 1 April 2018

These models contain the most relevant data for your area of interest.

Terminology used

Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1% chance of occurring in any one year, is described as 1% AEP.

Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 3.

Flood zone 3 shows the area at risk of flooding for an undefended flood event with a:

- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding

It's important to remember that the flood zones on this map:

- refer to the land at risk of flooding and do not refer to individual properties
- refer to the probability of river and sea flooding, ignoring the presence of defences
- do not take into account potential impacts of climate change



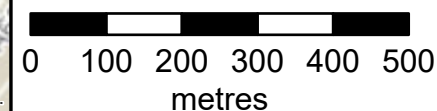
Flood map for planning

Location (easting/northing)
383545/399431

Scale
1:10,000

Created
31 Dec 2025

-  Selected area
-  Main river
-  Flood defence
-  Flood Zone 3
-  Flood Zone 2



Past floods

Past flood events included in this document

The recorded flood outlines included in this document are for areas of land local to your site location that have been flooded by any of these sources:

- ephemeral water
- main rivers
- ordinary watercourses
- the sea
- unknown

Data limitations

The outlines do not include flooding from:

- drainage where rainfall has led to surface water ponding or overland runoff
- artificial, water-bearing sewer, water supply and wastewater treatment pipelines

Changes to flood defences

The defences (also known as assets) that were in place may also have changed. For example, assets may have been built more recently than the last recorded flood outline.

What the recorded flood outlines dataset is

The recorded flood outlines are a geographical information system (GIS) data layer that show our verified records of areas that have flooded in the past from:

- rivers
- the sea
- groundwater
- surface water

[Download the complete recorded flood outlines dataset](#), which includes data quality flags for outlines recorded after April 2020. This indicates the confidence we have in an outline.

Get flood information from other organisations

Contact Manchester District Lead Local Flood Authority (LLFA) and your drainage board to get information about past flooding caused by surface water or drainage systems.



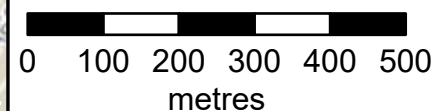
Past floods

Location (easting/northing)
383545/399431

Scale
1:10,000

Created
31 Dec 2025

-  Selected area
-  Main river
- Date of flood event
 -  December, 2015
 -  January, 2008
 -  October, 1998
 -  January, 1954
 -  September, 1946
 -  November, 1866



Data on past flood events

Start date	End date	Source of flood	Cause of flood	Affects location
26 December 2015	26 December 2015	main river	overtopping of defences	Yes
21 January 2008	22 January 2008	main river	unknown	No
23 October 1998	24 October 1998	unknown	other	No
21 January 1954	22 January 1954	main river	channel capacity exceeded (no raised defences)	No
20 September 1946	21 September 1946	main river	channel capacity exceeded (no raised defences)	Yes
01 November 1866	02 November 1866	main river	channel capacity exceeded (no raised defences)	Yes

Flood defences and attributes

The flood defences map shows the location of the flood defences present.

The flood defences data table shows the type of defences, their condition and the standard of protection. It shows the height above sea level of the top of the flood defence (crest level). The height is in mAOD which is the metres above the mean sea level at Newlyn, Cornwall.

It's important to remember that flood defence data may not be updated on a regular basis. The information here is based on the best available data.

Use this information:

- to help you assess if there is a reduced flood risk for this location because of defences
- with any information in the modelled data section to find out the impact of defences on flood risk



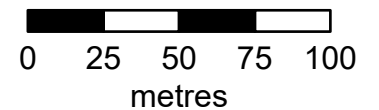
Flood defences

Location (easting/northing)
383545/399431

Scale
1:2,500

Created
31 Dec 2025

-  Selected area
-  Main river
-  Flood defence



Flood defences data

Label	Asset ID	Asset Type	Standard of protection (years)	Current condition	Downstream actual crest level (mAOD)	Upstream actual crest level (mAOD)	Effective crest level (mAOD)
1	452758	Embankment	75	Good	27.10	27.10	27.10
2	89057	Embankment	75	Good	28.58	27.01	
3	181081	Wall	75	Fair	27.07	27.10	
4	384247	Engineered High Ground		Fair	27.10	27.01	
5	88893	Engineered High Ground	75	Fair	27.20	27.44	
6	90728	Engineered High Ground	75	Fair	27.10	25.58	
7	88831	Engineered High Ground	75	Fair	27.44	27.66	

Any blank cells show where a particular value has not been recorded for an asset.

Modelled data

This section provides details of different scenarios we have modelled and includes the following (where available):

- outline maps showing the area at risk from flooding in different modelled scenarios
- modelled node point map(s) showing the points used to get the data to model the scenarios and table(s) providing details of the flood risk for different return periods
- map(s) showing the approximate water levels for the return period with the largest flood extent for a scenario and table(s) of sample points providing details of the flood risk for different return periods

Climate change

The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios

The following scenarios are included:

- Defended modelled fluvial: risk of flooding from rivers where there are flood defences
- Defences removed modelled fluvial: risk of flooding from rivers where flood defences have been removed
- No defences exist modelled fluvial: risk of flooding from rivers where there are no flood defences
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including estimated impact of climate change
- Defences removed climate change modelled fluvial: risk of flooding from rivers where flood defences have been removed, including estimated impact of climate change
- No defences exist climate change modelled fluvial: risk of flooding from rivers where there are no flood defences, including estimated impact of climate change



Defences removed climate change modelled fluvial extent

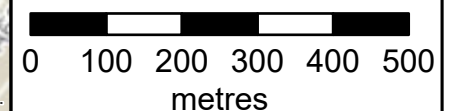
Location (easting/northing)
383545/399431

Scale Created
1:10,000 31 Dec 2025

Model name
Lower Irwell 2017

-  Selected area
-  Main river
- Modelled flood extent
 -  1% AEP (+30%)
 -  1% AEP (+35%)
 -  1% AEP (+70%)

Flood extents may not be
visible where they overlap
other return periods





Defences removed modelled fluvial extent

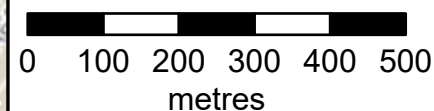
Location (easting/northing)
383545/399431

Scale Created
1:10,000 31 Dec 2025

Model name
Lower Irwell 2017

-  Selected area
-  Main river
- Modelled flood extent
 -  2% AEP
 -  1.33% AEP
 -  1% AEP
 -  0.5% AEP
 -  0.1% AEP

Flood extents may not be
visible where they overlap
other return periods





Defended climate change modelled fluvial extent

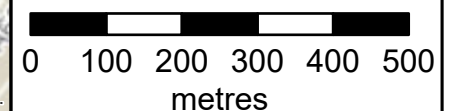
Location (easting/northing)
383545/399431

Scale Created
1:10,000 31 Dec 2025

Model name
Lower Irwell 2017

-  Selected area
-  Main river
- Modelled flood extent
 -  1% AEP (+30%)
 -  1% AEP (+35%)
 -  1% AEP (+70%)

Flood extents may not be
visible where they overlap
other return periods





Defended modelled fluvial extent

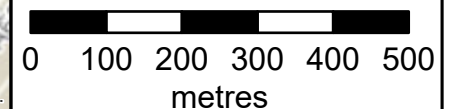
Location (easting/northing)
383545/399431

Scale Created
1:10,000 31 Dec 2025

Model name
Lower Irwell 2017

-  Selected area
-  Main river
- Modelled flood extent
 -  2% AEP
 -  1.33% AEP
 -  1% AEP
 -  0.5% AEP
 -  0.1% AEP

Flood extents may not be
visible where they overlap
other return periods





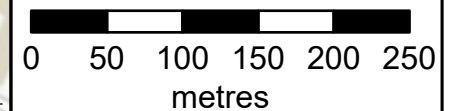
Defended modelled fluvial node locations

Location (easting/northing)
383545/399431

Scale Created
1:5,000 31 Dec 2025

Model name
Lower Irwell 2017

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defended

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level	Level
1	1545266	383196	399342	25.62	25.99	26.32	26.55	26.67	26.74	27.04	30.29
2	1545219	383243	399341	25.59	25.97	26.30	26.52	26.65	26.72	27.02	30.28
3	1545210	383291	399337	25.57	25.94	26.28	26.51	26.63	26.70	27.0	30.27
4	1545342	383351	399330	25.54	25.92	26.26	26.48	26.61	26.68	26.98	30.24
5	1545294	383383	399325	25.52	25.90	26.24	26.46	26.59	26.66	26.96	30.24
6	1545231	383466	399294	25.39	25.77	26.11	26.34	26.47	26.54	26.83	30.19
7	1545238	383551	399236	25.41	25.80	26.14	26.37	26.50	26.58	26.87	30.19
8	1545347	383590	399113	25.30	25.69	26.04	26.28	26.41	26.49	26.77	30.04
9	1545343	383630	399071	25.24	25.62	25.96	26.19	26.32	26.39	26.65	29.46
10	1545312	383647	399054	25.21	25.59	25.94	26.17	26.30	26.37	26.63	29.45

Data in this table comes from the Lower Irwell 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.

Defended

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	1545266	383196	399342	318.35	356.66	387.16	406.70	417.44	425.15	472.42	433.58
2	1545219	383243	399341	318.37	356.69	387.20	406.74	417.49	425.20	472.45	437.52
3	1545210	383291	399337	318.39	356.72	387.25	406.80	417.55	425.26	472.48	449.06
4	1545342	383351	399330	318.42	356.75	387.29	406.85	417.61	425.33	472.52	474.40
5	1545294	383383	399325	318.43	356.77	387.32	406.88	417.65	425.36	472.53	494.47
6	1545231	383466	399294	318.47	356.83	387.40	406.98	417.76	425.47	472.59	519.73
7	1545238	383551	399236	318.52	356.89	387.49	407.09	417.87	425.58	472.65	558.03
8	1545347	383590	399113	318.63	357.02	387.65	407.28	418.08	425.77	472.76	673.98
9	1545343	383630	399071	318.63	357.02	387.65	407.28	418.08	425.77	472.76	673.98
10	1545312	383647	399054	318.65	357.04	387.68	407.31	418.12	425.80	472.77	674.11

Data in this table comes from the Lower Irwell 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.



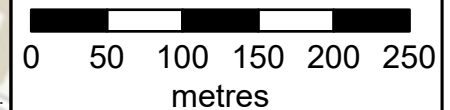
Defences removed modelled fluvial node locations

Location (easting/northing)
383545/399431

Scale Created
1:5,000 31 Dec 2025

Model name
Lower Irwell 2017

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defences removed

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level	Level
1	1545266	383196	399342	25.40	25.72	26.25	26.55	26.67	26.90	27.43	30.63
2	1545219	383243	399341	25.37	25.70	26.22	26.52	26.65	26.87	27.40	30.63
3	1545210	383291	399337	25.35	25.67	26.20	26.50	26.63	26.86	27.38	30.62
4	1545342	383351	399330	25.32	25.64	26.18	26.48	26.61	26.83	27.35	30.60
5	1545294	383383	399325	25.30	25.62	26.15	26.46	26.59	26.80	27.32	30.59
6	1545231	383466	399294	25.17	25.48	26.02	26.33	26.46	26.67	27.18	30.55
7	1545238	383551	399236	25.19	25.51	26.05	26.36	26.50	26.70	27.22	30.55
8	1545347	383590	399113	25.08	25.40	25.94	26.26	26.40	26.60	27.13	30.42
9	1545343	383630	399071	25.03	25.33	25.86	26.17	26.30	26.49	26.99	29.85
10	1545312	383647	399054	25.0	25.30	25.83	26.14	26.28	26.46	26.96	29.84

Data in this table comes from the Lower Irwell 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.

Defences removed

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	1545266	383196	399342	294.46	332.98	387.96	416.56	432.01	451.54	478.80	434.91
2	1545219	383243	399341	294.48	332.99	387.97	416.62	432.83	453.49	485.19	438.68
3	1545210	383291	399337	294.51	333.0	387.99	416.66	432.81	453.95	487.55	443.73
4	1545342	383351	399330	294.54	333.01	388.01	416.70	433.33	457.32	498.71	466.21
5	1545294	383383	399325	294.55	333.02	388.03	416.72	434.26	460.26	507.94	489.16
6	1545231	383466	399294	294.60	333.04	388.06	416.74	434.28	460.28	509.27	517.98
7	1545238	383551	399236	294.65	333.07	388.10	416.77	434.30	460.30	510.35	535.83
8	1545347	383590	399113	294.76	333.14	388.18	416.88	434.37	460.32	511.71	672.42
9	1545343	383630	399071	294.76	333.14	388.18	416.88	434.37	460.32	511.71	672.42
10	1545312	383647	399054	294.78	333.15	388.19	416.90	434.38	460.37	511.67	672.60

Data in this table comes from the Lower Irwell 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.



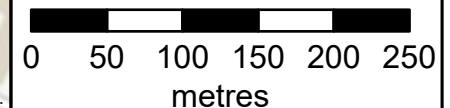
Defended climate change modelled fluvial node locations

Location (easting/northing)
383545/399431

Scale Created
1:5,000 31 Dec 2025

Model name
Lower Irwell 2017

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defended climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
				Level	Level	Level	Flow	Flow	Flow
1	1545266	383196	399342	27.62	27.79	29.59	492.54	490.72	470.83
2	1545219	383243	399341	27.58	27.75	29.58	497.49	497.68	483.80
3	1545210	383291	399337	27.56	27.73	29.56	501.37	502.26	490.74
4	1545342	383351	399330	27.52	27.69	29.53	516.71	518.61	509.23
5	1545294	383383	399325	27.50	27.66	29.52	526.40	532.84	523.36
6	1545231	383466	399294	27.36	27.52	29.45	528.87	539.41	541.44
7	1545238	383551	399236	27.40	27.56	29.43	530.93	543.69	575.55
8	1545347	383590	399113	27.30	27.47	29.26	533.15	547.35	678.72
9	1545343	383630	399071	27.16	27.31	28.77	533.15	547.35	678.72
10	1545312	383647	399054	27.13	27.28	28.75	533.15	547.37	678.74

Data in this table comes from the Lower Irwell 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.



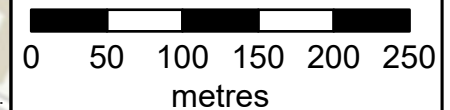
Defences removed climate change modelled fluvial node locations

Location (easting/northing)
383545/399431

Scale Created
1:5,000 31 Dec 2025

Model name
Lower Irwell 2017

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defences removed climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
				Level	Level	Level	Flow	Flow	Flow
1	1545266	383196	399342	28.30	28.55	30.01	474.76	472.64	461.79
2	1545219	383243	399341	28.26	28.52	30.0	484.19	481.16	467.52
3	1545210	383291	399337	28.22	28.48	29.98	492.24	489.0	469.35
4	1545342	383351	399330	28.18	28.44	29.95	508.89	506.19	480.96
5	1545294	383383	399325	28.16	28.42	29.95	525.61	522.09	502.07
6	1545231	383466	399294	28.02	28.30	29.89	548.53	545.82	530.36
7	1545238	383551	399236	28.04	28.31	29.89	561.16	560.45	548.31
8	1545347	383590	399113	27.93	28.19	29.72	587.62	606.70	684.94
9	1545343	383630	399071	27.73	27.94	29.15	587.62	606.70	684.94
10	1545312	383647	399054	27.71	27.92	29.14	587.64	606.72	685.04

Data in this table comes from the Lower Irwell 2017 model.

Level values are shown in mAOD, and flow values are shown in cubic metres per second.

Any blank cells show where a particular scenario has not been modelled for this location.



Defended modelled fluvial extent and height

Location (easting/northing)
383545/399431

Scale Created
1:500 31 Dec 2025

Model name
Lower Irwell 2017

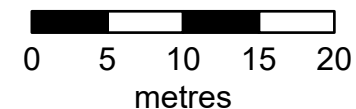
-  Selected area
-  Main river

Modelled 2D grid

Water level in mAOD

-  0 - 3.875
-  3.875 - 7.75
-  7.75 - 11.625
-  11.625 - 15.5
-  15.5 - 19.375
-  19.375 - 23.25
-  23.25 - 27.125
-  27.125 - 31.0
-  31.0 - 34.875

This map shows the
0.1% AEP height data



Defended

[illegible]

[illegible]

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height
Max value in selected area:			Not Calculated	Not Calculated	Not Calculated	Not Calculated	Not Calculated	Not Calculated	Not Calculated	30.25

Data in this table comes from the Lower Irwell 2017 model. Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Defended

[illegible]

[illegible]

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
Max value in selected area:			Not Calculated	Not Calculated	Not Calculated	Not Calculated	Not Calculated	Not Calculated	Not Calculated	2.93

Data in this table comes from the Lower Irwell 2017 model. Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Defences removed modelled fluvial extent and height

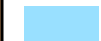
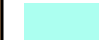
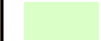
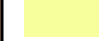
Location (easting/northing)
383545/399431

Scale Created
1:500 31 Dec 2025

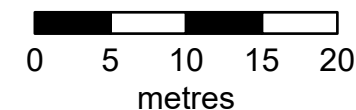
Model name
Lower Irwell 2017

-  Selected area
-  Main river

Modelled 2D grid
Water level in mAOD

-  0 - 3.875
-  3.875 - 7.75
-  7.75 - 11.625
-  11.625 - 15.5
-  15.5 - 19.375
-  19.375 - 23.25
-  23.25 - 27.125
-  27.125 - 31.0
-  31.0 - 34.875

This map shows the
0.1% AEP height data



Defences removed

[illegible]

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height
13	383572	399426	NoData	NoData	NoData	NoData	NoData	NoData	27.72	30.59
14	383522	399436	NoData	NoData	NoData	NoData	27.37	27.49	27.73	30.60
15	383532	399436	NoData	NoData	NoData	NoData	27.37	27.49	27.73	30.60
16	383542	399436	NoData	NoData	NoData	NoData	NoData	27.49	27.73	30.59
17	383552	399436	NoData	NoData	NoData	NoData	NoData	27.49	27.72	30.59
18	383562	399436	NoData	NoData	NoData	NoData	NoData	27.49	27.72	30.59
19	383572	399436	NoData	NoData	NoData	NoData	NoData	27.49	27.72	30.59
20	383542	399446	NoData	NoData	NoData	NoData	NoData	27.49	27.73	30.60
21	383552	399446	NoData	NoData	NoData	NoData	NoData	27.49	27.73	30.59
22	383562	399446	NoData	NoData	NoData	NoData	27.37	27.49	27.73	30.59
23	383572	399446	NoData	NoData	NoData	NoData	NoData	27.49	27.73	30.59
24	383562	399456	NoData	NoData	NoData	NoData	NoData	27.49	27.73	30.59

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height
Max value in selected area:			Not Calculated	Not Calculated	Not Calculated	Not Calculated	27.37	27.49	27.73	30.60

Data in this table comes from the Lower Irwell 2017 model. Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

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'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Defences removed

[illegible]

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
13	383572	399426	NoData	NoData	NoData	NoData	NoData	NoData	0.30	3.17
14	383522	399436	NoData	NoData	NoData	NoData	0.04	0.16	0.39	3.26
15	383532	399436	NoData	NoData	NoData	NoData	0.00	0.10	0.34	3.21
16	383542	399436	NoData	NoData	NoData	NoData	NoData	0.01	0.17	3.04
17	383552	399436	NoData	NoData	NoData	NoData	NoData	0.15	0.38	3.25
18	383562	399436	NoData	NoData	NoData	NoData	NoData	0.00	0.23	3.10
19	383572	399436	NoData	NoData	NoData	NoData	NoData	0.00	0.18	3.05
20	383542	399446	NoData	NoData	NoData	NoData	NoData	0.12	0.36	3.23
21	383552	399446	NoData	NoData	NoData	NoData	NoData	0.11	0.34	3.21
22	383562	399446	NoData	NoData	NoData	NoData	0.02	0.13	0.37	3.24
23	383572	399446	NoData	NoData	NoData	NoData	NoData	0.12	0.35	3.22
24	383562	399456	NoData	NoData	NoData	NoData	NoData	0.14	0.38	3.24

Label	Easting	Northing	20% AEP	10% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
Max value in selected area:			Not Calculated	Not Calculated	Not Calculated	Not Calculated	0.06	0.18	0.41	3.28

Data in this table comes from the Lower Irwell 2017 model. Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

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'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Defended climate change modelled fluvial extent and height

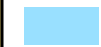
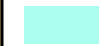
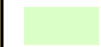
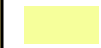
Location (easting/northing)
383545/399431

Scale Created
1:500 31 Dec 2025

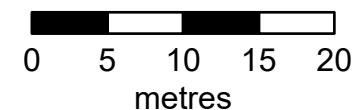
Model name
Lower Irwell 2017

-  Selected area
-  Main river

Modelled 2D grid
Water level in mAOD

-  27 - 27.375
-  27.375 - 27.75
-  27.75 - 28.125
-  28.125 - 28.5
-  28.5 - 28.875
-  28.875 - 29.25
-  29.25 - 29.625
-  29.625 - 30.0
-  30.0 - 30.375

This map shows the
1% AEP +70% height data



Sample point data

Defended climate change

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
1	383512	399406	27.79	27.90	29.52	0.28	0.39	2.01
2	383522	399406	27.78	27.89	29.52	0.28	0.39	2.01
3	383512	399416	27.80	27.91	29.53	0.41	0.51	2.13
4	383522	399416	27.79	27.90	29.52	0.17	0.28	1.89
5	383532	399416	NoData	27.90	29.52	NoData	0.15	1.77
6	383542	399416	27.78	27.90	29.52	0.06	0.15	1.77
7	383512	399426	27.81	27.92	29.54	0.49	0.60	2.22
8	383522	399426	27.81	27.92	29.54	0.33	0.43	2.05
9	383532	399426	27.81	27.92	29.53	0.11	0.22	1.83
10	383542	399426	27.81	27.92	29.52	0.05	0.11	1.66
11	383552	399426	27.80	27.90	29.52	0.19	0.29	1.90
12	383562	399426	27.80	27.91	29.52	0.32	0.42	2.04

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
13	383572	399426	27.80	27.91	29.52	0.38	0.49	2.10
14	383522	399436	27.81	27.92	29.54	0.48	0.58	2.20
15	383532	399436	27.81	27.92	29.53	0.42	0.53	2.14
16	383542	399436	27.81	27.92	29.53	0.26	0.37	1.98
17	383552	399436	27.81	27.91	29.52	0.47	0.57	2.18
18	383562	399436	27.80	27.91	29.52	0.31	0.42	2.03
19	383572	399436	27.80	27.91	29.52	0.27	0.37	1.99
20	383542	399446	27.81	27.92	29.53	0.45	0.55	2.17
21	383552	399446	27.81	27.92	29.53	0.43	0.53	2.15
22	383562	399446	27.81	27.92	29.53	0.45	0.56	2.17
23	383572	399446	27.81	27.92	29.53	0.44	0.55	2.16
24	383562	399456	27.81	27.92	29.53	0.46	0.57	2.18

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
Max value in selected area:			27.81	27.92	29.54	0.50	0.61	2.22

Data in this table comes from the Lower Irwell 2017 model. Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



Defences removed climate change modelled fluvial extent and height

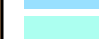
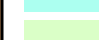
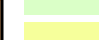
Location (easting/northing)
383545/399431

Scale Created
1:500 31 Dec 2025

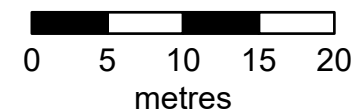
Model name
Lower Irwell 2017

-  Selected area
-  Main river

Modelled 2D grid
Water level in mAOD

-  0 - 3.75
-  3.75 - 7.5
-  7.5 - 11.25
-  11.25 - 15.0
-  15.0 - 18.75
-  18.75 - 22.5
-  22.5 - 26.25
-  26.25 - 30.0
-  30.0 - 33.75

This map shows the
1% AEP +70% height data



Sample point data

Defences removed climate change

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
1	383512	399406	28.29	28.50	29.95	0.78	0.99	2.43
2	383522	399406	28.29	28.50	29.95	0.78	1	2.44
3	383512	399416	28.30	28.51	29.95	0.90	1.12	2.56
4	383522	399416	28.29	28.50	29.95	0.66	0.88	2.32
5	383532	399416	28.29	28.50	29.95	0.54	0.76	2.20
6	383542	399416	28.29	28.50	29.95	0.54	0.75	2.20
7	383512	399426	28.30	28.52	29.96	0.99	1.21	2.64
8	383522	399426	28.30	28.52	29.96	0.82	1.04	2.48
9	383532	399426	28.30	28.52	29.95	0.60	0.82	2.26
10	383542	399426	28.29	28.51	29.95	0.44	0.65	2.09
11	383552	399426	28.29	28.50	29.95	0.67	0.89	2.33
12	383562	399426	28.29	28.51	29.95	0.81	1.03	2.47

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
13	383572	399426	28.30	28.51	29.95	0.88	1.10	2.53
14	383522	399436	28.30	28.52	29.96	0.97	1.19	2.63
15	383532	399436	28.30	28.52	29.96	0.92	1.13	2.57
16	383542	399436	28.30	28.52	29.95	0.75	0.97	2.40
17	383552	399436	28.30	28.51	29.95	0.96	1.17	2.61
18	383562	399436	28.30	28.51	29.95	0.81	1.02	2.46
19	383572	399436	28.30	28.52	29.95	0.76	0.98	2.41
20	383542	399446	28.30	28.52	29.96	0.94	1.16	2.59
21	383552	399446	28.30	28.52	29.95	0.92	1.14	2.57
22	383562	399446	28.30	28.52	29.95	0.95	1.16	2.60
23	383572	399446	28.30	28.52	29.95	0.93	1.15	2.58
24	383562	399456	28.30	28.52	29.96	0.95	1.17	2.61

Label	Easting	Northing	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+30%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
Max value in selected area:			28.31	28.52	29.96	0.99	1.21	2.64

Data in this table comes from the Lower Irwell 2017 model. Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

Your Lead Local Flood Authority is Manchester District.

About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

[Find out more about flood risk activity permits](#)

Help and advice

Contact the Greater Manchester Merseyside and Cheshire Environment Agency team at inforequests.gmmc@environment-agency.gov.uk for:

- [more information about getting a product 5, 6, 7 or 8](#)
- general help and advice about the site you're requesting data for

Appendix C



Environment
Agency

would your business stay afloat?

A guide to preparing your
business for flooding



Flooding is the most common and widespread natural disaster in the UK. Since 1998 there has been at least one serious flood every year. Businesses like yours are more likely to be flooded than destroyed by fire. As our climate changes we can expect to see more extreme weather – and more floods.

We aim to reduce the likelihood of flooding by managing land, rivers, coastal systems and flood defences. While we do everything we can to reduce the chance of flooding, it is a natural process and can never be completely eliminated.

By taking action to prepare in advance for flooding, most businesses can save between 20 and 90 per cent on the cost of lost stock and movable equipment, as well as some of the trouble and stress that goes with such an event.

This is a simple guide to some of the easy actions that you can take to make sure that your business is as well prepared as possible.

It tells you about how to find out if your business is at risk, our flood warning service and what our flood warning codes mean. It also has a simple template to use to design a flood plan for your company.

For more information about flooding, visit our website at **www.gov.uk/flood** or call Floodline on **0345 988 1188**.

Make sure that your business is prepared for flooding.

How do I find out if my business is at risk from flooding?

There are two quick and easy ways for you to find out if you're at risk.

call us on
0345 988 1188

Our Floodline service is open 24 hours, calls are charged at local rate. By taking your postcode, our operators will check and see if your business is in a flood risk area.

Look at our website
www.gov.uk/flood

You need to be aware of flooding and keep an eye on the water levels and weather situation at all times. You can do this by checking the flood forecasts and the river and sea levels on our website.

Our online flood map uses the latest technology and data gathered over many years to give the most accurate view of flooding in your area.

By entering your postcode you can find out if your business is at risk. Areas at risk from flooding are shown in dark blue and areas at risk from extreme flooding in light blue.

My business is at risk from flooding. What should I do now?

Start preparing now. If the weather conditions are right, flooding can happen at any time.

Remember, floods can happen at any time and any day – make sure you provide a number that can be contacted at all times – even out of working hours.

Sign up for flood warnings.

The first thing you should do is find out if you can receive flood warnings. In areas of high flood risk, we offer a service called Floodline Warnings Direct. This is a free, 24 hour service that sends automated flood warnings by telephone, SMS text, email, fax or pager.

To find out if you can receive this service, call Floodline on 0345 988 1188.

If your business isn't in an area covered by our warnings you can still check the latest flood warnings in force on our website.

When the situation is serious, flood warnings will also be broadcast on local television and radio news.

What practical steps can I take to protect my business?

Now that you've checked your risk and found out about flood warnings, it's time to start thinking about preparing a flood plan specifically for your business.

Taking simple steps can go a long way to protecting your business from flooding. Preparing a flood plan could:

- Significantly reduce financial losses, damage to property and business interruption;
- Help compliance with regulatory requirements (for example, Occupier's Liability Act 1984);
- Reduce exposure to civil or criminal liability;
- Enhance your company's image and credibility with employees, customers, suppliers and the community;
- Help fulfil your moral responsibility to protect employees, the community and the environment;
- Help you to obtain insurance cover.

What is a flood plan?

Just as many businesses have health and safety policies and contingency plans for an emergency, they should also have flood plans.

A flood plan is a written document that outlines how your business will respond to a flood.

This might include a list of steps you will take in case of a flood and the order you will take them in. It could also include the purchase of flood products and insurance.

A written plan can make information **easy** to access during a flood, **easy** to communicate to staff, and **easy** to remember.

Small businesses should make sure there is a plan of action in case of flooding. As the business owner, this may be your responsibility.

If your business is **medium sized**, flood preparation might be the responsibility of a team of people from different areas of the business.

If your business decides to have a flood planning team, this could be led by the business owner or Managing Director.

The leader of the flood planning team will need to let staff know about the plan once it is finished.

All members of the team should also keep a copy of important flood contacts at home for easy access.

Key areas to consider in your flood plan are:

- human resources;
- maintenance/facilities;
- finance and purchasing.

Once you have completed your plan don't forget about it. Look at it regularly and make sure it is up to date and in the event of a flood **use it**.



business flood plan



A written flood plan is recommended for businesses.

It should include:

- A list of important contacts, including Floodline, building services, suppliers and evacuation contacts for staff;
- A description or map showing locations of key property, protective materials and service shut-off points;
- Basic strategies for protecting property, preventing business disruption and assisting recovery;
- Checklists of procedures that can be quickly accessed by staff during a flood.

If a flood is imminent, your main priority is to make sure that your staff are safe. However there may be other actions that you can take to prepare your building and it's contents to minimise damage and post-flood repair and restoration costs.

Business flood plan

Flood plan for _____ dated _____

Registered address _____

Postcode _____

Staff contact list

Name	Address	Telephone/mobile	Emergency contact	Emergency telephone and address

Note staff who may require assistance in the event of a flood.

Name	Office location

Key locations

Service cut-off	Description of location
Electricity	
Gas	
Water	

Answer the following if applicable

	Description of location	How to protect from a flood (for example, move, cover, tie down)
First Aid Kit		
Oil based products (gasoline, oil, cooking oil etc.)		
Chemicals (including cleaning products)		

Protective actions

Identify stock, equipment and possessions that may need special protective measures, and describe the actions you will take to prevent damage in the event of a flood. We have suggested items and ways to protect them, but make sure you follow through on your plans.

think about:

- Computers;
- Tables / heavy furniture;
- Vehicles;
- Paper files;
- Electrical items;
- Chairs / stools;
- Databases;
- Soft furnishings;
- Computer files;
- Staff files.

ways to protect items

- Make a copy of important documentation and store in safe location;
- Raise items above ground level;
- Buy flood protection products;
- Buy new flood-resistant items;
- Move items to a safer location if possible – to an upper level of the building or off site.

Valuable item	Protective action	New location (if applicable)	Done
			☐
			☐
			☐
			☐
			☐
			☐
			☐
			☐
			☐

Suggested basic building materials to help protect your property

If materials are not needed, leave the relevant section blank

Materials	Used for	Items to protect / where to use	Storage location	Done
Sand and sand bags (unfilled), shovel	Creating flood barriers (used with plastic sheeting)			☐
Tools – hammer, nails, saw	Boarding up doors, windows and openings, creating shelves			☐
Wood – plywood, blocks of wood	Boarding up doors, windows and openings, creating shelves			☐
Sturdy plastic sheeting	Sandbag barriers, pulling up around furniture and appliances			☐
Strong plastic bags	Putting around legs of tables and chairs			☐
Pallets	Raising stored stock above flood level			☐
Emergency power generator	Maintaining function of air conditioning units (can help dry out a building), running fridges and freezers, medical equipment if appropriate			☐

Identify people who can help you before, during and after a flood, and what they can do.

We have suggested ways they might be able to help, but you'll need to discuss this with them.

Name	Address	Telephone day	Telephone evening	Mobile

Ways people can help

- assistance with installing flood products;
- assistance with transporting stock/materials to new location if possible;
- provision of emergency storage;
- provision of emergency supplies or medical support if required.

discussion guide

This discussion guide sums up the key areas of flood planning. Some of this information can be found in this pack to help get you started.



Research

- Look at your existing business policies, and think about whether they are appropriate in the event of a flood.

Staff

- Make a list of **employees' contact details in the event of an evacuation**. This might include mobile telephone numbers, or numbers for their home or the home of a friend or relative;
- Think about staff who **may need special assistance** in the event of a flood (for example, elderly, deaf, blind etc.)

Security procedures

- **Locking windows, doors and setting the alarm**. You might need more than one person to help do this;
- Insurance policies – **Are you insured for flood damage**, business interruption and lost revenue?
- Employee manuals – You might **add flood safety to staff information packs**, or adapt job descriptions to include flood warden duties;
- Hazardous materials plan – You must ensure that **chemicals, oils and other substances in your possession are kept safe** and do not contaminate flood water;
- Health and safety assessment – Plan to **check the functioning of flood products and flood warning systems regularly**, just as you do for fire safety equipment.

Check codes and regulations that might apply to your business in the event of a flood. The following could provide guidance on the right actions to take:

- Occupational health and safety regulations;
- Environmental regulations.



Important contacts

Make a list of important telephone numbers, including contacts for gas, electricity, water and telephone providers.

Key locations

- **Know the location** of cut-off points for gas, electricity and water. Ideally, these should be marked on a map that is stored with your flood plan;
- Know the location of chemicals, oils or other materials that could be dangerous or contaminate flood water. These should be stored safe from floods and other damage.

Protective actions

- Note key stock, equipment and possessions that may need special protection from flood water;
- Consider things you may need during or after a flood (for example, sandbags, plastic sheeting, loudspeaker);
- See if it's **possible to move key operations**, such as shipping or customer services, to another building.

Suppliers and external links

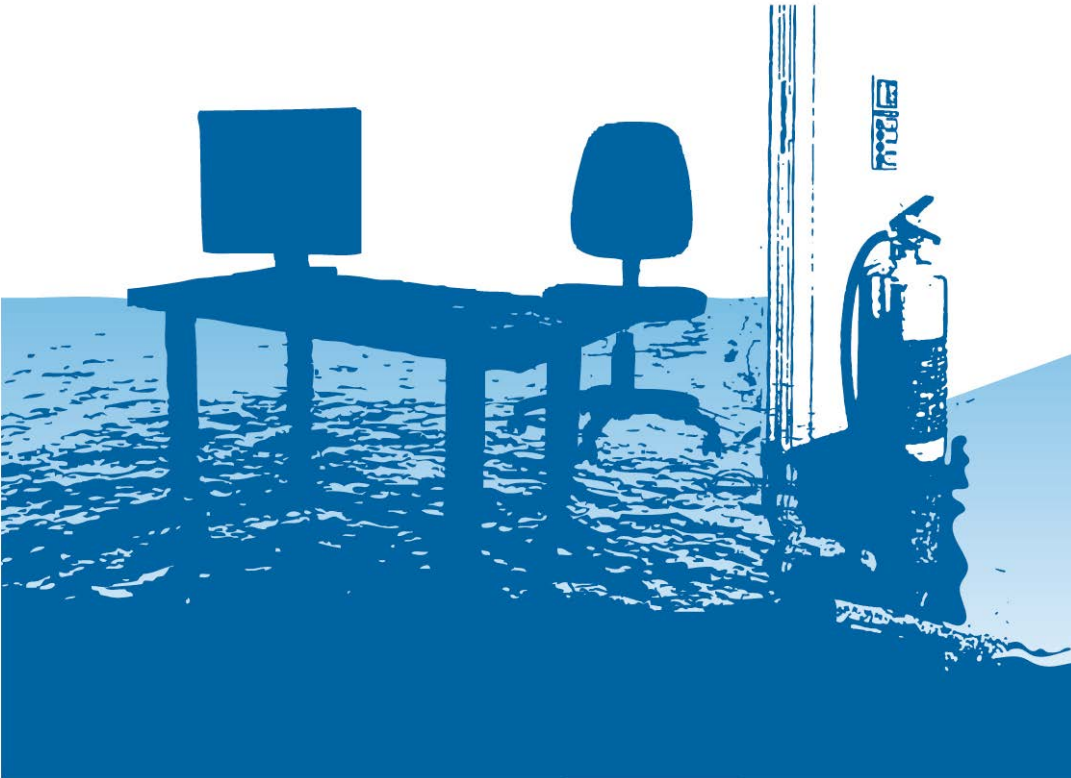
- Identify products and services you won't need in the event of a flood, or which suppliers may not be able to provide. **Make back-up plans** or arrangements for short-notice cancellation of deliveries;
- Consider contracting in advance with companies whose help you may need after a flood.

business checklist

Are you prepared for flooding?

If you answer no to any of the questions overleaf, there may be more you can do to protect your business.

The individual sections will give you valuable information on effective actions you can take to prepare for a flood.



If you can answer yes, please ☒, otherwise leave blank for no.

Know if you're at risk

- ☐ Do you know if you're at risk of flooding?
- ☐ Are flood warnings available in your area?
- ☐ Do you know how you can receive flood warnings?

Preparing a flood plan

- ☐ Do you know how your business will respond to a flood?
- ☐ Do you have a list of useful numbers including Floodline, local authority and insurance company?
- ☐ Do you know how to shut off your gas/electric/water supplies?
- ☐ Are your stock, fittings and valuable equipment stored above flood level?
- ☐ Have you developed flood contingency plans with suppliers and/or clients?
- ☐ Can you call someone to help you in the event of a flood?

Staff training and evacuation

- ☐ Are you aware of correct flood safety procedures for you and your staff?
- ☐ Have you trained your staff on flood safety procedures?
- ☐ Can your staff work quickly and efficiently to protect your business in the event of a flood?

Protecting your property

- ☐ Have you installed flood protection products?
- ☐ Do you have a stockpile of useful materials including plywood, plastic sheeting, sandbags (unfilled), sand, nails, hammer, shovel, blocks of wood and a saw?
- ☐ Have you installed non return valves in your toilets and drains?
- ☐ Do you and your staff have high ground where you can park your cars?
- ☐ Are your electrical sockets above flood level?
- ☐ Do you have computer equipment in the basement?

Flood insurance

- ☐ Do you have sufficient insurance cover in the event of a flood situation?
- ☐ Do you know what information your insurer will require to support a claim?

Evacuation

- ☐ Do you have an easy way to let your staff know about an evacuation?
- ☐ Do you know which roads will stay open in your area during a flood?
- ☐ Have you identified where staff can shelter in the event of a flood?
- ☐ Could you control staff panic during a flood?

understand your flood warning codes

Our warning service has three types of warnings - Flood Alert, Flood Warning and Severe Flood Warning - that will help you prepare for flooding and take necessary actions.

ONLINE FLOOD RISK FORECAST

What it means

Be aware.
Keep an eye on the weather situation.

When it's used

Forecasts of flooding on the Environment Agency website are updated at least once a day.

What to do

- Check weather conditions.
- Check for updated flood forecasts on our website.



FLOOD ALERT

What it means

Flooding is possible.
Be prepared.

When it's used

Two hours to two days in advance of flooding.

What to do

- Be prepared to act on your flood plan.
 - Prepare a flood kit of essential items.
 - Monitor local water levels and the flood forecast on our website.
-



FLOOD WARNING

What it means

Flooding is expected.
Immediate action required.

When it's used

Half an hour to one day
in advance of flooding.

What to do

- Move staff, stock and valuables to a safe place.
 - Turn off gas, electricity and water supplies if safe to do so.
 - Put flood protection equipment in place.
-



SEVERE FLOOD WARNING

What it means

Severe flooding.
Danger to life.

When it's used

When flooding poses a
significant risk to life.

What to do

- Stay in a safe place with means of escape.
 - Be ready should you need to evacuate.
 - Co-operate with the emergency services.
 - Call 999 if you are in immediate danger.
-

WARNING NO LONGER IN FORCE

What it means

No further flooding is
currently expected in
you area.

When it's used

When river or sea
conditions begin to
return to normal.

What to do

- Be careful. Flood water may still be around for several days.
 - If you've been flooded, ring your insurance company as soon as possible.
-

useful contacts

Fill in the contact details you may need if your business floods.
Keep it in a safe place, where you can hold of it quickly.

	Company name	Telephone number/s
Environment Agency Floodline		0345 988 1188
Electricity supplier and meter number		
Gas supplier and meter number		
Water supplier and meter number		
Telephone provider		
Local authority emergency services		
Insurance company 24-hour number and policy number		
Insurance agent		
Local radio station for news alerts and weather updates		
Companies that may be able to help you after a flood		
Electrician		
Plumber		
Builder		
Equipment repair/suppliers		
Security services		
Water pumping services		
Emergency power suppliers		

**Would you like to find out more about us,
or about your environment?**

Then call us on

08708 506 506* (Mon-Fri 8-6)

email

enquiries@environment-agency.gov.uk

or visit our website

www.gov.uk/environment-agency

incident hotline 0800 80 70 60 (24hrs)

floodline 0345 988 1188 (24hrs)

*** Weekday Daytime calls cost 8p plus up to 6p/min from BT Weekend Unlimited. Mobile and other providers' charges may vary.**



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