Elsecar Heritage Centre: Building B2 – Proposed development.

Flood Risk Assessment

Introduction

This Flood Risk Assessment Statement is to support the application for the proposed refurbishment of Building B2 on the Elsecar Heritage Centre site to provide additional retail floor space to the existing site.

1. **Development Description & Location**

a. **What Type of Development Proposed and where it will be located**:

Elsecar Workshops were built as a central establishment by Earl Fitzwilliam for different trades manufacturing products for his mines. The workshops are now owned by Barnsley Metropolitan Borough Council who purchased them from British coal in 1988. The buildings are now used for retail, offices, manufacturing, museum, heritage and educational uses. The site makes a considerable contribution to the overall character of Elsecar. Before it was built, the site contained the Elsecar Ironworks at the bottom of Forge Lane, with one row of cottages or a Farmhouse on the site of the Workshops. The Elsecar Heritage site already contains mixed use of retail, workshops and educational facilities and the proposals for the existing workshops will further enhance the site and provide a viable use for the current derelict building. They will be additions to a sustainable development that already attracts many visitors both local and from surrounding towns and cities. The workshops have evolved over the various uses of the site from its original use by the Darwin Company, and later by the NCB, would further mirror the overall change and development of the heritage site. The Elsecar Heritage Centre is to the south of Wath Road. The development area is to the south of the existing heritage site. The site area is bordered to the west by a Forge lane, with an existing car park also to the west. Wooded areas are further to the south at the end of Forge Lane. The existing building is in a derelict state, and its integrity and stability will only deteriorate. Due to the failure of some of the timber roof members, significant bowing of the roof ridge members can be observed, and decay and failure of the roof finish has caused structural damage to the first floor finish and structure. The proposals include the construction of new timber rafters and battens supporting via existing timber roof trusses. The existing roofing slate will be scrutinised for possible re use in re-roofing the building. The existing external walls comprise of coursed, dressed sand stone. The derelict nature of the building still identifies a partial Natural Welsh slate roof. The former two storey five bay blacksmith and Joiners workshop has segmental archway to bay 1; to ground floor of bays 4 and 5 is a large elliptical arch with brick voussoirs set on a cast iron former, the opening now bricked up; flanking round arched windows, that to bay 2 now enlarged as a garage entrance. Bricked up windows to 1st floor have projecting sills and old iron casements with glazing bars beneath round arches. The workshops are adjoined with No. 2 and 4 Forge Lane, and were formerly NCB partly offices. The cottages date from the mid and late C19 with extensive C20 additions. External walls of coursed, dressed sand stone, and Natural Welsh slate roofs. The proposed development is to refurbish the existing workshops and form individual and shared retail space, operating on a similar level to the existing site. The buildings will be repaired using existing materials, or were the existing fabric has perished or

decayed, this will be replaced in a sympathetic manner. The existing sandstone will be re-pointed, as will the exiting brickwork portion of the building. The roof finish will comprise of natural welsh slates, and windows of metal frame or timber. The development requires the provision of a platform lift, access WC and a complete new staircase and first floor construction. All the works are contained within the existing envelope of the building.
The main site pedestrian access is from an archway at the top of Forge Lane site and has a gradual gradient across the site permitting full access. The site boundary to the heritage centre is formed by the existing retail buildings, with a working steam engine and track to the south east of the site. Vehicular access for visitors to the centre is from Wentworth Road with current parking for approximately 90No car parking spaces. An adjacent car park accommodates approximately 70 car parking spaces. The heritage site also has approximately 10No car parking spaces on site (Darwin Yard) used by tenants with a space in their licence, contractors and blue badge holders. There are a further 6No spaces for tenants with a blue badge, located off Wath Road as you approach the service area of Darwin Yard by the site security office.

b. What is the Flood Risk Vulnerability Classification

The flood risk classification for the site is Flood Zone 3a.

c. Is the Proposed development consistent with the Local Plan for this area

The development is consistent with the local plan for this area. The refurbishment of the existing building to form retail units enhances the existing retail accommodation on the site.

d. Sequential Test/Exceptional Test

The Sequential and Exceptional Tests do not need to be applied to minor developments and change of use (except for change of use to a caravan or chalet site, or to a mobile home or park home site)

e. Will your proposal increase overall the number of occupants and/or users of the building/land, or the nature or times of occupation or use, such that it may affect the degree of flood risk to these people?

The development is compatible with the existing use on the site for retail units. It is not envisaged that the works to the proposed building would considerably increase footfall, but would enhance the choice of retail outlet to visitors to the site.

2. Definition of flood hazard

a. **What source of flooding could affect this site?**

The site has a water course running through the centre of the site. The source of the water course is from Elsecar Reservoir. This translates to a water course that runs from the reservoir, through Elsecar Park, under Wentworth Road, across the car park to Elsecar Heritage Centre, under Forge Lane and into the main Heritage site at the point of 2-4 Forge Lane, a pair of stone cottages.

Flooding adjacent the Elsecar Heritage site was as a result of debris build up at the mouth of a bridge located in the Elsecar Park site, across the water course, causing a back-up of water that resulted in flooding on the Elsecar Park site. This occurred in June & July 2007.

b. **For each identified source in box 2a above, can you describe how flooding would occur with reference to any historic records where these are available**
The potential for future flooding could be the water course, as mentioned above. The flooding occurred in June & July 2007.

c. **What are the existing surface water drainage arrangements for the site?**
The existing surface water drainage on the site is via an existing mains system running through the site and discharging into the main sewer at two points, one at the top of Forge Lane, and a second on Wath Road.

3. Probability

a. **Which flood zone is the site within?**
Elsecar Heritage Centre Site is within flood zone 3a

b. **If there is a Strategic Flood Risk Assessment covering the site. Does this show the same or a different flood zone compared with the Environmental Agency's flood map?**
Yes there is a BMBC strategic flood risk assessment for the site. The plan was instigated following flooding on the adjacent Elsecar Park site. The flooding was as a result of debris build up at the mouth of bridges across the water way, causing a back-up of water that resulted in flooding on the Elsecar Park site. This occurred in June & July 2007. The authority introduced measures as a result of the flooding, which forms the current strategic plan.

c. What is the probability of the site flooding, taking account of the maps flood risk from rivers and the sea and from surface water, on the Environmental Agency's website and the strategic Flood risk Assessment and any further flood risk information for this site.
As a result of the flooding of the adjacent Elsecar Park site from the water course, a Stratigic Flood Risk Assessment was put in place by BMBC. The water levels to the water course are checked on a daily basis, regular checks are made of debris/obstructions, with regular cleaning operations. A grille arrangement was installed to the bridge to prevent debris floating down stream and causing further obstruction, and allowing the clearing of such debris from an identified point.

d. If known what approximate are the existing rates and volumes of surface water run generated by the site?
The existing rates and volumes are not known for the whole site. The proposed refurbishment of Building B2 does not change the existing rates or volumes, as the roof pitch and area will be restored as the existing.

4. Climate Change

a. How is flood risk at the site likely to be affected by climate change? (The local planning authority's strategic Flood Risk Assessment should have taken this into account. Further information on climate change and development and flood risk is available on the Environment Agency website.

The Building B2 is an existing building, and forms part of the existing Elsecar Heritage site. The site consists of retail units housed in building that were originally workshops and stores as part of the NCB site.

5. **Detailed development proposals**

a. **Where appropriate, are you able to demonstrate how land uses most sensitive to flood and have been placed in areas within the site that are at least risk of flooding (including provisional details of the development layout)?**

The Building B2 is an existing building, and forms part of the existing Elsecar Heritage site. The site consists of retail units housed in building that were originally workshops and stores as part of the NCB site.

6. **Flood risk management measures**

a. **How will the site/building be protected from flooding, including the potential impacts of climate change over the developments lifetime?**

The refurbishment of the Building identified as B2 will include the construction of a new ground floor slab. The construction of the new slab will increase the floor level some 200mm above the existing ground floor level, improving the flood measures of this particular building.

7. **Off Site Impacts**

a. **How will you ensure that your proposed development and the measures to protect you from flooding will not increase flood risk elsewhere?**

The proposed development is a refurbishment of the existing building. The building does not increase in size, and the existing roof area, gradient and means of rainwater discharge would be as the existing building.

b. **How will you prevent run-off from the completed development causing an impact elsewhere**

The proposed development is a refurbishment of the existing building. The building does not increase in size, and the existing roof area, gradient and means of rainwater discharge would be as the existing building.

c. **Are there any opportunities offered by the development to reduce flood risk elsewhere?**

The proposed development is a refurbishment of the existing building. The building does not increase in size, and the existing roof area, gradient and means of rainwater discharge are as the existing building.

8. **Residual Risks**

a. **What flood related risks will remain after you have implemented the measures to prevent the site from flooding?**

The risk to the building should be reduced as the existing ground floor level will be increased by approximately 200mm. The existing ground floor level runs through with the external ground levels, and is at greater risk of flooding at the moment.

b. How, and by whom, will these risks be managed over the lifetime of the development flood warning and evacuation procedures.

The Elsecar Heritage site is managed by BMBC as a whole, and the proposed refurbished building will continue to form part of the site, and will remain as part of the managed estate. As part of the BMBC Strategic Flood Risk assessment, the watercourse that runs under the heritage site is monitored daily, and any debris or potential obstruction is removed as part of a regular maintenance operation.



Site Location


B6097
Wath Road
Distillery Side
Fitzwilliam Street
Wentworth Road
Forge Lane
Wentworth Road
Forge Lane

Site Plan



View from Forge Lane