

Project Title: Land to the North of Arborfield Road

Project No/ Document Reference: HD008/TN007

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Author: E Philpott

PLANNING APPLICATION WBC 242484 / FLOOD RISK RESPONSE FOLLOWING ENVIRONMENT
AGENCY MODELLING COMMENTS

1. Introduction

- 1.1. This technical note provides a response on flood risk matters following the Environment Agency (EA) comments made in the letter ref WA/2025/132198/03 dated 14th April 2026 on Wokingham Borough Council (WBC) planning application no 242484, for the 'Full Application for the Erection of 191 Dwellings, Open Space, Landscaping, Supporting Infrastructure and Associated Works. Land to the North of Arborfield Road, West of Shinfield Eastern Relief Road'.
- 1.2. The EA maintained its objection of 30th Jan 2026 as the review identified that there is still some further work required for both the hydrology and hydraulic model. The EA provided further comments on the hydrological and hydraulic modelling with key matters to be addressed.
- 1.3. The flood model produced by Enzygo has been updated to address the EA comments. The final model files and model report including a summary of the updates completed are provided under a separate cover.

2. Flood risk and FRA Implications of Modelling Updates

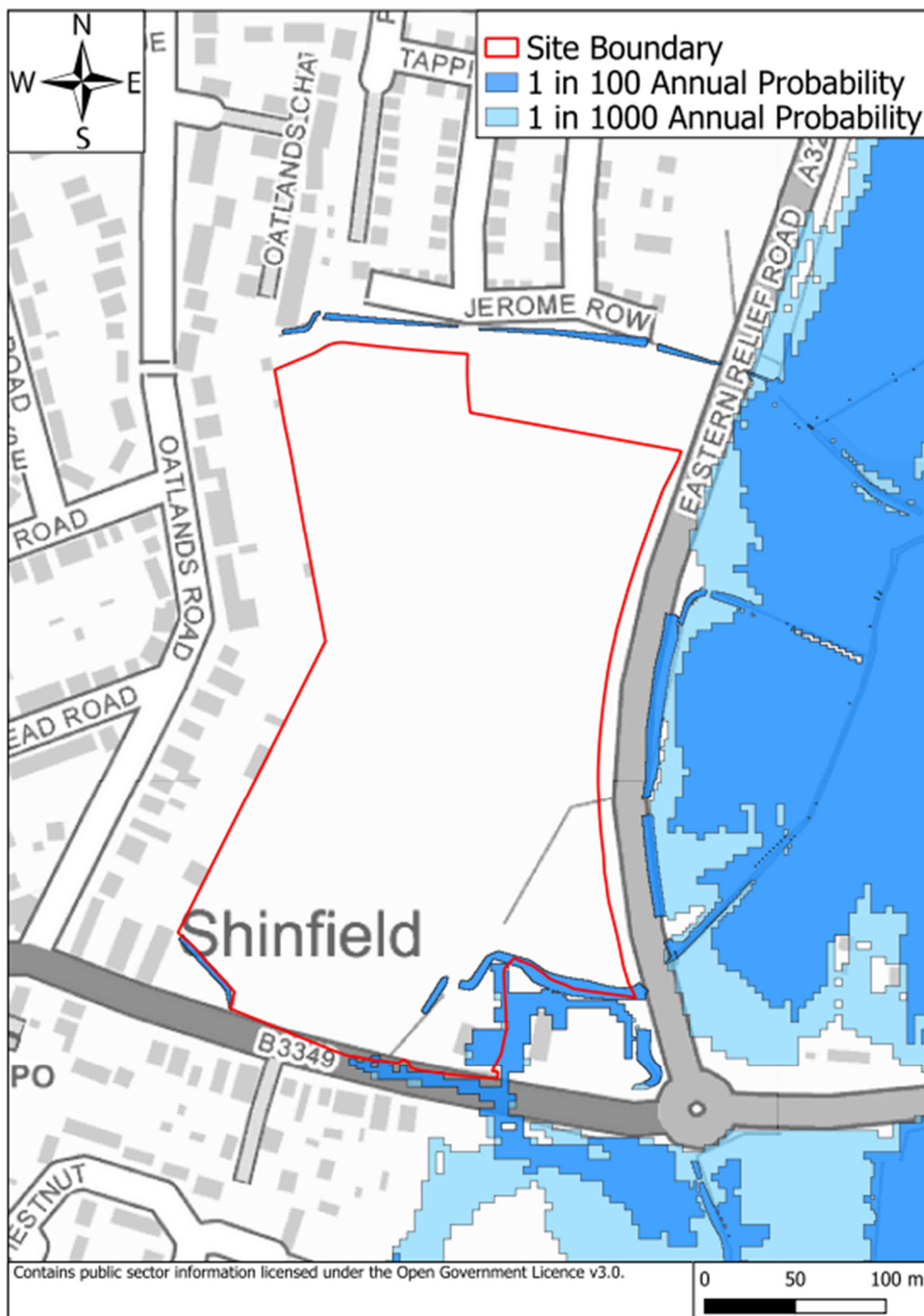
- 2.1. This technical note confirms the flood risk position for the FRA following the model updates.
- 2.2. The flood risk matters for the proposed development are covered in detail in the FRA submitted as part of the application, "Land North of Arborfield Road, Shinfield Flood Risk Assessment and Drainage Strategy" (Ref HD008-R001B dated 13 March 2025 and subsequently Rev C dated Feb 2026) and produced by Abley Letchford Partnership Limited'.
- 2.3. Technical Note HD008-TN004 dated 27th November 2025 then provided an update on flood risk matters following the EA response of May 2025 and including an update on flood modelling completed by Enzygo. The subsequent Technical Note HD008-TN006 dated 10th March 2026 then provided an update on flood risk matters following the EA response of Jan 2026 and confirmed the flood risk implications following the update on flood modelling completed by Enzygo.
- 2.4. This technical note concluded that the site-specific flood modelling updated to address the EA's comments confirmed that:
 - The site has a low potential for fluvial flooding from the Loddon and its tributaries;
 - The site is within Flood Zone 1, with the exception of the existing ditches that convey flow and a small area in the south-eastern corner of the site;
 - The proposed development is located in areas outside the extent of flooding for the 1 in 1,000 year and outside the 1 in 100 year with 14% climate change events (flood zone 2 and the design event);
 - Landscaping is proposed in the south-eastern corner with no impact on flooding;





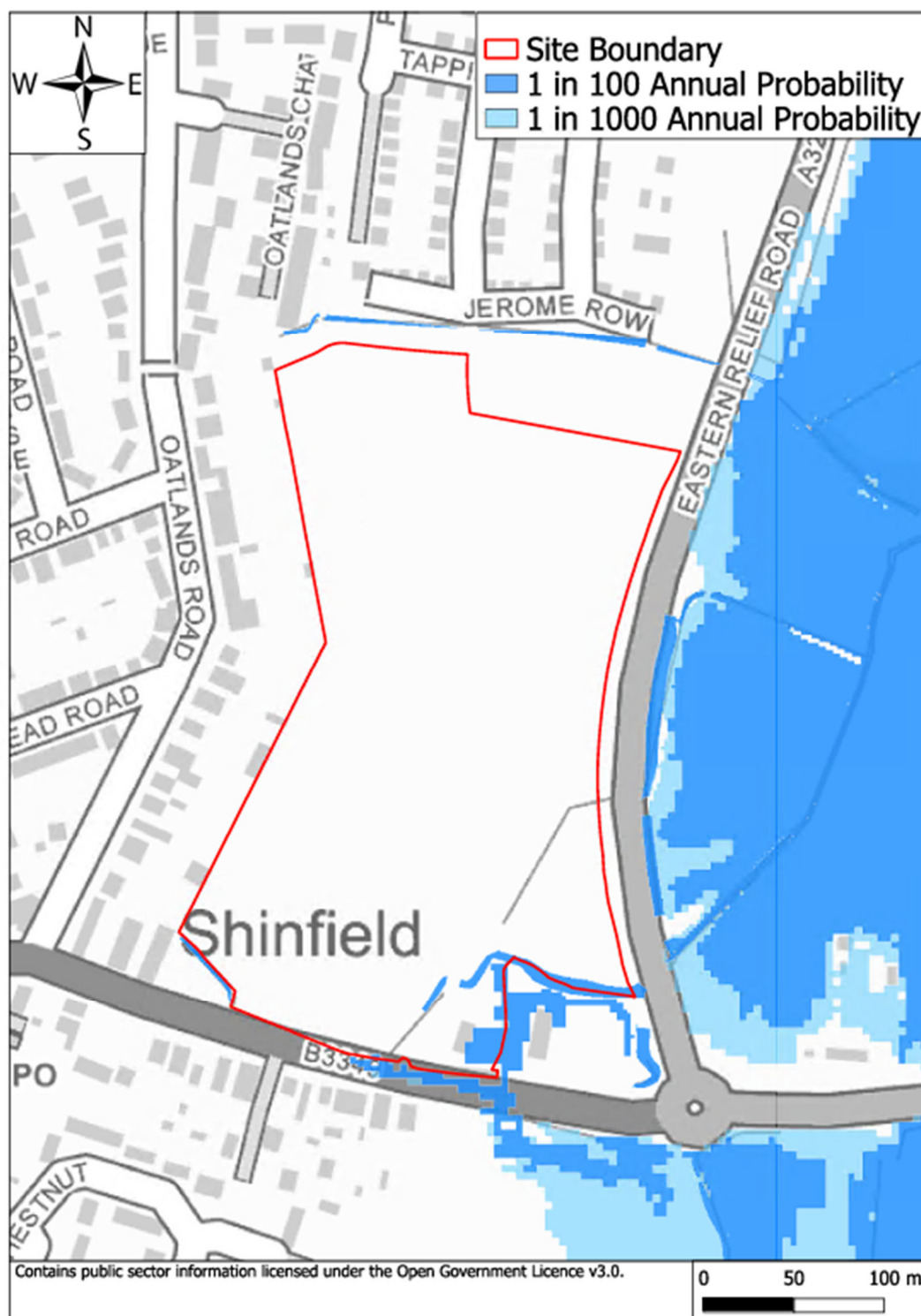
- The proposed development will have no impact on the existing floodplain.
- 2.5. Overall, the detailed modelling supported the findings of the FRA and the proposed development was shown to be appropriate and compliant with NPPF.
- 2.6. Enzygo has now completed further updates to the hydrological and hydraulic modelling in line with the EA comments of April 2026.
- 2.7. Enzygo has addressed the EA comments with the exception of the EA's comments on the flow inflow points for the tributary to the north of the site. The EA recommendation was to lump the total inflow for the watercourse at the upstream end of the tributary, but this would not be representative of the actual catchments for this watercourse. The Eastern Relief Road bisects the catchment and acts as a physical barrier for flow and it is therefore more accurate to treat this as two separate catchments. Indeed, were the flow to be lumped at the upstream end and then throttled by the structures at the Eastern Relief Road this could lead to an underestimation of the flows within the downstream reaches of the tributary and affecting the Loddon floodplain extent. This is explained fully in Enzygo's report: Hydrological Assessment – River Loddon, Watercourse 1 and 2, ref SHF.1154.040.HY.R.003.C in section 2.5 and 2.6. The current approach is deemed most appropriate for this catchment and, furthermore, was previously approved by the EA.
- 2.8. The updates to the modelling have resulted in some changes to the floodplain extents and depths shown from the modelling for both the River Loddon and its tributaries.
- 2.9. **Figure 1** shows the previous model results for the site from the modelling completed in March 2026.

Figure 1: March 2026 Flood Modelling Results



2.10. **Figure 2** shows the results of the current modelling completed in May 2026 for the 1 in 100 and 1 in 1,000 annual probability events.

Figure 2: May 2026 Flood Modelling Results-Baseline



- 2.11. This shows little change to the flood extent shown within the site.
- 2.12. **Figures 3 and 4** show the modelled flood extents overlaid on the final masterplan for the 1 in 100 and 1 in 1,000 annual probability events (to compare to **Figure 2**) and for the design event, the 1 in 100 annual probability event with 14% climate change uplift.

Figure 3: May 2026 Flood Modelling: 1 in 100 and 1 in 1,000 annual probability events-on Masterplan



2.13. **Figure 3** confirms that no built development is located in the 1 in 100 or 1 in 1,000 annual probability extent.

Figure 4: May 2026 Flood Modelling: 1 in 100 annual probability with climate change (design event)-on Masterplan





2.14. **Figure 4** confirms that all built development is outside the design event. Only areas for landscaping are in the areas potentially affected by flooding in this event.

3. Conclusion

3.1. A detailed modelling study of the River Loddon and its tributaries at the site has been completed in line with current methodologies, standards and using current data. This has been updated with the EA requirements set out in their response of 30th January 2026 and subsequent EA requirements set out in their response of 14th April 2026.

3.2. This updated modelling study and a review of the final proposed site layout confirms that:

- The site has a low potential for fluvial flooding from the Loddon and its tributaries;
- The site is within Flood Zone 1, with the exception of the existing ditches that convey flow and a small area in the south-eastern corner of the site;
- The proposed development is located in areas outside the extent of flooding for the 1 in 1,000 year and outside the 1 in 100 year with 14% climate change events Flood Zone 2 and the design event);
- Landscaping is proposed in the south-eastern corner with no impact on flooding
- The proposed development will have no impact on the existing floodplain.

3.3. The detailed modelling study therefore supports the findings of the FRA.