

Flood Warning & Evacuation Plan

Planning & Development

3 September 2024

Wakefield Acoustics Limited

Land Off St Peg Lane, Cleckheaton, BD19 3SA



Document Control

Client	Wakefield Acoustics Limited
Report Title	Flood Warning & Evacuation Plan - Land Off St Peg Lane, Cleckheaton, BD19 3SA
Report Reference	182623-F03
Report Status	Final
Prepared by	R. Williams
Checked by	J. Read
Approved by	A. Jones
Date of Issue	03/09/2024
Issue Method	PDF

Legal

This report has been prepared by Ashfield Solutions Group Ltd (Ashfield) exercising all reasonable skill, care and diligence within the terms of our agreement with the client, incorporating our general Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client. This report should not be used by the client in relation to any other matters not covered specifically by aforementioned scope. Unless otherwise and explicitly stated this report is intended for the sole use of the client and may not be copied, forwarded or in any other way distributed to any other party without the knowledge and written consent of Ashfield. We accept no responsibility to third parties to whom this report, or any part thereof, is made available and any such party relies on the report at their own risk. By receiving this report and acting on it, the client or any other person accepts that no individual is personally liable for breach of statutory duty, or otherwise in connection with its content,

Ashfield Solutions Group Ltd (Reg. No. 09729218), Ashfield Solutions Ltd (Reg. No. 5831575) and Ashfield Flood Risk Solutions Ltd (Reg. No. 09920534) are registered in England and Wales. Registered Office: Cwm Cynon Business Centre, Mountain Ash, CF45 4ER.

Contents

- 1. Introduction 1
- 2. Flood Risk Summary 3
- 3. Preparedness and Response Measures 5
- 4. Safe Access/Egress 10
- 5. Summary 11

Figures

- Figure 1 Site Location
- Figure 2 Flood Alert Areas
- Figure 3 Flood Warning Areas
- Figure 4 Safe Access/Egress Route

Distribution

Wakefield Acoustics Limited

Kevin Still





1. Introduction

1.1 Authorisation

Ashfield Flood Risk Solutions Limited (“Ashfield”) were commissioned by Wakefield Acoustics Limited (“the Client”) to undertake a Flood Warning and Evacuation Plan (“FWEP”) in support of a planning application (Planning Ref: 2024/62/90792/E) for the proposed change of use at Land Off St Peg Lane, Cleckheaton, BD19 3SA (“the site”). This proposed change of use will utilise the currently vacant land for the storage of genset enclosure generator units, including the siting of security and welfare cabins.

The FWEP has been written following the production of the Flood Risk Assessment (“FRA”) also undertaken by Ashfield in support of the development proposals at the site (Ashfield Ref: 182623-F02).

1.2 Purpose and Context

The overall aim of this FWEP is to provide a site-specific warning and evacuation plan to ensure that no persons (persons being defined as anyone who may be present on the premises of the site for any reason as part of its normal operation) are placed at risk from flood hazards, namely the fluvial risk from the River Spen (open channel).

This FWEP has been written in the context of the site being in operational use once the development of the site has been completed.

This FWEP has a Primary and Secondary objective:

- 1) Primary Objective:** To avoid wherever possible any initial access to site where there is a potential likelihood for flood water to encroach the site boundary or any key access/egress routes. This can be achieved via utilising an appropriate flood prediction method via the Environment Agency (EA)/Met Office.
- 2) Secondary Objective:** In a situation where flooding will imminently encroach the site boundary or any access/egress routes; and persons are on-site, a suitable evacuation plan is in place.

This FWEP addresses the matters required pursuant to the National Planning Practice Guidance Paragraph: 048 and ensures that flood warning procedures and subscription details to the EA flood warning systems are made available for key management staff at the site.

1.3 Limitations

This document has been devised specifically for the purposes of flood response, in the context of the proposed change of use being active/live. Any reference to the assessment of flood risk is taken directly from the FRA prepared by Ashfield (Ashfield Ref: 182623-F02) as part of the site’s formal planning application.

1.4 Site Location

The site is located on the eastern side of Cleckheaton, approximately 240m east of King Edwards VII Memorial Park (coordinates XY: 419465, 425161), with the nearest postcode being BD19 3SA. The site occupies an overall area of approximately 0.997 hectares (ha) and currently comprises the remnants of the historic engineering works (no buildings) and open spaces. From a review of available Google street level imagery, the current surface of the site



comprises hardstanding, with areas of vegetation encroaching upon these areas. The client has confirmed that the vegetation has been cleared since the street-level imagery was taken.

The site is bound to the north by residential properties, the west by Howard Park Community School and residential properties, and the south by a storage compound. The site can be accessed via St. Peg Lane to the north.

Figure 1: Site Location





2. Flood Risk Summary

Table 1 provides a summary of the classification of risk to the site from all potential flood sources. Further detailed information in relation to each risk source can be seen within the aforementioned FRA.

Table 1: Flood Risk Summary

Flood Source	Risk Rating	Description of Classified Risk
Fluvial	Low	Flood Zone 3 areas extend into the southern and eastern boundaries of the site; however, all proposed genset enclosures, security and welfare cabins, and the electrical distribution pod are situated within Flood Zone 2. Following review of the River Spen Flood Warning Improvements Hydraulic Model 2009, the majority of the site, including the genset enclosures, security and welfare cabins, and the electrical distribution pod, is not at risk of fluvial flooding at the design flood event (1 in 100 years + 20% Climate Change allowance). In the 1 in 1000 year flooding event the majority of the site is shown to be impacted by fluvial flooding. The site entrance is anticipated to remain unaffected by flooding at the design flood level.
Tidal	Negligible	The site is not projected to be risk of tidal flooding. The nearest tidal extents are located approximately 41km east of the site.
Surface Water	Low	The EA Surface Water Flood Map shows that surface water is projected to encroach upon the site's eastern boundary in the High and Medium-probability extents. Surface water is only shown to encroach upon the northern most genset enclosures during the Low-probability event, with depths projected to reach up to 300mm. It should be noted that the surface water mapping is based on national scale mapping and therefore the depicted risk is considered to be overly conservative.
Reservoir Failure	Low	The Risk of Flooding from Reservoir Failure mapping shows that the site is located within an area that is predicted to be at risk in the "dry day" failure event. Current legislation ensures that reservoirs are inspected regularly, and essential safety work is carried out as required.
Groundwater	Low	A nearby borehole with the same geology as the site (located 41 m west) indicated that groundwater was encountered at 2.35m below ground level (bgl). The Calder catchment SFRA mapping indicates that the site is located within an area 25-50% susceptible to groundwater flooding, which is considered to be low to moderate in terms of susceptibility. Susceptibility does not necessarily define the likelihood of groundwater flooding, but rather the susceptibility of the underlying geology to groundwater fluctuation. It should also be noted that this is based on high-level, district-scale mapping, and may not be an accurate representation of groundwater risk at the site.
Artificial Sources	Low	Sewer flooding was reported within the wider area in 2007. This was caused by insufficient capacity of local drainage systems resulting in several highway drains and culverts surcharging. However, there are no records of sewer flooding at or within the vicinity of the site

The main potential source of flooding at the site is the River Spen. The majority of the site, genset enclosures, security & welfare cabins and the electrical distribution pod are not at risk of fluvial flooding in the design flood event (1 in 100 year + 20%CC). The risk of surface water, tidal, groundwater, reservoir failure and artificial sources



are considered to be negligible to low. Further actions to ensure the safety of all personnel on site are outlined in the sections 3 and 4.



3. Preparedness and Response Measures

3.1 Flood Information Service

The Flood Information Service is a live website which provides up to date flood warning information based on postcode locations (**Site Postcode: BD19 3SA**), this can be accessed via the following link:

<https://check-for-flooding.service.gov.uk/location/kingston-upon-hull-hu9-1ax>

3.2 Floodline

Floodline can be called to receive up to date flooding information through the following number: 0345 988 1188, and by quoting the postcode for the site (**BD19 3SA**).

3.3 Flood Warnings Registration

Signing up to the EA Flood Warning Service is required to be undertaken by key management staff at the site in order to receive up to date information on local flood predictions. The service is free, and information is provided through telephone, mobile, email, SMS, text message or fax. The information provided through these channels would be based on continually updated information that would also be available through the Flood Information Service.

Registration for this service can be carried out over the phone (0845 988 1188) or by using the following link: <https://www.gov.uk/sign-up-for-flood-warnings>. Once registered, warnings will be issued up to five days in advance.

The flood alert and flood warning area that the site is located within is illustrated in Figures 2 and 3 below for reference.

The site is located within Flood Alert Ref. 123WAF984 (River Spen and Batley Beck catchments).

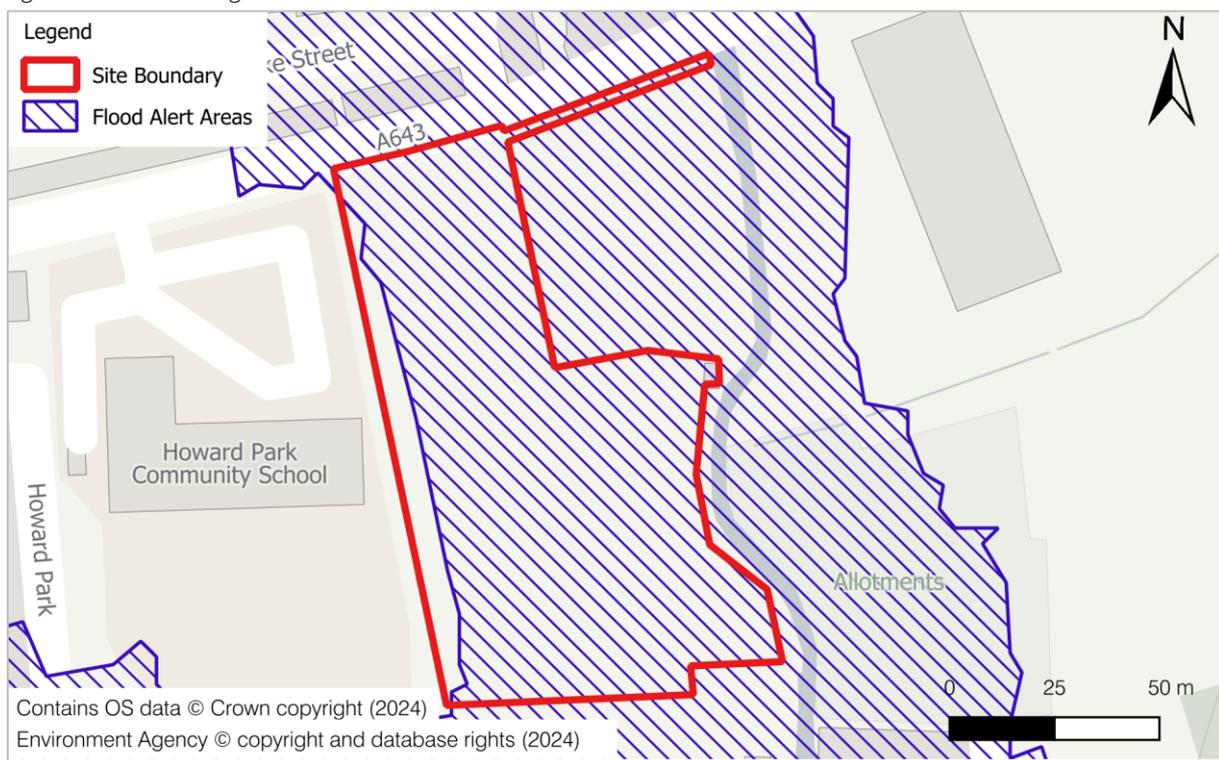


Figure 2: Flood Alert Areas



The site is located within Flood Warning Area Ref.123FWF281(River Spen at Cleckheaton).

Figure 3: Flood Alert Areas



The site manager and any other appropriate personnel should ensure they have allocated appropriate person(s) to sign up to the service and that they are aware of the measures set out in this response plan.



3.4 EA Flood Warning Codes

Flood warnings are issued at differing levels of magnitude, defined as “flood warning codes” based on the latest EA guidance. These codes related to the level of risk that the site is potentially at, and each one is outlined below.

Disclaimer

Where possible, Ashfield has provided site specific advice that provides an increased level of understanding of what actions may need to be taken for the differing levels of flood warning severity on the site. The responsibility of engaging with the correct information providers and carrying out specific actions that relate to the severity of warnings lies with the personnel on site or any designated persons who are assigned the responsibility of enacting the FWEP.

Three Day Forecast

“Be aware. Think ahead. Keep an eye on the weather situation.”

Forecasts are updated daily on the Flood Information Service and more frequently for situations of increased flood risk. National mapping within this interface will show one of four levels of risk for each county.

Green = **No risk** of flooding.

Yellow = **Low risk** of flooding.

Amber = **Medium risk** of flooding.

Red = **High risk** of flooding.

Flood Alert

“Flooding is possible. Be prepared.”



Generally, a *Flood Alert* shall be issued between two hours and two days in advance depending on the confidence of the prediction methods. This would likely be triggered by the weather forecast predicting intense rainfall within the local region.

Site Specific Action

A *Flood Alert* should trigger an increased level of awareness by any appointed staff who are responsible for enacting the FWEP. They are recommended to:

- Continually monitor local weather reports, and check for any escalation of *EA Flood Alerts* to *EA Flood Warnings*;
- Be mindful of potential areas of localised water accumulation in the external site grounds or the surrounding road network;
- Periodic checking of the Flood Information Service should be carried out every hour at minimum to establish whether the Flood Alert has been de-escalated or escalated to a higher level (Flood Warning or Severe Flood Warning).

Flood Warning

“Flooding is expected. Immediate action required.”



FLOOD WARNING

Generally, Flood Warnings are issued half an hour to one day in advance of potential flooding occurring, depending on the accuracy of the prediction methods and the size of the upstream river catchment. All heavy rainfall or flood warnings should be acted upon immediately.

Site Specific Action

A Flood Warning would warrant an increased level of vigilance by any appointed staff who are responsible for enacting the FWEP. They are recommended to:

- Commence the immediate closure of the site premises. This enables the Primary Objective of the FRP to be enacted, ensuring that no persons will be on-site from the onset.
- Where this is not possible, and the Secondary Objective must be enacted, it should be ensured that all staff and personnel can make their way off-site safely. The safest egress route from the site is outlined in Section 4 for reference.
- Whilst site closure protocols are underway:
 - Ensure that any localised accumulation of water is identified and monitored within the site boundary;
 - Ensure that all access and egress routes are still fully passible, and not being encroached by flood water; and,
 - Checking of the Flood Information Service should be carried out every 30 minutes to establish whether the Flood Warning has been de-escalated or escalated to a higher level (Severe Flood Warning).

Severe Flood Warning

“Severe flooding. Danger to life.”



SEVERE FLOOD WARNING

A *Severe Flood Warning* poses a significant risk to life or significant disruption to local communities or infrastructure. Escalation to this level would be triggered by:

- Actual flooding being identified where it poses significant risk to life;
- Breach of flood defences or failure of a flood barrier; and/or,
- Specialised knowledge of the area that warrants its escalation.

Site Specific Action

When a Severe Flood Warning is in place, the site premises will have already been closed (or at worst case safely evacuated) at the earlier Flood Warning level, and all persons will have vacated the site. The following actions are recommended to be undertaken by any staff members who are responsible for enacting the FWEP:

- Continual monitoring of the Flood Information Service, as well as local media to understand the potential length and magnitude of the risk;
- Communication directly with the EA to understand the likely duration that the *Severe Flood Warning* shall be in place; and,
- The site should not be accessed until confirmation has been received that the *Severe Flood Warning* has been removed, and further clarification from the emergency services has been given that safe access to site has been restored.

Warning No Longer in Force

“No further flooding is currently expected for your area”.



When flood alerts/warnings are no longer in force, this means that the risk of flooding has subsided, and no further flooding is expected in the near future. This decision will have been triggered through the judgement of professionals and discussions with partners who are in agreement for this to occur.

Site Specific Action

Should flooding have occurred on site, it should be initially evaluated whether access has been fully re-established to site. This should be done in conjunction with the EA, Emergency Services, Local Authority and any other party or stakeholder that has specialist knowledge of how the site operates.

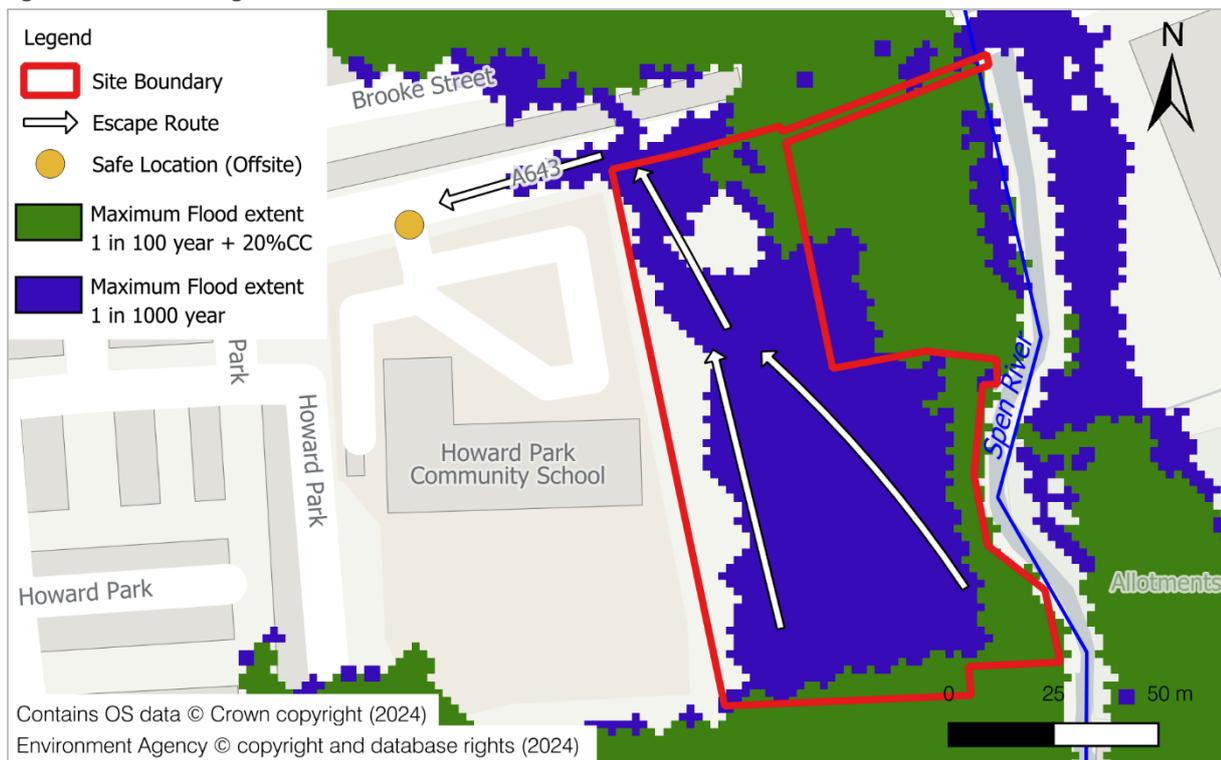
The scope of this FWEP does not cover any further actions that should be undertaken on site should severe damage have occurred. In this instance, the relevant person(s) should work alongside the EA and relevant authorities to establish whether it is safe to access the site.



4. Safe Access/Egress

As illustrated in Figure 4, an access/egress route has been established to the north of the site via the A643 (St Peg Lane). From this point, site personnel should proceed west towards Howard Park Community School. The school's car park, as shown in Figure 4, offers sufficient protection for site personnel, being outside the projected 1 in 1000 year flood extent.

Figure 4: Safe Access/Egress Route





5. Summary

This FWEP provides an overview of flood risk at the site, in-line with the findings of the Ashfield FRA (Ashfield Ref: 182623-F02). The measures included within this FWEP are considered to be appropriate based on the residual flood risk at the site, following the completion of the development.

Registration to the EA Flood Warning Service is required to be undertaken by key management staff at the site. This FWEP outlines the key actions and protocols to take in the event of a Flood Warning being issued, which dictates site closure until the warning level has been fully de-escalated, with no likely repeat occurrence predicted in the near future.

This FWEP should be updated if any subsequent alterations are agreed with key stakeholders, including the Emergency Planning Officer at Kirklees County Council.



Limitations of this report

This report has been prepared by Ashfield Flood Risk Solutions Limited (“Ashfield”) for the sole benefit of Wakefield Acoustics Limited (the “Client”) and has not been assigned to any other third parties. If reliance on this report was required by a third party, this could be arranged for an agreed fee. This report should not be used by the client in relation to any other matters not covered specifically by the scope of the report. If this report does not contain a signature in the Document Control window, then this is an uncontrolled electronic copy and should not be relied upon by the client or any other recipient, as Ashfield cannot give assurances on the source or content of the document. Ashfield has used all reasonable skill, care and diligence in the preparation of this report.

This Flood Response Plan has been prepared for the client as outlined in Section 1. It only includes a site investigation where specifically referenced. Ashfield accepts no responsibility for the accuracy or completeness of third-party data reviewed within this assessment.

This report is provided under Ashfield Solutions Limited Standard Terms and Conditions.



Thank you

for using Ashfield Solutions

Head Office:
Cwm Cynon Business Centre,
Cwm Cynon Business Park,
Mountain Ash, RCT, CF45 4ER

ashfieldsolutions.com

+44 (0)1443 803 540