Flood Risk Assessment

16 Alness Road, Whalley Range, Manchester

Date	Prepared For	Reference
October 2024	SSG Sustainable Living	73313

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Contract

GeoSon Limited were instructed by Maria Marsden of SSG Sustainable Living, by an email dated 9th September 2024, to undertake a Site Specific Flood Risk Assessment to support a proposed planning application for development at 16 Alness Road, Whalley Range, Manchester.

Project	Flood Risk Assessment for Planning
Prepared For	SSG Sustainable Living
Location	16 Alness Road, Whalley Range, Manchester M16 8ET
Application	Construction of a small extension at lower ground floor level; installation of a new stairwell and lift; internal reconfiguration of the property to create 15 x studio rooms as part of a HMO refurbishment
Our Reference	73313
Version	1.0
Issue Date	23/10/2024
Issued To	Maria Marsden (SSG Sustainable Living) and Mark Newman (Building Sense Limited)
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Purpose

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Introduction

Context

GeoSon Limited have been instructed by SSG Sustainable Living to undertake a Site Specific Flood Risk Assessment (FRA) to support a proposed planning application for development at 16 Alness Road, Whalley Range, Manchester.

This FRA has been undertaken in accordance with the revised National Planning Policy Framework (NPPF) December 2023 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 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.

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 16 Alness Road, Whalley Range, Manchester M16 8ET.

The red outline boundary is approximately 585m^2 in size and is occupied by an 11 bedroom, semi-detached House in Multiple Occupation (HMO) in the east with a driveway and car park in the west.

According to plans provided by the applicant the existing accommodation is split over four separate floors. Having reviewed the existing internal layout plans the lower ground floor level comprises two kitchens, a dining room, a living room, a bedroom, a bathroom and a separate toilet.

The upper ground floor is occupied by three bedrooms, a living room and a shower room. Four bedrooms and bathroom facilities are located on both the first and second floors with a communal stairwell in the centre of the property.

The application site is located at the intersection of Alness Road and Mayfield Road. The House in Multiple Occupation fronts onto Alness Road with pedestrian access available via a raised paved path. The car park in the west of the site is accessed via a separate entrance off Mayfield Road.

Site Address	16 Alness Road, Whalley Range, Manchester M16 8ET
Site Area	Approximately 585m^2
Current Use	Residential Use (HMO)
Proposed Use	Residential Use (HMO)
OS NGR	SJ 83156 95068
County	Greater 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 Alness Road (Source: Google)

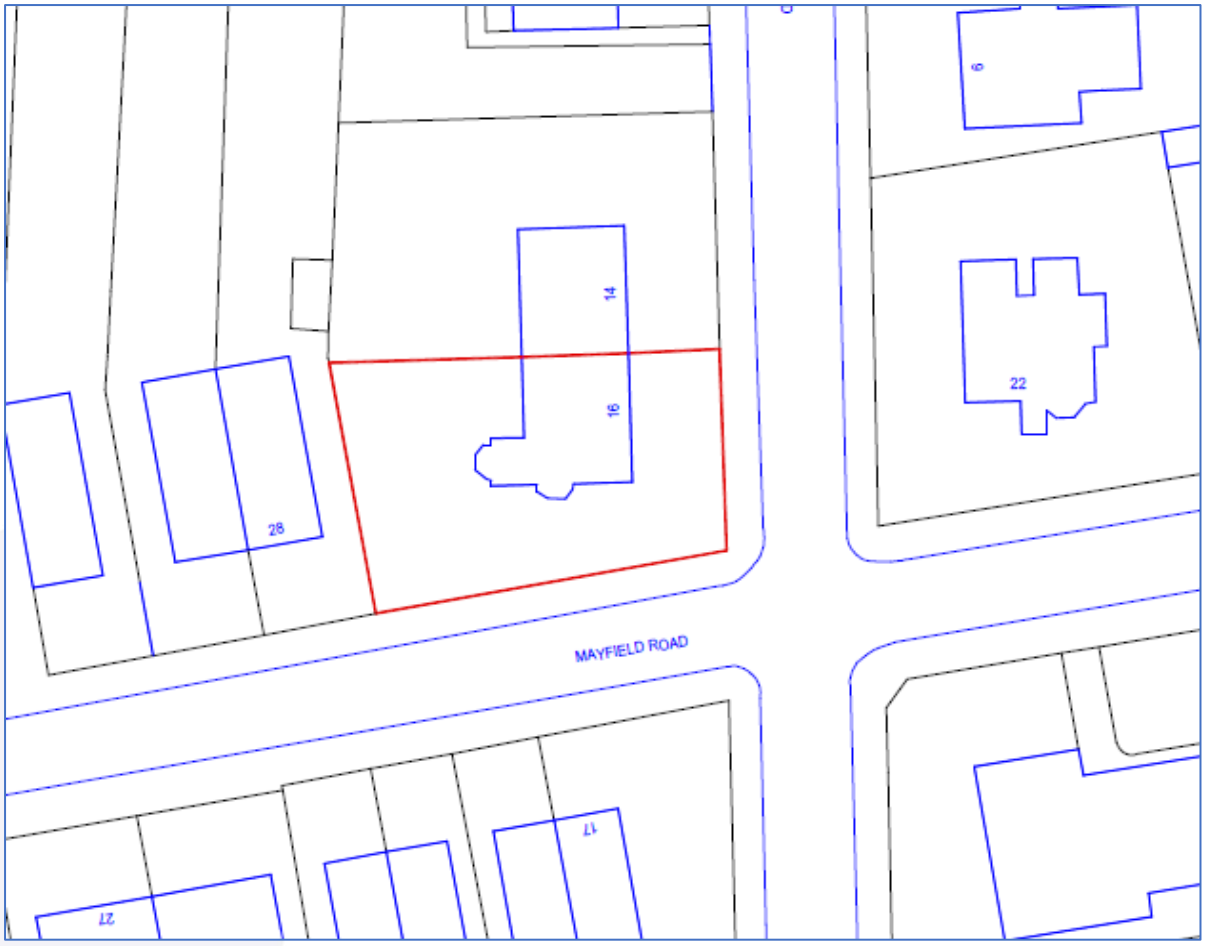


Figure 2: Site Location

Topography

A topographic survey was undertaken at the site by Survey 2 Plan in September 2024 and provided by the client for inclusion within this report.

The topographical survey indicates that external ground levels within the application boundary have a 1.39m elevation range from 29.55mAOD, associated with land adjacent to the rear entrance, to 30.94mAOD along the eastern boundary.

Review of online information indicates that the front entrance is accessed via several steps. The topographic survey, undertaken by Survey 2 Plan, includes a spot height for the section of footpath immediately adjacent to the stepped access and reports an external ground level of 30.91mAOD.

1.0m resolution LiDAR data obtained from the Environment Agency indicates that the surrounding area generally slopes in a south westerly direction (towards the River Mersey) with land to the north east elevated higher than the site.

Figure 3 shows the elevation profile of the site and surrounding area. The topographic survey can be seen in Appendix A.

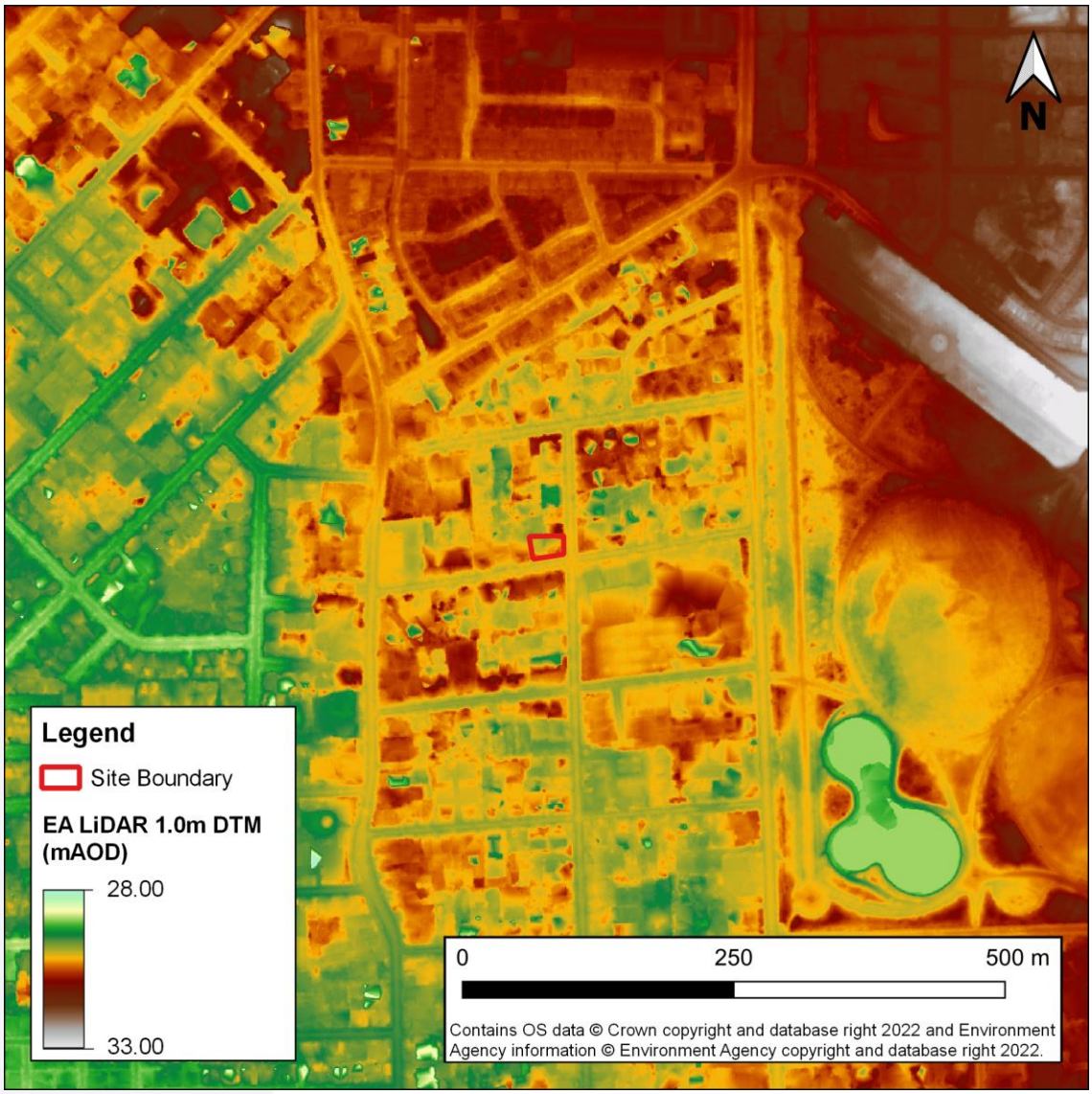


Figure 3: Topography of the Site and Surrounding Area

Existing Finished Floor Levels

The applicant has provided a section plan which shows the elevation of each floor of the existing building relative to rear entrance. Review of the section plan shows that there are internal steps on the upper ground, first and second floors which result in the property have two separate Finished Floor Levels per storey.

A conservative approach has been adopted to estimate the existing Finished Floor Levels of each storey of the building utilising the measurements shown on the section plan and the lowest spot height reported adjacent to the rear door of the property (29.55mAOD). Refer to topographic survey shown in Appendix A.

The approximate Finished Floor Levels for each storey at 16 Alness Road are shown in Table 2.

A copy of the section plan can be found in Appendix A.

Floor of Building	Elevation Compared to Rear Entrance (m)	Estimated Finished Floor Level (mAOD)
Lower Ground	0.00	29.55
Upper Ground	+ 2.26 / + 2.41	31.81 / 31.96
First	+ 5.33 / + 5.55	34.88 / 35.10
Second	+ 8.34 / + 8.98	37.89 / 38.53

Table 2: Estimated Existing Finished Floor Levels

Geology and Hydrogeology

Review of online British Geological Survey (BGS) records indicates that the site is located upon Wilmslow Sandstone Formation bedrock.

This geological strata was formed during the Olenekian Age some 247.1 to 250.0 million years ago.

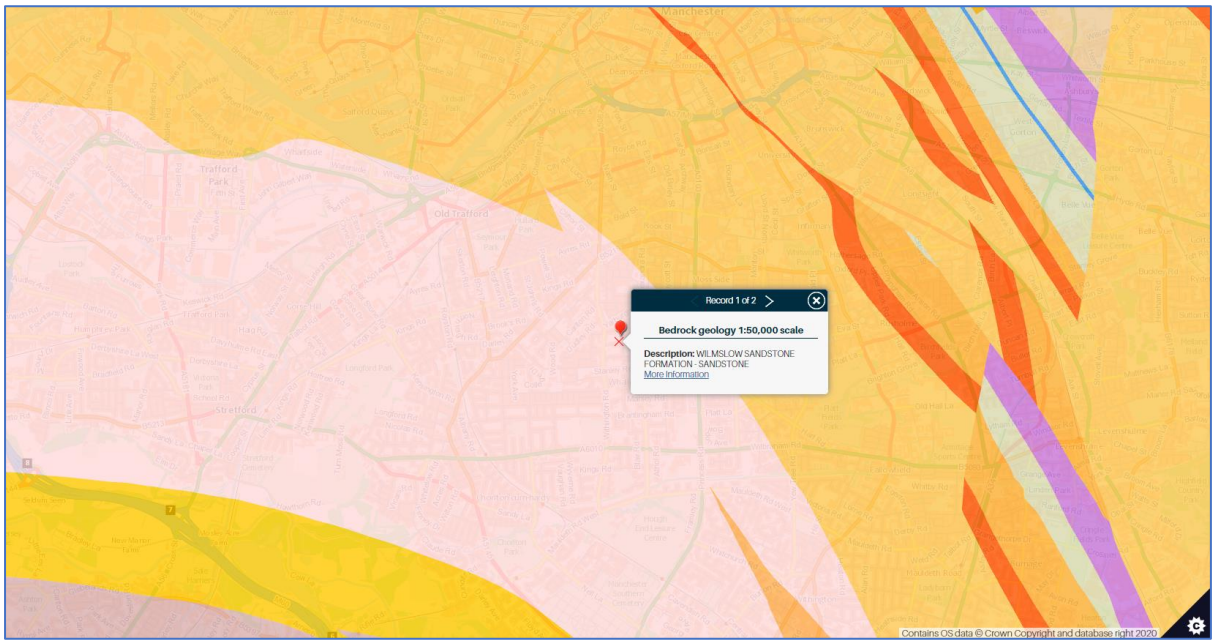


Figure 4: Bedrock Geology Map (Source: British Geological Survey)

According to BGS data the site is also underlain by superficial deposits comprising Glaciofluvial Sheet Deposits (Sand and Gravel).

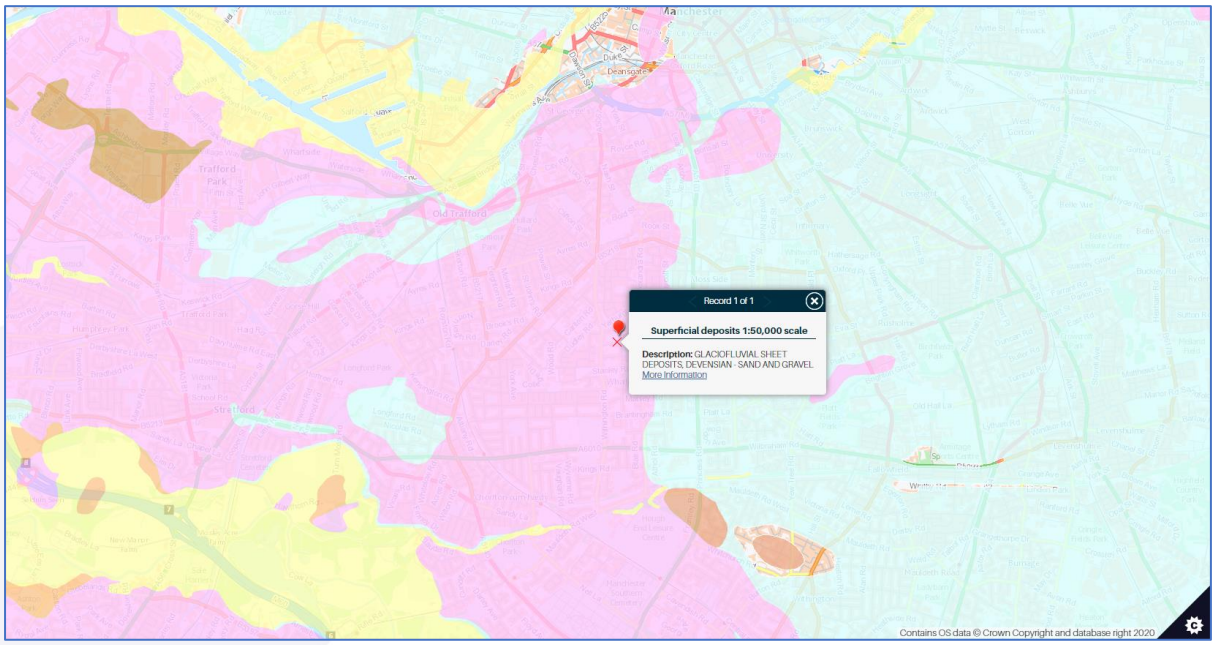


Figure 5: Superficial Deposit Geology Map (Source: British Geological Survey)

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

DEFRA 'Magic Maps' indicate that there are no groundwater Source Protection Zones beneath the site. The closest Source Protection Zone to the application area is located approximately 620m north east of the development and is classified as a Zone 3 – 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 watercourses have been identified within a 1.50km radius of 16 Alness Road, including:

- Alexandra Park Lake approximately 295m south east of the site;
- Platt Brook approximately 1.30km south east;
- Red Lion Brook 1.45km south east; and,
- Chorlton Brook 1.50km south of the site.

Platt Brook and Chorlton Brook are classified as Main Rivers and are therefore managed by the Environment Agency. Alexandra Park Lake and Red Lion Brook are classed as Ordinary Watercourses and are managed by the Lead Local Flood Authority.

The watercourses within a 1.50km radius of the site are shown in Figure 6 (below).

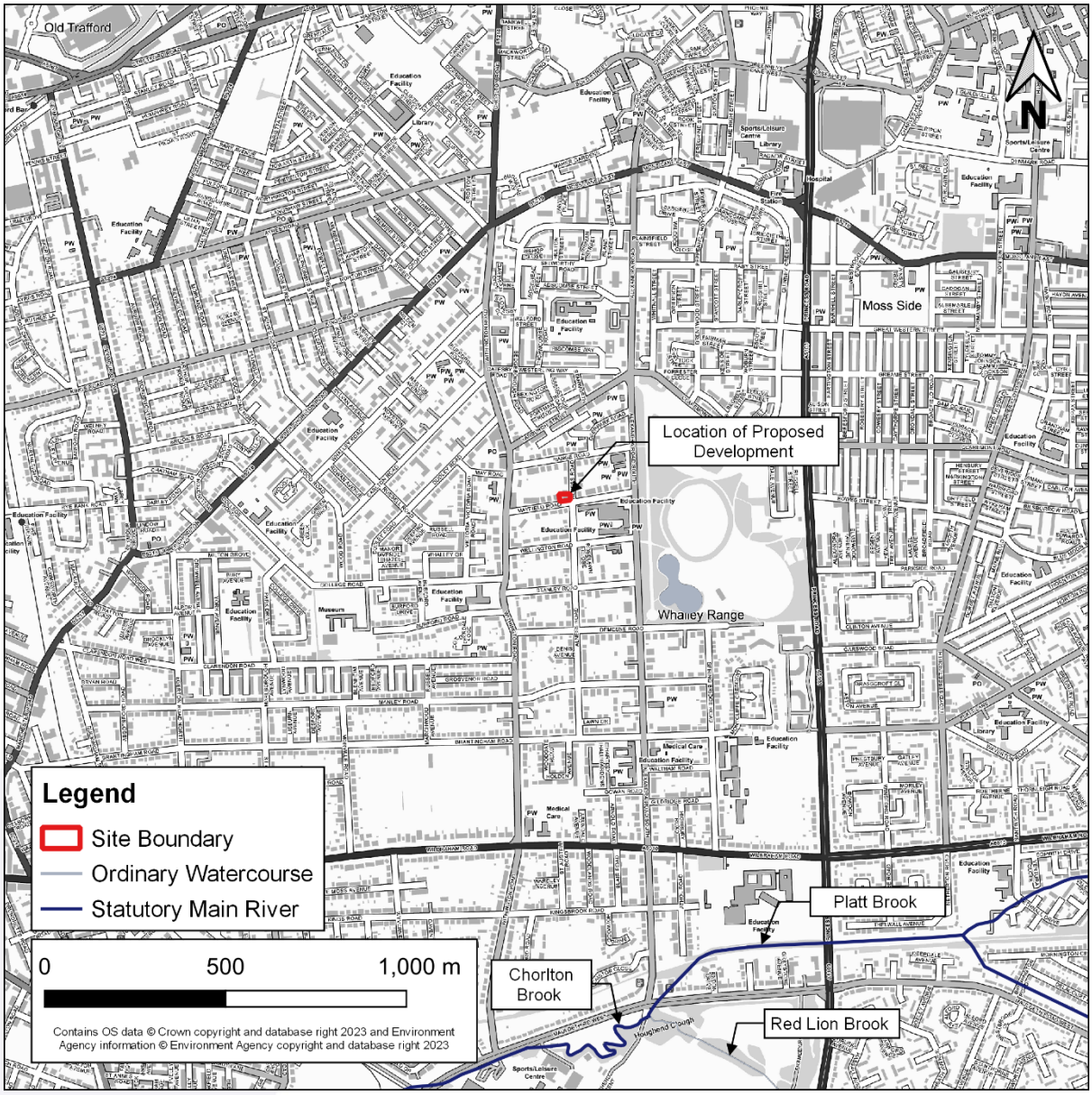


Figure 6: Watercourses Near the Site

Proposed Development

Development Proposals

The proposed planning application is for internal reconfiguration of the property to create 15 studio rooms as part of a HMO refurbishment for SSG Sustainable Living.

Based on the plans provided by the applicant, all works will be internal apart from construction of a small extension (measuring 4.5m^2) at lower ground floor level which will house a kitchen, along with installation of a new stairwell and lift to provide access to the upper ground floor.

The extension, external stairs and lift will be constructed upon existing hardstanding. Thus, there will be no increase in the total area of impermeable surfacing at the site post development.

A copy of the proposed site layout plan is provided in Figure 7 (below), as well as Appendix B.

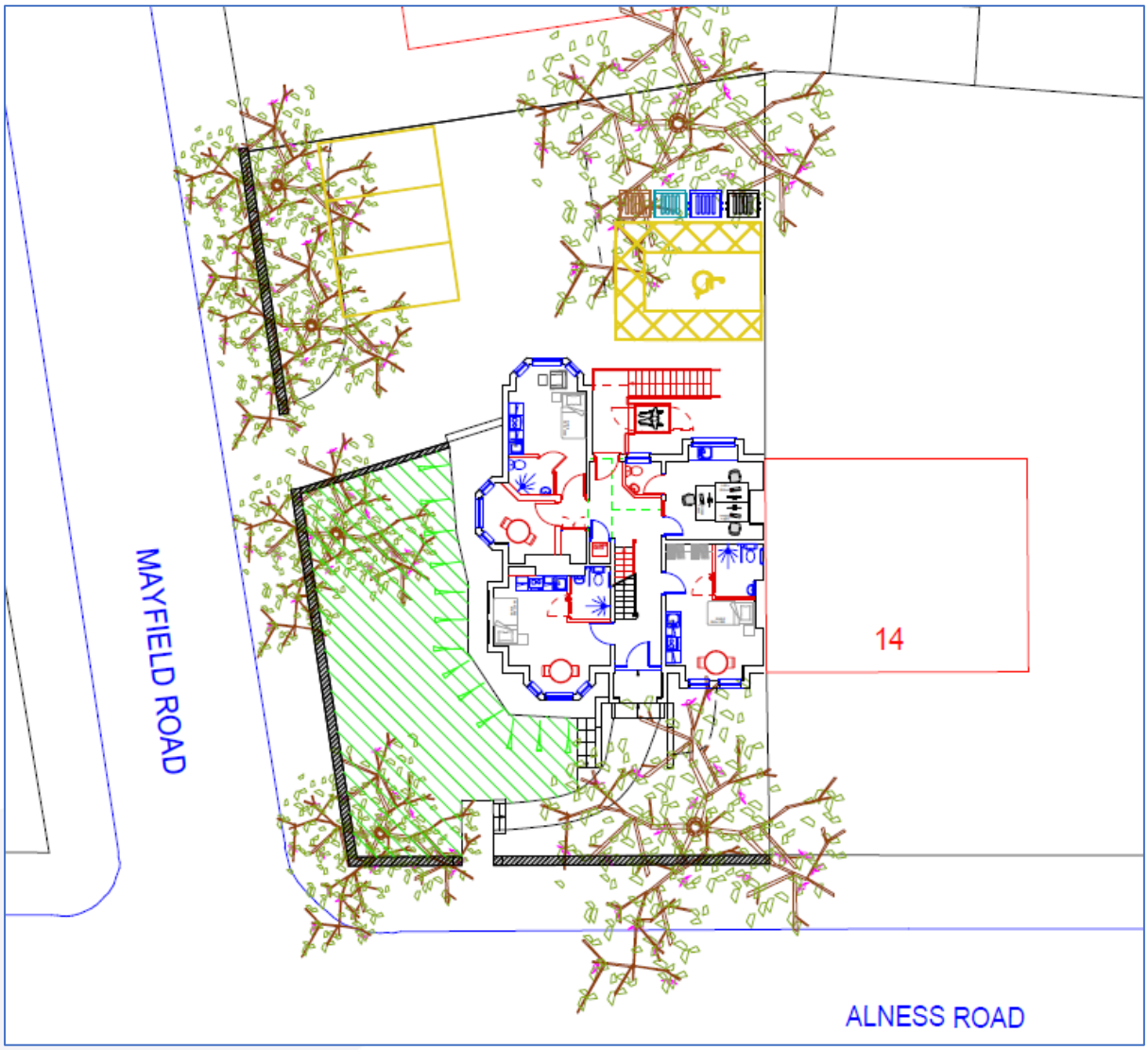


Figure 7: Proposed Site Layout Plan

Relevant National Planning Guidance

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 3: Flood Risk Vulnerability Classification (Source: NPPF)

The site is currently occupied by an 11 bedroom House in Multiple Occupation (HMO). Therefore, in terms of flood risk vulnerability it is considered "More Vulnerable".

The proposals comprise a small extension followed by internal reconfiguration to create a 15 bedroom HMO. As such, according to NPPF guidance the site will remain "More Vulnerable" post development.

In light of this, it is considered that the vulnerability of the application area will not increase as a result of the development.

Sequential and Exception Test

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

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

According to Table 4 (above) 'More Vulnerable' development is considered suitable within Flood Zone 1, 2 and 3a (subject to undertaking the Exception Test).

However, it should be noted that Sequential and Exception Tests do not apply to Change of Use and Minor Extension applications.

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 proposed extension will have a total built footprint of less than 4.5m^2. Therefore, it is considered that EA standing advice applies.

In accordance with the EA's Standing Advice for Minor Extensions, 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 either no lower than existing floor levels or 300 millimetres above estimated flood levels
- Details of appropriate flood resistance and resilience measures. 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 Strategic Flood Risk Management Framework (2018)
- Greater Manchester Level 1 Strategic Flood Risk Assessment Update (2019)
- Greater Manchester Level 2 Hybrid Strategic Flood Risk Assessment (2020)

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 an internet search.

Following review of the available data, whilst there have been reports of flood incidents along Alness Road no information have been provided to suggest that the site itself has ever flooded.

According to the Environment Agency's Recorded Flood Outline and Historic Flood Map datasets the nearest recorded fluvial flood incidents to the site relate to flooding of land 3.25km south of the development, adjacent to the River Mersey, in 1964 and 2021.

Environment Agency Flood Zones

The Environment Agency has created a set of Flood Zones which shows 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 5: Flood Zone Definitions (Source: Planning Practice Guidance)

Note: The Flood Zones shown on the Environment Agency's Flood Map for Planning (Rivers and Sea) do not take into account the possible impacts of climate change and consequent changes in the future probability of flooding.

According to the Environment Agency's Flood Map for Planning (refer to Figure 8) the site and the surrounding area are located within Flood Zone 2, defined as land which has between a 1 in 100 and 1 in 1000 annual probability of fluvial flooding in any given year.

The primary source of flood risk to the site appears to be sourced from Corn Brook and Platt Brook.

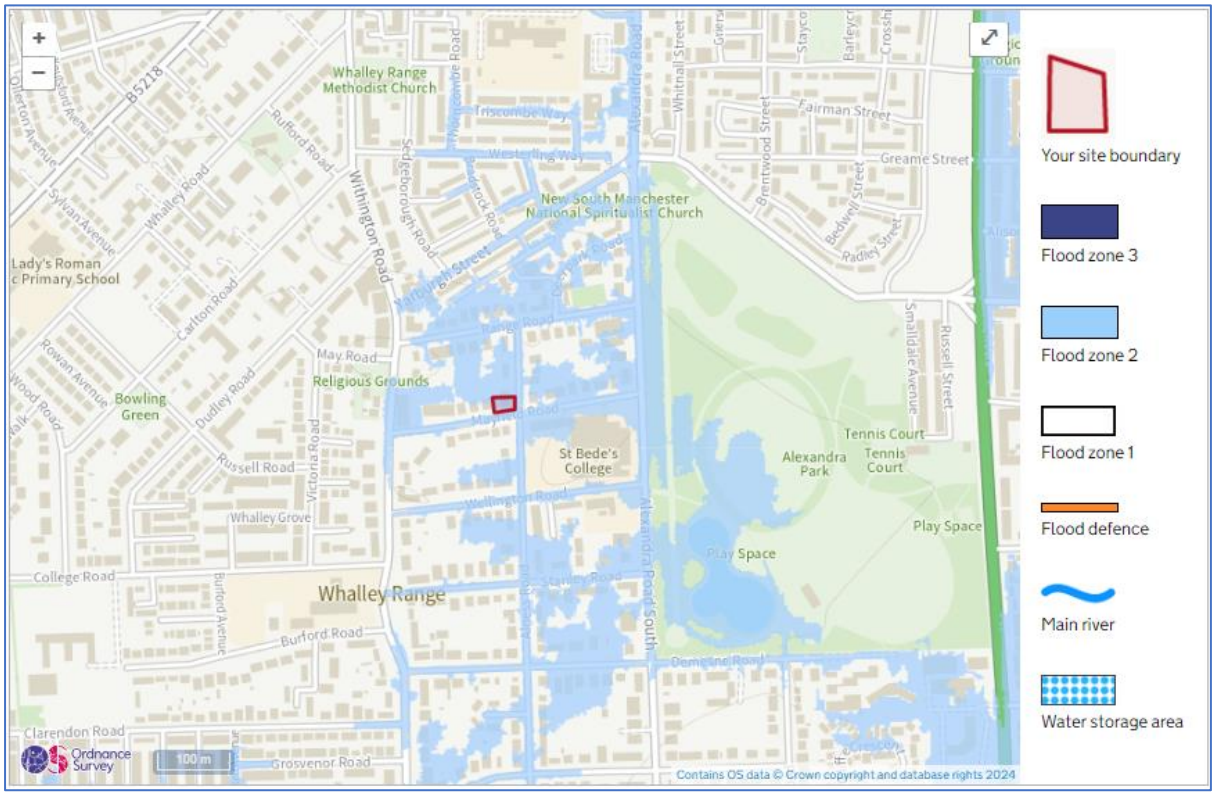


Figure 8: Environment Agency Flood Map for Planning

Fluvial (Rivers)

Environment Agency Product 4 Response

Considering that the site has been modelled within Flood Zone 2 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 site.

A Product 4 response was received in October 2024 (refer to Appendix C). Within which the Environment Agency provided in-channel flood levels and flows as well as 2D floodplain node levels extracted from the 2017 Corn Brook model and 2024 Chorlton Platt Gore model. Refer to Figure 9 for node point locations.

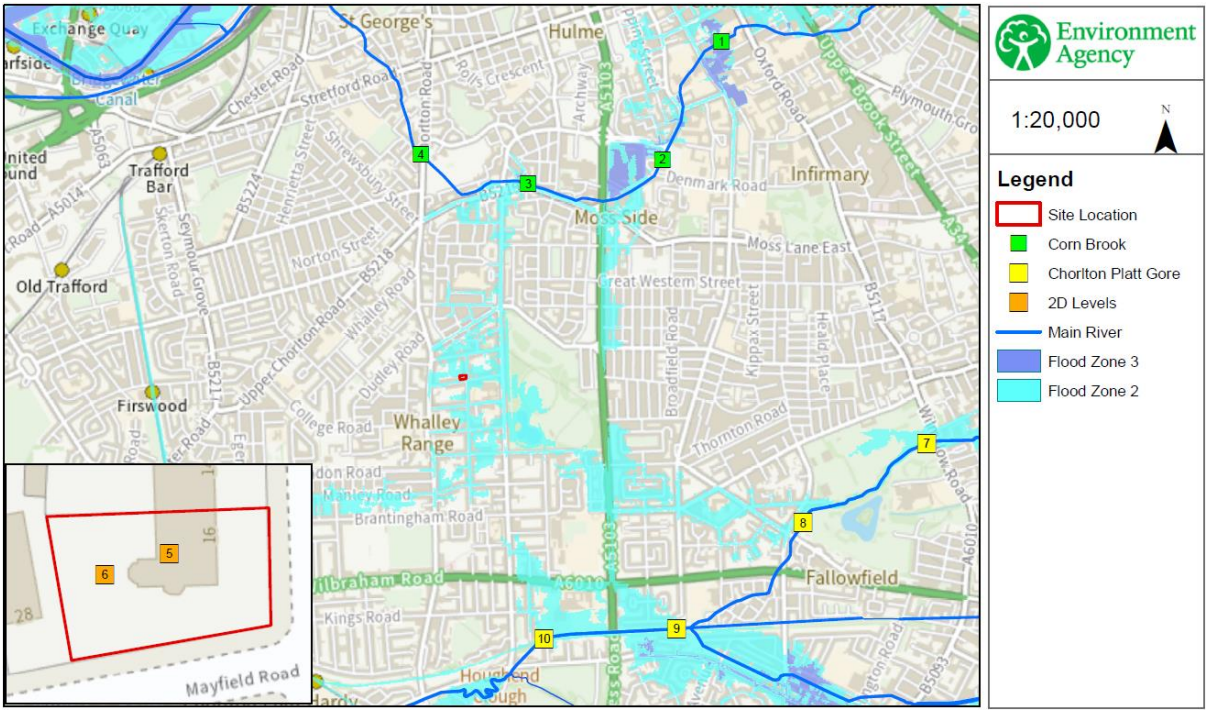


Figure 9: Node Points in Relation to the Site (Source: Environment Agency)

Defended and undefended floodplain levels have been provided for two node points at the site, extracted from the 2017 Corn Brook model and 2024 Chorlton Platt Gore model.

Table 6 and * Assumed *results for the 0.1% AEP +53% CC return period event. However, shown in EA Product 4 response as 1053.*

Table 7 show the modelled 2D floodplain levels relating to the two node points at the site, provided by the EA as part of the Product 4 information response.

Node Reference	Undefended Floodplain Level (mAOD)
	0.1 % AEP +30% CC
5	30.33
6	30.33

Table 6: Modelled 2D Floodplain Levels - 2017 Corn Brook (Source: EA)

Node Reference	Undefended (mAOD)	Defended (mAOD)		
	0.1 % AEP	1 % AEP +85% CC	0.1 % AEP	0.1 % AEP +53% CC *
5	30.04	30.05	30.08	30.38
6	30.04	30.05	30.07	30.38

** Assumed results for the 0.1% AEP +53% CC return period event. However, shown in EA Product 4 response as 1053.*

Table 7: Modelled 2D Floodplain Levels - 2024 Chorlton Platt Gore (Source: EA)

As can be seen from both sets of model results, the site and surrounding area are not located within the modelled 1 in 100 year or 1 in 100 year plus allowance for climate change extents.

Updated Climate Change Allowances

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 Corn Brook is located within the Irwell Management Catchment whereas Platt Brook is located within the Upper Mersey Management Catchment.

Updated peak river flow allowances for both catchments are as follows:

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

Table 8: Irwell Management Catchment Peak River Flow Allowances

Epoch	Central	Higher	Upper
2020s	13%	17%	27%
2050s	22%	31%	51%
2080s	41%	53%	85%

Table 9: Upper Mersey Management Catchment Peak River Flow Allowances

The specific Climate Change allowance required to the 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, residential developments should be considered to have a minimum lifetime of 100 years.

Additionally, residential developments are considered 'More Vulnerable' (refer to Table 3). In line with government guidance More 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% Annual Exceedance Probability plus 35% Climate Change fluvial event for Corn Brook, and
- 1% Annual Exceedance Probability plus 41% Climate Change fluvial event for Platt Brook.

Review of the model results provided from the 2017 Corn Brook study indicates that model runs were undertaken for the 1% AEP +35% Climate Change event.

Additionally, the Chorlton Platt Gore model includes modelled outputs for the 1% AEP +41% Climate Change scenario.

The EA have not provided any 2D floodplain levels at the site for both the 1% AEP +35% Climate Change and 1% AEP +41% Climate Change events.

As such, it is considered that the site is located entirely outside of the 1% AEP +35% Climate Change and 1% AEP +41% Climate Change events.

Despite the site being located entirely outside of the 1% AEP climate change flood extents for both models, it is recommended that a precautionary approach is adopted and flood mitigation measures are incorporated within the development based on the 0.1% AEP +30% CC floodplain level of 30.33mAOD.

Defences

As part of the Product 4 information request the Environment Agency provided details of nearby flood defences which afford the site protection.

According to Environment Agency data, flood defences in the form of embankments and walls are located along sections of Platt Brook to the south east of the site (refer to Figure 10).

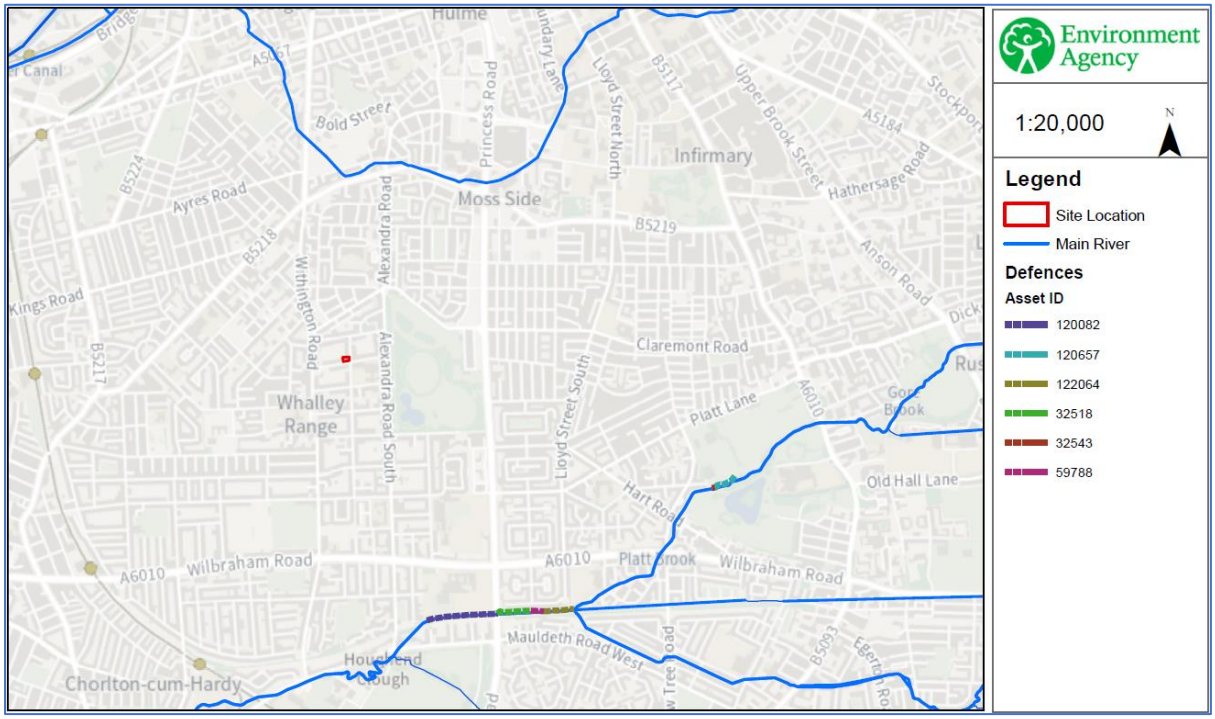


Figure 10: Formal Flood Defence Map (Source: Environment Agency)

Table 10 details the attributes associated with the formal flood defences shown in Figure 10. According to the EA's AIMS Spatial Flood Defences dataset the flood defence assets located along the banks of Platt Brook offer the site and surrounding area a 100 year standard of protection.

Start Date	Asset Type	Asset ID	Standard of Protection	Upstream Actual Crest Level (m aod)	Downstream Actual Crest Level (m aod)
01/01/1996	Embankment	120082	100	31.38	30.25
01/01/1996	Embankment	120657	100	36.27	36.29
01/01/1996	Wall	122064	100	31.90	31.84
01/01/1996	Wall	32518	100	31.84	31.48
01/01/1996	Wall	32543	100	35.76	35.74
01/01/1996	Embankment	59788	100	32.82	31.81

Table 10: Flood Defence Attributes (Source: Environment Agency)

Pluvial (Surface Water)

Pluvial (surface water) 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 Environment Agency's Risk of Flooding from Surface Water (RoFSW) dataset, refer to Figure 11.

The Risk of Flooding from Surface Water maps were produced in 2013 by the Environment Agency, working with Lead Local Flood Authorities. They are considered to represent a significant improvement on the previous surface water flood maps, both in terms of method and representation of the risk of flooding. Considerable improvements were made to the modelling techniques and data used, including the incorporation of locally produced mapping, where available, to represent features best modelled at a local scale.

The RoFSW information assesses flooding scenarios as a result of rainfall with the following chance of occurring in any given year:

- 1 in 30 (3.3%)
- 1 in 100 (1%)
- 1 in 1000 (0.1%)

The modelled return period outputs are then classified into four categories based on the level of surface water flood risk posed to an area. These categories are detailed below:

High	An area which has a 1 in 30 (3.3%) or greater annual probability of flooding
Medium	An area which has between a 1 in 100 (1%) and 1 in 30 (3.3%) annual probability of flooding
Low	An area which has between a 1 in 1000 (0.1%) and 1 in 100 (1%) annual probability of flooding
Very Low	An area which has less than a 1 in 1000 (0.1%) annual probability of flooding

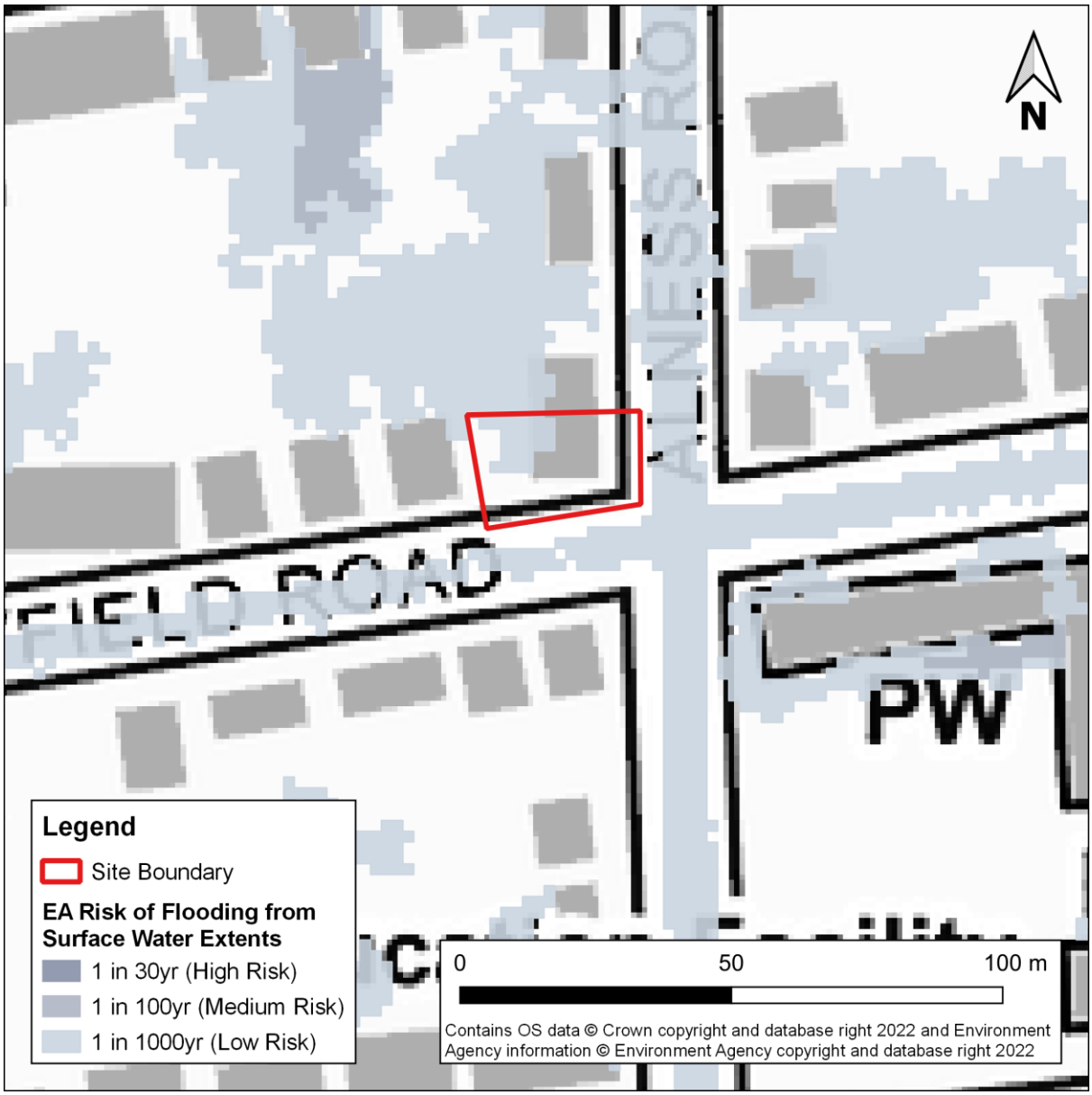


Figure 11: Environment Agency's Risk of Flooding from Surface Water Map

The EA's Risk of Flooding from Surface Water data (Figure 11) shows that the site is located within an area modelled to be at "Very Low" and "Low" risk of flooding from surface water.

Alness Road and Mayfield Road have also been modelled at "Low" risk of flooding from surface water.

According to the Environment Agency's RoFSW dataset, the site will remain flood free during the 1 in 30 year and 1 in 100 year storm events. However, surface water accumulation is anticipated to occur upon land in the north west of the site during the 1 in 1000 year storm event with flood depths modelled to reach up to 300-600mm deep along the western wall of the property.

Despite this, no information has been provided to suggest that the site has historically flooded as a result of surface water flows.

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 not located within an area identified at risk of groundwater flooding or within an area where shallow groundwater is present.

No further information has been provided to suggest that the site or surrounding area has historically been subject to groundwater flooding.

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.

Manchester City, Salford City and Trafford Council's Level 2 Hybrid Strategic Flood Risk Assessment (2011) states that *in Manchester, sewer and drainage problems have been identified during rainfall events, with issues in Northenden, Didsbury, Fallowfield and in the city centre.*

Greater Manchester Combined Authority Level 1 SFRA Update (2019) includes Figure 6.8 which shows the location of historic sewer flood incidents recorded by United Utilities and Greater Manchester Surface Water Hotspots.

Having reviewed the map, the closest recorded sewer incidents to the site appears to be associated with properties located on the other side of Withington Road to the application. Additionally, the development appears to be situated outside of the GM surface water hotspot.

No further information has been provided to suggest that the site itself is susceptible to sewer surcharge flooding.

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 development is considered to be susceptible to reservoir failure.

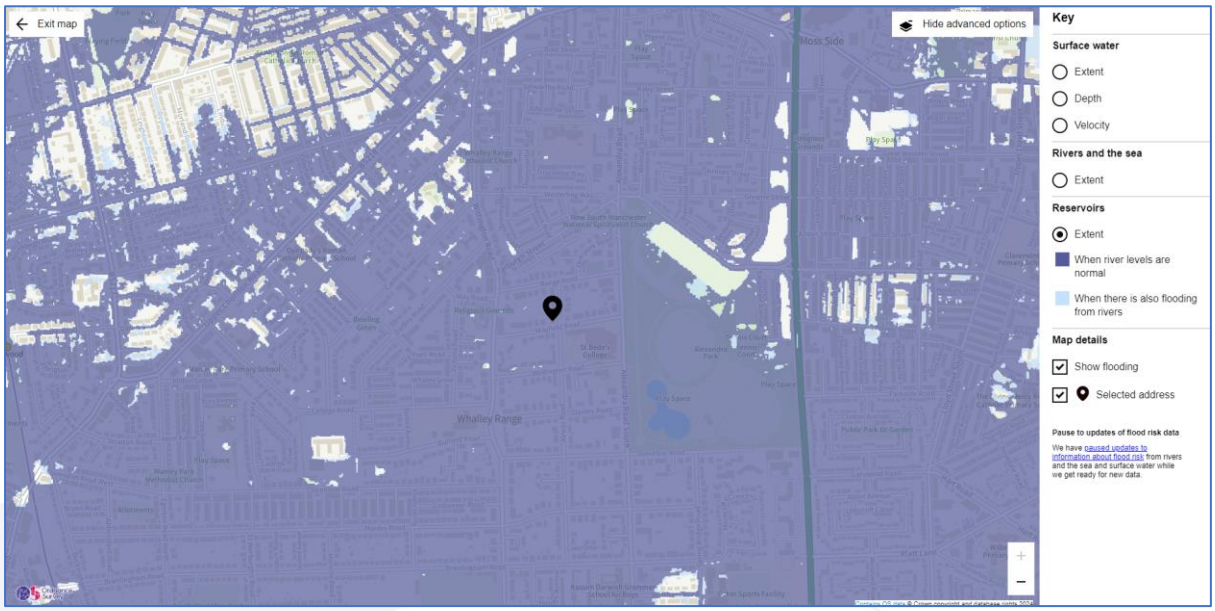


Figure 12: Flood Risk from Reservoirs Map (Source: EA)

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 development relates to construction of a small rear extension, measuring less than 4.5m^2, and internal reconfiguration to create 15 studio rooms as part of a HMO refurbishment for SSG Sustainable Living.

Given that the proposals primarily relate to refurbishment of an existing building the Finished Floor Levels within the property will remain as is.

In accordance with EA Standing Advice for minor extensions, the Finished Floor Level (FFL) of the proposed extension should be set either:

- no lower than existing floor levels or
- 300 millimetres (mm) above the estimated flood level

The client has confirmed that the Finished Floor Level of the proposed extension will match the existing lower ground floor FFL of the current building to allow for continuity between the proposed kitchen and activity room.

As such, providing that the FFL of the extension is set at the same level as the existing lower ground floor level, the first condition of the EA's Standing Advice for Minor Extensions 'no lower than existing floor levels' will be met.

Mitigation Measures

The majority of the application boundary is located within an area modelled to be at "Very Low" risk of flooding from surface water with the north west of the site modelled to be at "Low" risk.

Additionally, as demonstrated by the 2017 Corn Brook and 2024 Chorlton Platt Gore model results, the site is not located within the modelled 1 in 100 year or 1 in 100 year plus allowance for climate change fluvial flood extents for both watercourses.

The upper ground floor of 16 Alness Road has a Finished Floor Level of 31.81mAOD to 31.96mAOD and is therefore considered to be elevated entirely above the modelled 0.1% AEP and 0.1% AEP climate change fluvial floodplain levels extracted from both the 2017 Corn Brook model and 2024 Chorlton Platt Gore model.

However, given that the property includes a lower ground floor it is considered that there could be a risk of flooding during an extreme event associated with the subterranean level.

As such, whilst the site is located entirely outside of the 1% climate change flood extents for both models, it is recommended that a precautionary approach is adopted and flood mitigation measures are incorporated within the development based on the 0.1% AEP +30%CC floodplain level (30.33mAOD).

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

- External landscaping is designed to slope away from the building footprint
- Linear drains are installed in front of all building entry points
- Non-return valves fitted on drains and pipes
- Any chambers fitted with a double seal screw down cover and frame
- Any cracks and holes in the external walls, including service and drainage entry points are sealed with mortar/sealant and made watertight

- Any new electrics and sockets within the building are raised at least 300mm above the modelled 0.1% AEP +30%CC flood level, where possible (installed at 30.63mAOD or above)
- Flood resilient materials (for example lime plaster) are used to at least 300mm above the 0.1% AEP +30%CC flood level (to at least 30.63mAOD)
- Water resistant materials such as stainless steel, plastic or solid wood used for the lower ground floor level fitout
- External walls rendered resistant to flooding to upper ground floor level
- Any doors, windows or other openings are flood resistant to at least 300mm above the estimated flood level
- Covers are provided for airbricks, pet flaps and appliance vents
- Ensure there is access to all spaces to enable drying and cleaning, should a flood event occur

In addition to the measures listed above consideration should also be given to the following:

- Installation of demountable flood defence barriers to protect lower ground floor entry thresholds against flood water ingress up to a maximum depth of 0.6m
- If applicable, any extraction pipes and flues from the lower ground floor kitchens are designed so that the outlets and flue cowls are located at least 600mm above the surrounding ground levels

Groundwater Mitigation

No information has been provided to suggest that groundwater flooding or water penetration has historically occurred within the property.

Despite this, it is recommended that the applicant confirms whether the existing lower ground floor level has been tanked. If not already done so, it is recommended that the subterranean rooms are appropriately waterproofed as part of the refurbishment.

This mitigation measure will protect against the unlikely occurrence of groundwater ingress should water table levels fluctuate in the future.

Flood Warnings and Alerts

The site is located within an EA Flood Alert area.

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

Flood Alert	Flood Warning	Severe Flood Warning
Flooding is possible. Be prepared	**Flooding is expected. Immediate action required**	**Severe flooding. Danger to life.**
• Be prepared to act on your Flood Plan. • Prepare a flood kit. • Monitor local water levels and flood forecasts.	• Move people, pets, valuables and vehicles to a safe place. • Turn off utilities if safe to do so. • Put flood protection equipment in place.	• Stay in a safe place with means of escape. • Be ready to evacuate. • Co-operate with the emergency services.

Table 11: EA Flood Warnings and Flood Alerts

Residents and future owners should also be advised to monitor weather forecasts by signing up to the Met Office weather warnings.

Considering the nature of the development, it is recommended that the applicant completes the Environment Agency's Flood Plan template (refer to Appendix D). The Flood Plan will outline the site-specific actions which will be followed in the event of a flood alert being issued.

Should an extreme flood event occur without warning, given that the upper ground floor is elevated above the modelled 1% AEP and 0.1% AEP climate change fluvial extents, it is considered that safe refuge above the design flood event can be provided on the upper floors of the property.

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 application site is located within an area modelled to be at “Very Low” and “Low” risk of surface water flooding.

Additionally, as demonstrated by the 2017 Corn Brook and 2024 Chorlton Platt Gore model results, the site is not located within the modelled 1 in 100 year or 1 in 100 year plus allowance for climate change fluvial flood extents for both watercourses.

Given that the proposals relate to a minor extension and refurbishment of a 3.5 storey building, it is considered that safe refuge above the 0.1% AEP +30% CC fluvial floodplain level (30.33mAOD) can be provided on the upper ground floor level and above.

Safe access and egress to and from the property can be provided via Mayfield Road, adjacent south. It is recommended that residents travel west along Mayfield Road before heading north along Withington Road. This route is located outside of the 0.1% AEP fluvial flood extent and the 1 in 1000 year surface water extent from 140m west of the site (along Withington Road) onwards.

Offsite Impacts

Increase in Surface Water Runoff

Having reviewed the existing and proposed site layout plans, the rear extension will be constructed upon land already entirely underlain by hardstanding.

As a result, it is considered that the development in its current form will not significantly increase surface water runoff rates and volumes when compared to the pre-developed situation, and a surface water drainage strategy is not required.

It is assumed that surface water runoff currently generated by the site discharges via a private drainage network into the surrounding main sewer system.

It is envisaged that post development runoff from the proposed extension will be discharged into the surface water drainage system which currently serves the site.

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 butts (to provide a source of non-potable water supply) and raingardens into the scheme
- Designing external landscaping to slope away from the building, where possible
- Installing linear drains in front of all building entry points
- Locating any openings, such as air bricks, at least 300mm above the surrounding external ground levels

It is also recommended that any newly introduced areas of hardstanding should be constructed of permeable paving.

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

Given that the site is located entirely outside of the 1% AEP +35% Climate Change fluvial event (for Corn Brook) and the 1% AEP +41% Climate Change fluvial extent (for Platt Brook), the development will not impact upon the existing floodplain functionality.

As such, there will be no loss of fluvial floodplain storage as a result of the development.

Conclusions and Recommendations

Conclusions

GeoSon Limited have been instructed by SSG Sustainable Living to undertake a Site Specific Flood Risk Assessment (FRA) to support a proposed planning application for development at 16 Alness Road, Whalley Range, Manchester.

This FRA has been undertaken in accordance with the revised National Planning Policy Framework (NPPF) December 2023 and the associated Planning Practice Guidance (PPG).

The proposed application site is located at 16 Alness Road, Whalley Range, Manchester M16 8ET. The red outline boundary is approximately 585m^2 in size and is occupied by an 11 bedroom, semi-detached House in Multiple Occupation (HMO) in the east with a driveway and car park in the west.

The proposed planning application is for internal reconfiguration of the property to create 15 studio rooms as part of a HMO refurbishment for SSG Sustainable Living.

Based on the plans provided by the applicant, all works will be internal apart from construction of a small extension (measuring 4.5m^2) at lower ground floor level which will house a kitchen, along with installation of a new stairwell and lift to provide access to the upper ground floor.

The extension, external stairs and lift will be constructed upon existing hardstanding. Thus, there will be no increase in the total area of impermeable surfacing at the site post development.

The site is currently occupied by an 11 bedroom House in Multiple Occupation (HMO). Therefore, in terms of flood risk vulnerability it is considered "More Vulnerable". The proposals comprise a small extension followed by internal reconfiguration to create a 15 bedroom HMO. As such, according to NPPF guidance the site will remain "More Vulnerable" post development.

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 an internet search. Whilst there have been reports of flood incidents along Alness Road no information have been provided to suggest that the site itself has ever flooded.

According to the Environment Agency's Flood Map for Planning the site and the surrounding area are located within Flood Zone 2, defined as land which has between a 1 in 100 and 1 in 1000 annual probability of fluvial flooding in any given year.

Considering that the site has been modelled within Flood Zone 2 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 site.

A Product 4 response was received in October 2024 (refer to Appendix C). Within which the Environment Agency provided in-channel flood levels and flows as well as 2D floodplain node levels extracted from the 2017 Corn Brook model and 2024 Chorlton Platt Gore model.

Considering the nature of the proposals, the development should be assessed against the:

- 1% Annual Exceedance Probability plus 35% Climate Change fluvial event for Corn Brook, and
- 1% Annual Exceedance Probability plus 41% Climate Change fluvial event for Platt Brook.

Review of the model results provided from the 2017 Corn Brook and the 2024 Chorlton Platt Gore study indicates that model runs were undertaken for the 1% AEP +35% Climate Change event and 1% AEP +41% Climate Change scenario, respectively.

The EA have not provided any 2D floodplain levels at the site for both the 1% AEP +35% Climate Change and 1% AEP +41% Climate Change events. Therefore, it is considered that the site is located entirely outside of the 1% AEP +35% Climate Change and 1% AEP +41% Climate Change events.

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

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 development is considered to be susceptible to reservoir failure.

No information has been provided to suggest that the property or surrounding area has historically been subject to groundwater or sewer surcharge flooding.

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 development relates to construction of a small rear extension, measuring less than 4.5m^2, and internal reconfiguration to create 15 studio rooms as part of a HMO refurbishment for SSG Sustainable Living.
- Given that the proposals primarily relate to refurbishment of an existing building the Finished Floor Levels within the property will remain as is.
- The client has confirmed that the Finished Floor Level of the proposed extension will match the existing lower ground floor FFL of the current building to allow for continuity between the proposed kitchen and activity room.
- **Providing that the FFL of the extension is set at the same level as the existing lower ground floor level, the first condition of the EA's Standing Advice for Minor Extensions 'no lower than existing floor levels' will be met.**
- The application site is located within an area modelled to be at "Very Low" and "Low" risk of surface water flooding.
- Additionally, as demonstrated by the 2017 Corn Brook and 2024 Chorlton Platt Gore model results, the site is not located within the modelled 1 in 100 year or 1 in 100 year plus allowance for climate change fluvial flood extents for both watercourses.
- Despite this, given that the property includes a lower ground floor it is recommended that a precautionary approach is adopted and flood mitigation measures are incorporated within the development based on the 0.1% AEP +30%CC floodplain level (30.33mAOD). Appropriate mitigation measures are outlined on Pages 28 and 29.
- In addition to the measures listed on Page 28 and 29, to further protect the property and future users, it is recommended that the applicant considers:
    - Installing demountable flood defence barriers to protect lower ground floor entry thresholds against flood water ingress up to a maximum depth of 0.6m.
    - Designing any new outlets, such as the kitchen extraction pipes, so that the flue cowls are located at least 600mm above the surrounding ground levels.
- Whilst no information has been provided to suggest that groundwater flooding or water penetration has historically occurred within the lower ground floor, it is recommended that the applicant confirms whether the subterranean rooms have been tanked. If not already done so, it is recommended that the subterranean rooms are appropriately waterproofed as part of the refurbishment.
- The site is located within an EA Flood Alert area. Therefore it is recommended that the property owner and future tenants of the development sign up to the Environment Agency's free Targeted Flood Warning Service at https://www.gov.uk/sign-up-for-flood-warnings.
- The property owner and future residents should also be advised to monitor weather forecasts by signing up to the Met Office weather warnings.
- Considering the nature of the development, it is recommended that the applicant completes the Environment Agency's Flood Plan template (refer to Appendix D). The Flood Plan will outline the site-specific actions which will be followed in the event of a flood alert being issued.
- Given that the proposals relate to a minor extension and refurbishment of a 3.5 storey building, it is considered that safe refuge above the 0.1% AEP +30% CC fluvial floodplain level (30.33mAOD) can be provided on the upper ground floor level and above.
- Safe access and egress to and from the property can be provided via Mayfield Road, adjacent south. It is recommended that residents travel west along Mayfield Road before heading north along Withington Road. This route is located outside of the 0.1% AEP fluvial flood extent and the 1 in 1000 year surface water extent from 140m west of the site (along Withington Road) onwards.

Appendix

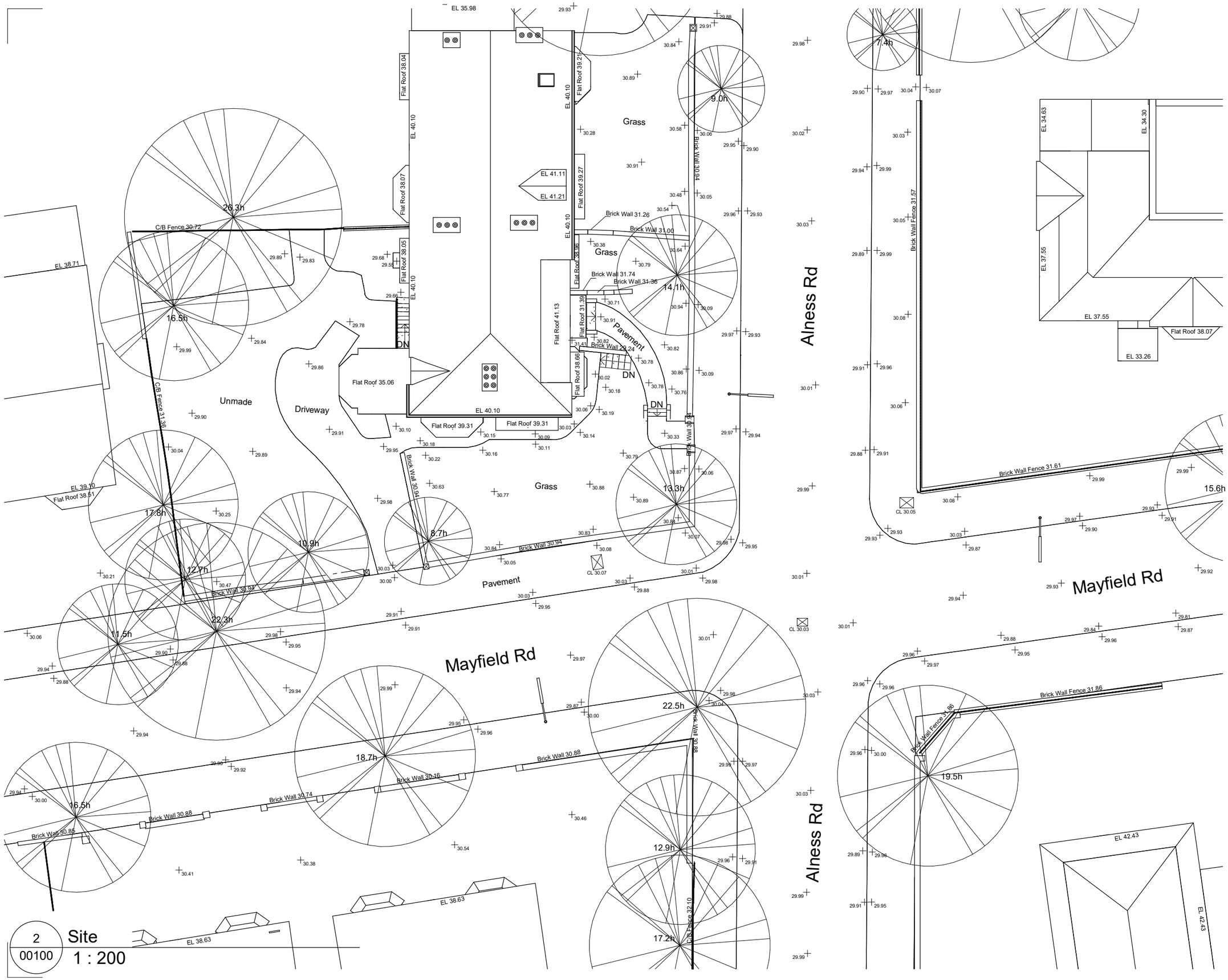
A. Topographic Survey and Section Plan

B. Existing Plans and Proposed Development Plans

C. Environment Agency Product 4 Response

D. Environment Agency Business and Personal Flood Plan Templates

Appendix A



2
00100

Site
1 : 200

Do not scale from this drawing.

Check drawing on receipt and immediately report any discrepanciesto the Architect.

Verify all dimensions and levels on site prior to construction.

The contents of this drawing are [CLIENT] copyright and shall not be re-used without their written permission.

Notes

Rev	Date	Description	Drawn	Checked

Survey 2 Plan
86-90 Paul Street
Innospace, Turing House, 5 Archway, Manchester
M15 IRL

T 020 388 355 59
info@survey2plan.com
www.survey2plan.com

Client
Building Sense Chartered Survey

Project
16AlnessRd

Drawing Title
Site Plan

Suitability Code	Drawn:	Checked:	Revision
S2	HS	HS	

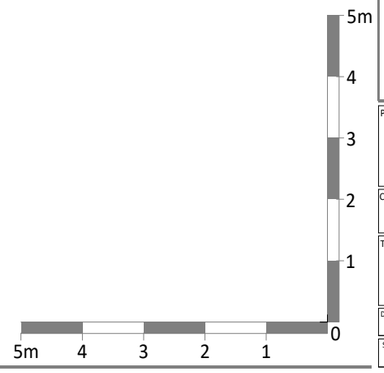
Date:	Scale @ A1	Scale @ A3
09/18/24	-	1 : 200

Drawing No.
16AR - S2P - XX - XX - DR - BB - **00100**

EXISTING

PROPOSED

REAR



REV	DESCRIPTION	DATE	INITIAL

Do not scale. All dimensions and levels must be verified on site and discrepancies reported to Building Sense Limited, prior to commencing works or preparing site drawings. Any conflicting information must be reported for clarification. If in doubt, ask.

STAGE:
PLANNING

Building Sense
Chartered Surveyors
T: 0161 215 1229
E: mark.newman@buildingsense.co.uk
W: buildingsense.co.uk

PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
Rear Elevation

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DRAWN:	CHECKED:	DATE:
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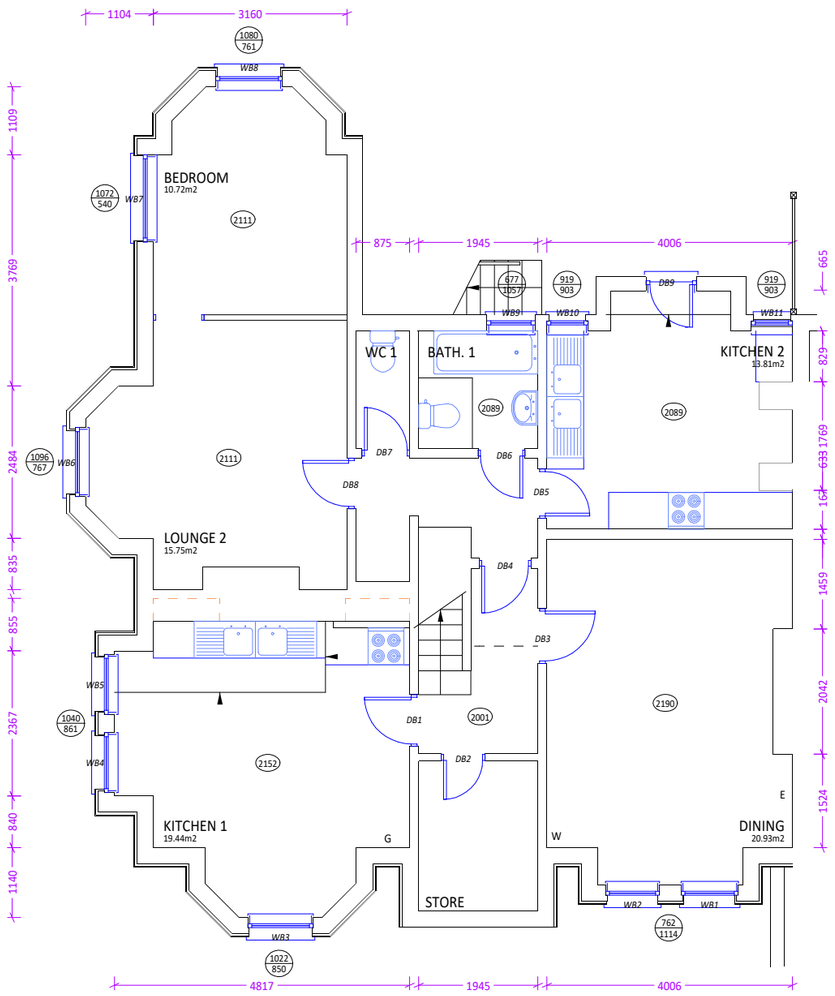
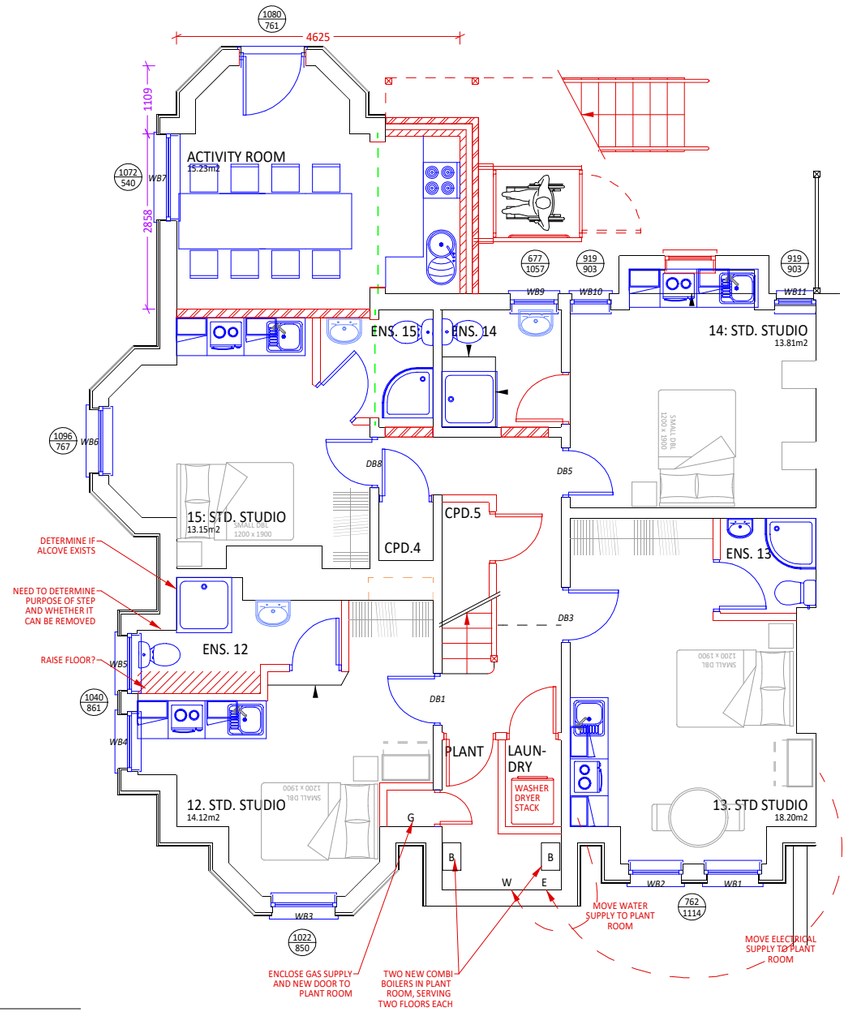
Appendix B





KEY:

- EXISTING ELEMENTS
- PROPOSED ELEMENTS
- 1055 / 1012 — OPENING CILL / HEAD HEIGHT
- 2505 — CEILING HEIGHT
- WS4 — OPENING NO. (type/floor/number)

EXISTING

LOWER GROUND

PROPOSED

5m 4 3 2 1 0

REV	DESCRIPTION	DATE	INITIAL

Do not scale. All dimensions and levels must be verified on site and discrepancies reported to Building Sense Limited, prior to commencing works or preparing site drawings. Any conflicting information must be reported for clarification. If in doubt, ask.

STAGE: PLANNING

Building Sense
Chartered Surveyors
T: 0161 215 1229
E: mark.newman@buildingsense.co.uk
W: buildingsense.co.uk

PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
Lower Ground Floor Plans

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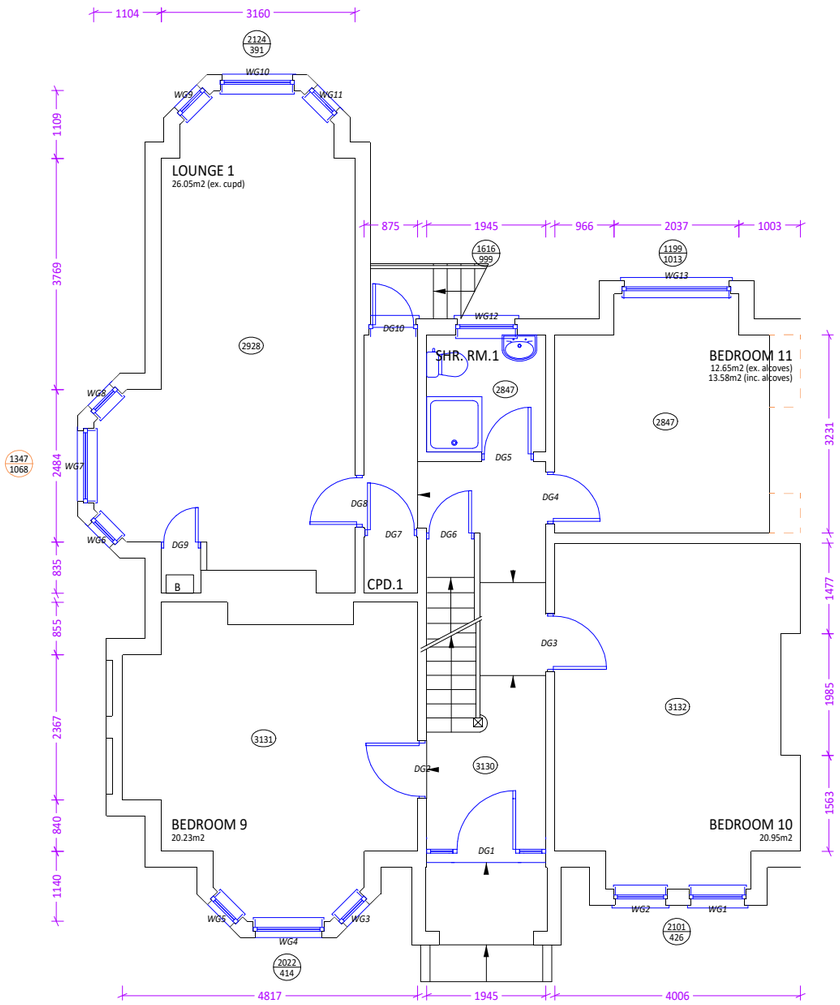

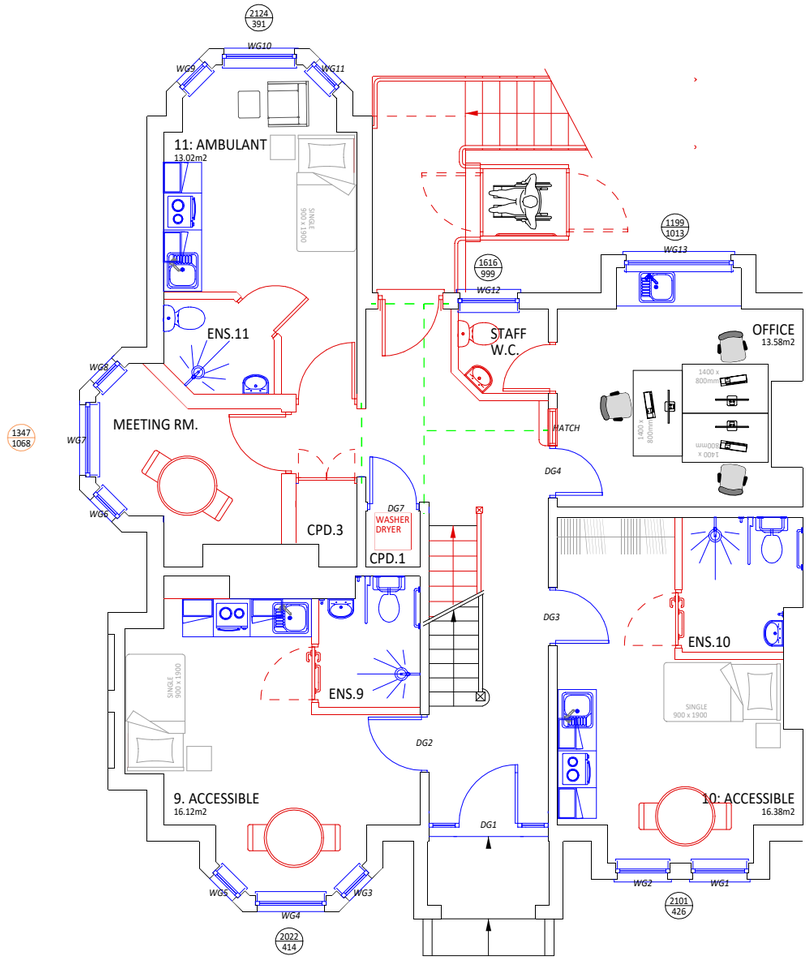

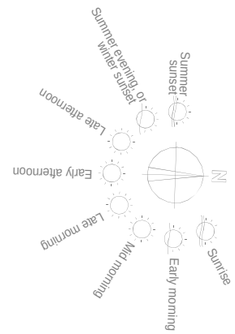

KEY:

- EXISTING ELEMENTS
- PROPOSED ELEMENTS
- OPENING CILL / HEAD HEIGHT
- CEILING HEIGHT
- OPENING NO. (type/floor/number)

EXISTING

UPPER GROUND

PROPOSED

5m 4 3 2 1 0

REV	DESCRIPTION	DATE	INITIAL

Do not scale. All dimensions and levels must be verified on site and discrepancies reported to Building Sense Limited, prior to commencing works or preparing site drawings. Any conflicting information must be reported for clarification. If in doubt, ask.

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Building Sense
Chartered Surveyors
T: 0161 215 1229
E: mark.newman@buildingsense.co.uk
W: buildingsense.co.uk

PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
Upper Ground Floor Plans

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DRAWN:	CHECKED:	DATE:
MKN	MKN	01/08/24
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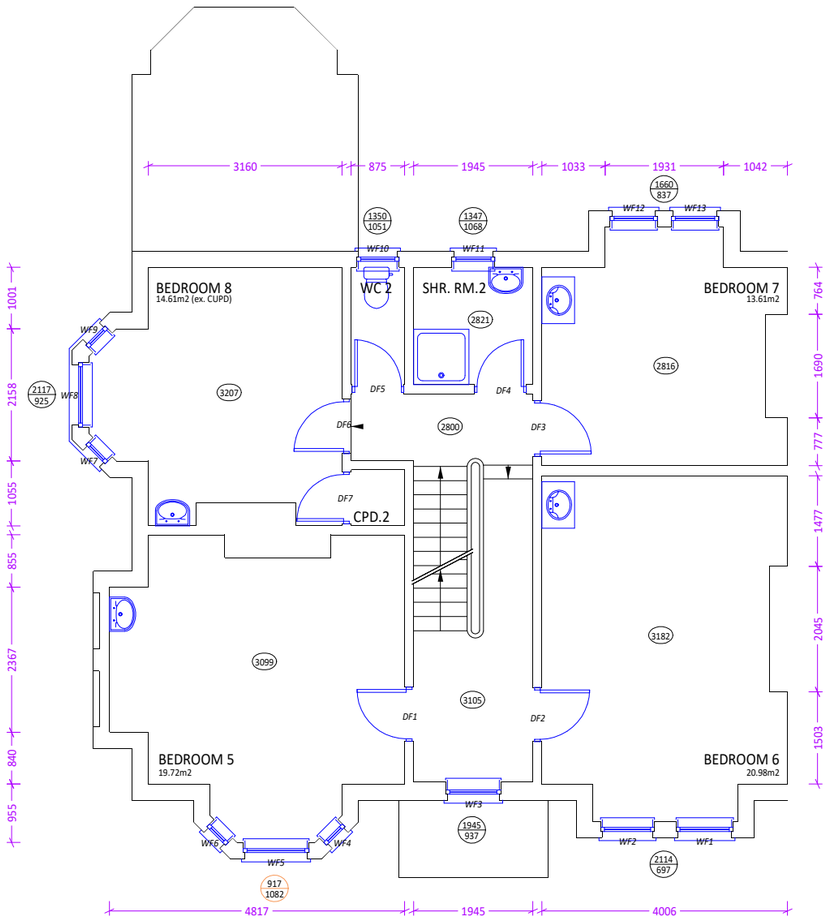

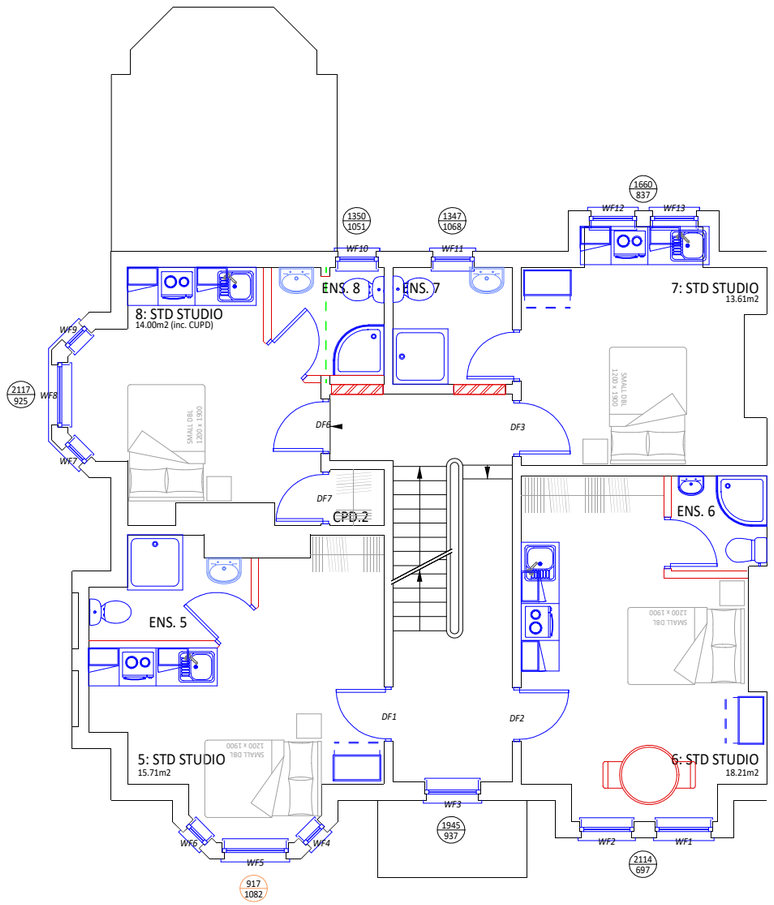

KEY:

- EXISTING ELEMENTS
- PROPOSED ELEMENTS
- 1055 / 1012 — OPENING CILL / HEAD HEIGHT
- 2505 — CEILING HEIGHT
- WS4 — OPENING NO. (type/floor/number)

EXISTING

FIRST FLOOR

PROPOSED

5m 4 3 2 1 0

REV	DESCRIPTION	DATE	INITIAL

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T: 0161 215 1229
E: mark.newman@buildingsense.co.uk
W: buildingsense.co.uk

PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
First Floor Plans

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DRAWN:	CHECKED:	DATE:
MKN	MKN	01/08/24
SCALE:	DRAWING NO.	REV:
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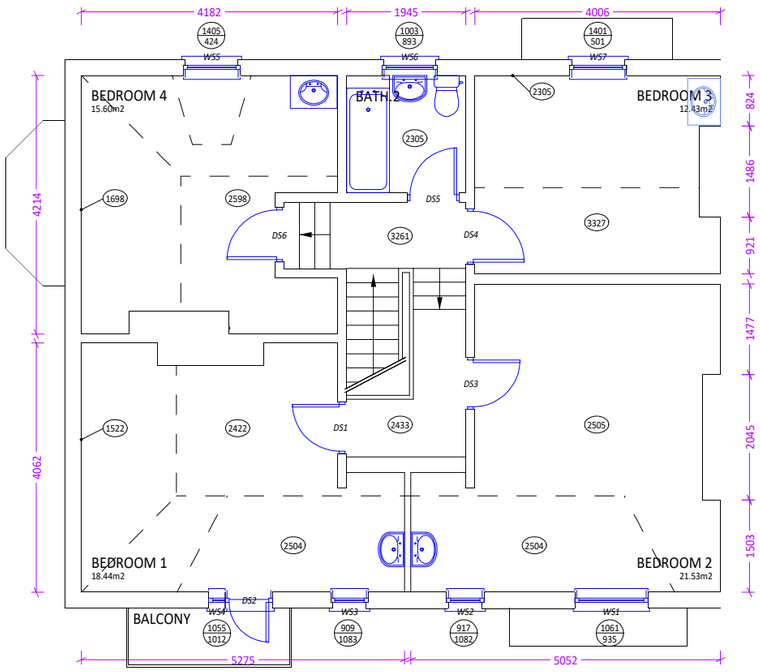

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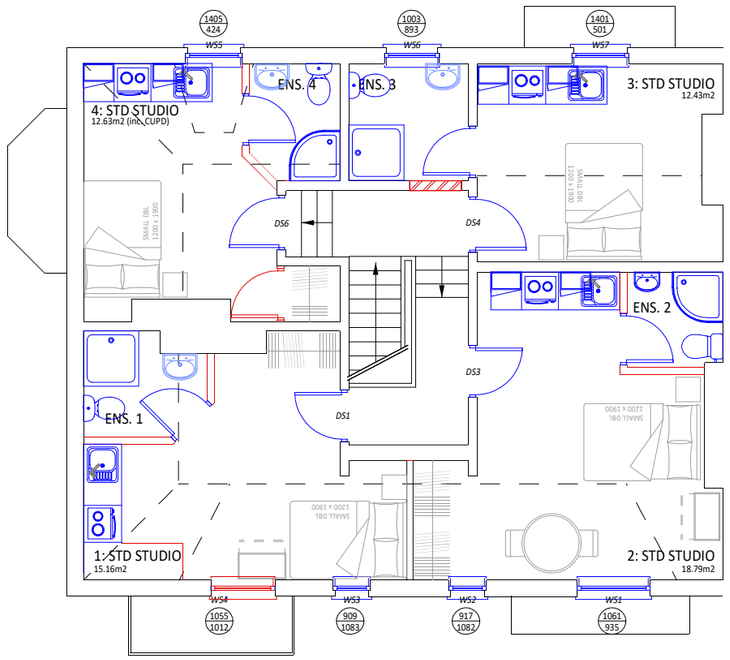
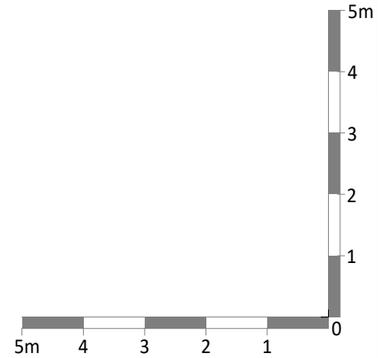


PROPOSED

KEY:

- EXISTING ELEMENTS
- PROPOSED ELEMENTS
- 1055 / 1012 — OPENING CILL / HEAD HEIGHT
- 2505 — CEILING HEIGHT
- WS4 — OPENING NO. (type/floor/number)

SECOND FLOOR



REV	DESCRIPTION	DATE	INITIAL

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PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
Second Floor Plans

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DRAWN:	CHECKED:	DATE:
MKN	MKN	01/08/24
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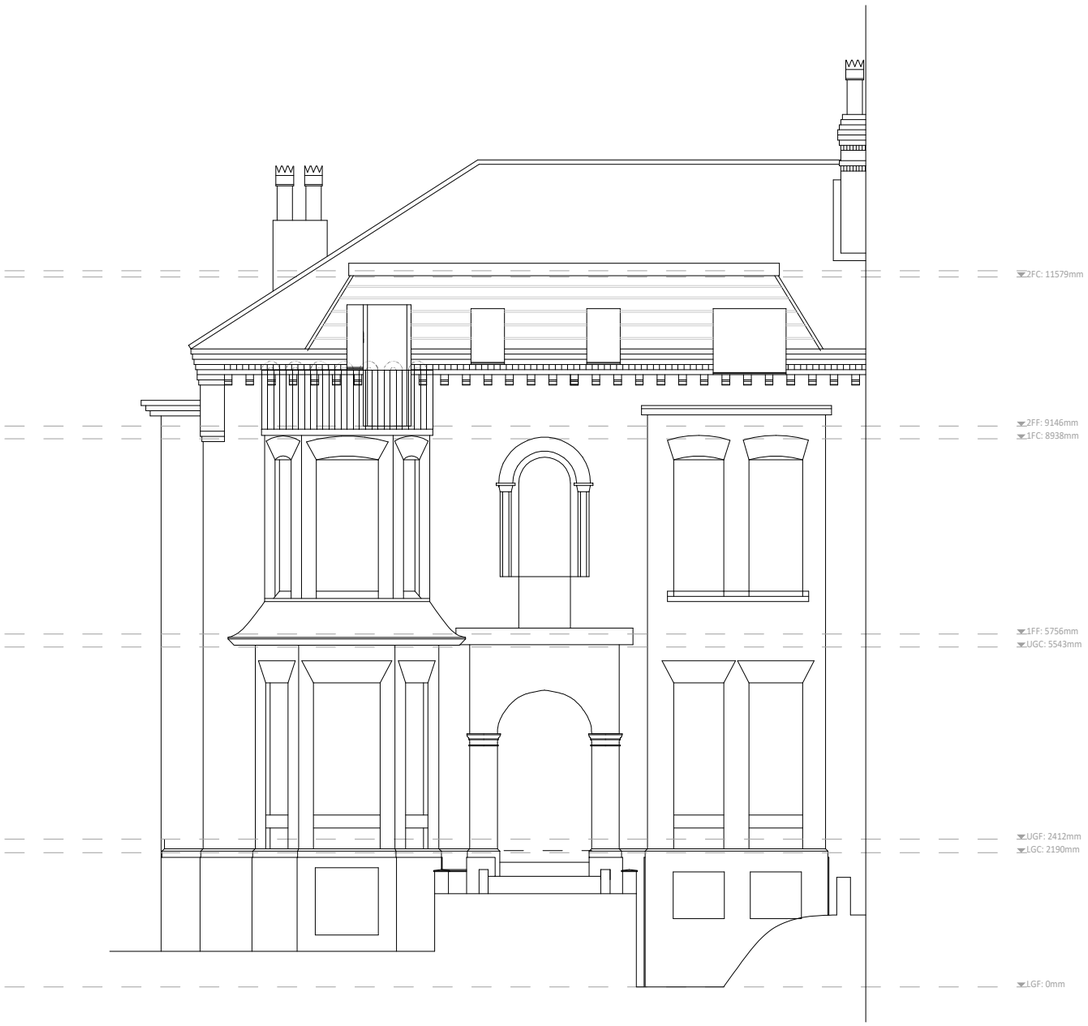
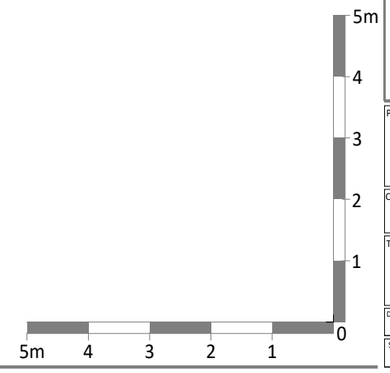


EXISTING

FRONT

PROPOSED



REV	DESCRIPTION	DATE	INITIAL

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E: mark.newman@buildingsense.co.uk
W: buildingsense.co.uk

PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
Front Elevation

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DRAWN:	CHECKED:	DATE:
MKN	MKN	21/08/24
SCALE:	DRAWING NO.	REV:
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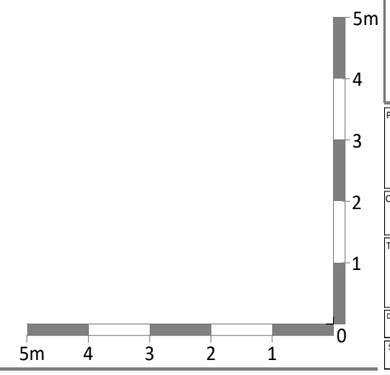
EXISTING

LEFT

PROPOSED



REV	DESCRIPTION	DATE	INITIAL

Do not scale. All dimensions and levels must be verified on site and discrepancies reported to Building Sense Limited, prior to commencing works or preparing site drawings. Any conflicting information must be reported for clarification. If in doubt, ask.

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E: mark.newman@buildingsense.co.uk
W: buildingsense.co.uk

PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
Left Elevation

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DRAWN:	CHECKED:	DATE:
MKN	MKN	21/08/24
SCALE:	DRAWING NO.	REV:
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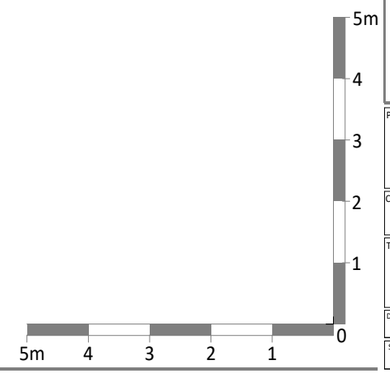
EXISTING

REAR

PROPOSED



REV	DESCRIPTION	DATE	INITIAL

Do not scale. All dimensions and levels must be verified on site and discrepancies reported to Building Sense Limited, prior to commencing works or preparing site drawings. Any conflicting information must be reported for clarification. If in doubt, ask.

STAGE:
PLANNING

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T: 0161 215 1229
E: mark.newman@buildingsense.co.uk
W: buildingsense.co.uk

PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
Rear Elevation

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DRAWN:	CHECKED:	DATE:
MKN	MKN	21/08/24
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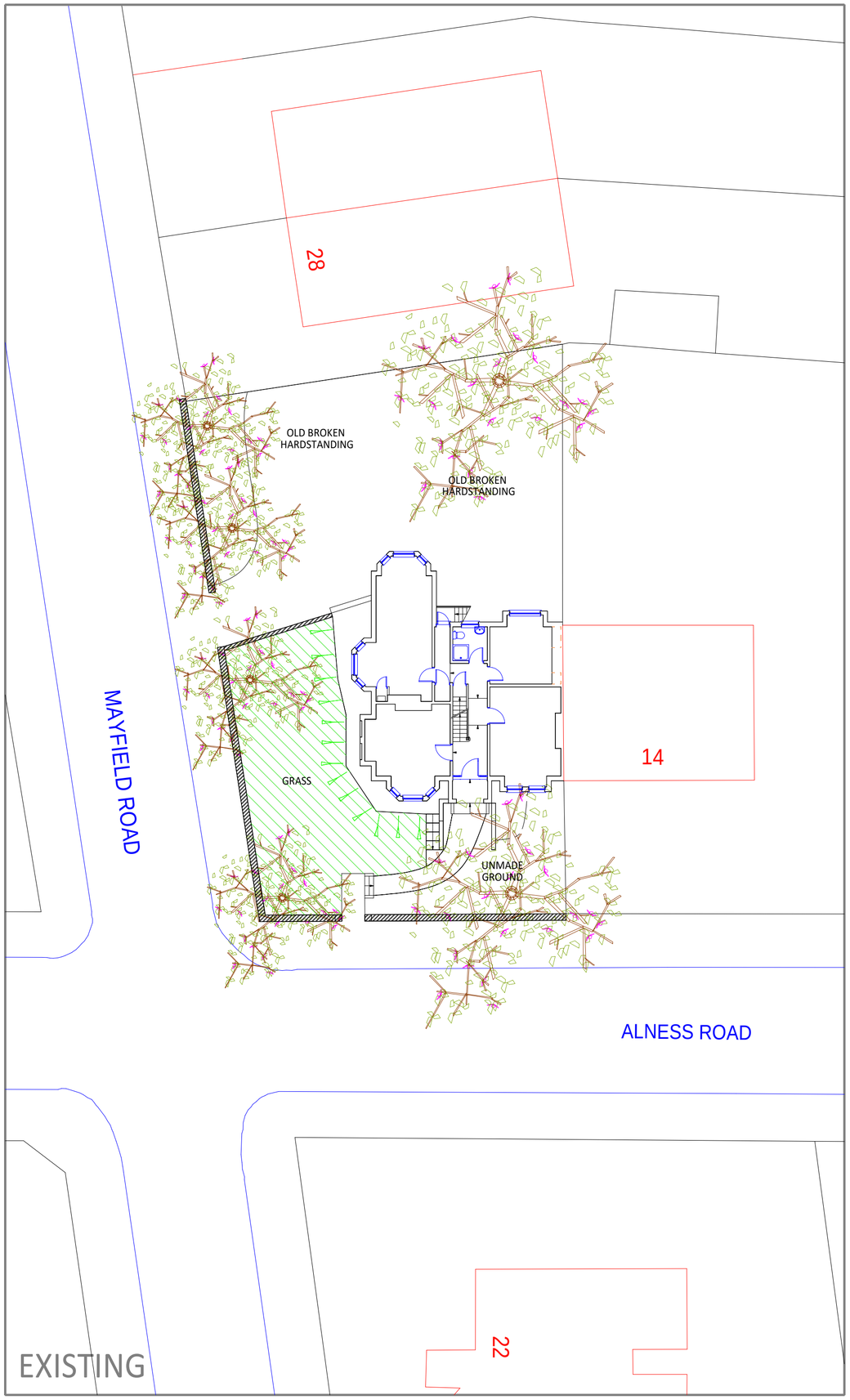

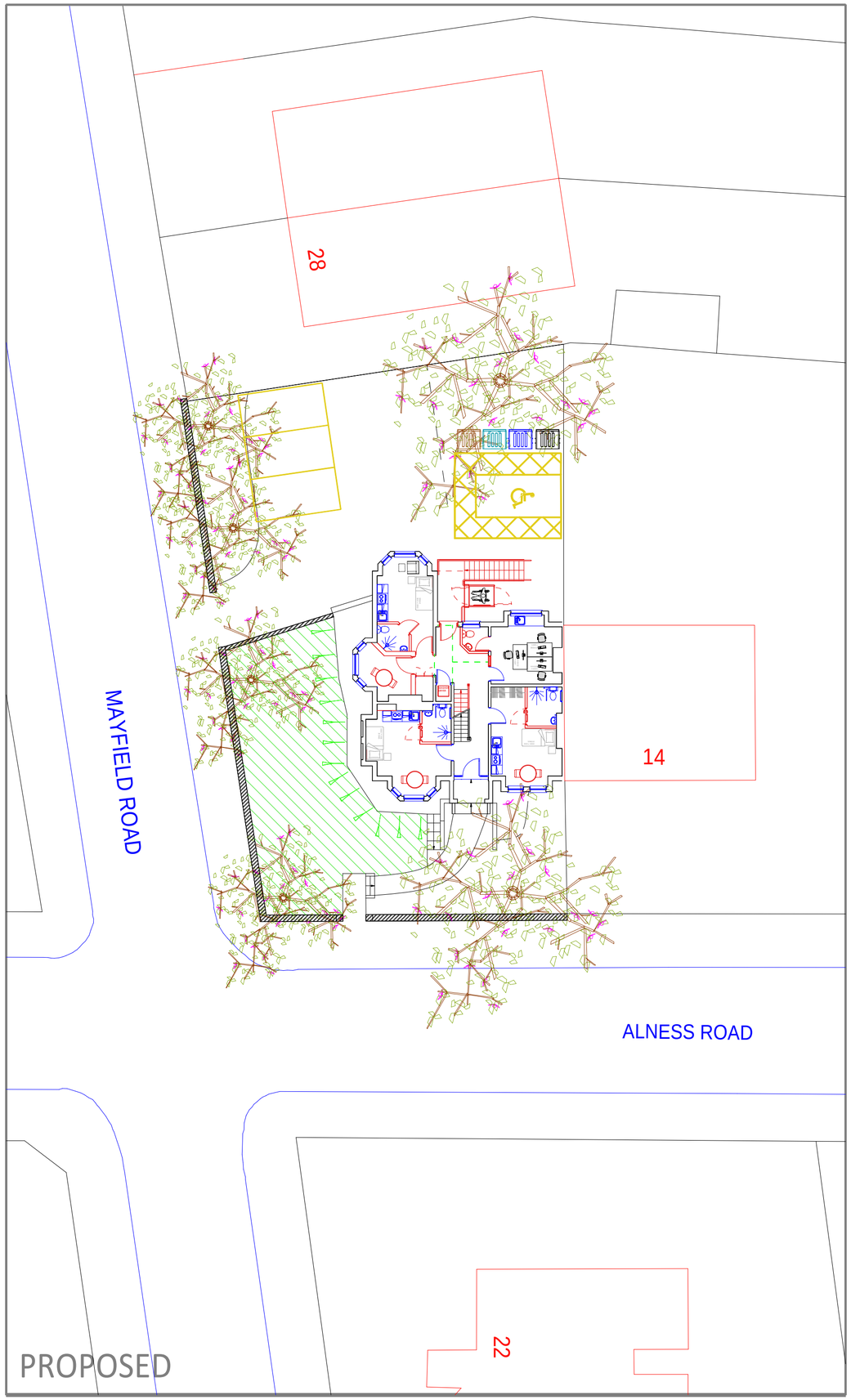

REV	DESCRIPTION	DATE	INITIAL

Do not scale. All dimensions and levels must be verified on site and discrepancies reported to Building Sense Limited, prior to commencing works or preparing site drawings. Any conflicting information must be reported for clarification. If in doubt, ask.

STAGE:
PLANNING

Building Sense
Chartered Surveyors
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E: mark.newman@buildingsense.co.uk
W: buildingsense.co.uk

PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
Site Plan as Existing and Proposed

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DRAWN:	CHECKED:	DATE:
MKN	MKN	22/08/24
SCALE:	DRAWING NO.	REV:
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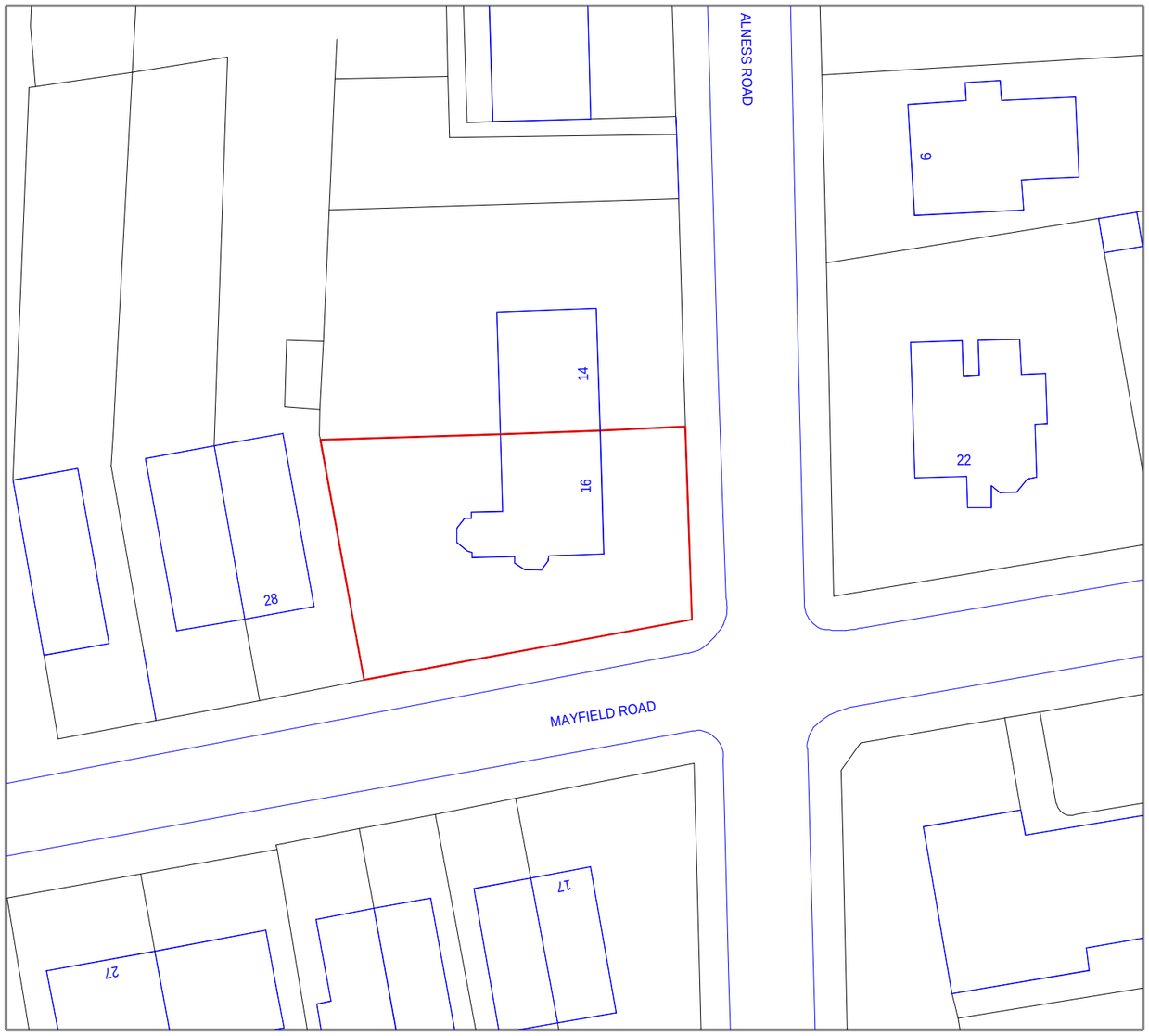

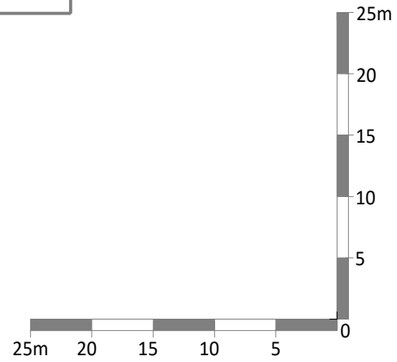

REV	DESCRIPTION	DATE	INITIAL

Do not scale. All dimensions and levels must be verified on site and discrepancies reported to Building Sense Limited, prior to commencing works or preparing site drawings. Any conflicting information must be reported for clarification. If in doubt, ask.

STAGE:
PLANNING

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E: mark.newman@buildingsense.co.uk
W: buildingsense.co.uk

PROJECT:
16 Alness Road
Whalley Range
Manchester
M16 8ET

CLIENT:
SSG Sustainable Living

TITLE:
Location/Block Plan

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DRAWN:	CHECKED:	DATE:
MKN	MKN	01/08/24
SCALE:	DRAWING NO.	REV:
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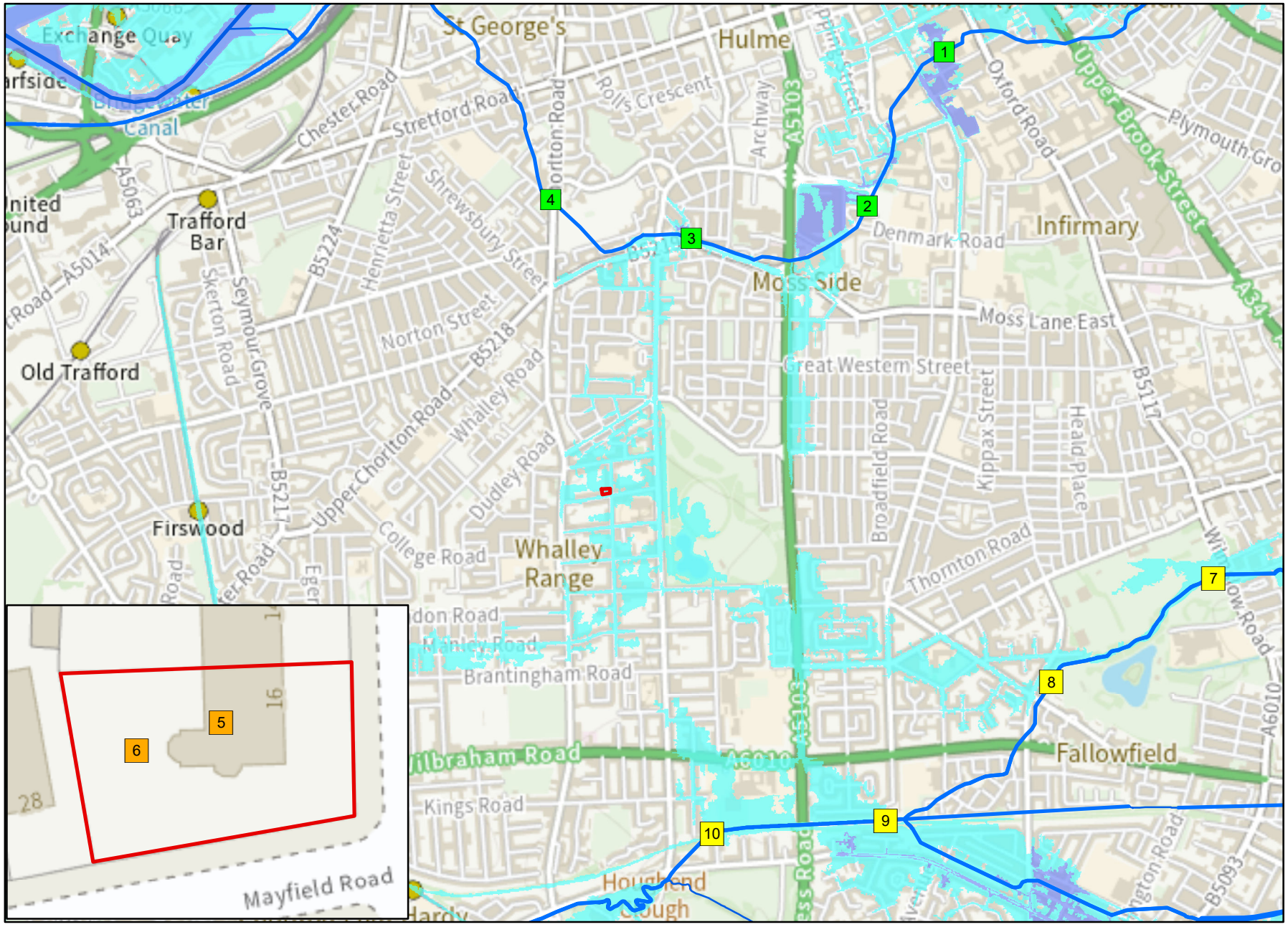
Appendix C

Detailed Flood Map Centred on Alness Road, Manchester, M16 8ET.
Created 11/09/2024 [GMMC375424LB]



Environment Agency

1:20,000

N

Legend

- Site Location
- Corn Brook
- Chorlton Platt Gore
- 2D Levels
- Main River
- Flood Zone 3
- Flood Zone 2

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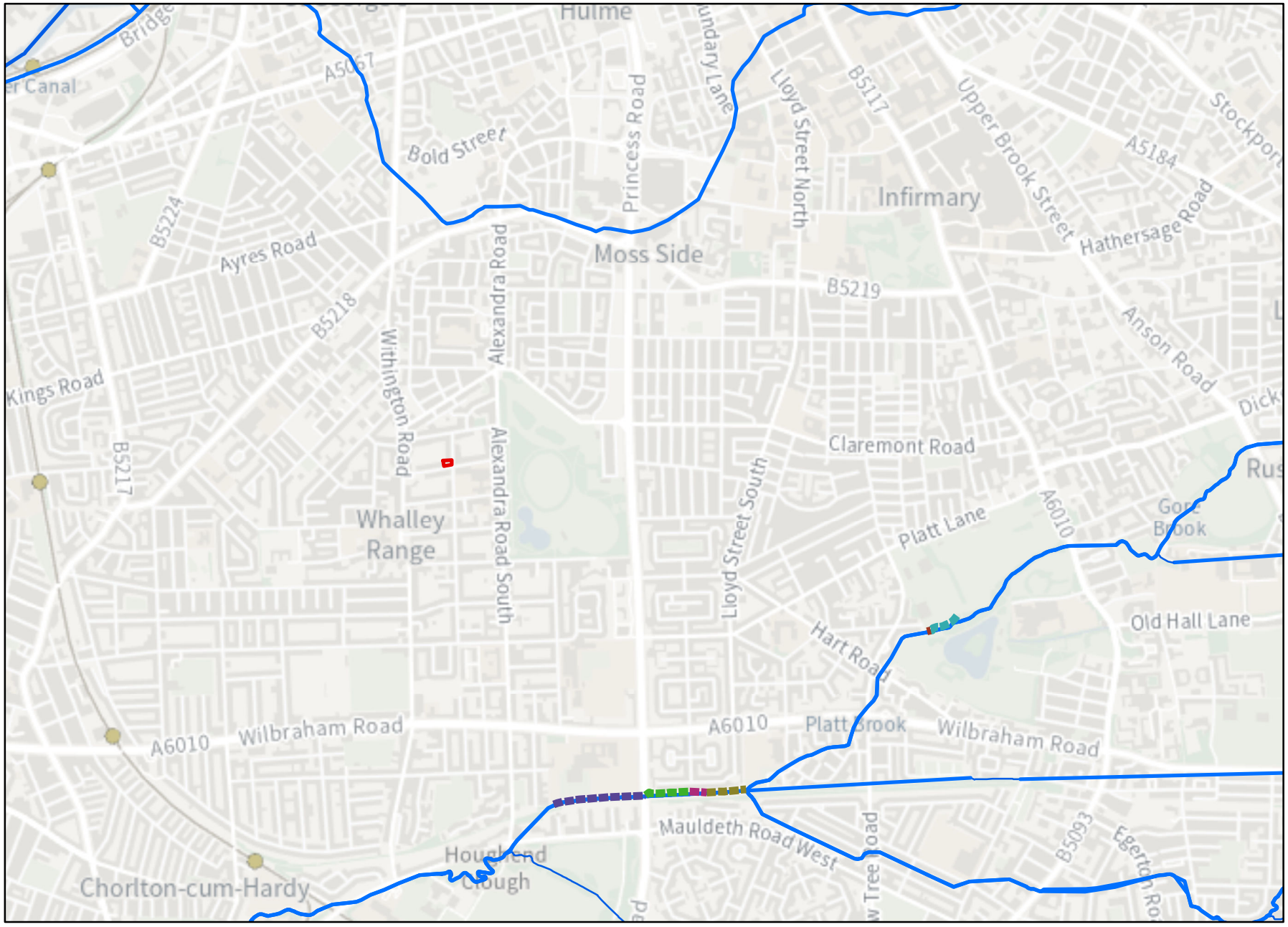
Flood Defence Map Centred on Alness Road, Manchester, M16 8ET.
Created 11/09/2024 [GMMC375424LB]



Environment Agency

1:20,000

N

Legend

Site Location

Main River

Defences

Asset ID

- 120082
- 120657
- 122064
- 32518
- 32543
- 59788

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					Undefended													
Map Reference	Model Node Reference	Easting	Northing	Data	50 % AEP (1 in 2 year)	20 % AEP (1 in 5 year)	10 % AEP (1 in 10 year)	5 % AEP (1 in 20 year)	4 % AEP (1 in 25 year)	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + 30% increase in flow	1 % AEP (1 in 100 year) + 35% increase in flow	1 % AEP (1 in 100 year) + 70% increase in flow	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)	0.1 % AEP (1 in 1000 year) + 30% increase in flow
1	ea013_0249_conn3215	383467	395995	Modelled Water Level (m aoDN)	30.61	30.71	30.80	30.90	31.01	31.93	32.43	32.58	32.78	32.81	32.99	32.84	33.28	33.39
				Modelled Flow (cumecs)	0.24	0.34	0.42	0.49	0.58	1.03	1.32	1.57	2.03	2.11	2.66	2.24	4.60	5.98
2	ea013_Model_COPN02_00008	383340	395972	Modelled Water Level (m aoDN)	30.26	30.46	30.60	30.73	30.86	31.69	32.10	32.24	32.42	32.44	32.63	32.48	32.91	33.01
3	ea013_Model_COPN02_00004	383284	395959	Modelled Water Level (m aoDN)	30.19	30.37	30.50	30.61	30.73	31.37	31.69	31.79	31.96	31.99	32.22	32.04	32.55	32.65
4	ea013_0249_conn2587	382984	396139	Modelled Water Level (m aoDN)	29.22	29.36	29.48	29.55	29.63	29.95	30.07	30.16	30.34	30.39	30.62	30.47	31.73	31.99
				Modelled Flow (cumecs)	0.26	0.37	0.46	0.53	0.63	1.13	1.46	1.72	2.24	2.33	2.93	2.47	5.10	6.63

					Undefended
Map Reference	Model Node Reference	Easting	Northing	Data	0.1 % AEP (1 in 1000 year) + 30% increase in flow
5	2D Levels	383154	395064	Modelled Water Level (m aoDN)	30.33
6		383144	395061	Modelled Water Level (m aoDN)	30.33

Model data taken from Corn Brook 2017
AEP - Annual Exceedence Probability
m aoDN - metres above ordnance datum Newlyn
cumecs - cubic metres per second

Notes: *Climate Change Scenario - 30%, 35% and 70% increases in flow calculated for the 2080's (2070 –2115). Please see https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances for more information regarding the new climate change guidance. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.

					Undefended																Defended															
Map Reference	Model Node Reference	Easting	Northing	Data	50 % AEP (1 in 2 year)	20 % AEP (1 in 5 year)	10 % AEP (1 in 10 year)	5 % AEP (1 in 20 year)	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year) + 41% increase in flow	1 % AEP (1 in 100 year) + 53% increase in flow	1 % AEP (1 in 100 year) + 85% increase in flow	1 % AEP (1 in 1000 year) + 53% increase in flow	50 % AEP (1 in 2 year)	50 % AEP (1 in 2 year) + 53% increase in flow	20 % AEP (1 in 5 year)	10 % AEP (1 in 10 year)	5 % AEP (1 in 20 year)	5 % AEP (1 in 20 year) + 53% increase in flow	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year) + 41% increase in flow	1 % AEP (1 in 100 year) + 53% increase in flow	1 % AEP (1 in 100 year) + 85% increase in flow	1 % AEP (1 in 1000 year) + 53% increase in flow
7	ea013_0317_04050	383544	393799	Modelled Water Level (m aoDN)	28.04	28.86	29.79	30.55	30.88	30.93	30.93	31.00	31.10	31.03	31.05	31.09	31.18	28.04	29.07	28.86	29.78	30.70	31.05	31.61	31.04	31.05	31.08	31.16	31.11	31.11	31.14	31.23
				Modelled Flow (cumecs)	12.40	17.13	20.04	22.07	22.83	22.99	23.06	23.28	23.52	23.37	23.40	23.46	23.60	12.44	17.77	17.16	20.20	23.18	24.52	24.26	24.43	24.53	24.74	25.05	24.89	24.94	25.01	25.16
8	ea013_0317_063524	385393	394743	Modelled Water Level (m aoDN)	35.40	35.59	35.73	35.86	36.08	36.29	36.46	36.73	36.91	36.84	36.88	36.95	37.14	35.40	35.61	35.59	35.73	35.88	36.54	36.10	36.37	36.54	36.75	36.85	36.85	36.89	36.96	37.14
				Modelled Flow (cumecs)	5.73	8.32	10.28	12.43	14.88	15.71	16.06	16.90	17.22	16.79	16.82	16.89	17.04	5.73	8.65	8.32	10.28	12.43	16.03	14.87	15.77	16.75	16.61	17.23	16.77	16.81	16.90	17.95
9	ea013_0317_04693	384182	393848	Modelled Water Level (m aoDN)	31.44	31.71	31.85	32.00	32.11	32.14	32.15	32.17	32.22	32.20	32.20	32.23	32.26	31.44	31.74	31.71	31.87	32.04	32.16	32.13	32.14	32.15	32.17	32.23	32.20	32.21	32.23	32.28
				Modelled Flow (cumecs)	12.17	15.38	17.52	19.89	22.48	23.52	24.17	24.98	27.89	26.14	26.34	26.26	31.83	12.20	17.49	16.68	19.97	23.40	27.77	26.56	27.13	27.72	29.92	31.79	30.07	30.64	32.03	34.97
10	ea013_0317_05735	384794	394359	Modelled Water Level (m aoDN)	33.35	33.66	33.89	34.14	35.01	35.30	35.41	35.55	35.78	35.66	35.69	35.77	35.97	33.35	33.70	33.66	33.89	34.15	35.56	35.11	35.47	35.56	35.68	35.91	35.78	35.80	35.88	36.13
				Modelled Flow (cumecs)	6.25	9.07	11.19	13.50	15.27	15.86	15.97	15.90	16.05	15.85	15.87	15.99	15.98	6.25	9.44	9.07	11.19	13.50	15.27	15.17	15.15	15.23	15.17	15.18	15.17	15.40	15.41	15.09

					Undefended	Defended	
Map Reference	Model Node Reference	Easting	Northing	Data	0.1 % AEP (1 in 1000 year)	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year) + 85% increase in flow	1053
5	2D Levels	383154	395064	Modelled Water Level (m aoDN)	30.04	30.08	30.05	30.38
6		383144	395061	Modelled Water Level (m aoDN)	30.04	30.07	30.05	30.38

Model data taken from Chorlton Platt Gore 2024
AEP - Annual Exceedence Probability
m aoDN - metres above ordnance datum Newlyn
cumecs - cubic metres per second

Notes: *Climate Change Scenario - 41%, 53% and 85% increases in flow calculated for the 2080's (2070 –2115).
Please see https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances for more information regarding the new climate change guidance.
The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.

Flood Defences

Start Date	Asset Type	Asset ID	Standard of Protection	Upstream Actual Crest Level (m aod)	Downstream Actual Crest Level (m aod)
01/01/1996	Embankment	120082	100	31.38	30.25
01/01/1996	Embankment	120657	100	36.27	36.29
01/01/1996	Wall	122064	100	31.90	31.84
01/01/1996	Wall	32518	100	31.84	31.48
01/01/1996	Wall	32543	100	35.76	35.74
01/01/1996	Embankment	50788	100	32.82	31.81

Appendix D

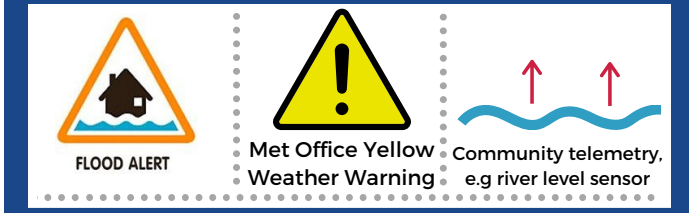
Business Flood Plan

THE FLOOD HUB

Pre-populated Plan

This pre-populated plan can be used as it is, or as a guide to help you create your own flood plan using one of our blank templates. You should give consideration to staff safety, site and buildings and key operational facilities, and keep it up to date..

Trigger 1



What to do at this stage

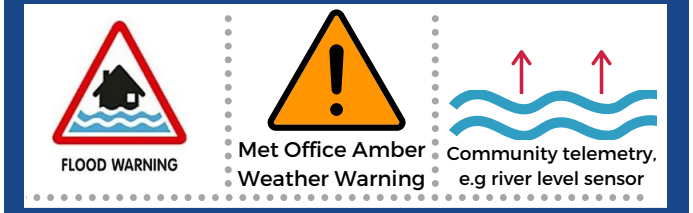
Flooding is possible.
Stay vigilant and make early preparations for a potential flood.

- Monitor the situation through forecasts, the Environment Agency's 'Check for Flooding' service, local radio stations and monitoring stations.
- Locate flood kit, check it is complete and ready if needed.
- Check reverse of sheet is completed and you know what to do if the situation gets worse.
- Ensure that your property flood resilience is in working order and ready to install.

Alert no longer in force → Stand down

Alert still in force/ escalated →

Trigger 2

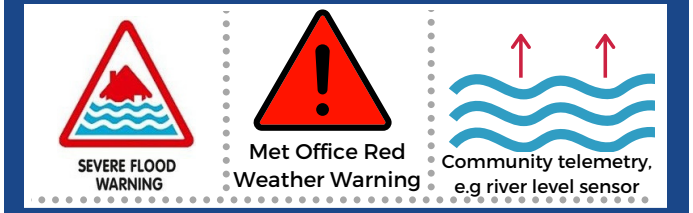


What to do at this stage

Flooding is expected.
Immediate action is required to protect yourself and your property.

- Continue to monitor the situation.
- Move electrical equipment, stock and valuables to a higher level using racking or pallets or put items on top of desks.
- Deploy property flood resilience e.g. door barriers, pumps and air brick covers.
- Ensure all employees are safe.
- Move vehicles to high ground out of the flood risk area.

Trigger 3



What to do at this stage

Severe flooding is expected and is likely to cause significant risk to life and destruction of property.

Prepare to evacuate and cooperate with emergency services.

- If safe to do so, turn off utility supplies (see reverse of this sheet).
- Continue to monitor the situation, e.g., check river levels and listen to the local radio.
- Evacuation is likely. Start your emergency evacuation plan and cooperate with the emergency services.
- Ring 999 if you or any of your staff are in immediate danger.

If your business is located in an area where flash flooding occurs, there can be very little warning. It is best to be as prepared as possible at all times.

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This resource has been produced by Newground who work in partnership with the Environment Agency

For further information on being prepared, please visit The Flood Hub website:
www.thefloodhub.co.uk

To sign up for flood warnings visit:
https://flood-warning-information.service.gov.uk/warnings

Last reviewed: December 2021

For more information visit:
www.thefloodhub.co.uk
@TheFloodHub

Business Flood Plan

THE FLOOD HUB

Pre-populated Plan

This pre-populated plan can be used as it is, or as a guide to help you create your own flood plan using one of our blank templates. You should give consideration to staff safety, site and buildings and key operational facilities, and keep it up to date..

ADDRESS OF EVACUATION CENTRE

FLOOD PLAN CHECKLIST:

- [ ] Sign up to Environment Agency flood alerts and warnings (ensure appropriate staff members are registered to receive these notifications).
- [ ] Understand what the flood alert and warning codes mean and what to do if you receive one (see reverse of this page).
- [ ] Check your business insurance covers flood damage to buildings, contents and stock, as well as business interruption and lost revenue cover.
- [ ] Investigate Property Flood Resilience (PFR) options (e.g. door barriers, pumps, racking, shelves).
- [ ] Back up records and store off site out of the flood risk area, whether paper or electronic (identify what data is crucial to business continuity).
- [ ] Make a flood kit if necessary.

CONTACT LIST

Environment Agency Floodline	0345 988 1188	@EnvAgencyNW
Electricity North West	0800 195 4141	@electricityNW
Electricity Helpline	105	
National Grid	0800 111 999	@nationalgriduk
United Utilities (sewer flooding)	0345 672 3723	@unitedutilities
Local Council		
Lead Local Flood Authority (LLFA)		
Insurance Company		
Local radio station		
Evacuation centre		
Gauge Map monitoring station		https://www.gaugemap.co.uk/
Flood Warden		

WHEN PROTECTING YOUR BUSINESS, CONSIDER: ☑

- [ ] Having a communication tree, contact details of all staff and important contacts.
- [ ] Including flood events in evacuation procedures (different assembly points may be required).
- [ ] Installing racking/shelving to raise important items such as servers and stock.
- [ ] Protection of any hazardous materials.
- [ ] Identifying key locations for the installation of Property Flood Resilience (PFR) options.
- [ ] Creating a flood kit to include; a copy of the flood plan, staff contact info, important documents for business continuity inc. data back up, two-way radios, first aid kit.

PROPERTY FLOOD RESILIENCE (PFR) AND EQUIPMENT LIST

ITEM:	WHERE IT IS KEPT:	HOW TO INSTALL IT:

WHERE IS THE...?

Location of electricity cut off:

Location of water cut off:

Location of gas cut off:

Location of flood kit:

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Last reviewed: December 2021

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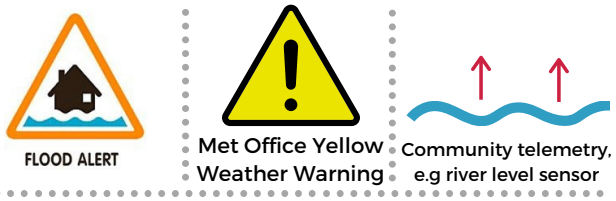
Business Flood Plan

THE FLOOD HUB

Blank template

Trigger 1



What to do at this stage

Flooding is possible.
Stay vigilant and make early preparations for a potential flood.

Alert no longer in force

Stand down

Alert still in force/ escalated

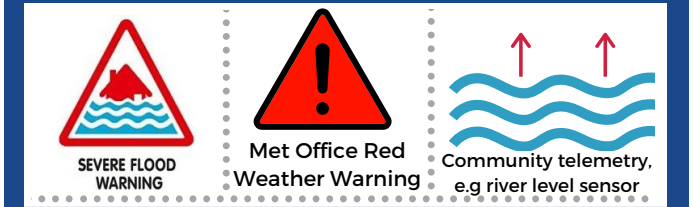
Trigger 2

What to do at this stage

Flooding is expected.
Immediate action is required to protect yourself and your property.

- Continue to monitor the situation.

Trigger 3



What to do at this stage

Severe flooding is expected and is likely to cause significant risk to life and destruction of property.

Prepare to evacuate and cooperate with emergency services.

- Evacuation is likely. Start your emergency evacuation plan and cooperate with the emergency services.
- Ring 999 if you or any of your staff are in immediate danger.

If your business is located in an area where flash flooding occurs, there can be very little warning. It is best to be as prepared as possible at all times.

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Last reviewed: August 2021
For more information visit:
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@TheFloodHub

Business Flood Plan

THE FLOOD HUB

Blank template

ADDRESS OF EVACUATION CENTRE

FLOOD PLAN CHECKLIST:

- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]

CONTACT LIST

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Gauge Map monitoring station		https://www.gaugemap.co.uk/
Flood Warden		

WHEN PROTECTING YOUR BUSINESS, CONSIDER: ✓

- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]

PROPERTY FLOOD RESILIENCE (PFR) AND EQUIPMENT LIST

ITEM:	WHERE IT IS KEPT:	HOW TO INSTALL IT:

WHERE IS THE...?

Location of electricity cut off:

Location of water cut off:

Location of gas cut off:

Location of flood kit:

Personal flood plan

Name

Environment Agency

Are you signed up to receive flood warnings?
If not call Floodline on 0345 988 1188 to see if your area receives free flood warnings.

Let us know when you've completed your flood plan by calling Floodline on **0345 988 1188.** This will help us learn more about how people are preparing for flooding.

General contact list	Company name	Contact name	Telephone
Floodline	Environment Agency		0345 988 1188
Electricity provider			
Gas provider			
Water company			
Telephone provider			
Insurance company and policy number			
Local council			
Local radio station			
Travel/weather info			

Key locations

Service cut-off	Description of location
Electricity	
Gas	
Water	

Who can help/who can you help?

Relationship	Name	Contact details	How can they/you help?
Relative			
Friend or neighbour			

Be prepared for flooding. Act now

Personal flood plan

What can I do NOW?

Environment Agency

- Put important documents out of flood risk and protect in polythene ☐
- Check your insurance covers you for flooding ☐
- Look at the best way of stopping floodwater entering your property ☐
- Make a flood plan and prepare a flood kit ☐
- Find out where you can get sandbags ☐
- Identify who can help you/ who you can help ☐
- Identify what you would need to take with you if you had to leave your home ☐
- Understand the flood warning codes ☐

What can you do if a flood is expected in your area?

Actions	Location
Home	
• Move furniture and electrical items to safety	
• Put flood boards, polythene and sandbags in place	
• Make a list now of what you can move away from the risk	
• Turn off electricity, water and gas supplies	
• Roll up carpets and rugs	
• Unless you have time to remove them hang curtains over rods	
• Move sentimental items to safety	
• Put important documents in polythene bags and move to safety	
Garden and outside	
• Move your car out of the flood risk area	
• Move any large or loose items or weigh them down	
Business	
• Move important documents, computers and stock	
• Alert staff and request their help	
• Farmers move animals and livestock to safety	
Evacuation - Prepare a flood kit in advance	
• Inform your family or friends that you may need to leave your home	
• Get your flood kit together and include a torch, warm and waterproof clothing, water, food, medication, toys for children and pets, rubber gloves and wellingtons	

There are a range of flood protection products on the market to help you protect your property from flood damage. A directory of these is available from the **National Flood Forum** at **www.bluepages.org.uk**

Be prepared for flooding. Act now

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