



Drainage Statement

Project: Hogwood Farm
Land to the South of Parcel 15

Client: CALA Homes Thames Ltd.

Reference: M44541-JNP-92-XX-RP-D-1005 P01

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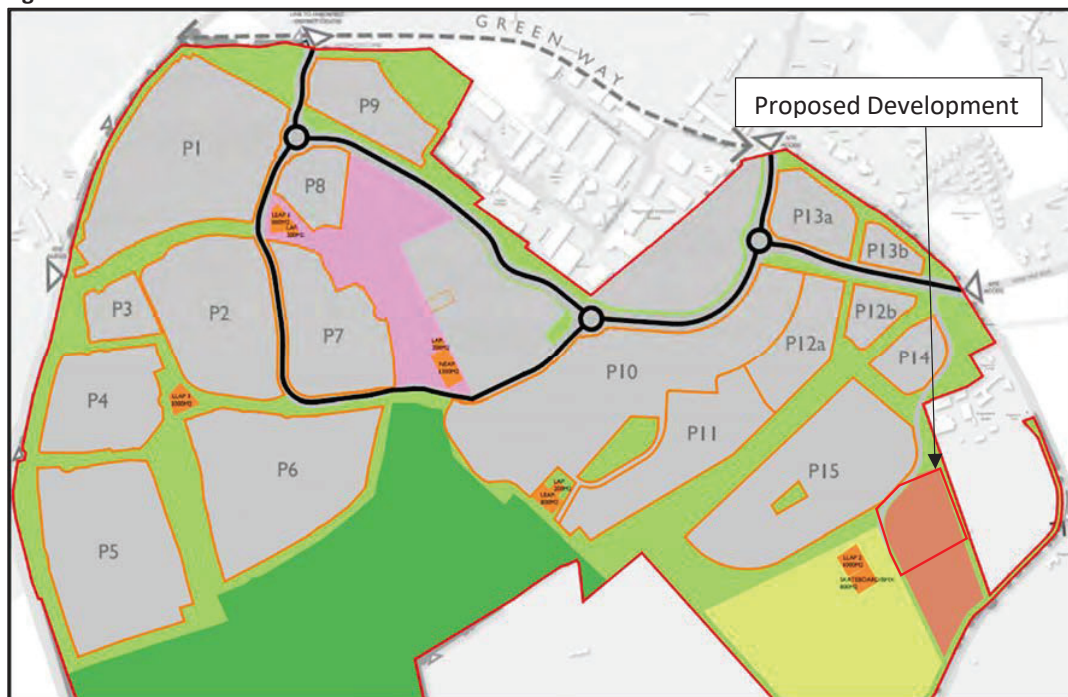
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1 INTRODUCTION

1.1 Background

- 1.1.1 JNP Group have been commissioned by Cala Homes Thames Ltd. to prepare a Drainage Statement to accompany a full planning application for 48 dwellings on land to the south of Parcel 15 at Hogwood Farm, Finchampstead.
- 1.1.2 Per the Framework Masterplan which was approved for Hogwood Farm under Outline Planning Consent O/2014/2179 (as varied by s.73 planning permission 181194, dated 14/11/2018), the land which comprises the proposed development formed part of an area to be used for allotments.
- 1.1.3 Following discussions with WBC, it was identified that the allotment and sports pitch land uses in this area of Hogwood Farm could be reconfigured, and a small residential parcel could be brought forward.
- 1.1.4 The location of land south of Parcel 15 at Hogwood Farm is shown on Figure 1.1 below.

Figure 1.1: Site Location



1.2 Scope of the Statement

- 1.2.1 This Drainage Statement is designed to build upon the content of the approved Outline Surface Water Drainage Assessment (C85672-SK203B-204B, available in Appendix A). The Outline Surface Water Drainage Assessment was prepared to support the hybrid planning application with a particular focus on detailing matters of the site-wide drainage system and associated attenuation and treatment.

2 DRAINAGE STRATEGY

2.1 Surface Water

- 2.1.1 Surface water run-off is assessed in detail in the Outline Drainage Assessment (Appendix A), in line with National Planning Policy and good practice documents, mimicking natural run-off directions and rates. The report also details discussions held with Wokingham Borough Council (WBC), which was instrumental in its development.
- 2.1.2 Although the land south of Parcel 15 was not part of the Outline Drainage Assessment, it still follows the principles of the report and keeps to the general existing topography of the site. Therefore, the surface water would drain similarly to original proposal as part of the outline report.
- 2.1.3 Soils across land south of Parcel 15 are largely impermeable clay, and as such existing run-off mostly follows the site topography, running into local watercourses, which in turn run through the site in a southerly direction.
- 2.1.4 The main principle of the drainage strategy is to ensure that total discharge rates from the site are matched to greenfield rates, for all events up to and including the 1 in 100 year storm event plus 40% allowance for climate change, in accordance with the NPPF and good practice guide.
- 2.1.5 Land south of Parcel 15 is located in the southeast of the wider site. As part of the surface water design for Parcel 15 an accommodation of 0.529ha of impermeable area had been allowed to cater for surface water flows from the sports hub pavilion hardstanding areas, including pavilion, roads and parking. Due to the changes associated with the sports hub land, the 0.529ha allowance is now intended to be used to serve a portion of the land south of Parcel 15.
- 2.1.6 The rest of the Land south of Parcel 15 will drain toward the southeast into a new proposed attention basin. This basin will also accommodate the surface water flows from the access road that serve the sports hub and allotments, as well as the associated parking courts. This basin will discharge into the existing ditch along the eastern boundary.
- 2.1.7 The land south of Parcel 15 surface water drainage strategy has been developed using the following principles:
- Run-off will be collected from roofs and hardstanding areas using gullies, to drained via pipe networks into the main gravity sewer network. Swales will be used to convey flows into the existing ditches.
 - Impermeable catchment areas have been measured from the planning site layout which total 1.10 ha. This equates to approximately 52% of the total development area within the redline boundary.
- An additional allowance of 20% has been added to the private areas to cater for potential Urban Creep and Soft Landscaping contributions into the network, totalling 0.114 ha.
- 0.529 ha of the impermeable area (including urban creep) within the redline boundary will drain towards the Parcel 15 Network. 0.311 ha of the

impermeable area from the sports facilities land will drain into the land south of Parcel 15 network.

As such, the total catchment area for design purposes is calculated to be 0.996 ha.

- A detailed hydraulic model has been created for both networks and the results for this model are contained in Appendix C.
- Due to the shallow depths of the surface water sewers in the southern section of the Land South of parcel 15, it will be necessary to raise ground levels to facilitate connection to the sewers and provide sufficient cover to pipework.
- The equivalent green fields runoff for the land south of Parcel 15 the QBar rate was 2.04 l/s. The impermeable area drained is 0.996 ha and therefore the pro-rated flow rate for the drainage system is 2.03 l/s.
- The basin which predominantly serves the land south of parcel 15 will discharge at a controlled rate of 2.0 l/s. An attenuation basin will provide the storage to prevent flooding of properties for storm events up to and including the 1 in 100 year plus 40% allowance for Climate Change.
- The attenuation basin will provide 745m³ to prevent flooding of properties for storm events up to and including the 1 in 100 year plus 40% allowance for Climate Change.

- 2.1.8 Water quality is assessed within the Outline Drainage Assessment. Although the land south of Parcel 15 was not part of the Outline Drainage Assessment, it still follows the principles of the report and keeps to the general principles. In addition to outline work, the drainage design demonstrates that all run-off is routed through at least one attenuation basin, the pollution risk indices are appropriately mitigated in-line with the CIRIA The SuDS Manual 2015. Refer to Table 6 in the Outline Surface Water Drainage Assessment (C85672-R003A in Appendix A).
- 2.1.9 The surface water drainage strategy can be viewed on drawing M44541-JNP-92-XX-SK-D-7020. The drawing and associated calculations are contained in Appendix C.
- 2.1.10 Catchment areas for the development can be viewed on drawing M44541-JNP-92-XX-DR-C-7023, contained in Appendix D.
- 2.1.11 Exceedance flood flow routes have been assessed throughout the proposed development to demonstrate the overland flow routes in the event of exceedance flooding and/or blockage of drainage components. The drawing demonstrates that flows are primarily contained within the highway network, with any overflows routed towards existing ditches and away from dwellings. The flow routes can be viewed on drawings M44541-JNP-92-XX-SK-D-7024, contained in Appendix E.
- 2.1.12 The proposed strategy follows the principles approved under the outline consent and is therefore considered to be acceptable in terms of flood risk.

2.2 Foul Water

- 2.2.1 Foul drainage for the entire development is to discharge to the Parcel 15 foul water drainage network. The foul flows will then discharge into the foul water pumping station located at the south of Parcel 15.
- 2.2.2 The previous Sitewide Foul Drainage Strategy (ref: C85672-SK-220 Development Foul Drainage Phasing Plan, available to view in Appendix B) sets out the principles of the mains foul water drainage.
- 2.2.3 The Parcel 15 network has been sized to accommodate the foul flows from the sports pavilion and drainage calculations have been completed to confirm that the Parcel 15 sewer network has capacity for the additional 48 units proposed. The implications to the foul water pumping station will be assessed as part of the detailed designs.
- 2.2.4 Thames Water (TW) are the sewerage authority for the area and previously confirmed that upgrade works would be required to serve the total development. It is understood that these upgrades have since been carried out and that the sewers now have capacity to serve the full development proposals as approved under the outline planning consent. As this parcel was not included as part of the original outline consent, it is expected that Thames Water will need to be re-approached to confirm that the additional dwellings do not require further upgrade works due to capacity.

2.3 Maintenance

- 2.3.1 It is intended that all main sewers located within areas of public highway will be adopted under a Section 104 agreement with ICOSA Water.
- 2.3.2 Where a sewer only serves the public highway (accepting no flows from properties or other areas), it will be offered for adoption under a Section 38 agreement with WBC.
- 2.3.3 All drainage serving more than one dwelling, but not within an area of public highway will be maintained by a private management company appointed by the developer.
- 2.3.4 All drainage serving a single dwelling only will be the responsibility of the property owner (as per previous Parcels 1-3, 10 and 14-15).
- 2.3.5 The proposed attention basin will be the responsibility of either a private management company or alternatively the basin will be proposed to adopted by ICOSA Water through the S104 agreement.

2.4 Who are ICOSA Water

- 2.4.1 ICOSA Water is a statutory water and wastewater undertaker, licensed by the Secretary of State to operate and own infrastructure anywhere in England and Wales. Their license is exactly the same as Thames Water except they have a defined geography granted in 1989, whilst ICOSA compete around the country for infrastructure and customers where they try to grow their business in competition with other businesses and traditional incumbents such as Thames Water. You can see ICOSA's license on the Ofwat website and they are very present on their pages on the NAV market and publications.
- 2.4.2 ICOSA are regulated like any other water and sewerage business and have the same statutory powers and obligations as other water and sewerage undertakers. They are regulated by Ofwat, CC Water, the Drinking Water Inspectorate, the Environment Agency and DEFRA.
- 2.4.3 NAV License: In March 2020, ICOSA signed a NAV 'New Appointment and Variation' Licence which means that within the site of Hogwood Farm, ICOSA are the appointed sewerage undertaker rather than Thames Water. This is a recognised arrangement under the Water Industry Act 1991 – which ICOSA have applied for this under Section 7(4)(b) of this Act.
- 2.4.4 Visit the ICOSA Website to see Finchwood Park Listed:
- Home page: <https://www.icosawater.co.uk/>
- Finchwood Park: <https://www.icosawater.co.uk/finchwood-park-finchampstead-live-nav/>

3 SUMMARY

- 3.1.1 Overall, this Drainage Statement demonstrates that the proposals for land south of Parcel 15 meet the design standards and principles set out within local and national guidance and the approved outline foul and surface water drainage strategies.