

BLUEBELL BARN NURSERY  
NORTH END, LONDON ROAD, EAST GRINSTEAD  
RH19 1QQ

Document Title:

**FLOOD RISK ASSESSMENT**

Client:

**MR PORTER**

Project Number:

**25-0087**

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2<sup>nd</sup> July 2025

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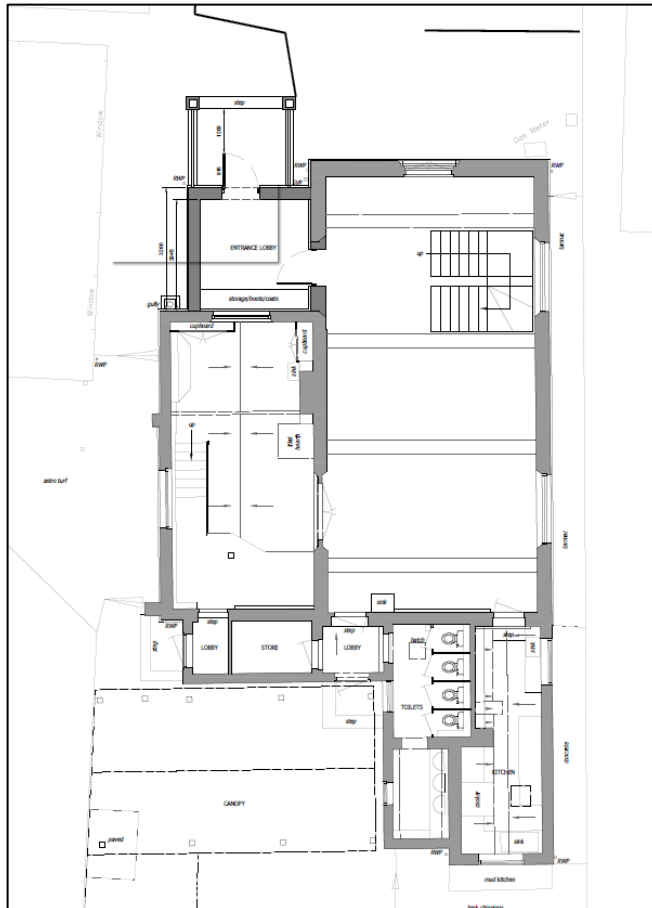
Appendix 1 – Proposed Site Plan

Appendix 2 – Environment Agency Flood Map for Planning

Appendix 3 – Long Term Surface Water Flood Map

## 1. Introduction and Brief

This report has been prepared for Mr Porter to assess Flood Risk for the proposed development at Bluebell Barn Nursery, North End, London Road, East Grinstead, RH19 1QQ. The proposal is for a minor extension to the nursery building, including an entrance lobby and porch area.



**Figure 1-1 – Development Proposals**

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## 2. Existing Site Conditions

### 2.1 Location

The development site is located at Bluebell Barn Nursery, North End, London Road, East Grinstead, RH19 1QQ. The British National Grid Reference is E:537837 N:139214. The figures below show the site in the wider area, more locally and then an aerial image to show the site in its current context.

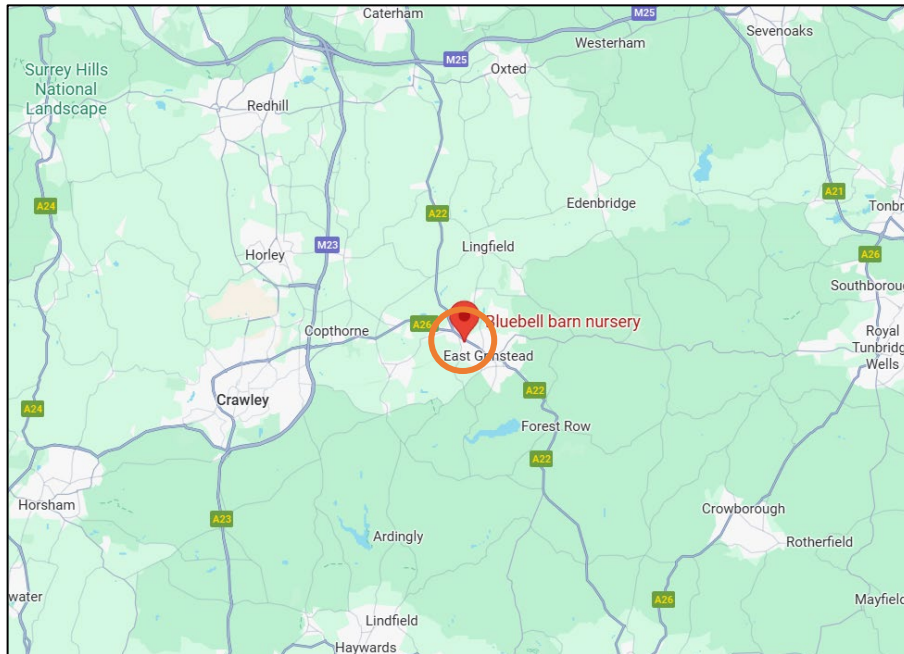


Figure 2-1 – Site Location (shown by orange circle) ©Google Maps

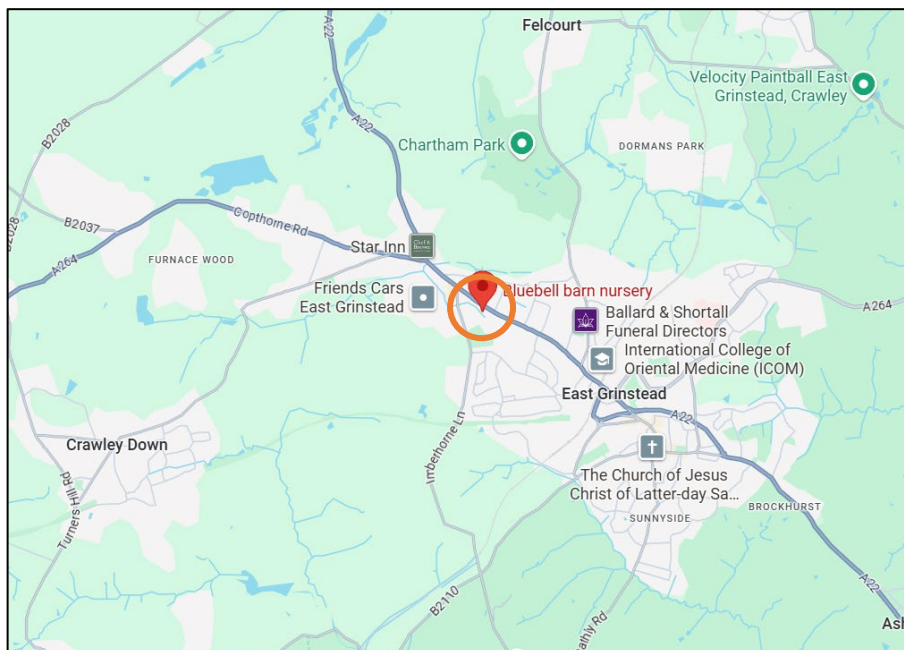


Figure 2-2 – Site Location (shown by orange circle) ©Google Maps

The following aerial image provides additional information about the context of the site and surrounding areas.



Figure 2-3 – Site Location (approximate site boundary in orange) ©Google Maps

The site comprises an existing building, parking to the north-east and garden/play area to the south-west. It is bounded by London Road (A22) to the north, residential dwellings to the south-east and north-west and allotments to the south. A watercourse is present within the allotment land.

## 2.2 Site Topography

The levels generally fall towards the middle of the site. The rear garden / play area falls north to south, with a fall of approximately 250mm. The parking area falls north to south, with a fall of approximately 750mm. The existing building is elevated against the surrounding land, with an FFL of 10m (local datum).

### 3. Proposed Development

The proposal is for a minor extension to the nursery building, including an entrance lobby and porch area. The following figure shows the Architect's current proposals.

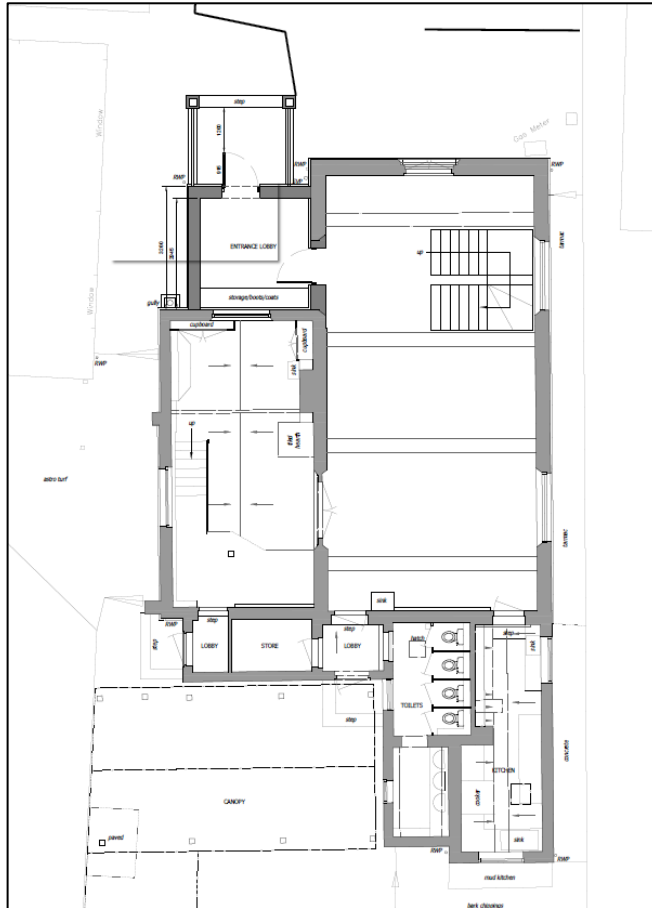


Figure 3-1 – Development Proposals

## 4. Flood Risk

This Flood Risk Assessment (FRA) has been produced in accordance with current best practice, recommendations and guidance set out in the National Planning Policy Framework (NPPF) and associated documents valid at the time of writing.

### 4.1 Criteria

As according to the NPPF, a site typically requires a site specific FRA for all development in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1ha or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a Strategic Flood Risk Assessment (SFRA) as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use.

### 4.2 Flood Risk Zones

The PPG defines a number of flood zones based on the probability of flooding. It also provides guidance on the most appropriate form of development within each zone. The flood risk is summarised as below.

**Table 4-1 – Flood Zone Definitions**

| Flood Zone                          | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Zone 1 – Low Probability            | Land having a less than 0.1% (1 in 1000) annual probability of river or sea flooding.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Zone 2 – Medium Probability         | Land having between a 1% and 0.1% (1 in 100 and 1 in 1000) annual probability of river flooding; or land having between a 0.5% and 0.1% annual probability of sea flooding.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Zone 3a – High Probability          | Land having a 1% (1 in 100) or greater annual probability of river flooding; or Land having a 0.5% (1 in 200) or greater annual probability of sea.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Zone 3b – The Functional Floodplain | <p>This zone comprises land where water from rivers or the sea has to flow or be stored in times of flood. The identification of functional floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. Functional floodplain will normally comprise:</p> <ul style="list-style-type: none"> <li>land having a 3.3% or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively; or</li> <li>land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding).</li> </ul> <p>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.</p> |

### 4.3 Strategic Flood Risk Assessment (SFRA)

An SFRA, published in 2024, has been prepared for Mid Sussex District Council (MSDC). The MSDC website also has an interactive map identifying future and historic sources of flooding. These two sources have been reviewed and referred to within this FRA.

### 4.4 Surface Water Management Plan (SWMP)

At the time of writing, a SWMP for the area did not appear publicly available.

### 4.5 Historic Flooding

The SFRA reviews historic flooding and the following sections summarise the findings within the SFRA.

#### 4.5.1 Fluvial Flooding

There was no historical flooding within the vicinity reported within the online Historic Flood Map.

#### 4.5.2 Surface Water Flooding

There was no historical flooding within the vicinity reported within the online Historic Flood Map.

#### 4.5.3 Flooding from Sewers

There was no historical flooding within the vicinity reported within the online Historic Flood Map.

#### 4.5.4 Groundwater Flooding

There was no historical flooding within the vicinity reported within the online Historic Flood Map.

## 4.6 Flood Map for Planning

A review of the Environment Agency's online mapping tools has identified that the development site is within Flood Zone 1, an area with a low probability of flooding from Rivers and Sea.

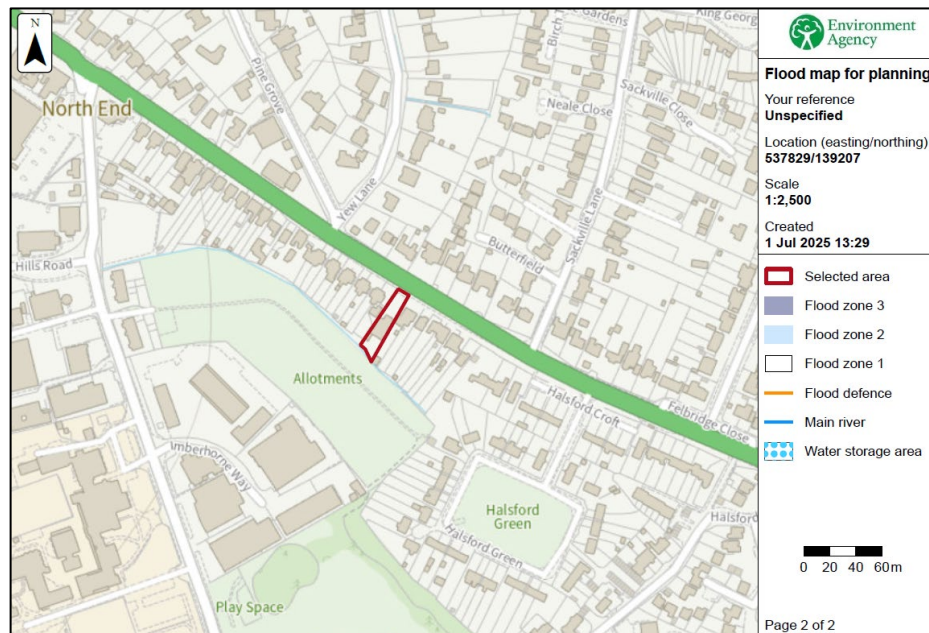


Figure 4-1 – Extract of the Environment Agency's Flood Map for Planning

Flood Zone 1 comprises land having a less than 0.1% (1 in 1000) annual probability of river or sea flooding. Therefore, the risk of flooding from fluvial or tidal sources is considered negligible.

## 4.7 Long Term Flood Risk – Surface Water

A review of the Environment Agency's online mapping tools has identified that the development site is at low to high risk of flooding from surface water, including consideration of climate change.

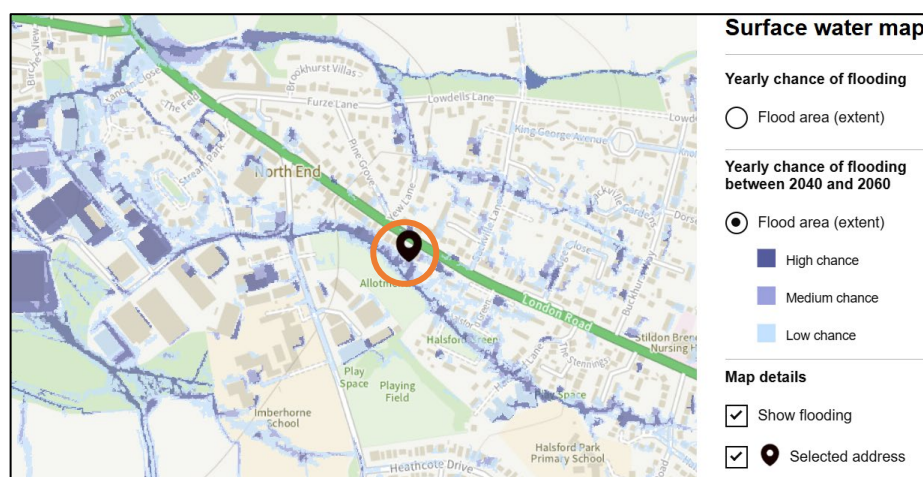
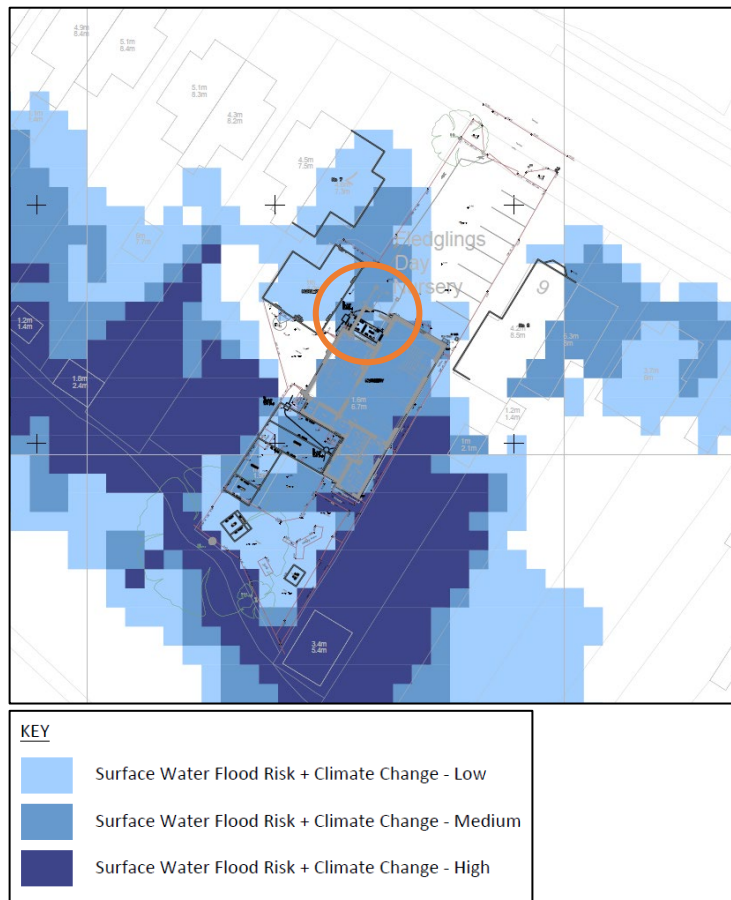


Figure 4-2 – Extract of the Environment Agency's Long Term Flood Risk Map (including climate change allowance)

The long term surface water flood risk data (including climate change allowance) has been obtained from DEFRA and compared with the site layout. A sketch has been appended to this report and extract shown below.



**Figure 4-3 – Extract of MCE Sketch 25-0087-MCE-XX-XX-DR-C-1400 (Surface Water Flood Risk Including Climate Change) (Extension circle in orange)**

As can be seen from the previous extract, the proposed extension lies within the low-medium surface water flood risk zone.

The current access and proposed access to the building are at a similar risk of surface water flooding. It is also anticipated that the development shall not increase flood risk elsewhere from a surface water perspective, assuming that the drainage for this extension is appropriately designed and installed.

Based on the topographical survey and flood data, the maximum depth of water is anticipated to be less than 200mm at the proposed extension. Given the likely low velocity at this location, this depth would ordinarily meet with BS8533 for safe access and egress. However, as the site use is for children, it would be appropriate to evacuate the building before flood waters reached this area. The building owner should consider an appropriate emergency plan.

Therefore, although risk of flooding from surface water is considered low-medium, the risk shall not increase a result of development.

## 4.8 Flood Risk from Groundwater

The Environment Agency online resources suggests that flooding from groundwater is unlikely in the area.

Therefore, the risk of flooding from groundwater is considered low.

## 4.9 Flood Risk from Reservoirs

The Environment Agency online resources suggests that flooding from the breach of a reservoir is unlikely in the area.

Therefore, the risk of flooding from reservoirs is considered low.

## 4.10 Flood Risk from Public Sewers, Highways and Private Drains

### 4.10.1 Public Sewers

There are no known historic flood events at the site, nor any known public sewers within the site.

Thus, the risk to this development site is considered low.

### 4.10.2 Highways Drainage

There are no known historic flood events at the site, nor any known highways drainage within the site.

Thus, the risk to this development site is considered low.

### 4.10.3 Private Drainage

There are no known issues with the private drainage on site. Any new drainage would be installed in accordance with current standards.

Thus, the risk for this development site is considered low.

## 4.11 Sequential Test

According to the Environment Agency's website, small non-domestic extensions with a footprint of less than 250m<sup>2</sup> are exempt from the sequential test. Given the extension for this project is approximately 17m<sup>2</sup>, the sequential test is not required.

## 4.12 Vulnerability Classification

The technical guidance for the NPPF indicates that buildings used for nurseries are classified as "more vulnerable".

The technical guidance for the NPPF also includes a list of appropriate land uses in each flood zone dependant on vulnerability to flooding as represented in the following table.

**Table 4-2 – Flood Risk Vulnerability and Flood Zone Compatibility**

| Flood Risk Vulnerability Classification |                               | Essential Infrastructure   | Water Compatible           | Highly Vulnerable                   | More Vulnerable                     | Less Vulnerable                     |
|-----------------------------------------|-------------------------------|----------------------------|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Flood Zone                              | Zone1                         | Development is appropriate | Development is appropriate | Development is appropriate          | Development is appropriate          | Development is appropriate          |
|                                         | Zone 2                        | Development is appropriate | Development is appropriate | Exception Test Required             | Development is appropriate          | Development is appropriate          |
|                                         | Zone 3a                       | Exception Test Required    | Development is appropriate | Development should not be permitted | Exception Test Required             | Development is appropriate          |
|                                         | Zone 3b Functional Floodplain | Exception Test Required    | Development is appropriate | Development should not be permitted | Development should not be permitted | Development should not be permitted |

It is clear from the previous table that the development is considered appropriate and therefore the Exception Test is not required.

### 4.13 Exception Test

In accordance with the NPPF, the Exception Test should demonstrate that:

1. The development would provide wider sustainability benefits to the community that outweigh the flood risk; and
2. The development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and where possible, will reduce flood risk overall.

As noted in the previous section, the Exception Test is not required.

### 4.14 Flood Resilience

This report is prepared to consider the proposed extension, and therefore the resilience methods refer to this space only.

#### General

The building should allow water to pass through the property to avoid structural damage by: Making it easy for water to drain away after flooding. This could be accommodated through suitable surface water drainage design at the detailed design stage. Making sure there's access to all spaces to enable drying and cleaning.

#### External Walls

If walls are to be replaced or improved then low permeability materials, inclusive of water-resistant coating is advised.

#### Windows & Doors

Windows & Doors on the ground floor are to be flood resilient. These windows & doors should be water-tight and be able to withstand the high pressure exerted on them when submerged under flood water. A removable flood barrier for doors should be considered.

### **Air Vents**

Air vents should be located 600mm above anticipated flood depths.

### **Internal Walls**

Gypsum plaster and plasterboard within floors below the flood levels should be avoided. Stud partition walls should also be avoided.

### **Fitting, fixture and services**

All fittings, fixtures and services should be at high level and above the anticipated flood levels where possible. Medium Density Fibreboard should be avoided. Solid doors, treated with waterproof coatings should be used.

## **4.15 Flood Warning and Emergency Planning**

The users of the site should be encouraged to register with the Government's Flood Warning Service. Flood Alerts, Flood Warnings and Severe Flood Warnings are issued to residents and businesses within flood risk areas. This system dials out a message to the recipient when a particular category of flood warning is being advised. The message can be communicated through text message or a phone call.

The building operator should also ensure an appropriate emergency plan is in place. A stay put policy would usually be appropriate in times of flood but, given the use, it would be appropriate to consider evacuation.

Installation of a flood alarm positioned towards the rear of the property, where the initial area of flooding is anticipated, should be considered.

## **4.16 Flood Risk Summary**

The site has been assessed in accordance with the latest guidance provided within the NPPF and supplementary guidance documents.

Accordingly, the potential flood risk at the development site has been summarised below:

**Table 4-3 – Flood Risk Summary**

| Source                  | Risk     |
|-------------------------|----------|
| Rivers (Fluvial)        | Low      |
| Sea (Tidal)             | Low      |
| Surface Water (Pluvial) | Low-High |
| Groundwater             | Low      |
| Reservoirs              | Low      |
| Public Sewers           | Low      |
| Highways Drainage       | Low      |
| Private Drainage        | Low      |

Having considered the potential sources of flooding, most have been identified as having a low risk to the development site. It is believed that the main risk of flooding to the development site is surface water. However, it is apparent that the risk shall not increase as a result of development.

The building users should sign up to the government's flood warning service and building operator should ensure an appropriate emergency procedure is in place.

## 5. Conclusions

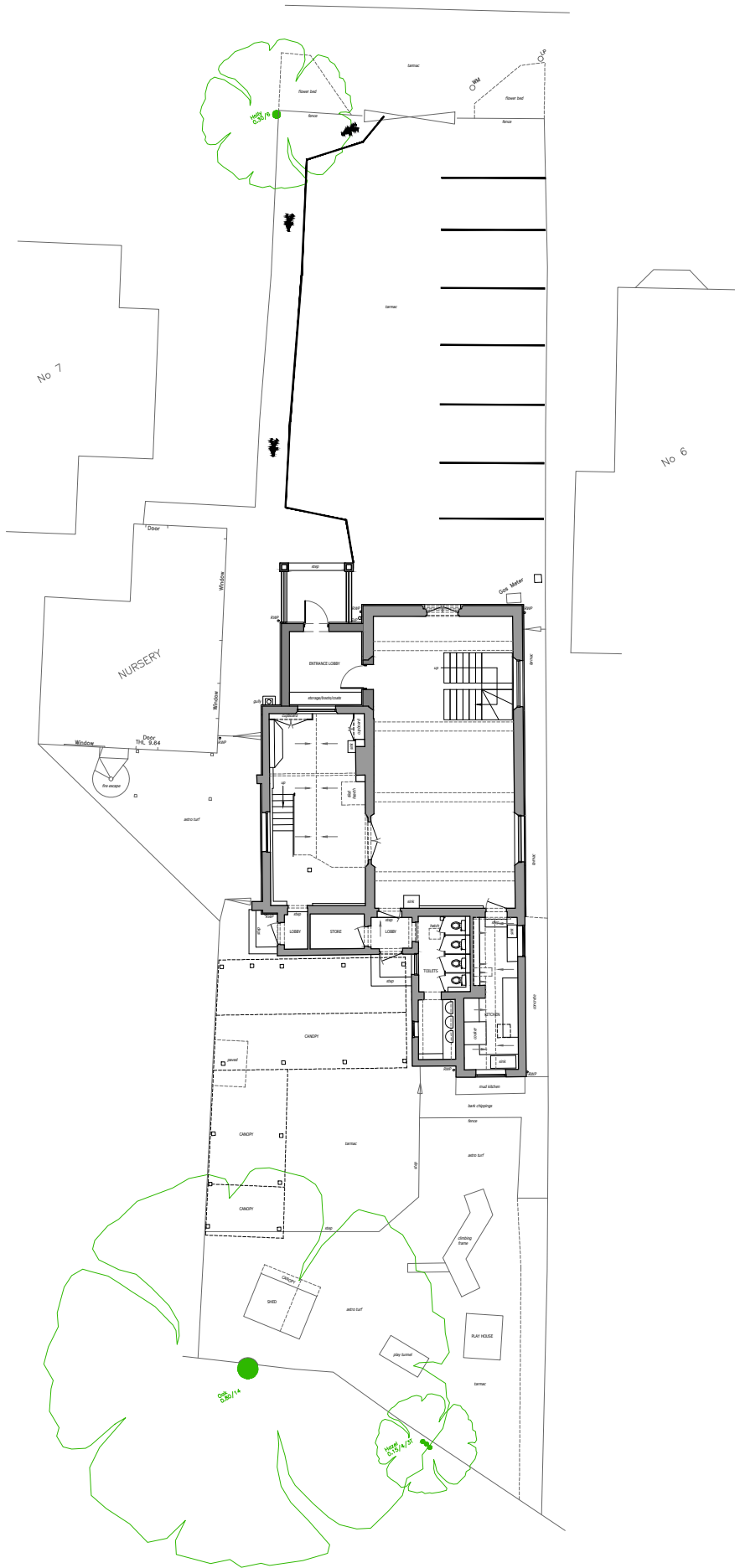
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This document has been produced in accordance with current best practice, recommendations and guidance set out in the National Planning Policy Framework (NPPF) and associated documents valid at the time of writing.

This report concludes:

1. The site comprises an existing building, parking to the north-east and garden/play area to the south-west. It is bounded by London Road (A22) to the north, residential dwellings to the south-east and north-west and allotments to the south. A watercourse is present within the allotment land.
2. The proposal is for a minor extension to the nursery building, including an entrance lobby and porch area.
3. A review of the available Environment Agency Flood Maps and SFRA conclude that:
  - a. The majority of the sources of flooding present a low risk to the site.
  - b. It is believed that the main risk of flooding to the development site is surface water. It is believed that the main risk of flooding to the development site is surface water. However, it is apparent that the risk shall not increase as a result of development.
4. Opportunities to adopt flood resilient design for the proposed extension should be explored. Additionally, an emergency plan should be developed, if not already in place.

## Appendix 1 – Proposed Site Plan



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CDM 2015

Under the CDM regulations 2015, the client will need to employ a principal designer and principal contractor to assist with the health and safety process and co-ordinate health and safety matters. Further advice with regards to client duties and the duties of the principal designer & principal contractor can be found on the Internet (i.e CONIAC Industry Guidance & the HSE website), alternatively you may consult with a qualified H&S Advisor or similar qualified individual or company. This drawing, together with an asbestos survey or any other surveys and record drawings/information that the client has on the existing building or site, such as service locations, should be passed on to the contractor. Our brief does not extend to the principal designer role, so the principal contractor will be responsible for developing the health and safety file during construction and handing it over to the client as an as built file.

Notes

- Existing furniture/fittings are shown indicatively only, and may not be representative of exact items on site.
- All layouts and alterations to existing building are subject to structural engineer review and input, and may be subject to change.
- Internal measurements where shown, are indicative and may be subject to change when detailing building materials and finishes during the building regulations stage.
- New rainwater drainage/connections subject to further site investigation. Findings and subsequent drainage design may impact layouts.
- Proposed external doors/glazing shown indicatively, subject to final product selections.
- Site levels and adjustments where required TBC in developed/detailed design stage.
- Fire escape plan and strategy to be by fire consultant under separate client instruction.
- All access arrangements to ground and first floor level are subject to further detail during the building regulations stage, to ensure compliance.

|     |                              |     |            |
|-----|------------------------------|-----|------------|
|     |                              |     |            |
| C   | Capturing client amendments. | S.G | 07.05.2025 |
| B   | Capturing client amendments. | S.G | 18.03.2025 |
| A   | Capturing client amendments. | S.G | 10.03.2025 |
| Rev | Revision Detail              | By  | Date       |



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Client

MP Racing Ltd

Project

Bluebell Barn Nursery,  
North End, London Road,  
East Grinstead, RH19 1QQ

Title

Proposed Site Plan

Status

PRELIMINARY

|              |            |          |          |
|--------------|------------|----------|----------|
| Drawn by     | Checked by | Date     | Scale    |
| S.G          | S.G        | 24.02.25 | 1:250@A3 |
| Drawing No.  | Revision   |          |          |
| SD2549-10-01 | C          |          |          |

## Appendix 2 – Environment Agency Flood Map for Planning

# Flood map for planning

Your reference  
**Unspecified**

Location (easting/northing)  
**537829/139207**

Created  
**1 July 2025 13:29**

**Your selected location is in flood zone 1, an area with a low probability of flooding.**

You will need to do a flood risk assessment if your site is **any of the following**:

- bigger than 1 hectare (ha)
- in an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

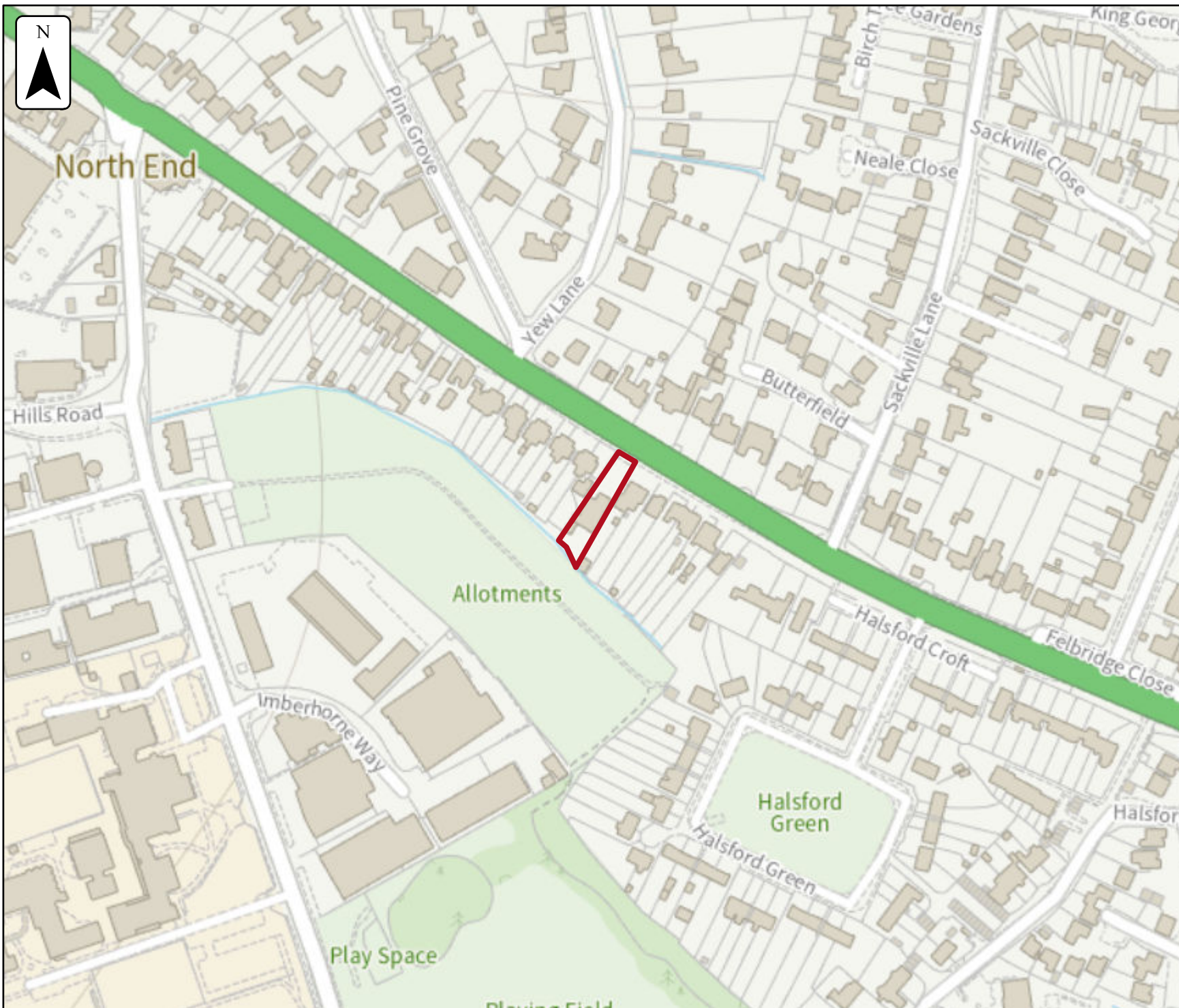
## Notes

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 2025 AC0000807064. <https://flood-map-for-planning.service.gov.uk/os-terms>



## Flood map for planning

Your reference

**Unspecified**

Location (easting/northing)  
**537829/139207**

Scale  
**1:2,500**

Created  
**1 Jul 2025 13:29**

-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area

  
0 20 40 60m

## Appendix 3 – Long Term Surface Water Flood Map

KEY

- Surface Water Flood Risk + Climate Change - Low
- Surface Water Flood Risk + Climate Change - Medium
- Surface Water Flood Risk + Climate Change - High

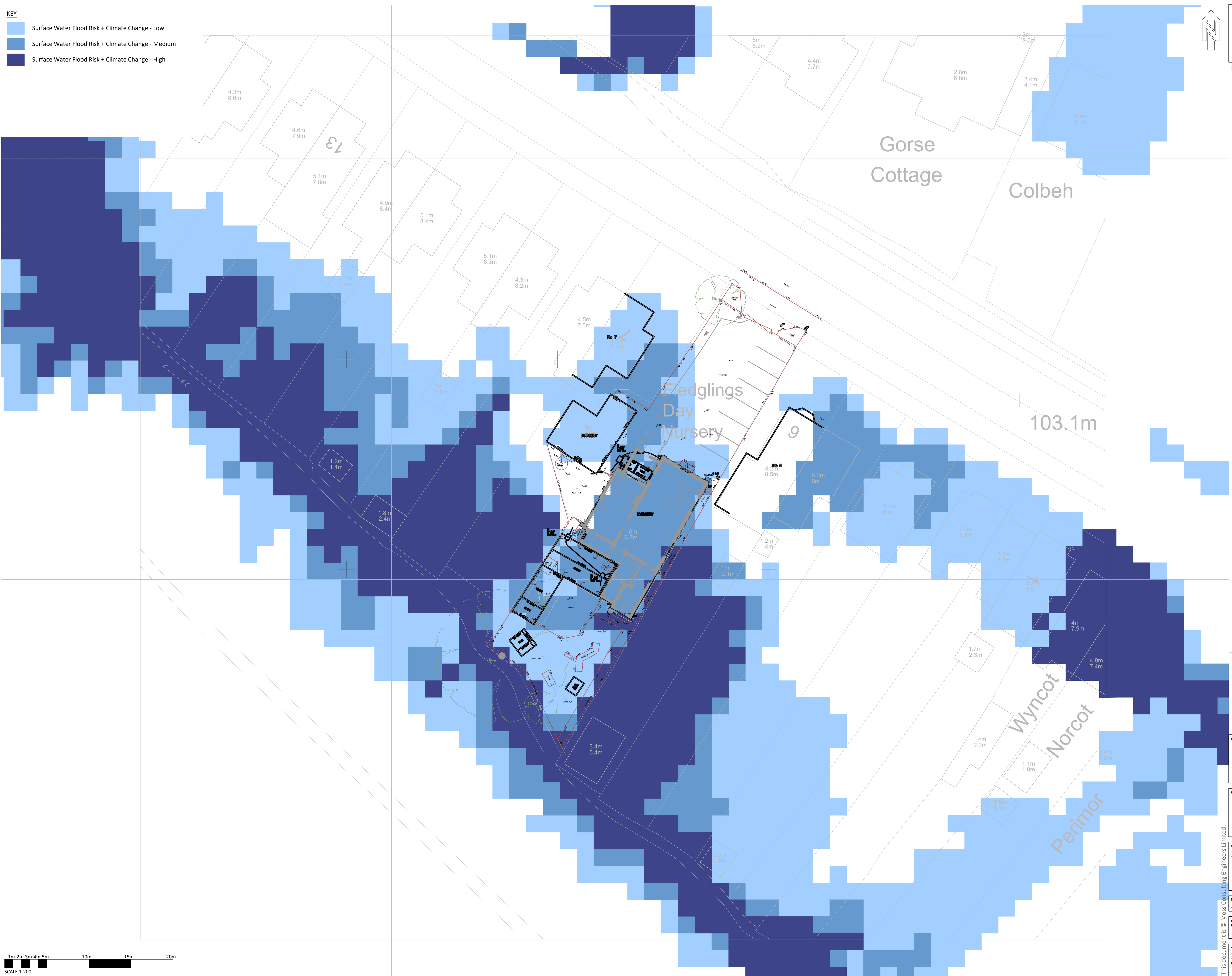


DO NOT SCALE THIS DRAWING. ALL SETTING OUT TO ARCHITECT'S DETAILS AND DRAWINGS

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWING ISSUES AND THE SPECIFICATION.

Notes:

- G1. All building materials, components and workmanship to comply with the appropriate public health acts, building regulations, british standards and codes of practice and the appropriate manufacturer's recommendations.
- G2. For all specialist work see relevant drawings.
- G3. Any discrepancies, errors or omissions to be reported to the project co-ordinator for further instructions before commencement of works.
- G4. The Engineer is not responsible for dimensions, except where shown on his drawings. All setting out information, dimensions, etc, shall be calculated from the Architect's drawings.
- S1. Position of topographical survey and Architect layout approximate only.



|     |                    |     |     |     |          |
|-----|--------------------|-----|-----|-----|----------|
| P01 | Preliminary Issue. | JEM | VJM | JEM | 02.07.25 |
| Rev | Amendment          | Dm  | Chk | Apr | Date     |

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Drawing Title:  
SURFACE WATER FLOOD RISK LAYOUT  
(INCLUDING CLIMATE CHANGE)

|         |          |        |                |                     |
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| MCE ref | drawn by | date   | drawing scales | original paper size |
| 25-0087 | JEM      | JUN 25 | 1:200@A1       | A1                  |

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| drawing reference : | originator | volume | level | type | role | number     |
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| status :   | SUITABLE FOR INFORMATION |
| revision : | revision status :        |
| P01        | PRELIMINARY              |

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