

Technical Note 1: Foul Water Drainage Addendum



Project: Hotel, Bicester Gateway Business Park, Wendlebury Road, Bicester
Prepared by: Jason Morgans
Approved by: Robert Monie
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84 North Street
Guildford
Surrey
GU1 4AU

Tel: 01483 531300
www.motion.co.uk

1.0 Introduction

- 1.1 This Foul Water Drainage Addendum has been prepared for L & R Hotels regarding the development proposals located at Bicester Gateway Business Park, Wendlebury Road, Bicester. The development proposals are for a Holiday Inn Express Hotel.
- 1.2 The development of this site was given consent by the Local Planning Authority (LPA) Cherwell District Council under planning application reference No. 16/02586/OUT dated 11th January 2017. The outline consent included a pre-commencement condition 17 relating to the foul water drainage strategy requiring the prior approval of the foul water drainage strategy.
- 1.3 A Surface and Foul Water Drainage Strategy for the development site was undertaken on 31 August 2018 by WSP. Since then the foul water drainage strategy for the site have been revised due to the requirement to have the foul water pumping station and rising main to be adopted by the Sewer Authority Thames Water Utilities (TWU). The purpose of this Foul Water Drainage Addendum is to detail the new foul water drainage strategy for this development site.
- 1.4 This Foul Water Drainage Addendum should be read in conjunction with the 31 August 2018 Surface and Foul Water Drainage Overview Technical Note produced by WSP.

2.0 Previous Foul Water Drainage Strategy

- 2.1 The previously foul water drainage strategy for the site, as detailed in the Foul Water Drainage Overview Technical Note, included the following key components.
 - The foul water discharge from the new hotel drains via a gravity pipe system to a new pumping station.
 - Peak hotel foul flows are calculated at 12.5 l/s.
 - The pumping station design and wet well storage allows for a future connection of a rising main from the Phase 1B development at a flow rate of 10 l/s.
 - Pumping station to be private.
 - The foul flows will be pumped at a flow of 24 l/s via a rising main laid in the footway along the A41 Oxford Road to the existing 600mm diameter Thames Water public sewer located in Oxford Road approximately 0.5 km to the north of the site.

3.0 Revised Foul Water Drainage Strategy

- 3.1 A requirement has been identified that the rising main running in the A41 Oxford Road should be adopted by TWU. This is due to the difficulties in maintaining private infrastructure in the adopted highway, including obtaining the necessary consents and licences from Oxfordshire County Council. It is a more robust design from a maintenance viewpoint, to have the rising main adopted by TWU, as they have the necessary infrastructure in place in order to maintain the system and as a Statutory Undertaker TWU have the legal right to lay, access and maintain infrastructure in the Public Highway.
- 3.2 TWU will not adopt the rising main unless the pumping station is also adopted under a Section 104 agreement. This has required a redesign of the hotel parking layout in order to accommodate a pumping station to comply with TWU adoption requirements under a S104 agreement, including the requirement to provide a pumping station compound.

- 3.3 The proposed revised foul water drainage drawings can be found in **Appendix A**. The revised foul water drainage strategy differs from the previous foul water drainage strategy as follows. In all other aspects the revised strategy is the same as the previous strategy submitted and agreed as part of Condition 17:-
- The pumping station and rising main is to be adopted by TWU under a S104 agreement, previously the pumping station was to be private.
 - The adopted pumping station requires a fenced off compound that takes up more space than a private pumping station.
 - The proposed hotel parking area has been redesigned to incorporate a pumping station compound and access to the compound vehicle parking space by TWU tanker, which has result in the loss of 7 parking spaces.

4.0 Summary and Conclusion

- 4.1 It is concluded that the revised foul water drainage strategy meets the same performance criteria as the previous approved strategy in terms of; hydraulic design, flow rates and connection to the existing TWU foul gravity sewer network. However, the revised strategy includes the adoption of the pumping station and rising main by TWU. This is an improvement over the previous strategy due to the specialist maintenance and monitoring, and statutory response time in the event of failure, that is provided by the Sewer Authority who are a Statutory Body.
- 4.2 A S104 technical submission has been made to TWU, who have confirmed their technical approval of the details of the proposed pumping station and rising main.
- 4.3 The introduction of a pumping station compound has necessitated a redesign of the hotel parking layout, which has been achieved with minimal loss of parking spaces.