

Ms Anna Herriman  
Oxfordshire County Council  
Planning Implementation  
County Hall New Road  
Oxford  
Oxfordshire  
OX1 1ND

**Our ref:** WA/2024/131120/01-L01  
**Your ref:** R3.0010/24  
**Date:** 22 March 2024

Dear Ms Herriman

**Planning application by Oxfordshire County Council for planning permission: notice of an application for planning permission relating to the construction of two sections of single carriageway forming part of the Watlington relief road (WRR) including footways and cycleways, two new roundabouts, a new junction linking Britwell Road/Harmans Way and the provision of a vehicular pick-up and drop-off area to Icknield Community College, a new section of bridleway (Pyrtan Lane to east and west of the route alignment), pedestrian crossing facilities, a new bridge over Chalgrove brook, landscaping and planting, drainage improvements, street lighting and associated earthworks and infrastructure at fields to the northern and eastern outskirts of Watlington in Oxfordshire**

**B4009, Rosemoor Drive, Cuxham Road, Pyrtan Lane and Watlington Road**

Thank you for consulting us on the above application on 22 January 2024. Please accept our apologies for the delay in responding.

The proposed location of the road lies within land which is partly within Flood Zones 2 and 3, defined as having a medium and high probability of flooding respectively. The applicant has undertaken detailed hydraulic flood modelling which confirms that part of the site lies within Flood Zone 3b – the functional floodplain. The proposed development location is also upon a principal aquifer where groundwater levels are expected to be extremely shallow.

The Chalgrove Brook chalk stream main river runs adjacent to Cuxham Road.

#### **Environment Agency position**

In accordance with paragraph(s) 170, 171 and 180 of the National Planning Policy Framework (NPPF), we **object** to the proposed development due to its unacceptable risk to the environment.

The proposal is also contrary to South Oxfordshire District Council Local Plan policy TRANS3 (exception test) ENV12 (impact from pollution) and EP4 (exception test and flood risk and water quality from sustainable drainage).

We recommend that planning permission is refused for the following reasons:

### **Reason 1 - Fluvial flood risk**

We welcome that the applicant has undertaken hydraulic flood modelling to better understand flood risk in the area and the potential impacts of the proposed development. We are satisfied that the applicant's modelling is appropriate to use within a Flood Risk Assessment for this development. Our agreement of the model relates to our acceptance of the model soundness as an evidence base and is not an agreement of the model as a flood risk assessment.

We **object** to this application because it fails the second part of the flood risk exception test. We recommend that planning permission is refused on this basis.

This application sites lies partly within Flood Zones 3a and 3b, which is land defined by the flood risk and coastal change planning practice guidance (PPG) as having a high probability of flooding. As shown in table 2 of the PPG, development classified as 'essential infrastructure' under Annex 3 of the National Planning Policy Framework (NPPF) is only appropriate in these areas if the exception test is passed alongside the sequential test.

The NPPF (paragraph 171) makes it clear that both elements of the exception test must be passed for development to be permitted. Part 2 of the test requires the applicant to demonstrate, via a site-specific flood risk assessment, that the development will be safe, without increasing flood risk elsewhere. Where possible, the development should reduce flood risk overall.

Essential infrastructure in flood zones 3a and 3b should be designed to be operational and safe in time of flooding and in flood zone 3b, where the exception test is passed, should result in no net loss of flood storage and present no impediment to flow or increase flood risk elsewhere.

In this instance the submitted flood risk assessment (reference WRR-ACM-02-LK1-RP-F-0520006, dated December 2023 and prepared by Aecom) fails to:

- sufficiently take the impacts of climate change into account
- demonstrate the development will not increase flood risk elsewhere
- demonstrate the proposed development will be safe

In the area at risk of flooding, the road is proposed to be raised and a new bridge constructed across the Chalgrove Brook main river. The raised road would result in the loss of 311m<sup>3</sup> of floodplain storage and impede flood flows within the design flood extent (1 % annual probability flood event with the relevant allowance for climate change), and so increase the risk of flooding both onsite and elsewhere contrary to the National Planning Policy Framework.

The applicant has proposed flood storage compensation to mitigate for the flood storage due to be lost. We are satisfied it has been demonstrated that the compensation is level for level in terms of volume, as demonstrated in Table 6-2 of the Hydraulic Modelling Report (dated December 2023 and prepared by Aecom) in Volume III Appendix 11-2 of the Environment Statement. However, level for level compensation has only been provided up to the 1% AP plus a 31% (central) allowance for climate

change, when compensation should be provided up to the 43% (higher) CC allowance, in accordance with [Flood risk assessments: climate change allowances](#), as flood risk to 'essential infrastructure' is impacted by the proposed development.

In addition, it is not clear whether the level for level compensation scheme is hydraulically connected for each slice. We have not located plans that show how water could flow into and out of the compensation areas. Whilst we welcome that a topographical survey has been provided in 'Part 2' of the Flood Risk Assessment, we unfortunately cannot zoom in far enough to read this plan. The applicant should be asked to provide a clear version of this plan alongside evidence that the compensation scheme is hydraulically connected.

In particular, more detail is required on how water would flow into and out of the compensation area separated from the river and wider floodplain by a culvert. Paragraph 11.4.39 of Volume 1 Chapter 11 of the Environment Statement implies details of land reprofiling will be provided at a later date, however we need to be confident at this stage that there is a functional option. Please note we are generally not supportive of using culverts in this way to access compensation areas as culverts can become blocked and prevent floodwaters reaching the floodplain storage area. If there are no alternative options, we recommend at least two culverts are installed to access the floodplain storage area to reduce impacts of any blockages and a robust maintenance plan will be required at a later stage to reduce the chance of blockages which would prevent the culverts from working as designed. The risk of blockage is set out in sections 7.1 and 7.3 of the submitted FRA. Blockages can lead to obstruction of flood flows and increased flood risk elsewhere. The maintenance plan would need to be sufficient to ensure the culverts remain open and fully functional for the lifetime of the development.

The applicant's modelling shows that the raised road would impede a flow route across the development site (Site 2) in the 0.1% AP flood event. We request that an additional culvert under the raised road is explored to help mitigate for impacts of the proposed development in this extreme event.

The applicant's flood modelling has also included the compensation scheme. The outputs of this modelling, showing changes in flood levels across the site as a result of the proposed works, can be seen in Figures 6-2 (without compensation) and 6-6 (with compensation) of the Hydraulic Model Report. These figures should be replicated with the change in flood risk due to the proposed development over a range of flood events, including the 1% AP plus 43% CC allowance event.

Comparing Fig 6-2 with 6-6, the compensation scheme has limited impact on the increases in flood risk as a result of the development. It appears that the greatest increases in flood risk are upstream on the site (in the east of the site) and are affected by the proposed compensation. A third floodplain storage area, in the east of the site, upstream of the proposed bridge and raised new road, should be investigated.

Further, both Figures show increased flood risk to the B480 near the existing Cuxham Roundabout. This is summarised in the Hydraulic Model report, which states that flood levels on the new section of the B480 are predicted to increase by up to 250mm due to lowering road levels in this location. The FRA proposes that this road should be closed in times of flood. As the proposed development is shown to increase flood risk to an existing road (essential infrastructure) it is considered to fail the exception test.

The applicant should confirm the height of the proposed new road in mAOD. Whilst the height of the proposed bridge and both roundabouts are mentioned in the FRA, it is not

clear what height the rest of the road would be set at. Whilst we expect this is proposed to be above the design flood level to protect future users, this should be clearly stated in the FRA.

### **Overcoming our objection**

To overcome our objection, the applicant should submit a revised FRA which addresses the points highlighted above. If this cannot be achieved, we are likely to maintain our objection.

Specifically the FRA will need to demonstrate that any loss of floodplain storage within the 1% AP plus a 43% allowance for climate change can be directly compensated for to prevent an increase in flood risk elsewhere. Plus demonstrate that the proposal will be safe for users in times of flood.

We also ask that the applicant provides some clarity on the information supplied in Figure 6-6. This appears to show that flood volumes are lost under the proposed bridge, contrary to the plans provided that show flood extents remain in bank here.

There is also no flood risk shown in the flood relief culvert. We request that the applicant confirms whether this is just a visual mapping issue or an issue in how the proposed scenario has been created.

### **Reason 2 – Groundwater quality**

We **object** to this planning application because the risks to groundwater from the development are (with the current data set) unacceptable. The applicant has not supplied adequate information to demonstrate that the risks posed to groundwater can be satisfactorily managed. We recommend that planning permission should be refused on this basis in line with paragraph 180 of the National Planning Policy Framework.

Our approach to groundwater protection is set out in 'The Environment Agency's approach to groundwater protection'. In implementing the position statements in this guidance we will oppose development proposals that may pollute groundwater especially where the risks of pollution are high and the groundwater asset is of high value.

Groundwater is particularly sensitive in this location because the proposed development site is located on a Principal aquifer (which is encountered at shallow depths across the Study Area, >0.3 mbgl in the vicinity of Chalgrove Brook) and where groundwater is extremely shallow in places.

Groundwater as a receptor is both sensitive and vulnerable. Groundwater is suggested to be in hydraulic continuity with surface waters. Fractures/fissures may be present which will present direct pathways for road-derived contaminants to reach groundwater and surface waters.

To ensure development is sustainable, applicants must provide adequate information to demonstrate that the risks posed by development to groundwater can be satisfactorily managed. In this instance the applicant has failed to provide this information and we consider that the proposed development may pose an unacceptable risk of causing a detrimental impact to groundwater quality.

Volume III of the Environmental Impact Assessment (EIA) considers the risk of groundwater pollution. We have also reviewed Appendix 11-1 – Drainage Strategy and Appendix 11-5 – Groundwater Risk Assessment.

Measured groundwater elevations are limited to between April and September 2023. As a minimum, we would expect to see groundwater baseline monitoring for an entire year in order to fully inform the EIA. Therefore, the EIA contains insufficient monitoring of groundwater levels during wetter periods and assumptions made in the EIA in relation to slightly higher peak winter levels are likely to underestimate the potential effects to water quality from the road drainage.

Based on insufficient monitoring, we have concerns that the proposed surface water drainage design will not be effective in preventing pollution of ground and surface waters during periods where groundwater levels would be expected to be higher than currently considered. This is particularly relevant for, but not limited to, features which will discharge directly to the Chalgrove Brook main river. Groundwater flooding may also be a concern at this site under peak periods, likely to render infiltration features ineffective.

### **Overcoming our objection**

In accordance with our approach to groundwater protection we will maintain our objection until we receive a satisfactory risk assessment that demonstrates that the risks to groundwater posed by this development can be satisfactorily managed.

### **Other matters**

We have also considered the following matters within our remit as part of this planning application. We are confident that these matters can be managed through appropriately worded conditions should our objections be resolved.

#### Impact to ecological value of the Chalgrove Brook

The construction of a new road bridge proposed as part of this development could have an unacceptable effect on the ecological value of the watercourse at this site. This is considered especially critical as the Chalgrove Brook is a chalk stream within the River Thames Conservation Target Area and houses the only verified population of Brown Trout in the River Thames catchment.

Ecological enhancements that have been proposed will require a management plan to be in place. This will ensure the landscape provides a maximum benefit to people and the environment.

The River Thames river basin management plan requires the restoration and enhancement of water bodies to prevent deterioration and promote their recovery. Without a landscape management plan, the proposal's ecological impact may lead to deterioration of a water quality element to a lower status class in the Chalgrove Brook.

### **Advice to Planning Authority**

#### **Sequential test**

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

In accordance with the National Planning Policy Framework (paragraph 168), 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 [here](#).

### **Exception test**

The exception test should only be applied as set out in flood risk [table 2](#) of the Planning Practice Guidance (PPG) following application of the sequential test. The exception test should not be used to justify the grant of planning permission in flood risk areas when the sequential test has shown that there are reasonably available, lower risk sites, appropriate for the proposed development.

In those circumstances, planning permission should be refused, unless you consider that sustainable development objectives make steering development to these lower risk sites inappropriate as outlined in PPG (ref ID: [7-031-20220825](#)).

### **Our role in the exception test**

The exception test is in two parts, described in the NPPF (paragraph 170). In order for the test to be passed it must be demonstrated that

1. The development would provide wider sustainability benefits to the community that outweigh flood risk; and
2. 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.

Paragraph 171 of the NPPF makes clear that both parts need to be met for the test to be satisfied. It is for the applicant to demonstrate this.

We provide advice on the second part of the test, but it is for you, as the local planning authority, to consider the first part of the test, accounting for the findings of the flood risk assessment and our flood risk advice, and to determine whether the test, overall, has been satisfied. Development that does not satisfy both parts of the exception test should be refused.

### **Where the flood risk assessment shows the development will be safe throughout its lifetime without increasing flood risk elsewhere**

Even where a flood risk assessment shows the development can be made safe throughout its lifetime without increasing risk elsewhere, there will always be some remaining risk that the development will be affected either directly or indirectly by flooding. You will need to weigh these risks against any wider sustainability benefits to the community.

### **Advice to applicant**

The applicant will require a Flood Risk Activity Permit (FRAP) to undertake the proposed works over and in close proximity to the main river Chalgrove Brook. The Environmental Permitting (England and Wales) Regulations 2016 require a permit or exemption to be obtained for any activities which will take place:

- on or within 8 metres of a main river (16 metres if tidal)
- 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

The applicant should not assume that a permit will automatically be forthcoming once planning permission has been granted, and we advise them to consult with us at the earliest opportunity.

For further guidance please 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).

We note that dewatering works have been suggested to be needed for this development.

Section 11.3.35 of Ch 11 states:

*Where groundwater is intercepted, temporary and or permanent groundwater*



*management and drainage management systems may be required to control groundwater.*

Dewatering is the removal/abstraction of water (predominantly, but not confined to, groundwater) in order to locally lower water levels near the excavation. This can allow operations to take place, such as mining, quarrying, building, engineering works or other operations, whether underground or on the surface.

The dewatering activities on-site could have an impact upon local wells, water supplies and/or nearby watercourses and environmental interests.

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This activity was previously exempt from requiring an abstraction licence. Since 1 January 2018, most cases of new planned dewatering operations above 20 cubic metres a day will require a water abstraction licence from us prior to the commencement of dewatering activities at the site. More information is available on gov.uk: <https://www.gov.uk/guidance/water-management-apply-for-a-water-abstraction-or-impoundment-licence#apply-for-a-licence-for-a-previously-exempt-abstraction>.

### **Advice to Planning Authority**

If you are minded to approve this application for major development contrary to our flood risk objection, we request that you contact us to allow further discussion and/or representations from us in line with the [Town and Country Planning \(Consultation\) \(England\) Direction 2021](#).

This statutory instrument prevents you from issuing planning permission without first referring the application to the Secretary of State for Housing, Communities and Local Government (via the National Planning Casework Unit) to give them the opportunity to call-in the application for their own determination. This process must be followed unless we are able to withdraw our objection to you in writing. A failure to follow this statutory process could render any decision unlawful, and the resultant permission vulnerable to legal challenge.

### **Closing & decision**

In accordance with the planning practice guidance (determining a planning application, paragraph 019), please notify us by email within two weeks of a decision being made or application withdrawn. Please provide us with a URL of the decision notice, or an electronic copy of the decision notice or outcome.

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

Yours sincerely

**Miss Sarah Green**  
**Sustainable Places - Planning Advisor**

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