



# WHITLINGHAM BOATHOUSES FLOOD EVACUATION PLAN

## INTRODUCTION AND SCOPE

This document sets out the Flood Evacuation Plan for Whitlingham Boathouses.

This plan applies to all property managed and operated by Whitlingham Boathouses Foundation Ltd (WBF) under a lease from Whitlingham Charitable Trust and applies to all users of the site whether members, users or visitors.

The scope of the site is set out on the attached map.

### AIM

The aim of this plan is to ensuring the safe operation, evacuation and subsequent re-occupation of the WBF site in the event of a flood situation.

### SITUATION

The site is situated within Whitlingham Country Park and is accessed from Whitlingham Lane, through the Park. There are 2 main routes in and out: one gravel track for both vehicles and pedestrians from the south west and one gravel path for pedestrians only from the east. Both access routes link into Whitlingham Lane and the Whitlingham Country Park car parks.

All of the buildings on the site have been designed as boat storage or ancillary facilities and are all within the flood plain of the River Yare. In particular, the new boathouse facility (main building constructed in 2011 and completed in 2015) has been designed to be permeable to water and includes a number of flood alleviation measures both within the ground floor and beneath the floor slab.

The original boatsheds are also water permeable, one on a concrete foundation and one on bare earth.

The site has the River Yare to the north west and the Whitlingham Little Broad to the south and south east.

There is no residential accommodation on the site. Any occupation is on a daily basis between the operating hours of 0600hrs and 2300hrs, 7 days per week. The site operates on every day of the year except for Christmas Day.

The following maps are attached:

- General site map showing the demise and including evacuation and assembly routes
- Environment Agency flood risk map for NR14 8TR (note that the boathouse is physically located at Grid Reference TG 251077)



## FLOOD RISK

### GENERAL

The whole site is deemed to be Water Compatible Development and has been developed in accordance with the Broads Authority Development Plan Document.

### DEFINITION OF THE FLOOD HAZARD

*Sources of flooding.* Any serious flooding at Norwich would be expected to be due to a combination of fluvial (river) and tidal effects

*How flooding would occur.* The water levels in the River Yare would rise and overtop the bank surrounding the quay heading and river access point. To an extent, the water levels vary with every rise and fall of the tide. The only record of the site behind the river bank flooding was in 1912. Those who have used this site since 1972 (establishment of the existing facility) cannot recall water levels ever breaching the bank at this point.

*Drainage.* The site drains naturally, primarily into the River Yare but also into the Little Broad.

*Run-off.* The site currently copes with the normal rise and fall of the tide as well as land-water flow into the River Yare.

### PROBABILITY

*Flood Map.* The Environment Agency flood map shows the site to be within Flood Zone 3 (High Risk).

*Strategic Flood Risk.* This area is covered by the Broads Strategic Flood Risk Assessment and the accompanying Development and Flood Risk Supplementary Planning Document (SPD).

#### *Probability of Flooding.*

- The ground level at quay heading is 0.28m AOD and is submerged at most high tides
- The ground floor level of the new boathouse (2011) is 1.45m AOD and is designed to absorb any flooding or flood water
- The 1:20 year flood level is 1.13m AOD and the top of the sloping river bank is 1.6m AOD (1:100 year level)
- The highest level ever recorded at Carrow Bridge (1km upstream) was 1.6m in 1995

### CLIMATE CHANGE

The 1 in 100 year predicted flood level is 1.6m, the height of the sloping bank on the river access site



## PREVENT, PROTECT, PREPARE

### FLOOD WARNINGS

The Environment Agency operates a Flood Warning scheme (Floodline telephone number 0345 988 1188).

Whitlingham Boathouses is registered to receive flood warnings for this area (EA Reference Number 130939).

The standard flood alert levels are displayed in the boathouses.

### ACTION ON FLOOD ALERT

#### ONLINE FLOOD RISK FORECAST

Be aware of a possible flood risk

- Monitor weather conditions
- Check Environment Agency website for any changes to Alert state (<http://www.environment-agency.gov.uk>)

#### FLOOD ALERT

Flooding is possible; *"be prepared"*

- Be prepared to initiate flood evacuation plan
- Prepare flood kit
- Monitor local water levels
- Monitor Environment Agency website

#### FLOOD WARNING

Flooding is expected; *"immediate action is required"*

- Initiate flood plans
- Secure all facilities and equipment within buildings when not in use
- Review all waterborne activities and cease all activities as determined by the WBF Operational Management Committee (OMC)
- Move people into safe areas as required by the WBF OMC
- Prepare to turn off utilities if it is safe to do so (gas, electricity, water, sewerage)

#### SEVERE FLOOD ALERT

Severe flooding; *"danger to life"*

- Implement flood plans
- All waterborne activity ceases including use of launches
- Secure all facilities and equipment within buildings
- Turn off utilities if it is safe to do so (gas, electricity, water, sewerage)
- Ensure all buildings are secured and closed
- Evacuate all users to the assembly area
- Account for all users
- Cooperate with emergency services as required



## WARNING NO LONGER IN PLACE

No further flooding is expected in the area

- Risk assessment by the WBF OMC
- Re-occupy site with caution as directed by the WBF OMC
- Normal operations resume
- Inform insurance company of any damage or potential claim

## MONITORING

In times of a raised Flood Alert, the site manager (if appointed) or other person nominated by the WBF OMC is to monitor the Environment Agency website for any change to Alert levels and take the appropriate action under this plan.

## EVACUATION

In the event that the instruction is given to evacuate the site, all users and visitors will secure any equipment which has been used and move to the assembly area.

The evacuation assembly point is the field gate adjacent to the Whitlingham Outdoor Education Centre electricity sub-station. Any further evacuation is via the causeway to the Whitlingham Country Parks and onto Whitlingham Lane (as marked on the site map).

There are one routes to the assembly point: follow the track to the Whitlingham Outdoor Education Centre; the assembly point is on the right (sign attached to the field gate).

## SITE RE-OCCUPATION

The site will only be re-occupied following a reduction in warning levels and a risk assessment carried out by the site manager (if appointed) or other person authorised by the WBF OMC.

## BRIEFING AND INDUCTION TRAINING

All users and visitors to the site should familiarise themselves with the Flood Evacuation Plan.

All user Club safety officers are required to ensure that their members and guests are familiar with the Flood Evacuation Plan and that this is included in induction training.

The site manager (if appointed) is to include the Flood Evacuation Plan requirement in induction training for users and visitors.



Appendices:

WBF Site Map showing Evacuation Route and Assembly Point  
Environment Agency Flood Map

Distribution:

Whitlingham Boathouses Foundation Ltd Trustees  
All Founding Members (NRC, NCC, UEA BC, NS BC, NHS RC)  
All User Groups  
All User Group Safety Officers  
All Coaches  
Broads Authority – Planning Department  
Whitlingham Outdoor Education Centre (Mike Roper, Norfolk County Council)  
Whitlingham Country Park (Lucy Burchnall, Broads Authority)  
Noticeboard  
Website

Document Control:

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## FLOODLINE

0345 988 1188

or

<http://apps.environment-agency.gov.uk>

## EMERGENCY CONTACT DETAILS

Name	Telephone Day	Telephone Night	Emergency Contact
Max Heron (WBF)	07854 555354	01603 784237	07854 555354
Nick Francis (NRC)	07714 064956	01603 600044	07714 064956
Charles Bracey (NRC)	07785 536946	01603 717054	07785 536946
Nigel Kippin (NRC)	07833 453103	07833 453103	07833 453103
Kerry Duff (NCC)	07789 111207	01603 402846	07789 111207
Jackie Kilbourn (NCC)	07999 475452	07999 475452	07999 475452
James Raywood (UEA Union)	01603 593272		
Andreas Stabell (UEA BC)	07519 273983	07519 273983	07519 273983
Chris Williams (NS)	01603 728430	07903 856417	07903 856417
Doug Barrell (NS)	07519 663085	07519 663085	07519 663085
Martin Livesey (NHS)	01603 453265	07931 869942	07931 869942

## BOATHOUSE LOCATION

### Address:

Whitlingham Boathouses  
Off Whitlingham Lane  
Trowse  
Norwich  
Norfolk NR14 8TR

### Physical Location:

Grid Reference TG 251077

## SERVICES AND ACTIONS

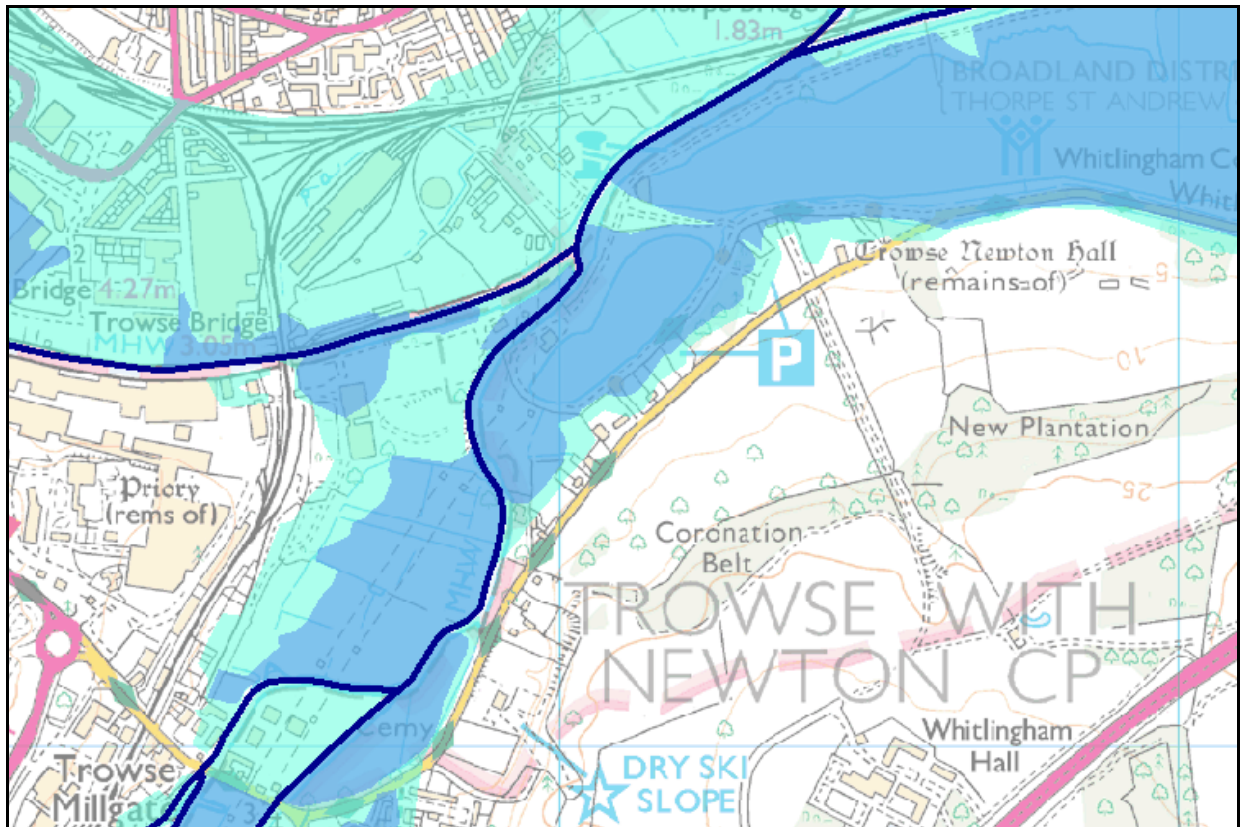
Service/Item	Location	Action
First Aid Kit	One in each boatshed; 2 on WBF boathouses 1 <sup>st</sup> floor	None
M&E Plant	WBF boathouse plant room	Hit emergency off switch (red on yellow housing) to isolate all gas and electricity
Lift	WBF boathouse ground floor	Ensure that lift is raised to the 1 <sup>st</sup> floor position before switching off power
Kitchen	WBF boathouse 1 <sup>st</sup> floor	Hit emergency off switch (red on yellow housing) to isolate gas and power to kitchen; switch off and unplug any ancillary items
Electricity	WBF boathouse plant room	Switch off master switch; isolates all power to site facilities
Gas	WBF boathouse plant room	Switch off master switch; isolates all gas to site facilities
Water	Outside of wooden boatshed 1  WBF boathouse plant room	Ensure switched off at standpipe on side of Little Broad and in NRC Clubhouse Switch off main supply valve at floor level
Sewerage	External sewerage plant	Automatically stops when power switched off
Fuel	Outboard tanks; fuel stores	Ensure that all tanks and fuel cans are secured in proprietary containers
Other oil based products	Fuel stores	Ensure that all oil based products are secured in proprietary containers
Chemicals	WBF boathouses cleaner's cupboard on 1 <sup>st</sup> floor landing	Minimum levels should be held on site; ensure secured in cupboard
Rowing boats	All boatsheds and outdoor racks	Ensure that all boats are secure and that external doors are closed. Boats on outdoor racks and low internal racks should be secured/tied down to the racks
Canoes	WBF boathouse and outdoor racks	Ensure that all boats are secure and that external doors are closed. Boats on outdoor racks should be secured/tied down to the racks
Safety launches	Wooden boatsheds; containers	Ensure that all launches are secure and cannot move within the boathouses; launches may only be operated by individuals with RYA Level 2 qualification; launches are not to be operated during periods of Severe Flood Warning

# FLOOD EVACUATION ROUTE AND ASSEMBLY POINT





## ENVIRONMENT AGENCY FLOOD MAP NR14 8TR



### Flood Plain

A floodplain is the area that would naturally be affected by flooding if a river rises above its banks, or high tides and stormy seas cause flooding in coastal areas.

There are two different kinds of area shown on the Flood Map. They can be described as follows:


- Dark blue ■ shows the area that could be affected by flooding, either from rivers or the sea, if there were no flood defences. This area could be flooded:
  - From the sea by a flood that has a 0.5 per cent (1 in 200) or greater chance of happening each year.
  - Or from a river by a flood that has a 1 per cent (1 in 100) or greater chance of happening each year.
- Light blue □ shows the additional extent of an extreme flood from rivers or the sea. These outlying areas are likely to be affected by a major flood, with up to a 0.1 per cent (1 in 1000) chance of occurring each year.

These two colours show the extent of the natural floodplain if there were no flood defences or certain other manmade structures and channel improvements.

### Flood Defences

The purple line ■ shows all flood defences built in the last five years to protect against river floods with a 1 per cent (1 in 100) chance of happening each year, or floods from the sea with a 0.5 per cent (1 in 200) chance of happening each year, together with some, but not all, older defences and defences which protect against smaller floods. Flood defences that are not yet

shown, and the areas that benefit from them, will be gradually added.

Hatched areas  benefit from the flood defences shown, in the event of a river flood with a 1 per cent (1 in 100) chance of happening each year, or a flood from the sea with a 0.5 per cent (1 in 200) chance of happening each year. If the defences were not there, these areas would be flooded.

Flood defences do not completely remove the chance of flooding, however, and can be overtopped or fail in extreme weather conditions.

For information on flood defences which are not yet shown on the map, contact your local Environment Agency office.