FLOOD RISK ASSESSMENT

NPPF & PPG compliant
Hillingdon & London Plan SI.12 / SI.13 compliant

Extension to existing dwelling to be retained as a single dwelling.

at

21 Glebe Road Uxbridge UB8 2RD

August 2025

ARK Environmental Consultancy Ltd

Table of Contents

If this report has been released electronically, the appendices referred to herein can be found in the annexed zip folder/s as .pdf or .dwg files. If this report has been released in hard copy the appendices will be bound into the back of this report. Plans may be annexed separately as A1 or A0 copies where a bound-in A3 copy is not appropriate.

Contents

1.0 Scope

This report contains the details of a Flood Risk Assessment carried out by Ark Environmental Consulting Limited ("ARK Ltd") for 21 Glebe Road Uxbridge UB8 2RD, henceforth referred to as "the site" in this report.

This report has been prepared for ArchDezine Ltd and must not be relied upon by any other party without the explicit written permission of ARK Ltd. All parties to this report do not intend any of the terms of the Contracts (Right of Third Parties Act 1999) to apply to this report. Please note this report does not purport to provide definitive legal advice nor can it be used to demonstrate that the site will never flood in the future. The Executive Summary contains an overview of key findings and conclusions. However, no reliance should be placed on the Executive Summary until the whole of the report has been read. Other sections of the report may contain information which puts into context the findings noted within the Executive Summary.

2.0 Executive Summary

This FRA has been carried out in accordance with the National Planning Policy Framework (NPPF) & PPG. It is to be used to assist the Local Planning Authority (LPA) and Environment Agency (EA) when considering the flooding issues of the proposed development as part of a planning application.

The proposed development comprises an extension to an existing dwelling.

All site users still have access to an upper level above the extreme event for the lifetime of the scheme

- Site is in patchy FZ1 and FZ2

This is categorized as a "More Vulnerable" landuse in accordance with the NPPF classifications; the site is located in FZ1 / FZ2 and low surface water risk. The NPPF Exception Test does not need to be passed; it is considered passed by this assessment as a precautionary approach.

The site is also in LOW hazard for surface water flooding.

The correct approach has been followed by the scheme:

- Ground floor levels no lower than existing
- Modern flood resilience required for ground floor

The scheme results in better protected and flood future-proofed property than existing.

Additional SUDS can be integrated as part of the landscaping scheme compliant with policy.

<u>July 2025 New National SUDS Standards</u>

- Rain garden planters
- Permeable landscaping with SUDS storage subbase
- Water Butts for reducing potable water use

Given the residual risk flood setting, the level, extent and depth of flooding on the site can be managed in terms of continued refuge for all site users for the lifetime of the development.

Based on the likely flooding risk, it is considered that the proposed development can be constructed and operated safely in flood risk terms, without increasing flood risk elsewhere and is therefore appropriate development in accordance with the NPPF.

3.0 Introduction

The site boundary is provided in the location plan in Appendix A.

The FRA combined a desktop study, review of available information, consultations and an assessment of all sources of flooding posed to and from the site and proposed development, in accordance with National Planning Policy Framework (NPPF). Appropriate flood mitigation measures were then considered, either as already incorporated within the scheme or recommended for inclusion at detailed design stage. The suitability of the proposed development was also reviewed in the context of the NPPF and the technical guidance accompanying the NPPF.

4.0 Purpose of the Report

This FRA has been carried out in accordance with National Planning Policy Framework (NPPF). It is to be used to assist the Local Planning Authority (LPA) and Environment Agency (EA) when considering the flooding issues of the proposed development as part of a planning application.

The report provides the following information:

- An assessment of the flood risk posed to the site based on flood information and mapping provide by the EA and Strategic Flood Risk Assessment (SFRA);
- An assessment of the proposed development in terms of surface water run-off; and
- Proposals for measures to mitigate the flood risks posed to and from the development where appropriate.

5.0 Report Information Sources

The information source used to undertake this FRA has been collected from the following sources:

- EA Website and Data
- British Geological Survey Website and iGeology App
- Hillingdon Strategic Flood Risk Assessment and mapping
- LLFA Drainage and SUDS Policies and Guidance
- London Plan SI.12 and SI.13 compliant
- Internet mapping and searches.

6.0 Overview of British Legislation

6.1 National Planning Policy

The National Planning Policy Framework (NPPF) and PPG supercede all Planning Policy Statements (PPS's) and remaining Planning Policy Guidance (PPG's). Flood risk is retained as a key development consideration.

The Sequential and Exception Tests are retained as part of the NPPF. The accompanying NPPF Technical Guidance also includes Tables 2 and 3 to assist with flood risk vulnerability classifications and development suitability. This report provides the flood risk assessment element of both tests where appropriate. It is the decision of the planning authority as to whether the tests can be fully passed.

6.2 Local Policy

Local Authorities consider flood risk through relevant environmental and climate change policies which enforce the requirements of the NPPF.

The Strategic Flood Risk Assessment (SFRA) is a key source of flood risk specific information for the area. The SFRA provides a more detailed review of flood risks and recommendations for ensuring developments can be constructed and operated safely in accordance with the NPPF. Greater detail of the SFRA is provided in the report.

7.0 Site Status and Environmental Setting

7.1 Site Location and Status / Geology

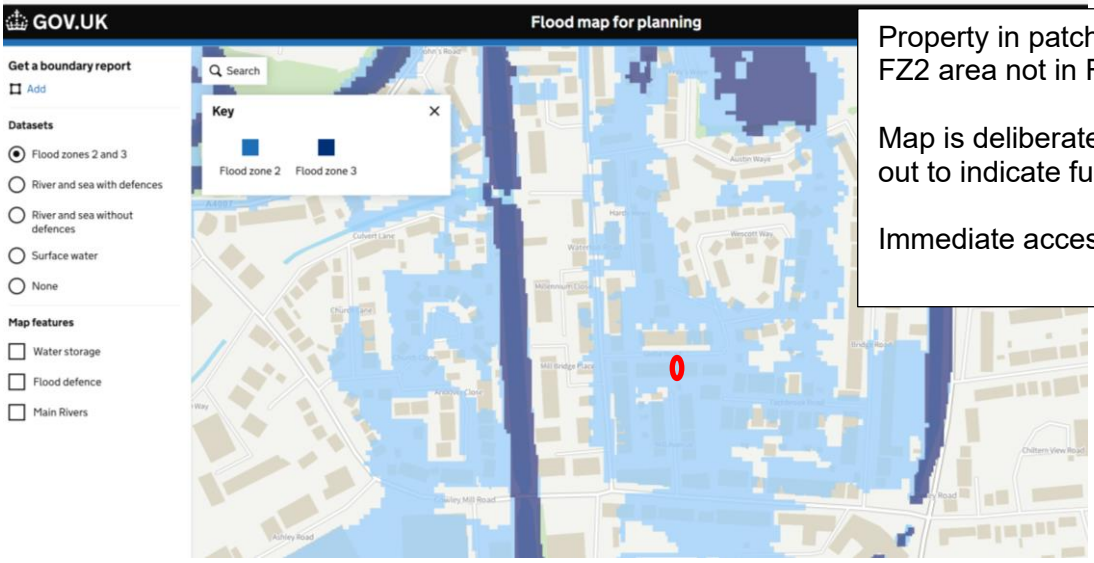
The following description is based on information made available from internet mapping, architects drawings and aerial photography. The site comprises an existing dwelling with hard and soft landscaping.

Given the scale of the scheme and the geology not being relevant to the scheme, there is no need for BRE365 Testing as soakaways are not an option that needs to be explored for an extension scheme at this site, specific to the hydrogeology and scope of the scheme and size of the site.

The location plan can be seen in Appendix A.

7.2 Existing Flood Risk Posed to the Site / from Scheme

Flood Sources	**Site Status**	**Comment on flood risk posed to / from the development**
Fluvial / Tidal	The site is located in majority EA FZ1 The property is in FZ1 The site is not in SFRA FZ3a or FZ3b or any of the climate change allowances extents in the updated SFRA mapping	All works are in FZ1 / FZ2 Not necessary to define the flood zones further or to apply additional climate change allowances given no further design input is required: ground floor habitable in FZ1 / FZ2 with unrestricted access to FZ1 No additional hydraulic modelling is required. All site users continue to have access to upper floors above the extreme event for the lifetime of the scheme
Groundwater	SFRA indicates site is not in an area of groundwater flooding / incidents.	The proposed development will not increase the risk of groundwater flooding. Low Risk
Artificial Sources	Site is not within EA Reservoir Flood Warning area: managed and maintained to appropriate standards No other artificial sources with likely flowpaths that could reach the site	Low Risk Not relevant to the scheme as residential use at the site is not in question
Surface Water / Sewer Flooding	Site is not located in a Critical Drainage Area partly within surface water flood extents from the council and the EA Condition, depth and location of surrounding infrastructure uncertain	Scheme includes betterment with SUDS and flood resilience No additional drainage assessment required **Results in better protected and flood future-proofed property than existing.** Low Risk
Climate Change: new allowances	Included in the SFRA flood modelling extents usually; other data sources / uplift if flood levels are required / available	Development will not increase the peak flow and volume of discharge from the site Climate change incorporated in the SFRA modelling (not EA mapping) Regardless: exact flood heights are not required for this scheme given full height flood resilience and extension only needs to ensure ground FFL no lower than existing Low risk posed to and from the development
Historic Flooding	Included in the EA / council data where appropriate	Site is not in an area of historic flooding based on available data



Property in patchy EA FZ1 / FZ2 area not in FZ3

Map is deliberately zoomed out to indicate full FZ1 extent

Immediate access to FZ1

7.3 SFRA Summary

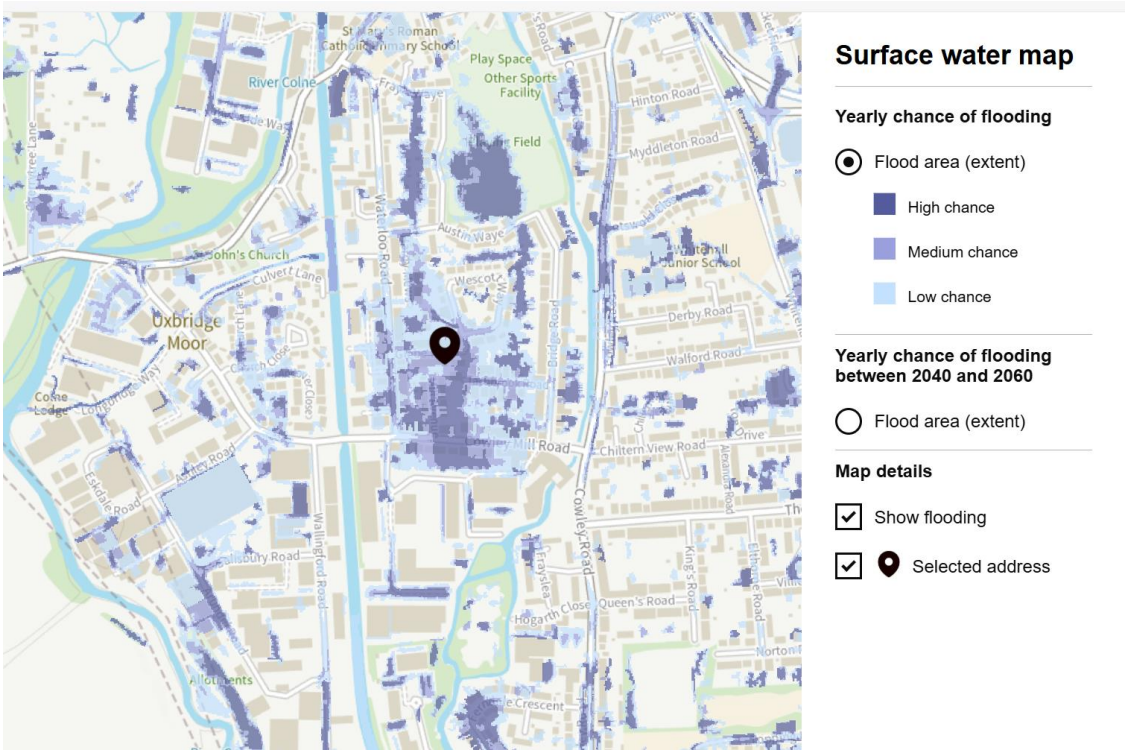
Where appropriate (eg: groundwater) the SFRA is referenced above. The SFRA does not indicate any other significant sources of flooding.

7.4 Flood Compensation

This report and the data presented demonstrate that the property and area of works are within an area of patchy EA fluvial FZ2 / FZ1. This means there will be no flood storage displacement and no flood compensation is required and in fact the site is not within the new climate change allowances so flood compensation is not required regardless of the scheme. That is national and EA guidance.

7.5 EA 2025 Surface Water Hazard

- Property is in part Medium hazard
- Residential use is not in question and an extension is policy compliant
- Correct approach and policy compliant approach is: standard to use modern flood resilient measures
    - **Results in better protected and flood future-proofed existing dwelling: sustainable approach: reducing embodied carbon to create dwellings that are flood resilient**



7.6 Existing drainage

The site has no formal SUDS; the site currently drains 100% of roof to sewer / informal natural seepage to the porous garden area.

No alterations to the drainage are required as part of the scheme in terms of connections.

8.0 Assessment of Proposed Development

8.1 Proposed Development

The proposed development can be seen in Appendix B. The proposed development comprises an extension to an existing dwelling.

All site users still have access to an upper level above the extreme event for the lifetime of the scheme

- Critical: site is NOT in the SFRA climate change extents

The correct approach has been followed by the scheme:

- Ground floor levels no lower than existing
- Modern flood resilience required for ground floor

The scheme results in better protected and flood future-proofed property than existing.

- Use 600mm height flood resilient measures (see section below)
- No additional formal SUDS considered necessary given scope of the scheme

Scheme results in better protected and flood future-proofed property than existing.

8.2 SUDS Specifications: July 2025 New National SUDS Standards

New rain garden planters and water butts to connect to rainwater downpipes where feasible.

Any new landscaping:

- Maximise porous and permeable surfacing not impermeable
- Any new permeable surfacing can be constructed following the guidance:

To meet council policy, use the **EA's specific "Guidance on the permeable surfacing of front gardens"**

http://www.communities.gov.uk/publications/planningandbuilding/pavingfrontgardens

8.3 Maintenance

Given the SUDS required for this site are natural SUDS and off the shelf rain garden planters: no further maintenance or management measures are required given these are minimal intervention and no maintenance, for them to still operate as SUDS measures.

8.4 SUDS Hierarchy: Kingston and London Plan Check

Site Specific SUDS Appraisal

SUDS Hierarchy	SUDS Technique	Potential Benefits			Site Specific	
		Flood Reduction	Pollution Reduction	Landscape & Wildlife Benefit	?	Scheme Specific SUDS Suitability Appraisal and Comment
Most Sustainable	Living Roofs	•	•	•	X	Not likely feasible given nature of roof construction. (Blue, Green and Brown roofs)
	Ponds / Basins	•	•	•	X	Not suitable in this flood setting / size of site or scheme
	Swales	•	•	•	X	Not suitable in this flood setting / size of site or scheme
	Infiltration Techniques	•	•		X	Not required given scale of scheme and London Clay with potential for Head Clay superficial deposits: not suitable for soakage also given hydraulic connectivity with watercourse
	Rain Garden Planters and Permeable Surfaces with granular subbase	•	•		✓	Included to meet council policy if any external works are planned
Least Sustainable	Tanked Systems	•			X	Not required given no increase in impermeable areas and scale of scheme

Key:
Potentially suitable at the site: * Incorporated in the scheme: ✓ Not suitable / possible at the site: X

8.5 Flood Resilience

The following elements for the extension and ground floor works will be undertaken using the most resilient approaches:

- Any new electrics to be installed top down if feasible
- Any new ground floor slab will be concrete in order to minimise damage and reduce the turnaround time for returning the property to full operation after a flood event
- No change to site levels outside of the new footprint and no increase in impermeable areas
- Any new waterproofing to be tied in to the existing and proposed ground floor slab as appropriate to reduce the turnaround time for returning the property to full operation after a flood event; details to be provided at detailed design to building regulations requirements
- Any new waterproofing where feasible will be extended to an appropriate level as high as is feasible, above existing ground levels.
- Any new plasterboards will be installed in horizontal sheets rather than conventional vertical installation methods to minimise the amount of plasterboard that could be damaged in a flood event
- Any new wall sockets where possible will be raised to as high (minimum of 450mm above existing ground levels) as is feasible and practicable in order to minimise damage if flood waters inundate the property
- Any wood fixings on ground floor will be robust and/or protected by suitable coatings in order to minimise damage during a flood event

9.0 Flood Response Management

9.1 Evacuation and refuge

A precautionary approach has been taken as this is an extension to an existing dwelling:
The access & egress and the property are to immediate EA FZ1 / FZ2 and easily to unrestricted FZ1 and not in the new climate change flood extents from the SFRA.
No further flood risk specific evacuation management is required at this stage.

9.2 Flood Risk Vulnerability & Exception Test

According to the NPPF retained Flood Risk Vulnerability Classification, the retained and proposed residential land use would be classified as "More Vulnerable."

The NPPF also retained Flood Risk Vulnerability and Flood Zone "Compatibility" Classification; this states that a "More Vulnerable" development in FZ1 or FZ2 is appropriate without the need to pass the Exception Test.

It is considered the Exception Test can be passed regardless: the property itself is not in the new climate change SFRA extents.

10.0 Conclusion

The proposed development comprises an extension to an existing dwelling.

All site users still have access to an upper level above the extreme event for the lifetime of the scheme

- Site is in patchy FZ1 and FZ2

This is categorized as a "More Vulnerable" landuse in accordance with the NPPF classifications; the site is located in FZ1 / FZ2 and low surface water risk. The NPPF Exception Test does not need to be passed; it is considered passed by this assessment as a precautionary approach.

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Based on the likely flooding risk, it is considered that the proposed development can be constructed and operated safely in flood risk terms, without increasing flood risk elsewhere and is therefore appropriate development in accordance with the NPPF.

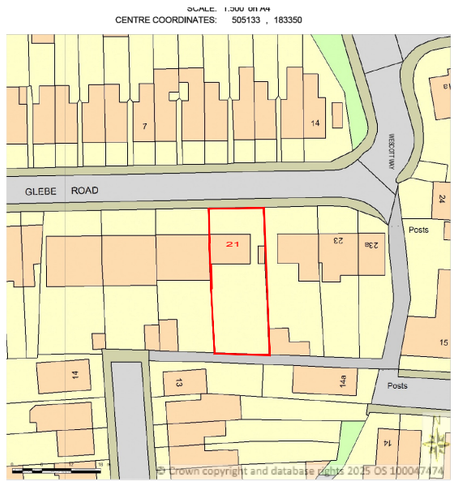
10.1 Recommendations

1. Use EA guidance for constructing any landscaping

11.0 Appendices

A. Location Plan
B. Layouts / Floor Plans

Appendix A



LOCATION PLAN
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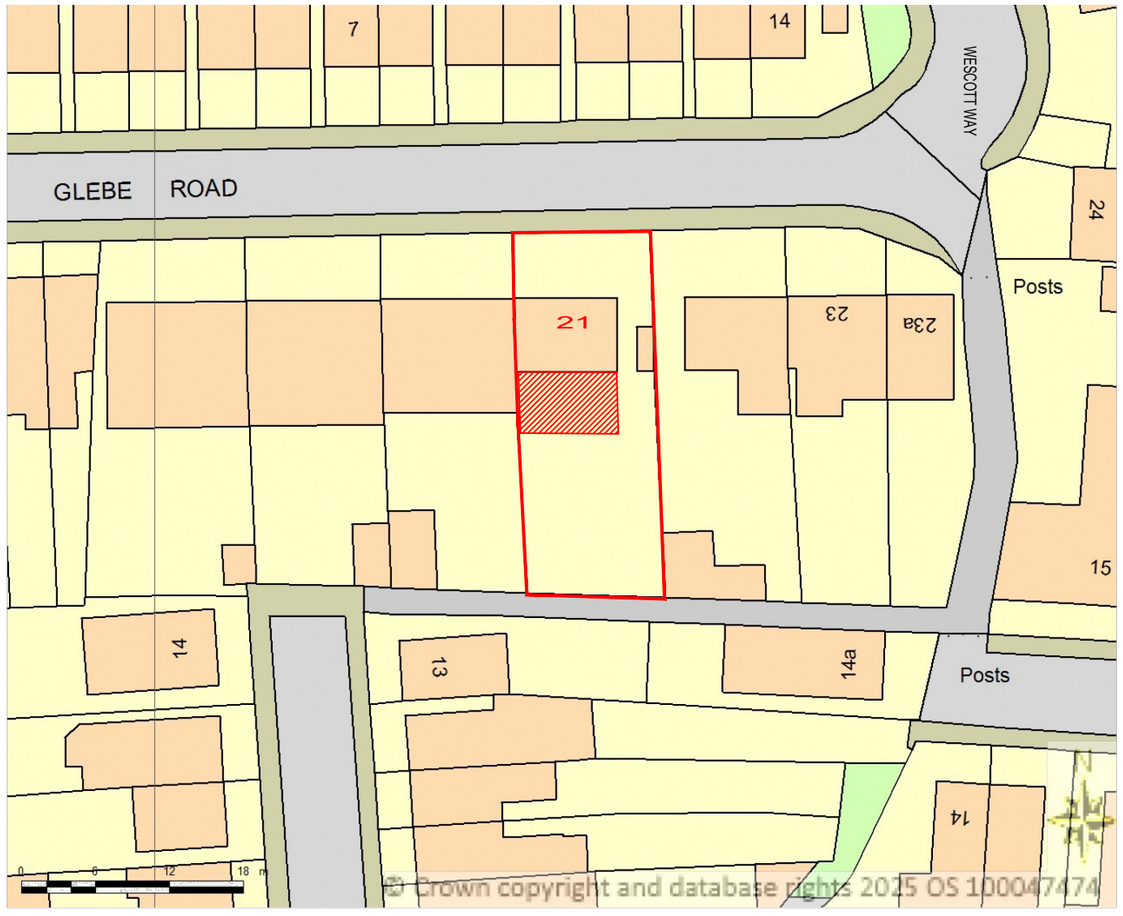

BLOCK PLAN
SCALE 1:500@A3

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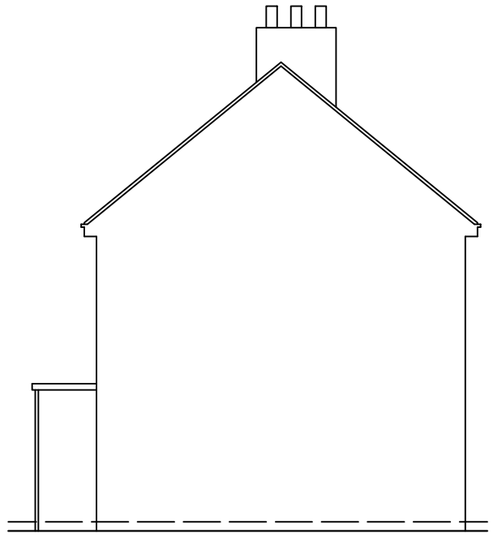
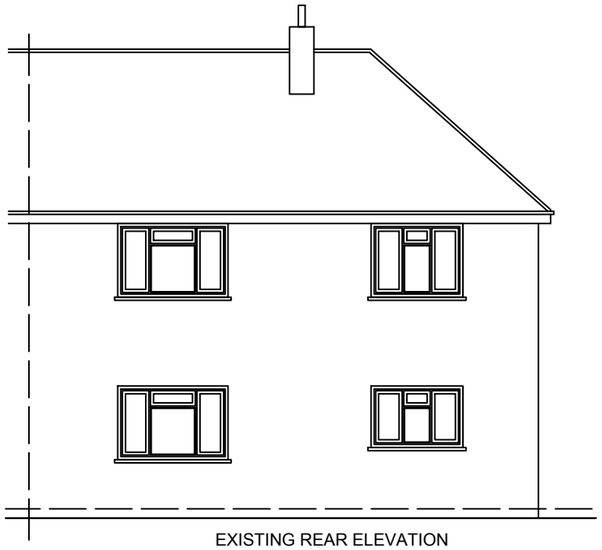
EXISTING FRONT ELEVATION



EXISTING SIDE-1 ELEVATION



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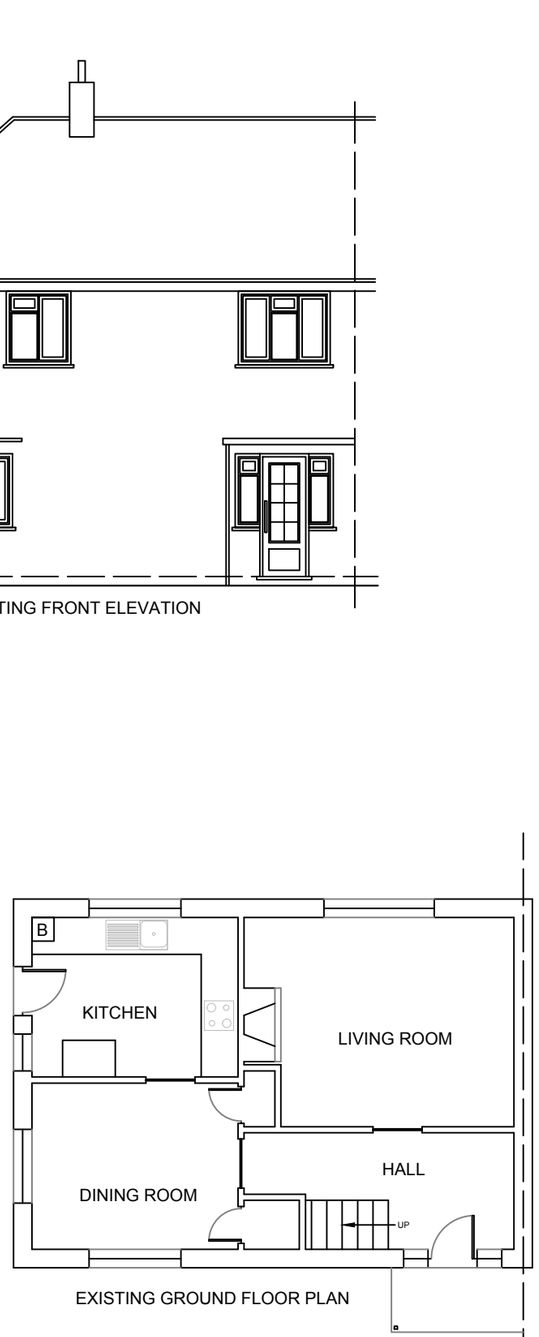

EXISTING GROUND FLOOR PLAN

EXISTING SIDE-2 ELEVATION

0 METRES 5

SCALE

PROJECT:

PROPOSED SINGLE STOREY REAR EXTENSION

21 Glebe Road
Uxbridge

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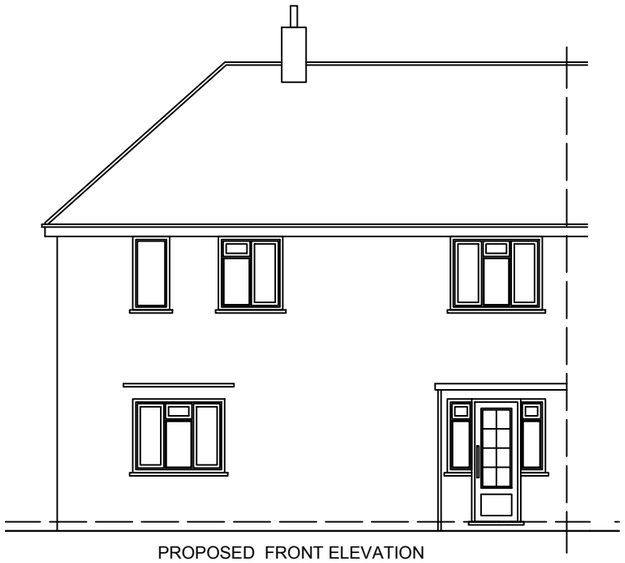
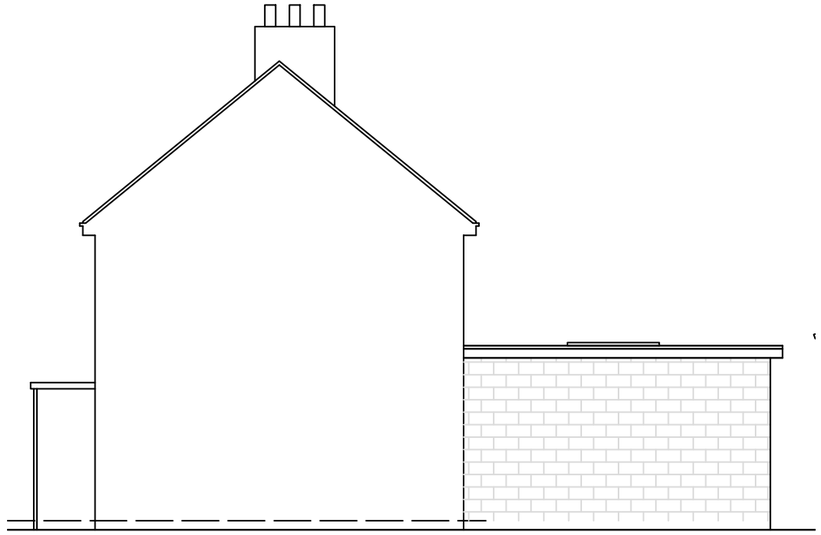
ArchDezine Limited
archdeziner7@gmail.com

Appendix B



PROPOSED FRONT ELEVATION



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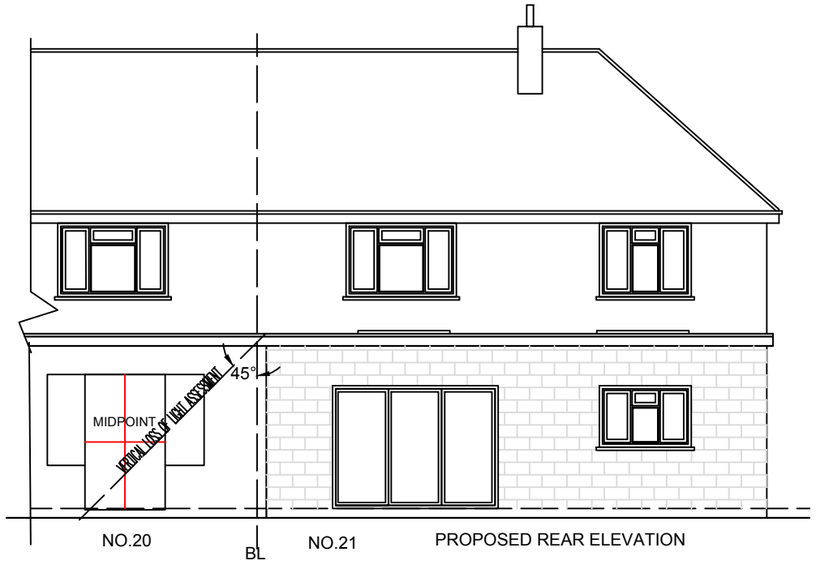

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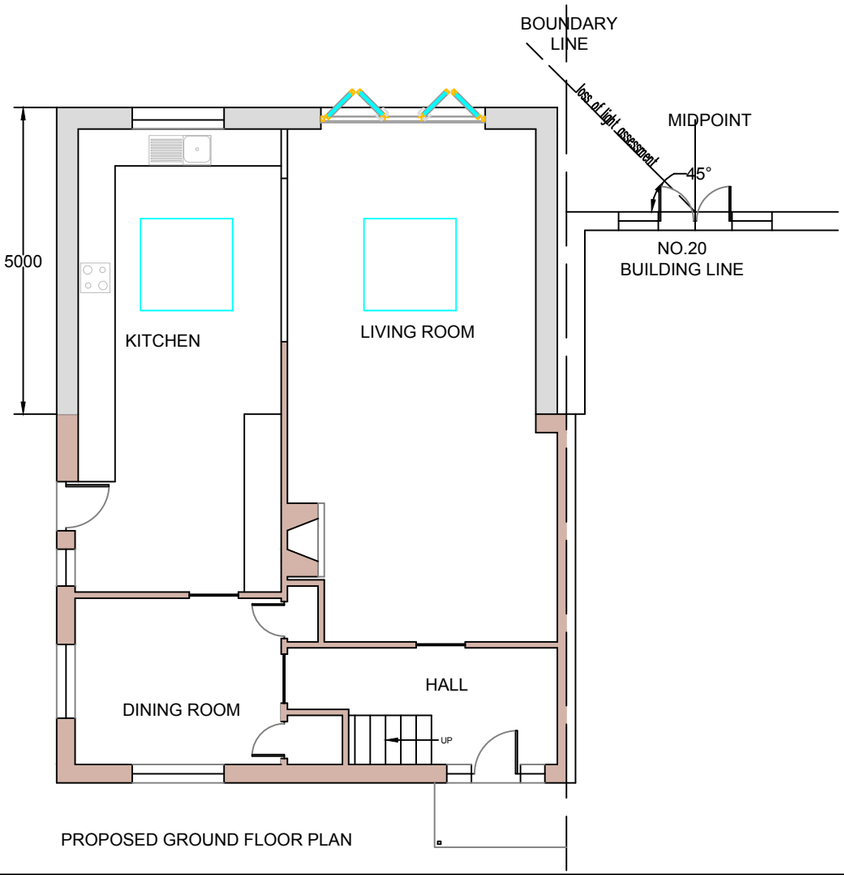

PROPOSED GROUND FLOOR PLAN

PROPOSED SIDE-2 ELEVATION

0 METRES 5

SCALE

PROJECT:

PROPOSED SINGLE STOREY REAR EXTENSION

21 Glebe Road
Uxbridge

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DRAWING TITLE: PROPOSED PLANS & ELEVATIONS

DRAWING NUMBER: GR–03

ArchDezine Limited
archdeziner7@gmail.com