Environment Agency

Mr Nick Hirst
Kirklees Metropolitan Borough Council
Development Management
PO Box B93
Huddersfield
West Yorkshire
HD1 2JR

Our ref: RA/2021/143639/02-L01
Your ref: 2021/93567

Date: 21 March 2022

Dear Nick

ERECTION OF 194 DWELLINGS WITH ASSOCIATED WORKS – LAND OFF WESTGATE, CLECKHEATON, BD19 5DR

Thank you for re-consulting us on this application following submission of additional/ revised flood risk information, which we received on 14 February 2022. This information does not fully address our concerns therefore we are maintaining our objection.

Environment Agency position
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 30 to 32 of the Flood Risk and Coastal Change section of the planning practice guidance. The FRA does not therefore adequately assess the flood risks posed by the development. In particular, the flood risk appraisal fails to:

- Confirm which parts of the development are within flood zone 3ai
- Take the impacts of climate change into account in the assessment of flood risk to the site
- Confirm if flood compensatory storage is required up to and including the 1% plus climate change scenario
- Confirm de-culverting will not increase flood risk or transfer flood risk to others at scenarios up to and including the 1% plus climate change level
- Assess whether the development can stay safe for its lifetime taking into account climate change including the requirement for safe access and egress

Overcoming our objection

Flood zone 3ai
We recommend the site plan is overlaid onto Kirklees Council's Strategic Flood Risk Assessment (SFRA) maps showing flood zone 3ai to ensure there is no residential development, no loss of flood storage or land raising within this area. The Council need to be satisfied the development meets their SFRA policy on 3ai.

Cont/d..

The SFRA maps showing 3ai are owned by the Council and any plans to update the Environment Agency's Flood Map do not automatically update the SFRA maps. We make the council aware of any changes we make to the Flood Map, however they are responsible for amendments to their own maps.

Impacts of climate change
The climate change allowances were updated in July 2021 and the most appropriate allowance to use for this area is now 23% climate change allowances. The FRA needs to assess the flood risk using the allowance of 23% rather than the 20% used.

The appraisal shows node point Blac01_1287 has been used for the 1% level. This node point is where the open channel of Blacup Beck enters the culvert. There are other modelled node points upstream and within the site boundary with higher 1% flood levels. The appraisal and any modelling work the applicant has undertaken to determine the finished floor levels and compensatory storage should use the node points representative of the worst-case flood risk to the site. We normally expect the upstream modelled node point to be used to assess the flood risk to the entire site or justification is provided for a more appropriate node for example a mid-point node.

Flood Risk Mitigation
The appraisal shows finished floor levels are likely to be above the 1% plus 23% climate change plus 600mm level. However, the model node points used need to be assessed using the worst-case scenario and at 1% plus 23% climate change.

Bungalows and ground floor sleeping in three storey buildings are shown on the site. The FRA needs to indicate where these properties are located and ensure they are in the lowest flood risk areas of the site.

Flood Compensatory Storage
The FRA needs to demonstrate the development will not result in any loss of floodplain storage for all scenarios up to and including the 1% plus 23% climate change level. The appraisal assesses compensatory storage to the 1% level only. Compensatory storage for any loss of storage at the 1% plus 23% CC should be at a level for level basis.

Compensatory storage is required to the 1% plus 23% CC to confirm there is no increase in flood risk as a result of the development, for example through de-culverting works, raising finished floor levels, re-profiling site ground levels or new walls. The assessment needs to demonstrate there is no increased flood risk within the site, no alteration of existing flood flow routes, no loss of flood storage or transfer of flood risk to others such as existing flood depths or hazard (using the FD2320 method) up to the 1% plus climate change scenario.

The FRA needs to show pre/post development changes to site levels in mAOD and if compensatory storage is required as a result for any loss in floodplain storage up to and including the 1% plus 23% CC level.

We need further information to demonstrate how the compensatory storage has been calculated, together with evidence that the methodology used represents the flood risk and mechanisms. The FRA ideally should use a detailed methodology ie modelling work to demonstrate the 1% plus CC flood levels and compensatory storage. An intermediate approach may be satisfactory, but we need evidence to support the approach taken ie an explanation of how modelled flood levels and compensatory storage up to the 1% plus 23% CC have been calculated and why.

Cont/d..

The surface water attenuation storage appears within the area of 3ai, there must be no loss of storage in 3ai. Flood zone 1 or 2 should be explored for storage. If this is not possible the Council will need to decide if they are satisfied this meets their policy on 3ai. Matters relating to the ordinary watercourse, surface water design and 3ai need to be agreed with the Kirklees Council Flood Risk and Drainage Teams.

De-culverting the Ordinary Watercourse Blacup Beck
The information submitted indicates compensatory storage will be created by de-culverting Blacup Beck ordinary watercourse and reducing ground levels in this area.

An assessment is required of the impact of de-culverting on scenarios up to the 1% plus climate change. The appraisal uses the 1% level only so this needs to be reassessed with 23% CC. The assessment of de culverting needs to consider blockage scenarios and exceedance events on drainage infrastructure pre and post development. This is to show there will be no increase in flood risk, no alteration of existing flood flow routes and no transfer of flood risk to others. Calculations and modelling may be required to demonstrate this.

We need evidence that the methodology used represents the flood risk and flood mechanisms resulting from de culverting. The FRA ideally should use a detailed methodology ie modelling work to demonstrate the impact of this up to 1% plus 23% CC. An intermediate approach may be satisfactory, but we need further evidence to support the approach taken ie an explanation of the methodology used and why. If you would like modelling advice please contact our Data and Evidence Team at yorks.pso.d&e.advice@environment-agency.gov.uk

Flood Map
The EA Flood Maps stay as they are designated by us until any suitable revised and accepted modelled data becomes available at which time we may change them.

The applicant could apply to have the flood zones changed based on their data, however, this would have to meet specific criteria to be suitable for informing Flood Zones, which if accepted, would lead to a change in the flood zones. If the applicant would like to formally challenge the Flood Maps, they would need to submit an ERR (Evidence Review Request) to our Data and Evidence Team who can provide guidance on this.

Safe access and egress
The FRA needs to demonstrate safe access / egress is provided for site users, up to and including the design event (1%AEP plus 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 using flood depth, velocity and 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.

INFORMATIVES
Development Upstream of the site
We draw to the Council’s attention the application we commented on upstream of the site boundary - your reference 2021/92661. In our response the existing site plan showed a pond within flood zone 3 with drainage (to non-main river) from the west and

an ordinary watercourse (Blacup Beck) flowing out to the east. Google maps shows the pond has been partly filled in. We indicated the FRA needs to assess what flood risk mitigation, such as compensatory storage, is required to ensure no loss of flood storage or transfer of flood risk to others beyond the site boundary (eg downstream).

We indicated the council needs to be satisfied that any works to fill in the pond has the required approvals from the LPA and the consent of the LLFA under the Land Drainage Act for proposed alterations to the watercourse.

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

Yours sincerely

Mrs Bev Lambert
Sustainable Places - Planning Advisor

Direct dial 020 302 57982
Direct e-mail bev.lambert@environment-agency.gov.uk
Team e-mail sp-yorkshire@environment-agency.gov.uk

End