

51A Montagu Road

Flood Risk Assessment
November 2023



Quality Management

Project	51A Montagu Road Flood Risk Assessment
Location	51A Montagu Road, London, N18 2LX
Reference	LE2023490FRA

Revision History

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Executive Summary

Site Name	51A Montagu Road Flood Risk Assessment
Location	51A Montagu Road, London, N18 2LX
Grid Reference	534935, 192481
Area (ha)	Approximately 0.02ha
EA Flood Zone Classification	Flood Zone 3
Current Site Use	Residential
Description of proposed development	Conversion of self-contained flat to two self-contained flats with changes to side facade and demolition of rear storage building
Vulnerability Classification	Residential – ‘More Vulnerable’
Summary of Pre-development Risks	<ul style="list-style-type: none"> • Fluvial Flood Risk: High Risk • Tidal Flood Risk: Negligible Risk • Flood Risk from Land, Surface Water and Sewers: Low Risk • Groundwater Flood Risk: Low Risk • Flood Risk from Artificial Sources: Low Risk • Residual Flood Risk: Low Risk

1. Introduction

1.1 Requirement

1.1.1 Liska Environmental has been commissioned by Mr Tonbul to undertake a desk based Flood Risk Assessment (FRA) for a development at 51A Montagu Road, London, N18 2LX (Figure 3-1). It is understood by Liska Environmental that this report is to support a planning application for the conversion of self-contained flat to two self-contained flats with changes to side facade and demolition of rear storage building.

1.2 Report Objectives

1.2.1 The contents of this FRA describe the assessment of the proposal and the implications of the proposed development on flood risk. The FRA has been prepared following guidance provided in the revised National Planning Policy Framework (September 2023) and the Planning Policy Guidance (June 2021).

1.2.2 The aim of this assessment is to provide the level of detail necessary to demonstrate that the potential effects of flood risk (to the proposal) have been addressed by:

- Identifying the source and probability of flooding to the application site, including the possible effects of climate change;
- Determining the consequences of flooding to and from the proposed development proposal and advising on the how this will be managed, if necessary; and
- Demonstrating the flood risk issues described in this assessment are compliant with the relevant guidance.

1.3 Limitations

1.3.1 This report relies on publicly available information which Liska Environmental assumes to be correct: Liska Environmental cannot and does not verify accuracy of this data, and it is outside the scope of this commission to do so.

1.4 Sources of Information

1.4.1 Sources of information used during the compilation of this report include:

- Environment Agency (EA) website – ‘*Flood Map for Planning*’ [Accessed 27/11/2023];
- British Geological Survey (BGS) website – ‘*GeoIndex*’ and ‘*Lexicon of Named Rock Units*’ [Accessed 27/11/2023];
- Department of Environment, Food, and Rural Affairs (DEFRA) website – ‘*MAGIC Map Application*’ [Accessed 27/11/2023];
- Environment Agency (EA) website - ‘*Catchment Data Explorer*’ [Accessed 27/11/2023].

2. Policy and Guidance

2.1 Thames Catchment Flood Management Plan (CFMP), 2009

2.1.1 A Catchment Flood Management Plan (CFMP) is a high-level strategic plan prepared by the EA, which identifies long-term (50 to 100 year) policies for sustainable flood risk within a catchment.

2.1.2 The relevant key messages contained within the Thames Region CFMP (2009) are that:

- Climate change will be the major cause of increased flood risk in the future; in urban areas and areas of narrow floodplain, flooding from heavy rainfall will be more regular and more severe. Surface water, sewer and fluvial flooding can occur within minutes of a severe rainfall event. Flooding can therefore occur at any time of the year, and there is very little time to provide flood warnings.
- Development and urban regeneration provide a crucial opportunity to manage flood risk; the location, layout and design of development can all reduce flood risk. For example, the use of SuDS can help to control surface water runoff.

2.2 Flood and Water Management Act, 2010

2.2.1 Combined with the Flood Risk Regulations 2009 ('the Regulations'), (which enact the EU Floods Directive in the England and Wales) the Flood and Water Management Act 2010 ('the Act') places significantly greater responsibility on Local Authorities to manage and lead on local flooding issues. The Act and the Regulations together raise the requirements and targets Local Authorities need to meet, including:

- Playing an active role leading Flood Risk Management;
- Development of Local Flood Risk Management Strategies (LFRMS);
- Implementing requirements of Flood and Water Management legislation;
- Development and implementation of drainage and flooding management strategies; and
- Responsibility for first approval, then adopting, management and maintenance of Sustainable Drainage Systems (SuDS) where they service more than one property.

2.2.2 The Act also clarifies three key areas that influence development:

1. **Sustainable Drainage Systems (SuDS)** - the Act makes provision for a national standard to be prepared on SuDS, and developers will be required to obtain local authority approval for in accordance with the standards, likely with conditions. Supporting this, the Act requires local authorities to adopt and maintain SuDS, removing any ongoing responsibility for developers to maintain SuDS if they are designed and constructed robustly.
2. **Flood risk management structures** - the Act enables the EA and local authorities to designate structures such as flood defences or embankments owned by third parties for protection if they affect flooding or coastal erosion. A developer or landowner will not be able to alter, remove or replace a designated structure or feature without first obtaining consent from the relevant authority.
3. **Permitted flooding of third party land** - The EA and local authorities have the power to carry out work, which may cause flooding to third party land where the works are deemed to be in the interest of nature conservation, the preservation of cultural heritage or people's enjoyment of the environment or of cultural heritage.

2.3 National Planning Policy Framework (NPPF), September 2023

2.3.1 In determining an approach for the assessment of flood risk for the proposal there is a need to review the policy context. The National Planning Policy Framework requires that consideration be given to flood risk in the planning process. The National Planning Policy Framework was revised and issued in July 2018 and outlines the national policy position on development and flood risk assessment.

2.3.2 The Framework states that the appropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. Where development is necessary in flood risk areas, it can be permitted provided it is made safe without increasing flood risk elsewhere.

2.3.3 The essence of NPPF is that:

- Local Plans should be supported by Strategic Flood Risk Assessment and develop policies to manage flood risk from all sources, taking advice from the Environment Agency and other relevant flood risk management bodies, such as lead local flood authorities and internal drainage boards;
- Policies in development plans should outline the consideration, which will be given to flooding issues, recognising the uncertainties that are inherent in the prediction of flooding and that flood risk is expected to increase as a result of climate change;
- Planning authorities should apply the precautionary principle to the issue of flood risk, using a risk-based search sequence to avoid such risk where possible and managing it elsewhere;
- The vulnerability of a proposed land use should be considered when assessing flood risk;
- Opportunities offered by new developments should be used to reduce the causes and impacts of flooding;
- Planning authorities should recognise the importance of functional floodplains, where water flows or is held at times of flood, and avoid inappropriate development on undeveloped and undefended floodplains; and
- Development is based on the concept of Flood Risk Reduction, particularly in circumstances where development has been sanctioned on the basis of the “Exception Test”.

3. Development Site Planning Considerations

3.1 Location

- 3.1.1 The site, of approximately 0.02ha, is located at 51A Montagu Road, London, N18 2LX at Ordnance Survey (OS) coordinates 534935, 192481.



Figure 3-1 Site Boundary. Source: Google Map

3.2 Proposed Development

- 3.2.1 The proposal consists of the conversion of self-contained flat to two self-contained flats with changes to side facade and demolition of rear storage building. Further details about the proposals have been provided in Appendix A.

3.3 Local Geology

- 3.3.1 A review of the published geological information was carried out, including information from the BGS GeoIndex and Lexicon of Named Rock Units websites¹. The geological sequence underlying the Site is summarised in Table 3-1.

¹ <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

Table 3-1 Underlying Geological Sequence

Stratum	Name	Location	Description
Bedrock Geology	London Clay Formation - Clay, Silt And Sand	Onsite	Sedimentary Bedrock formed approximately 48 to 56 million years ago in the Palaeogene Period. Local environment previously dominated by deep seas.
Superficial Deposits	Enfield Silt Member - Clay and silt	Onsite	Sedimentary superficial deposit formed between 116 thousand years ago and the present during the Quaternary period.

3.4 Hydrogeology

3.4.1 Both The bedrock geology and Superficial Deposits are designated as Unproductive. These are geological strata with low permeability that have negligible significance for water supply or river base flow Aquifers previously designated as major and minor have now become principal and secondary respectively.

3.5 Flood Zone

3.5.1 Flood Zones describe the extent of flooding that would occur on the assumption that no flood defences are in place. The definition of Flood Zones is provided in Table 1 of the PPG and in table 3.1 below:

Table 3-1: Flood zone terminology

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or Land having between a 1 in 200 and 1 in 1,000 annual probability of sea 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 sea flooding. (Land shown in dark blue on the Flood Map)
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 Environment

Flood Zone	Definition
	Agency. (Not separately distinguished from Zone 3a on the Flood Map)

3.5.2 The site lies within the Environment Agency's Flood Zone 3 which is described within PPG Table 1 as having a 'High Probability' of flooding. The Environment Agency's flood zone map is shown in Appendix B.

3.6 Vulnerability Classification

3.6.1 The proposed development is considered to fall under the classification of 'More Vulnerable' land uses based on Table 2 of PPG Technical Guidance. Table 3: Flood Risk Vulnerability and Flood Zone Compatibility in PPG, states that these land uses are compatible in Flood Zone 3 (with the requirement to apply the Exception Test) (as in Table 3.2 below).

Table 3.2: Flood Zone Risk and Vulnerability

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

Key: ✓Development is appropriate ✗Development should not be permitted

3.7 Sequential Test and Exception Test

3.7.1 Paragraph 101 of the NPPF sets out guidance on the application of the Sequential Test, the aim of which is to steer new development to areas with the lowest probability of flooding. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding. Where areas of lower risk are not available, the Exception Test, as set out in paragraph 102 of the NPPF can be applied, to ensure that flood risk to people and property will be managed satisfactorily.

3.7.2 As the proposed development is classified as a 'Change of Use', and there would be no additional vulnerability to flood risk nor any worsening of flood risk elsewhere over that as a result of the proposal on this site. Therefore, a Sequential and Exception Test are considered as passed.

4. Sources of Flooding – Actual Flood Risk

4.1.1 The NPPF describes potential sources of flooding. It is necessary to consider the risk of flooding from all sources within a FRA. This section provides a review of flooding from land, sewers, groundwater and artificial sources, in addition to that from rivers and the sea.

4.2 Fluvial Flood Risk

4.2.1 The Environment Agency's Flood map for Planning, was used to identify risk of flooding at site (refer Appendix B). These confirm that the site is in Flood Zone 3 .

4.2.2 River Lee 2D Flood Mapping Study completed in 2010 has been provided by the Environment Agency following a data request for Product 5 and 6.

4.2.3 The closest point to the development site that indicates flooding, with a flood level of 11.62 mAOD for the 1% +20CC event. The revised flood level for the 1% +35CC event is 11.79 mAOD.

Table 4.1: Defended Fluvial Flood Levels (mAOD)

modelled 1 in 100 year	modelled 1 in 100 year + CC (20%)	revised 1 in 100 year +CC (35%)
11.40	11.62	11.79

4.2.4 The ground level of the main building is at 11.34 mAOD. The existing ground floor level is at 11.64 mAOD which is above the flood level of 11.62 mAOD for the 1% +20CC event

4.2.5 The site may be inundated with floodwater to a water depth of 0.15 m during the 1 in 100 year event plus 35% climate change undefended scenario. Extra flood resistance and resilience measures will be proposed to ensure that people will be kept safe from the identified flood hazards. As the proposed development is a 'Change of Use' development, due to the limitation of headroom constraints, planning policy and Building Regulations it is considered impractical to raise the finished floor levels. A slot in demountable flood barrier system will be fitted to protect the dwelling from flooding. This will be at least 0.45m high (which is 300mm above the flood level for the 1% +35CC event).

4.2.6 The new development will also improve the local flood risk. First floor will be proposed for the existing ground floor self contained flat. Therefore, Safe refuge is available within the proposed development during all modelled flood events. The existing rear storage building will be demolished and this will improve the flood storage on site.

4.3 Flood Risk from Land, Surface Water and Sewers

4.3.1 Flooding from land can be caused by rainfall being unable to infiltrate into the natural ground or entering the drainage systems due to blockage, or flows being above design capacity. This can then result in (temporary) localised ponding and flooding. The natural topography and location of buildings/structures can influence the direction and depth of water flowing off impermeable and permeable surfaces.

- 4.3.2 Surface water flooding can be difficult to predict, much more so than river or sea flooding as it is hard to forecast exactly where or how much rain will fall in any storm. The Environment Agency classifies the site, as being within a low risk area of flooding (i.e. each year this area has a chance of flooding of between 0.1% and 1%).



Figure 4-1: Surface Water Flood Map (Source Environment Agency²)

4.4 Tidal Flood Risk

- 4.4.1 Tidal flooding occurs when a high astronomical tide and storm (tidal surge) exceeds the level of coastal land or coastal flood defences. Tidal flooding can also be caused by 'tide locking' of rivers or estuaries. Tide locking prevents a river from discharging into the sea, causing 'backing up' and resulting in tidal/fluvial flooding.

- 4.4.2 The Site is not located within an area at risk from tidal flooding.

4.5 Groundwater Flood Risk

- 4.5.1 According to the Enfield SFRA, there are no recorded groundwater flooding incidents near the site, as the proposed development is on ground level and above, the risk of flooding from this source could be considered low.

4.6 Flood Risk from Artificial Sources

- 4.6.1 Artificial sources of flooding include reservoirs, canals, ponds and mining abstraction.

² <http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?&topic=ufmfs#x=357683&y=355134&scale=2>
[accessed 27/11/2023]

- 4.6.2 A review of the Environment Agency Reservoir Maps indicates that the site is within an area at risk from reservoir flooding. The Enfield SFRA states that consequently the risk of flooding due to catastrophic failure of any of the reservoirs in Enfield is considered to be sufficiently managed.



Figure 4-2: Extend of flooding from reservoirs (Source Environment Agency³)

4.7 Residual Flood Risk

- 4.7.1 Residual Risk is defined as 'the risk which remains after risk avoidance, reduction and mitigation measures have been implemented'. For the purpose of assessing flood risk, it is assumed that events greater than those assessed as Actual Risk are considered a 'Residual Risk'.
- 4.7.2 As proposed development is located in a high flood risk zone and does not benefit from the presence of significant defences. As such, the residual risk to the site could be considered to be relatively low.

³ <http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?&topic=ufmfs#wx=357683&y=355134&scale=2>
[accessed 27/11/2023]

4.8 Summary of flood risk

4.8.1 Table 4.1 below summarises the types of flood risk at the Site:

Table 4-1: Summary of flood risk

Source of risk	Ongoing risk
Fluvial Flood Risk	High Risk
Tidal Flood Risk	Negligible Risk
Flood Risk from Land, Surface Water and Sewers	Low Risk
Groundwater Flood Risk	Low Risk
Flood Risk from Artificial Sources	Low Risk
Residual Flood Risk	Low Risk

5. Flood Risk Management

5.1 Principles of Flood Risk Management

- 5.1.1 NPPF requires a precautionary approach to be undertaken when making land use planning decisions regarding flood risk. This is partly due to the considerable uncertainty surrounding flooding mechanisms and how flooding may respond to climate change. It is also due to the potentially devastating consequences of flooding to the people and property affected.
- 5.1.2 Flood risk is a combination of the probability of flooding and the consequences of flooding. Hence 'managing flood risk' involves managing either, the probability of flooding or the consequences of flooding, or both.
- 5.1.3 NPPF requires flooding from tidal, fluvial, land, surface water & sewerage and from groundwater to be considered. The flood risk management measures discussed in this section are based on the sources of flooding identified in Section 4 that are considered to pose a risk to the development proposals.

5.2 Flood Resilient Measures

- 5.2.1 The flood risk management measures discussed in this section are based on the sources of flooding identified in section 4. The following flood resilient measures should be adopted to minimise the damage and to enable quick recovery and clean up after the flooding event:
- Wiring for telephone, TV, Internet and other services will be protected by suitable insulation to minimise damage.
 - Wall sockets will be raised to as high as is feasible and practicable to avoid damage if flood waters inundate the property.
 - A slot in demountable flood barrier system will be fitted to protect the dwelling from flooding. This will be at least 0.45m high.

5.3 Finished Floor Level (FFL)

- 5.3.1 As the proposed development is a 'Change of Use' development, due to the limitation of headroom constraints, planning policy and Building Regulations it is considered impractical to raise the finished floor levels. The finished floor level will not be touched and set to match the existing floor level at 11.64 mAOD.

5.4 Sustainable Drainage Systems (SuDS)

- 5.4.1 A sustainable drainage system (SuDS) is recommended to help to reduce the surface water discharge rate based on the proposed development. The requirements for SuDS will ensure that any redevelopment or new development does not negatively contribute to the surface water flood risk off site and instead provides a positive benefit to the level of risk in the area. It will also ensure that appropriate measures are taken to increase the flood resilience of new properties and developments in surface water flood risk areas, such as those identified as being in an area with critical drainage problems.

- 5.4.2 The SuDS hierarchy and management train has been discussed in the SuDS Manual (C753) which aims to mimic the natural catchment processes as closely as possible. The general hierarchy of the SuDS measures is provided in Table 5-1 below.

Table 5-1 SuDS measures Hierarchy

Measures	Description
Prevention	The use of good site design and housekeeping measures to prevent runoff and pollution (e.g. rainwater harvesting/reuse, Water butt).
Source control	Control of runoff at or very near its source (e.g. soakaways, porous and pervious surfaces, green roofs).
Site control	Management of water in a local area on site (e.g. routing water to large soakaways, infiltration or detention basins)
Regional control	Management of runoff from a site or several sites (e.g. balancing ponds, wetlands).

- 5.4.3 Table 5-2 below presents the feasibility assessment of the SuDS measures for the site.

Table 5-2 Feasibility Assessment of SuDS measures for the site

SuDS Measures	Description	Feasibility for the site
Source control	Surface runoff can be improved by implementing rainwater harvesting using water butt	Yes

- 5.4.4 The existing rear outbuilding will be demolished and there will be an increase in permeable area as a result of the proposed development. Based on the general assessment of the potential SuDS measures above, it is recommended that a water butt can be proposed to help to improve the surface runoff from the site.

6. Flood Warnings




6.1 EA Flood Warning Service

6.1.1 The Environment Agency provides a warning system, which is free to all users, including their flood warning feeds, flood warning widget, live flood warning map and three-day flood risk forecast. It is recommended that users and occupants of the property subscribe to this service. In terms of lead times for flood alerts, the EA aims to issue alerts a minimum of 12 hours prior to a tidal event and a minimum of 2 hours prior to a river flood event.

<https://www.gov.uk/sign-up-for-flood-warnings>

6.2 Flood Warning System

6.2.1 There are different types of flood warnings that can be issued by the EA and the actions required as a result of each warning type are explained below:

Flood Warning	Flood Alert	Flood Warning	Severe Flood Warning
			
Message	Flooding is possible, Be prepared.	Flooding is expected and Immediate action required.	Severe flooding with Danger to life.
Timing	Two hours to two days in advance of flooding.	Half an hour to one day in advance of flooding.	When flooding poses a significant threat to life.
Action	<ul style="list-style-type: none"> - Be prepared to act on your flood plan. - Prepare a flood kit of essential items. - Monitor local water levels and the flood forecast on our website. 	<ul style="list-style-type: none"> - Move people, pets and valuables to a safe place. - Turn off gas, electricity and water supplies (if safe to do so) - Put flood protection equipment in place. 	<ul style="list-style-type: none"> - Stay in a safe place with a means of escape. - Prepare to evacuate from your home. - Co-operate with the emergency services. - Call 999 if you are in immediate danger.

6.3 Flood Warning Lead time

6.3.1 The EA aim to provide a minimum of 1-2 hours lead time for Flood Warnings on rivers and 6 hours for tidal or coastal locations. A more accurate estimation will be provided when the warning is made.

6.4 Three day flood risk forecast

- 6.4.1 There are different types of flood warnings that can be issued by the EA and the actions required as a result of each warning type are explained below: In addition to issuing flood warnings, the EA also provide the Three day flood risk forecast service. This shows, county by county, where there is risk of flooding over the next five days. The five-day forecast is updated at least every eight hours. For more information, the following link is available: <https://check-for-flooding.service.gov.uk/>

7. Flood Evacuation Plan

7.1 Decision Making

- 7.1.1 Once a Flood Warning has been received, the site owner/manager will need to decide what actions they or others now have to take. The site owner/manager should have the contact details of all site users where possible.
- 7.1.2 The receipt of and response to warnings of floods is an essential element in the management of the residual risk of flooding. Particular attention should be given to the communication of warnings to vulnerable people who may live adjacent to you including those with impaired hearing or sight and those with restricted mobility.
- 7.1.3 If immediate flooding is forecast and the opportunity to safely evacuate is gone, pre-emptive flood protection tasks must be implemented (if time allows) and the order given for moving to the area of safe refuge, see safe refuge section below.

7.2 Essential Contact Numbers

- 7.2.1 Table 1 provides a list of relevant key telephone numbers in the event of an flood emergency. Numbers and names are shown where known at this time but the outstanding information needs to be completed by the Appointed Responsible Person(s) before the Plan can be actioned.

Table 1: Key Contact Numbers

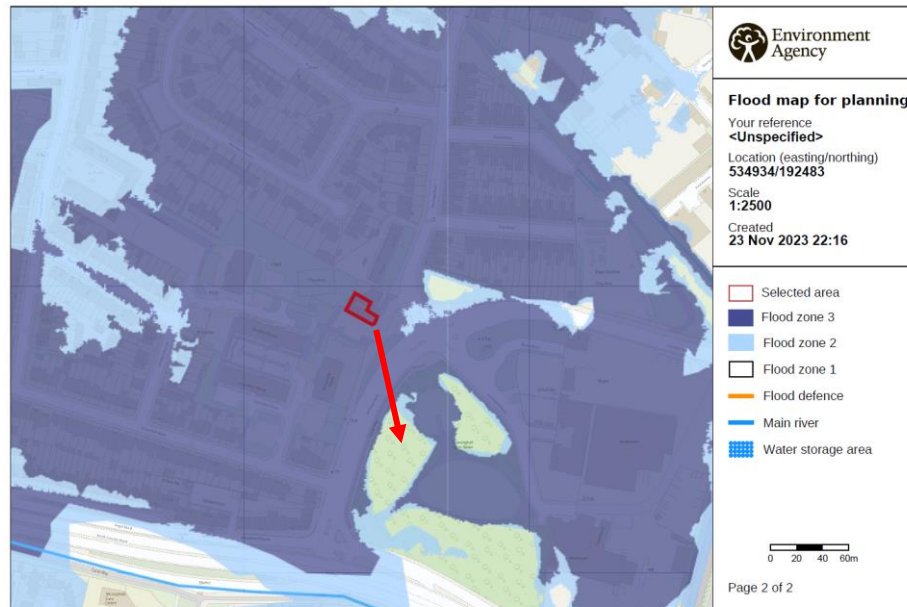
	Company/person	Telephone Number
Appointed responsible person	Site Owner	TBA
Floodline	Environment Agency	0345 988 1188
Electricity supplier	TBA	TBA
Gas supplier	TBA	TBA
Water supplier	TBA	TBA
Telephone provider	TBA	TBA
Insurance company 24-hour number and policy number	TBA	TBA
Ambulance Service	TBA	TBA
Insurance agent	TBA	TBA
Equipment repair/ suppliers	TBA	TBA

7.3 Protective Actions

- 7.3.1 Once a flood warning has been received, the Appointed Responsible Person will be required to organise the following actions to be carried out:
- Hazardous Materials – Move all hazardous materials to the first floor
 - First Aid Kit - Ensure that the site First Aid Kit is moved to the first floor

7.4 Evacuation Plan

- 7.4.1 Once a decision has been made to evacuate, The Appointed Responsible Person will be required to contact all site users to advise that the site is being evacuated in the event of an imminent flood
- 7.4.2 Evacuation route is proposed and the occupants will be able to leave the property safely in the event of extreme flooding. Prior to the onset of flooding occupants should head south to the higher ground at Kenninghall Open Space which is within Flood Zone 1.



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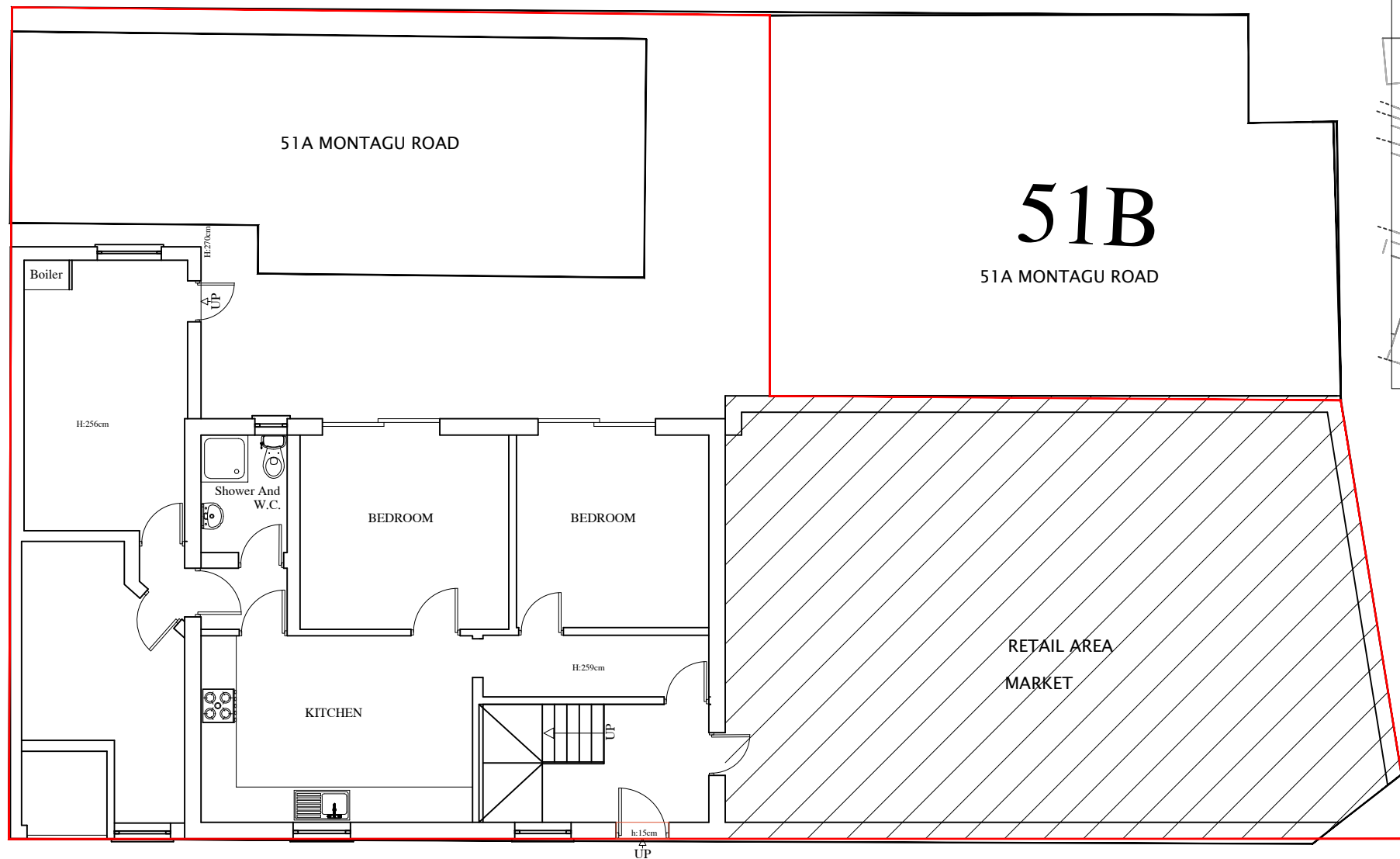
Figure 6-2: Evacuation Route (Background map: Environment Agency)

- 7.4.3 The site access and along the Evacuation route floods to max depths of 0.45 m during the 1% + 35% climate change. Following BS 8533:2011, a hazard rating of 1.338 has been calculated for the 1% AEP+35CC, based on a maximum flood depth of 0.45 m and a conservative velocity of 0.25 m/s.
- 7.4.4 This rating is below the Danger for all 2.0, which means emergency vehicles can access the site during a flood. Safe refuge is available within the proposed development during all modelled flood events.

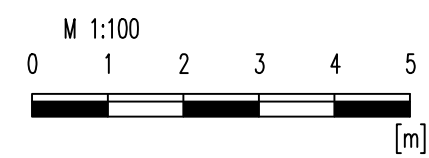
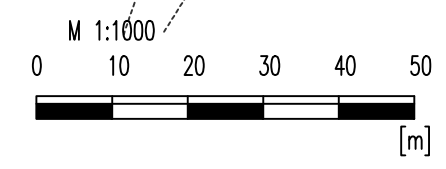
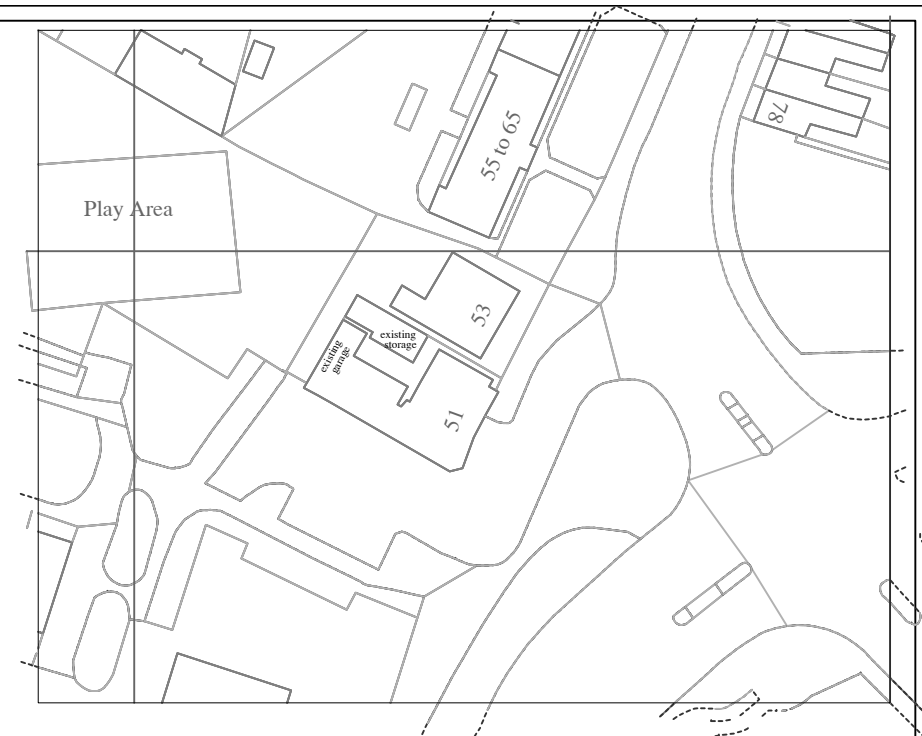
8. Conclusions & Recommendations

- 8.1.1 An assessment of areas potentially at risk from flooding has been undertaken and the development proposals have been examined in relation to their potential to increase flood risk both on and off site. This desk based FRA accompanies the full planning application for the conversion of self-contained flat to two self-contained flats with changes to side facade and demolition of rear storage building at 51A Montagu Road, to demonstrate that flood risk has been given material consideration throughout the development planning process and development should not be restricted at this Site due to flood risk.
- 8.1.2 The site is located within Flood Zone 3 according to the Environment Agency Flood Zones Maps. The current and proposed development Site use is classified as a 'More Vulnerable' land use and 'Minor Development' according to NPPF. Therefore, the site is compatible with the Environment Agency's vulnerability tests.
- 8.1.3 In line with the NPPF, all sources of flooding have been considered and assessed, using readily available sources of information. The site is located in the area with high risk from rivers and low risk from all other sources including tidal risk, surface water, groundwater, sewer and reservoir.
- 8.1.4 The development proposal has considered flood risk at all stages throughout the development of the final layout and reflects the flood risk constraints and the need to manage, and where possible reduce, flood risk in compliance with the guidance in NPPF. The proposal will not increase the risk of flooding to others and as a result, proposed development at this site should not be restricted as a result of flood risk.

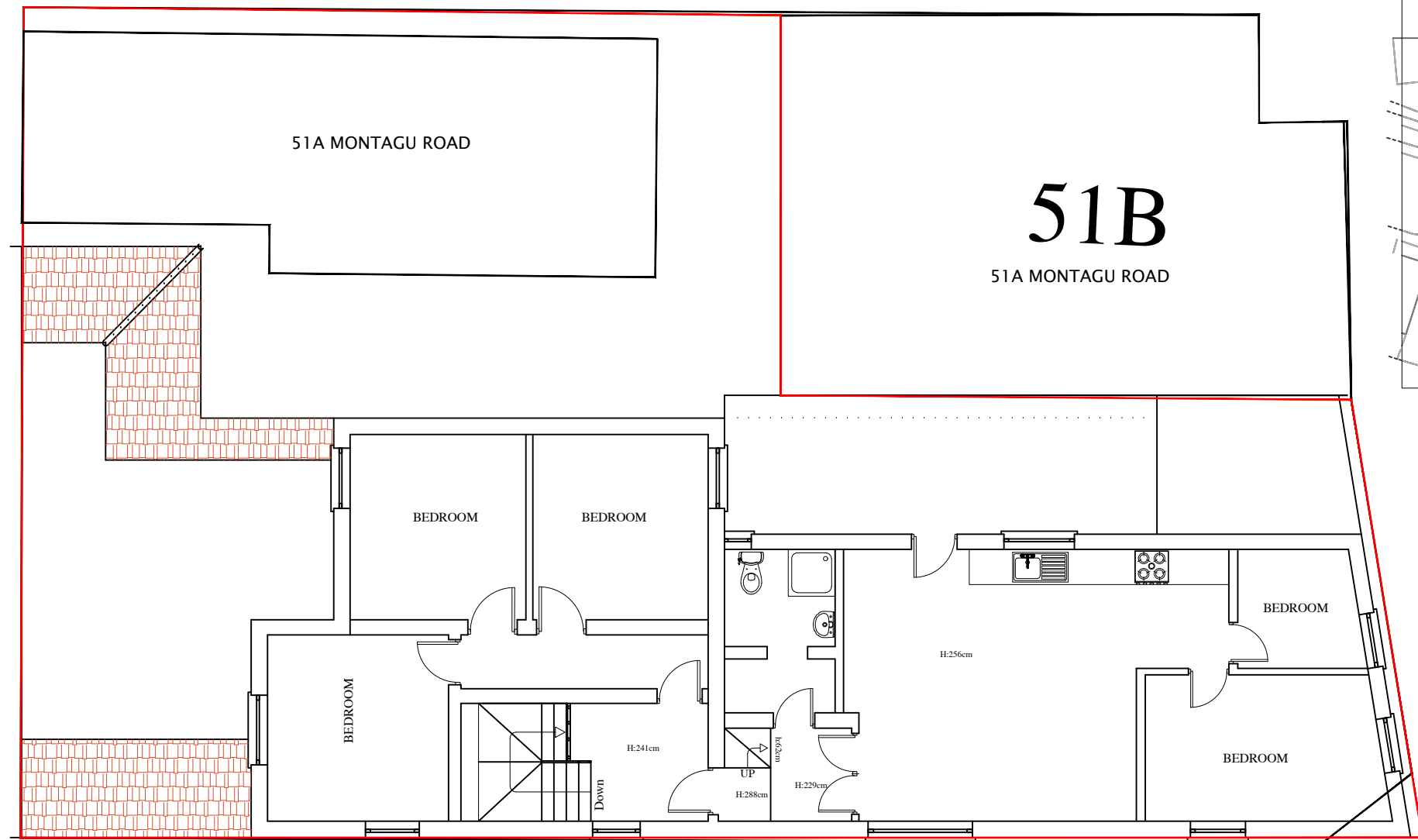
Appendix A Existing Site and Proposed Plans



EXISTING GROUND FLOOR PLAN



no	revision	date	control
project			
51A AND C MONTAGU ROAD EDMONTON N18 2LX			
drawing title			
EXISTING GROUND FLOOR PLAN			
scale			
1/100#A3			
date			
MAY 2023			
dwg.no			
A.TONBUL-05-PL01			



51A MONTAGU ROAD

51B

51A MONTAGU ROAD

BEDROOM

BEDROOM

BEDROOM

H:241cm

Down

UP

H:288cm

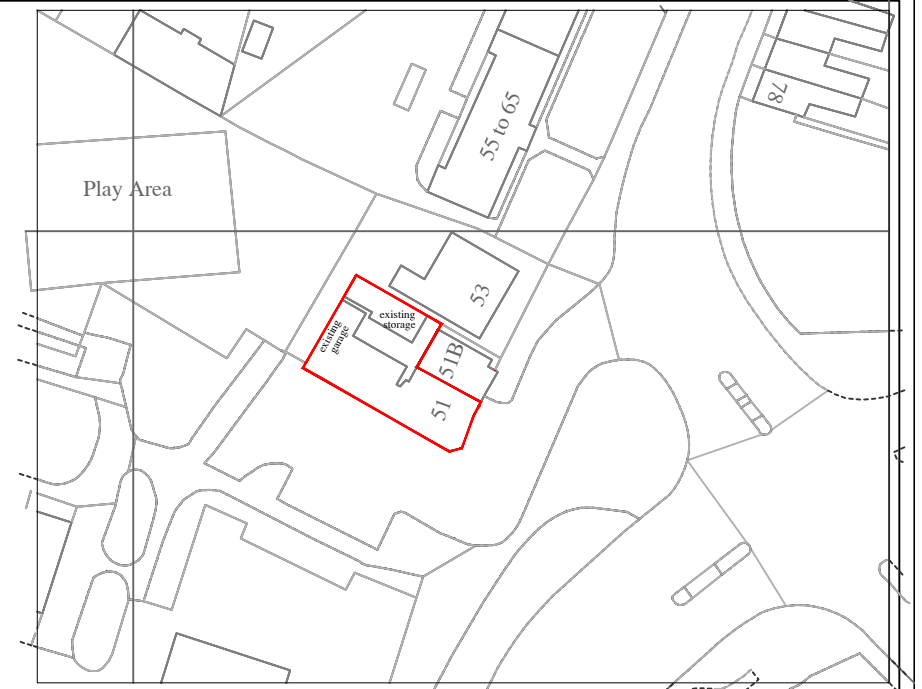
H:229cm

H:256cm

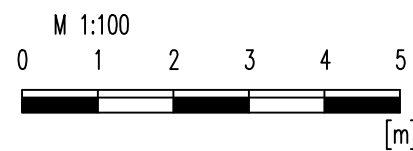
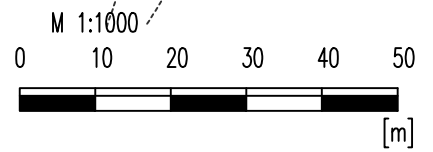
BEDROOM

BEDROOM

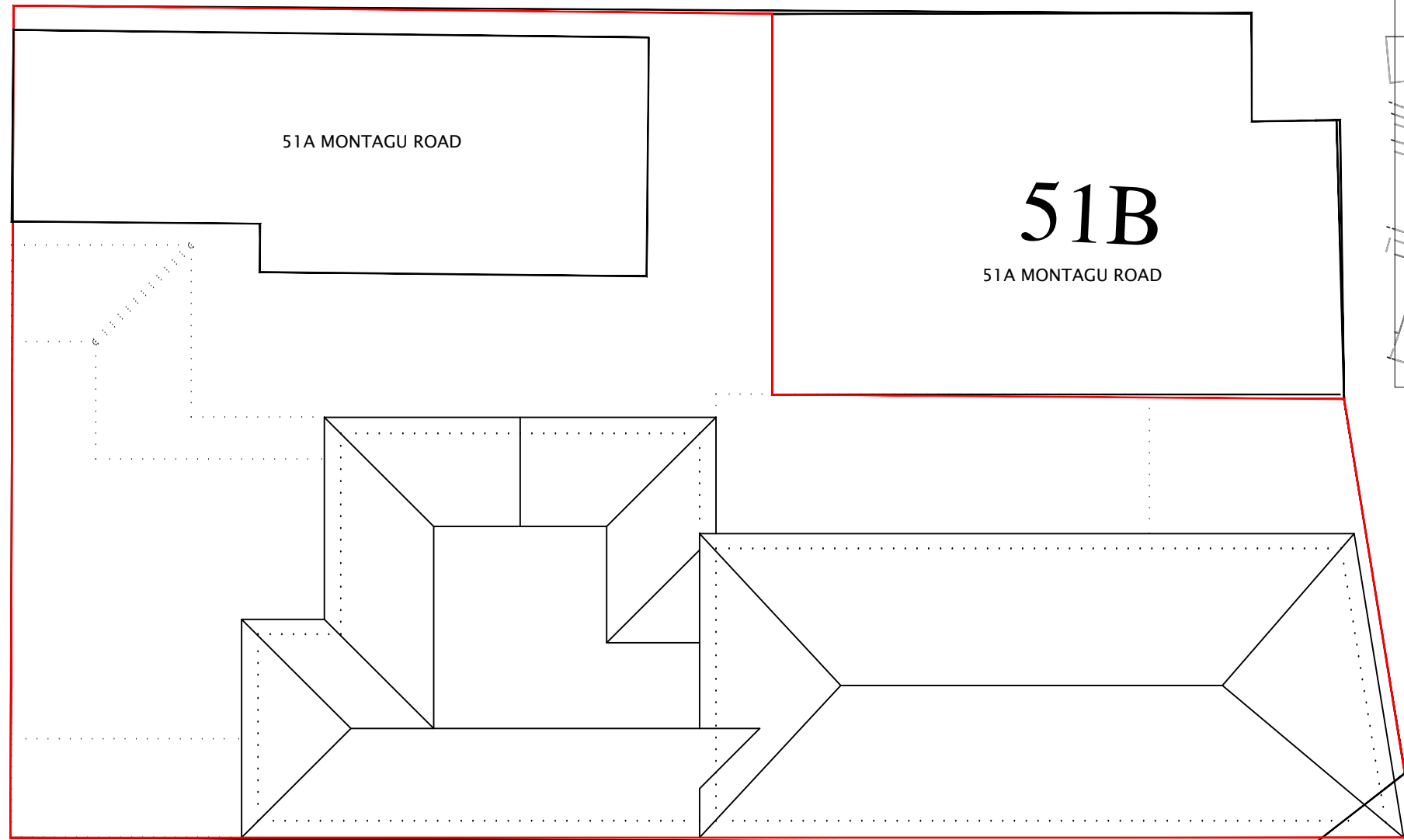
EXISTING FIRST FLOOR PLAN



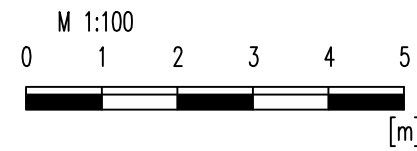
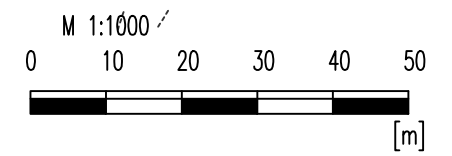
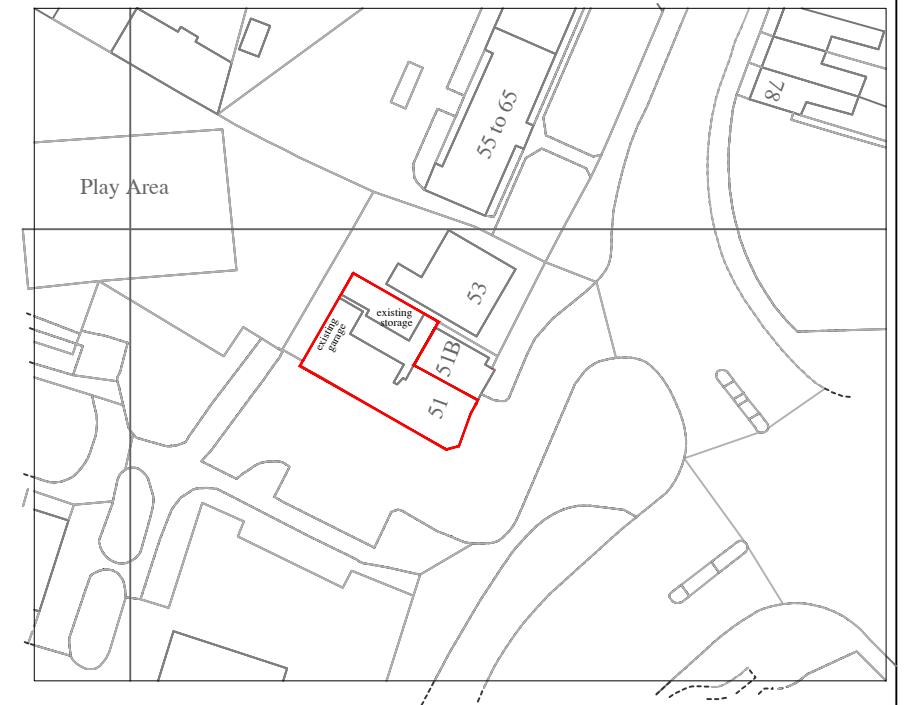
Play Area



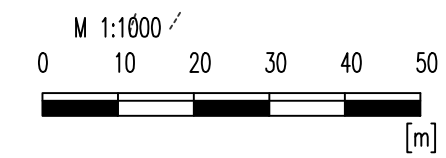
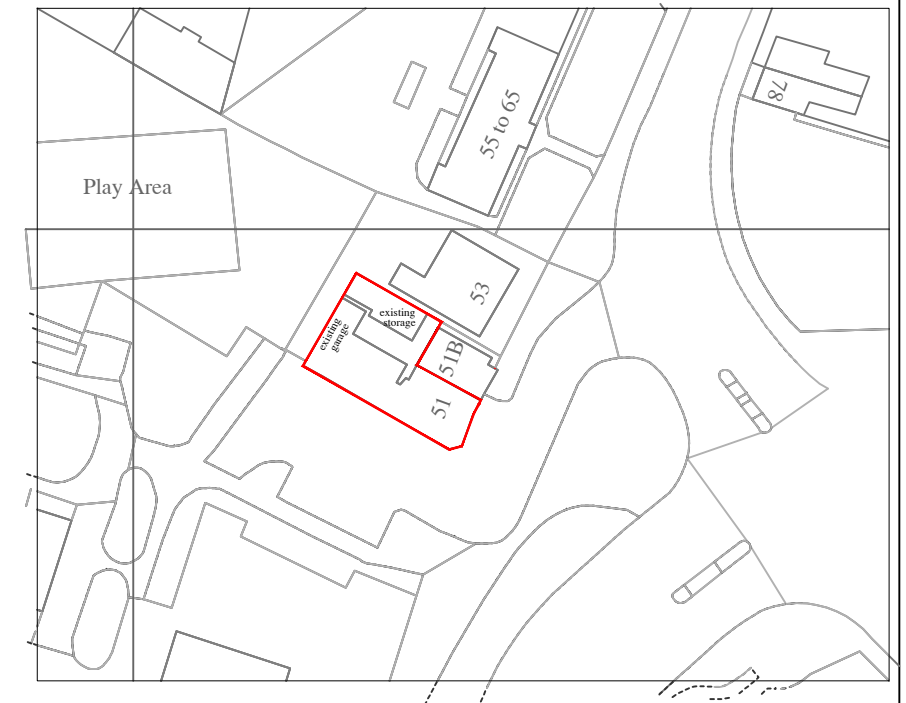
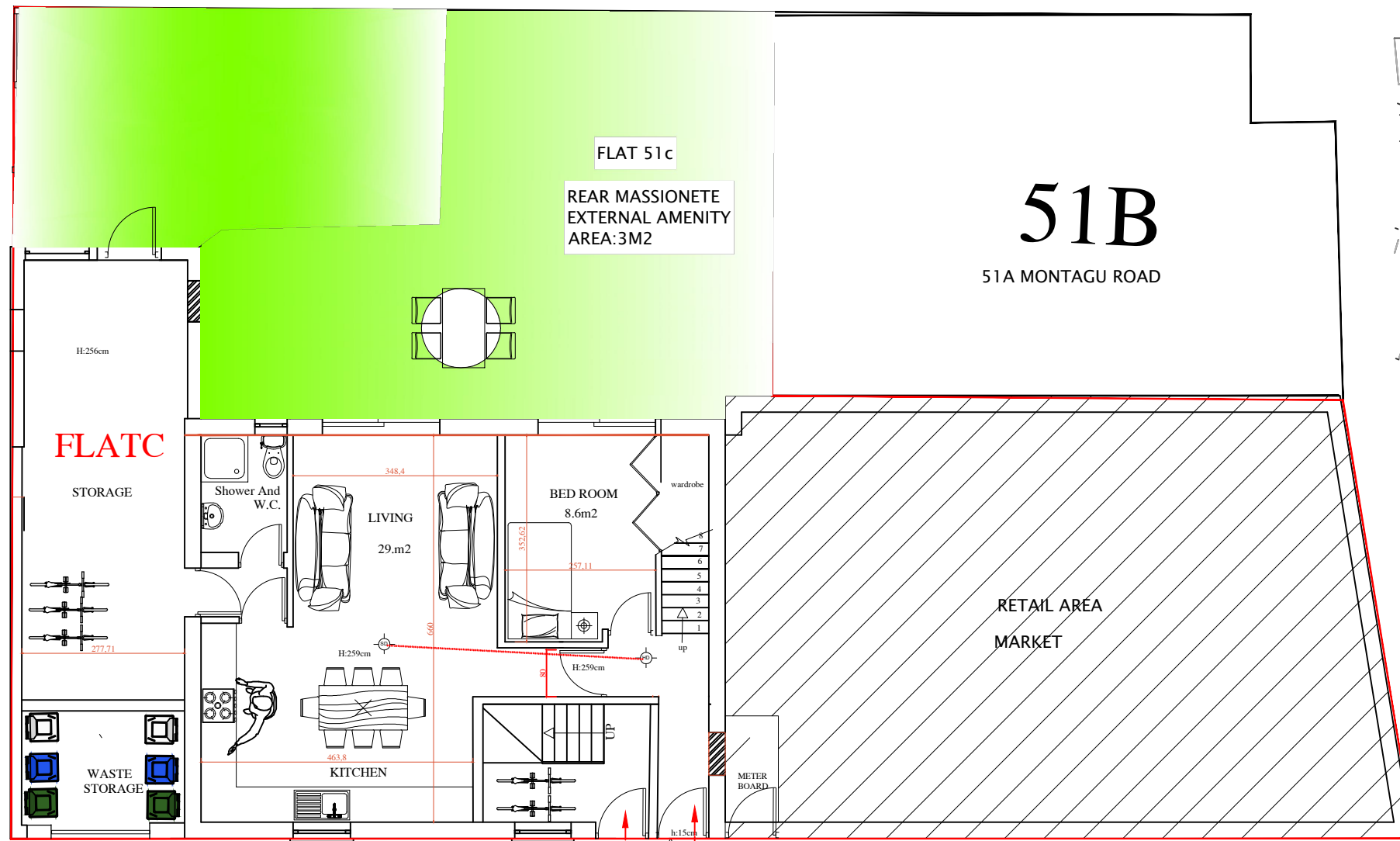
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project 51A AND C MONTAGU ROAD EDMONTON N18 2LX			
drawing title EXISTING FIRST FLOOR PLAN			
scale 1/100#A3			
date MAY 2023			
dwg.no A.TONBUL-05-PL02			



EXISTING ROOF PLAN



no	revision	date	control
project 51A AND 51B MONTAGU ROAD EDMONTON N18 2LX			
drawing title EXISTING ROOF PLAN			
scale 1/100#A3			
date MAY 2023			
dwg.no A.TONBUL-05-PL03			



REAR BOUNDARY TREATMENT
Lap Fence Panel 1.8m x 1.8m



PROPOSED GROUND FLOOR PLAN
TOTAL GROUND FLOOR: 79.0m²

FLAT C FLATA

51C MONTAGU ROAD
3 BED FOUR people

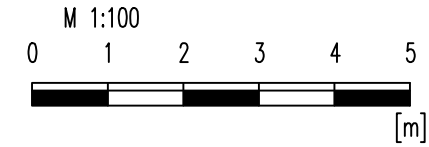
	AREA	Min. Required
GROUND FLOOR GROSS	61.20m²	
LIVING /KITCHEN/DINING	29.0m²	29.0m²
STORAGE	2.5m²	6.0m²
BEDROOM 1:	12.2m²	12.0m²
BEDROOM 2:	9.0m²	8.5m²
BEDROOM 3:	8.6m²	8.5m²

Table 1 - Minimum gross internal floor areas and storage (m²)

Number of bedrooms(b)	Number of bed spaces (persons)	1 storey dwellings	2 storey dwellings	3 storey dwellings	Built-in storage
1b	1p	39 (37) *			1.0
	2p	50	58		1.5
	3p	61	70		
2b	4p	70	79		2.0
	4p	74	84	90	
3b	5p	86	93	99	2.5
	6p	95	102	108	
	5p	90	97	103	
	6p	99	106	112	
4b	7p	108	115	121	3.0
	8p	117	124	130	
	6p	103	110	116	
5b	7p	112	119	125	3.5
	8p	121	128	134	
	7p	116	123	129	
6b	8p	125	132	138	4.0

LINE SHOWS
FLAT A REAR MASSIONETE

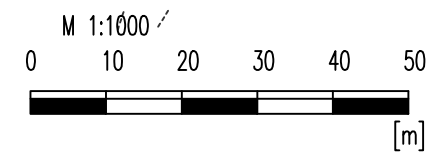
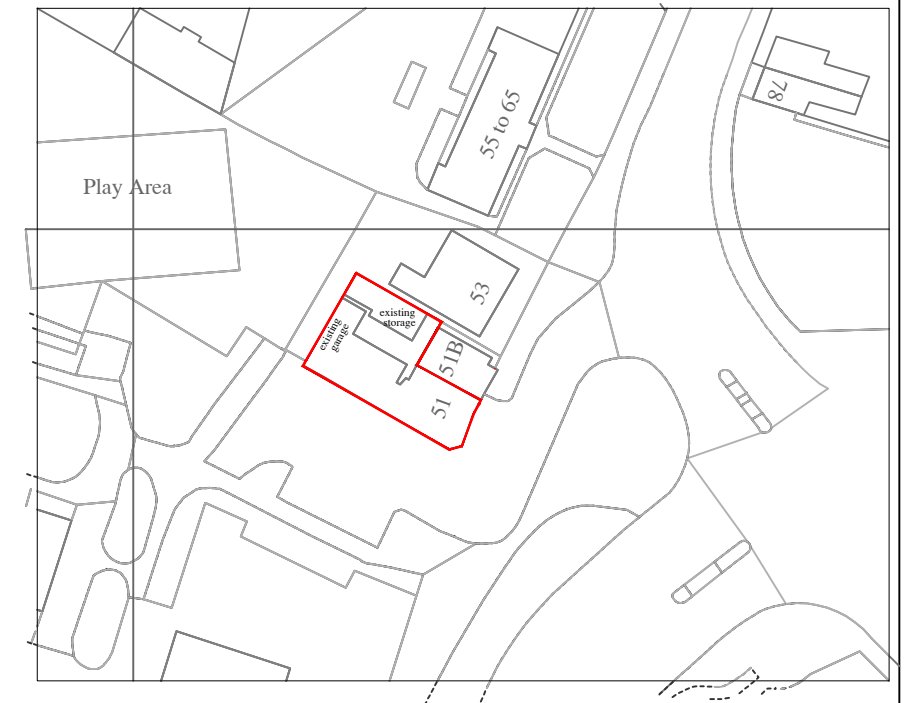
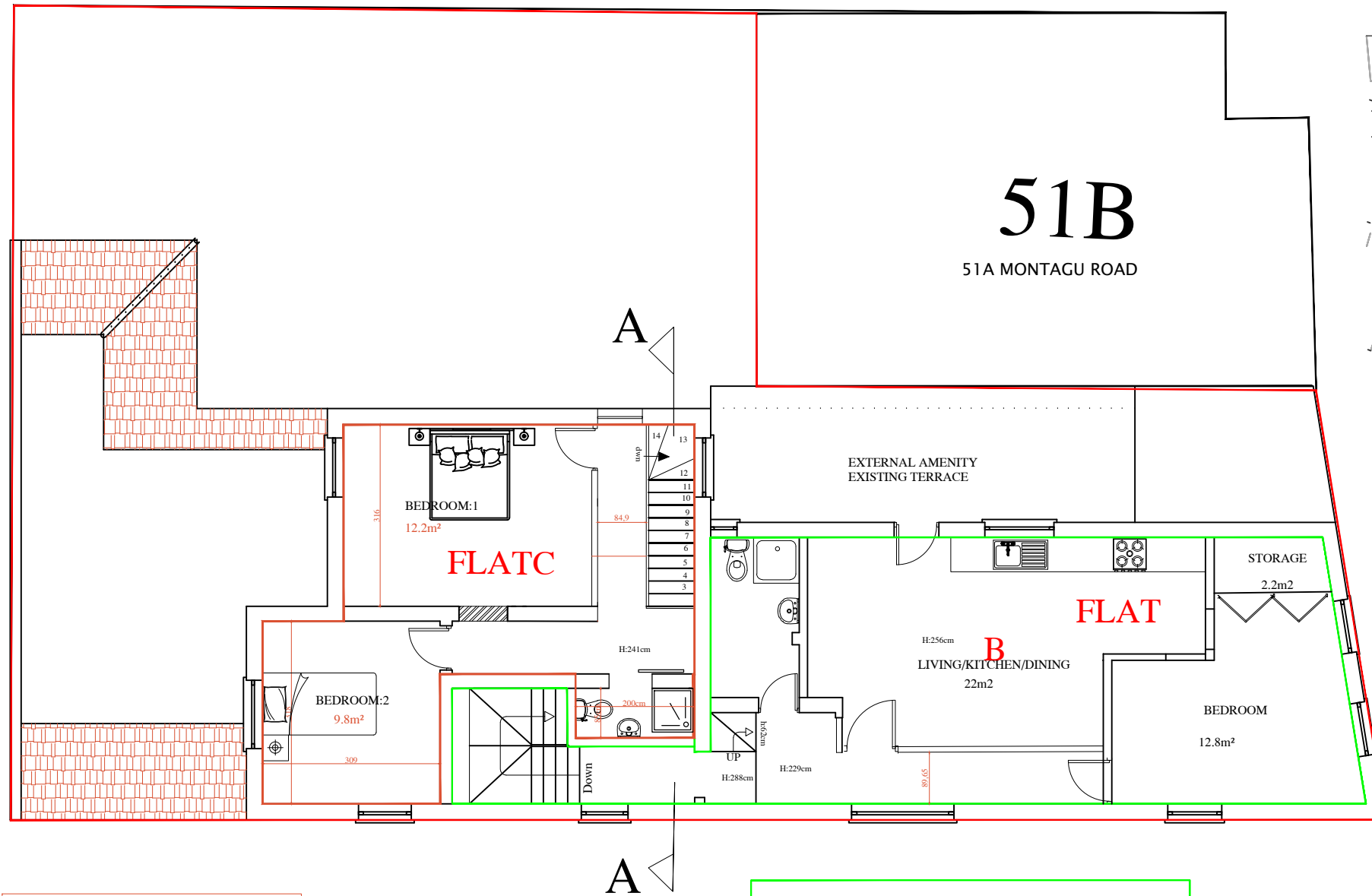
THREE BED FOR FOUR PEOPLE



no	revision	date	control
project	51A AND C MONTAGU ROAD EDMONTON N18 2LX		
drawing title	PROPOSED GROUND FLOOR PLAN		
scale	1/100#A3		
date	MAY 2023		
dw.no	A.TONBUL-05-PL04		

3 bed four people

51B
51A MONTAGU ROAD



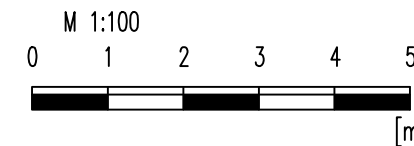
51A MONTAGU ROAD
1 BED TWO people

	Min. Required
GROUND FLOOR GROSS AREA: 61.20m ²	
LIVING /KITCHEN/DINING 29.m2	29.m2
STORAGE 2.5m ²	6.0m ²
BEDROOM 1: 14m ²	12.0m ²

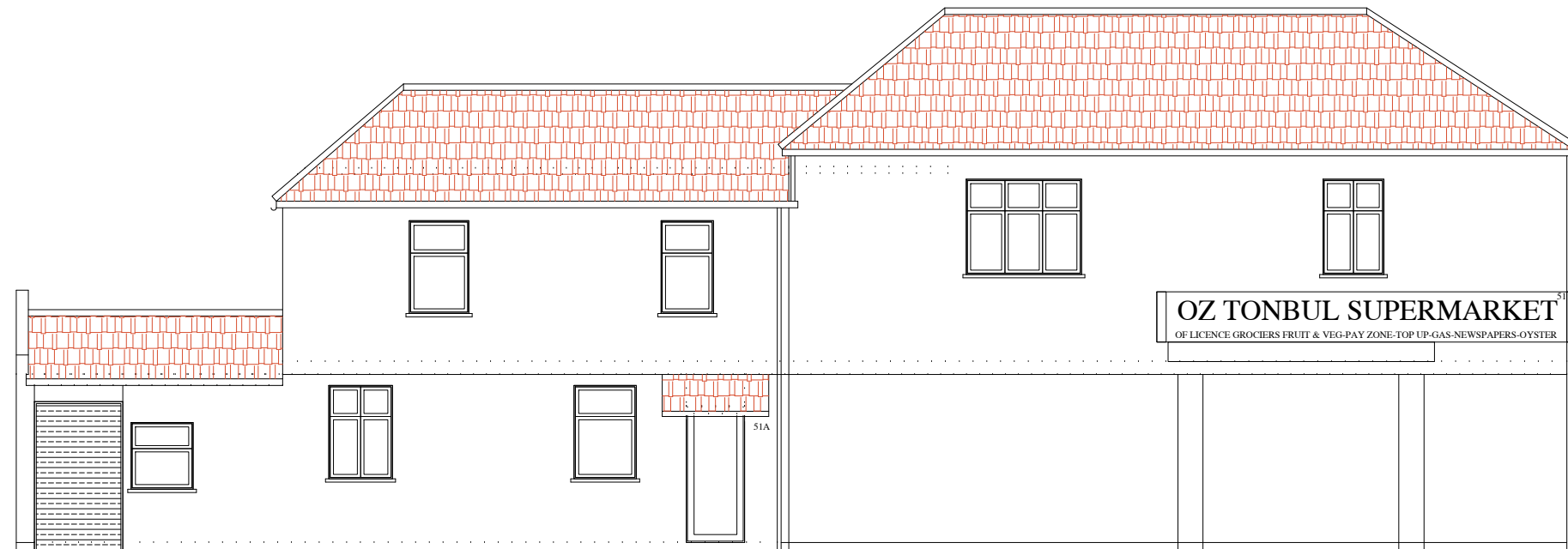
LINE SHOWS
 — FLAT C
 REAR MASSIONETTE
 Internal floor area: 37.0m²
 THREE BED FOR FOUR
 PEOPLE

PROPOSED FIRST FLOOR PLAN
 TOTAL FIRST FLOOR AREA OF
 MASSIONETTE : 37m²
 TOTAL GROUND AND FIRST
 FLOOR FLAT
 FLAT C
 MASSIONNETE FLOOR AREA
 79.0m²+37m²=116²>85m²

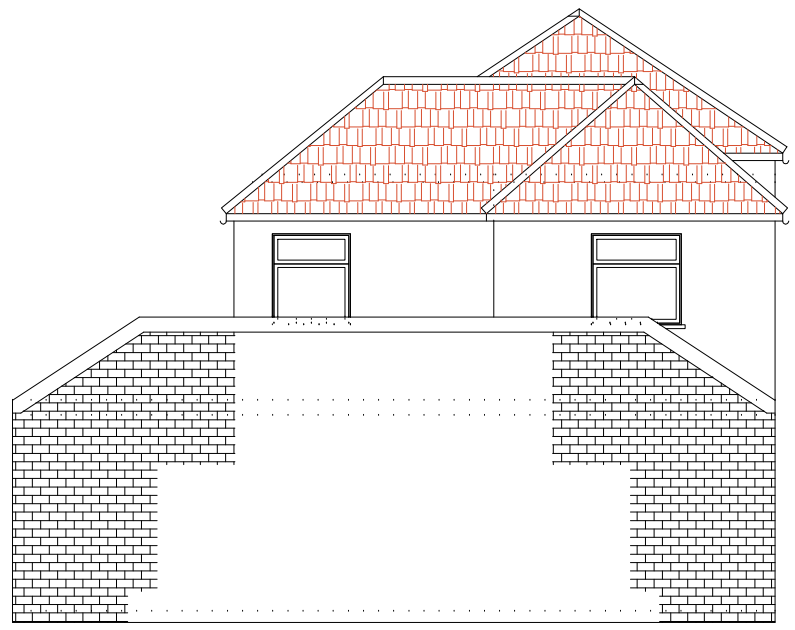
LINE SHOWS
 — FLAT B
 FIRST FLOOR FLAT
 Internal floor area: 57.60m²
 ONE BED FOR TWO PEOPLE



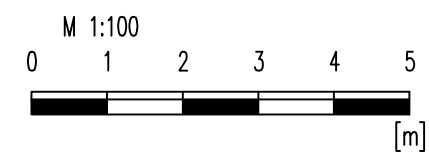
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drawing title	PROPOSED FLOOR PLANS		
scale	1/100#A3		
date	MAY 2023		
dwg.no	A.TONBUL-05-PL05		



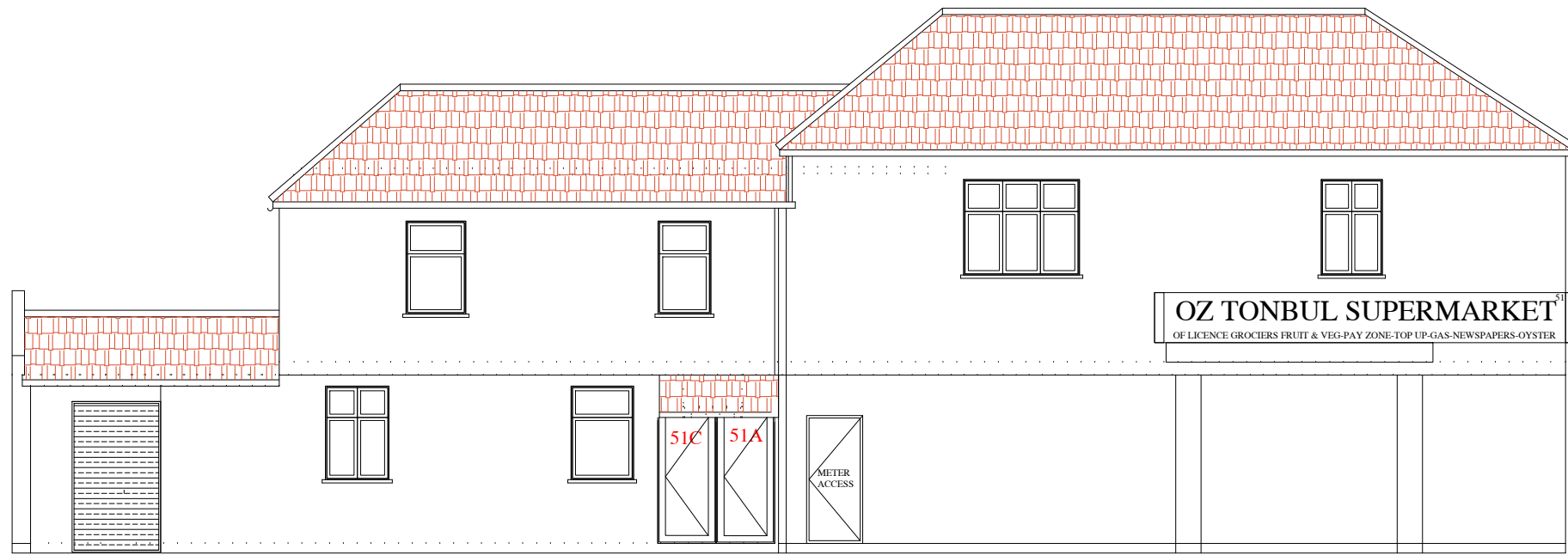
EXISTING FRONT ELEVATION



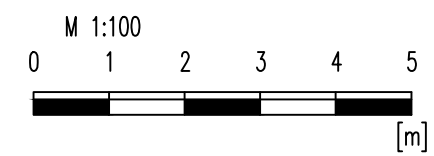
EXISTING SIDE ELEVATION
NO ALTERATION



no	revision	date	control
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drawing title EXISTING ELEVATIONS			
scale 1/100#PA3			
date MAY 2023			
dwg.no A.TONBUL-05-PL06			



PROPOSED FRONT ELEVATION



no	revision	date	control
project 51A MONTAGU ROAD EDMONTON N18 2LX			
drawing title PROPOSED ELEVATIONS			
scale 1/100#A3			
date MAY 2023			
dwg.no A.TONBUL-05-PL07			

Appendix B Environment Agency Flood Map for Planning



Flood map for planning

Your reference	Location (easting/northing)	Created
<Unspecified>	534934/192483	23 Nov 2023 22:16

Your selected location is in flood zone 3, an area with a high probability of flooding.

This means:

- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see www.gov.uk/guidance/flood-risk-assessment-standing-advice)

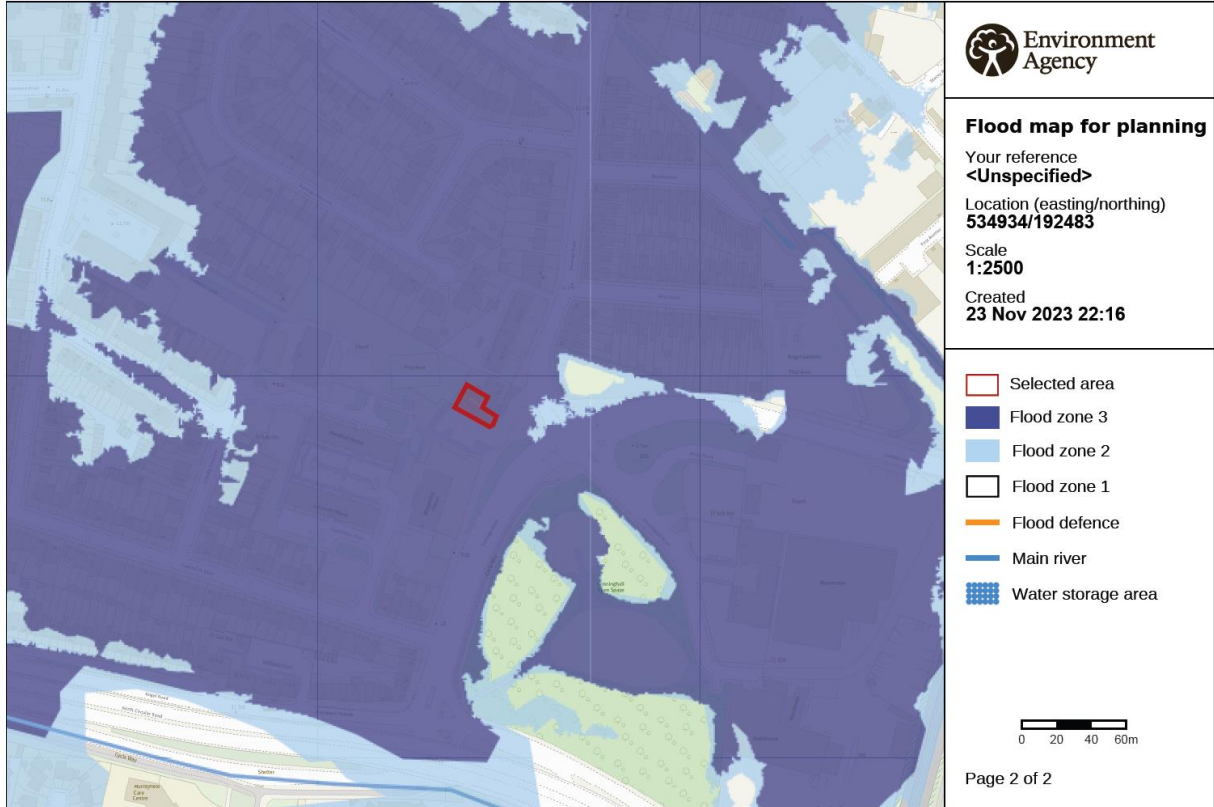
Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

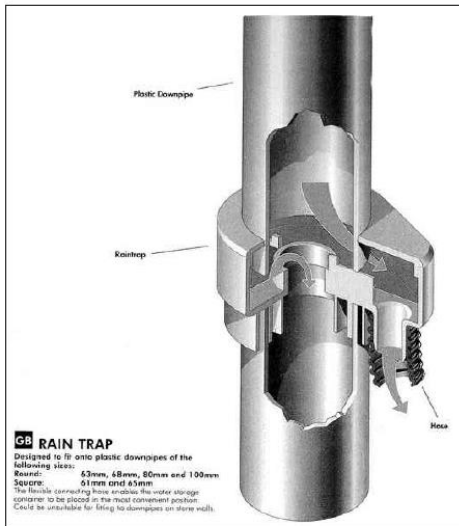
Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2022 OS 100024198. <https://flood-map-for-planning.service.gov.uk/os-terms>



Appendix C Water Butt/SuDS details

Suggested Water butt:
 Charles Bentley 210L Garden Round Plastic Water Butt.
 Features: Water exit tap, Lockable lid, 3 part stand and
 downpipe filler kit, 210 litres Capacity
 Materials: High Density Plastic
 Dimensions: Water Butt - H97 x W57 x D57cm
 Stand - L40.5 x W40.5 x H30.5cm
 Weights: 8.2kg

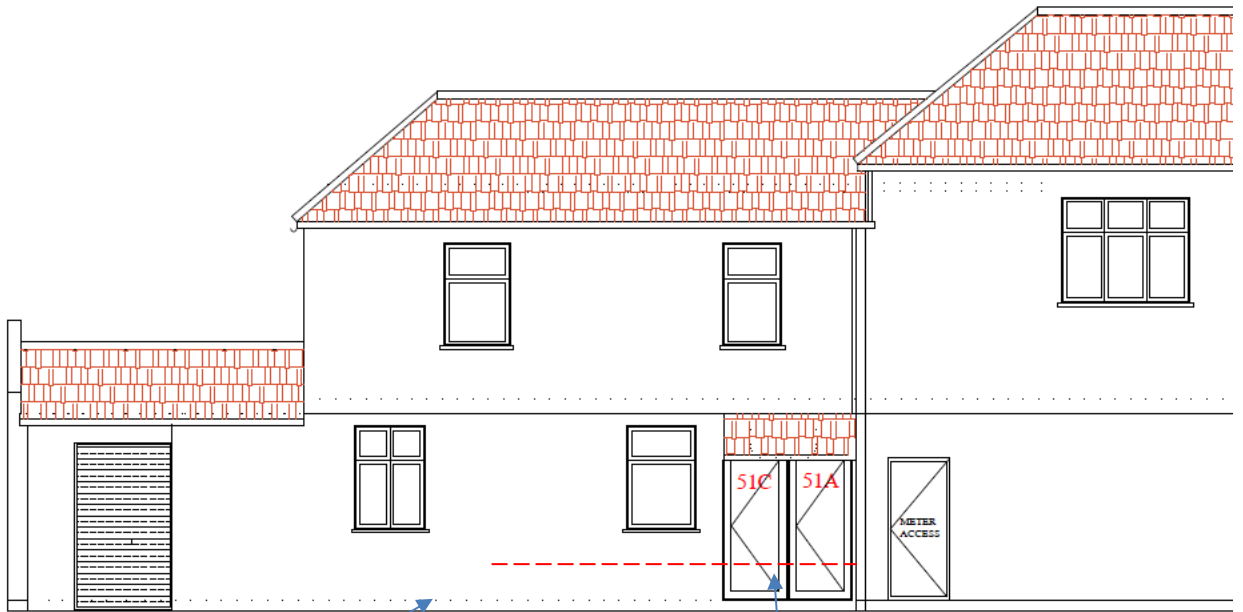


Overflow Direction when water butt is full

Appendix D SuDS Maintenance Schedule

Water Butt Maintenance Schedule			
Maintenance schedule	Requirement	Frequency	Responsibility
Regular maintenance	Clearing of tank, inlets, outlets, gutters, withdrawal devices and roof drain filters and other debris	Annual (or following poor performance)	Landowner
Occasional maintenance	Replacement of any filters	As required	Landowner
Remedial actions	Repair any erosion damage, or damage to tank	As required	Landowner
Monitoring	Inspection of tank for debris and sediment build up	Annual (or following poor performance)	Landowner
	Inspection of inlets, outlets and withdrawal devices	Annual (or following poor performance)	Landowner
	Inspection of areas receiving overflow, for evidence of erosion	After extreme storms	Landowner
	Inspection of roof drain filters	Annual (or following poor performance)	Landowner

Appendix E Flood Resilience Construction Details



The finished floor level will not be touched and set to match the existing floor level at 11.64 mAOD

A slot in demountable flood barrier system will be fitted to protect the dwelling from flooding. This will be at least 0.45m high (which is 300mm above the flood level of 11.79 mAOD for the 1% +35CC event)