



Project Title

Flood Risk Assessment & Outline Drainage Strategy

At

**Vision House
100 Floats Road
Wythenshawe
Manchester
M23 9PL**

For

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Executive Summary

Item	Brief Description
Development Proposed	Change of use of the site & buildings from the existing offices (Class E) to a Special Educational Needs (SEN) School (Class F1) alongside supporting works namely, new perimeter fencing and gates, at Vision House, 100 Floats Road, Wythenshawe, Manchester, M23 9PL.
Flood Risk Review	Tidal: Low Risk Flood Zone 1 Fluvial: Low Risk Flood Zone 1 Surface Water: Low / Medium Risk Sewer & Drainage: Low Risk Groundwater: Low Risk Reservoir: Low Risk
Geology	A review of the BGS online mapping has indicated the site area to encompass Glaciofluvial Sheet Deposits comprising sand and gravel, underlain by bedrock comprising the Bollin Mudstone Member - Mudstone.
Infiltration Rate	Based on the assessment of the BGS data set and the presence of the underlying sands and gravels, infiltration as a means of draining the site can be considered. Where appropriate, formal BRE 365 testing is to be completed to confirm the actual infiltration rates.
Nearest Watercourses	The nearest named watercourse is located beneath the main entrance road and is known as Mill Brook, flowing in a north westerly direction.
Nearest Adopted Sewers and onsite private drainage	The United Utilities (UU) sewer records have been reviewed and indicate there to be a 450mm diameter combined water sewer flowing south within Floats Road. The plans for the existing private drainage network serving the building and external areas have not been provided to PGC at the time of writing this report. However, it can be anticipated that the surface water will outfall unrestricted to Mill Brook with the foul drainage outfalling to the combined sewer. Reviewing the historical plans of the area, it is evident that Vision House was originally linked to the large warehouse building to the south. As such, both the foul and surface water drainage will pass through this site prior to outfalling to the sewer and watercourse respectively.
Existing Discharge Rate	The development area is anticipated to outfall unrestricted.
Surface Water Drainage Outfall and SuDS Hierarchal Approach	With the proposed development being an internal change of use only, the drainage networks serving the current building and external areas will remain unchanged.
Maintenance Responsibility	New School.
Foul Drainage Strategy	Any new internal foul drainage drops are to connect to the existing below ground foul water drainage network serving the retained building, that ultimately outfall to the combined sewer

1.0 Introduction

- 1.1 PG Consulting (PGC) has been appointed by the Hurstwood Holdings Ltd to prepare this Flood Risk Assessment & Outline Drainage Strategy to support a planning application for a Change of Use of the site & buildings (no new floor space proposed) from the existing offices (Class E) to a Special Educational Needs (SEN) School (Class F1) alongside supporting works namely; new perimeter fencing and gates at Vision House, 100 Floats Road, Wythenshawe, Manchester, M23 9PL.
- 1.2 The indicative layout for this application can be found in Appendix A.
- 1.3 The assessment has been undertaken in line with Section 14 of the National Planning Policy Framework (NPPF) plus the accompanying Planning Policy Guidance (PPG) on Flood Risk.
- 1.4 This Flood Risk Assessment (FRA) has been commissioned by Hurstwood Holdings Ltd and is specific to their interests in the development proposals as described by the Architectural plan in Appendix A.
- 1.5 The report has been commissioned to identify any flood-related issues associated with the proposed developments and any likely constraints that could be imposed plus consider the outline drainage strategy for it. The following issues have been suggested by the Environment Agency (EA) & Manchester City Council and subsequently addressed within this report.
 - Identify available data relating to flood risk at the site.
 - Determine whether the site is at risk from flooding from all sources, including but not exhaustive, from breach or overtopping of any existing flood defences, watercourse flooding, surface water flooding and/or ground water flooding.
 - If at risk from any source, devise appropriate measures to prevent flood risk whilst not compromising the flood risk elsewhere.
 - Consider the flood risk from all other sources.
 - Determine the current surface water drainage regime and assess impacts as a result of the proposed development.
 - Discuss if required Sustainable Drainage Systems (SuDS) as an option for reducing surface water flood risk. Determine any potential increase in surface water runoff as a result of the proposed development.
 - Devise an appropriate outline foul and surface water drainage strategy to deal with any increase in surface water runoff and include for climate change.
 - Consider the recommendations of the Manchester City Council Strategic Flood Risk Assessment (SFRA).
 - Prepare the Flood Risk Assessment and Surface Water Drainage Strategy report.
 - Assess mitigation measures & off-site impacts and define any residual risks.

2.0 Development Description and Location

2.1 Site Location

The site is referenced in Table 1, and a site location map is provided in Appendix A.

Item	Brief Description
Site name	Vision House, Wythenshawe.
Site address and location	Vision House, 100 Floats Road, Wythenshawe, Manchester, M23 9PL.
Council Area	Manchester City Council
Approximate Grid Reference	OS: 380324, 388741
General Locality	The development is located some 12km to the southwest of Manchester City Centre.

Table 1: Site Referencing Information

2.2 Existing site Description

- 2.2.1 The site is irregular in planned shape and encompasses an office building with a considerable area of tarmac parking to the north and also a large area of grass land located to the east of the building. There are shrubs and trees located on all borders of the proposed site.
- 2.2.2 The proposed site sits within a largely industrial and commercial area of Wythenshawe.
- 2.2.3 The closest residential areas are 250m to the west and 200m to the east of the development site. Access is from and will continue to be from Float Roads to the southwest.
- 2.2.4 Figure 1 identifies the overall site location details. Further details of the existing layout can be seen on the Red Line Plans in Appendix A

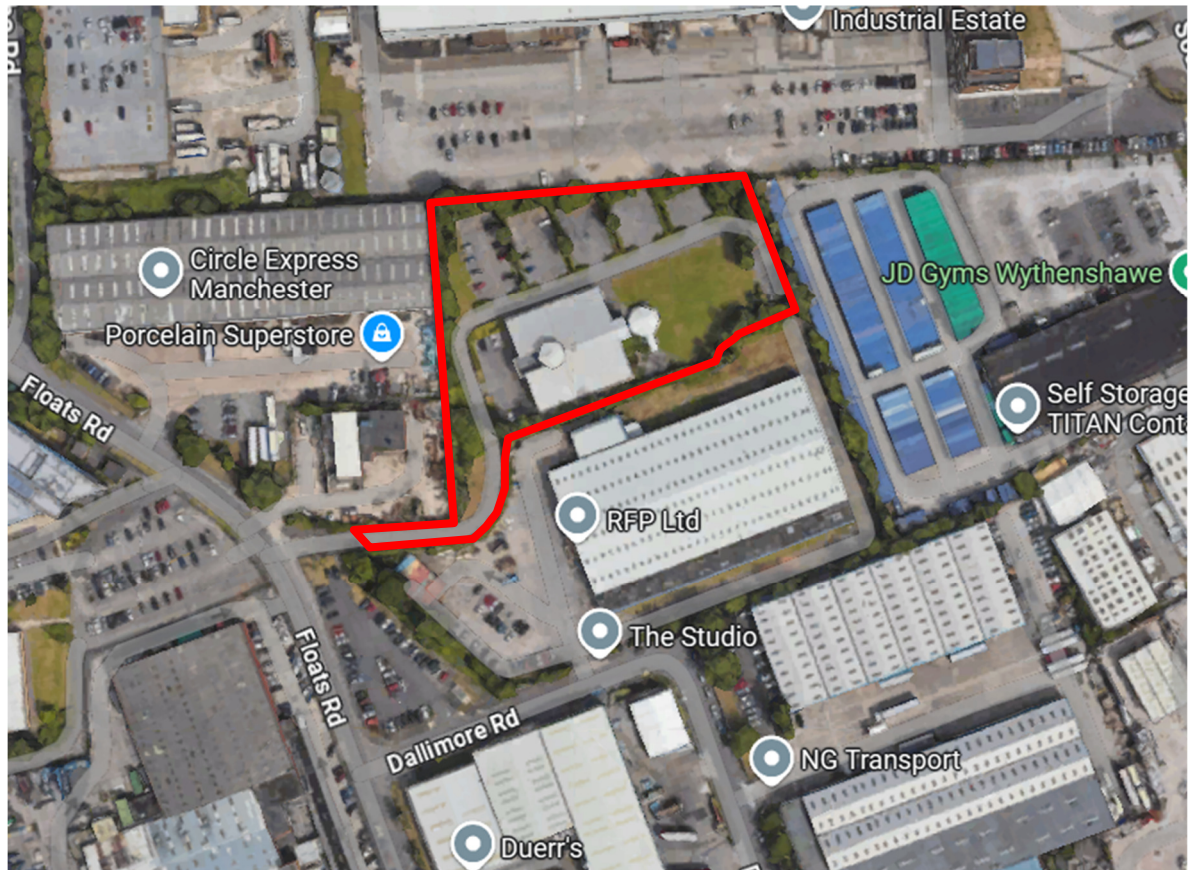


Figure 1: Location Plan

2.3 Topographical Survey

- 2.3.1 A detailed topographical survey has not been completed at the site. A review of local levels would indicate the current building holds a level of circa 33.5m AOD.

3.0 Planning Policy and Consultation

3.1 National Planning Policy Framework

3.1.1 The indicative flood maps provided by the Environment Agency locate the main development area within low-risk Flood Zone 1 classification, i.e., land assessed as having less than a 1 in 1000 annual probability of fluvial flooding (<0.1%) in any year.

3.1.2 As a requirement of the new NPPF (2024), Section 14, the proposed development must satisfy the requirements of the Sequential Test and where applicable the Exception Test.

Sequential Test:

3.1.3 Under the NPPF (2024) and accompanying Planning Policy Guidance (PPG), Flood Zone 1 is defined as Low probability flood risk. The proposal is for an educational development, which in line with Table 1 is classified as 'More Vulnerable'.

3.1.4 Placing both these criteria into Table 2 (Flood Risk Vulnerability and Flood Zone Incompatibility), More Vulnerable development in Flood Zone 1 determines that the 'Development is Appropriate' and that the Exception Test is not applicable to this development proposal.

3.2 Strategic Flood Risk Assessment (SFRA)

3.2.1 SFRA's assess the risk associated with all types of flooding and provide the information required to identify the amount of development permitted in an area; how drainage systems in the area should function and also how risks in vulnerable areas can be reduced and/or mitigated. The NPPF states that regional planning bodies (RPB's) or local planning authorities should prepare SFRA's in consultation with the EA.

3.2.2 Manchester City Council, in consultation with the Greater Manchester Combined Authority, produced the Greater Manchester Level 2 Strategic Flood Risk Assessment (2020) to demonstrate and define its understanding and role in managing flood risk. A fundamental aim of the strategy is that the Council embraces and supports its role as Lead Local Flood Authority, and this means taking the lead in helping with infrastructure development and re-development and working with other bodies in dealing with flood risk. The Council wants to encourage and wherever possible enforce current thinking and guidance and be able to provide improvements through working better together. The Strategy is aimed at providing an overview and assessment of local flood risk, setting out objectives and measures for how the Council will manage and reduce local flood risk. This Strategy builds on existing and developing approaches to flood risk management and promotes the use of a wide range of measures to manage flood risk. Risk should be managed in a co-ordinated way within catchments and balance the needs of communities, the economy and the environment.

3.2.2. A summary of the main elements from the SFRA associated with the district is detailed below. The full report can be obtained from the Manchester City Council website.

- The most significant sources of flood risk are fluvial and surface water.
- To better understand local flood risk and make best use of available information in order to better manage flood risk to people, businesses, property, infrastructure and the natural environment.
- To reduce the potential impact and costs of flooding in the Borough.
- To ensure resilience of local water bodies and drainage assets.
- To ensure appropriate development in areas of flood risk.
- To develop a collaborative partnership approach to flood risk management and cooperate with other Risk Management Authorities (RMAs) and key stakeholders working across catchments.
- To assist communities in understanding information on flood risk and support themselves.
- To encourage, support and provide flood risk management which seeks to enhance and protect the environment.
- For all sites, development proposals should look at opportunities to incorporate SuDS to reduce the risk of surface water flooding.
- All proposed developments must ensure that foul and surface water are kept separate.

4.0 Definition of Flood Hazard

4.0.1 Flood risk to the proposed development building is considered from all sources of flooding, as defined by the NPPF.

4.1 Sources of information

4.1.1 The following section defines the flood risk receptors and anticipated flood risk. Section 4.7 then summarises the probability of flooding and the likely impacts. Table 2 defines the main sources of information used in the identification of flood risk.

Source of Information	Details
Environment Agency	Various Flood Maps from EA website
United Utilities	Sewer Records
Manchester City Council	SFRA Report & Various Maps

Table 2: Sources of information used in the identification of flood risk

4.2 Flooding from River (Fluvial)

4.2.1 As mentioned in earlier sections, the closest identified watercourse is located along the northwestern boundary.

4.2.2 The National Planning Policy Framework (NPPF) categorises fluvial and tidal flood risk as follows:

- Zone 1 (low probability) – Land assessed as having less than a 1 in 1,000 annual probability of river or sea flooding (<0.1%).
- Zone 2 (medium probability) – Land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year; and
- Zone 3a (high probability) - Land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.
- Zone 3b The Functional Floodplain - This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the EA. (Not separately distinguished from Zone 3a on the Flood Map).

4.2.3 Figure 2 below locates the site on the Environment Agency's indicative floodplain map. The development site holds a low-risk Flood Zone 1 classification, i.e., land assessed as having less than a 1 in 1000 annual probability of fluvial flooding (<0.1%) in any year. Based on this the risk from fluvial flood water is therefore reduced to acceptable levels and no further assessment is required.

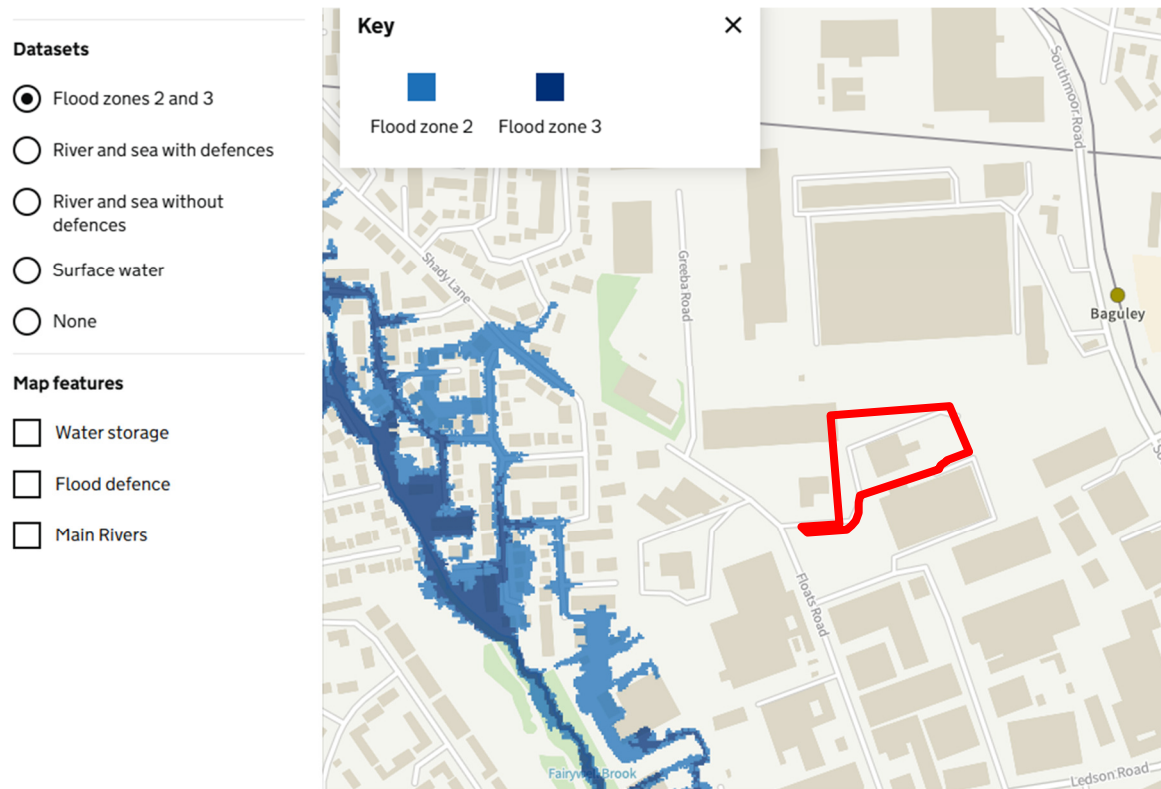


Figure 2 – The EA's Indicative 100-year Fluvial Floodplain Map

4.3 Flooding from Land and Surface Waters (Overland Flow)

4.3.1 The EA descriptions for the High, Medium and Low risk scenarios for surface water flooding are as follows:

- High risk means that each year this area has a chance of flooding of greater than 3.3%.
- Medium risk means that each year this area has a chance of flooding between 1% and 3.3%.
- Low risk means that each year this area has a chance of flooding between 0.1% and 1%.
- Very Low risk means that each year this area has a chance of flooding of less than 0.1%.

4.3.2 The general area within and surrounding the development site falls predominantly in a northwesterly direction to mimic the falls of the local watercourses. There is a moderate fall away from the building in all other directions. This is due to a low point in the existing topography where any surplus rainwater water has the potential to be retained on the surface.

4.3.3 The Environment Agency's surface water flood maps (refer to Figure 3) indicate the site area to be at relatively low risk of surface water flooding for the 1 in 30 year (Figure 3) adjacent the building but more of a greater risk of flooding for the 1 in 100 year (figure 4).

4.3.4 It is noted these maps do not consider the existing drainage infrastructure serving these areas that will collect this rainwater and direct into the underlying drainage network, such that in reality the extent of any such surface water flooding would be significantly reduced.

4.3.5 There are no identified existing surface water flow routes through the site that would need to be maintained.

4.3.6 The building is elevated above all the surrounding levels further mitigating any risk.

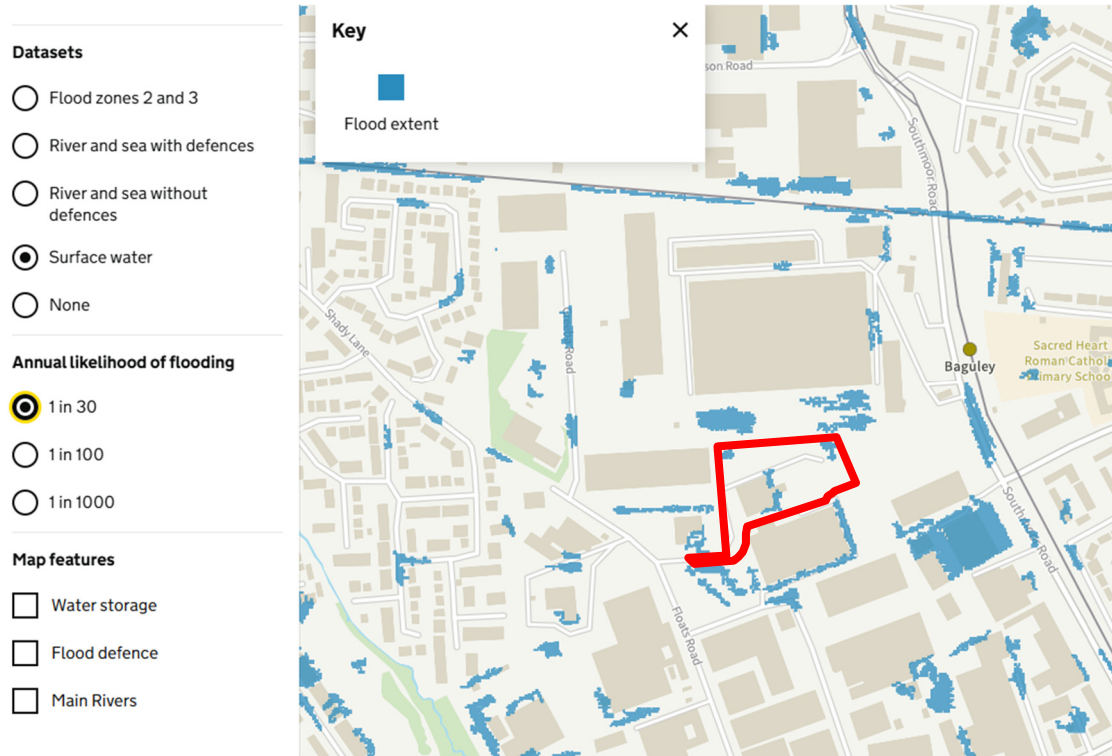


Figure 3 – Extract EA Flood Risk Mapping - Flood Risk from Surface Water 1 in 30 year

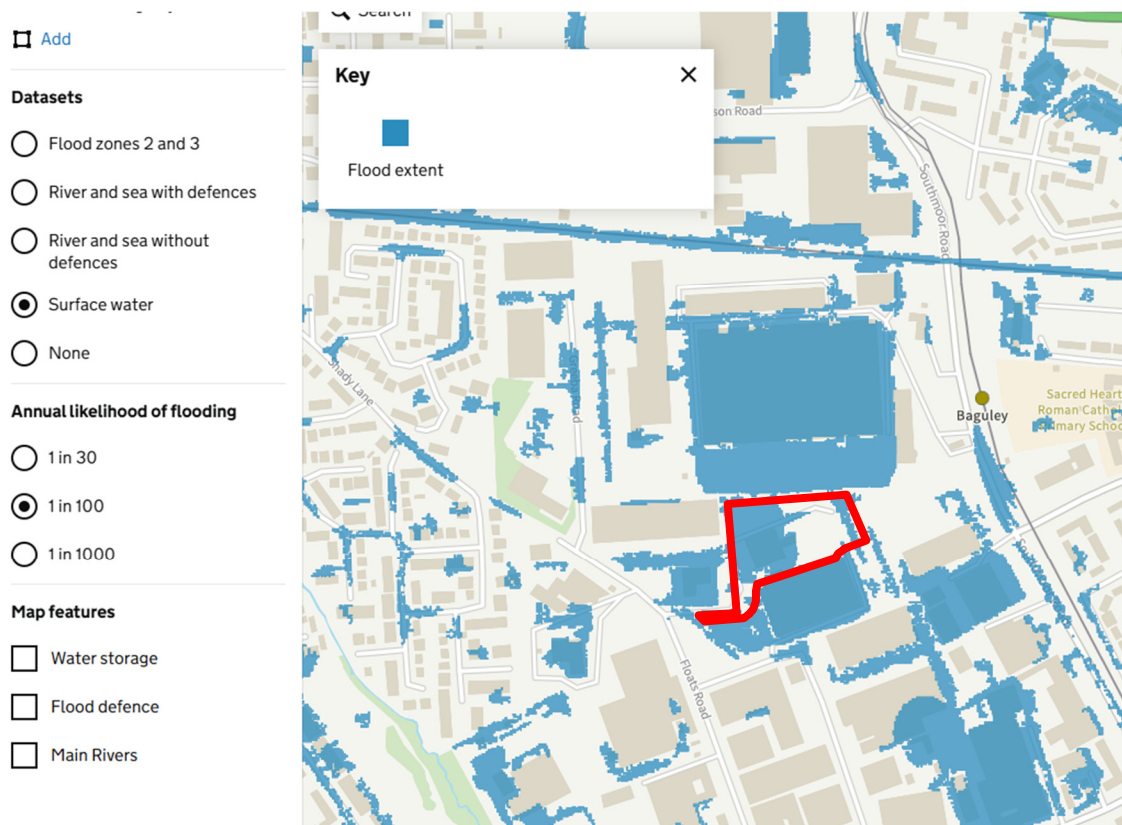


Figure 4 – Extract EA Flood Risk Mapping - Flood Risk from Surface Water 1 in 100 year

4.4 Flooding from Sewers and Private Drainage

- 4.4.1 The United Utilities (UU) sewer records have been reviewed and indicate there to be a 450mm diameter combined water sewer flowing south within Floats Road.
- 4.4.2 The plans for the existing private drainage network have not been provided to PGC at the time of writing this report. However, it can be anticipated that the surface water will outfall unrestricted to Mill Brook with the foul drainage outfalling to the combined sewer. Reviewing the historical plans of the area, it is evident that Vision House was originally linked to the large warehouse building to the south. As such, both the foul and surface water drainage will pass through this site prior to outfalling to the sewer and watercourse respectively.
- 4.4.3 The drainage networks serving the existing building ensure that the development footprint is protected from the impact of flooding. Thus, flood risk to the site from sewers is diminished to acceptable levels.

4.5 Flooding from Groundwater

- 4.5.2 Groundwater flooding occurs when the water table, the level of water below the ground, rises above the ground surface or into cellars and basements. Groundwater flooding is most likely to occur in low lying areas underlain by permeable rocks (aquifers). These may be extensive, regional aquifers, such as chalk or sandstone, or maybe localised sands or river gravels in valley bottoms underlain by less permeable rocks.
- 4.5.3 No site investigation has been carried out at the site. British Geological Survey mapping confirmed that the bedrock strata for the whole site is designated as a Principle Aquifer.
- 4.5.4 The Strategic Flood Risk Assessment (SFRA) maps for the area indicate that the site is not at risk of groundwater flooding.
- 4.5.5 Based on these findings, plus the fact the building is elevated above all surrounding ground levels and adjacent watercourse, the risk of groundwater flooding is considered to be Low.

4.6 Flooding from Other Water Features

- 4.6.2 There are no other artificial water bodies in close proximity.

4.7 Summary

Below is a table summary of the flood risks associated with the development site.

Source	Probability of Flood Risk	Impacts	Remarks
Tidal	Low	Low	The development building is not influenced by Tidal flood risk.
Fluvial (Watercourse)	Low	Low	The development buildings and surrounding landscaped areas are located within a low flood risk zone 1 designation.
Surface (Overland Flood Flow)	Low-Medium	Low	The site area is located within a Low-Medium Risk surface water flood zone. Existing drainage networks and elevated building level will remove this risk.
Sewers & New Drainage	Low	Low	Existing drainage networks currently discharge the impermeable areas to adjacent watercourse. No changes to the surface water runoff strategy.
Groundwater	Low	Low	No indication through SFRA or local borehole records that site is at risk of groundwater flooding.
Artificial Sources	Low	Low	No artificial sources in close proximity.

Table 3 – Flood Risk Summary

5.0 Outline Drainage Strategy

5.1 Existing Drainage

- 5.1.1 As per Section 4.4, the UU sewer records have been reviewed and show that there are no sewers passing within the development site. A combined water sewer and watercourse are located outside the development boundary.
- 5.1.2 Existing runoff discharges unrestricted to the respective combined sewer and watercourse .

5.2 Surface Water Drainage Strategy

- 5.2.1 As the external areas will not be affected by the proposal that involves internal building modification only, the drainage network serving the roof and hard paved areas will remain unchanged.

5.3 Foul Water Drainage Strategy

- 5.3.1 The foul drainage strategy will be to reuse the existing foul water network serving the retained building for any new internal foul water drops.
- 5.3.2 Further investigations to be undertaken.

6.0 Management Measures, Off Site Impacts and Residual Risk

6.1 Flood Risk Management Measures

- 6.1.1 The assessment has determined that the flood risk from all sources has been considered and found not to be a flood risk generator to the development.
- 6.1.2 There will be a site management health and safety document prepared in respect of the final development. This will include the required maintenance regime for the on-site drainage facilities.
- 6.1.3 The school will be responsible for site cleanliness and drain cleansing to ensure that the surface water drainage system will always operate at its maximum efficiency.

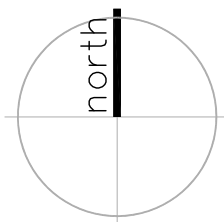
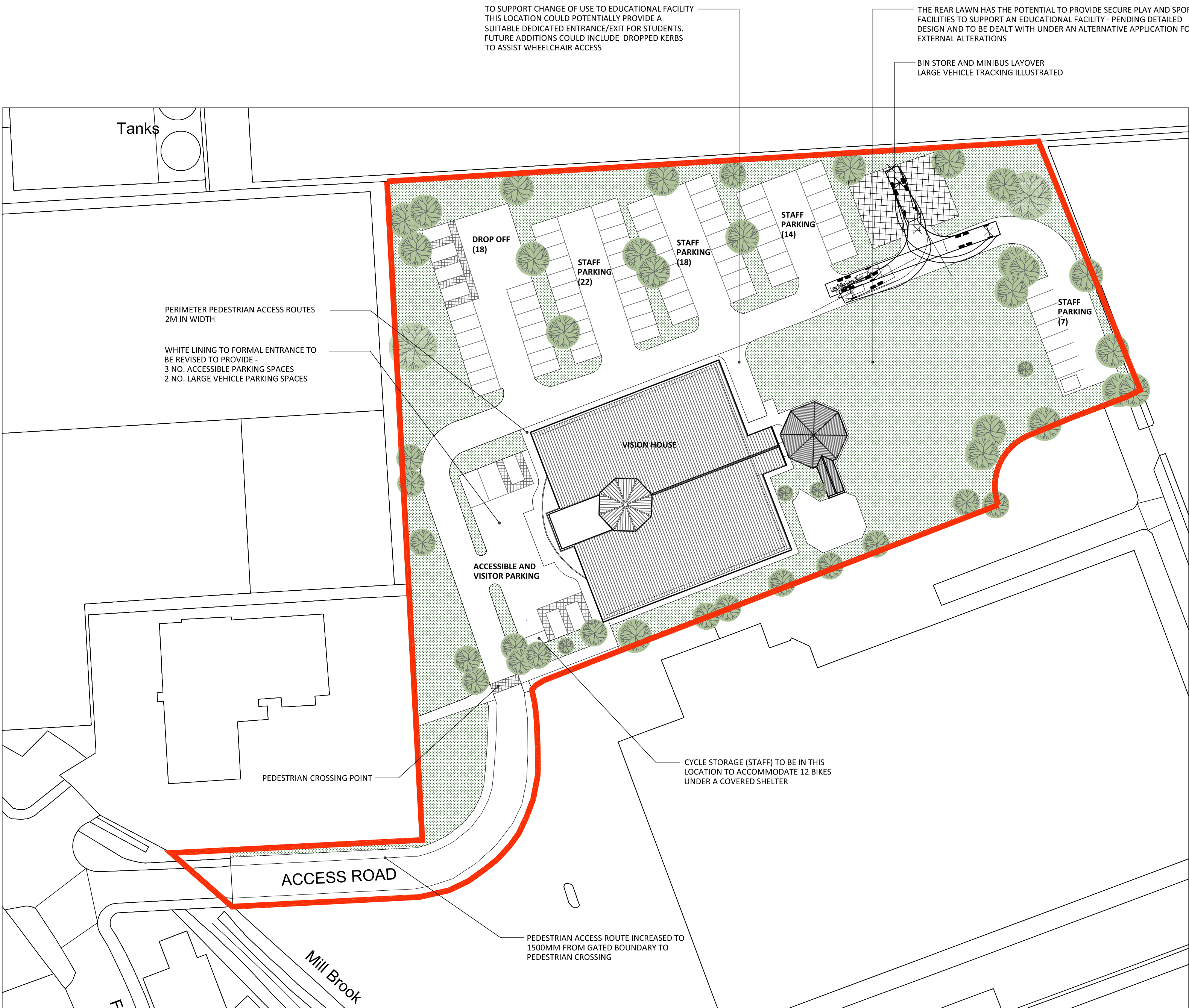
6.2 Off Site Impacts

- 6.2.1 The development of the site does not impair the hydraulic continuity of any watercourse and the current 'local hydraulics' of distributing watercourses / outfalls.
- 6.2.2 Surface water runoff will mimic the pre-development regime.
- 6.2.3 As there is no flood displacement or increased rate of runoff as part of this proposal into the adjacent watercourse, the proposed development will therefore not increase flood risk onto its locality.

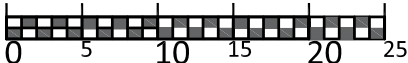
6.3 Residual Risk

- 6.3.1 With careful design of the drainage elements as described above there will be no residual flood-related risks that will remain after the development has been completed.

Appendix A – Architects Drawing



PROPOSED SITE PLAN
SCALE 1:500



SCALE BAR @ 1:500

- B: 290425 Cycle storage added.
- A: 290425 Parking layout updated to include drop off zone and refuse/mini bus maneuvering location. Pedestrian crossing added and access road pedestrian pavement width increased.

Client	HURSTWOOD HOLDINGS		
Project	VISION HOUSE		
Title	PROPOSED SITE PLAN		
Scale	1:500 @ A1	Status	PLANNING APPLICATION
Project. No.	AF258	Dwg. No.	B102 Rev B
Date	MARCH 2025		
 ArchitectFolk ARCHITECTURE + DESIGN			
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