these reps relate to evidence base - specifically SFRA and Water Cycle study - covering letter for info, submit comments from pages after

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Environment Agency

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**Our ref:** WA/2006/000013/PO-03/SB1-L01
**Your ref:** Draft Oxford Local Plan 2040
**Date:** 19 January 2024

Dear Planning Policy Team

**Draft Oxford Local Plan 2040 – Sites and Evidence Base (second part of Environment Agency comments on the draft local plan)**

Thank you for consulting us on the Draft Oxford Local Plan 2040. We have not completed the online questionnaire but have rather provided you with this letter which contains our comments and advice on the local plan particularly in relation to the Allocated Sites in Chapter 8 and associated Evidence Base (Water Cycle Study and Strategic Flood Risk Assessment).

We would like to thank you for extending the time for us to comment on the allocated sites and evidence base for the local plan. We reiterate that our aim is to assist you in preparing and implementing a sound, robust and effective plan that is reflective of national policy so that it may deliver sustainable development in Oxford City.

Following a review of the draft local plan and the accompanying evidence base documents, we consider that the plan does not meet the tests of soundness in terms of being justified and consistent with national policy. Unfortunately, we consider the draft plan to be **unsound** as it is. We have provided you with details on the main soundness issues which are related to the:

- Allocated sites -sequential test, exception test and wastewater discharge evidence.
- Evidence base - flood risk and water quality.

Please be assured that we are keen to engage with you to ensure your local plan is sound and fit for purpose. Please refer to our comments below.

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**Points of Soundness**

**Chapter 8 –Development Sites, Areas of Focus and Infrastructure**

Please refer to detailed comments we have provided on allocated sites in the attached table. These comments reflect our concerns about these sites. Please refer to the comments below which also summarises our concerns on various matters.

**Site assessments Flood risk**

We welcome the inclusion of the site assessments and much of the content within them. However, we do not consider the plan as it is to be sound, is it because it is NOT: Justified and Consistent with national policy.

It has not been demonstrated that the allocated sites have adequately addressed the risk of flooding to the sites and development and elsewhere. For example, we have concerns on following sites:

- SPCW 4, Canalside Land, Jericho – can safe access be provided and is there sufficient space for level-for-level compensation? Vulnerable development is proposed in a site with FZ3b – whilst we understand you do not intend to put 'more' or 'less vulnerable' development in FZ3b, this should be clearly stated in the site policy.
- SPCW 5, Oxpens –. Access and egress route is through an area at flood risk as site surrounded by FZ's 2 and 3. The hazard rating is not low.
- SPCW 6, Nuffield Sites – access and compensation. Land raising is proposed and set this could increase risk elsewhere.
- SPCW 7, Osney Mead – can safe access be provided and is there sufficient space for level-for-level compensation (unlikely to be able to increase built footprint without increasing flood risk elsewhere). There is a significant proportion of FZ3b and that the access and egress hazard rating include 'danger for most' in many areas.
- SPCW 8, Botley Road Retail Park – access and compensation (may not be able to increase built footprint much without increasing flood risk elsewhere). The site is in FZ 2, FZ3a and FZ3b with problems for access and egress and a hazard rating of 'danger for most' in part of the site.

To ensure these assessments address all flood risk considerations, we recommend the following is also included (where appropriate):

- Details should be provided to demonstrate whether safe access and egress can be provided. Your hazard maps show multiple sites would not have dry access and egress. It is not sufficient to only state an emergency flood plan should be provided. This should be justified, including in your SFRA.
- A demonstration of how the development will not increase flood risk offsite. For example, can the development be delivered without building in the design flood event OR can sufficient level for level compensation be provided to prevent increases in flood risk elsewhere? Please be aware that following an update to the PPG in August 2022, voids are not appropriate for compensating for any loss of floodplain storage, therefore level for level compensation should be provided instead. In summary it is not clear that the scale of development proposed is possible without increasing flooding elsewhere. This is linked to concerns on land raising referenced in the exception test.
- A conclusion on whether the Exception Test has been passed at the Local Plan stage. It is not sufficient to leave this to the planning application stage in accordance with paragraphs 170 and 172. It is important to note that, the findings of your site assessments and Exception Tests should be carried through to your

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local plan to ensure the developments are safe and do not increase flood risk. This also helps provide clarity to developers on key considerations for a site. Further information on how development will be safe (including access and egress) and not increase flood risk elsewhere is required before some of your sites can pass the Exception Test. The exception Test has not been passed for 'more vulnerable' site allocations within Flood Zone 3.

For example, we have not located site assessments for some of your proposed allocations at fluvial flood risk. Please note that the following sites are partially within Flood Zone 3a and need to pass the Exception Test if more vulnerable development is proposed:

| Site allocation | Flood zones | Comment | Exception test needed |
|---|---|---|---|
| SPS10, Knights Road | Site clips FZ2 and 3b | Proposed 80 homes | Yes |
| SPS11, Cowley Marsh Depot | Overlaps with FZ2 and FZ3 +20% | Proposed 80 dwellings | Yes |
| SPS15, Redbridge Paddock | Clips 2, 3b and FZ3+82%cc | Proposed 200 dwellings | Yes |
| SPE 2, Land Surrounding St Clements Church | Overlaps on boundary with FZ2 and 3b | 40 dwellings | Yes |

The allocated sites must prevent inappropriate development in floodzone 3b. This is clear in the exception test but not in the site policy.

We have suggested some wording below to help strengthen your policy wording for certain allocations where these factors apply:

- More vulnerable development will be expected to be located away from the areas at highest risk of flooding and shall not be located in Flood Zone 3b
- Finished Floor Levels should be set at least 300mm above the design flood level
- Either: All built development will be located outside the design flood event OR Level for level compensation shall be provided to prevent increases in flood risk onsite or elsewhere

Note 'less vulnerable' development should also be located outside of Flood Zone 3b.

**Site assessments - water quality**

We have been unable to provide detailed comments for you on the allocated sites because there are water drainage concerns that must be addressed before sites are considered and allocated for development in Oxford.

It is proposed that wastewater from development on the allocated sites will be discharging to Oxford Sewage Treatment Works. We have explained in detail below that the Oxford Sewage Treatment Works has significant long-term performance concerns and requires major investment. Also, the water environment within the Oxford area is

under significant pressure and therefore an appropriate assessment must be undertaken regarding how water wastewater would be managed in Oxford. Currently there is limited information in the Water Cycle Studies evidence base.

**Site assessments – Ecology and Biodiversity**
We have provided comments about the policy requirements needed to ensure protection and enhancement of sensitive habitats and receptors. Please refer to the attached table.

**Site assessments – ground water protection**
We have provided comments about the policy requirements needed to ensure protection of ground water resources. Please refer to the attached table.

## Evidence base

**Water Cycle Study Scoping Report 2023**
We have reviewed the Water Cycle Study Scoping Report 2023 (hereafter referred to as 'the report') as part of the evidence base for the Local Plan 2040 submission and unfortunately, we do not consider this report as a reliable evidence base to determine the effects of development on the quality of the water environment.
We therefore do not consider the plan as it is to be sound, is it because it is NOT: Justified.

The report is titled as a 'scoping report' however it does not include much of the information that would be expected from a scoping report. It also does not have the level of detail that would be expected from a full stage 2 Water Cycle Study. The guidance on gov.uk sets out what is expected from a scoping report, the evidence that is required to inform it, and partners that need to be engaged. While there is not an expectation to carry out 'detailed monitoring or technical analysis' at this stage, there is an expectation to understand the evidence gaps that are needed to make an assessment and recommend further, more detailed study if required.

The report does make some reference to the South Oxfordshire and Oxford City Council Water Cycle Study, however none of the data, evidence or technical conclusions have been included in this report. These documents have not been reviewed as part of this review as they were not provided. It is understood these were conducted in 2018 or 2019. If these are to be used as a platform for this assessment, they should be updated to include any up-to-date evidence and reflect any changes or additions to legislation since they were published.

If a Water Cycle Study Scoping Report did not recommend a Stage 2 study, this would often be because the risk from development was low, or mitigation measures to prevent deterioration to WFD waterbodies could be proposed at this stage. For this report, neither of those are the case. Oxford Sewage Treatment Works -STW has significant long-term performance concerns and requires major investment, the water environment within the Oxford area is under significant pressure, and no detailed or specific mitigation measures identified within this document/the report.

Reference has been made to Water Environment Regulations (formally Water Framework Directive -WFD), River Basin Management Plans -RBMP and the status of the waterbodies within Oxford City. However, a key purpose of a WCS is to identify how development will either, lead to a deterioration of WFD status, or prevent the waterbody achieve its objectives in the RBMP. We do not see that an assessment or consideration

has been made within this document/ the report as to how the effects of the development on specific WFD element status or RBMP objectives.

Within the document there is some reference to headroom and capacity. This can have several different meanings in this context, and it is important that all the different aspects are considered.

- Permitted headroom usually refers to how much additional capacity remains in the Dry Weather Flow (DWF) permit, and a calculation can be made to determine how many additional properties could be connected to the receiving STW before a new permit would be required.
- Infrastructure capacity can either refer to the capability of the existing sewerage network to convey the additional flows, and/or the capability of STWs or network pumping stations to pass flow forward to treatment (FFT). Reviewing this is often a way of determining if new developments are likely to lead to network failures or increase storm overflows.
- Environmental headroom or capacity relates to the ability of the receiving waterbody to accept additional nutrient loads without causing a deterioration of quality.

Within the document there is no mention of Dry Weather Flow, Flow to Full Treatment, or deteriorations of specific WFD elements. For these to be assessed properly, we would expect to see a full Stage 2 WCS that includes detailed modelling to show that the proposed developments will not causes an exceedance of the DWF permit, will not lead to an increase in storm overflows, and will not lead to a deterioration and/or prevent WFD elements achieving their objectives as set out in the RBMP.

As mentioned above, we have significant concerns about the performance of Oxford STW, and we suspect that currently it does not have any more capacity for new connections. Some improvement schemes have been ear marked for STW, which were due to be delivered by 2025 as part of Thames Water's Water Industry National Environment Programme (WINEP). However, the EA understand that these improvements have been significantly delayed. The EA cannot support any additional development connecting to this works before improvements are made. This should have been noted and assessed within this report.

In conclusion this report does not contain the required information to be considered and effective Water Cycle Study Scoping Report. It is recommended that further work is done (following the guidance on gov.uk-https://www.gov.uk/guidance/water-cycle-studies#preparing-a-water-cycle-study) to identify the evidence base, evidence gaps, and partners to work with. It is also considered that a full Stage 2 Water Cycle Study will need to be done following the scoping report to provide detailed assessment of the impacts of growth on the water environment. Previous studies can be used as basis for these studies, but should be updated with the latest data, evidence, and legislative requirements.

**Strategic Flood Risk Assessment**

We have reviewed the Strategic flood risk assessments level 1 and 2 (SFRA L1 and L2) and the BGP9b Flood Risk and Sequential Test of Sites and Background Paper- Flood risk and Drainage and have provided you with comments below. In summary we have concerns regarding the approach and application of the Sequential and Exception Tests for the allocated sites. Therefore, we do not consider the plan as it is to be sound, is it because it is NOT: Justified and Consistent with national policy.

**SFRA Level 1 Comments**
The sequential methodology is included in the SFRA, and assessment of climate change is included throughout. Both the sequential and exception tests are described in line with national policy.

We believe your Sequential Test can be found within your Background Paper 9b. We are concerned that a full Sequential Test that considers ***all*** sources of flood risk and the impacts of climate change, in accordance with paragraphs 023 to 026 of the Flood risk and coastal change section of the PPG, has not been undertaken. The sequential test has to be undertaken for all sites, including those at risk from other sources of flood risk than fluvial/river flooding, and those that are in Flood Zone 1 but are at risk of flooding in the future due to the impacts of climate change. Without this, we find your Local Plan to be unsound as the allocations are not justified.

In addition, Background paper 9b does not appear to prevent intensification or increase in vulnerability within Flood Zone 3b (FZ3b). We are concerned with Figure 3 which states there is capacity for 759 dwellings in FZ3b. This implies introducing 759 new homes to the functional floodplain. We do **not** support this approach as there should be no new dwellings in FZ3b as this would put more people at risk of flooding. Whilst it may be possible to raise finished floor levels above the design flood level, there are other factors such as access and egress and damage to property such as cars, sheds, gardens etc that would be at high flood risk. (We have already provided comments about this situation in our comments on Policy G7).

As well, can further information be provided on how the classification of low, moderate and high flood risk bands have been defined? Paragraph 3.3 of BGP 9b Flood Risk and Sequential Test of sites states; *'if the proportion of the site in the highest risk Flood Zone is **less than 20%**, it has been classed as being within the **next lowest area of flood risk** that covers more than 20% of the site.'* Does this include the impacts of climate change and can the development be delivered without using 20% of the site?

We are also concerned that your Level 1 SFRA does not assess safe access and egress in detail. We are particularly concerned as many of your proposed allocations do not have dry access and egress a during a flood event. An assessment should be provided on if this is appropriate and if so, what measures are required to ensure occupants will be safe.

**Points of clarity and accuracy**

**SFRA Level 1**
The previously published SFRA in 2017 has been updated and published in November 2023. This meets our request to update the SFRA in our response at the Preferred Options Stage. Updates in National and Local flood risk management strategies have been included.

The SFRA 2023 includes an assessment of all sources of flooding.

The models listed in section 1.4 and 1.5 (page 9) list the latest hydraulic models available that the Environment Agency manage.

We are pleased to see that an online map is available that shows the policy layers. We advise that the Risk of Flooding from Surface Water should be added to the "Flooding" group.

Flood Zone 3b is listed as the 1 in 30 (3.3% AEP) which is in line with national Planning Practice Guidance Flood risk and coastal change section. Section 1.6.2 states how the functional floodplain is defined where the 1 in 30 is not modelled. We support your precautionary approach to use Flood Zone 3a as a proxy for FZ3b where the 3.3% AEP is not available.

The climate changes for both peak river flow and peak rainfall in England match the current published allowances.

We are pleased to see that cumulative impacts of development and land -use change are considered in bullet 1 page 30 of the SFRA.

We agree with the opportunities to reduce flood risk in chapter 4.1 page 30. It is good to see the consideration of combined flood risk. The SFRA states that there are no formal flood defences within the LPA. Natural Flood Management (chapter 4.1) is included as opportunities to reduce flood risk in Oxford, however there is no detail on land identified for this flood management.

It is good to see that the Oxford Flood Alleviation Scheme (OFAS) is included.
We welcome reference to property flood resilience and to the industry standard CIRIA code of practice.

The Conclusion and Recommendations chapter 5 of the SFRA includes recommendations on how to reduce flood risk in development. Please note the following.

5.1.4 (page 36) states that the Littlemore Brook poses a risk to flooding in the Blackbird Leys area. Can the Northfield Brook be included in this text as this watercourse is also a source of flood risk in this area?
5.1.13 - there are also two additional warning areas (River Cherwell from Lower Heyford down to Cherwell Bridge) that overlap with the administration boundary.
5.2.2 – there is mention of an Emergency Flood plan during significant flooding. More detail should be provided on safety during flood events in relation to access and egress.
5.2.3 – we support the use of sustainable drainage to safeguard against flooding onsite and downstream. Please note that the Lead Local Flood Authority is responsible for issues in relation to surface water drainage and flooding.
5.2.4 – good to see that greenfield site development should not exceed greenfield run-off.

The SFRA references both the National and Local Flood Risk Management Strategies and the Flood and Water Management Act. It also references the Thames Catchment Flood Management Plan. The CFMPs have not been updated for a while and are not referenced in the latest FCERM strategy. We would advise against mentioning them. The Thame River Basin Management Plan and associated Flood Risk Management Plans (FRMP) are not referenced. The FRMPs for the Oxford area can be accessed at: Oxford, Thames (RoFRS) Flood Risk Area – Flood Plan Explorer (data.gov.uk).

**SFRA Level 2**
It is not clear how within Table 2 of the SFRA - low, moderate and high has been defined? Can this be clarified?

Also, with regards to the 'traffic light' system, red is defined as '*Proposed development is not appropriate and is unlikely to pass the Exception Test'* however in Table 2 SPCW 7 and 8 are red and still proposed? can this be rectified or clarified?

Central (26%) or Higher (41%) Climate Change allowances are required. Sites with FZ3b requires higher, however this is not in site assessments.

We note the use of 84% which is a precautionary approach however Oxford City could use lower.

Please clarify the intended use of your additional hydraulic modelling undertaken for your Level 2 SFRA. Is this only to support your Local Plan or do you intend to let developers use it?

**Final Comments**

We trust the above comments are useful and we look forward to working with you to produce a sound and robust local plan for the Oxford City Emerging Local Plan. Our comments are based on our available records and the information as submitted. If you have any questions, please do not hesitate to contact me.

Yours faithfully

**Miss Judith Montford**
**Planning Specialist**

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