FLOOD RISK ASSESSMENT

Project:

PROPOSED INDUSTRIAL UNIT TO INCLUDE CARPET SHOWROOM/STORE AND OFFICE ACCOMMODATION

Proposed Site:

Bars Bridge Industrial Estate, Bourne Road, West Pinchbeck, SPALDING, Lincolnshire PE11 3NQ

Applicant: Mr. L. Barton

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Prepared by:
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1.0 INTRODUCTION –

AF Architecture has been instructed by Mr. L. Barton to prepare and submit an application to South Holland District Council for full planning permission for the proposed construction of an industrial unit to include carpet showroom/store and office accommodation.

Because the property is in Flood Zone 3 according to the the Environment Agency's indicative flood maps, we have been asked to submit a flood risk assessment.

This Flood Risk Assessment has been written to support our application and should be read in conjunction with the accompanying drawings.

2.0 SITE APPRAISAL –

2.1 SITE LOCATION & SURROUNDINGS –

2.1.1 The site is located on the Bars Bridge Industrial Estate, Bourne Road, West Pinchbeck.

2.1.2 The land comprises a vacant plot of commercial land owned by the applicant.

2.1.3 There is an existing point of vehicular access from Bourne Road.

2.1.4 The site is otherwise a vacant former storage yard with no development on it other than areas of concrete hardstanding.



3.0 THE PROPOSAL –

3.0.1 This application seeks planning approval for the proposed construction of a two-storey industrial unit to include carpet showroom/store and office accommodation.

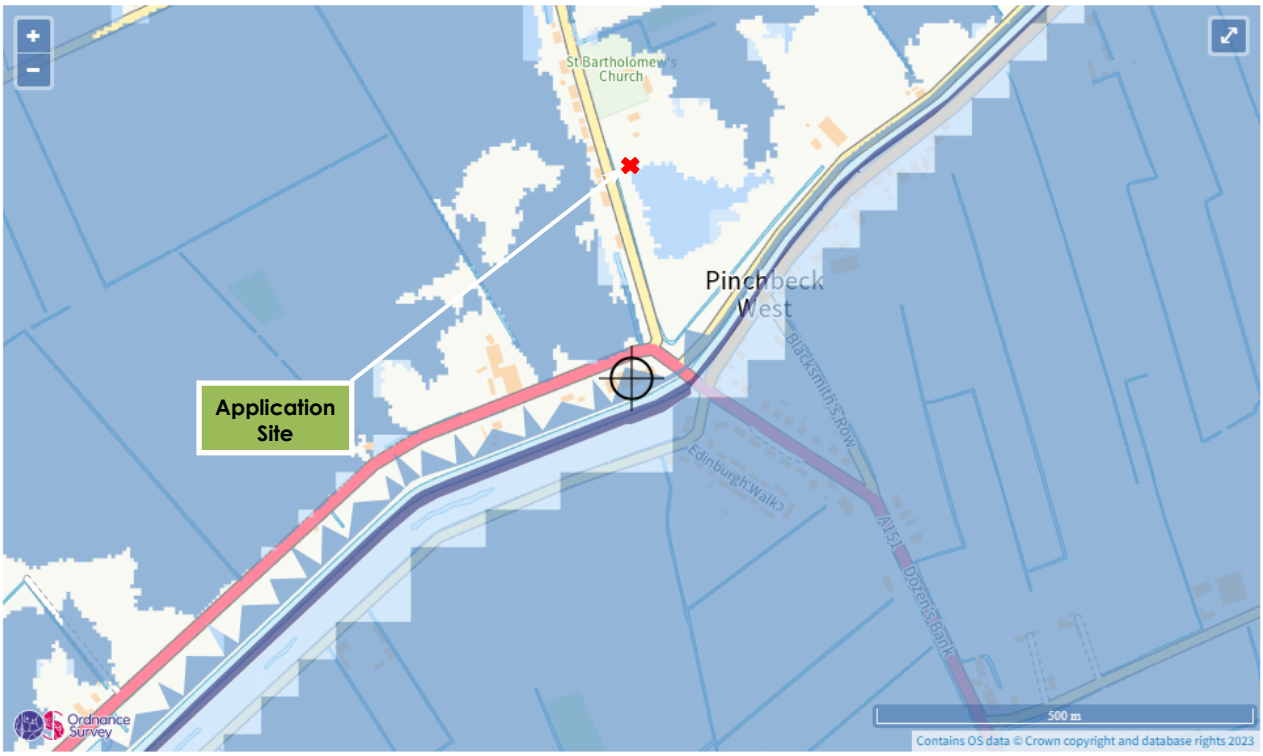
3.02 An alternative first floor exit would be provided via an external staircase to the SE end of the proposed building.

4.0 FLOOD SOURCES & EXISTING DEFENCES

4.0.1 The proposed site is potentially at risk, to a greater or lesser degree, from failure of any of the existing flood alleviation measures in the area.

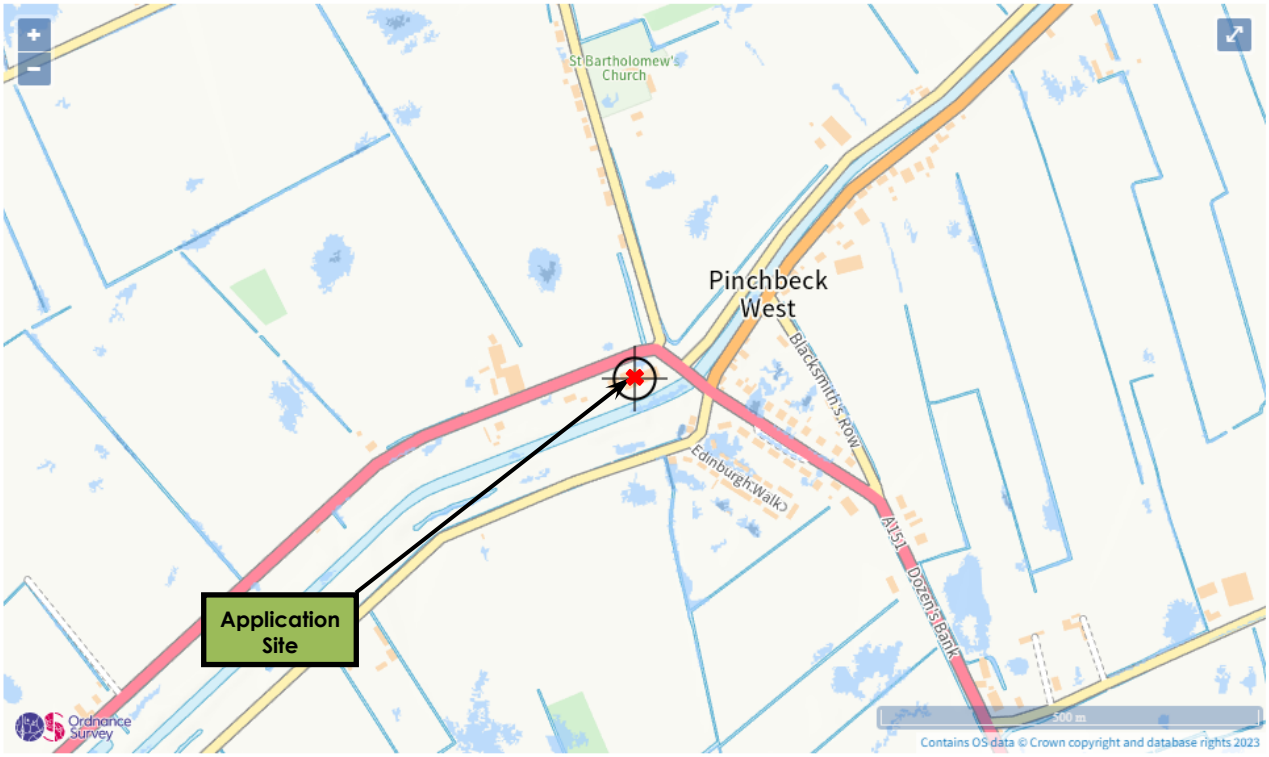
4.0.2 The Environment Agency's Flood Zone Map shows the whole of the area to be in Flood Zone 3 and the Relative Probability of Flooding shows the whole of the surrounding area to be at a high probability of flooding.

4.0.3 However the maps below indicate that the site is at a medium risk of flooding. **Medium risk** means that this area has a chance of flooding of between 1% and 3.3% **each year**. This takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.



Extent of flooding from rivers or the sea

High Medium Low Very low Location you selected



Extent of flooding from surface water

High Medium Low Very low Location you selected

5.0 DISCUSSION

5.0.1 The proposed building will have no habitable accommodation within it. It is purely for carpet showroom/store and office accommodation at ground floor and at first floor further office accommodation and a mezzanine for additional storage over the main showroom/shop area.

5.0.2 According to the NPPF Technical guidance document the proposed use is appropriate in Flood Zone 3a since the use is classified as a less vulnerable use as shown and confirmed in the table extracts on the following pages.

5.0.3 The finished ground floor level will be approximately 150mm above existing external ground level. First floor level would be a further 2.6m above ground which would be at a level that would provide safe refuge in the extreme event of any overtopping of floodwater over the existing raised flood defence embankments adjacent to the site.

5.0.4 Regardless of the potential flood risk associated with the location the proposal has no adverse impact or associated risk to occupants in relation to flooding.

5.0.5 Given the location and potential for flooding, the attached Flood Warning and Evacuation Plan is drawn to the attention of the applicants.

NPPF Technical Guidance - *Table 1 Flood Zones:*

Zone 3a - high probability

Definition
This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.

Appropriate uses
The water-compatible and less vulnerable uses of land (table 2) are appropriate in this zone. The highly vulnerable uses should not be permitted in this zone.

The more vulnerable uses and essential infrastructure should only be permitted in this zone if the Exception Test is passed. Essential infrastructure permitted in this zone should be designed and constructed to remain operational and safe for users in times of flood.

Flood risk assessment requirements
All development proposals in this zone should be accompanied by a flood risk assessment.

Policy aims
In this zone, developers and local authorities should seek opportunities to:

- reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage systems;

NPPF Technical Guidance - ***Table 2 Flood Risk Vulnerability Classification:***

More vulnerable

- Hospitals.
- Residential institutions such as residential care homes, children's homes, social services homes, prisons and hostels.
- Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels.
- Non–residential uses for health services, nurseries and educational establishments.
- Landfill and sites used for waste management facilities for hazardous waste[6].
- Sites used for holiday or short-let caravans and camping, *subject to a specific warning and evacuation plan*.[7]

Less vulnerable

- Police, ambulance and fire stations which are not required to be operational during flooding.
- Buildings used for shops, financial, professional and other services,

6.0 CONCLUSION

6.1 Although the site has been classified as being a high flood risk area, it actually has a low risk of flooding from tidal and fluvial sources and from surface water due to the location, topography and standards of defence.

6.2 We are reassured by the fact that the appropriate organisations will continue to monitor, maintain and improve the existing drainage network in the prevention of flooding in response to the predicted effects of climate change. Such organisations have a responsibility to inform the public if these circumstances change.

6.3 The NPPF guidance in relation to flood risk in locations such as the application site location being within Flood Zone 3a confirms that the proposed building and its (*less vulnerable*) use are appropriate.

6.4 Given the above factors we feel that the proposal is suitable.

6.5 However, the location is to be acknowledged and, although of very remote probability, it must never be ruled out that flooding, even of a scale greater than envisaged by this FRA, could occur.

Flood Warning & Evacuation Plan (FWEP)

- The occupants will sign up to the Environment Agency's free Warnings Direct System (contact 01522 – 785877). Flooding from tidal events is predictable and if a flooding event is imminent the EA would advise the owner accordingly.

- Upon the designated telephone number receiving the warning that the site is at risk of flooding, the assigned person will inform occupants of the situation within the shortest time possible.

- Visitors and occupants should familiarise themselves with the site and surroundings and take note of the proposed evacuation plan. Ensure that the owner has a contact mobile number for emergency contact.

	Status
	**Severe Flood Warning** Severe flooding. Danger to life.
	**Flood Warning** Flooding is expected. Immediate action required
	**Flood Alert** Flooding is possible. Be prepared.
	Warning no longer in force Flood warnings and flood alerts that have been removed in the last 24 hours

- There are four stages of warning which will be issued by the Environment Agency:

- **Flood Alert –** flooding is possible, be prepared. The owner should be prepared to act on their flood plan by preparing a flood kit of essential items.

- **Flood Warning –** Flooding is expected. Immediate action required. People, pets and valuables will be moved to a safe place of refuge at first floor level. Gas, electricity and water supplies will be turned off and flood protection equipment (demountable barriers, sandbags etc.) put in place as required.

- If the **'Severe Flood Warning'** is issued the site should not be occupied as there is likely to be threat to life. If for any reason, the site is occupied during a severe flood warning it will be evacuated to safe ground as recommended by the appropriate authority who will direct the evacuation towards Council operated centres outside the floodplain.

When evacuation has taken place regular contact will be made with the Environment Agency flood control centre to ensure that all current information is available to those affected. (EA Floodline – 0845 988 1188)

- **Warning No Longer In Force –** No further flooding is expected in the area. Upon receipt of the all clear message from the Environment Agency or the Police, the local area may re-open and a visual inspection of the site conditions carried out to determine whether if it safe to return to the site.

General advice given by the EA is that property owners should still be careful as flood water may still be around for several days. If flooding has occurred on site the appropriate measures should be taken to make the site safe to return.