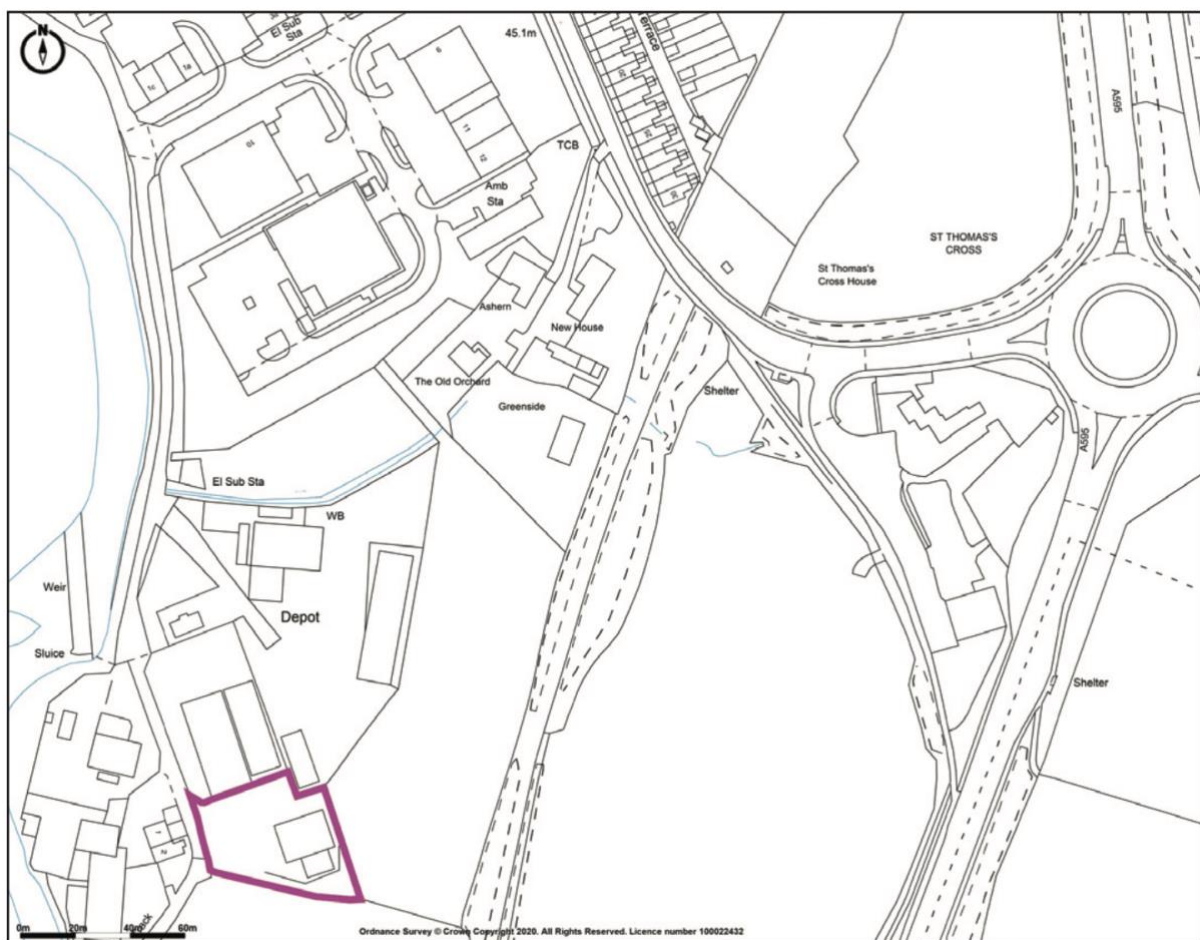


## **Flood Risk Assessment Statement – Units 5 & 6 Ennerdale Mill, Bridge End, Egremont**

### **Proposal:**

Change of use from Bus depot to Gym

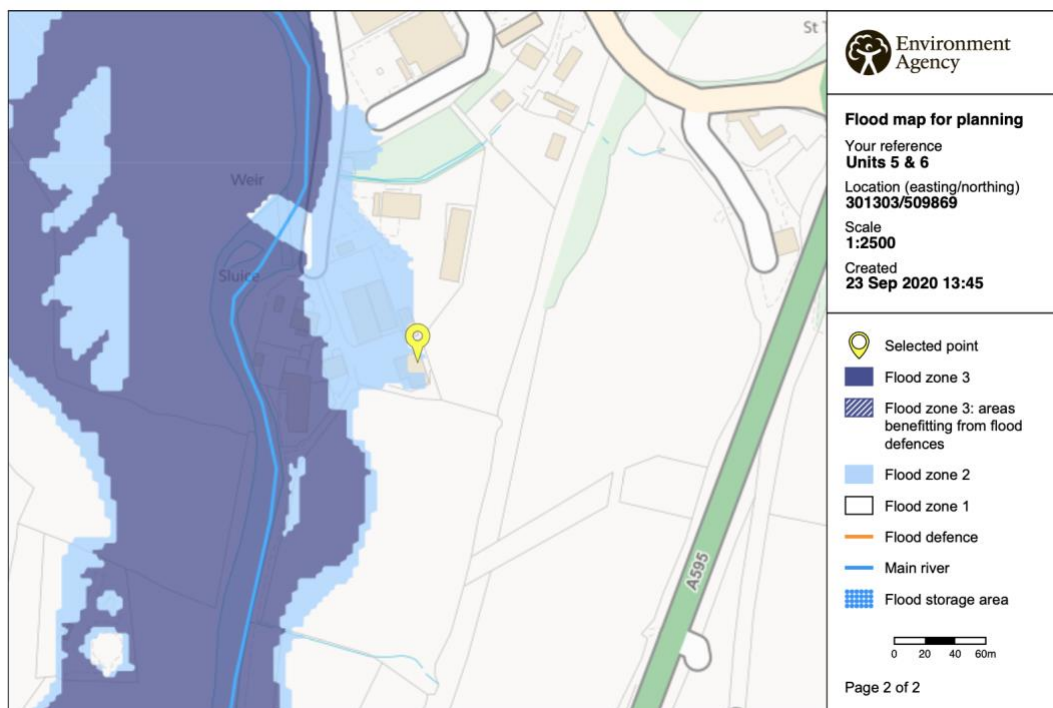


**Applicant:** Urban Fitness and Performance

September 2020

## 1.0 Introduction

- 1.1 This Flood Risk Assessment (FRA) has been prepared on behalf of the applicant, Urban Fitness and Performance, in support of an application for a change of use from a bus depot to a gym at Units 5 & 6 Ennerdale Mill, Bridge End, Egremont.
- 1.2 The FRA is required for the planning application as a portion of the site is located within the Environment Agency designated Flood Zone 2.
- 1.3 The site is located near to the River Ehen which is to the west of the application site, at a lower level.
- 1.4 No part of the site is within the Flood Zone 3 area. Approximately half of the building on the site is actually in Flood Zone 1, which is no risk from flooding.



Environment Agency Flood Zone Map – Bridge End

- 1.5 The proposed application is simply for a change of use planning application. The existing building on the site will not be altered from the as build for the proposed use. The current building on site was constructed under planning permission 19/2391/0, which was approved, including the Flood Risk Assessment attached to this document as appendix A.
- 1.6 The building on the site was considered appropriate with the justification in relation to flood risk, and this is therefore considered relevant.
- 1.8 To conclude, the Flood Zone designation does not negatively impact on the proposed use.

## Appendix A:

### **UNIT 5 & 6 ENNERDALE BRIDGE Flood Risk Assessment**

#### **1. Introduction**

The coaches in service would be open air garaged on the site and coaches being repaired or serviced will be garaged in the workshops. The office accommodation would not change in any material way.

The site is part of the Ennerdale Mill Industrial Estates complex on the banks of the River Ehen south of Egremont town centre at NGR NY0109

#### **2. The Development Site**

The development is a simple modification to an existing building. The details of the application will create no greater risk of flooding by the form of development than presently exists from the site.

The site itself offers no risk of flooding to adjacent neighbouring properties and is neither at threat from any adjacent buildings due in part to the proximity of the river which under normal weather conditions deals satisfactorily with local surface water demand.

The ground level of the site which includes workshops is at approximately..... AOD. The offices are approximately 150 mm. above this level. The surrounding buildings are all within 300 mm. of the ground mean of .....AOD.

The Site is at the bottom of the estate to the south. The original use of the mill, adjacent to the river between the development site and the river, was as a mill with its own weir which is still intact.

#### **3. Flood Risk**

The Site is classified as being in Flood Zone 2. However, under normal and, indeed, severe rainfall conditions rainfall run-off into the river is usually contained within the river banks.

There has been no known flooding of the Mill or the access road which is relatively high above the mean river water level.

There have been two major floods in the area the most recent being the event on November 2009. This was described as one in a thousand year event and was caused by severe heavy rain throughout the flood basin and the Ennerdale valley and surrounding fells. These weather conditions which devastated the West Cumbria Coast particularly in Cockermouth and Workington were no less felt in Egremont where low lying properties to the North of the site were deluged.

However the worst case scenario throughout the Ennerdale Mill site was some localised flooding on one of the carparks caused by local rainwater not being able to discharge to the river because it was much higher than the outlet.

Just up the river to the north of the site the river burst its banks at Bleach Green the river is held up there by the old Bleach Green weir and the water burst its banks on the lower side and flooded the pitch, clubhouse and multi use games area before breaking back into the river south of the clubhouse and the new changing rooms which were not flooded.

The new changing rooms were designed to be flood proof and the designs worked in the worst conditions in know memory on the river! The design was not scientific but certainly effective.

In 2005 there was another flood event on the River Ehen and similar conditions were witnessed but the flood levels were not as sever. Despite valiant efforts the clubhouse flood defences were breached by about 50 mm maximum. The new changing rooms were therefore designed to be approximately 450 mm. above the clubhouse floor. This made the changing room floor level 400 mm above the highest know flood level in modern memory until the 2010 event. The changing rooms survived this catastrophic event by about 25 mm, but survive they did.

Further south of the clubhouse the new bungalows had been build at similar floor levels to the new club changing rooms and in they too mainly survived the worst of the flooding even though at times they were surrounded by the water flooding from the river across the rugby field and back to the river downstream just north of the development site.

The development site has the advantage of being on the high side of the river and the Ennerdale Mill weir. When this weir causes the river to break its banks it does so on the opposite side of the river into the meadow which slopes away to the south relieving flood conditions at the Mill complex to culminate further down the river.

The flood in 2010 was a culmination of a range of weather factors coming together. It is well documented and recorded and the Environment Agency have all the evidence of this event and it would not be appropriate to advise here on what they already know of that event and what its causes and consequences are and how that will affect any future measures they may have for improved flood defences.

We suspect that if they feel there is a serious danger of a similar event broader measures will be taken in the public interest to protect from the consequences of future flooding throughout the Ehen valley.

Given that the application site did not flood in this one in a thousand year event the applicant can take some assurance that the site is relatively safe from this natural threat of flooding due to the proximity of the river and that the site itself is not liable to be a greater threat to neighbouring sites due to uncontrolled surface water run off.

#### **4. Surface Water Drainage**

The surface water drainage from The Site will, as at present, follow the ground contours and flow away from the Site discharging into local drains to the river. Should the applicants risk assessment for the used oil advise on extra measures to comply with the requirements of PPG8 to retain used oils and detergents on site these measures will be put in line to protect the water course from pollution to the satisfaction of the Environment agency.

#### **5. Foul Water Drainage**

Foul Drainage will be into the local foul water sewer as at present.

#### **6. Effect of the Development on Other Sites**

The proposed development will not affect the adjacent sites. The ground permeability will not be changed and, therefore, there will be no effect on other sites.

#### **7. Summary**

7.1 The proposed new development is a minor change of use to an existing building complex with existing services and conditions all unaffected by the change of use.

7.2 If there are blockages in the river channel or a breach in the flood bank in extreme rainfall conditions there would be flooding of roads and property in the Egremont area. There could also be some minor flood ponding in the car park and bus-park from overland flow and from marginal overspill from the roads but this would dissipate before reaching any level which would pose a threat to the offices and any other surrounding buildings.

7.3 Foul Drainage will be into the local foul water sewer as at present.

Geoffrey Wallace FSCD.  
November 2019