

# Hope Shaft Flood Risk Technical Note

<b>Project name</b> Hope Shaft Refurbishment	<b>Project number</b> 60692401	<b>Client</b> The Coal Authority	<b>Subject</b> Flood Risk Technical Note
<b>Date</b> 05 November 2024	<b>Issued by</b> AECOM	<b>Revision No.</b> P01	
<b>Prepared by</b> Luke Coleman	<b>Checked by</b> Sam Youdan	<b>Verified by</b> Gary Hurrell	<b>Approved by</b> Lewis Wardle

## Background

The purpose of the Hope Shaft pumping station is to maintain a water level to make sure that the incoming mine water flows do not cause the National Coal Mining Museum to flood. The existing pumping arrangement at Hope Shaft includes two borehole pumps (duty/assist), which are installed between 162m and 167m deep in the Hope Shaft. The Coal Authority has concluded that the existing pumps are difficult and costly to maintain. In addition, the existing HV (11kV) substation and switchgear have also been assessed as part of a feasibility study, which recommended that they require replacement, an option for which is to relocate new equipment to an external electrical kiosk.

A planning application has been submitted to Kirklees Council for the provision of this external electrical kiosk, and this technical note outlines the Flood Risk Assessment requirements for the application.

## Flood risk review

The proposed pumping station kiosk is located in an area classified as flood zone 1, as shown in Figure 1 below, which has a low probability of fluvial flooding (less than 0.1% chance of annual flooding). The site is also less than 1 hectare, so a flood risk assessment is not required, in accordance with Environment Agency flood risk assessment guidance.

The proposed site is located at a higher elevation than the surrounding area and has a very low risk of flooding (less than 0.1% chance of annual flooding) from surface water and reservoir sources. In addition, it is noted that other areas of the National Coal Mining Museum also have a low risk of flooding (less than 1% chance of annual flooding).

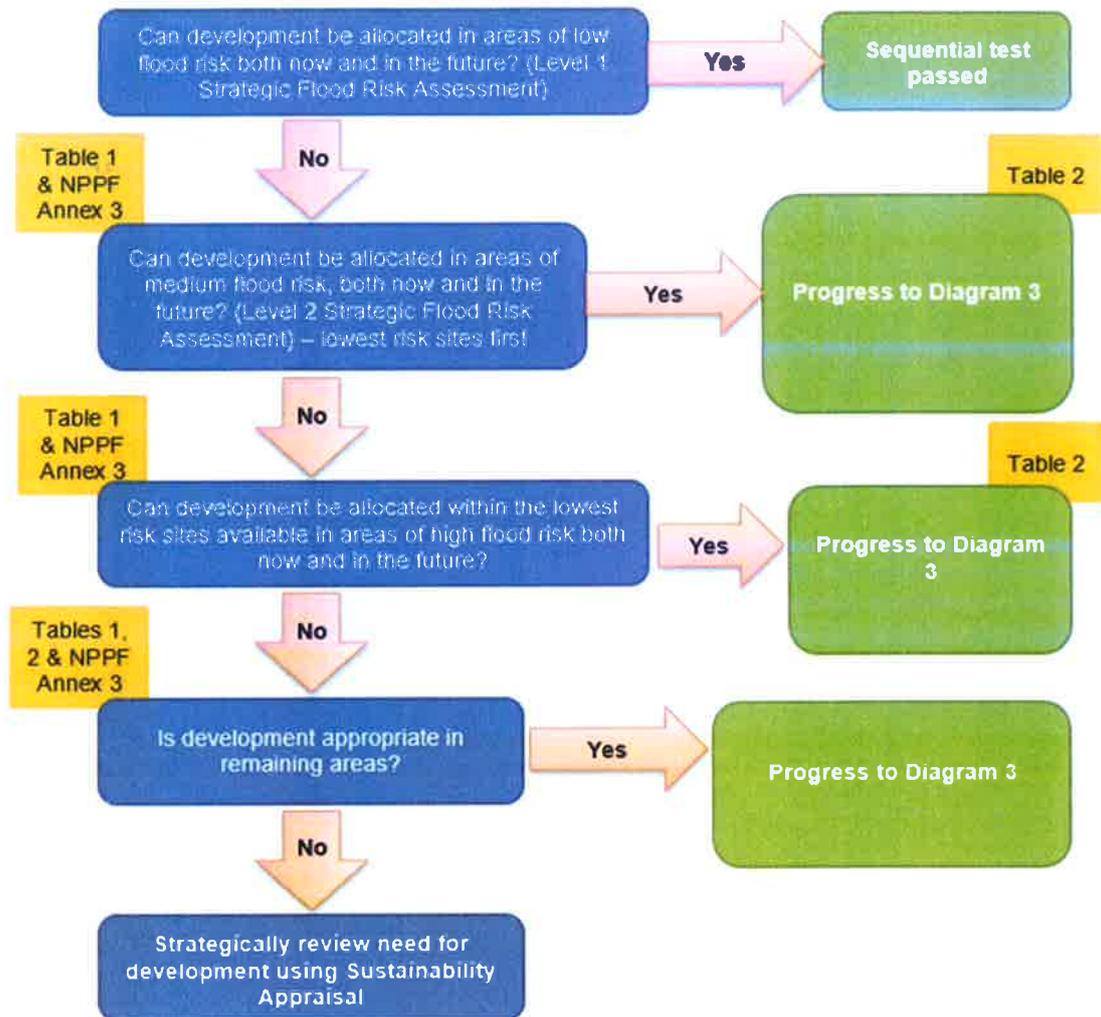
The requirements for a sequential test and exception test have been reviewed against the proposed development site for the Hope Shaft pumping station exterior kiosk. Being located in flood zone 1 and with a low or very low risk of flooding, the site passes the sequential test and does not require an exception test, as shown in Figure 2 below.

Passing the sequential test means no further examination on the sequential or exception test is required.

The proposed site is not located in an area identified in the Kirklees Strategic Flood Risk Assessment.



Figure 2. Application of the Sequential Test for Plan Preparation



(Source: Environment Agency Flood Risk Guidance, Diagram 2)

