15 Dover Road

Flood Risk Assessment

September 2026



Quality Management

Project	15 Dover Road Flood Risk Assessment
Location	15 Dover Road, London, N9 0LD
Reference	LE2027175FRA

Revision History

Rev	Date	Issue / Purpose/ Comment	Prepared
R01	September 2026	Final	ZY

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Executive Summary

Site Name	15 Dover Road Flood Risk Assessment
Location	15 Dover Road, London, N9 0LD
Grid Reference	535235 , 193760
EA Flood Zone Classification	Flood Zone 3
Current Site Use	Residential
Description of proposed development	change of use from a dwelling house to a HMO, rear dormer
Vulnerability Classification	Residential – 'More Vulnerable'
Summary of Pre-development Risks	• Fluvial/Tidal Flood Risk: Medium 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 to undertake a desk based Flood Risk Assessment (FRA) for a development at 15 Dover Road, London, N9 0LD (Figure 2-1). It is understood by Liska Environmental that this report is to support a planning application for the change of use from a dwelling house to a HMO, rear dormer.

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 National Planning Policy Framework.

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 16/09/2026];
- British Geological Survey (BGS) website – *'GeoIndex'* and *'Lexicon of Named Rock Units'* [Accessed 16/09/2026];
- Department of Environment, Food, and Rural Affairs (DEFRA) website – *'MAGIC Map Application'* [Accessed 16/09/2026];
- Environment Agency (EA) website - '*Catchment Data Explorer'* [Accessed 16/09/2026].

2. Development Site Planning Considerations

2.1 Location

2.1.1 The site is located at 15 Dover Road, London, N9 0LD at Ordnance Survey (OS) coordinates 535235 , 193760.



Figure 2-1 Site Boundary. Source: Google Map

2.2 Proposed Development

2.2.1 The proposal consists of the change of use from a dwelling house to a HMO, rear dormer. Further details about the proposals have been provided in Appendix A.

2.3 Existing Topography

2.3.1 A topographical survey to Newlyn Ordnance Datum (mAOD) has been undertaken by using the EA lidar data. The external ground level of the site is between 11.75 mAOD and 11.90 mAOD. The existing ground floor level of the building is at 12.15 mAOD.

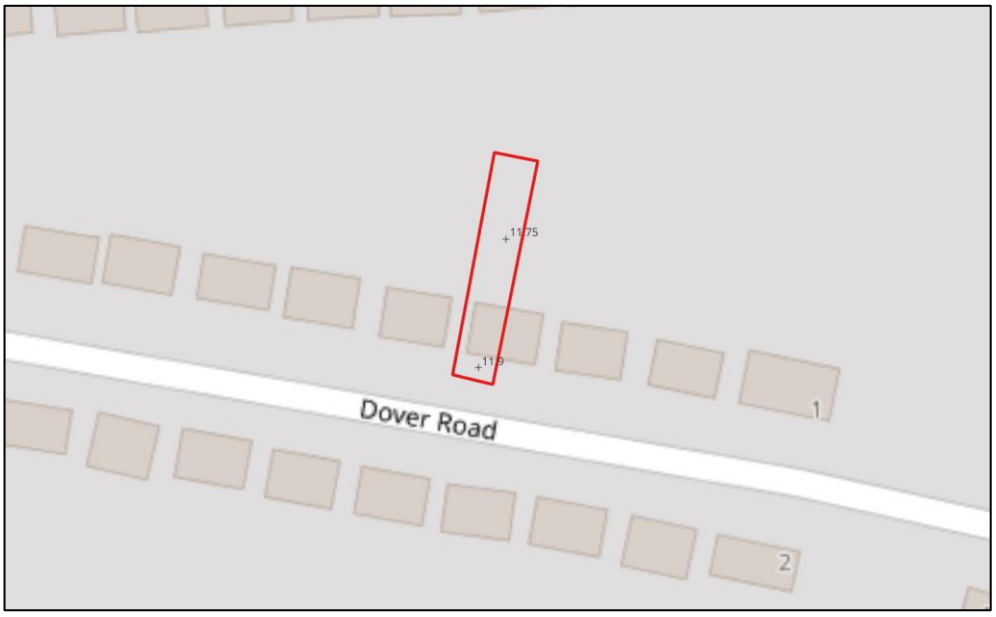


Figure 2-2 Existing Topography. Source: Environment Agency

2.4 Local Geology

2.4.1 A review of the published geological information was carried out, including information from the BGS GeoIndex and Lexicon of Named Rock Units websites[1]. 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	These sedimentary rocks are marine in origin. They are detrital and comprise coarse- to fine-grained slurries of debris from the continental shelf flowing into a deep-sea environment, forming distinctively graded beds.
Superficial Deposits	Kempton Park Gravel Member-Sand and gravel	Onsite	These sedimentary deposits are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting).

2.5 Flood Zone

2.5.1 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 2.1 below:

Table 2-1: 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 Agency. (Not separately distinguished from Zone 3a on the Flood Map)

2.5.2 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.

2.6 Vulnerability Classification

2.6.1 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 (as in Table 2.2 below).

Table 2.2: 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

2.7 Sequential Test and Exception Test

2.7.1 The National Planning Policy Framework 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 it is not possible to locate development in areas of lower flood risk, the Exception Test (where required by national policy) must be applied to demonstrate that the development would provide wider sustainability benefits that outweigh flood risk and that it will be safe for its lifetime without increasing flood risk elsewhere, and where possible will reduce flood risk overall.

2.7.2 As the proposed development is classified as a 'Change of Use' development, 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.

3. Sources of Flooding – Actual Flood Risk

3.1.1 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.

3.2 Fluvial/Tidal Flood Risk

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

3.3 Flood Risk from Land, Surface Water and Sewers

3.3.1 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.

3.3.2 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.

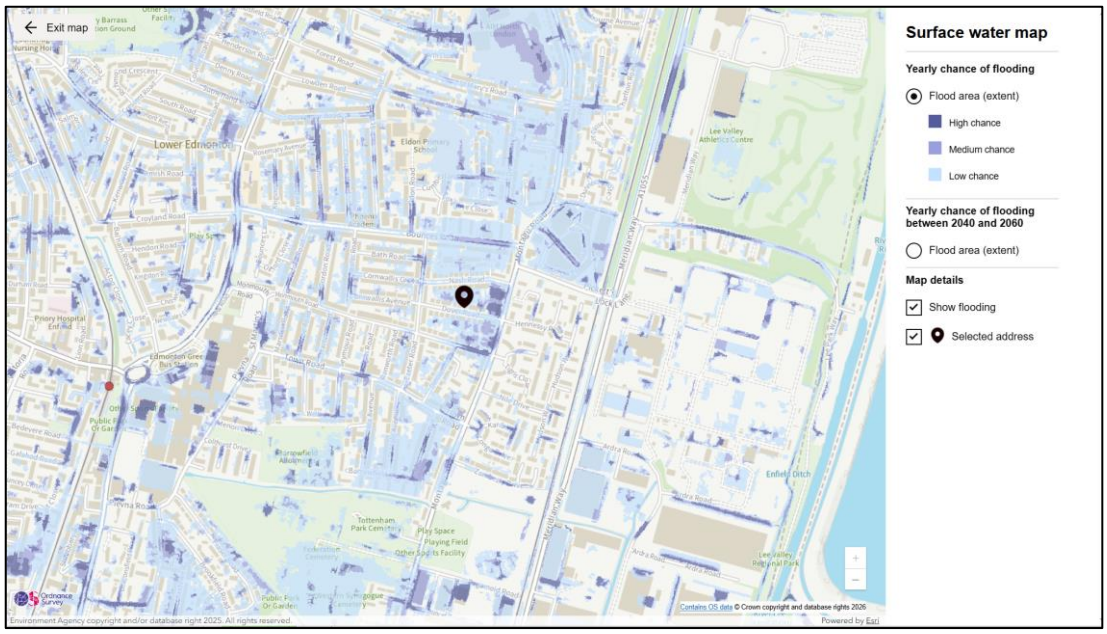


Figure 3-1: Surface Water Flood Map (Source Environment Agency[2])

[2] http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?&topic=ufmfsw#x=357683&y=355134&scale=2

3.4 Compensatory Flood Storage (CFS)

3.4.1 A Compensatory Flood Storage scheme is required to evidence that proposed development can be achieved without increasing flood risk elsewhere.

3.4.2 In order to calculate how much compensatory storage is required, the amount of flood water displacement in the 1:100 year plus climate change event should be calculated. The proposed development is a 'Change of Use' development and there is no increase in footprint as a result of the proposed development, therefore no compensatory flood storage is required.

3.5 Groundwater Flood Risk

3.5.1 As the proposed development is on ground level or above, the risk of flooding from this source could be considered low.

3.6 Flood Risk from Artificial Sources

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

3.6.2 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.

3.7 Residual Flood Risk

3.7.1 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'.

3.7.2 As proposed development is located in a low 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.

3.8 Summary of flood risk

3.8.1 Table 3.1 below summarises the types of flood risk at the Site:

Table 3-1: Summary of flood risk

Source of risk	Ongoing risk
Fluvial/Tidal Flood Risk	Medium 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

4. Flood Risk Management

4.1 Principles of Flood Risk Management

4.1.1 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.

4.1.2 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.

4.1.3 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 3 that are considered to pose a risk to the development proposals.

4.2 Flood Resilient Measures

4.2.1 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 shall 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.

4.3 Finished Floor Level (FFL)

4.3.1 The Proposed development is a ‘Change of Use’ development.

4.3.2 According to the Enfield Council new direct rainfall modelling, Flood Level has been modelled at 12.13 mAOD during the 1 in 100 year event plus climate change. The ground floor level of the main building will be raised from 12.15 mAOD to 12.28 mAOD, providing a 150 mm freeboard above the modelled flood level for the 1 in 100 year event plus climate change.

4.3.3 Whilst this does not achieve the standard 300 mm freeboard above the combined modelled flood level, given the constraints of the existing building, the availability of first floor refuge, the provision of flood resilience measures and a minimum 150 mm freeboard above the modelled flood level, the proposed finished floor level is considered acceptable for this development.

4.4 Sustainable Drainage Systems (SuDS)

4.4.1 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.

4.4.2 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 4-1 below.

Table 4-1 SuDS measures Hierarchy

Measures	Description
Source control	Rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)
Site control	Rainwater infiltration to ground at or close to source
Source control	Rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens)
Regional control	Rainwater discharge direct to a watercourse (unless not appropriate)
Site control	Controlled rainwater discharge to a surface water sewer or drain
Site control	Controlled rainwater discharge to a combined sewer

4.4.3 Table 4-2 below presents the feasibility assessment of the SuDS measures for the site.

Table 4-2 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

4.4.4 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.

4.5 Safe Access/Egress Arrangements

4.5.1 Demonstrating safe access and egress is available for the site for the development lifetime is a key factor in demonstrating compliance with the NPPF. This requires site occupants to be able to safely access and exit their dwellings in design flood conditions. Vehicular access to allow the emergency services to safely reach the development during design flood conditions is also normally required.

4.5.2 According to PPG NPPF, an evacuation route should be proposed at this stage in order to ensure that the site occupants will be able to leave the property safely in the event of extreme flooding event. A maximum flood depth of 0.24 m should be expected at the access route. Given that the access road is generally flat, low velocities (0.25 m/s) are expected on the road itself. The hazard rating (HR) of the site would be HR = [(0.25 + 0.5) x 0.24] + 0.5 = 0.68 <0.75. Therefore, safe access and egress (very low risk) can be provided.

4.5.3 In the event that users cannot reach an evacuation area, it is suggested that safe refuge is sought in locations such as the upper storeys of the main building.

5. Conclusions & Recommendations

5.1.1 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 planning application for the change of use from a dwelling house to a HMO, rear dormer at 15 Dover 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.

5.1.2 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 'Change of Use' development according to NPPF. Therefore, the site is compatible with the Environment Agency's vulnerability tests.

5.1.3 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 medium risk from rivers and low risk from all sources including groundwater, surface water and reservoir.

5.1.4 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

Appendix B Environment Agency Flood Map for Planning

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
Unspecified	**535233/193767**	**17 September 2026 07:50**

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 https://www.gov.uk/guidance/flood-risk-assessment-standing-advice)

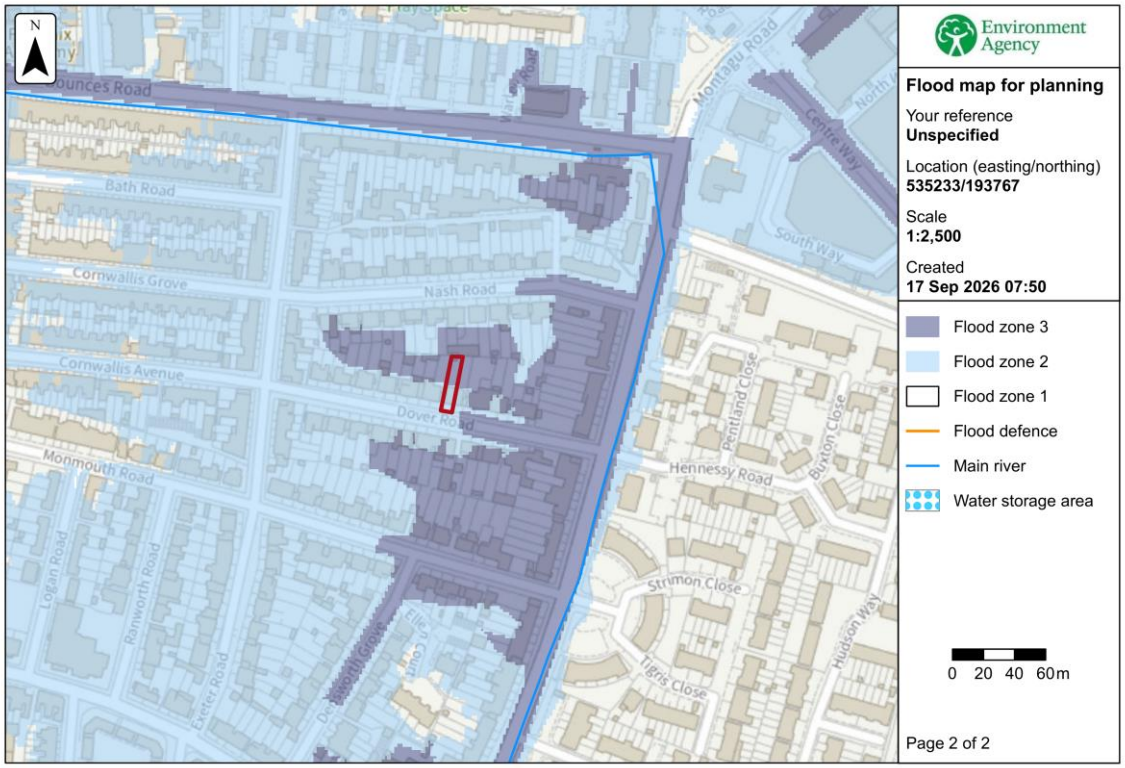
Notes

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

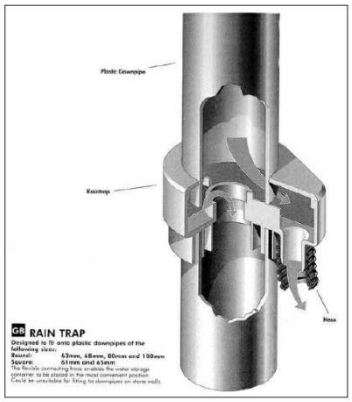
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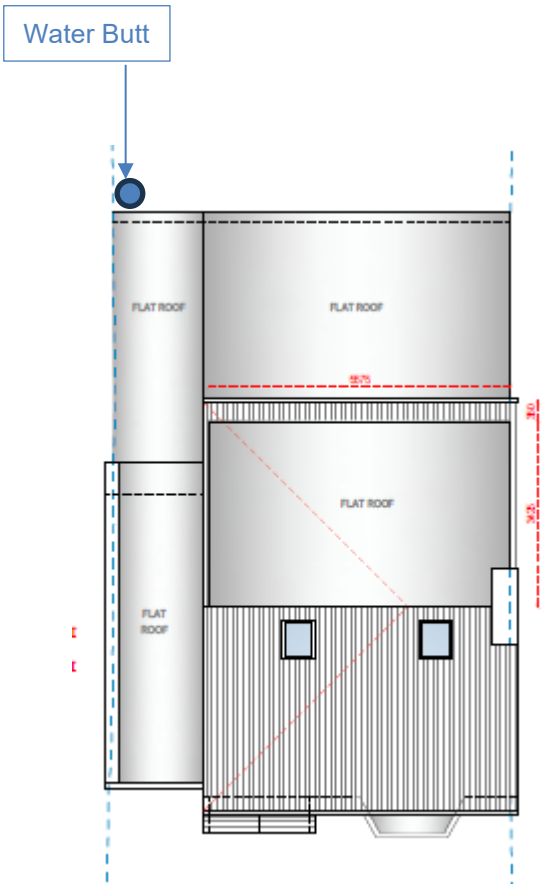
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Appendix C Water Butt/SuDS details

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



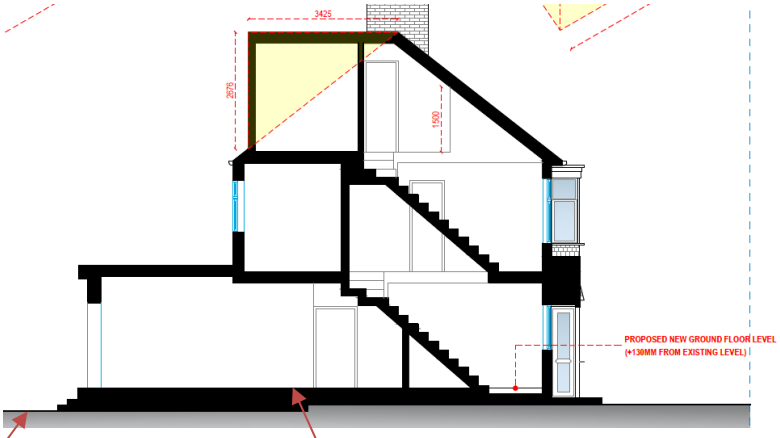




Appendix D SuDS Maintenance Schedule

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 Floor Level



Ground Level 11.75 mAOD

Raised Floor level 12.28 mAOD