

Technical Note

Project: Yarton, Oxfordshire

Subject: Flood Risk & Drainage ES Chapter Addendum Note

Client:	Merton College	Version:	P1
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I Introduction

- 1.1.1 Following planning submission for the proposed PR9 development in Yarnton, Oxfordshire (planning ref. 21/03522/OUT), there have been a number of consultation comments received with regards to flood risk and drainage in response to the Flood Risk Assessment (WSP, October 2021) (herein referred to as the WSP FRA) and Chapter 11 of the ES Chapter which were prepared to support the outline planning application.
- 1.1.2 Following this, additional supporting evidence have been prepared in relation to flood risk and drainage which have been included within the revised Flood Risk Assessment (FRA), produced by PJA dated December 2022 (herein referred to as the PJA FRA).
- 1.1.3 As such, Chapter 11 of the ES Chapter has been superseded and this note sets out the primary changes from those contained in the previously submitted ES Chapter. The PJA FRA (December 2022) supersedes that previously submitted by WSP (October 2021).

2 Supplementary Information to Support ES Chapter II

2.1 Additional Data Gathering

- 2.1.1 The assessment methodology as set out in Section 3 of the ES Chapter identifies ‘data gathering’ methods utilised when preparing the ES Chapter and supporting FRA. As part of this data gathering exercise to update the FRA Report, a number of additional Site walkovers and consultation with key stakeholders has been undertaken. This have included;
- Additional Site walkovers:
 - 20th December 2021 – Site walkover and meeting with Yarnton Flood Defence Group;
 - 11th January 2022 – Site walkover to review existing ditch network and downstream drainage; and

- 16th February 2022 – Site walkover with Nagina Bawar (Oxfordshire County Council Lead Local Flood Authority).
- Additional Stakeholder Engagement:
 1. Oxfordshire County Council
 - 16th February 2022 – Site walkover with Nagina Bawar (Oxfordshire County Council Lead Local Flood Authority). 23rd February 2022 – Email from Nagina Bawar (Oxfordshire County Council Lead Local Flood Authority) confirming acceptance of Scoping Report for the generation of further flood risk and drainage evidence; and
 - 11th May 2022 – Microsoft Teams call with Nagina Bawar (Oxfordshire County Council Lead Local Flood Authority) to update on progress.
 2. Cherwell District Council
 - 24th February 2022 Meeting with Tony Brummel (Cherwell District Council).
 3. Yarnton Flood Defence Group
 - 20th December 2021 – Site walkover and meeting with Yarnton Flood Defence Group representatives; and
 - 17th May 2022 – Meeting with Yarnton Flood Defence Group representatives.
 4. Thames Water
 - Pre-development Enquiry Response received on the 4th March 2022; and
 - Additional pre-development enquiry response received 10th June 2022.

2.2 Baseline Conditions Update

2.2.1 Further supplementary information has been made available, subsequent to the submission of the previous WSP FRA which provides additional knowledge with regards to the baseline Site conditions.

2.2.2 The majority of the Site is underlain by Oxford Clay which is not generally conducive to an infiltration-led drainage strategy. Given this, infiltration testing was undertaken at four locations across the Site in November 2021 in accordance with BRE Digest 365 Soakaway Design Guidance. The results of this testing identified that an infiltration-led strategy is not a viable means of managing surface water from the Proposed Development as all falling head tests failed to provide positive results. These infiltration test results are available in the PJA FRA (December 2022), available in Appendix L.

- 2.2.3 Groundwater levels were not identified within the depth of trial pipes during the infiltration testing described above. The trial pipes were dug to depths of over 2.2m and identified an underlying strata of Made Ground above Clay.
- 2.2.4 Further information has also been supplied by Yarnton Flood Defence Group. They have confirmed during a Site walkover with PJA on 20th December 2021 and a meeting on the 17th May 2022 that the village of Yarnton, downstream of the Site had experienced foul water flooding.
- 2.2.5 Additionally, two CCTV surveys have been undertaken to further understand the downstream drainage connectivity of the Site through the village of Yarnton. These CCTV Survey Reports have been made available in Appendix C of the PJA FRA (December 2022). This CCTV survey information was then utilised within revised hydraulic modelling to provide a more representative understanding of the existing flood risk.

2.3 Likely Significant Effects

- 2.3.1 No additional likely significant effects have been identified since the submission of Chapter 11 of the ES Chapter and the sensitivity of each receptors, magnitude of each impact and significance of each effect remains the same throughout the report.
- 2.3.2 Given this, the updated information in relation to the baseline conditions has brought about some changes to the Proposed Development, predominantly the surface water drainage strategy. The revised surface water drainage strategy has been detailed within Section 6 of the PJA FRA which has removed reliance on infiltration to manage surface water flows in the south of the Site. It also contains updates to the drainage strategy following the CCTV survey which has confirmed the outfall invert levels for the proposed attenuation features.
- 2.3.3 Further refinement has also been made in relation to the foul drainage strategy. The strategy now identifies two foul discharge points:
- (1) Gravity discharge to the Thames Water sewer at the junction of Rutten Lane and Aysgarth Road; and
 - (2) Pumped connection to the Thames Water sewer north of the Site in Woodstock Road (A44).
- 2.3.4 Thames Water have confirmed the acceptability of foul water connections from the Site and will undertake a hydraulic modelling exercise to confirm the existing capacity and any upgrades of the existing sewer network to enable the Site to discharge. The foul water drainage strategy is outlined in Section 7 of the PJA FRA (December 2022).

2.3.5 Revised baseline and proposed development hydraulic modelling was undertaken utilising the additional information gathered and the revisions to the proposed masterplanning and surface water drainage strategy. The updated modelling provides the same conclusion as Chapter 11 of the submitted ES Chapter and shows that there is no increase in downstream flood risk. This information is contained in Section 5 of the PJA FRA (December 2022).

3 Conclusions

3.1.1 No additional likely significant effects have been identified since the submission of Chapter 11 of the ES Chapter and the sensitivity of each receptors, magnitude of each impact and significance of each effect remains the same throughout the report.

3.1.2 The supporting PJA FRA has been updated to reflect additional baseline information and hydraulic modelling, the refined surface water and foul water strategy and statutory consultation which has been undertaken. The PJA FRA (December 2022) supersedes the previously submitted WSP FRA (October 2021).