

Farzana Tabasum  
Kirklees Metropolitan Borough Council  
Development Management

**Our ref:** RA/2022/145211/01-L01  
**Your ref:** 2022/93766

**Date:** 14 December 2022

By email: [dc.admin@kirklees.gov.uk](mailto:dc.admin@kirklees.gov.uk)

Dear Farzana

**ERECTION OF THREE INDUSTRIAL SHEDS ON EXISTING INDUSTRIAL SITE.  
SYNGENTA LTD, LEEDS ROAD, HUDDERSFIELD, HD2 1FF**

Thank you for consulting us on this application which we received on 24 November 2022.

We object to this application due to

- An inadequate flood risk assessment
- Proximity to a main river culvert and natural high ground which acts as an informal flood defence – insufficient information provided

Our detailed comments are provided below.

**COMAH Regulations**

Syngenta Limited is regulated under the Environmental Permitting Regulations (EPR) by the Environment Agency and the Control of Major Accident Hazards Regulations (COMAH) by the Competent Authority (made up of the Environment Agency and the Health & Safety Executive). The Environment Agency Regulatory Officer for the site is fully aware of the proposed development and confirms that they have no regulatory issues with the development. Flooding has been an issue on other parts of the site in the past and therefore consultation with the Environment Agency flood risk advisor has been undertaken, comments provided below.

**Flood Risk**

Our Flood Map for Planning shows the site lies within Flood Zone 3, with a high probability of flooding from rivers. The application is for industrial buildings, which are considered to be a 'less vulnerable' land use in [Annex 3](#) of the National Planning Policy Framework. It is therefore necessary for the application to pass the Sequential Test and to be supported by a site-specific flood risk assessment (FRA), which can demonstrate that the 'development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall'.

**Flood Risk Assessment**

An FRA by Arcadis UK dated 10 August 2022, reference 10053234-ARC-XX-XX-RP-ZZ-0034-01-Flood Risk Assessment, Revision 2.0, has been submitted in support of the application.

Environment Agency  
Kings Pool Peasholme Green, York, North Yorkshire, YO1 7PX.  
Customer services line: 03708 506 506  
[www.gov.uk/environment-agency](http://www.gov.uk/environment-agency)

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The FRA indicates planning permission is required for the expansion of an existing manufacturing plant. This FRA also assesses the flood risk to a proposed chemical storage tank farm which is considered to be permitted development and therefore does not form part of the planning application. Our comments are based on this description. However, the applicant should note the Environmental Permitting informative below also applies to the chemical storage tank farm.

### **Environment Agency position – Objection 1**

In the absence of an acceptable flood risk assessment (FRA) we object to this application and recommend that planning permission is refused.

### **Reasons**

The submitted FRA does not comply with the requirements for site-specific flood risk assessments, as set out in paragraphs 20 to 21 of the Flood Risk and Coastal Change section of the planning practice guidance and its site-specific flood risk assessment checklist. The FRA does not therefore adequately assess the flood risks posed by the development. In particular, the FRA fails to:

- Provide flood risk mitigation measures to address flood risk
- Demonstrate how the development will be kept safe from flood hazards and provide safe access and egress routes

### **Overcoming our objection**

#### **Flood Risk Mitigation**

We normally expect finished floor levels and/or flood sensitive equipment to be above the higher of the highest recorded flood level or 1% level plus [climate change allowances](#), whichever is highest, with a further 300mm. The FRA indicates this cannot be achieved due to the requirement for level access and to avoid transfer of flood risk to others.

We recommend flood resilience to the design flood level (1% plus CC) such as raising flood sensitive equipment and materials to the design flood level. The FRA currently doesn't indicate the level of flood resilience.

It is not clear whether a water entry strategy is being used or if the walls will be made flood resilient. This needs to be clear within the FRA with an explanation of how this affects the requirement for compensatory storage to avoid transfer of flood risk to others. If a water entry strategy is chosen the FRA needs to detail an evacuation plan and the flood hazard. The FRA states existing demountable defences will be used as flood resilience. It is not clear what height they protect to or if there is an issue regarding transfer of flood risk to others. We normally recommend passive resistance/resilience as this does not require human intervention to install, store and maintain demountable defences. We recommend the applicant signs up to receive our flood warnings, however we cannot guarantee there will be a long lead time issuing these.

#### **Compensatory Storage**

The FRA needs to demonstrate there is no loss of flood storage up to an including the 1% plus [climate change allowances](#).

The FRA (section 7.6) makes some assessment of the loss of flood storage as a result of the new warehouse, however, makes no assessment of the impact in terms of loss of storage of the other buildings within flood zone 3. The FRA needs to assess this. Compensatory storage is required to the 1% plus CC level to ensure there is no increase in flood risk as a result of the development, no alteration of existing flood flow

routes, no loss of flood storage and no transfer of flood risk to others.

The FRA needs to explain how any loss of storage up to and including the 1% AEP plus CC level is calculated, and if required, is mitigated.

### **Flood Hazard and Safe access/egress routes**

The FRA needs to demonstrate users of the site can remain safe for the lifetime of the development including climate change. The FRA needs to assess the flood hazard to the building and for access and egress. This is defined by the UK flood hazard rating using the FD2320 methodology. The FRA needs to calculate this based on; the design flood, duration, depths, velocities and debris factor to determine the flood hazard classification of:

- No danger to people
- A danger to some people (e.g. the elderly and infirm)
- A danger to most people (e.g. there will be danger of loss of life for the general public)
- A danger for all people (e.g. there will be danger of loss of life for the general public and the emergency services)

The FRA needs to demonstrate safe access / egress is provided for site users, up to and including the design event (1% AEP CC). Wherever possible, safe access routes should be provided that are located above design flood levels and avoiding flow paths (i.e. 'dry')". If 'dry' safe access/egress is not possible, the proposed routes can be 'wet' but must be 'safe'. This is defined by the UK flood hazard rating using the FD2320 methodology, calculated according to flood depth, velocity and likely debris factor.

We are not the competent authority on matters of safe access/egress or emergency planning. Our role is to ensure that enough data is available within the FRA for the LPA/LLFA/emergency planners to make an informed decision. As a minimum, the FRA should either demonstrate a dry access/egress route or an assessment of a proposed 'wet' route using FD2320. If no safe route is possible and the applicant intends to rely on an emergency plan, then sufficient data needs to be included in the FRA for the decision maker to understand whether emergency planning proposals are acceptable.

### **Environment Agency position – Objection 2**

We object to this application as it involves building within 8 metres of a main river (Lees Beck) and privately owned culvert, and it is unclear how close to the natural high ground. As submitted, it is unlikely that we would grant a flood risk activity permit for this application.

#### **Reasons**

The proposed development is likely to adversely affect the construction and stability of the culvert which may compromise its function. Therefore, potentially increasing the risk of flooding.

#### **Overcoming our objection**

##### **Distance from culvert including foundations and natural high ground**

The works proposed are in close proximity to a privately owned culvert with Lees Beck main river running through it, and also to natural high ground which may act as an informal flood defence (referred to in section 4.3 of the FRA). To obtain an Environmental permit from us for this development, the applicant must be able to demonstrate that there is no detrimental effect to the culvert, foundations or natural high ground. At this stage we are unable to say whether it is likely that we could grant a permit for the development without further information.

- The FRA must confirm the distance of any works from the culvert/foundations and the landward toe of the natural high ground in metres. We normally expect at least an 8 metre easement from, and no development over, a culvert/natural high ground. It may be useful to overlay the development onto a plan showing the alignment of the culvert and natural high ground.
- The FRA needs to demonstrate the works have no impact on the structural integrity and place no additional loading vertically or horizontally on the culvert and its foundations.
- The applicant should seek confirmation from structural engineers and the Council's Flood Risk and Drainage Team that they are satisfied there will be no detrimental impact on the structural integrity of the culvert/foundations. As this could compromise their function and increase the risk of flooding to people and property.

Any damage to the culvert or natural high ground as a result of the development would be the responsibility of the riparian owner, i.e. the landowner, who is responsible for ensuring no transfer of flood risk to others as a result of their development. Access needs to be maintained to the culvert for example for maintenance and operational response. As it is a privately owned culvert the riparian owner needs to be satisfied access can be achieved and discuss this with the Flood Risk and Drainage Team at Kirklees Council.

## INFORMATIVES

### **Environmental Flood Risk Permit**

The Environmental Permitting (England and Wales) Regulations 2016 require a permit to be obtained for any activities which will take place:

- on or within 8 metres of a main river
- on or within 8 metres of a flood defence structure or culverted main river (16 metres if tidal)
- on or within 16 metres of a sea defence
- involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert
- in a floodplain more than 8 metres from the river bank, culvert or flood defence structure (16 metres if it's a tidal main river) and you don't already have planning permission For further guidance the applicant can visit <https://www.gov.uk/guidance/flood-risk-activities-environmental-permits> or contact our National Customer Contact Centre on 03708 506 506 (Monday to Friday, 8am to 6pm) or by emailing [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk).

### **Compensatory storage**

Where a development is likely to increase flood risk by taking up flood plain storage, it may be necessary to provide compensatory storage to mitigate this risk. Compensation works are divided into direct and indirect. These terms come from CIRIA report C624 "Development and flood risk – guidance for the construction industry (2004)".

Direct or 'level for level' methods as they are also known re-grade the land at the same level as that taken up by the development. Direct schemes therefore provide a direct replacement for the lost storage volume. Indirect methods rely on water entering a storage area which then releases water at a slower rate, akin to a surface water attenuation scheme. The storage area can be remote from the flood plain or even a tank. Indirect schemes are complicated to design and construct and require a more intensive maintenance regime, which must be continued indefinitely.

For the above reasons we are generally opposed to indirect schemes unless a planning decision has already been made and they are the only remaining option.

### **Flood resistance and resilience**

Physical barriers, raised electrical fittings and special construction materials are just some of the ways you can help reduce flood damage. To find out which measures will be effective for this development, please contact your building control department. If you'd like to find out more about reducing flood damage, visit the Flood Risk and Coastal Change pages of the planning practice guidance. Further guidance on flood resistance and resilience measures can also be found in:

- Government guidance on flood resilient construction  
<https://www.gov.uk/government/publications/flood-resilient-construction-of-new-buildings>
- CIRIA Code of Practice for property flood resilience  
[https://www.ciria.org/Research/Projects\\_underway2/Code\\_of\\_Practice\\_and\\_guidance\\_for\\_property\\_flood\\_resilience.aspx](https://www.ciria.org/Research/Projects_underway2/Code_of_Practice_and_guidance_for_property_flood_resilience.aspx)
- British Standard 85500 – Flood resistant and resilient construction  
<https://shop.bsigroup.com/ProductDetail/?pid=000000000030299686>

### **Signing up for flood warnings**

The applicant/occupants should phone Floodline on 0345 988 1188 to register for a flood warning or visit <https://www.gov.uk/sign-up-for-flood-warnings>. It's a free service that provides warnings of flooding from rivers, the sea and groundwater, direct by telephone, email or text message. Anyone can sign up.

Flood warnings can give people valuable time to prepare for flooding – time that allows them to move themselves, others and water-sensitive items to safety. Flood warnings can also save lives and enable the emergency services to prepare and help communities.

- For practical advice on preparing for a flood, visit <https://www.gov.uk/prepare-for-flooding>.
- To get help during a flood, visit <https://www.gov.uk/help-during-flood>.
- For advice on what do after a flood, visit <https://www.gov.uk/after-flood>.

### **Flood warning and emergency response - advice to LPA**

We do not normally comment on or approve the adequacy of flood emergency response procedures accompanying development proposals, as we do not carry out these roles during a flood. Our involvement with this development during an emergency will be limited to delivering flood warnings to occupants/users covered by our flood warning network. The planning practice guidance (PPG) to the National Planning Policy Framework states that, in determining whether a development is safe, the ability of residents and users to safely access and exit a building during a design flood and to evacuate before an extreme flood needs to be considered. One of the key considerations to ensure that any new development is safe is whether adequate flood warnings would be available to people using the development.

In all circumstances where warning and emergency response is fundamental to managing flood risk, we advise local planning authorities to formally consider the emergency planning and rescue implications of new development in making their decisions. As such, we recommend you refer to 'Flood risk emergency plans for new development' and undertake appropriate consultation with your emergency planners and the emergency services to determine whether the proposals are safe in accordance with paragraph 167 of the NPPF and the guiding principles of the PPG. We remind you

to consult with your emergency planners and the emergency services to confirm the adequacy of the evacuation proposals.

### **Sequential test - advice to LPA**

#### **What is the sequential test and does it apply to this application?**

In accordance with the National Planning Policy Framework (paragraph 162), development in flood risk areas should not be permitted if there are reasonably available alternative sites, appropriate for the proposed development, in areas with a lower risk of flooding. The sequential test establishes if this is the case.

Development is in a flood risk area if it is in Flood Zone 2 or 3, or it is within Flood Zone 1 and your strategic flood risk assessment shows it to be at future flood risk or at risk from other sources of flooding such as surface water or groundwater.

The only developments exempt from the sequential test in flood risk areas are:

- Householder developments such as residential extensions, conservatories or loft conversions
- Small non-residential extensions with a footprint of less than 250sqm
- Changes of use (except changes of use to a caravan, camping or chalet site, or to a mobile home or park home site)
- Applications for development on sites allocated in the development plan through the sequential test and:
  - the proposed development is consistent with the use for which the site was allocated; and
  - there have been no significant changes to the known level of flood risk to the site, now or in the future, which would have affected the outcome of the test.

Avoiding flood risk through the sequential test is the most effective way of addressing flood risk because it places the least reliance on measures such as flood defences, flood warnings and property level resilience.

#### **Who undertakes the sequential test?**

It is for you, as the local planning authority, to determine an appropriate area of search and to decide whether the sequential test has been passed, with reference to the information you hold on land availability. You may also ask the applicant to identify any other 'reasonably available' sites which are on the open market and to check on the current status of identified sites to determine if they can be considered 'reasonably available'. Further guidance on the area of search can be found in paragraphs 027-030 of the planning practice guidance [here](#).

#### **What is our role in the sequential test?**

We can advise on the relative flood risk between the proposed site and any alternative sites identified - although your strategic flood risk assessment should allow you to do this yourself in most cases. We won't advise on whether alternative sites are reasonably available or whether they would be suitable for the proposed development. We also won't advise on whether there are sustainable development objectives that mean steering the development to any alternative sites would be inappropriate. Further guidance on how to apply the sequential test to site specific applications can be found in the planning practice guidance: [Flood risk and coastal change - GOV.UK \(www.gov.uk\)](http://www.gov.uk).

Should you require any additional information, or wish to discuss these matters further, please do not hesitate to contact me.

Yours sincerely

**Bev Lambert**  
**Sustainable Places - Planning Advisor**

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