



Homebase, 84 Manor Road  
North Sheen, Richmond  
Flood Warning and Evacuation Plan

*For Avanton Richmond Developments Ltd*

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Date: 24 March 2023

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# DOCUMENT CONTROL SHEET

Issued by	Hydrock Consultants Limited Over Court Barns Over Lane Almondsbury Bristol BS32 4DF United Kingdom	T +44 (0)1454 619533 F +44 (0)1454 614125 E bristol@hydrock.com www.hydrock.com
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Prepared by	Toby Adair BSc. (Hons)	
Checked by	Luke Whalley BSc (Hons) GradCIWEM	
Approved by	Simon Mirams BSc MCIWEM C.WEM CSci	

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## 1. INTRODUCTION

This Flood Warning and Evacuation (referred hereafter as 'Plan') has been prepared by Hydrock Consultants Ltd on behalf of Avanton Richmond Developments Ltd to support a planning application for the proposed demolition of the existing commercial building and the construction of residential-led development on the former Homebase Site on Manor Road, Richmond.

The Plan is intended to inform the site management and occupants of the potential flood risks and to outline the recommended response to be adopted in the event of flooding at the site. The specific objectives of the Plan are as follows:

- Raise awareness of the risk of flooding at the site including the likely source, frequency and mechanism.
- Describe the measures proposed to protect the development from flooding.
- Recommend actions to be undertaken before, during and after a flood, and the responsibilities of those involved in the Plan.
- Identification of safe evacuation routes to a point of safe refuge in the event of an extreme flood.

The content and instructions within this document are to form a part of the Health & Safety Register maintained by the site management company. This is to be disseminated to all occupants at the site.

The Plan is designed to be treated as a 'live' document which may be updated as a result of: lessons learned (through drills or a real flood event); changes to site management arrangement or operation; or as a result of notified changes in the predicted flood risk to the site. Responsibility for maintaining, reviewing and updating this Plan rests with the site management company.

It should be acknowledged that a reasonable direct instruction from the Emergency Services and/or person in authority during a flood event will outweigh any recommendations given within this document.

## 2. DEVELOPMENT LOCATION AND DESCRIPTION

The site is located at the former Homebase site in Richmond. It is triangular in shape and bound by the South Western Railway Main Line to the south, the North London Line to the north-west and Manor Road to the east. The site is surrounded by a combination of residential and commercial developments. The total site area is 1.76ha which is almost entirely impermeable comprising of either buildings or paved parking, roads and other hardstanding areas.

The submitted planning application is for "Demolition of existing buildings and structures and comprehensive phased residential-led redevelopment to provide residential units (Class C3), flexible commercial, business and service uses (Class E), provision of car and cycle parking, landscaping, public and private open spaces and all other necessary enabling works."

The site address can be found in **Table 1**. The site location can be seen in **Figure 1**.

Table 1: Site Location Information

Site Referencing Information	
Site Address	Homebase, 84 Manor Road, North Sheen, Richmond, TW9 1YB
Grid Reference	518901, 175426

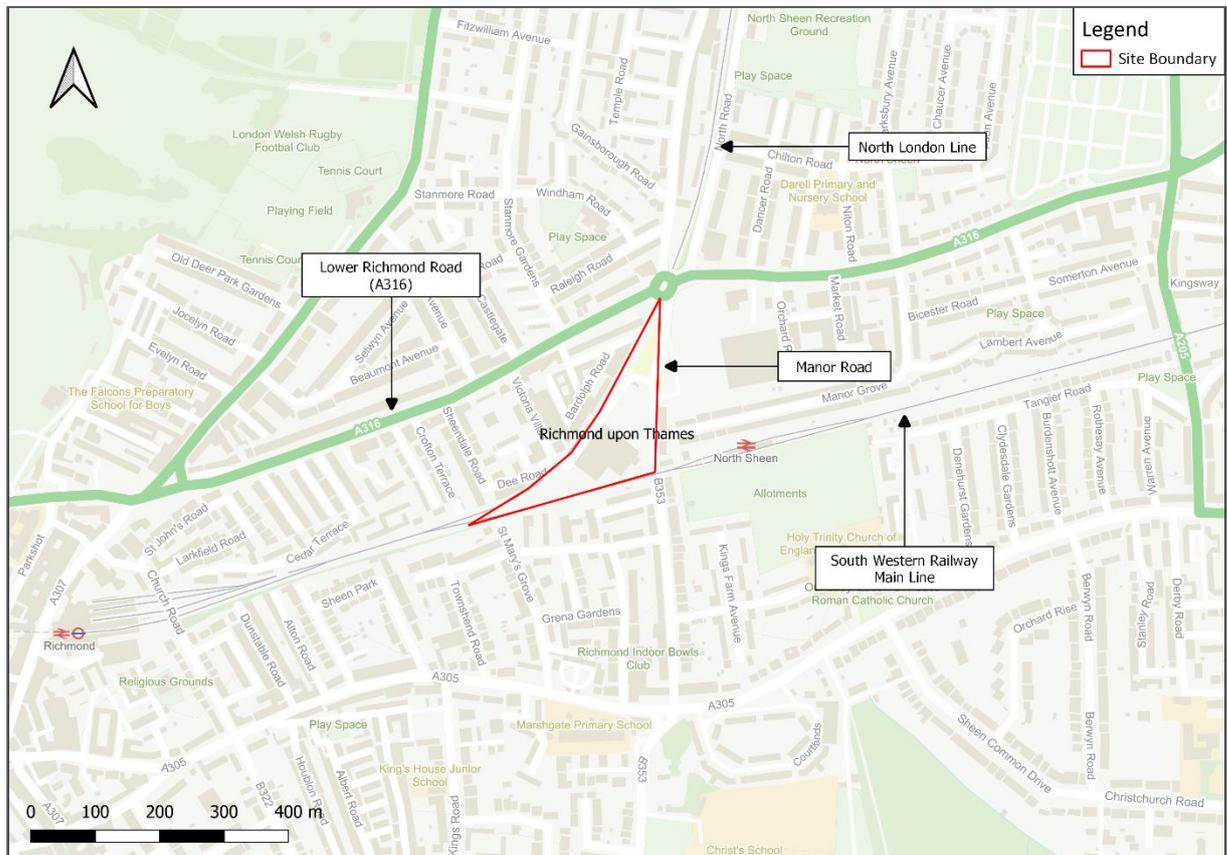


Figure 1: Site Plan

### 3. FLOOD RISK AND FLOOD PROTECTION MEASURES

#### 3.1 Flood Risk

A detailed assessment of flood risk at the site have been undertaken by Hydrock in the form of a Flood Risk Assessment (FRA). This document should be consulted further on the flood risk posed to the site. A summary of the key flood risk information is provided below.

*Table 2: Summary of Flood Risk to the site*

Flood Source	Risk
Tidal	Negligible
Fluvial	Low
Surface Water	High
Groundwater	Low
Infrastructure	Low

##### 3.1.1 Artificial Infrastructure Failure

The EA Reservoir Failure Extent mapping (EA, 2022)<sup>1</sup>, whilst it does not show the site to lie within the extent of sole potential reservoir flooding, when there is also flooding from rivers the site is expected to be within the maximum flood extent in the event of a failure of multiple reservoirs upstream. The reservoirs upstream of Richmond which have the potential to impact the site are; Island Barn, Queen Elizabeth II Storage, Knight, Beesborough, Queen Mary, King George VI, Staines, Wraysbury, The Queen Mother.

Whilst no further information is made available with regard to potential reservoir flooding, it is expected that in the event of a catastrophic failure of the reservoir embankments, any flooding would be fast flowing and likely high hazard in the immediate flow routes. Given the site is predicted to be flooding only in the event of fluvial flooding, there would be limited capacity within the River Thames and as such the extents would be predicted to inundate the site.

Given the monitoring and maintenance requirements for such reservoirs under the Reservoir Act (1975), the risk of such an occurrence is considered very low, and as such there is only a ‘residual’ risk of flooding due to reservoir failure.

##### 3.1.2 Surface Water

The EA Surface Water Flood Risk Map shows areas of low, medium and high risk of flooding within the site boundary, displayed below in **Figure 2**, and suggests the site lies within a significant surface water flow route.

<sup>1</sup> EA Long Term Flood Risk Service - <https://check-long-term-flood-risk.service.gov.uk/map>

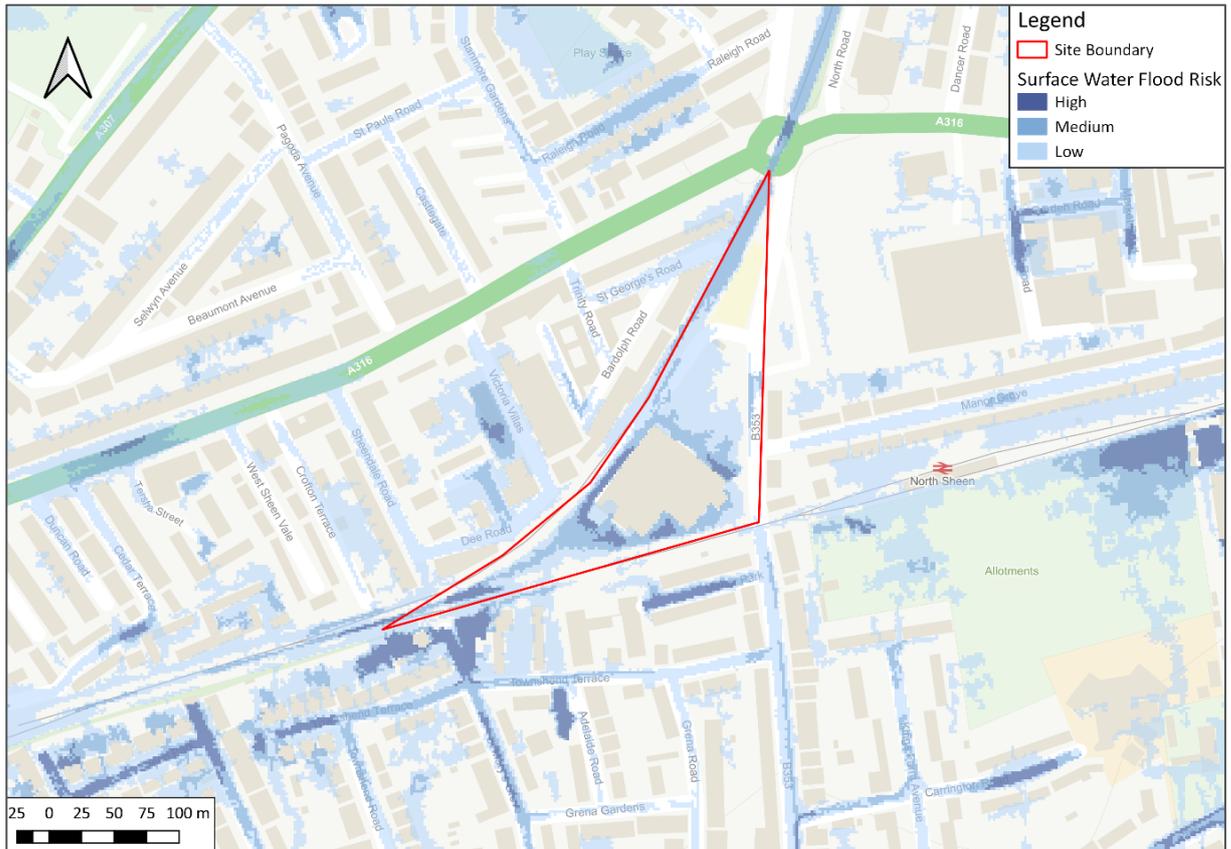


Figure 2: EA Surface Water Flood Map

Due to the coarse nature of current EA Mapping, Hydrock has undertaken additional detailed hydraulic modelling to confirm existing risk and ensure any risk post-development can be safely managed and / or mitigated. Full details and methodology can be found within the Hydraulic Modelling report (Ref: 25608-HYD-XX-XX-RP-FR-0003).

Results of the hydraulic modelling confirm in existing conditions (i.e. pre-development), surface water flows are indicated to enter the site via the south western and southern boundaries and flow around the existing Homebase development on site, eventually discharging to the adjacent railway along the north western boundary. Flooding is also predicted to pond around the existing building with depths reaching up to 0.45m in places in the 1 in 100-year plus climate change design event.

Following confirmation of the existing risk to site, an exercise was undertaken to confirm risk following the development of the proposed residential and commercial units, displayed in **Figure 3** below.

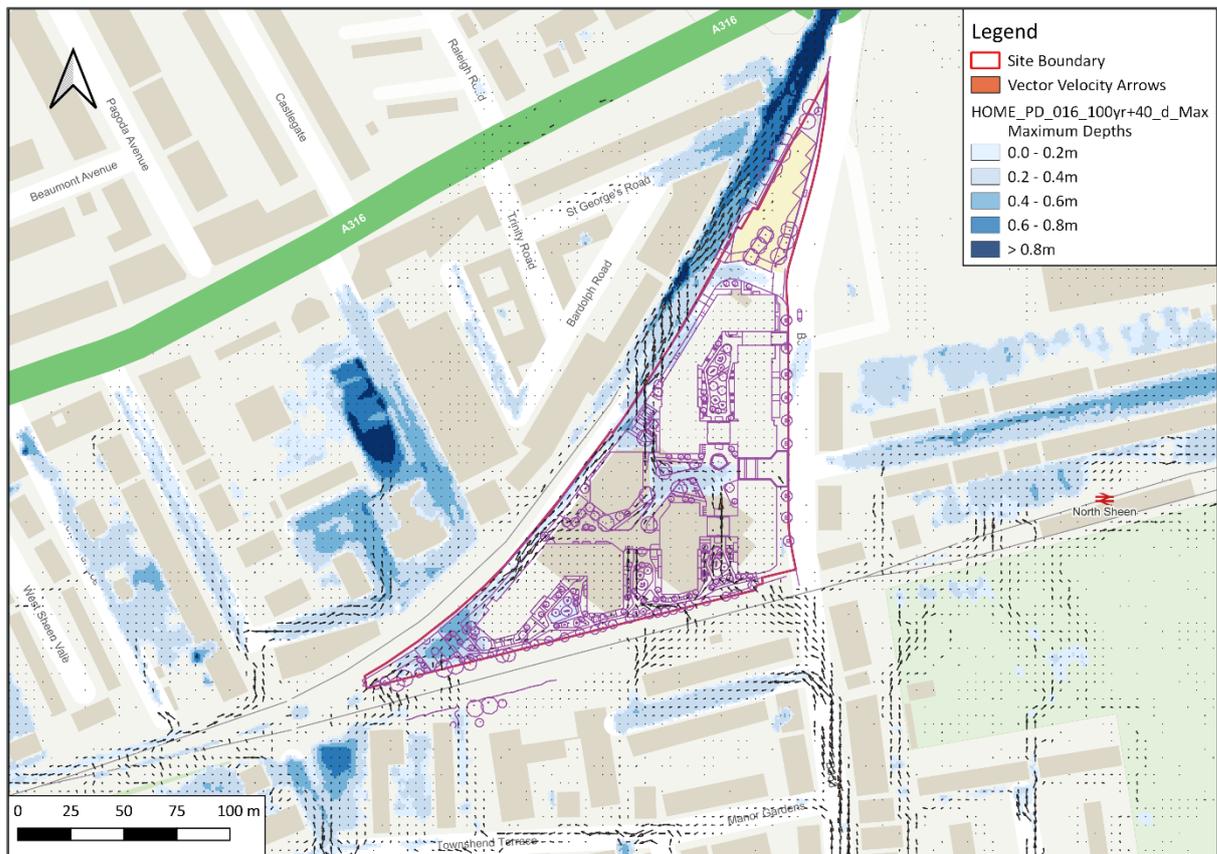


Figure 3: Proposed Development Modelling – 1 in 100-year plus 40% Climate Change Maximum Depths

Results of the post development modelling show the key flow route from the south west corner would be maintained, to limit off-site increases of risk, with the surface water flow route following localised lowering through the site around the proposed blocks. Flooding is predicted to be at its deepest in the south west corner and in the central courtyard area with maximum onsite depths in this scenario indicated to be approximately 0.5m however, the majority of onsite flooding is predicted to be below 0.2m and considered “shallow”.

To further assess potential risk and associated hazard with any flooding on site, the surface water flooding has been classified using DEFRA FD2320/TR2<sup>2</sup> ‘Framework and Guidance for Assessing and Managing Flood Risk for New Development’ (See Figure 4. Predicted Maximum Hazard Ratings for Manor Road, Richmond - 1 in 100 year plus 40% Climate Change Design Event. This uses a number of factors including; depth of flooding, velocity of floodwaters and debris factor to assess the direct risks of people exposed to floodwaters. The classification of the results shows the majority of onsite flooding to be classified as lowest hazard described as “*Caution - Flood zone with shallow flowing water or deep standing water*”. There are three areas indicated to be Moderate or Significant Hazard (*‘Dangerous for some (i.e. children)’* and *‘Dangerous for most people respectively’*), these areas are located in the south west corner of the site, in the central courtyard and to the west of Block A. As such, potential evacuation routes have been shown to avoid these areas of higher risks.

<sup>2</sup> Defra and Agency (2005) Framework and Guidance for Assessing and Managing Flood Risk for New Development, Flood Risk Assessment Guidance for New Development, FD2320 Technical Report 2, HR Wallingford et al. did the report for Defra/EA Flood and Coastal Defence R&D Programme, October 2005.

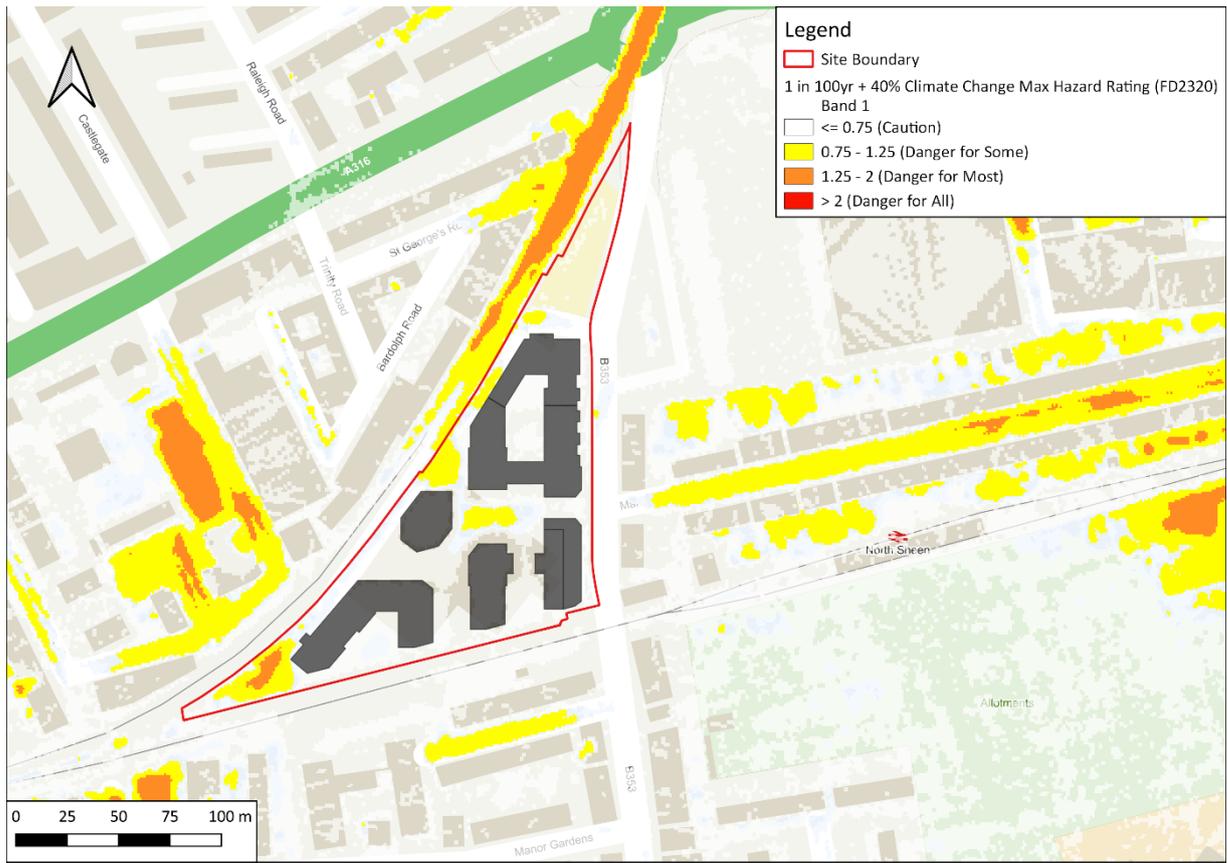


Figure 4. Predicted Maximum Hazard Ratings for Manor Road, Richmond - 1 in 100 year plus 40% Climate Change Design Event

This flooding is a worst-case scenario as the modelling assumes all drains on site and in the surrounding area are blocked and provide no additional mitigation.

The modelling therefore confirms the site to be at risk of surface water flooding in both the present day and future scenarios.

### 3.2 Flood Protection Measures

The modelling undertaken by Hydrock is considered to be conservative given no allowance for existing or proposed drainage networks and the risk of onsite surface water flooding is expected to be reduced primarily through a Surface Water Drainage Strategy, undertaken by Manhire Associates (21031-PSK810-REV00).

The mitigation measures recommended in the FRA by Hydrock undertaken in November 2022 (Ref. 25608-HYD-XX-XX-FR-RP-0002) are outlined below and are in accordance with the Government's Improving the Flood Performance of New Buildings document:

- The setting of ground FFLs at a high a level as feasible.
- Ground supported floor construction.
- Water resistant floor finishes, i.e. tiles as opposed to carpet.
- External and internal ground floor level walls constructed of materials with low water penetration, good drying ability, and good retention of pre-flood integrity.

- Sensitive services (i.e. electrics) brought in and continued at as high a level as possible, and ideally at a minimum level of 300mm above finished floor levels.
- Lifts within ground floor entrance lobbies to be designed and installed so as to be flood resilient, i.e. water-sensitive apparatus/controls to be set at a minimum level of 300mm above finished floor levels.
- The installation of 'active' flood measures i.e., permanent 'flood proof' doors to be installed on ground floor entrances of buildings (with crest level of 600mm freeboard above the 1 in 100-year + climate change design event) in the event of internal flooding (reservoirs / surface water).
- Electric vehicle charging should either be removable (so it can be removed on receipt of an EA warning) or of a construction that will be unaffected by flood waters.
- 'Safe Refuge' areas be provided in the first floor and above to accommodate visitors and residents in the event of a catastrophic breach in the upstream reservoirs.

#### 4. ROLE OF SITE MANAGEMENT TEAM

The number of members of the site management team working at any one time will be confirmed by the site management company.

The site management team will have a supervisory presence on site during the day and will be on-call during operational hours. The site is a residential-led development and therefore some occupants may require assistance in the event of an emergency. It is understood that the site management team will be able to provide this assistance or to contact others who would be able to do so.

Those appointed to provide assistance will adopt the informal role of 'Flood Warden' alongside their daily duties, and will have the following key responsibilities:

- Understanding the flood risk to the site and the flood protection measures in place
- Communication of the flood risk to occupants
- Understand the flood warning codes and what actions are required following a receipt of the flood warning
- Monitoring local environment for high river levels / signs of flooding

Overseeing the safe site operation in the event of a flood, following advice of emergency services / relevant authorities

## 5. PREPARING FOR FLOODING

### 5.1 Flood Warnings from Floodline

The key source of information regarding imminent flooding will be Floodline, which is a free flood warning service operated by the Environment Agency (EA) that provides alerts (via telephone / email / text message) prior to a flood occurring. The site is within an area covered by this service. The site management team can sign up to this service by calling Floodline on 0345 988 1188 or online at: <https://www.gov.uk/sign-up-for-flood-warnings>.

There are three levels of warning: ‘Flood Alert’, ‘Flood Warning’ and ‘Severe Flood Warning’; the associated meaning of each warning is shown in **Table 3**. The recommended response on receipt of these alerts is detailed in **Section 6**.

Table 3: EA Flood Warning Levels

Warning Level	What it means	When it's issued
 <p><b>FLOOD ALERT</b></p>	Flooding is possible, be prepared. This is a general warning which covers a wide area and may not specifically apply to the site itself and its immediate neighbourhood.	Two hours to 2 days in advance of flooding.
 <p><b>FLOOD WARNING</b></p>	Flooding is expected, immediate action required. This is issued when it is more certain that flooding will occur in a particular area.	Half an hour to 1day in advance of flooding.
 <p><b>SEVERE FLOOD WARNING</b></p>	Severe flooding that could cause a danger to life.	Issued if the flood poses a significant threat to life.

### 5.2 Information Channels

In addition to Floodline, the following sources should be explored by the site management team’s Flood Wardens and occupants to stay informed on the flood risk to the site:

- Flood Information Service: <https://check-for-flooding.service.gov.uk/>
- Flood Warnings to England: <https://flood-warning-information.service.gov.uk/warnings>
- 5-day flood risk for England: <https://flood-warning-information.service.gov.uk/5-day-flood-risk>
- River, sea, groundwater and rainfall levels: <https://flood-warning-information.service.gov.uk/river-and-sea-levels>
- Long-term flood risk: <https://flood-warning-information.service.gov.uk/long-term-flood-risk>
- Met Office: <https://www.metoffice.gov.uk/weather/guides/flood-warnings>

- Online Forecast: <https://www.metoffice.gov.uk/>
- Email Alerts service: <https://www.metoffice.gov.uk/about-us/guide-to-emails>
- BBC / ITV / Sky News
- Local radio station: BBC Radio London
- Flood wardens / emergency services
- Observation of Local Environment

### 5.3 Site Management Company Recommended Flood Preparation Checklist

This section provides a summary of the recommended actions to be undertaken by the site management team in preparation for a flood.

<b>1.0</b>	<b>Role Allocation and Training</b>
1.1	Allocate and brief personnel who will take on the role of 'Flood Warden', who is advised to follow the recommended procedures outlined in the plan and maintain a record of who has been trained. Flooding could occur at any time and so the roles must be filled 24/7, including holiday cover.
1.2	Place the site on the Environment Agency's 'Floodline Warnings Direct' service by calling Floodline on 0345 988 1188 or online at: <a href="https://www.gov.uk/sign-up-for-flood-warnings">https://www.gov.uk/sign-up-for-flood-warnings</a> . Provide contact details of all flood wardens. Those registered will be provided with text message Flood Warnings which will trigger the necessary actions for evacuation.
1.3	<ul style="list-style-type: none"> <li>• Practice the procedures in the Plan and update where required:</li> <li>• on first occupation;</li> <li>• Every 3 years or;</li> <li>• As a result of lessons identified following a flood event, or;</li> <li>• Following changes of ownership / use of the property or;</li> <li>• Following changes to the Flood Warning process or predicted flood risk.</li> </ul> <p>Any updates should be written into the Plan and then re-issued to all occupants.</p>
<b>2.0</b>	<b>Monitoring of Local Environment</b>
2.1	No onsite monitoring would be possible in the event of a breach in the upstream reservoirs. For surface water sources, monitoring locations can be established for observing the local surface water levels and localised flooding. The plan in <b>Appendix A</b> recommends potential monitoring locations to allow early observation of the flooding from the south-west corner of the site, as well as on Manor Road at the south east corner of the site.
<b>3.0</b>	<b>Awareness</b>
3.1	Provide all staff with access to an up-to-date copy of this Plan so they are aware of the flood risks to the site.
3.2	Prepare signage to be displayed in prominent, clearly visible places to inform occupants when flooding is forecast. In the event of a breach in the upstream reservoirs, residents and visitors should be directed to higher floors to seek 'safe refuge' until such time when flood waters have receded. The evacuation route for surface water flooding is included in <b>Appendix A</b> and <b>Appendix B</b> includes ways to manage flood risk stated on the London Borough of Richmond upon Thames website, as well as including London Borough of Richmond upon Thames emergency contact details.
3.3	Establish a method for communicating the flood warning and recommended actions to all occupants. This may include emails / texts / announcements / signage during a warning status and an announcement / alarm to initiate evacuation. Identify any vulnerable guests who may require extra assistance in the event of a flood.

<b>4.0</b>	<b>Contact Numbers</b>
4.1	Refer to examples of contact details in London Borough of Richmond upon Thames to report a flood in <b>Appendix B</b> . Confirm any additional specific contacts that may be required in the event of a flood, e.g. any site managers contacts, building insurance.

## 5.4 Occupants Recommended Flood Preparation Checklist

This section provides a summary of the recommended actions to be undertaken by the site occupants in preparation for a flood.

<b>1.0</b>	<b>Flood Warning System</b>
1.1	Register with the Environment Agency’s ‘Floodline Warnings Direct’ service by calling Floodline on 0345 988 1188 or online at: <a href="https://www.gov.uk/sign-up-for-flood-warnings">https://www.gov.uk/sign-up-for-flood-warnings</a> . Those registered will be provided with text message Flood Warnings which will trigger the necessary actions for evacuation.
<b>2.0</b>	<b>Awareness</b>
2.1	Read through plan and ensure you are clear on the evacuation procedure for both Reservoir and Surface Water flooding.
<b>3.0</b>	<b>General</b>
3.1	Refer to the FRA by Hydrock (Ref. 25608-HYD-XX-XX-RP-FR-0002) for a full map of the floodplain.
3.2	Identify any occupants/visitors who may require extra assistance / alerts in a flood. Occupants who may require extra assistance should identify themselves to site management team.
3.3	Make note of required emergency flood kit items, to be prepared when flooding is expected. Recommended items include: <ul style="list-style-type: none"> <li>• Non-perishable food items (3 days supply)</li> <li>• Bottled water</li> <li>• Any important tablets / medication</li> <li>• High-vis jacket</li> <li>• Waterproof trousers and boots</li> <li>• Blankets</li> <li>• First aid kit</li> <li>• Wash bag</li> <li>• Torches (wind-up or spare batteries)</li> <li>• Important documents e.g. insurance</li> </ul>
<b>4.0</b>	<b>Contact Numbers</b>
4.1	Refer to examples of emergency contacts in London Borough of Richmond upon Thames in <b>Appendix B</b> . Confirm any additional specific contacts that may be required in the event of a flood, e.g. site management team, contents insurance.

## 6. FLOOD EMERGENCY PROCEDURE

In the event of a catastrophic breach of the upstream reservoirs, given the limited information, it is expected that the flooding from these reservoirs would be sudden with limited warning times. Due to the likely fast flowing and sudden nature of potential reservoir flooding, evacuation routes are not expected to be viable options. Visitors and residents onsite would be able to seek 'safe refuge' within the proposed blocks on the first floor and above, and given the risk is from a finite amount of water, any flooding on site is predicted to be 'short-lived' and so residents and visitors would not be expected to remain within these areas for long periods.

For surface water flooding, pedestrian or vehicular evacuation to an area outside of the floodplain is recommended prior to flooding of the evacuation route. The proposed evacuation route from the site is shown below in **Figure 5** and in **Appendix B**.

The evacuation route on site avoids the areas of greatest risk and generally follows the southern and eastern boundary, exiting the site onto Manor Road (B353) before proceeding north to the Manor Circus Roundabout and subsequently east onto Lower Richmond Road (A316). This affords access to the wider area and it shown to be situated outside of any areas at risk of surface water flooding.

According to Google Maps, the route is a 5 minute walk on foot and a 3 minute drive from the site entrance on Manor Road.

The parts of the evacuation route on site, as well as on Manor Road, are modelled to flood, which is why evacuation to an area outside of the surface water flood extents is recommended prior to flooding however, the route follows the areas of lowest hazard ratings (i.e. "Caution") and with the shallowest flooding (i.e. <200mm). If evacuation cannot be sought prior to flooding, safe refuge will be possible within the proposed buildings.

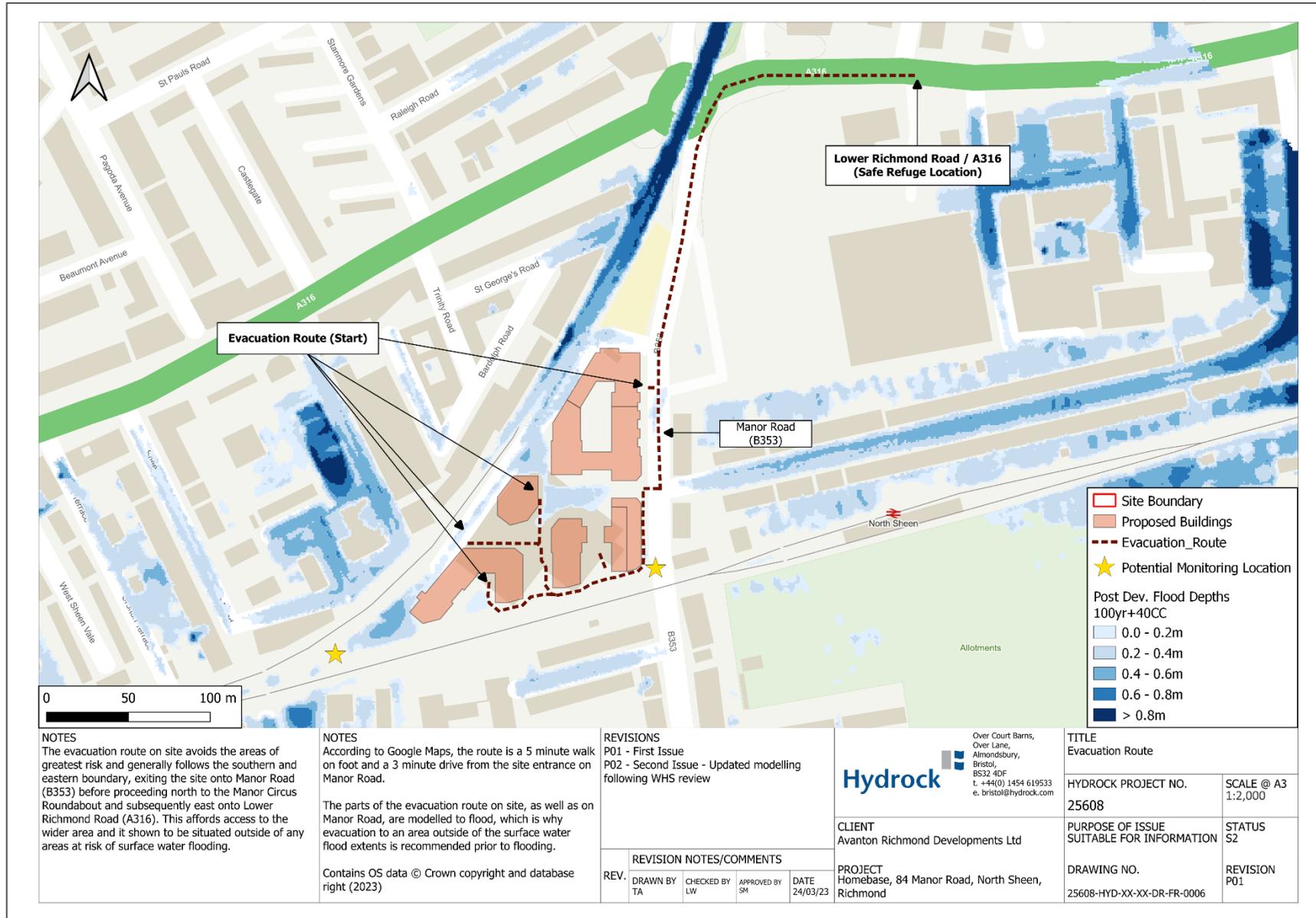


Figure 5: Evacuation Route

## 6.1 Flood Triggers and Advised Actions

The recommended flood emergency procedure is shown below. It should be acknowledged that a reasonable direct instruction from the emergency services or Council flood wardens during a flood event will outweigh any recommendations given within this document.

Stage 1 – Flooding is Possible, be prepared and Observe Local Environment	
<p><b>Trigger</b></p> <p>‘Flood Alert’ received from EA. Extreme rainfall observed or forecast by the various information channels (see Section 5.2).</p> <p>Flooding from surface water is possible</p> <div style="text-align: center;">  <p><b>FLOOD ALERT</b></p> </div>	<p><b>Advised Actions – Flood Wardens</b></p> <ul style="list-style-type: none"> <li>• Attend the site if not already present.</li> <li>• Advise all occupants and any visitors of the potential for flooding at the site and advise of the EA ‘flood alert’ status (through signage at site entrance, internal email etc). Directly contact any occupants who require additional assistance to ensure they have received the warning and allow to respond as appropriate (see advised actions below).</li> <li>• Monitor the Floodline service until either the ‘flood alert’ is removed or progressed to a ‘flood warning’ (see Stage 2).</li> <li>• Monitor local environment (surface water flooding only), minimum half-hourly (see <b>Appendix A</b> for suggested monitoring location). Proceed to Stage 2 if flooding is observed to the east of the site or Stage 3 if flood waters reach the site.</li> </ul> <p><b>Advised Actions – Occupants</b></p> <ul style="list-style-type: none"> <li>• Prepare emergency flood kit (see Section 5.4).</li> <li>• Organised planned method of pedestrian or vehicular evacuation if flooding progresses.</li> </ul>



## Stage 2 – Flooding is Expected, Act Now

### Trigger

‘Flood Warning’ received from EA  
 Flooding observed to the south-west/south-east of the site (see Appendix B)

Flooding is observed on Manor Road to the south-east and/or the railway line to the south-west/south



### Advised Actions – Flood Wardens

- Follow advice of the EA flood warning system / emergency services where available.
- Advise occupants of the increase in flood risk status to EA ‘flood warning’ and any observed details of flooding in the local area (through signage, internal email etc.). Directly contact any occupants who require additional assistance to ensure they have received the warning and allow to respond as appropriate (see advised actions below).
- Monitor the Floodline service until either the ‘flood warning’ is removed or progressed to a ‘severe flood warning’ (see Stage 3).
- Monitor local environment ((surface water flooding only), minimum half-hourly (see **Appendix A** for suggested monitoring location). Proceed to Stage 3 if surface water flood waters are observed on Manor Road south-east of the site or the railway track to the south-west/south of the site.
- Cancel any scheduled visitors until the ‘flood warning’ is removed.

### Advised Actions – Occupants

- Monitor the local environment and ensure you are prepared for imminent evacuation.
- Evacuate the site via the recommended evacuation route (shown in **Appendix B**). If flood waters are observed close to the site, proceed to the emergency refuge scenario. Under no circumstances should anyone attempt to exit or re-enter the building once flooding has started. Proceed immediately to Stage 4.
- Ensure emergency flood kit is readily available (see Section 5.4).
- Follow advice of Flood Wardens and Emergency Services.



Stage 3 – Evacuation	
<p><b>Trigger</b></p> <p>‘Severe Flood Warning’ received from EA Flooding at the site observed or if instructed by emergency services</p> <p>Flooding is observed on Manor Road to the south-east and/or the railway line to the south-west/south and is approaching the site.</p> 	<p><b>Advised Actions - Flood Wardens</b></p> <ul style="list-style-type: none"> <li>• Sound the alarm or make announcement and co-ordinate the evacuation of all persons and vehicles via the recommended evacuation route - surface water flooding only (shown in <b>Appendix A</b>).</li> <li>• In the event of flooding from reservoirs, advise residents and visitors on the ground floor to proceed to safe refuge areas on first floor and above.</li> <li>• If safe to do so, provide assistance to any occupants/visitors who need it.</li> <li>• Continually monitor Manor Road and the railway line to the south-west/south for signs of flooding and evacuate the site immediately if close to flooding.</li> <li>• Call 999 if in immediate danger.</li> </ul> <p><b>Advised Actions – Occupants/Staff/Guests</b></p> <ul style="list-style-type: none"> <li>• Evacuate the site via the recommended evacuation route (shown in <b>Appendix A</b>). If flood waters are observed close to or at the site, proceed to the emergency refuge scenario. Under no circumstances should anyone attempt to exit or re-enter the building once flooding has started. Proceed immediately to Stage 4.</li> <li>• Do not attempt to move any cars/vehicles if it is already in flood water</li> <li>• Follow advice of Flood Wardens and Emergency Services.</li> </ul>



Stage 4 – Emergency Refuge Area
<p>If flooding is observed at or nearby the site the Flood Officers should sound the flood alarm and order immediate emergency refuge. This refuge should be at the first-floor level and above. This will involve the following actions:</p> <p><b>Advised Actions - Flood Wardens</b></p> <ul style="list-style-type: none"> <li>• Identify any occupants who require special assistance and assist with their evacuation to first floor and above.</li> <li>• Proceed to first floor.</li> <li>• Contact the emergency services or floodline and follow their advice.</li> </ul>



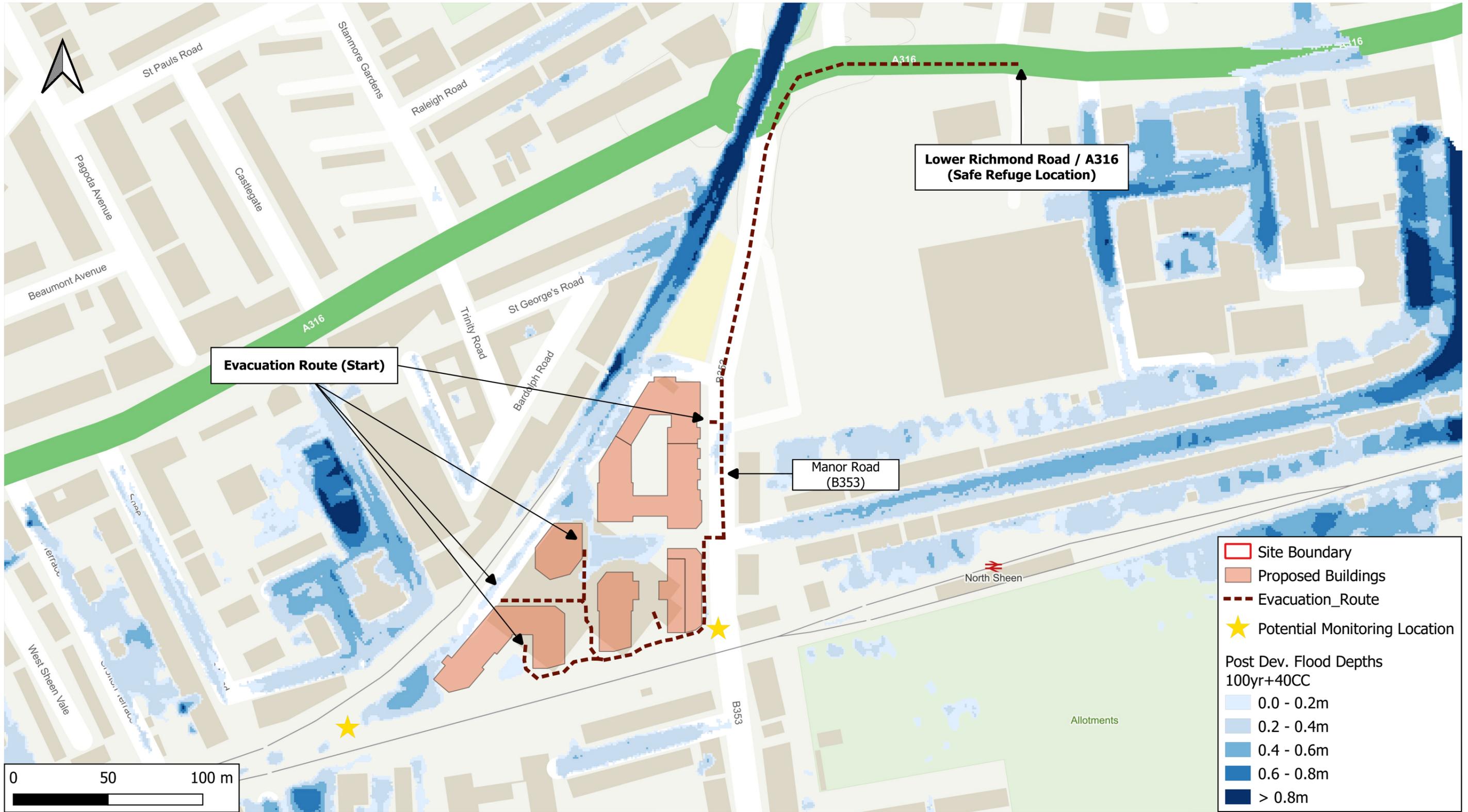
**Stage 5 - Inspection / clearance of flooded area.**

Attempts to return to the site should be made only once an 'All Clear' warning has been issued by the EA and/or at the reasonable direction of the Emergency Services and/or person in authority. Initial attendance should be by the appointed 'Flood Warden(s)', to ensure access to the site, and the site itself, is safe.

**Advised Actions - Flood Wardens**

- It will be important to consider some of the hazards that may be present, including standing water and transported debris or silt that may be hazardous / slippery.
- Enter site only if safe to do so, at great care, and wearing appropriate protective equipment, due to risk of submerged hazards and/or pollution.
- Inform all occupants of situation, and instruct return to site only when safe to do so.
- 'Normal' site operations to resume (e.g. occupants permanent return), only when the site has been deemed safe by suitably competent person.
- Co-ordinate clearance of debris / repair work where necessary.
- Advise occupants that drinking water may be contaminated, and food may be contaminated or spoiled due to power failures. Confirm with the water authority whether tap water is safe for use.

## Appendix A - Evacuation Route



**NOTES**  
 The evacuation route on site avoids the areas of greatest risk and generally follows the southern and eastern boundary, exiting the site onto Manor Road (B353) before proceeding north to the Manor Circus Roundabout and subsequently east onto Lower Richmond Road (A316). This affords access to the wider area and it shown to be situated outside of any areas at risk of surface water flooding.

**NOTES**  
 According to Google Maps, the route is a 5 minute walk on foot and a 3 minute drive from the site entrance on Manor Road.  
  
 The parts of the evacuation route on site, as well as on Manor Road, are modelled to flood, which is why evacuation to an area outside of the surface water flood extents is recommended prior to flooding.  
  
 Contains OS data © Crown copyright and database right (2023)

**REVISIONS**  
 P01 - First Issue  
 P02 - Second Issue - Updated modelling following WHS review

REV.	DRAWN BY	CHECKED BY	APPROVED BY	DATE	REVISION NOTES/COMMENTS
	TA	LW	SM	24/03/23	

Over Court Barns,  
 Over Lane,  
 Almondsbury,  
 Bristol,  
 BS32 4DF  
 t. +44(0) 1454 619533  
 e. bristol@hydrock.com

**CLIENT**  
 Avanton Richmond Developments Ltd

**PROJECT**  
 Homebase, 84 Manor Road, North Sheen, Richmond

<b>TITLE</b> Evacuation Route	
<b>HYDROCK PROJECT NO.</b> 25608	<b>SCALE @ A3</b> 1:2,000
<b>PURPOSE OF ISSUE</b> SUITABLE FOR INFORMATION	<b>STATUS</b> S2
<b>DRAWING NO.</b> 25608-HYD-XX-XX-DR-FR-0006	<b>REVISION</b> P01

## Appendix B - Other Useful Information

*London Borough of Richmond upon Thames Flood Guidance*

## Disruption to telephones and online services

Our phone lines and some online services are currently unavailable. We are working to restore all services as soon as possible.

We apologise for any inconvenience caused.

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## Emergency links and information

In an emergency that could cause harm to people or property, **dial 999 immediately**.

To inform the Council about less urgent emergencies, telephone our 24 hour Emergency Control on 020 8744 2442.

The following details may also be useful.

### Emergency numbers

- **Air Pollution helpline** (pre-recorded information service)  
Telephone: 0800 55 66 77
- **Anti-Terrorist hotline**  
Telephone: 0800 789 321 (Available 24/7)
- **Floodline**  
Telephone: 0845 9881 188 (Available 24/7)
- **National gas emergency service**  
Telephone: 0800 111 999 (Available 24/7)
- **National power cut line**  
Telephone: 105 (Available 24/7)
- **Thames Water supply issues**  
Telephone: 0800 316 9800 (Available 24/7)

### Emergency apps

There are a variety of different free emergency apps available:

- [British Red Cross Emergency apps](#) for targeted emergency alerts and information
- [British Red Cross Baby and Child First Aid app](#) for baby and child first aid advice
- [St. John Ambulance First Aid app](#) for easy to follow first aid advice
- [Met Office Weather App](#) for daily weather forecasts and UK National Severe Weather Warnings
- In Case of Emergency (ICE) apps allow you to store emergency contact information, as well as allergy or medication information on your phone. Some apps can even display this on the lock screen of your phone

## Local radio stations

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Your local radio stations are:

- BBC London Live, 94.9 FM
- Capital FM, 95.8 FM
- Heart, 106.2 FM
- Jackie, 107.8 FM
- LBC, 97.3 FM or 1152 AM
- Magic, 105.4 FM
- Virgin, 105.8 FM

## Neighbouring borough information

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- [London Borough of Hammersmith & Fulham](#)  
Telephone: 020 8748 3020  
Out of hours: 020 8748 8588
- [Royal Borough of Kensington & Chelsea](#)  
Telephone: 020 7937 5464  
Out of hours: 020 7373 6099
- [Royal Borough of Kingston upon Thames](#)  
Telephone: 020 8547 5000  
Out of hours: 020 8547 5800
- [London Borough of Lambeth](#)  
Telephone: 020 7926 1000  
Out of hours: 020 7926 1000
- [London Borough of Merton](#)  
Telephone: 020 8274 4901  
Out of hours: 020 8543 9750
- [London Borough of Richmond upon Thames](#)  
Telephone: 020 8891 1411  
Out of hours: 020 8744 2442
- [London Borough of Sutton](#)  
Telephone: 020 8770 5000  
Out of hours: 020 8770 5000
- [London Borough of Wandsworth](#)  
Telephone: 020 8871 6900  
Out of hours: 020 8871 6900
- [Westminster City Council](#)  
Telephone: 020 7641 6000  
Out of hours: 020 7641 6000

Up to: [Emergency planning](#)

Updated: 23 August 2022



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## Flooding

Parts of Richmond are at risk of flooding from the rivers Crane, Beverley Brook and the River Thames.

- [Who to contact about flooding](#)
- [Key emergency flooding contacts](#)
- [Flooding advice: before, during and after](#)
- [Flood risk management](#)
- [Local Flood Risk Management Strategy](#)
- [Managing development and building works](#)

## Who to contact about flooding

During a flooding event, if you are vulnerable or feel that lives are at risk, contact the emergency services on 999 for immediate assistance and rescue.

If the issue is urgent but not life threatening, please contact us by phone on 020 8891 7999 (24/7).

You can contact the Environment Agency hotline on 0800 80 70 60. You can call your Water Utility on 0800 316 9800.

If you are not sure who to contact, please see advice below.

## Key emergency flooding contacts

View the key emergency contacts below.

### Properties

As a property owner you should take reasonable measures to protect your land and property from flooding.

### Responsibilities

If you own land adjoining, above or with a watercourse running through it, you have certain rights and responsibilities. In legal terms you are a 'riparian owner'.

If you rent the land, you should agree with the owner who will manage these rights and responsibilities. The Environment agency has a plan to help you understand [your responsibilities](#).

## Front gardens

Make sure if you're paving your garden that the material you use is permeable. [Gov.uk](#) and the [Royal Horticultural Society](#) have produced some useful guidance on how to do this.

## Pipes and drains

A drain is the property owner's responsibility until it connects to either someone else's drain or to a public sewer. Water that fails to drain away under normal circumstances is the property owner's responsibility to check for blockages

If your drains are blocked, you need to call a plumber or drainage engineer. Specific insurance is available for drains within the property boundary.

If water is 'backing up' into your toilet/sink/bath or flowing out of a sewer causing flooding, contact Thames Water on 0800 316 9800. The water utility company (Thames Water) is responsible for sewers up to the property boundary or where they are shared up to the sewer which leads to the property.

## Reporting issues

If you are in a local authority owned property and the issue is within your property you can report is 020 8891 7999.

If you are a housing association or private tenant, please contact your landlord to report any issues

## Surface water

**Surface water** or **flash flooding** occurs when heavy rainfall exceeds the capacity of the ground and local drainage networks to absorb it. It can lead to water flowing over the ground and pooling in low-lying areas. It is typically caused by short intense rainfall. This is identified as the biggest risk in London.

You will most obviously see this as water ponding on roads. Most roads have roadside gully pots at the side of the road which captures the water, this then flows into Thames Water sewers in most cases or soakways. The local authority highways teams are responsible for clearing gullies and managing these soakaways.

After heavy rain, it is expected to see some water in the road or on open land, despite work undertaken to prevent this. It may be because other parts of the drainage system are at full capacity and it will slowly recede. If water is still present after a few hours and you believe the issue is being caused by a blocked or damaged roadside gully, or if you wish to report another non-emergency drainage issue, please contact the local authority Highways team on

[highwayoperationsandstreetscene@richmond.gov.uk](mailto:highwayoperationsandstreetscene@richmond.gov.uk)

There are gullies or drainage systems that are present in private estates or roads which are the responsibility of the landowner or private management company, usually shared ownership between residents. Significant structures and their owners where the information is provided by the 3rd party may be identified in the Flood Asset Register produced by the local authority – See later section.

Where significant flooding has resulted in a property flooding the local authority will need to include this in their Flood Investigations please [report this after the event](#).

## Sewers

Sewers are the responsibility of [Thames Water](#).

Sewer flooding can occur due to sewer blockage or collapse, or an increased flow and volume of water entering a sewer system which overwhelms its capacity, causing water not to be able to enter or to be pushed out. Where sewer outfall points are either blocked or submerged due to high water levels, water can back up in a sewer system and cause flooding. If you think there is a blockage in the sewer, you can [report this to Thames Water](#).

If the flooding is coming from inside your property (i.e.. out of your sinks, toilets, or showers) then please [report this to Thames Water](#) or call them on 0800 316 9800. Please complete their [sewer flooding questionnaire](#) as this is the only way they prioritise any longer term work which may be required.

Sewer flooding can often be seen as surface water flooding and so it may not be clear where it originates from and so should also be reported to the local authority at [highwayoperationsandstreetscene@richmond.gov.uk](mailto:highwayoperationsandstreetscene@richmond.gov.uk) or by [reporting an issue with a drain](#)

## Water Supply pipes

Unfortunately, even with supply pipes there can be leaks and occasionally more serious pipe bursts. For advice in these situations please visit your water supplier website. In many cases across London, Thames Water is your supplier and provides the following advice on [frozen or burst pipes](#) and that you [please let them know](#) about all pipe burst in the road.

If you are unsure who your supplier is, you can can [find your supplier](#) online.

## Rivers

All rivers are the responsibility of landowners known as 'riparian owners'.

### Main Rivers

**Main rivers** are mapped and registered by the [Environment Agency](#). The Environment Agency undertakes [some maintenance work in high-risk areas](#). If you notice a blockage or tree on a main river which is causing risk of flooding, call the **Environment Agency hotline on 0800 80 70 60**. Permits are also required from the Environment Agency for structures along main rivers. There are also structures and screens that are managed and cleared on rivers on a more regular basis in periods of adverse weather. This could be the Environment Agency, local authority or other organisation or private landowner. The significant structures will be highlighted in the Flood Asset Register.

### Ordinary Watercourses

Roadside ditches normally belong to the adjoining landowner and not the highway authority, except where land has been acquired for new road building.

Consent is required from the Lead Local Flood Authority (LLFA) to undertake some works on an ordinary watercourse. If a landowner wishes to pipe, alter a pipe, or dam an ordinary watercourse, they should apply for consent from the LLFA by contacting [planning@richmond.gov.uk](mailto:planning@richmond.gov.uk).

Where there is local authority owned land, we have a programme for clearance and maintenance. Where they are piped or culverted, this does not change the responsibility. Please contact [planning@richmond.gov.uk](mailto:planning@richmond.gov.uk) to find out more.

## Groundwater (where applicable)

Groundwater flooding occurs because of the underground water table rising, which can result in water emerging through the ground and causing flooding in extreme circumstances. This source of flooding tends to occur after extensive periods of heavy rainfall.

Please call 020 8891 7999 to find out more.

## Reservoirs (where applicable)

A reservoir is, most commonly, an enlarged natural or artificial lake, pond or impoundment created using a dam or lock to store water. There are a number of these may be managed by different companies and landowners.

Contact details of the responsible body will be displayed at each reservoir, who will have an onsite reservoir plan, however in an emergency please call the local authority on 020 8891 7999 who are responsible for offsite reservoir plans and alerting the wider public of the potential issue.

## Canals (where applicable)

The [Canal and River Trust](#) is responsible for the canals. For non-emergency related matters, call them on 0303 040 4040.

For emergencies, call the 24-hour number on 0800 47 999 47.

## Flooding advice: before, during and after

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Find out where to get help and advice before, during and after a flood.

### Plan and prepare - residential, commercial and community properties

- Find out if your property is at risk by checking [UK's flood maps](#)
- If you are at risk from river or tidal flooding or in some specific areas affected by groundwater, sign up for the [UK's flood warning service](#) or call **Floodline** on **0345 988 1188**
- Sign up to [UK's flood warnings](#) and the [Met Office weather warnings](#)
- Read [UK's advice on preparing for a flood](#)
- Read the [National Flood Forum's advice on preparing for a flood](#)
- Read the London Fire Brigade [flooding webpages](#).
- Have a [flood kit](#) and make a flood plan, you can use [UK's template flood plan](#)
- Check your buildings and contents insurance policy to make sure you're covered for flooding and that you've not underestimated the value of your home contents
- Know how to turn off the water, gas, and electricity, ask your supplier for advice if you're not sure, put stickers on the taps so you can see them easily
- Plan what you will do with pets, cars, furniture, electrical equipment, and garden furniture
- Meet with neighbours and [make a community flood plan](#)

### Flood resilience equipment

Before using flood resilience equipment:

- Read [UK's advice on improving your property's flood protection](#)
- Consider installing flood protection measures on your property. You can buy flood protection products and find service providers on [The National Flood Forum Blue Pages Directory](#). This can include simple air brick covers which can be left on, flood doors and or barriers.

- Get advice from a flood specialist and be ready with a supply of temporary flood barriers, check the [National flood Forums advice on flood prevention equipment and surveyors](#)
- Get information and an online estimate on how to protect your property using the National Flood Forum's [Property Protection Advisor](#), funded by DEFRA.
- You may need to contact your landlord if you don't own the property to install property resilience
- Ensure you understand and learn how to use flood prevention equipment.
- Move valuables upstairs or to another safe place above the flood line

## During a flood

**If there is a risk to life, a serious risk to property or to the environment call 999**

During a flood you **should**:

- Keep up to date about the weather and risks to your property using radio, TV, web, or social media
- Keep outside drains clear to let surface water escape
- Turn off gas, electricity and water supplies before flood water enters your property (if it's safe to do so)
- Put plugs in sinks and baths and weigh them down to stop water overflowing into your home
- Wash your hands whenever they come into contact with flood water as they may be contaminated
- Look after your neighbours - even in the summer, people can suffer from hypothermia after their homes have become flooded with cold rainwater
- Be careful if you have a private water supply - flooding can affect its quality and damage equipment, boil it before drinking or using it for food preparation
- If your home has been flooded, move your family and pets upstairs, or to a high place with a means of escape, take your emergency grab bag with you
- If you're using a petrol or diesel water pump, put the generator outside, keep your doors and windows closed, use a carbon monoxide detector in your home - generators produce carbon monoxide fumes which can kill

During a flood you **should not**:

- Touch sources of electricity when standing in flood water
- Enter your home if there is raw sewage in it - stay somewhere else until it has been cleaned
- Smoke, eat or drink whilst in contact with flood water (always wash your hands in clean water before doing so)
- Let your children play in flood water, it can become contaminated with sewage and chemicals
- Use towpaths
- Walk through flooded areas - even shallow water moving fast can sweep you off your feet, there may be hidden dangers such as open drains, damaged road surfaces, submerged debris or deep channels - these can cause serious injuries or even death
- Travel in heavy rainstorms unless absolutely necessary
- Drive through flooded roads or areas:
  - 80 percent of flood deaths happen in vehicles as the water is deeper than it looks and moving fast
  - Your vehicle may be swept away, or you may become stranded, four inches of water is enough to stop a car
  - Driving through flood water can spread sewage onto your car and into streets

## Organisations working together

Where a flood event becomes a major event, the local authority has written a Multi-Agency Flood Plan. This has been agreed across all the key parties that have responsibilities in responding to flooding on how they will work together.

## What we do after a flood

We'll do our best to reduce flooding but if it does happen, we'll:

- Help restore the flooded area to normality
- Provide support to those affected by flooding
- Consider how we can prevent future flooding and reduce its effect
- Work with government departments and partner agencies, hoping to secure funding and grants for those affected
- For significant events the Local Authorities are likely to have a recovery plan which will be enacted.

## What you can do after a flood

What to do after a flood, once the water has receded:

- Contact your insurer as soon as possible after a flood [See insurance guidance for homeowners](#)
- Read [GOV.UK's advice on clearing up after a flood](#)
  - Wear protective clothing such as wellies and rubber gloves before starting any clean up
  - Remove dirty water and silt from your property
  - If you have wooden floors you may have water under the floorboards which need pumping out. Emergency services do not provide a pumping-out service, so you'll need to get pumps from hardware and DIY stores
  - If using a petrol or diesel pump make sure the generator is outside and that doors and windows are closed - generators produce carbon monoxide fumes which can kill
  - Ventilate your property, open doors and windows - less damp means less damage
  - Use specialist detergents to clean up oil and petrol, following the manufacturer's guidelines, and ensure the area is well ventilated
  - Don't dispose of damaged goods until your insurers have had a chance to inspect them
  - Flood water can leave a muddy deposit containing bacteria but a thorough clean up reduces the health risk
- Get your local electricity supply checked before switching it back on. (For businesses, assess the risk to your staff and customers and consider closing the business until it has been checked).
- Don't use electrical equipment exposed to flood water until it has been checked by a qualified electrician
- Do not use internal lifts until power is back to normal
- Have your gas or oil central heating checked by a qualified person
- Follow the [Food Standards Agency's advice](#) on food safety after a flood
- Get professional advice (structural engineer) for repairs if your property is damaged, [GOV.UK can help you find repairers](#)
- If anyone becomes ill after accidentally swallowing flood water or mud, contact a doctor and tell them about the flooding
- [Report your flood](#) to the relevant body to ensure they take action where necessary, and it is included in future decision making on projects that may be taken forward
- Apply for any assistance provided by central government and/or the local authority.

Consider [Build Back Better - Flood Re](#)

# Flood risk management

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We have a range of duties and powers to help reduce and manage flooding within the borough.

## Lead Local Flood Authority

As the Lead Local Flood Authority, we are responsible for coordinating the management of flooding from groundwater, surface water and ordinary water courses within the borough.

## Groundwater flooding

Groundwater flooding happens when water levels in the ground rise above surface levels.

## Surface water flooding

Surface water flooding (also known as flash flooding) happens when heavy rainfall overwhelms the drains of the local area, or when a pumping station fails.

Surface water flooding is more difficult to predict and pinpoint than river flooding. We estimate that around [681 properties in the borough](#)  (pdf, 12.3 MB) are at a high risk from surface water flooding.

## River flooding

River flooding (fluvial) happens when a water course cannot cope with the water draining into it from the surrounding land.

River flooding is usually caused by heavy rain falling on already waterlogged land. We estimate that around [4753 properties in the borough](#)  (pdf, 2.3 MB) are at risk from river flooding.

We have a range of duties and powers to help reduce and manage flooding within the borough.

We also work closely with external bodies such as the Environment Agency and Thames Water to provide a joined up approach. Unfortunately it is not always possible to prevent damage to properties in every flood. We do not have a legal obligation to protect individual properties. However, we will do all we can to reduce the risk of flooding and help residents following a flood.

## Flood investigation

We have a duty to investigate flooding when it is 'necessary and appropriate' (Section 19 of the Flood and Water Management Act).

You can tell us about flooding in the borough, or we may notice incidents of flooding ourselves. When we come to know about flooding we decide whether to undertake a flood risk investigation. We are likely to investigate where:

- A property has been flooded inside, on more than one occasion
- Five or more properties have been flooded inside during a single flood incident
- Critical infrastructure has been affected by flooding
- The source of flooding is ambiguous

The investigation will identify which Risk Management Authority (for example us or the Environment agency) have a flood risk management function in relation to the flood. It will then detail what each authority with a relevant function is going to or has done in response to the flooding incident.

View our [recent flood investigations](#).

## Local Flood Risk Management Strategy

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As Local Lead Flood Authority, we have a duty, under Section 9 of the Flood and Water Management Act 2010, to develop, maintain, apply and monitor a strategy for local flood risk management. Local flood risk is the risk of flooding from ordinary watercourses, groundwater and surface water.

Read the [London Borough of Richmond upon Thames Local Flood Risk Management Strategy](#)  (pdf, 2.3 MB).

The strategy describes how flood risk will be managed across the borough. It considers the risk of flooding from ordinary watercourses, groundwater and surface water. It outlines our priorities for managing the local flood risk and sets out a delivery plan to manage the risk.

The strategy includes:

- The risk management authorities within the boundaries of the borough and what management functions each authority has in managing local flood risk. We have given consideration to the roles and responsibilities of other risk management authorities across the borough, including:
  - The Environment Agency, who have responsibility for managing the risk of flooding from main rivers
  - Thames Water, who have responsibility for managing the risk of flooding from sewers
- The objectives for managing local flood risk, along with how and when they are expected to be achieved
- The cost and benefit of each measure
- An assessment of local flood risk
- An action plan of how and when the strategy is to be reviewed
- How the wider environment will benefit by achieving the objectives set out in the strategy

Projects that are being delivered to reduce local flood risk include:

### Flood Asset Register

We maintain a register and record of assets that have a significant impact on the risk of flooding. (This is required by the Flood and Water Management Act.) An asset is a structure or feature that can affect the flow or storage of water.

For example a wall next to a river could stop water from flooding houses during heavy rain, and it could be considered an asset. Pipes in the ground, bridges and roadside gullies are other examples of assets that can affect flood risk.

### Assets in your local area

The [Asset register](#) is an online record of assets in the borough. The register contains information about the location, condition and ownership (where available) of each asset. The register does not show you where there is a risk of flooding, but you can use the register to see what assets are in your local area.

## Managing development and building works

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As the Lead Local Flood Authority and as the Local Planning Authority, we have a range of duties and powers to help prevent and manage flooding within the borough. Some of those duties affect building and development within the borough.

Although flooding is a natural event, it can be life-threatening and cause severe damage to property. The risk can't be removed but can be reduced through good planning and management in order to create safe and sustainable future development.

As the Local Planning Authority we are responsible for assessing flood risk.

You can read the latest [Strategic Flood Risk Assessment](#) (pdf, 2.3 MB).

## Sustainable urban drainage

Sustainable drainage aims to mimic natural processes. Examples of sustainable drainage are:

- Ponds
- Green roofs
- Soakaways
- Swales

Sustainable drainage puts as much water as possible back into the ground to:

- Help maintain healthy aquifers
- Decrease the risk of flooding and drought
- Improve water quality

Sustainable Drainage is a material planning consideration for all Major applications. The Lead Local Flood Authority is consulted on all major planning applications since 15 April 2015.

Read more about [assessing drainage on major applications](#) and how to complete the [drainage Proforma](#).

## Ordinary watercourse consenting

As Lead Local Flood Authority we are responsible for consenting and enforcing ordinary watercourses.

If you are undertaking work that will affect the flow of water through an ordinary watercourse or culvert, you need consent from us before work can begin.

A watercourse is defined in the Land Drainage Act 1991 as 'all rivers and streams, all ditches, drains, cuts, culverts, dikes, sluices, sewers (other than public sewers within the meaning of the Water Industry Act 1991) and passages, through which water flows'.

An ordinary watercourse is a watercourse that has not been designated as a main river on the Environment agency's flood risk map.

If you do not get consent from us and your work affects an ordinary watercourse we have the power to take remedial action. This includes the power to complete the works and reclaim the associated costs from you (see section 23 of the Land Drainage Act 1991).

Please contact for quires: 020 8871 7372.

## Designated structures or features that may reduce flooding

As the Lead Local Flood Authority we have powers to designate structures or features with a significant impact on flood risk. We do this to protect structures or features that play a role in reducing flood risk. If we have designated something it usually means that a number of properties would be at a greater risk of flooding if that structure or feature was removed.

The Environment Agency also have powers to designate structures you can find out more on the [GOV.UK Flood and sea defences guidance](#).

A record of the designation will be put onto the Local Land Charges so that subsequent land owners will be made aware of the designation.

Once we have designated a feature, the owner must seek consent from us to alter, remove, or replace it.

If you make a change to a designated feature without our consent, we may issue an enforcement notice which will set out the steps that must be taken to restore the feature.

You may appeal against a designation notice, refusal of consent, conditions placed on a consent or an enforcement notice.

Contact us to find out the structures that have been designated and discuss consent to alter a feature or structure that has been designated.

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Up to: [Severe weather](#)

Updated: 16 August 2022



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