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Classification:	Project related		

Dear Mr Davies,

Flood Risk Assessment Letter for the proposed change of use for Units 3A and 3D Churnet Park

1 Introduction

Royal HaskoningDHV has been commissioned by the Applicant (Mr Carl Lambert) to provide a Flood Risk Assessment Letter in support of the proposed change of use for Units 3A and 3D Churnet Park, Macclesfield Road, Leek.

The Site comprises an existing building which is currently allocated as Land Use B Industrial and the proposed application is to change the use to a Land Use D2 Fitness Suite; however, all proposed development will be contained within the existing built footprint.

The current publicly available Environment Agency flood mapping shows that the Site is located within Flood Zone 2. On the basis that the Site is located within Flood Zone 2, current guidance as defined by the National Planning Policy Framework (NPPF) indicates that a site-specific Flood Risk Assessment is required to support any planning application submitted for the Site.

On the basis of the above and following discussions between the Applicant and the Local Planning Authority it has been confirmed that the submission of flood risk information in a letter format is appropriate.

2 Site Description and Location

The Site is located in close proximity to the River Churnet, which is approximately 40m to the south, and is accessed from the A523 Macclesfield Road, Leek, ST13 8YH (see Figure 1). The Site comprises part of a wider mixed-use development which was built from 2010 onwards.

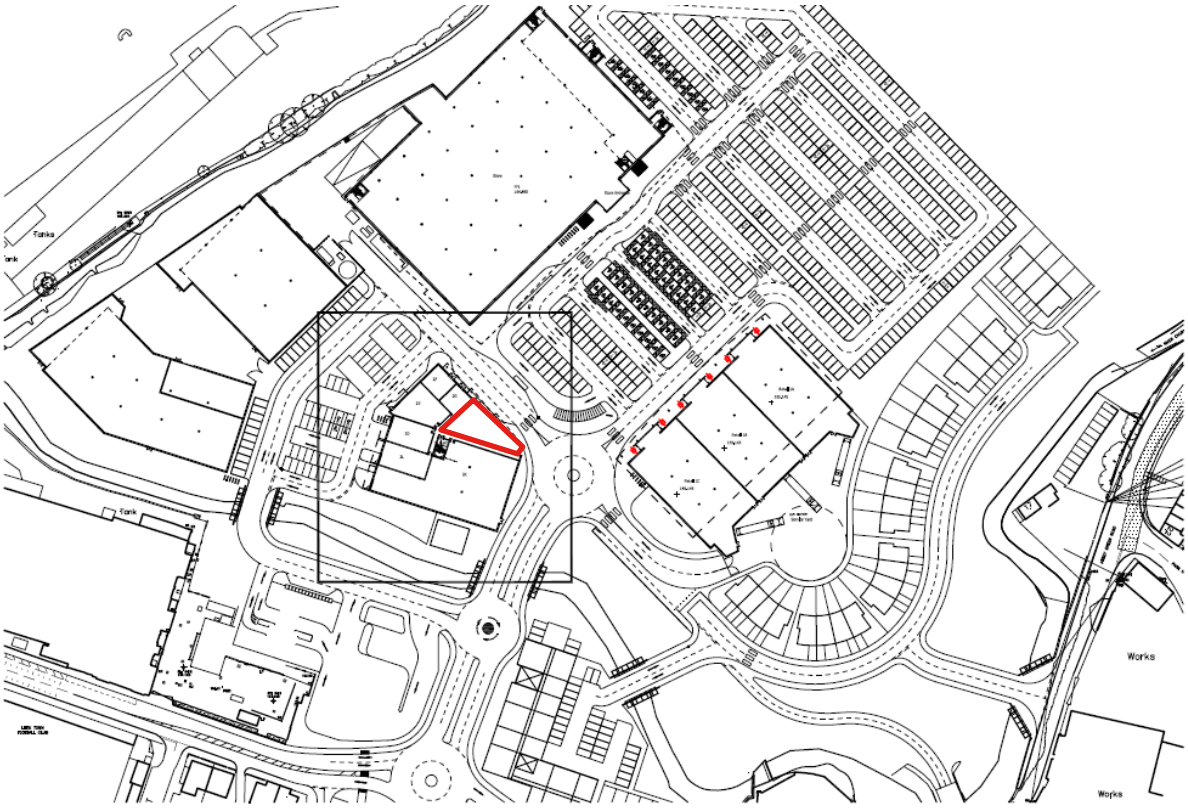

Figure 1: Units 3A and 3D location plan (units highlighted in red) (Extract from Drawing Title: Employment Units 2D-2L: Proposed Plans and Elevations, Drawing No. PL1(3)04, dated 15/04/2010)

3 Flood Risk Review

3.1 Planning History

Flood risk to the wider Site was previously considered within the Environmental Statement prepared as part of the Sainsbury's Supermarkets Ltd, Churnet Works, Leek Mixed Use Redevelopment planning application (Ref: SMD/2010/0201) which was submitted in 2010 and approved in 2011.

This planning application was a mixed-use application comprising a Superstore, provision of retail units, landscaping and Public Open Space. As such the flood risk information contained within the Environmental Statement is comprehensive and covers multiple aspects, beyond those now being considered for the current change of use application.

As such any reference hereafter to the Site is limited to Units 3A and 3D which comprise the current change of use application.

3.2 Local Plan

Staffordshire Moorlands District Council submitted the Local Plan 2016 – 2031 for examination on 29th June 2018. The Local Plan for Staffordshire Moorlands will shape how the district develops over the next 14 years by identifying sites and policies for housing, employment, open spaces and setting development and retail boundaries.

The Site is shown on the interactive map to be within the Proposed Town / Village Boundary which has been extended from the 1998 Local Plan Town / Village Boundary to include the whole of the mixed-use development that has been constructed in this area. As the Site has already been subject to recent development it does not appear to have been identified as a site for future policy allocations.

3.3 Sources of flood risk

According to information set out within the 2010 Environment Statement, the Site is located in Flood Zone 3. However, subsequent modelling was carried out by the Environment Agency to provide greater detail on flood risk in the area and to incorporate construction and river channel works carried out as part of the mixed-use development to facilitate development and address flood risk in the area.

The River Churnet Hazard Mapping Report, 2014 identified areas within the previous 2007 River Churnet hydraulic model where there was erroneous survey information. The hydraulic model was updated to amend these issues and to incorporate the above information as part of the 2014 study. Following this hydraulic modelling exercise the Site has been identified as being at medium fluvial flood risk as it is located in Flood Zone 2 (i.e. land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding), as shown on the Environment Agency mapping available online entitled 'Flood Map for Planning'[1].

A review of other sources of flood risk indicate that there is a risk of surface water flooding to the north of the existing building; however, this does not extend to the building itself and there is no risk of surface water flooding to the Site.

Flood mapping indicates that there is a potential risk of flooding from reservoirs; however, the flood risk from reservoirs whilst significant in consequence should it occur is unlikely due to the extensive legislation that governs the maintenance and operation of these structures.

Due to the location of the Site inland, away from the sea, and as there are no canals or other artificial sources in proximity to the Site there is no risk of flooding from these sources.

On the basis that the Site is located within Flood Zone 2, current guidance indicates that a Flood Risk Assessment should consider the vulnerability of the proposed use, the impact of flood risk on the proposed development alongside any off-site impacts.

As the current planning application is for a change of use within the existing built footprint, flood risk to the Site will remain as it is currently and there will be no increase in the impermeable area or the surface water runoff. The following sections demonstrate how flood risk to and from the Site will remain unchanged as a result of the proposed change of use.

3.4 Sequential and Exception Test

The aim of the NPPF PPG Sequential Test is to ensure that a sequential approach is adopted to steer new development to areas with the lowest probability of flooding i.e. Flood Zone 1. Where there are no reasonably available sites in Flood Zone 1 the Local Planning Authority (LPA) can consider reasonably available sites in Flood Zone 2. Only where there are no reasonably available sites for development in Flood Zone 1 and 2, should the suitability of sites in Flood Zone 3 be considered.

[1] *Flood Map for Planning (Accessed 02/08/2018: https://flood-map-for-planning.service.gov.uk)*

Following application of the Sequential Test, if it is not possible for the development to be located in zones with a lower probability of flooding, the Exception Test may be required. Within each flood zone, surface water and other sources of flooding also need to be taken into account in applying the sequential approach to the location of development.

As the application is for a proposed change of use the Sequential and Exception Test is not required in accordance with paragraph 104 of the National Planning Policy Framework (NPPF)[2].

3.5 Vulnerability Assessment

The vulnerability of different types of development is set out in NPPF. The descriptions of Highly Vulnerable, More Vulnerable, Less Vulnerable and Water Compatible are as follows:

Highly Vulnerable – Buildings used for: Police, ambulance and fire stations and command centres; basement dwellings; caravans and mobile homes; and installations requiring hazardous substances consent.

More Vulnerable – Buildings used for: hospitals; dwellings and accommodation; residential institutional accommodation; non-residential health services, educational facilities; drinking establishments; nightclubs and hotels.

Less Vulnerable – Buildings used for: shops; financial, professional and other services; restaurants and cafes; hot food and takeaways; offices; general industry and storage etc.

Water Compatible – Development used for: flood control infrastructure; amenity open space, nature conservation and outdoor sports facilities; water / sewerage pumping stations; docks marinas and wharves; and navigation facilities.

The NPPF sets out the compatibility of development types based on the Flood Zone and the Flood Risk Vulnerability, which is reproduced as Table 1 below.

Table 1 Flood risk vulnerability and flood zone 'compatibility', NPPF PPG Table 3

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a †	Exception Test required †	X	Exception Test required	✓	✓
Zone 3b *	Exception Test required *	X	X	X	✓*

[2] *National Planning Policy Framework, Flood Risk and Coastal Change. Department for Communities and Local Government (Last updated 15/04/15) http://planningguidance.communities.gov.uk/blog/guidance/flood-risk-and-coastal-change/*

Under NPPF the current Land Use B Industrial is considered to be '*Less Vulnerable*' as it is categorised as 'general industry'.

The proposed Land Use D2 Fitness Suite is also considered to be '*Less Vulnerable*' as it is categorised as 'professional and other services'.

The proposed change of use does not result in a change in the vulnerability classification and '*Less Vulnerable*' development is considered appropriate in Flood Zones 1, 2 and 3. Therefore the proposed change of use is in accordance with the NPPF. Additionally, as the application is for a change of use there is no requirement to carry out the Sequential Test.

4 Flood Risk Management Measures

4.1 Managing residual risk

When determining planning applications, local planning authorities should ensure that flood risk is not increased elsewhere and consider if development is appropriate for the level of flood risk.

The proposed change of use, comprises an area of approximately 102m^2 in a building with a total area of approximately 1,735m^2 (i.e. approximately 6% of the building footprint) and is contained wholly within the existing building. As there will be no change to the built footprint there will be no additional displacement of flood water during an event, following the proposed change of use.

In addition, the Site is currently 100% impermeable, with rainwater from the roof collected into the wider surface water drainage system for the entire building. As there are no proposed changes to the built footprint or external areas around the building then there will be no change to surface water runoff from the Site.

Based on the above it is concluded that there will be no additional displacement of flood water, no increase in surface water runoff and therefore no off-site impacts as a result of the proposed change of use.

4.2 Flood Resistant Measures

As the Site is located in Flood Zone 2 then there may be a requirement to apply flood resistant measures to the building; however, on the basis that there are no planned exterior changes to the building any flood resistant measures would need to be limited to the interior refurbishment only.

Flood resistance construction is when a structure in built in such a way to prevent floodwater entering the building and damaging its fabric. Examples could include the use of sealed doorways and entrances to the building to prevent the ingress of flood water.

4.3 Flood Resilient Measures

As the Site is located in Flood Zone 2 then there may be a requirement to apply flood resilience measures such as raising the level of electrical controls and cables, the use of solid floors that are resistant to water damage (e.g. tiled floors) and the use of water-resistant materials and fixtures.

4.4 Flood Warning and Evacuation Plan

A site-specific Flood Warning and Evacuation Plan should be developed and / or reviewed for the proposed change of use and include practical steps for protecting the Site and personnel using the building, be easy

to communicate and consider delegated responsibility, or whether personnel are likely to require additional support during a flood event.

A Flood Warning and Evacuation Plan should include the following:

- A list of important contacts, including Floodline, utilities companies and insurance providers;
- A description or map showing locations of service shut-off points;
- Basic strategies for protecting property, including moving assets to safety where possible, turning off / isolating services and moving to safety; and
- Safe access and egress routes.

The Environment Agency operates Floodline, a flood warning service available to businesses and residents located in areas of flood risk. Owners and / or operators of the proposed change of use are recommended to register for the flood warning service.

The proposed hours of operation for the Site will be between 06:00 and 22:00 with no users remaining in the building overnight. On this basis as there is no overnight accommodation the Site may be evacuated upon receipt of a flood warning via the egress route set out below.

4.5 Access and Egress

Following on from the development of a site-specific Flood Warning and Evacuation Plan it is important to understand the location of access and egress routes to and from the Site during a potential flood event. Currently access onto and away from the Site is via the internal access roads and roundabouts towards the A523 Macclesfield Road, which is located in Flood Zone 1.

For the proposed change of use the access and egress route would remain the same as it is currently. It is understood that the internal access road and bridge over the River Churnet were designed to be above the 1 in 100 year plus climate change water level and therefore safe dry, access from the Site can be maintained following the proposed change of use.

5 Summary

The vulnerability of the proposed change of use is classed as '*Less Vulnerable*' both prior to and following the proposed change of use. Additionally, the flood risk to and from the Site will remain unchanged following the proposed change of use.

Therefore, it is concluded that the proposed change of use is in accordance with the guidance on flood risk as set out in NPPF.

Yours sincerely,



Helena Wicks

Senior Flood Risk Consultant
Water
For and on behalf of HaskoningDHV UK Ltd.