68 Ashford Avenue

Flood Risk Assessment
June 2022

Quality Management

Project	68 Ashford Avenue Flood Risk Assessment
Location	68 Ashford Avenue, Hayes, UB4 0NA
Reference	LE2022265FRA

Revision History

Rev	Date	Issue / Purpose/ Comment	Prepared
R01	June 2022	Final	ZY

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Contents

Appendices

Executive Summary

Site Name	68 Ashford Avenue Flood Risk Assessment
Location	68 Ashford Avenue, Hayes, UB4 0NA
Grid Reference	511830, 181010
Area (ha)	Approximately 0.04ha
EA Flood Zone Classification	Flood Zone 2
Current Site Use	Residential
Description of proposed development	Demolition of the existing outbuilding and construction of a new outbuilding
Vulnerability Classification	Residential – 'More Vulnerable'
Summary of Pre-development Risks	• Fluvial Flood Risk: Medium 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 Art Consultants (UK) Ltd to undertake a desk based Flood Risk Assessment (FRA) for a development at 68 Ashford Avenue, Hayes, UB4 0NA (Figure 3-1). It is understood by Liska Environmental that this report is to support a planning application for the demolition of the existing outbuilding and construction of a new outbuilding.

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 (July 2018) and the Planning Policy Guidance (November 2016).

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 03/06/2022];
- British Geological Survey (BGS) website – *'GeoIndex'* and *'Lexicon of Named Rock Units'* [Accessed 03/06/2022];
- Department of Environment, Food, and Rural Affairs (DEFRA) website – *'MAGIC Map Application'* [Accessed 03/06/2022];
- Environment Agency (EA) website - '*Catchment Data Explorer'* [Accessed 03/06/2022].

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.
- NPPF should be applied to ensure that flood risk is managed appropriately.

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), July 2018

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;
- Polices 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 0.04ha, is located at 68 Ashford Avenue, Hayes, UB4 0NA at Ordinance Survey (OS) coordinates 511830, 181010.

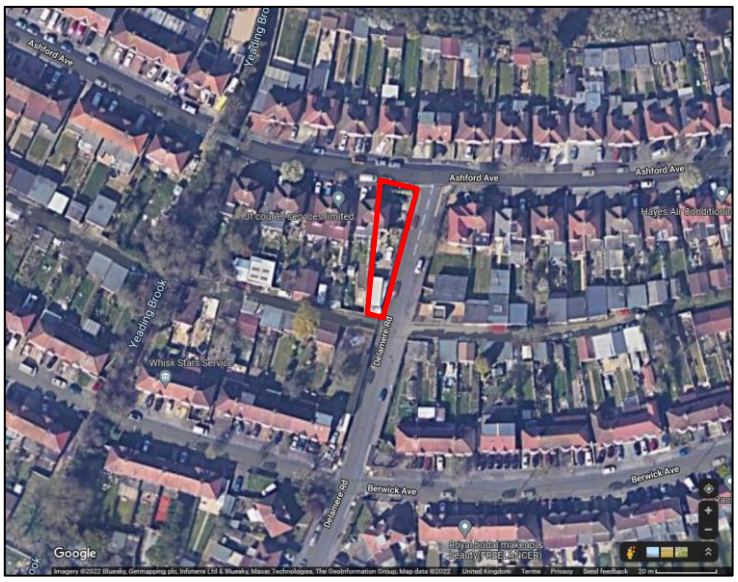


Figure 3-1 Site Boundary. Source: Google Map

3.2 Proposed Development

3.2.1 The proposal consists of the demolition of the existing outbuilding and construction of a new outbuilding. 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 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	Sedimentary Bedrock formed approximately 48 to 56 million years ago in the Palaeogene Period. Local environment previously dominated by deep seas.
Superficial Deposits	Langley Silt Member - Clay and Silt	Onsite	Superficial Deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by wind blown deposits (U).

3.3.2 The BGS geological mapping shows that the Site superficial comprises Langley Silt Member - Clay And Silt. These sedimentary deposits are aeolian in origin. They are detrital, comprising medium- to fine- grained materials, forming lenses, beds (and locally) dunes.

3.3.3 The BGS geological mapping shows that the Site bedrock comprises London Clay Formation - Clay, Silt And Sand. 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.

3.4 Hydrogeology

3.4.1 The bedrock geology is 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.

3.4.2 The 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.

3.4.3 The nearest surface water feature is Yeading Brook which is located at approximately 55 m to the west of the site.

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)

Flood Zone	Definition
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)

3.5.2 The site lies within the Environment Agency's Flood Zone 2 which is described within PPG Table 1 as having a ' Medium 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 2 (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 'Minor 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.

3.8 Existing Flood Risk Management Infrastructure

3.8.1 According to the Environment Agency's flood zone map the Site is in Flood Zone 2. The site does not benefit from any formal flood defences.

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 2 . The site does not benefit from any formal flood defences.

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%).

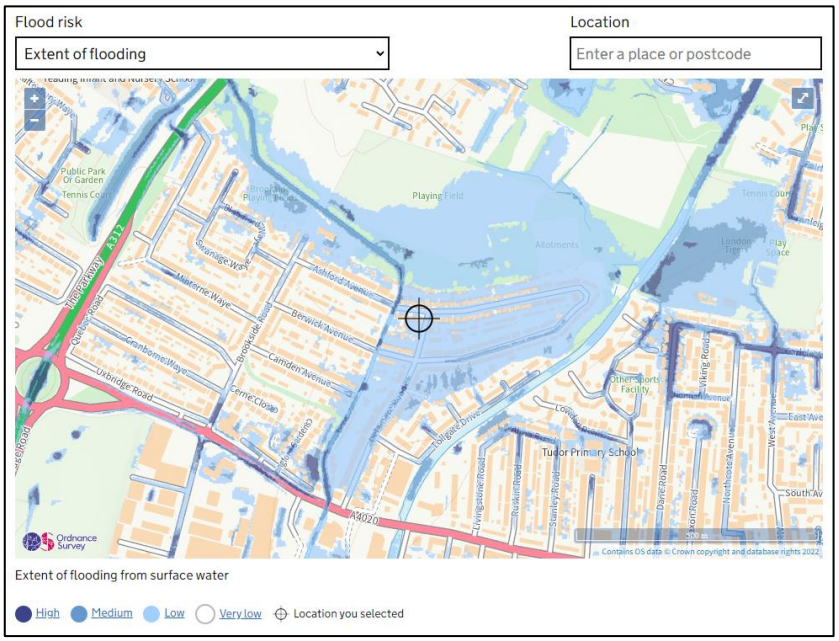


Figure 4-1: Surface Water Flood Map (Source Environment Agency[2])

[2] http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?&topic=ufmfsw#x=357683&y=355134&scale=2 [accessed *03/06/2022]*

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 West London Strategic Flood Risk Assessment, the site is located not in the area with the potential for Elevated Groundwater in permeable superficial deposits, as the proposed development is on ground level, 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.

4.6.2 A review of the Environment Agency Reservoir Maps indicates that the site is within an area at risk from reservoir flooding. Reservoir flooding can be extremely dangerous due to the speed and volume of the water released which may be with little or no warning. Since this is a prediction of a worst case scenario, it's unlikely that any actual flood would be this large. Reservoir flooding is also extremely unlikely with no loss of life attributed since 1925. The Local Authority for each reservoir listed below could be contacted for further information on local emergency plans.

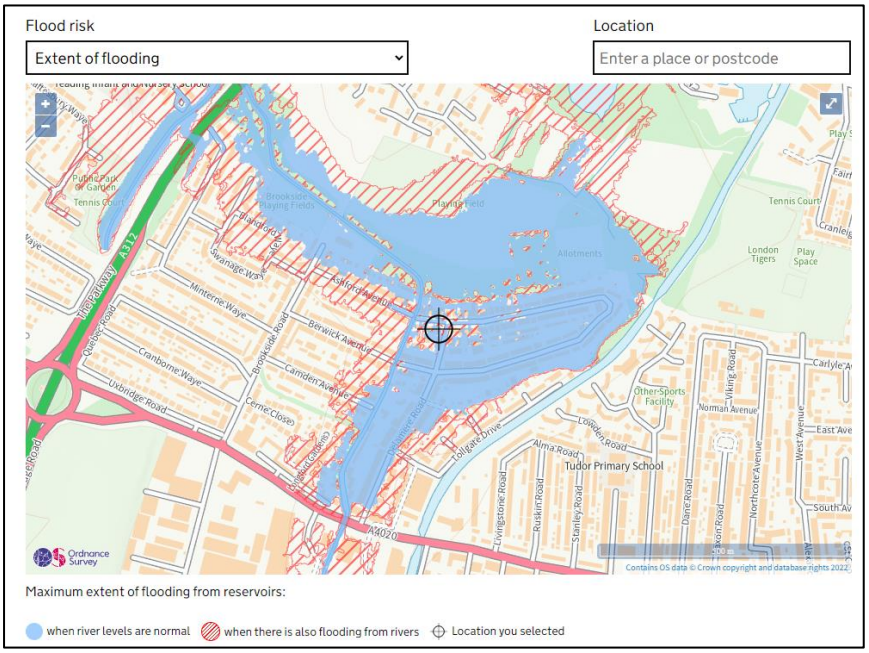


Figure 4-2: Extend of flooding from reservoirs (Source Environment Agency[3])

[3] http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?&topic=ufmfsw#x=357683&y=355134&scale=2 [accessed *03/06/2022]*

Table 4-1: Reservoirs identified as posing risk to the site.

Reservoir	Owner	Grid Reference	Lead Local Flood Authority
King George VI	Thames Water Ltd	TQ0417074259	Surrey
Queen Mary	Thames Water Ltd	TQ0831069750	Surrey
Wraysbury	Thames Water Ltd	TQ0303075640	Surrey
Virginia Water	The Crown Estate	SU9785768524	Surrey
Queen Mother	Thames Water Ltd	TQ0129777727	Windsor and Maidenhead

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 medium 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.

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	Medium 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:

- Non-return valves will be used in the drainage system to prevent back-flow of diluted sewage in situations where there is an identified risk of the foul sewer surcharging.
- 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.

5.3 Finished Floor Level (FFL)

5.3.1 Finished floor levels within the proposed outbuilding will be set no lower than existing levels.

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).

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 soakaways	Yes

Based on the general assessment of the potential SuDS measures above, it is recommended that a soakaway could be implemented in order to improve the surface runoff from the outbuilding. The general layout of the proposed soakaway is shown in Appendix C. The location of the soakaway can be changed in order to suit the location condition.

Outline design of Soakaway

5.4.3 The general design criteria for a soakaway are:

- In Clay soils, soakaway volume to be 1m^3 per 16m^2 of roof area served.
- Minimum empty volume should be 3m^3.
- All soakaways must be sited at least 5m from any building or road & 2.5m from any boundary

5.4.4 The proposed development is for the demolition of the existing outbuilding and construction of a new outbuilding. The proposed outbuilding will be built on the existing impermeable paving area.

5.4.5 It is proposed that a soakaway will be implemented to pick up the surface water runoff from the new outbuilding which has an area of 59m^2. Therefore, the storage volume of the proposed soakaway (m^3) = 59/16 = **3.7 m^3**. It is proposed that a soakaway of minimum storage volume of 3.7m^3 (Length = 3.0m, width = 1.3 m, Depth = 1.0 m, total storage = 3.9m^3) will be implemented at the rear garden in order to improve the surface runoff from the site.

5.4.6 The general layout of the proposed soakaway is shown in Appendix C. The location and its dimensions can be changed in order to suit the local condition ensuring that a minimum of 3.7m^3 of storage is provided.

SuDS Maintenance Scheme

5.4.7 All drainage on-site will remain private. There are no elements that could be adopted by the Public Sewer authority or by the Council. A long-term maintenance regime schedule can be found in Appendix D.

5.5 Safe Access/Egress Arrangements

5.5.1 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.

5.5.2 In order for the development to be classified as safe users should be able evacuate the site building before an extreme flood. Key points to note are:

- Occupiers would have more than 24 hours' notice of severe weather warning service.
- The Environment Agency and Emergency Services would evacuate the area should a breach be detected or expected. This is likely to occur if a breach were spotted well in advance of inundation.
- Following the receipt of flood warning it is recommended that the site is evacuated and closed and is only re-opened when it is safe to do so taking advice from the Environment Agency and the Local Authority. 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.

5.5.3 As a further precaution, 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.

6. Conclusions & Recommendations

6.1.1 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 demolition of the existing outbuilding and construction of a new outbuilding at 68 Ashford Avenue, 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.

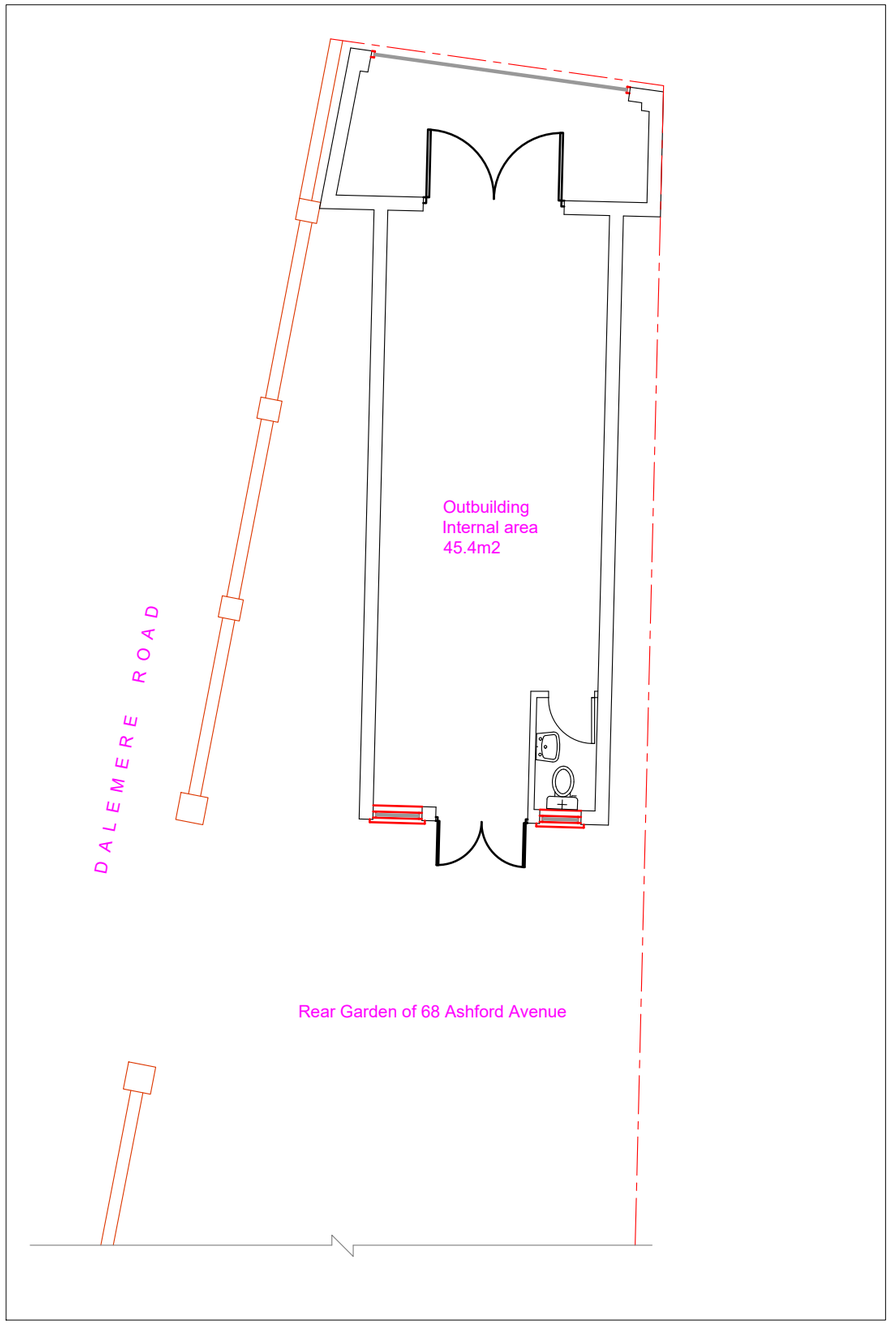
6.1.2 The site is located within Flood Zone 2 according to the Environment Agency Flood Zones Maps. The current and proposed development Site use is classified as a 'More Vulnerable' land use and 'Minor Development' according to NPPF. Therefore, the site is compatible with the Environment Agency's vulnerability tests.

6.1.3 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 other sources including tidal risk, surface water, groundwater, sewer and reservoir.

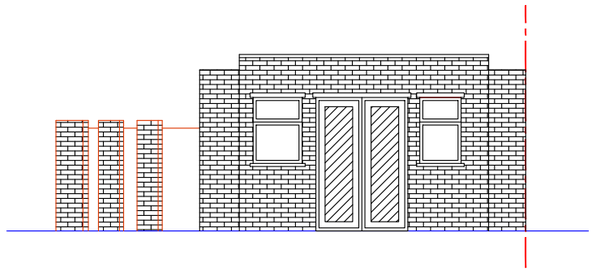
6.1.4 The development proposal has considered flood risk at all stages throughout the development of the final layout and reflects the flood risk constraints and the need to manage, and where possible reduce, flood risk in compliance with the guidance in NPPF. The proposal will not increase the risk 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

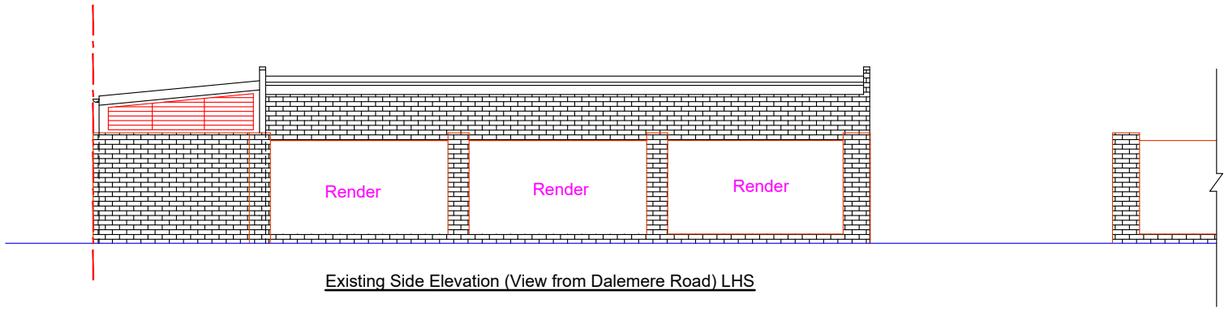
Note: This Drawing is for planning purpose and should not be used for construction.
All dimensions should be confirmed on site and any deviation should be reported back to designer.



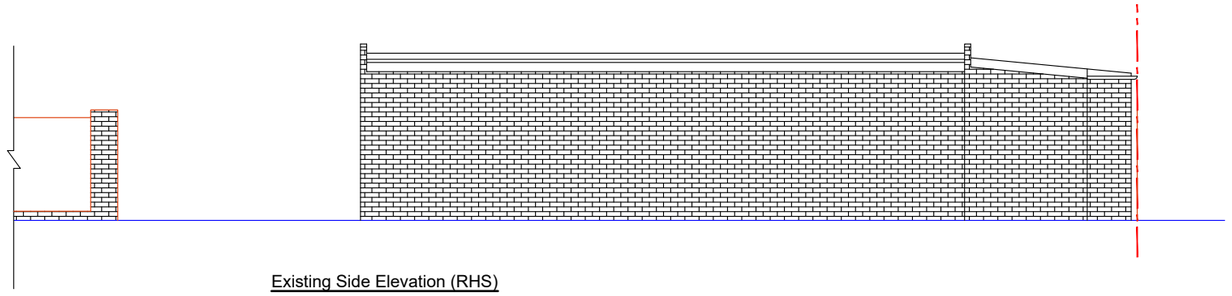
Existing Ground Floor Layout



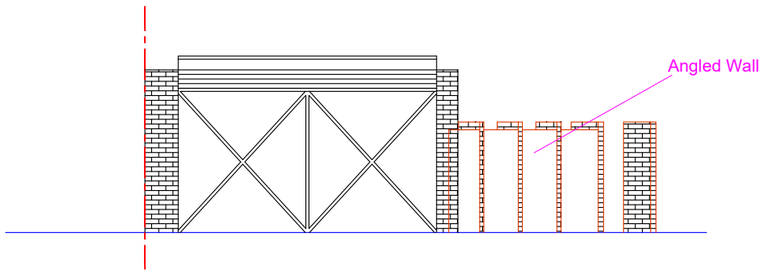
Existing Front Elevation



Existing Side Elevation (View from Dalemere Road) LHS



Existing Side Elevation (RHS)



Existing Rear Elevation

Proposed Development:
Outbuilding

Site Address:
68 Ashford Avenue
Hayes
UB4 0NA

Revisions:

Rev	Date	Description
A	29/04/2022	

Drawing Description:
Existing Floor Layout & Elevations

Drawing No:
ART/2022/OUT68AA/ELEE

Scale: 1:100
Paper Size: A3
Sheet No: 1 of 3

0 1 2 3 4 5M

ART CONSULTANTS (UK) LTD
113 LONG LANE
STANWELL
TW19 7AL
M:07960071377
E: ARTCONSULTANTSUK@GMAIL.COM

Note: This Drawing is for planning purpose and should not be used for construction.
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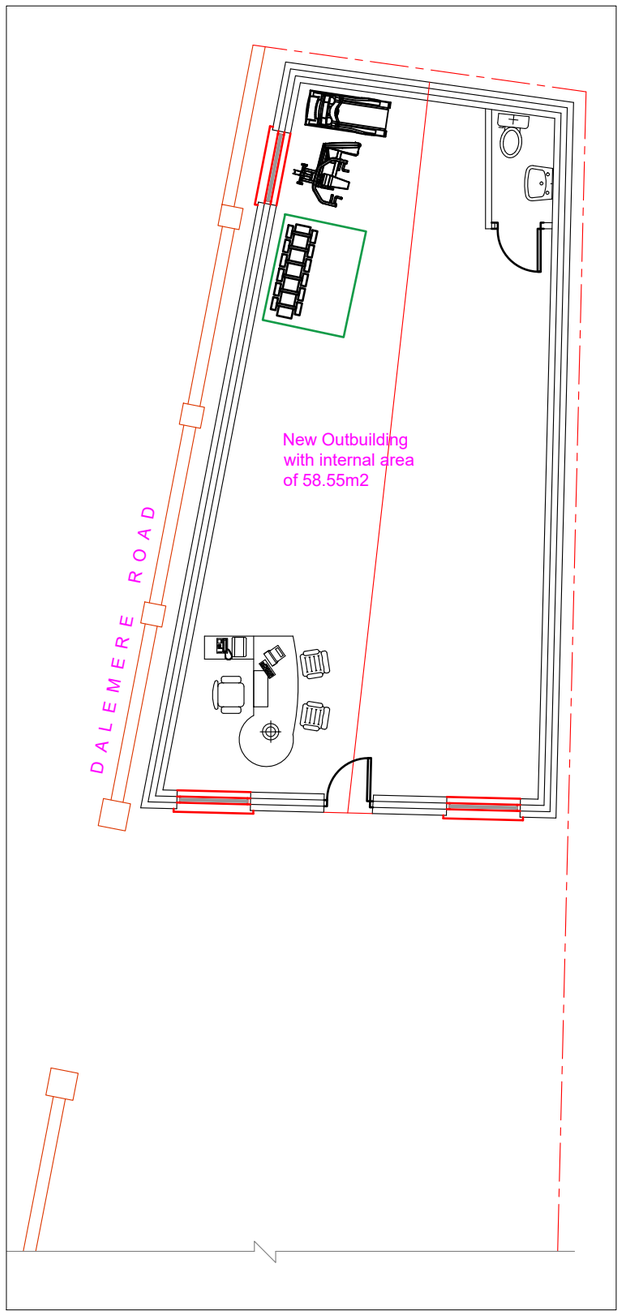
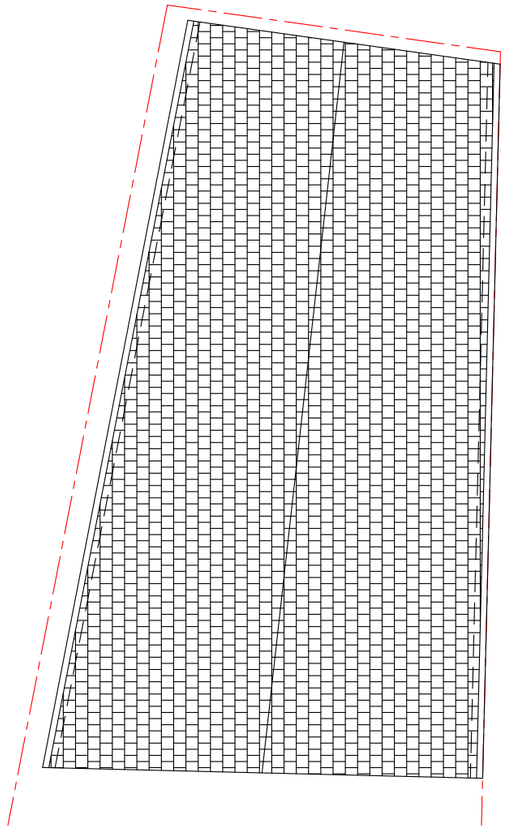
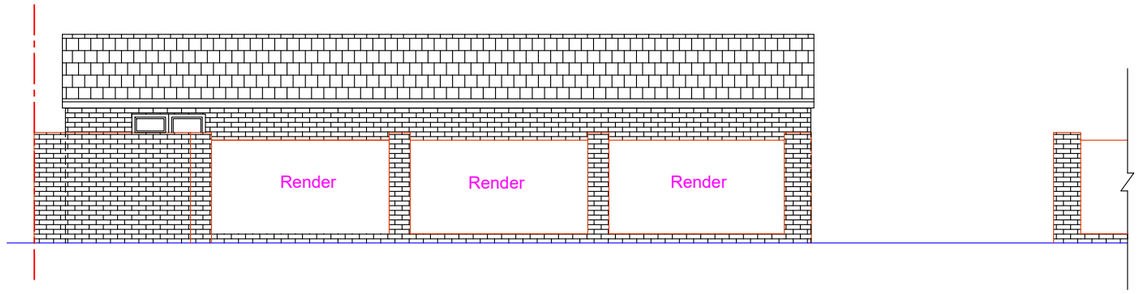


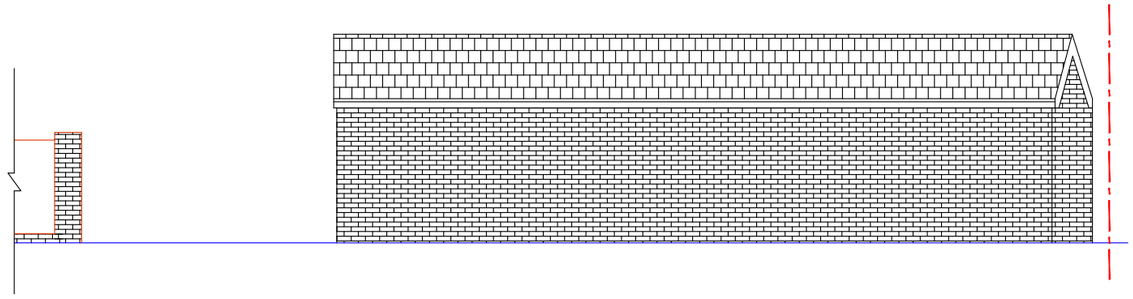
Proposed Ground Floor Layout



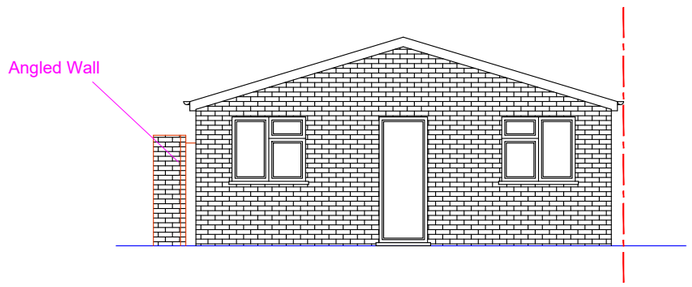
Proposed Roof Layout



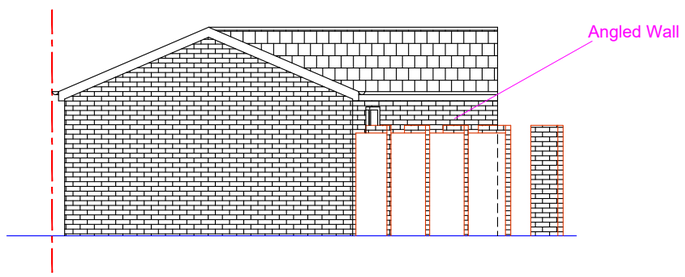
Proposed Side Elevation (View from Dalemere Road) LHS



Proposed Side Elevation RHS



Proposed Front Elevation



Proposed Rear Elevation

Proposed Development:
Outbuilding

Site Address:
68 Ashford Avenue
Hayes
UB4 0NA

Revisions:

Rev	Date	Description
A	29/04/2022	

Drawing Description:
Proposed Ouotbuilding, Roof Plan
And Elevations

Drawing No:
ART/2022/OUT 68AA/PLPE

Scale: 1:100
Paper Size: A3
Sheet No: 2 of 3

0 1 2 3 4 5M

ART CONSULTANTS (UK) LTD
113 LONG LANE
STANWELL
TW19 7AL
M:07960071377
E: ARTCONSULTANTSUK@GMAIL.COM

Appendix B Environment Agency Flood Map for Planning

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
181010	**511830/181010**	**3 Jun 2022 12:18**

Your selected location is in flood zone 2, an area with a medium probability of flooding.

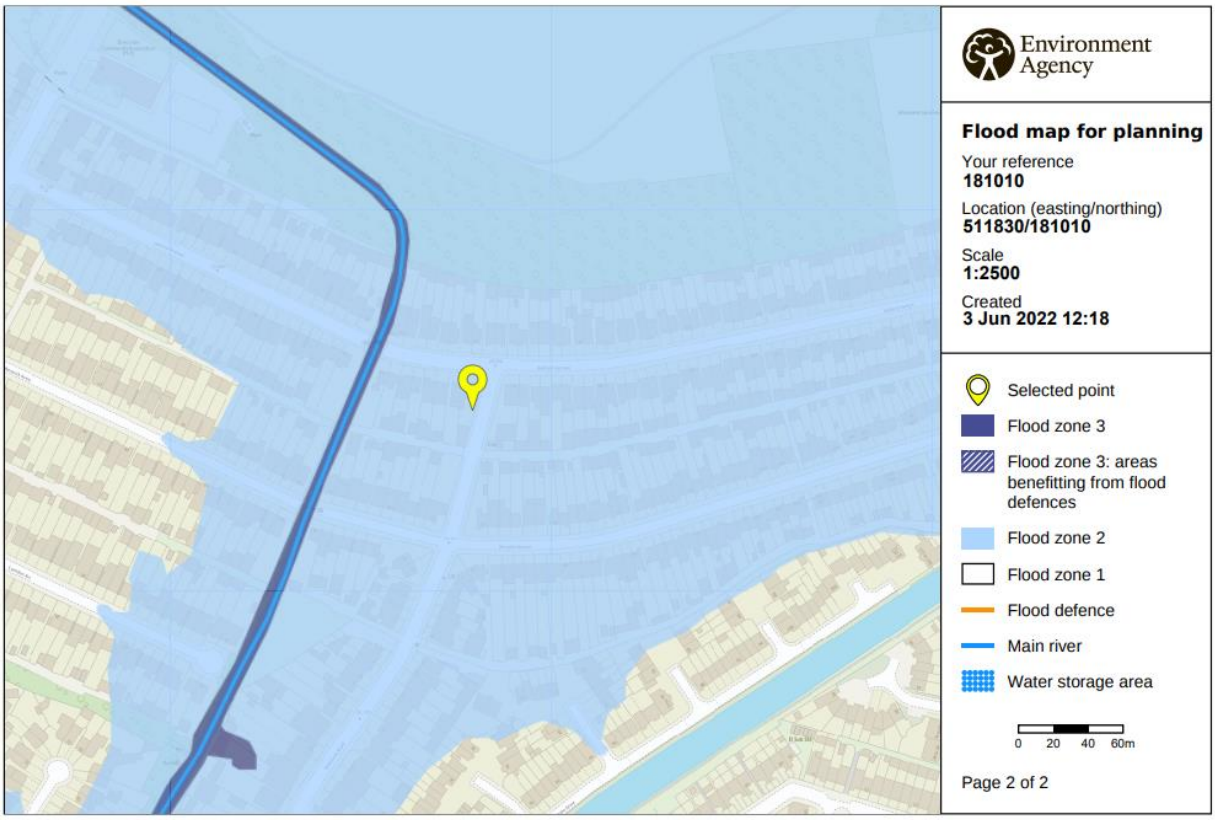
This means:

- 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)

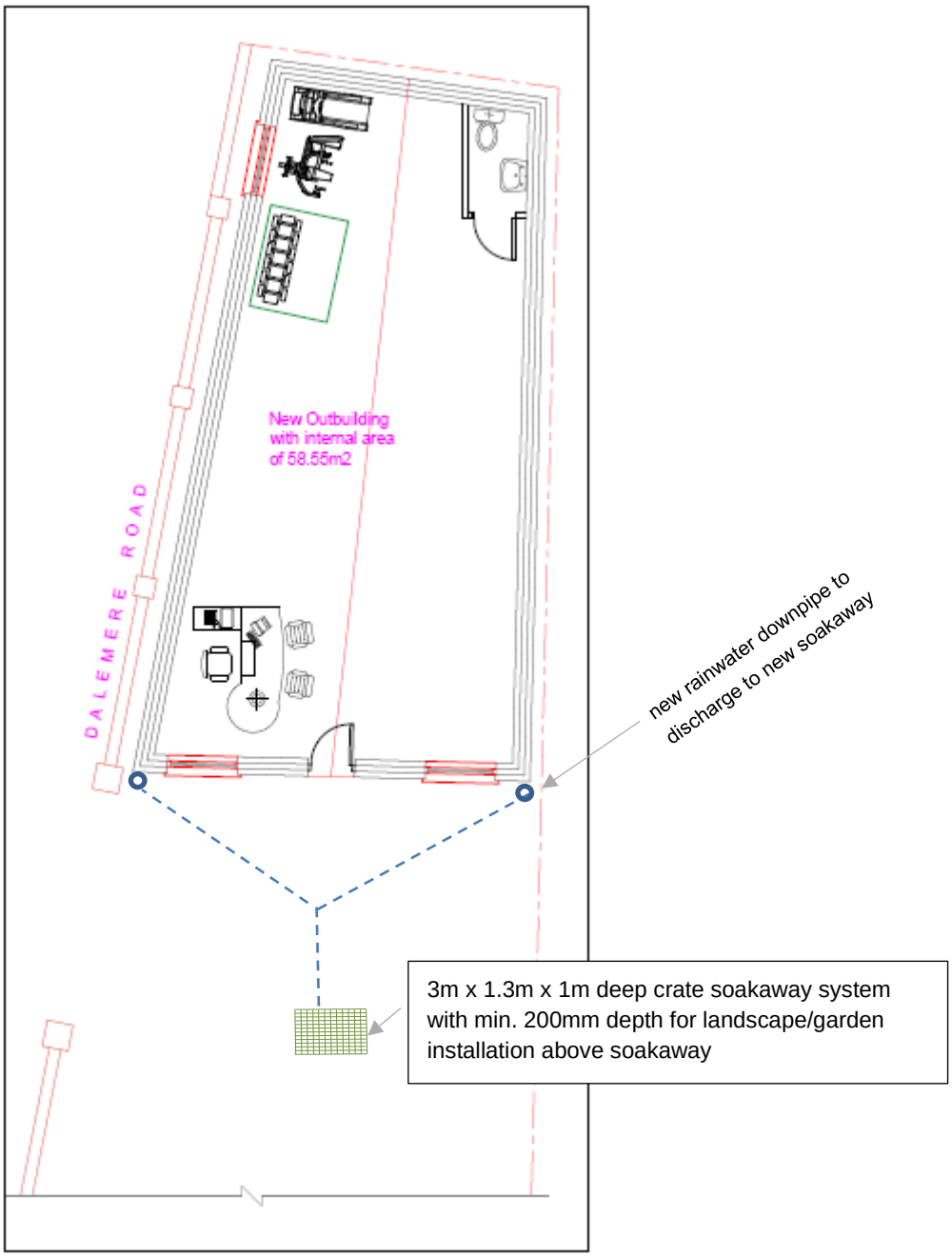
Notes

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.



Appendix C Proposed SuDS Layout



Appendix D SuDS Maintenance Plan

Soakaway Maintenance Schedule
Inspections & Monitoring (Every 6 Months)
Inspection of Soakaway Structures
Inspection of Inlets & Outlets
Monitoring of Performance after Heavy Rain
Inspection for Tree Roots
Inspection of Sediment Interception Methods
Inspection of Catchment for Erosion
Inspection of Surface for Settlement
Inspection for Signs of Pollution
Regular Maintenance (Every 3 Months)
Removal of Litter & Debris (Soakaway)
Removal of Litter & Debris (Sediment Interception Methods)
Sweeping of Paved Surfaces
Cleaning of Roof Gutters
Occasional Maintenance (Every 12 Months)
Removal of Tree Roots
Tree/Shrub Management
Sediment Removal (Soakaway)
Sediment Removal (Sediment Interception Methods)
Cleaning of Inlets & Outlets
Cleaning of Pipework
Remedial Maintenance (When Required)
Full Structure Rehabilitation
Infiltration Surface Reconditioning