

Cherwell District Council
Planning & Development Services
Bodicote House White Post Road
Bodicote
Banbury
OX15 4AA

Our ref: WA/2023/130772/03-L01

Your ref: 23/02098/OUT

Date: 28 August 2024

Dear Andrew,

Outline Application, With All Matters Reserved, For A Phased (Severable), Comprehensive Residential-Led Mixed Use Development Comprising: Up To 215,000 Square Metres Gross External Area Of Residential Floorspace Within Use Class C3/C4 And Large Houses Of Multiple Occupation (Sui Generis); Supporting Social Infrastructure Including Secondary School/Primary School(S) (Use Class F1); Health, Indoor Sport And Recreation, Emergency And Nursery Facilities (Class E(D)-(F)) Supporting Retail, Leisure And Community Uses, Including Retail (Class E(A)), Cafes And Restaurants (Class E(B)), Commercial And Professional Services (Class E(C)), Local Community Uses (Class F2), And Other Local Centre Uses Within A Sui Generis Use Including Public Houses, Bars And Drinking Establishments (Including With Expanded Food Provision), Hot Food Takeaways, Venues For Live Music Performance, Theatre, And Cinema. Up To 155,000 Net Additional Square Metres (Gross External Area) Of Flexible Employment Uses Including Research And Development, Office And Workspace And Associated Uses (Use E(G)), Industrial (Use Class B2) And Storage (Use Class B8) In Connection With The Expansion Of Begbroke Science Park; Highway Works, Including New Vehicular, Cyclist And Pedestrian Roads And Paths, Improvements To The Existing Sandy Lane And Begbroke Hill Road, A Bridge Over The Oxford Canal, Safeguarded Land For A Rail Halt, And Car And Cycle Parking With Associated Electric Vehicle Charging Infrastructure; Landscape And Public Realm, Including Areas For Sustainable Urban Drainage Systems, Allotments, Biodiversity Areas, Outdoor Play And Sports Facilities (Use Class F2(C)); Utility, Energy, Water, And Waste Water Facilities And Infrastructure; Together With Enabling, Site Clearance, Demolition And Associated Works, Including Temporary Meanwhile Uses.

Begbroke Science Park And Surrounding Land

Did you know that in the UK, 6.6 million tonnes of household food waste a year is thrown away? Almost three quarters of that is food which could have been eaten. Do your bit to avoid domestic food waste to fight climate change! www.lovefoodhatewaste.com www.wrap.org.uk

Environment Agency position

The submitted Design Note (subject EA Responses to Flood Risk Comments, revision 00, dated 21 June 2024 and prepared by Buro Happold) and Letter from Quod to the Environment Agency (reference Q210843, dated 6 August 2024) do not satisfactorily address our earlier concerns. We therefore **maintain our flood risk objection** set out in our responses dated 15 February and 3 June 2024.

The Design Note confirms that the applicants Flood Risk Assessment (FRA) has not been updated. We recommend this document is updated to reflect the additional information provided to date as well as the further required information as set out below. This helps provide clarity on what is currently proposed, and which documents have and have not been superseded, for future reference.

Reasons

The developer's additional flood risk information fails to:

- demonstrate the flood modelling used within the FRA is appropriate
- demonstrate the sequential approach has been applied
- demonstrate the development will not increase flood risk elsewhere
- address the opportunities presented by this development for reducing flood risk

This proposal is therefore contrary to adopted policy ESD 6 in the Cherwell Local Plan 2011-2031 and adopted Policy PR8 (Land East of the A44) in the Cherwell Local Plan 2011-2031 (Part 1) Partial Review - Oxfords Unmet Housing Need.

Flood risk information

We have reviewed the submitted Design Note. The hydraulic model still has several outstanding issues, including that inflow sensitivity analysis is still outstanding and needs doing, along with reporting linked to that. This is a must do action. Without this, we do not have a complete picture of model uncertainty. Please see the attached spreadsheets for more information on this and our other concerns with the hydraulic model, and how to overcome them.

Therefore, it has not been demonstrated whether the flood modelling provided by the applicant of the baseline and with-scheme scenarios is appropriate to use within an FRA for the proposed development in this location.

Sequential Approach

Limited comments have been provided by the applicant on the sequential approach. Applying the sequential approach ensures the most vulnerable development is located in the areas at the lowest flood risk (this is in addition to the Sequential Test which was passed at the Local Plan stage). In this instance, the most vulnerable development (residential/dwellings) is proposed in areas currently at high risk of fluvial flooding, whilst development of lower vulnerability, such as water-compatible and 'less vulnerable' development are proposed outside the design flood event. This has not been justified and is contrary to adopted policy ESD 6 in the Cherwell Local Plan 2011-2031 which states flood risk will be managed 'using a sequential approach to development; locating vulnerable developments in areas at lower risk of flooding' as well as part (a) of paragraph 173 of the NPPF which states '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'.

Flood Zone 3b

We welcome that the '1 in 30-year Baseline Flood Extents with Masterplan' shows no vulnerable development is proposed within baseline Flood Zone 3b. However, it has still

not been demonstrated that there shall be no vulnerable development within the proposed Flood Zone 3b. From a flood risk perspective, this could be easily overcome by removing the proposal to remove a stretch of watercourse (which would alter the 3.3% AEP flood extent) from this live planning application.

Please note the '1 in 30-year Baseline Flood Extents with Masterplan' plan appears to only show out of bank flooding and does not include in-channel flooding. In-channel flooding should be included in this and any 'proposed scenario' plans. The 3.3% AEP extents may also change should any alterations to the applicant's modelling be made to overcome our concerns (please see above).

Climate change

For clarity, guidance on the appropriate climate change allowances to be used to assess future flood risk are advised here: [Flood risk assessments: climate change allowances](#). Under 'Assess off-site impacts and calculate floodplain storage compensation' this guidance states to use the 'higher central allowance when the affected area contains essential infrastructure'.

The A44 (a major road identified as essential transport infrastructure) is adjacent to the south west corner of the application site, and is shown to be at flood risk in the 1% AEP plus 26% CC event and higher, as well as in the 0.1% AEP event. Preventing flood waters entering the application site in these higher order events (without mitigation) is likely to increase flood risk to the A44. Therefore, in accordance with [Flood risk assessments: climate change allowances](#) the higher central climate change allowance should be used.

We welcome that the applicant has used the higher central climate change allowance of 41% in their assessment, however we do not agree this is above 'the minimum required by NPPF' as stated in the applicant's letter. Instead, this is the allowance that should be used in line with national guidance. Using this allowance does not count towards creating reductions in flood risk.

Exception Test

The proposed development includes 'more vulnerable' works and the Red Line Boundary includes Flood Zone 3a, so the Exception Test is required. Further, more vulnerable development ('educational') is proposed within the 1% AEP flood extent in the south of the site.

Contrary to the applicant's comments in their Design Note, part (b) in paragraph 170 of the NPPF states that to pass the Exception Test development 'where possible, will reduce flood risk overall'. There appears to be plenty of appropriate land on this site where flood risk reduction measures could be introduced. Adopted policy ESD 6 in the Cherwell Local Plan 2011-2031 also states 'In addition to safeguarding floodplains from development, opportunities will be sought to restore natural river flows and floodplains'.

We recommend creating additional floodplain storage by lowering land within or on the edge of the floodplain, using slices so that all floodplain is hydraulically connected without isolated low points. Natural Flood Management (NFM) measures may also be appropriate on this site as set out in your Level 1 SFRA dated November 2022 and in accordance with adopted policy ESD 6 in the Cherwell Local Plan 2011-2031.

Our comments below relate to our concerns relating to part 'b' of the Exception Test, in particular whether 'the development will be safe ... without increasing flood risk elsewhere'.

Floodplain storage – level for level compensation

Development is proposed in areas at existing flood risk, including removing land from the floodplain which would displace flood waters, leading to increases in flood risk elsewhere. If this work is deemed necessary, level for level compensation should be provided in accordance with the PPG to prevent increases in flood risk elsewhere. Whilst the PPG does set out on-site level-for-level compensation may not always be possible, it also sets out that the FRA should 'fully detail the extent and nature of the increase in risk' and that this 'is likely to be a key consideration in whether planning permission is granted' and therefore may be a reason for refusal of planning permission.

If it is not possible to provide level for level compensation, in the first instance we recommend the applicant tries to amend their parameter plans to ensure the floodplain is safeguarded in accordance with adopted policy ESD 6 in the Cherwell Local Plan 2011-2031.

If this is not possible, then the FRA will need to fully detail the extent and nature of the increase in risk and to assess its significance, in line with the PPG. In this instance, we would expect the changes in flood risk as a result of the proposed development to be included in the applicants modelling, with the outputs of this modelling clearly shown in mapping/plans, as well as providing calculations and plans of the proposed changes in floodplain storage in terms of volume, levels and location.

Please be aware that it is not appropriate to rely solely on hydraulic modelling to show 'negligible' changes in flood risk. There should be no increase in flood risk elsewhere as a result of the proposed development, and where possible there should be reductions in flood risk. Therefore, it should be clearly demonstrated that the proposed mitigation will provide at least as much floodplain storage as the amount proposed to be lost.

We have provided further information on the two areas where losses in floodplain storage are proposed below:

North-west of site – Proposed Swale

The applicant proposes to obstruct a flow route in the northwest of the site, which is likely to increase flood risk elsewhere as the displaced flood water would find a new flow route. We would expect level for level compensation to be proposed for the loss of floodplain storage (the area that will be prevented from flooding). Instead, a swale is proposed, and it is unclear how the swale would function. If the water is channelled into a narrow ditch, this could increase the efficiency of flood flows, moving more water downstream at a greater rate which could increase flood risk elsewhere. It may be the swale would be designed to mimic the existing flood flow, however this would need to be demonstrated through modelling and plans clearly identifying how the swale would function. Further information is therefore required in order to show there would be no detriment, including considering timing of any flooding offsite.

Further, whilst attenuating the displaced flood water in a swale may hold water upstream in an initial rainfall event, if the attenuation area/swale cannot freely drain into the river then there may be less storage available for any future floodwater should there be further rainfall event. This could also increase flood risk elsewhere. We would not have these concerns if level for level compensation was proposed, as flood water would be able to freely enter and exit the floodplain storage area during and after an event. More information is therefore required on the proposed swale unless, ideally, it can be replaced with level for level compensation.

We have provided the following comments for if a swale is the only mitigation feasible option and the applicant can demonstrate there would be no detriment. The submitted Design Note highlights 'difference plots presenting difference in modelled flood depths and extents shown in Figure 6.5 and 6.6 of the updated Hydraulic Modelling Report'. Unfortunately, the resolution of these figures in the Model Report are too low for us to review (the proposed swale is not distinguishable from the RLB). Please can you request high resolution versions of these figures are provided. This mapping should clearly identify where the swale is proposed and what impact the works would have on flood risk on and offsite.

In addition, the applicant should also provide more information on the proposed swale including:

- In relation to the 6.5 of the Design Note, the flow route of the ordinary course on the other side of the A44 is not clear. Our mapping identifies a culvert under the A44 and across the site, broadly following the flood extent shown during the 0.1% AEP event. There is limited information in section 4 of the Model Report: does this watercourse go into a culvert, and if so, where does this culvert discharge? If this culvert is present, what capacity does it have? The flow route across the road may be due to a low point in the road at the same height as the watercourse being bank full, or the culvert surcharging and levels increasing in the upstream reach before overtopping. Is there open channel on either side of the A44 connecting the ordinary watercourse to the Rowel Brook in the north? Note any key details set out in the Model Report should also be set out in the FRA to explain the principle of what is proposed.
- Confirmation that the swale is only to mitigate for the 1% AEP plus higher CC allowance flood events and above, and that floodplain storage for lower order events will be maintained such that the floodplain will function as it does in the pre-development scenario.
- An explanation and plans that demonstrate how the swale would function in practise, clearly setting out the design principles. This should include whether the swale would be hydraulically connected to the floodplain or watercourses. Would the scheme change the timing of a flood event? If so, what would the impacts be? Would it create a more efficient flow path, increasing flows downstream? How would the works affect the A44? Would there be any benefits of the scheme?
- How the swale will drain after heavy rainfall and how would this affect fluvial flood flows into and out of the swale? This is to identify whether storage would be available should there be a second flood event shortly after an initial event
- Confirmation that these works are possible within the RLB, and if not, how they would be achieved

In relation to 6.4 of the Design Note, it is not clear how the proposed swale is more sustainable than the existing situation, as it appears that a more engineered approach is proposed.

South-east of site - Removal of watercourse

To date, we have only been able to review a plan (Section 5.3 of the Flood Risk Technical Note dated 12 March 2024) that shows removing a section of watercourse would increase flood risk offsite if no mitigation is provided. It has not been demonstrated that suitable mitigation is possible to prevent increases in flood risk to proposed dwellings and offsite. Following a meeting in July 2024, we also have concerns that surface water mitigation is proposed for changes in fluvial flood risk which is not appropriate.

It is our understanding that the proposed removal of a stretch of watercourse may not be required, dependant on decisions related to a possible new school. The applicant's letter (dated 6 August 2024) states educational use in this area 'is not expected to be needed'. As it has not been demonstrated that appropriate mitigation for removing this stretch of watercourse is possible, we strongly recommend the proposal to remove a stretch of watercourse is removed from this live application. The flood risks associated with removal of this watercourse, including to proposed new dwellings, do not seem proportionate for the unlikely possibility of school playing fields. Further, it is preferable for school fields to flood than dwellings, and OCC's requirement for no educational land in Flood Zones 2 and 3 should not be secured by increasing flood risk to other 'more vulnerable' development.

If educational land is required, is it possible to amend the parameter plan to ensure no 'more vulnerable' development is proposed in the location of the watercourse?

If this is not possible, the applicant should propose additional watercourse length to replace the length of watercourse that is proposed to be removed. This new watercourse should be modelled and, if appropriate, level for level compensation proposed for any loss of storage associated with ground level changes to prevent any increases in flood risk on and off site. At this stage, it is not known if this is possible, therefore we are not able to remove our objection to this outline planning application.

It is our understanding that a pipe and an attenuation area may be proposed instead of open watercourse channel and level for level compensation. There is some confusion on what is proposed as section 4.1.2 of the FRA states that a replacement channel is proposed, not a pipe. Note a open channel/watercourse is likely to be preferable from a maintenance and biodiversity perspective. Further, the area shown as to be used as attenuation does not appear to be large enough to provided level for level compensation (as it's likely a similar area to that of floodplain storage lost would be required for the level for level compensation scheme).

If none of the options outlined above are possible, then the FRA should clearly set out the following to aid the LPA's decision by clearly setting out what is proposed and what the possible impacts would be on flood risk on site and to the surrounding land:

- What is the catchment of the head of the watercourse? Would the proposed attenuation area collect the same rainfall as the existing ordinary watercourse?
- What would happen to the rainfall that currently flows into the ordinary watercourse? Would this discharge into the main river change the timing of flood events?
- How do the proposals link to the applicant's surface water strategy?
- Where would the new watercourse/pipe discharge to? What would be the impacts offsite/downstream?
- Would a surface water model be appropriate to demonstrate the changes at the top of this catchment?

River Crossings

In section 8.2 the applicant has responded to our question '*It is still not clear if any river crossings would be proposed as part of reserved matters applications. Clarity should be provided*' with '*We have confirmed that at this stage no river crossings are proposed as part of this planning application. We are unsure what further information can be provided.*' We interpret this to mean that no river crossings are going to be proposed in the outline or reserved matters applications. Therefore, should our above objection be removed, it is likely we will condition that no river crossings are included in any reserved matters application.

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. Please re-consult us on any revised FRA submitted. Please see our previous letters for more information.

Foul waste – advice to applicant and Planning Authority

There are significant, well documented issues with new developments connecting to Oxford Sewage Treatment Works (STW), and given the location of this development, it was reasonable to seek assurances it would be connecting to a different STW. With the information provided, and additional mapping provided by Thames Water, we have some confidence that Oxford STW will not be used to serve this development. Subject to our flood risk objection being overcome, we will recommend a planning condition that will require a drainage scheme to be submitted to the LPA, which will include confirmation from Thames Water of the receiving STW and that it has capacity for this development.

Environmental Permit – Informative for applicant

The applicant will require a Flood Risk Activity Permit (FRAP) to undertake the proposed works within 8 metres of main rivers Rowel Brook, Thrupp Ditch and North Yarnton Ditches (called Southern Drainage Ditch in Figure 3 of the FRA) which run through and/or adjacent to the site. Should this involve infilling part of the main river North Yarnton Ditches, it is unlikely that a permit would be granted as it has not been demonstrated the works will not increase flood risk elsewhere. The applicant would need to demonstrate that the proposed works will not adversely impact on flood risk or the watercourse.

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.

Exception test – advice to Planning Authority

In accordance with the National Planning Policy Framework (paragraphs 170 and 171), the proposed development is appropriate provided that the site meets the requirements of the exception test. Our comments on the proposals relate to the part of the exception test that demonstrates the development is safe. The local planning authority must

decide whether or not the proposal provides wider sustainability benefits to the community that outweigh flood risk.

The exception test should only be applied as set out in flood risk table 3 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: 7-033-20140306).

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.

Other Consents – advice to applicant

As you are aware we also have a regulatory role in issuing legally required consents, permits or licences for various activities. We have not assessed whether consent will be required under our regulatory role and therefore this letter does not indicate that permission will be given by the Environment Agency as a regulatory body.

The applicant should contact 03708 506 506 or consult our website to establish if consent will be required for the works they are proposing. Please see <http://www.environment-agency.gov.uk/business/topics/permitting/default.aspx>

Final Comments

Thank you again for consulting us on this application. Our comments are based on the best available data and the information as presented to us. **Subject to our flood risk objection being overcome, we have planning conditions we would recommend in regards to biodiversity, foul drainage and groundwater and contaminated land.**

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.

Should you require any additional information, or wish to discuss these matters further, please do not hesitate to contact me. Please quote our reference number in any future correspondence.

Yours faithfully

Miss Chloe Alma-Daykin
Planning Advisor

Direct dial 0203 025 9872
E-mail Planning_THM@environment-agency.gov.uk