
10682 Banbury Oil Deport

Technical Note 6: Response to EA Drainage Comments 16th January 2023

September 2023

1 Introduction

- 1.1 This technical note reviews the comments provided by the Environment Agency (EA), dated 16th January 2023, for the proposed development at Banbury Oil Deport.
- 1.2 The Application Site forms part of a wider allocated Site, Banbury Canalside, which is covered under Planning Policy BAN1 Banbury Canalside.
- 1.3 The EA commentary is noted in *italics* with the Brookbanks response noted in blue.

2 EA Drainage Comments

- 2.1 *The modelling has been run to identify flood risk in relation to a 49% increase in peak river conditions due to climate change. This is the upper end and most extreme climate change prediction for this catchment as shown in current guidance and will therefore represent a worst-case scenario. The model results represented in Appendix A, show that the development will displace flood water and increase flood risk elsewhere. This means for development to proceed on this site, based on the flood risk currently identified, compensation for any expected lost flood storage would be needed. Due to the extent of identified flooding in this extreme scenario, on site compensation for lost flood storage would not be possible. This means the development would fail both national and local planning policy and the flood risk exception test.*
- 2.2 *However, the applicant has not provided details of any of the other climate change scenarios for this catchment and to proceed with detailed designs based on this extreme representation of flooding is unlikely to result in a viable development. The applicant needs to also consider the higher central climate change scenario (25%). Should this result in increased flood risk to the nearby rail station and tracks, compensation to address this will need to be designed and shown to be feasible in order for planning permission to be granted. Should the rail station and be unaffected by the development proposal using the 25% scenario, then it may only be necessary to consider the central climate change allowance of 15%.*
- 2.3 *The applicant will need to demonstrate that development on this site can be designed to remain safe without increasing flood risk elsewhere both now and in the future using the relevant climate change scenario. Sufficient evidence should be presented to ensure that the risk of flooding at the site is clearly understood, including the expected extent of flooding that may be experienced and identify the flood depth/s across the site. They will then need to show that a viable development can be designed to meet planning policy requirements. This includes providing details of the current built footprint on site and potential development parameters in response to the identified risk of flooding which will provide the necessary confidence to the Planning Authority that flood risk can be properly controlled. The Flood Risk and Coastal Change Planning Practice Guidance offers advice on how this should be considered including the need to consider potential breaches or overtopping of*

flood defences which offer some protection to this site.

- 2.4 Previous model runs completed by Brookbanks on the Environment Agency’s (EA) River Cherwell model, was completed by reducing the model size and amending the hydrology in order to represent the size of the amended catchment. The model was initially amended due to its size to provide a more suitable run duration.
- 2.5 However, and following the provided comments, the model has now been run in full and has included climate change runs in accordance with the EA’s climate change assessment. The higher central allowance has been used to assess the current risk of flooding at the Site as the development comprises of essential infrastructure located in flood zones 2 and 3a. Therefore, the River Cherwell model has been run for both the 100 year and the 100 year plus 25% climate change allowance (higher central).
- 2.6 The EA’s hydrology used within the model was reviewed and deemed appropriate for the baseline modelling on the basis that the EA have issued the modelling and provided no specials conditions with respect to any updates. Additionally, and owing to additional data being made available, it is expect that, and owing to the increased wet weather patterns, and from experience, that any updated assessment would, if anything , decrease the peak flood flows and therefore the approach of using the data provided would be considered as adopting a conservative assessment. A percentage increase was applied to the hydrology to accommodate the updated climate change scenarios in line with standard practise.
- 2.7 Within the defended scenario, development lies outside of the 1 in 100 year plus 25% climate change allowance (**Figure 2-1**) and therefore, does not increase the risk of flooding elsewhere.



- 2.8 Both the undefended higher central and the upper central climate change allowance of 49% has been run as part of the sensitivity testing to determine the maximum extent of flooding. The maximum height of flooding in the undefended 100 year plus 49% climate change allowance is 90.83m AOD in the north of the Site, where

existing ground levels are at 90.60m AOD. Finished floor for the development will be set at a minimum of 600mm above the maximum flood extent.