TO:	Horsham District Council – Planning Dept
LOCATION:	The Spinney Pulborough, RH20 2AP
DESCRIPTION:	Demolition of 11No. existing garages and erection of 2No. two storey dwellings with associated external works and landscaping.
REFERENCE:	DC/24/0068
RECOMMENDATION:	Advice / More Information

SUMMARY OF COMMENTS & RECOMMENDATION:

The following supporting documents have been reviewed:

- Technical Site Plan (mh architects, 5th August 2022, Rev P01, ref: 21-083)
- Surface Water Drainage Design Summary and Calculations (Bright Plan Civils, 12th December 2022, ref: D2068.24)
- Proposed Site Plan (mh architects, 5th August 2022, Rev P03, ref: 21-083)
- Horsham District Council Application for Planning Permission (21st December 2023, ref: PP-11958468)
- Design and Access Statement (mh Architects, Rev: Draft)
- Drainage Strategy (Bright Plan Civils, February 2023, Rev A, ref: D2068.24 PL301)
- Surface Water Drainage Model (Bright Plan Civils, February 2023, ref: D2068.24 Flow Model A.pdf)

We have reviewed the evidence provided by the applicant in support of the planning application, and the **following recommendations to the LPA** are made.

Recommendations

1) The applicant has not provided sufficient evidence to confirm or discount the potential for infiltration. The soil and geology identified in the desk study are potentially suitable material for infiltration. The Horsham District Council SFRA-Appendix 1 Figure 4 SuDS Suitability indicates suitability across the district council area for the provision of infiltration SuDS features. This product notes the site to lie in an area of moderate infiltration suitability.

Several constraints have been highlighted by the applicant, including proximity to buildings and the presence of a water supply trunk main. The location of the water supply trunk main has not been identified on a plan.

The applicant must highlight all constraints on a plan to determine available space for infiltration devices.

If spatial constraints allow for the provision of infiltration; the applicant must provide evidence of infiltration testing in accordance with BRE365, at the location and depth of proposed devices.

If evidence is presented to discount infiltration, discharge to sewer would be the next appropriate method of discharge.

2) The applicant has estimated the greenfield runoff rate (Qbar) as 0.3 l/s, this corresponds to 6.08 l/s/ha applied to the existing site impermeable area. The Qbar rate is consistent with the rate calculated using the IH124 methodology.

The applicant has estimated the pre-development brownfield runoff rate using a 50mm rainfall event applied across the existing site impermeable area. The resulting brownfield rate is calculated as 6.6 l/s, which the applicant states is equivalent to a 1 in 2 year return period scenario.

A site specific estimate for existing brownfield runoff rate should be provided: including the *1 in 1, 1 in 30 and 1 in 100 year storm events* storm events.

3) The applicant has modelled the proposed Surface Water Drainage network using flow+. It is demonstrated that the proposed geocellular storage tank is adequately sized to manage the critical storm events for all events up to and including the 1 in 100 year event including climate change.

The development will result in a reduction in impermeable area, and storage provided by geocellular storage tanks will reduce runoff from the site. The proposed discharge rate of 2.0 l/s represents a 70% betterment from the existing estimated brownfield runoff rate.

West Sussex LLFA Policy for the Management of Surface Water (2018) comments;

'*Redevelopment on brownfield land has the potential to rectify or reduce flood risk. In all cases, including on brownfield sites, runoff should where possible be restricted to the greenfield 1 in 1 year runoff rate during all events up to and including the 1 in 100 year rainfall event with climate change. An alternative approach would be for discharge rates to be limited to a range of greenfield rates, based on the 1 in 1, 1 in 30 and 1 in 100 year storm events. However, the use of this method to restrict discharge rates requires the inclusion of on-line long-term storage, sized to take account of the increased post development volumes, discharging at no greater than 2l/s/ha. While discharging at no greater than 2 l/s/ha is acceptable, it is still the LLFA's preference that the former approach is used wherever possible. If it is deemed that this is not achievable, evidence must be provided and developers should still seek to achieve no increase in runoff from greenfield sites and a 50% betterment of existing run off rates on brownfield sites (provided this does not result in a runoff rate less than greenfield).*'

The proposed drainage strategy provides a greater than 50% betterment on existing runoff rate. However, the application has not deemed that the site can discharge at a greenfield 1 in 1 year discharge rate.

4) The applicant has correctly provided an assessment of pollution from the proposed land uses in accordance with the Simple Index Approach. However, the pollutant removal quoted by the applicant for the proposed proprietary device (Permachannel/Permatreat product), is not evidenced. The applicant should obtain evidence from the product supplier that the treatment performance of the proprietary system is adequate to meet the stated requirements.

5) The applicant has incorrectly set urban creep to 0%. An allowance of 10% for urban creep should be used, as per Section 5.6.4 of the West Sussex LLFA Policy for the Management of Surface Water.

6) A Maintenance and Management Plan, including access requirements, maintenance frequency and responsibility, and proprietary device manuals, for all drainage features and SuDS devices should be provided. A section showing the configuration of the proprietary treatment device and geocellular system should be provided.

7) Consideration of how exceedance flows for events greater than the 1 in 100 year plus climate change event will be managed and mitigated on site without significantly increasing flood risks (both on site and outside the development) should be provided. The applicant should confirm whether a 150mm finished floor level freeboard above surrounding ground levels is proposed to mitigate against the residual risk from surface water exceedance events. Proposed site levels and resulting surface water exceedance routes should be provided for the proposal.

8) The detailed foul drainage strategy layout has been designed to account for the proposed peak foul flows generated by two dwellings. The invert levels of the foul water network have not been provided, but the application does not provide clear evidence if foul water pipes are too close to buildings or within the line of influence of the foundations. The applicant must demonstrate that both the surface water and foul water pipes will be set 1.2m clear from the foundation external face, or otherwise not within the line of influence of the building foundations, in accordance with Sewerage Sector Guidance: Design and Construction Guidance.

Written evidence of a Section 106 foul connection agreement with Southern Water should be provided by the applicant, as should a model of the foul strategy with associated drainage design (e.g. gradient, pipe diameter, etc).

MAIN COMMENTS:

As above

ANY RECOMMENDED CONDITIONS:

Once these issues have been addressed, appropriately worded conditions can be placed on the permission for the consideration of the Surface Water Drainage Strategy during detailed design. These conditions will include provision of the above details, prior to construction, based on our assessment of the current drainage proposals.

NAME:	A Harman D Burgess P Mennell
DEPARTMENT:	Horsham District Council - Drainage
DATE:	12/02/2024