TO:	Horsham District Council – Planning Dept
LOCATION:	Woodhouse Farm New Road Billingshurst West Sussex RH14 9DS
DESCRIPTION:	Approval of details reserved by condition 3 to approved application DC/23/1188
REFERENCE:	DISC/24/0140
RECOMMENDATION:	More Information

SUMMARY OF COMMENTS & RECOMMENDATION:

The following supporting information has been reviewed:

- Responses to LLFA Comments Regarding Condition 3 (CGS Civils Ltd, 26 July 2024, Reference C3077)
- Foul and Surface Water Drainage Report (CGS Civils Ltd, 26 July 2024, Rev PL1)
- Proposed Drainage Strategy (CGS Civils Ltd, 26 July 2024, C3077, PL1, 101 Rev PL1)
- Contributing Area Plan (CGS Civils Ltd, 26 July 2024, C3077, PL1, 201 Rev PL1)
- Exceedance Flow Routes (CGS Civils Ltd, 26 July 2024, C3077, PL1, 301 Rev PL1)
- Surface Water Calculations Raingarden (26 July 2024, reference C3077)
- Surface Water Calculations Raingarden Sections (CGS Civils Ltd, 26 July 2024, reference C3077)

Condition 3:

Pre-Commencement Condition: No development shall commence until a drainage strategy detailing the proposed means of foul and surface water disposal has been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved scheme.

Reason: As this matter is fundamental to ensure that the development is properly drained and to comply with Policy 38 of the Horsham District Planning Framework (2015).

This consultation response follows our previous response dated 04 July 2024. Thank you for the additional information. While this provides a step towards a suitable response, we require more information before Condition 3 can be discharged.

MAIN COMMENTS:

Thank you for providing an updated surface water drainage strategy, consisting of an updated design of a proposed raingarden (attenuation device) with a now revised design of infiltration to ground and an orifice flow control which is restricted to 1 l/s to the existing watercourse. The applicant confirms an overflow is proposed as the half drain down times cannot be achieved due to the low infiltration rate. The upstream hard paved areas are designed as infiltrating permeable pavement with an underdrain pipe network falling to the downstream raingarden.

The greenfield runoff rates have been calculated for the total site area of 0.2042ha. The results appended to the Foul and Surface Water Drainage Report show that for the 1 in 1 year event this is 0.94 l/s (4.60 l/s/ha). The greenfield runoff rates should be calculated pro rata to the contributing impermeable area, proposed in the contributing area plan as

0.0621ha. Hence, for the 1 in 1 year event the required greenfield runoff rate would be 0.29 l/s for the proposed in the contributing area, not 1l/s as proposed.

It is not clear what contributing area has been used to derive the proposed attenuation storage, however this should be checked at the same time as above.

The Horsham District Council SuDS Suitability map, provided in the SFRA Evidence Base, shows the site has a Low SuDS infiltration potential, and the desk based study records Wealden Clay bedrock at the site. Please provide evidence to BRE 365 or revise the drainage strategy outfall strategy to discharge to the watercourse only. The Foul and Surface Water Drainage Report states an onsite infiltration test was conducted, with an infiltration rate of 1.96×10^{-6}. The applicant states the half drain down time cannot be achieved within 24 hours. The applicant should provide evidence of testing to BRE 365 at the location and depth of the proposed raingarden. This should include a marked-up plan showing the infiltration test location. If infiltration testing is not shown to be to BRE 365, then infiltration cannot be proven feasible. If so, the surface water drainage strategy should discharge to the watercourse only.

The Table in Section 5.2 Proposed Hydraulic Calculation Specifications of the Drainage Statement and the Causeway model storage structure outputs in the Appendices shows that an infiltration rate has been applied to both the base and sides of the raingarden and the permeable paving storage structure. Paragraph 5.2.2 of the West Sussex LLFA Policy for the Management of Surface Water, states that the infiltration rate for infiltration basins or permeable pavements (and rain gardens) the percolation rate is applied to the base only (not the sides). Consideration should be given to silt ingress by appropriate geotextile filter material wrapping for buried devices, to reduce ingress of fines and build up at the base. The design infiltration rate of the base should be reduced to account for siltation, to a maximum rate of $1x10^{-5}$ m/s on the base as per Section 25.4 of the CIRIA guidance (The SuDS Manual C753).

As per best practice, infiltration devices should be 5m from structures and boundaries, in addition to avoiding Root Protection Zones.

All control orifices 100mm or less must be guarded to reduce the risk of blockages. All flow control of any diameter must be provided with an overflow weir.

The Proposed Exceedance Flow Route drawing shows the exceedance flow route is directed around the proposed building however no measure such as device exceedance overflow weirs, or landscaping i.e. land raising, bunding or shallow v-drains is proposed to direct these exceedance flows. The flows are shown to flow to greenspace, and to the proposed attenuation feature but the contributing catchment plan does not account for external flows into the attenuation device or the permeable paving. Contributing flows from the external catchment, including from higher ground such as the access and wider surroundings within and beyond the redline boundary, should also be included in exceedance considerations. Measures must be provided to mitigate any exceedance flows shown to flow to the upstream side (front elevation) of the proposed dwelling.

As the proposed dwelling is located downstream of the driveway area permeable paving, the factor of safety for the permeable paving should be increased. The factor of safety should align with Table 25.2 of the CIRIA SuDS Manual and be justified. If infiltration to BRE 365 if proven, the calculations should be updated to incorporate this.

The Surface Water Calculations Raingarden document shows negative and low velocities for each modelled storm event. There are no areas shown draining to pipes 1.000 and 1.002. Each pipe should be designed to achieve minimum self-cleansing velocities.

The Drainage Report and the Drainage Strategy drawing labels the 'Headwall Inlet' on the raingarden outlet, and 'Headwall Outlet' on the raingarden inlet. The 'Proposed ACO SuDS Swale Inlet' label is located on the raingarden outlet. Please update the Drainage Strategy drawing.

Ordinary Watercourse Consent must be sought from the LLFA (West Sussex County Council) prior to starting any works (temporary or permanent) that affect the flow of water in the watercourse. This includes the proposed outfall to the watercourse. This is in accordance with Section 4.3 of the West Sussex LLFA Policy for the Management of Surface Water.

The Drainage Report and the Drainage Strategy drawing indicate that the foul water flow loading is based on the British Flows and Loads guidance for six persons. However, the Reply to LLFA comments document states that the peak discharge has been calculated based on four persons. Please provide the correct figure and update the relevant document.

The proposed foul water is to be discharged to an on-site treatment plant prior to the existing watercourse. The applicant has stated that this will not require Environment Agency approval as it will meet the binding rules. It must be noted that the applicant has described the drainage ditch as follows, "*At the time of site visit the existing ditch was running dry*". Hence, Rule 19 of the binding rules is not met. Confirmation of an approved environmental permit for foul discharges, or evidence showing the treatment plant is exempt is required. Please review the guidance linked: https://www.gov.uk/guidance/general-binding-rules-small-sewage-discharge-to-a-surface-water

ANY RECOMMENDED CONDITIONS: N/A	
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DEPARTMENT:	Horsham District Council - Drainage
DATE:	13/08/2024