

Project name	Gavray Drive, Bicester		
Design note title	Response to EA Comments		
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1. INTRODUCTION

A Flood Risk Assessment (Ref: 15114-HYD-XX-XX-RP-FR-0001) was prepared and submitted in support of the outline planning application (app no. 21/03558/OUT) in September 2021. This report also included a summary of hydraulic modelling works that were undertaken to confirm that mitigation measures proposed, and the proposed development layout are in line with policy requirements - i.e. no detrimental impact to third party land.

In addition to the report the detailed modelling files were previously provided for technical review via a OneDrive link. Owing to the nature of the files these cannot be uploaded to the planning portal and the approach adopted (i.e. file share link) is best practise for sharing these files.

Following the submission of the above technical report and supporting modelling files, the EA have provided consultation responses that object to the proposals. This note has been prepared in order to respond/address the comments specific to flood.

2. PLANNING HISTORY

For context, a summary of the planning history on this application has been detailed below:

- The principle of development on Gavray Drive was established in the Cherwell Local Plan (adopted 1996) and allocated for employment uses. It was assessed and included again in the Non-Statutory Cherwell Local Plan 2011 (adopted December 2004).
- The principle of residential development was confirmed at appeal in 2006 when Outline Planning consent for 500 units was approved on appeal (application no. 04/02797). That outline consent was subsequently extended in February 2012 (application no. 10/01667).
- The suitability of the site for residential development was reassessed and confirmed by Cherwell District Councils' subsequent decision to allocate the site for residential development in the Cherwell Local Plan Part 1 2011-2031 which was re-adopted in 2016. This includes an allocation of the current application site for residential-led development of up to 300 dwellings under Policy Bicester 13.
- This current adopted Local Plan was underpinned by a substantial evidence base including CDC's Sequential Test and Exception Test (Flooding) August 2012 (Updated October 2013) Strategic Sites. This included Gavray Drive as a strategic site.
- Most recently an Outline Planning Application for up to 180 dwellings on part of the allocation, west of Langford Brook (referred to as Gavray Drive West) was dismissed at appeal in 2018 (application

no. 15/00837/OUT). The Inspector's decision was not related to flood risk or drainage but primarily due to the application being for part of the allocation only and as such failing to provide a comprehensive proposal for the effect upon the ecology in Gavray Meadows Wildlife Site, to the east of Landford Brook.

- Importantly, the Environment Agency did not object to the application on flood risk or drainage matters at that time (EA ref. WA/2015/120594/01-L01). The scale of development west of the brook in 2015 is very similar to that currently proposed when parameter plans are compared.

In summary, the site has a long history of allocation for development underpinned by a detailed technical evidence base to which the EA will have been a statutory consultee. Previous and recent development proposals in the same location and for a similar scale of development have been **supported by the Environment Agency**.

3. EA COMMENTS

The EA response has highlighted 3 points and for the purpose of this note each of the topics raised forms a subject heading with a response to each point.

3.1 Point 1 - Provide evidence of how presented flood levels with climate change allowances have been derived.

In preparing the Flood Risk Assessment the EA's model for the Langford Brook was provided to Hydrock through a freedom for information request. The modelling files that the EA provided did not include any climate change events and, as such, Hydrock updated the modelling to include for the climate change allowances at a 35% increase to the 1 in 100 year event. This was in line with the requirements, and guidance, at the time of submission. It is noted that whilst the latest EA peak river flow allowances have been updated since the submission, the updated Central allowance of 15% is lower than the 35% used in the modelling and as such would likely cause a decrease in the flood extents and so the modelling undertaken by Hydrock can be considered more robust through adopting a conservative approach where appropriate. These events were created via no alteration of the existing modelling files other than to set up a new 'Event Data' file. The outlines for the revised climate change event are shown in **Section 3.3** of the submitted report (Ref 15114-HYD-XX-XX-FR-RP-0001 P03) and **Figure 3**.

In addition, all modelling files were provided to the EA which include all run, checks and results files including the climate change event. The outputs from the modelling undertaken were also detailed within the submitted FRA and specifically within **Section 3.3** for the baseline scenario and **Section 4.2** for the post development. These modelling files have been provided in the covering email for this note to avoid confusion.

3.2 Point 2 - Apply the Sequential Approach

This section has been addressed within **Section 4.1** of the submitted **Flood Risk Assessment** report.

In summary, a sequential approach to site use has been used (**Section 4.1**) in the main but there are localised areas where this was not possible in order to meet the allocation needs for the site. As such there is a small amount of development (including access roads) located within the current Flood Zone 3 (and climate change) events.

Whilst development has been located within the current Flood Zone 3, mitigation measures have been detailed within the report that demonstrates how these areas of development can be achieved.

In summary the proposals are, and in line with best practise, for these sections of the site to be raised to ensure all finished floor levels are a minimum of 600mm above the 1 in 100 year plus 35% allowance for climate change event (which it should be noted exceeds the current guidance for the Langford Brook which required a 20% increase) and set no lower than 67.62m AOD. It is also recommended that all ground levels (including access roads, domestic garden, drainage infrastructure etc) be set a minimum of 300mm above the 1 in 1,000-year flood levels which would be a minimum level of 67.47m AOD. In adopting this approach, and through providing the proposed compensation storage, all development will be located within the post development Flood Zone 1 and at low risk.

Where the required levels result in ground raising this would effectively result in a 'loss' of floodplain storage and a scheme of floodplain compensation would be required to ensure no increase in flood risk and, where possible, a betterment elsewhere. Such works comprise the lowering of ground levels between the Gavray West development parcel and the Langford Brook to a level of 66.5m AOD to tie in with the proposed surface water drainage outfall.

Detailed modelling of the proposed floodplain compensation scheme has demonstrated the site will not increase flood risk within the catchment through a loss of floodplain storage or impedance of flood flows. A detailed explanation of this is given within the submitted FRA but a volumetric assessment has also been conducted for the post development scenario based on the maximum pre- and post-development fluvial flood volumes during the 1 in 100-year event plus 35% climate change. This assessment indicates a requirement for flood water storage of 21,603m³ and 23,569m³ for pre- and post-development respectively. As such, an **additional 1,966m³** of storage is provided and therefore a **betterment** when compared to the existing scenario

Through the mitigation measures proposed, and once implemented, this will result in all development being located outside the floodplain and the compensation will ensure no detrimental impact to third party land.

3.3 Flood Risk Mitigation measures to address the loss of flood risk are inadequate.

The response to Point 2 also addresses this point with all justification/details having been provided within the submitted FRA in **Section 4.2** and the previously submitted flood modelling files.

The modelling undertaken confirms that whilst sections of the site are currently shown to be within Flood Zone 3 suitable mitigation measures have been modelled that confirms through provision of compensation storage all development can be located within Flood Zone 1. The FRA also details how the proposed ground lowering/compensation storage provided a **betterment** on the current situation by providing an **additional 1,966m³** of volumetric storage on the site when compared to the existing situation.

3.4 Conclusion

Whilst the Environment Agency have provided an objection to the planning submission this note provides responses along with signposting where evidence is provided within the submitted Flood Risk Assessment Report to demonstrate how the objections and comments raised have been addressed/overcome.

In addition to the technical responses, it should also be noted that there is a long history of allocation for development which has, at every stage, been supported by a detailed technical evidence base to which the EA will have been a statutory consultee. Previous and recent development proposals in the same location and for a similar scale of development have been supported by the Environment Agency

and it is unclear why the recent responses differ to this when much of the supporting evidence has been provided.

We request that the EA opens dialogue with the Applicant through Hydrock. Through this dialogue, the content of this Technical Note and the previously submitted Flood Risk Assessment (and Drainage Strategy) can be discussed in full allowing the EA's comments on the application to be resolved and ultimately enabling removal of their objection to the outline application for this allocated residential development site.