

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

Our ref: WA/2023/130772/02-L01

Your ref: 23/02098/OUT

Date: 03 June 2024

Dear Sir/Madam

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

Thank you for re-consulting us on the above application on 23 February 2024, following the submission of additional information and thank you for agreeing an additional timeframe for the provision of our comments.

We have reviewed the following documents with regards to our planning remit:

- Applicant response letter from Quod (Matthew Sharpe) to EA dated 22 February 2024
- Appendix 1 – EA Responses to Flood Risk Comments dated 21 February 2024 prepared by Buro Happold
- Appendix 2 - Parameter Plan PP1-Development Areas dated 06/07/2023 (Drawing No. BEG-HBA-SW-ZZ-DR-A-080101 Rev: P1)
- Appendix 2 - Parameter Plan PP3-Green Infrastructure dated 06/07/2023 (Drawing No. BEG-HBA-SW-ZZ-DR-A-080103 Rev: P1)
- Email from Quod (Matthew Sharpe) dated 27 February 2024
- Flood Risk Technical Note (revision 01, dated 12 March 2024 and prepared by Buro Happold)
- Model files and model reports

Environment Agency position

The additional information does not address our earlier concerns. We therefore **maintain our two objections** set out in our response dated 15 February 2024. We recommend that planning permission should be refused on this basis.

Objection 1 – Flood risk

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.

We note that part 10.1 of the applicant's 'EA Responses to Flood Risk Comments' document states '*An update to the FRA will be made to reflect these comments and will also be dependent on the outcome of the hydraulic model comments review.*' We have not been able to locate an updated FRA and are not sure if one has been provided to date.

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 applicant's revised flood modelling and additional comments. The hydrology is now considered fit for purpose, with only minor review comments outstanding. However, the hydraulic model still has several outstanding issues. The most significant of these are:

- The 1D and 2D representation of river channel widths do not match. This may be resulting in double counting of modelled flow and lead to model inaccuracies.

- While several sensitivity tests have been completed, an inflow sensitivity test (usually routine) has not been undertaken. Therefore, we do not have a complete picture of model uncertainty.
- There has been no comparison of modelled outputs against the Historic Flood Map which does highlight areas of past flooding within the 2D model domain.
- There are several sections of the reporting which would benefit from further information and detail on modelled representation of structures and flood plain features.

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. Please see the attached spreadsheets for more information and how to overcome our modelling concerns.

Sequential Approach

One of the applicant's key comments relates to the identification of Flood Zones 2 and 3. In accordance with the Flood Map for Planning, the application site lies partly within Flood Zones 2 and 3 defined by the National Planning Policy Framework (NPPF) and associated Flood risk and coastal change Planning Policy Guidance (PPG) as having a medium and high probability of flooding. Whilst the Flood Map for Planning (FMfP) provides a starting point for applying the sequential approach, a Flood Risk Assessment (FRA) is required to take into account site specific considerations.

Due to the scale of the flood modelling used to inform the FMfP, Flood Zones on the FMfP are not accurate enough to be used on their own in a site specific FRA. Topographical surveys should be provided and compared to flood levels from a range of flood extents. This means the 0.1% AEP plotted in a site-specific FRA will be different and more accurate than Flood Zone 2 on the FMfP.

There is no detailed modelling available in this location, therefore the Flood Map for Planning is only informed by JFLOW modelling (and a historic flood outline). There are limitations to JFLOW modelling, which was produced using a methodology consistent for all catchments across England meaning it is generalised and does not take account of information that may be significant locally. Further, in some locations on this site there is no available flood modelling, including no JFLOW, for both main rivers and ordinary watercourses. This does not mean there is no fluvial flood risk in these locations, only that no model had been made (often this is due to small catchment size and lack of historic property flooding).

To better understand flood risk in this location, the applicant has undertaken their own detailed flood modelling and, whilst there are ongoing concerns with the applicant's modelling, we welcome that modelling has been undertaken in this instance. The applicant's modelling shows more of the site to be at fluvial flood risk than the Flood Map for Planning, partly because their modelling includes previously unmodelled watercourses.

The best most up to date available information should be used to make planning decisions. Should the applicant's model be updated and deemed fit for purpose, this model would be considered the best available data and therefore should be used to inform the sequential approach. We have based our comments on the applicant's 0.1% AEP flood extent in accordance with the applicant's modelling, but please note this is subject to improvements to the model which may alter the applicant's flood extents.

Flood Zone 2 is defined by the PPG as 'Land having between a 1% and 0.1% annual

probability of river flooding'. Development is proposed within the applicant's 0.1% AEP flood extent which is not in the spirit of adopted Policy PR8 (Land East of the A44) in the Cherwell Local Plan 2011-2031 (Part 1) Partial Review - Oxfords Unmet Housing Need. This is shown in Figure 5-1 of the submitted Technical Note. This means the sequential approach has not been fully implemented. As set out in our previous objection, to overcome this the applicant proposes a swale and land level changes to relocate flood risk. This means the sequential approach has not been fully implemented.

Flood Zone 3b

Figures 4-1 and 5-1 of the Technical Note (which we believe replace Figure 9 and 17 of the initial FRA) do not demonstrate that all the proposed 'more vulnerable' development would be located outside of existing and proposed Flood Zone 3b. The proposed development has still not been plotted on a map alongside the applicant's 3.3% AEP flood extent. Hence it still has not been demonstrated that any development in Flood Zone 3b is appropriate in accordance with Table 2 of the Flood Zone and flood risk tables of the PPG.

Section 4.1 of the applicant's EA Responses to Flood Risk Comments document refers to Figure 17 to demonstrate that no development is proposed in Flood Zone 3b. However, Flood Zone 3b is not shown in Figure 17 so this is not clear and an additional plan should be provided. Further, the applicant proposed to change Flood Zone 3b (3.3% AEP) on site, so a plan showing the proposed development and proposed Flood Zone 3b should also be provided.

Exception Test

The site is partly within Flood Zone 3 in accordance with both the Flood Map for Planning and the applicant's detailed flood modelling. As 'more vulnerable' development is proposed, the Exception Test is required. It has not been demonstrated, via a site-specific flood risk assessment, that for the lifetime of the development the development will be safe, without increasing flood risk elsewhere.

It is also not clear whether flood risk could be reduced as a result of the proposed development. The applicant's comments in section 1.8 of the EA Responses to Flood Risk Comments document do not provide evidence of any reductions in flood risk, such as how much additional floodplain storage is proposed and where it would be located. It has not been demonstrated that the proposed swale in the north west of the site would reduce flood risk.

Floodplain storage

If it is deemed that development is necessary in areas at existing flood risk, level for level compensation should be provided in accordance with the PPG to prevent increases in flood risk elsewhere. The applicant has not provided level for level compensation, therefore we maintain our objection.

Instead, the applicant proposed a swale and ground level changes. Whilst we are now satisfied that the swale has now been appropriately modelled and detailed in model report, the impacts on flood risk are not clear from the submitted plans. We strongly recommend that an additional plan is provided to show the difference in modelled flood depths and extents, as well as the location and design of the proposed swale.

Further, modelling alone should not be used to show that flood risk would not increase elsewhere as small changes in flood risk may not be visible in the modelling. The cumulative impact of multiple small increases in flood risk from various developments can lead to a significant overall increase in flood risk. In accordance with the PPG, level

for level compensation should be provided. It may be possible for part of a level for level compensation scheme to be linked to the proposed swale (please see advisory below).

Section 7.7 of the applicant's document states 'The survey does not indicate a culverted ordinary watercourse passing under this corner of the site'. This is not sufficient to be sure the culvert does not exist. Evidence should be provided on whether or not there is a culvert in this location.

In the south of the site, land level changes and relation the main river are proposed. Details of the proposed compensation have not been provided or modelled; therefore it has not been demonstrated that the proposed scheme would prevent an increase in flood risk elsewhere. In fact, the current modelling demonstrates the proposed works would increase flood risk offsite.

For clarity, part of the channel that the applicant proposes to fill in (from approximately SP4835512779 to SP4841112808) is designated main river. This stretch of main river is shown in yellow in Figure 7.2 of the revised Model Report. Any changes to watercourses (main river or ordinary watercourse) may impact fluvial flood risk. Therefore, the impacts of the proposed works need to be modelled, and it will need to be demonstrated that the works will not increase flood risk onsite or elsewhere.

Figures 5-5 and 5-6 in the Technical Note show changes of flood risk as a result of relocating the river. A further map showing the impacts in the 3.3% AEP should be provided, as well as zoomed in clear images of the affected area for all relevant flood events. The scale used should not include a bracket that is above and below zero.

Figure 5-6 shows increases in flood risk offsite, therefore we maintain our objection to the proposed development. This is not appropriately addressed in section 7.8 of the applicant's recent document. This is not an issue that can be dealt with at a later date.

We are also concerned about the apparent inconsistent approach taken in the south of the site, where new properties appear to be put into the design flood event, compared to rerouting flood waters to remove properties from the design flood extent in the north.

Finished floor levels

We welcome that the applicant has confirmed that FFLs will be set at least 300mm above the 1% AEP plus 41% allowance for climate change flood level. Due to the size of the site, we understand that this level varies across the site so a range of FFLs are to be proposed. Further information on precise FFLs for each building would be required before development can commence.

River crossings

We note the applicant has only confirmed that '*No river crossings are proposed as part of the outline planning application*'. It is still not clear if any river crossings would be proposed as part of reserved matters applications. Clarity should be provided.

Bridges should be of clear span design, with abutments set back from the bank to allow for maintenance and improvement works and provide suitable space to allow mammals to pass. The soffit (underside) of the bridge should be set at least 600mm above the 1% AEP plus an appropriate allowance for climate change flood level to allow flood water and floating debris to pass beneath the bridge, to prevent blockages. The bridge should not cause flooding either upstream, downstream or at the site.

Other works – roads, paths, substation, landscaping

Limited information has been provided on any roads, paths and landscaping. Unless mitigation is provided, there should be no changes to land levels within the design flood extent. This has not been confirmed by the applicant, who has only referred to paths and flood zones in section 9.1 of the EA Responses to Flood Risk Comments document.

We welcome that the primary substation is to be located outside the 1% AEP plus 41% allowance for climate change. This is confirmed in Figure 5-2 of the Technical Note.

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.

Advice to Applicant – level for level compensation

Any increase in built footprint or raising of ground levels should be compensated up to the 1% AEP plus an appropriate allowance for climate change flood level. This is necessary to prevent the proposed development reducing floodplain storage and displacing flood waters, thereby increasing flood risk elsewhere.

Level for level floodplain compensation is the preferred method of mitigation and should be considered within the FRA. Level for level floodplain compensation is the matching of floodplain storage volumes lost with new floodplain storage volume gained through the reduction of ground levels. Please note for this to be achievable it requires land on the edge of the floodplain and above the 1% annual exceedance probability (AEP) flood level with an appropriate allowance for climate change to be available. A comparison of ground levels (from a topographical survey) with modelled floodplain levels will show if land is available above the 1% AEP flood level with an appropriate allowance for climate change to be used as compensation.

We recommend that level for level floodplain storage calculations are provided in a table that sets out the volume of floodplain storage lost (cut) and the volume of floodplain storage gained (fill) for each of the slices. Typically, the thickness of a slice should be 100mm or 200mm, dependent on-site specific considerations. This may vary in the case of large, very flat sites, where 0.05 metres could be used; or in very steep sites with a high range of flood water levels. Slice thickness should be set to provide 10 to 15 slices in these cases. It will need to be demonstrated that there would be no net loss in storage volume for any slice.

A location plan that corresponds with the table should also be submitted showing where the compensation will be located on site. The location of the changes in floodplain storage should be clearly identified, demonstrating the scheme would be hydraulically connected for each slice. It is not acceptable to propose works several kilometres away or separated from the site by a significant structure such as a weir, bridge or other obstruction.

Excavation of the proposed floodplain compensation scheme should be completed prior to the construction of development to ensure floodplain capacity is maintained.

If this cannot be achieved, then the applicant may need to amend the development to ensure that there will be no increase in flood risk elsewhere (for example by reducing built footprint or amount of land raising proposed).

Advice to Applicant - Boundary treatments

Walls and fences can have a significant impact on the flow and storage of flood water, especially if they are constructed across a flood flow route. This can lead to higher levels of flood water on the upstream side of the fence or wall which will potentially increase the flood risk to nearby areas. Therefore walls and fences should be permeable to flood water.

We recommend the use of post and rail fencing, hit and miss fencing (vertical slats fixed alternately on each side of horizontal posts) or hedging. If a solid wall is proposed there must be openings below the 1% annual probability (1 in 100) flood level with an appropriate allowance for climate change to allow the movement of flood water. The openings should be at least 1 metre wide by the depth of flooding and there should be one opening in every 5-metre length of wall.

Objection 2 – Foul Waste

We object to this application as submitted because the proposed development would pose an unacceptable risk of pollution to surface water quality and recommend that planning permission should be refused on this basis.

Reasons

Paragraph 180 of the National Planning Policy Framework states that the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of water pollution. In addition, the Thames River Basin Management Plan requires the restoration and enhancement of water bodies to prevent deterioration and promote recovery of water bodies.

Our previous response sets out our concerns regarding Oxford Sewage Treatment Works (STW). No evidence that all flows from the development will drain to Cassington STW has been provided.

Overcoming our objection

We have reviewed the drainage strategy provided and can see no reference to Cassington STW being used to serve the development. Given the concerns raised about Oxford STW, and the proximity of this development to the sewerage network that connects to Oxford STW, we need to see evidence that all flows from this development will be draining to Cassington STW.

Sequential test – advice to Planning Authority

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, which are consistent with the use for which the site was allocated.

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 decide whether the sequential test has been satisfied, but the applicant should demonstrate to you, with evidence, what area of search has been used. Further guidance on the area of search can be found in 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 – 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.

Environmental permit - advice to 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. Please be aware this includes the infilling of part of the main river North Yarnton Ditches, which is incorrectly identified as only an ordinary watercourse in section 4.3 of the FRA. As submitted, 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.

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 and foul drainage objections being overcome, we have planning conditions we would recommend in regards to biodiversity 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

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