



# **Red & Yellow Specialist Extra Care**

Melliss Avenue - Kew

Flood Warning & Evacuation Plan  
October 2018





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## **1 Introduction**

Planning Permission has been applied for in respect of the proposed redevelopment of the former Biothane Site, Melliss Avenue, Kew. The scheme involves demolition of existing buildings and structures and redevelopment of the site to provide a Specialist Extra Care facility (C2 Use Class) for the elderly with existing health conditions. Comprising, 89 units, with extensive private and communal healthcare, therapy, leisure and social facilities set within a building of ground plus 3 to 5 storeys including set backs. Provision of car and cycle parking, associated landscaping and publicly accessible amenity spaces including a children's play area.

This Flood Warning and Evacuation Plan (FWEP) has been prepared in anticipation of its requirement as part of the Planning Approval and shall be read in conjunction with the AKT II Flood Risk Assessment report dated October 2018.

The following form must be completed if this report is revised.

### **Amendment Sheet**

<b>Amendment number</b>	<b>Details</b>	<b>Amended by</b>	<b>Date</b>



## ***2 Aim and Objectives of the Plan***

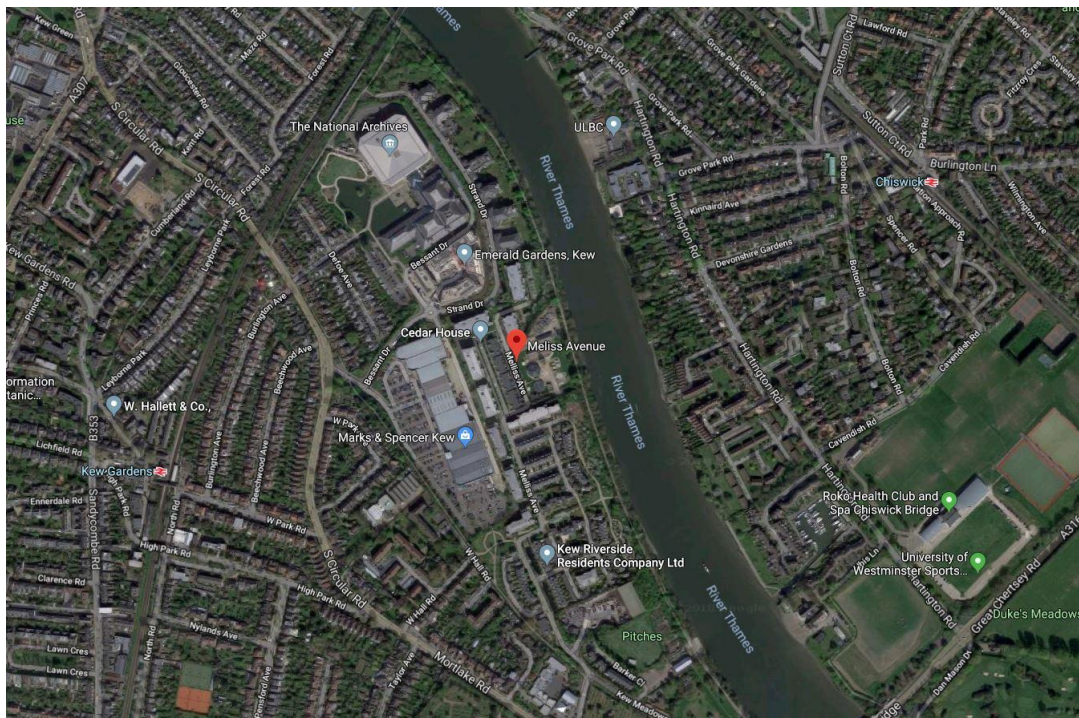
The aim of this report is to outline an appropriate emergency response to fluvial flooding on site. The objectives are:

- Explain flood warning arrangements.
- Clarify the roles and responsibilities.
- Describe what actions are required by the people in the development.
- Detail how the Plan is triggered, by who and when.

The report draws upon the findings of the AKT II Flood Risk Assessment (FRA) that was prepared in support of the Planning Application for the redevelopment of Mellis Avenue, Kew, to demonstrate that the site can be redeveloped safely, without exposing the new development to an unacceptable degree of flood risk or increasing the flood risk to third parties. Refer to figures 1 and 2 for the site location.



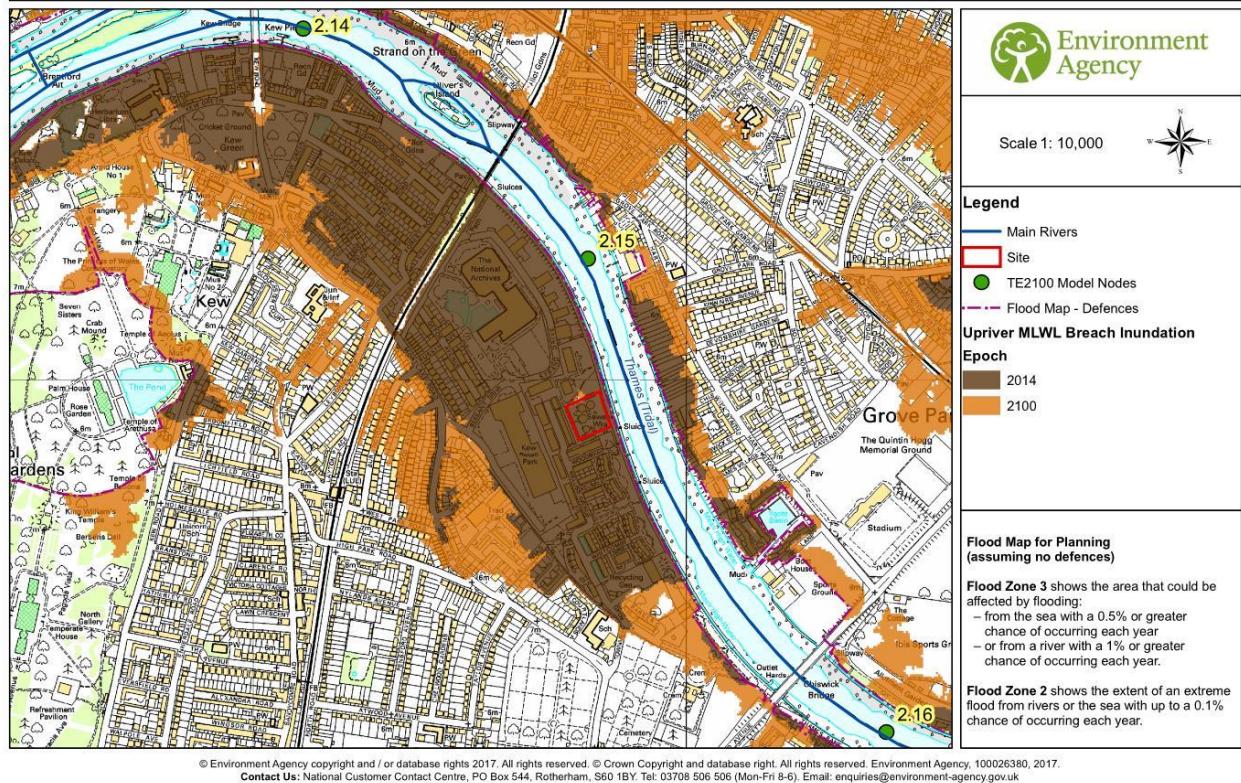
**Figure 1: Site Location – Environment Agency Flood Risk from Rivers or the Sea**



**Figure 2: Site Location**



**Breach inundation map centred on TW9 4BD created 15 November 2017 [Ref: KSL 66463 UE]**



**Figure 3: Environment Agency Breach Flooding Map**

## The Risk of Flooding

The FRA undertaken by AKT II assessed the flood risk to the site from all potential sources and concluded that it is subject to the following risks:

Risk of flooding from rivers or tidal sources	Low
Risk of flooding from surcharging sewers	Low
Risk of flooding from groundwater sources	Low
Risk of flooding from artificial sources	Very Low
Risk of flooding from surface water flooding	Very Low

The FRA categorised the site as lying within Flood Zone 3a - an area assessed as having a high probability of flooding without the local food defences. The food defences protect the area against a river food with a 1 in 100 annual probability or 1 in 200 annual probability of sea flooding.

The Environment Agency have provided the modelled flood extents from their 'Thames Tidal Upriver Breach Inundation Modelling Study 2017' which indicate that the site is impacted as indicated in Figure 3 above.

The proposed development will be at flood risk if there is as breach in the tidal defences as confirmed by Environment Agency, refer to Section 7 of the Flood Risk Assessment by AKT II. Comparison of the site topographic survey and the modelled breach food level obtained from the EA indicates that the site would be impacted by a breach to a maximum depth in excess of 2m. In accordance with the Figure 6b this will pose danger to all. Therefore, a dry route connecting the site to an area outside the floodplain will not be available

		Depth (m)									
Velocity (m/s)		0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50
	0.00	0.13	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13	1.25
	0.50	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50
	1.00	0.38	0.75	1.13	1.50	1.88	2.25	2.63	3.00	3.38	3.75
	1.50	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
	2.00	0.63	1.25	1.88	2.50	3.13	3.75	4.38	5.00	5.63	6.25
	2.50	0.75	1.50	2.25	3.00	3.75	4.50	5.25	6.00	6.75	7.50
	3.00	0.88	1.75	2.63	3.50	4.38	5.25	6.13	7.00	7.88	8.75
	3.50	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
	4.00	1.13	2.25	3.38	4.50	5.63	6.75	7.88	9.00	10.13	11.25
	4.50	1.25	2.50	3.75	5.00	6.25	7.50	8.75	10.00	11.25	12.50
	5.00	1.38	2.75	4.13	5.50	6.88	8.25	9.63	11.00	12.38	13.75

Flood Hazard Rating (HR)	Colour Code	Hazard to People Classification
< 0.75		Very low hazard - Caution
0.75 to 1.25		Danger for some - includes children, the elderly and the infirm
1.25 to 2.00		Danger for most - includes the general public
> 2.00		Danger for all - includes the emergency services

Figure 6b: Extract from FD2321/TR2

The proposed habitable floors will be located approximately 2.5m above the breach level. Therefore, in the event of a breach, any residents on the habitable floors will remain there, safely above the flood level. Any residents in the communal ground floor areas will evacuated to their apartments, or be relocated by trained staff.

The building managers will be register with the EA Flood Warning system. Therefore, in the event of any warning of an imminent breach event the on-site evacuation strategy will be implemented. There will be trained staff present on site 24 hours a day, 7 days a week.

### **3 Communication Plan**

Warning and informing those at risk is a key requirement.

#### ***Communication during an incident***

It is recommended that a flood alarm system to be installed in the building. The flood alarm would be activated by the staff on site and will provide hearing and visual warning to the residents.

### **4 On-site Evacuation Procedures & Routes**

The Evacuation procedure will be developed which identify when and how evacuation procedure takes place.

### **5 Briefing / Training / Document Control**

All personnel who work on site will be made aware of this Plan and briefed & trained accordingly. The Plan will be distributed to all residents and will be owned, maintained and updated by the building managers.

### **6 Plan Activation – Thresholds and Triggers**

#### ***What do flood warnings mean and what do responders do?***

The Environment Agency operates a flood warning service in areas at risk of flooding from rivers and the sea. Warnings are issued using a set of four easily recognisable codes. A description of the codes, their definition and lead times is below:

#### ***Flood Warnings are defined as:***

##### **6.1 Flood Alert**



#### **FLOOD ALERT**

##### **Flooding is possible. Be prepared.**

- Be prepared for flooding.
  - Prepare a flood kit of essential items.
  - Monitor local water levels and the flood forecast on the Environment Agency's website.
-

## 6.2 Flood Warning



### FLOOD WARNING

**Flooding is expected. Immediate action required**

- Move family, pets and valuables to a safe place.
  - Turn off gas, electricity and water supplies if safe to do so.
  - Put flood protection equipment in place.
- 

## 8.3 Severe Flood Warning



### SEVERE FLOOD WARNING

**Severe flooding. Danger to life**

- Stay in a safe place with a means of escape.
  - Be ready should you need to evacuate from your home.
  - Co-operate with the emergency services.
  - Call 999 if you are in immediate danger.
-





## **7 Key Facilities**

As the proposed ground levels will be constructed approximately 1.5m below the breach level, key infrastructure at risk of flooding will be identified at a later stage of the project and the flood plan will be revised accordingly to protect these items where possible. It should be noted that all of the habitable accommodation is above the flood level in a breach condition.

## **8 Recovery**

As the floodwater recedes, the emergency response may still be ongoing as the recovery phase begins. The local authority will lead the recovery of the community and help to restore the economy, infrastructure and the environment in partnership with other agencies and organisations and the private sector.

Recovery from a minor flood will usually form part of normal operations without special arrangements. However, a severe flood affecting many people and properties will require a co-ordinated response.

The Recovery will need to prioritise the various needs and allocate resources appropriately so that the community returns to normality as soon as possible.

Common issues following flooding include:

- clean up and waste disposal;
- repairs to assets;
- restoration of power, communications and water;
- domestic and business insurance issues;
- humanitarian assistance needs including
  - homeless / displaced residents;
  - psychological impacts;

## **9 References**

- National Planning Policy Framework (NPPF)
- FD2321/TR2 “Flood Risks to People” – Environment Agency, Defra, March 2006
- Environment Agency’s website “[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)”
- Planning Advice Note Guidance on Producing a Flood Emergency Plan November 2011 – London Borough of Richmond Upon Thames



## Appendix A – General Advice to those at risk

### Before a flood / evacuation preparation

#### Prepare a Flood Plan and include the following:

##### A flood kit

Pack a small bag with essential belongings and include warm clothes, torch (check batteries), radio (wind up or battery powered), food, water, other drink, mobile phone (pre input useful numbers), any medicines that you might need to take, any important documents that you have and a first aid kit. Keep this bag easily accessible.

- Move people, pets, valuables and sentimental items above ground floor level.
- Keep a separate list of useful telephone numbers to hand (this should include your local Council, your insurance company and **Floodline – 0345 988 1188**).
- Find out where and how to turn off your Gas and Electricity. Ensure that you switch it off if flooding is imminent before evacuating.
- If possible, move electrical equipment and furniture above ground floor level.
- Any furniture that you cannot move upstairs, try to raise well off the floor.
- Alert neighbours and assist the elderly, infirm and those with small children.
- Block doorways and air bricks
- Avoid walking and driving through floodwater, there could be hidden hazards.
- Keep up to date with local radio for further information and announcements and via **Floodline 0345 988 1188**.

##### **During a flood**

- Continue to listen to situation updates on your local radio and via **Floodline 0345 988 1188**.
- Keep dry and out of floodwater if possible.
- Stay in your property, if safe to do so, until advised otherwise by the emergency services or the floodwater has receded.
- Do not walk or drive through flowing floodwater.
- If it is necessary to walk through shallow floodwater, take care for hidden holes, obstacles or other hazards
- Do not walk on river banks, sea defences or cross bridges over torrential rivers.
- Avoid contact with floodwater and wash any exposed parts before handling food or attending to wounds.
- If possible, move electrical equipment and furniture above ground floor level.



### **If evacuation becomes necessary**

- Stay calm and do not panic.
- Police officers and / or other officials will try to visit all properties at risk to advise on the requirement to evacuate.
- If road conditions permit, move vehicles to unaffected areas and ask friends / family if you can share their parking facilities.
- You will hear about your evacuation point for transport and the location of the reception centre either verbally or by a leaflet.
- Try to check that any elderly / vulnerable family members or neighbours know about the evacuation.
- Try to inform family members / friends as to where you are evacuating.
- Please follow the instructions given when the time comes.

### **After a flood / returning home**

- Contact your insurers and follow their advice. Do not throw away damaged goods until your insurer has checked them.
- Check the safety of electricity and gas before use. A qualified electrician needs to check any electrical equipment and circuits that have been exposed to floodwater.
- Avoid contact with any remaining floodwater or items having had contact with floodwater unless wearing protective gloves / clothing.
- Boil all tap water until it is declared safe by the water supply company
- Wash yours and your children's hands frequently with bottled water if your supply has not been declared fit for use. Disinfect any children's toys.
- Dispose of any contaminated food, including tinned food, defrosted food, and packaged food that have been exposed to floodwater.
- Seek medical assistance if any health issues appear, especially flu like symptoms.
- Ventilate your property whilst taking care for security.
- Do not throw rubbish and furniture outdoors; wait for an organised collection.
- During these hard times, bogus / cowboy builders / traders are frequently offering their services. Make sure that you get a written quotation that is on letter headed paper with a landline contact number and address.

The National Recovery Guidance contains the following advice provided by the Association of British Insurers. You may wish to incorporate any additional points into the above lists.

### **Key messages for people affected by a flood:**

- For those people living in a flood risk area, personal safety is the top priority. They should:
  - listen to local radio and Environment Agency Floodline bulletins (0345 988 1188) for up-to-date information on the flooding situation in their area, or alternatively register with the Environment Agency's 'Flood Warnings Direct' early warnings system;
  - collect personal belongings, including insurance and bank details, and essential telephone numbers together, and keep them in a waterproof bag;
  - if safe to do so, move belongings from lower floors to higher levels.

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- be prepared to turn off essential supplies – gas, electricity and water – at the mains.
  - listen to the advice of the authorities and follow any instructions to leave a property.
- If people are affected by a flood, they should contact their insurers as soon as possible after their properties have been damaged. Most insurers have a 24-hour helpline. Claims staff will be able to give advice on the actions that need to be taken. In certain circumstances, claims staff may also be able to give the go-ahead for repair work to be commenced.
- If people have to leave their houses during the flood and subsequent repair, alternative accommodation must be reasonable and in keeping with their normal lifestyles. They should always obtain their insurers' approval before incurring any costs.
- Once the flood waters have receded, the property should have mud removed, be cleaned and disinfected, and dried out. Where possible, people should seek professional advice as to how walls, furniture and carpets should be cleaned and dried out, before any work is undertaken.
- It is a good idea for people to take photographs of the damage. Any carpets, furniture or other goods that have been removed from their homes should be retained until their insurers have agreed that they can be disposed of. If it is not possible to store or retain goods, every effort should be made to contact the insurers or their representatives (loss adjusters) to obtain their agreement to the disposal of goods.





## Appendix B – Contact Details of Key Personnel

**Figure A1 Contact Details of Key Personnel**

Department / Organisation	Post title	Contact number	Secondary contact (name / number)
Environment Agency floodline		0345 988 1188	
Quickdial number			
Local authority emergency helpline			
Insurance company 24-hour number			
Local radio station frequency for news alerts and weather updates			
Family and neighbours			
Bank phone number and details			
Work phone number			
Doctor's surgery			
Local police station			
Vet/kennel/cattery			
Local hotel or B&B			
Gas supplier and meter number			
Electricity supplier and meter number			
Water supplier and meter number			
Electrician			
Plumber			
Builder			



## Appendix C – Warning those at risk

### Sirens/Alarms

SIRENS/ALARMS	
Location	Communal areas
Operation	Similar to fire alarm
Activation	From residents if a flood warning is issued

invest  change