

# FLOOD EVACUATION PLAN

Kneller Hall



HLEF 84861

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08 September 2022

## REPORT

### Document status

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### Approval for issue

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# 1 INTRODUCTION

**A COPY OF THIS REPORT SHOULD BE MAINTAINED IN THE BUILDING MANAGEMENT OFFICE. ALL SITE USERS SHOULD BE BRIEFED ON THE CONTENTS AND PROCEDURES.**

- 1.1 This is a Flood Evacuation Plan (FEP) for the proposed development at Royal Military School of Music, Kneller Hall, Kneller Road, Twickenham, TW2 7DU. As part of the planning submission the Council has requested that a Flood Evacuation Plan (FEP) is provided. The FEP takes into account the nature of the proposed development comprising a re-development of the Kneller Hall site which is allocated in the Richmond Local Plan (2018).
- 1.2 The proposed development is for the demolition of existing modern buildings on the site and the conversion of Kneller Hall and other ancillary buildings associated with the Royal Military Music School to a day school (use Class F1), together with the construction of associated new purpose-built buildings including teaching space, indoor sports facilities and sporting pavilion, and other ancillary works including landscaping, access and energy centre.
- 1.3 Environment Agency mapping indicates the site is located within Flood Zone 1, with an annual probability of flooding that is greater than 1 in 1000 (0.1%) from tidal or fluvial sources in the absence of any defences. The flood outline is produced in respect to the risk posed by surface water flooding as the proposed site is not near any fluvial or tidal sources.
- 1.4 The flood risk analysis are included within the Flood Risk Assessment report, prepared by RPS in (ref, HLEF84861 Kneller Hall FRA R v2 20220915). The report concludes that overall, the risk of inundation in the event of a surface water flooding at the site is **moderate**, and it will be reduced to **low** with the implementation of a suitable drainage strategy. Notwithstanding this, in the unlikely event of flooding the site should be evacuated upon receiving a flood warning.
- 1.5 This Flood Evacuation Plan has been produced to raise awareness of the potential flood risk and to provide guidance regarding appropriate actions to be taken in the unlikely event of flooding or receipt of a flood warning for the site.
- 1.6 The site is not located within a Flood Warning Area. However, the management of the site should sign up to a Weather Warning Service.
- 1.7 The aim of the Flood Evacuation Plan is to provide an accessible document for use, prior to, and in the event of, a flood. It is purposefully brief with an emphasis on clear graphical aids. A technical explanation of the flood risk and reasoning behind the evacuation procedure is provided in Appendix A.
- 1.8 The report should be considered a live document which will require regular review in accordance with any local changes in procedures. As a minimum an annual review should be undertaken along with a review following each evacuation undertaken.
- 1.9 **Instructions in this Flood Evacuation Plan should be disregarded if conflicting information is given by the Emergency Services, or other authority co-ordinating an emergency response, in the event of flooding.**

## 2 FLOOD ACTION PLAN




### Preparing for Flooding

- 2.1 Site users should familiarise themselves with the potential risk of flooding and the actions to be taken in the event of a flood, as detailed in this plan. The flood risk at the site appears to be associated with a surface water flow path running along the west, north, and east site boundaries, and surface water ponding in lower topographical spots or trapped between the buildings. The site users should be aware of the potential flood risk and be prepared to react quickly if required. Site users should also familiarise themselves with the use of the Weather Warning Service.
- 2.2 The site is not at risk of fluvial flooding and is not located within a Flood Warning Area. However, the Flood Warning Area “River Crane at Twickenham including Cole Park” associated with the Duke of Northumberland’s River is bordering the east boundary of the site. Given the close location to the flood warning area, it is anticipated that the site could be included in this area and it is recommended that residents and users sign up to the EA flood warning service to allow for sufficient time to prepare for a flood event.
- 2.3 In addition, the site management and users are advised to sign up online for the Met Office e-mail weather warnings (<https://service.govdelivery.com/accounts/UKMETOFFICE/subscriber/new>). This will give site users early warning of any heavy rainfall events.
- 2.4 Following the receipt of a flood warning from the Met Office or the EA flood warning service, all residents, staff and contractors at the site should evacuate the site, following the route as indicated in Figure 1 (Section 3). In the unlikely event that flooding occurs prior to commencing evacuation, all users of the site should seek safe refuge in the upper floor areas of the buildings they are located at this point in time. Considering the EA does not acknowledge any fluvial risk of flooding, it is not expected for the flooding to be of long duration (More than 12 hours), so occupants are not likely to need to seek refuge for a significant length of time.
- 2.5 It is recommended that the site users prepare a ‘Flood Kit’ in order to ensure that they have adequate provisions and essential items in a readily accessible place to last them for a few hours if the building becomes surrounded by flood water. The following items are recommended for inclusion (these items should be stored permanently in a central location on the ground floor and be moved to the first floor if flooding is imminent):
- Torch;
  - Fully charged mobile phone;
  - Battery operated radio;
  - Spare batteries / Charged portable charger and associated cables;
  - First aid kit;
  - Bottled water and non-perishable food items;
  - Local council / emergency services contact numbers and local radio frequencies (see Section 4); and
  - Any essential medication for staff members.

### Environment Agency Flood Warnings

- 2.6 The Environment Agency is responsible for monitoring flood events and for issuing warnings to people in properties and businesses at risk of flooding. They operate a four-stage coded warning system. Definitions and symbols for each warning stage are given in Table 1 below.

**Table 1. Environment Agency Flood Warning Symbols**

Warning Symbol	Status
	<p><b>Severe Flood Warning</b> Severe flooding. Danger to life.</p>
	<p><b>Flood Warning</b> Flooding is expected. Immediate action required.</p>
	<p><b>Flood Alert</b> Flooding is possible. Be prepared.</p>
<p>No symbol</p>	<p><b>Warning no longer in force</b> Flood warnings and flood alerts that have been removed in the last 24 hours.</p>

- 2.7 The site is located in a close proximity to a Flood Warning area and it is anticipated that the site management can register for flood warnings associated with this area.
- 2.8 Information regarding the latest flood warning status can be obtained via the following sources:
  - The Environment Agency website: <https://flood-warning-information.service.gov.uk/warnings>
  - Calling the Environment Agency’s Floodline on 0345 988 1188; and
  - Local television or radio.




**If a Warning is Received**

- 2.9 The Environment Agency’s flood warning service uses three types of warning, as described in Table 1 above. Actions to be taken upon receipt of each level of flood warning are included in Table 2 overleaf.

**Responding to a flood warning – further information**

- 2.10 **The instructions of the Emergency Services over-ride any advice given within this plan and must be followed at all times.**
- 2.11 It should be noted that flooding could occur from any source with no prior flood warnings issued. In this case, the emergency response will be co-ordinated by the Emergency Services, but evacuation to first floor level is advised whilst the emergency response is awaited.
- 2.12 The following flow chart should be followed, according to the level of flood warning.

Table 2. Flood Management Procedure

FLOOD ALERT	
 <p>Flood Alert</p>	<ul style="list-style-type: none"> <li>- Check Environment Agency website (updated every 15 minutes, 24 hours a day, 7 days a week) or call Floodline for updated flood status hourly;</li> <li>- Display appropriate sign at access points, detailing active alert status;</li> <li>- Consider the needs of any staff/residents with mobility requirements;</li> <li>- Collate any necessary emergency contact details and the Flood Kit and be prepared to evacuate if required (see Section 3);</li> <li>- Charge mobile phones;</li> <li>- Follow local media coverage.</li> </ul>
FLOOD WARNING OR SEVERE FLOOD WARNING	
 <p>Flood Warning</p>	<ul style="list-style-type: none"> <li>- Initiate evacuation;</li> <li>- Display active status at all access points to the building;</li> <li>- Access into building to be closed;</li> <li>- Building management should ensure all occupants are aware of the active Warning and provide guidance as necessary to possible situation;</li> <li>- Check all ground floor rooms and external areas are vacated;</li> <li>- Continue to monitor flood warning levels and follow local media coverage;</li> <li>- If warning received outside of working hours, notify staff by phone that the offices are closed;</li> <li>- Co-operate with emergency services (site manager to act as central contact for liaison with emergency services);</li> <li>- Call 999 if in immediate danger.</li> </ul>
 <p>Severe Flood Warning</p>	
ACTUAL FLOODING (WITH NO PRIOR WARNING)	
<ul style="list-style-type: none"> <li>- All site users to relocate immediately to first floor (with emergency items listed in Section 3.5);</li> <li>- Co-operate with emergency services (site manager to act as central contact for liaison with emergency services); and</li> <li>- Call 999 if in immediate danger.</li> </ul>	
FLOOD WARNING NO LONGER IN FORCE	
<ul style="list-style-type: none"> <li>- No further flooding expected. If flooding has not occurred, property can be re-occupied;</li> <li>- If flooding has occurred, building to be inspected for safety prior to reoccupation;</li> </ul>	

## REPORT

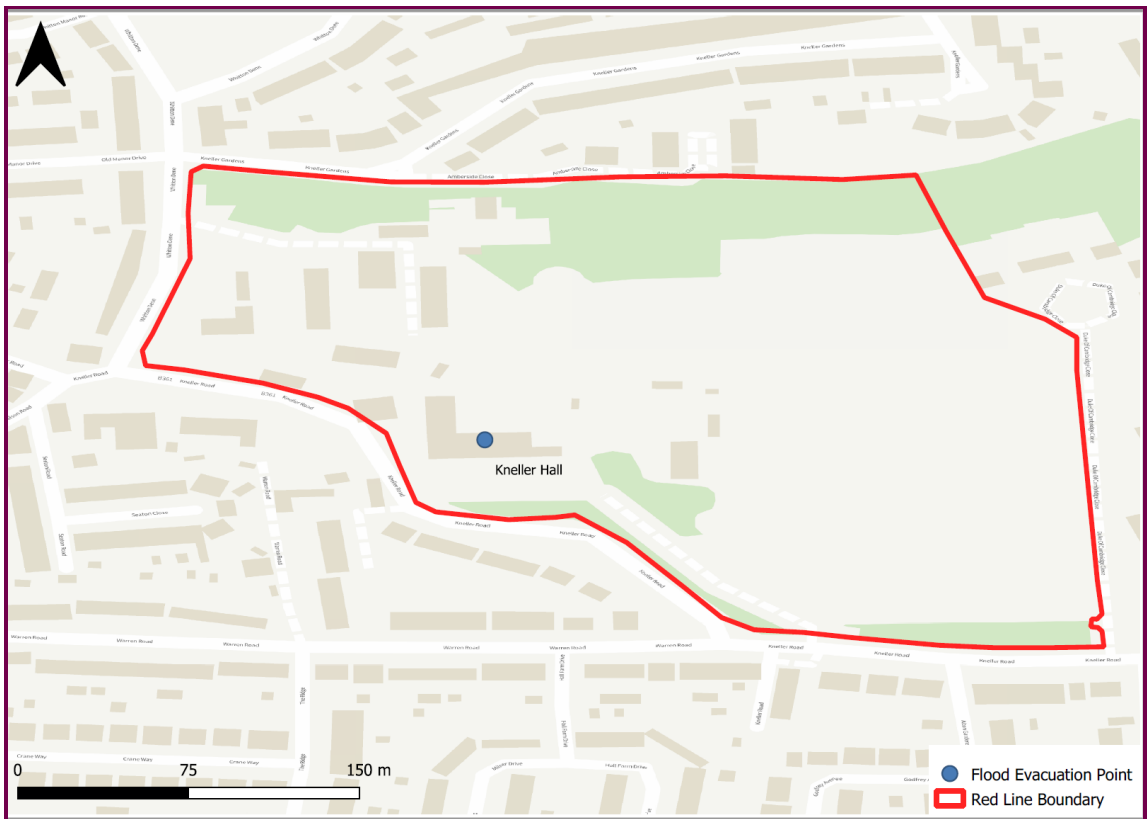
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- Call insurance company if building affected;
- Site management to consult utilities company before re-connecting services; and
- Be aware of sharp objects or pollution in floodwaters.



### 3 EVACUATION ROUTE

- 3.1 If a warning is received prior to any potential flooding to occur, the site management team will initiate an emergency evacuation of the site and occupants will follow the route presented in Figure 1.
- 3.2 The following evacuation route has been identified: Site users should proceed to Kneller Hall which is located to the south of the site and is indicated in figure 1 as a blue navigation point and is clearly labelled. This route will take site users to an area located within Flood Zone 1, and outside of the area at risk of surface water flooding. Site users may congregate within Kneller Hall to register their safe evacuation from the site with the site manager and disperse as appropriate. Figure 1 below indicates the proposed evacuation point.
- 3.3 If flooding occurs instantly, without preliminary warning and the paths around the site are flooded prior to evacuation, then site users should seek safe refuge in the upper floors of the building they are currently located within and wait for rescue.



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**Figure 1. Flood Evacuation Route**

## 4 STAFF TRAINING

- 4.1 All staff should review this plan as part of their standard induction and a copy should be provided to residents. Designated personnel should be appointed to coordinate any required evacuation to Kneller Hall (it is anticipated that responsibilities will be similar to a fire evacuation). Furthermore, it is extremely unlikely that flooding will occur quickly with limited warning. However, even still it is recommended that all staff and residents are aware of the flood risk and are prepared to react quickly if required. Furthermore, regular refresher training should take place and staff and residents should be reminded of the procedure and location of the flood evacuation point before an impending flood event.
- 4.2 Training should include:
- awareness of the potential for flooding;
  - the specific nature of the flood risk to the site;
  - the method by which flood warnings will be received;
  - methods for communicating evacuation to site users;
  - the evacuations procedures (as detailed in this Flood Evacuation Plan) and the role of staff in implementing it;
  - the location and contents of the 'Flood Kit';
  - the potential dangers associated with flood water including but not limited to:
    - the dangers associated with driving, walking or swimming through flood water;
    - debris in flood water;
    - contaminated flood water; and
    - hidden foot traps and popped manhole covers.
- 4.3 Refresher training should be undertaken on an annual basis, or in the event that an evacuation has been undertaken (whichever occurs first).

## 5 LINES OF COMMUNICATION

5.1 The following table identifies external organisations who may be involved in the response to a potential flood event.

**Table 3. Contact Information**

Organisation	Contact details
Emergency Services	999
NHS medical help (non-emergency)	111
Environment Agency National Contact Centre	03708 506 506
Environment Agency Incident Hotline	0800 80 70 60
Environment Agency Floodline	0345 988 1188 Type talk: 0345 602 6340
If you smell gas	0800 111 999
Site Management	TBC
Electricity provider	TBC
Insurance provider	TBC
Gas Network Operator	0800 029 4285
Thames Water	0800 316 9800
Metropolitan Police non-emergency number	101



**APPENDICES**

## Appendix A- Technical Justification

- A.1 The National Planning Policy Framework (NPPF) requires that flood risk is appropriately managed for new developments so that they remain safe throughout their lifetime, taking climate change into account. Safe access and egress routes should be provided.
- A.2 The proposed development is located within Flood Zone 1. However, a surface water flow path is running through the site and this flood evacuation plan has been prepared taking into account the risk of surface water flooding at the site.
- A.5 This Flood Evacuation Plan details actions to be taken when a flood warning from the Met Office or the EA flood warning service is received. Upon receiving a flood warning, the site users can leave the buildings and congregate at Kneller Hall. However, if inundation of the surrounding areas has commenced prior to evacuation, the residents should remain in the building and seek internal refuge in the upper levels.
- A.6 Should any magnitude of flood event occur, an advance warning is likely to be available before floodwaters reach the site, via the Environment Agency's Flood Warning Service. During an extreme flood event, it is critical that personnel are aware that evacuation of the site should only be undertaken if an advance warning has been received.

