

# Flood Risk Assessment

Prior notification for change of use from office/ancillary to 2 dwellings at Orchard Works, Spen Vale Street, Heckmondwike, WF16 0NQ



on behalf of Mr Irfan Aslan, Haslam Homes Ltd

May 2023

Ref \_22114 FRA



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## 1\_ Introduction

JG-D was instructed by Mr Irfan Aslan to prepare a Prior notification application for a change of use of the first floor office/ ancillary space at Orchard Works, Spen Vale Street, Heckmondwike to two dwellings, which was submitted in February 2023.

The application site is part of the former Orchard Dye Works which was built to support the Woollen Mills along the Spen River dating from 1850s and is designated within Flood Zone 3 on the Environment Agency mapping system.

The applicant submitted the application aware of the implications of its location and the standing advice that a Flood Risk Assessment is undertaken even for minor development within Flood Zones 2 and 3. Recent experience with long delays in obtaining data from the Environment Agency and the elevated position of the proposed apartments with access from Flood Zone 1 were considered suitable mitigation for a change of use however and encouraged a pre-emptive submission.

Discussions with the LPA confirmed the approach and having fulfilled their statutory duty by consulting with the EA they were prepared to determine the application when an objection was received. Subsequent exchanges have agreed an acceptable format for a Flood Risk Assessment – *'simply a statement setting out the risk (if any) and how in the event of flooding the occupants will have a safe route to somewhere outside of the flooding area.'*

## 2\_Site Description

Site Area: 150m<sup>2</sup>

Grid Reference: SE 21716 22944

Elevation: approx. 59m above Sea Level

The proposals are for the change of use of from office/ancillary to 2 dwellings at Orchard Works, Spen Vale Street, Heckmondwike, WF16 0NQ



*Location of Site*



*Aerial View*



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### 3\_Flood Risk Assessment

#### National Planning Policy

Paragraph 167 of the NPPF states " When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:

- within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;
- the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;
- it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;
- any residual risk can be safely managed; and
- safe access and escape routes are included where appropriate, as part of an agreed emergency plan

#### Local Planning Policy

Local Authorities consider flood risk through relevant environmental and climate change policies which enforce the requirements of the NPPF. Relevant local policy, as outlined by Kirklees Council, is contained within the;

- i) Calder Catchment Strategic Flood Risk Assessment
- ii) Kirklees Surface Water Management Plan

The Strategic Flood Risk Assessment (SFRA) and the Kirklees Surface Water Management Plan (SWMP) are key sources of specific flood risk information and the associated planning policies for the area. The SFRA provides a more detailed review of flood risk and recommendations for ensuring developments can be constructed and operated safely in accordance with the NPPF.

#### Flood Risk Zones

These Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences. They are shown on the Environment Agency's Flood Map for Planning available on the Environment Agency's web site, as indicated in the table below:

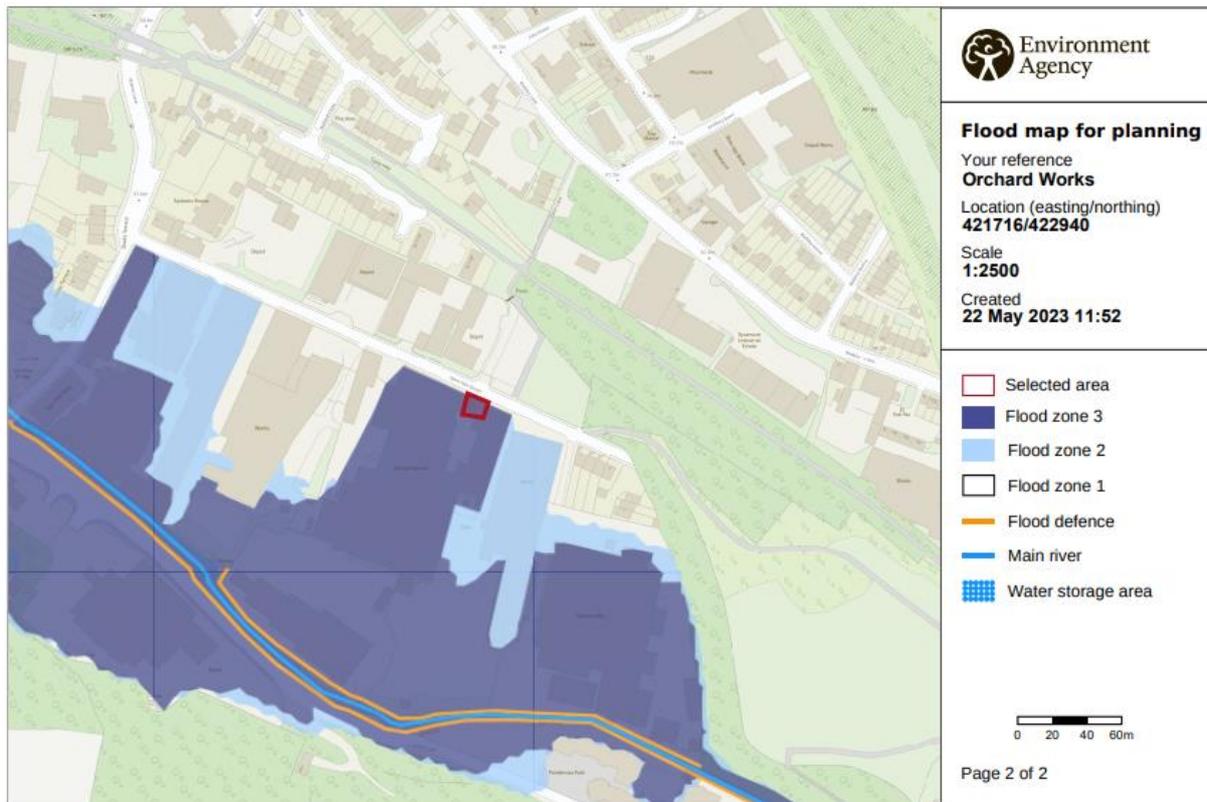
Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or Land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on the Flood Map)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding. (Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood.

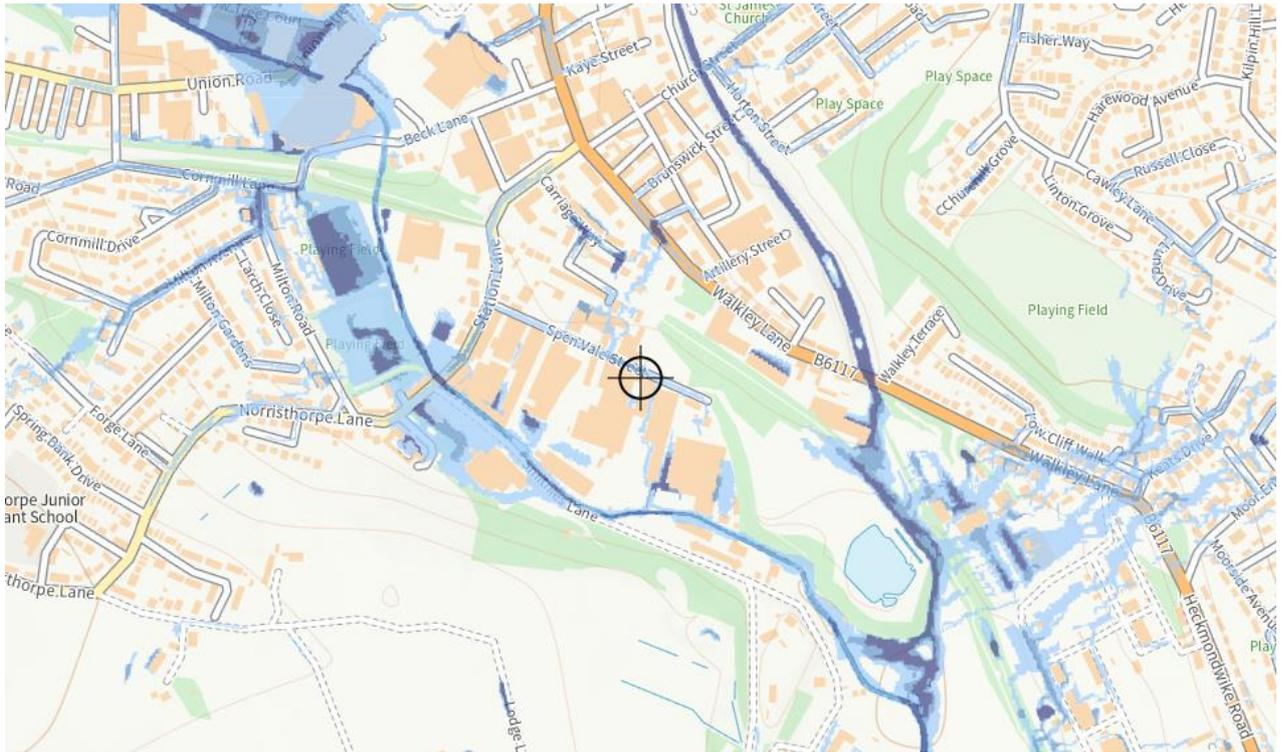


	<p>Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency.</p> <p>(Not separately distinguished from Zone 3a on the Flood Map)</p>
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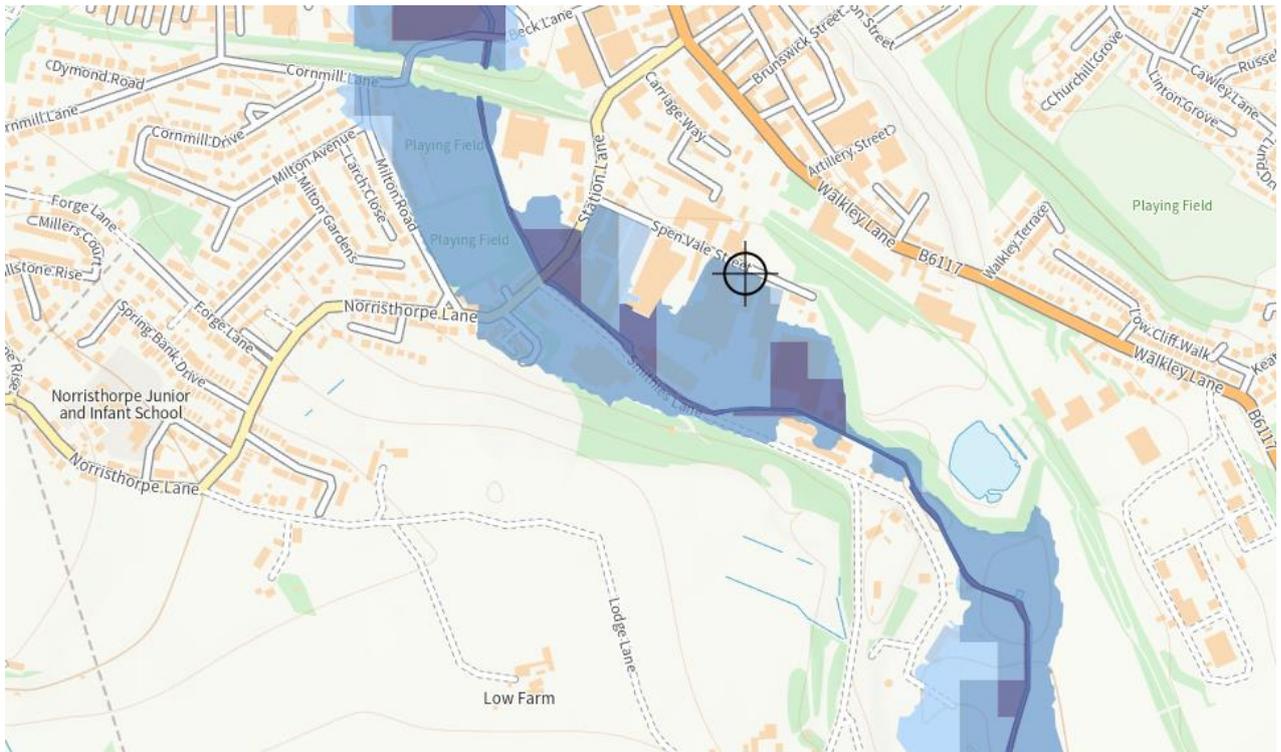
#### 4\_Sources of Flooding

The Environment Agency's Flood Map for Planning (Rivers and Sea) identifies fluvial and tidal flood zones and provides an indication of whether or not these zones are protected, due to the presence of flood defences (also highlighted). The map below represents the Flood Map for the surrounding area.





Extent of flooding from surface water



Extent of flooding from Rivers or the Sea

## 5\_Management of Flood Risk

The applicant purchased the property as a business opportunity in full knowledge of the Flood Risk. Having identified the office space potential the changes to working practices caused by the pandemic have encouraged a reappraisal and the residential conversion currently being considered.

The ground floor communal entrance is located on Spen Vale Street which is in Flood Zone 1. Internal floor level is approximately 100mm above pavement level and the living accommodation is at first floor, a further 3.2m above road level. Although EA flood maps show the full footprint of the building within Flood Zone 3, local undulations suggest that water levels will not breach the entrance lobby before discharging into Spen Vale Street.

Measures will be employed to minimize the risk as far as possible:

Tenants will be registered with the EA Flood Warning Service which provides a minimum of 2 hours advance notification of potential flooding, giving adequate time to implement safety procedures. The site is within the 'River Spen from Wormald Street to Spen Vale Street' Flood Warning Area.

In the event of flooding, the residents have access to safe refuge on the first floor of the dwelling.

Spen Vale Street is elevated in relation to the immediate environs of Orchard Works and provides a suitable emergency egress route to Station Lane and Heckmondwike beyond.

Flood resistance and resilience measures will be employed in the refurbishment of the ground floor spaces:

- External walls rendered resistant to flooding to higher level;
- Manual flood doors;
- External ventilation outlets, utility points and air bricks fitted with removable waterproof covers;
- Extension electrical main ring run from higher level; and on separately switched circuit from first floor;
- Existing high level electrical incomer retained;
- Plumbing insulation of closed-cell design;
- Non-return valves fitted to all drain and sewer outlets;
- Manhole covers secured;
- Use of MDF carpentry (i.e. skirting, architrave, built-in storage) avoided at ground floor level.

As the development is situated in Flood Zone 3 a flood warning and evacuation plan will be set up and implemented post development. This plan is based on the tenants signing up to the Environment Agency flood warning service.

The flood warning service has three types of warning that will help occupants to prepare for flooding and take action.



Flood Warning	Flood Alert	Flood Warning	Severe Flood Warning
			
What it means?	Flooding is possible. Be prepared.	Flooding is expected. Immediate action required.	Severe flooding. Danger to life.
When it's used?	Two hours to two days in advance of flooding.	Half an hour to one day in advance of flooding.	When flooding poses a significant threat to life.
What to do?	Be prepared to act on your flood plan.  Prepare a flood kit of essential items.  Monitor local water levels and the flood forecast on our website.	Move family, pets and valuables to a safe place.  Turn off gas, electricity and water supplies if safe to do so.  Put flood protection equipment in place.	Stay in a safe place with a means of escape.  Be ready should you need to evacuate from your home.  Co-operate with the emergency services.  Call 999 if you are in immediate danger.

## 7\_ Recommended Flood Plan:

### Before a flood

- Find out if you are at risk of flooding;
- Find out if you can receive flood warnings;
- Prepare and keep a list of all your contacts to hand or save them on your mobile phone/tablet;
- Think about what items you can move now and what you would want to move to safety during a flood such as pets, cars, furniture and electrical equipment;
- Know how to turn off gas, electricity and water supplies;
- Prepare a flood kit of essential items and keep it handy. It can include copies of important documents, a torch, a battery-powered or wind-up radio, blankets and warm clothing, waterproofs, rubber gloves and a first aid kit including all essential medication.

### On receipt of a flood warning

- Tune into your local radio station on a battery or wind-up radio;
- Fill jugs and saucepans with water;
- Grab your already prepared flood kit;
- Collect blankets, torch, first aid kit, medication and food;
- Move important documents, personal items, valuables and lightweight belongings upstairs or to high shelves;
- Raise large items of furniture, or put them in large bags if you have them;
- Move people, outdoor belongings, cars and pets to higher ground;



Switch off water, gas and electricity at mains when water is about to enter your home.  
Do not touch sources of electricity when in standing water;  
Fit flood protection products, if you have them, for example flood boards, airbrick covers and sandbags;  
If you do not have non-return valves fitted, plug water inlet pipes with towels or cloths;  
Know your means of escape;  
Listen to the advice of the emergency services and evacuate if told to do so;  
Avoid walking or driving through flood water. 300mm of fast flowing water can knock over an adult and two feet of water can move a car.

#### After a flood

If you have flooded, contact your insurance company as soon as possible;  
Take photographs and videos of your damaged property as a record for your insurance company;  
If you don't have insurance, contact your local authority for information on grants and charities that may help you;  
Flood water can contain sewage, chemicals and animal waste. Always wear waterproof outdoor wear, including gloves, wellington boots and a face mask;  
Have your electrics, central heating and water checked by qualified engineers before switching them back on.

#### 8\_Conclusion

The site is susceptible to flooding but in association with the proposed change of use measures can be adopted to minimize risks to future occupiers:

It is recommended that extensive flood resistance and resilience measures are incorporated into the development.

It is also requested that the tenants of the property register for the EA Flood Warning Service, which is available in the area and develop a flood plan that may be implemented in the event of extreme flooding.

Based on the likely flooding risk, it is considered that the proposed development can be operated safely in flood risk terms, without increasing flood risk elsewhere and is therefore appropriate development in accordance with the NPPF.

