

Surface Water Drainage Statement for Development at Eric Wall Nursery, Lake Lane, Barnham-Issue 3

Client Redrow Homes Southern Counties.

1.0 Introduction

- 1.01 Banners Gate have been appointed by Redrow Homes Southern Counties to undertake the civil engineering design for Phase 2 of the development.
- 1.02 In addition, Banners Gate were requested to undertake a review of the drainage strategy for the overall development which comprises of 2 phases and is considered below.
- 1.03 The overall development including both Phase 1 & 2 areas has an approximate net developable area of 6.2Ha. The development consists of the provision of 114 residential units and is located on the eastern side of Barnham Village at OS Grid Reference 496706,104644. The site is accessed off Lake Lane.

2.0 Proposed Foul Drainage

- 2.01 We understand that the Client is in negotiation with Southern Water via a Section 98 Agreement under the Water Industries Act to provide a suitable foul drainage outfall for the development.

3.0 Proposed Surface Water Drainage

- 3.01 We have sight of the overall surface water drainage strategy promoted by JNP Engineers who undertook the initial drainage strategy for the development and the detailed civil engineering design for Phase 1 of the development.
- 3.02 The strategy employs the use of a 2-stage cascade system. The upper system serves most of the surface water run-off from Phase 2 of the development site and consists of a piped network gravitating to an attenuation pond located adjacent to the western boundary of the development site.
- 3.03 A control chamber with a hydrobrake control limiting the surface water discharge from this portion of the site to 10 l/s for storm events up to the 100 year+30% for climate change has been provided.
- 3.04 The outfall from the Phase 2 pond and the remaining surface water run-off from Phase 1 and part of Phase 2 gravitates to an additional pond within the Phase 1 area located adjacent to the lower northern boundary of the site. The surface water discharge from the Phase 1 pond has been restricted to 21.7 l/s to accommodate storm events up to the 100 year + 30% for climate change.
- 3.05 The proposed pond located in Phase 2 will have bank slopes set at 1 in 4 with a 2m maintenance margin adjacent to the top of bank level.

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3.06 Due to expected relatively high ground water levels an impermeable liner will be installed within the Phase 2 pond construction.

3.07 Supporting calculations which incorporate both the Phase 1 and Phase 2 catchments together with Phase 2 Drainage Area Plan and Flood Routing Plan are appended for reference.

4.0 Conclusion

4.01 The foul water discharge for the site is currently subject to a Section 98 Sewer Requisition application with Southern Water which the Client is currently progressing.

4.02 The proposed Phase 2 surface water design has followed the principles laid out in the JNP Phase 1 design and incorporated the required restricted discharges to the receiving ditch course.

4.03 It has been demonstrated that the surface water run-off generated by the 100-year storm event + 30% for climate change can be accommodated on the development site.

John Byrne
Director
For and on behalf of Banners Gate Ltd