TO:	Horsham District Council – Planning Dept
LOCATION:	Hyders Farmhouse, Bonnetts Lane, Ifield, Crawley, west Sussex, RH11 0NY
DESCRIPTION:	Full New application for application no. DC-24-0392-CND: "building over the existing sand school along with rainwater harvesting capture tanks". The sand schools were previously granted approval under application no. DC/16/2133.
REFERENCE:	DC-24-0392-CND
RECOMMENDATION:	Not satisfied - more information required

SUMMARY OF COMMENTS & RECOMMENDATION:

The following supporting documents have been reviewed:

- Flood Risk Assessment - September 2016
- Latest Plan drawing no.24-24649 – February 2024
- Location and Block Plan 56 – September 2016
- Location Plan PP-12866128v1 – March 2024
- Planning, Design and Access statement – March 2024
- Delegated Applications Assessment Sheet – January 2017

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

The applicant has indicated that surface water runoff produced by the proposed roofs, will discharge to the rainwater harvesting (RWH) system. This system has been designed solely as a RWH and therefore further evidence is required, if the applicant wished to use this device for stormwater attenuation, which must show the system is designed for regular (daily demand) water supply purposes, and additional capacity to provide the necessary stormwater attenuation. For RWH design refer to BS EN 16941-1 2018 On-site non-potable water systems, and Chapter 11 of The SuDS Manual to demonstrate additional stormwater attenuation compliance.

Alternatively, the applicant should provide the following information, and until such time as this information is received, Horsham District Council cannot determine the suitability of the proposed scheme with regards to surface water and foul drainage

- The applicant has indicated that the preferred method of discharge at this site is via the ordinary watercourse drainage ditch to the northwest of the proposed site. However, the 2016 application for the previous sand school is provided, so they are outdated and not applicable to 2024 application. Based on available information, potential for the new proposals to discharge via infiltration should be explored. This is in line with the drainage hierarchy (building Regulations Part H). The applicant should also provide site drainage patterns – an assessment of the current and proposed drainage patterns entering, within, and leaving the site, including an understanding of how surface water would flow across the site in normal and rainfall event conditions (see to GOV.UK Long term flood risk mapping).

- The applicant should provide a measurement of pre and post development permeable and impermeable areas with supporting catchment plans and calculations.
- The applicant should provide the following flow and volume rates with supporting evidence (see the UKSUDS.com tool): existing runoff rates during a 100% Annual Exceedance Probability (AEP), 3.33% AEP and 1% AEP storm event. The applicant should also provide post development discharge rates during a 100% AEP, 3.33% AEP, 1% AEP, 1% AEP + Climate Change storm events and Greenfield runoff rate (Q_{BAR}). Water storage capacity volumes of the proposed drainage features to attenuate the 1% AEP + Climate Change storm event should be provided.
- Geology identified by BGS, and infiltration suitability provided in the SFRA, for the site and surrounding area, indicate that potential infiltration at this site is 'low'. Justification must be provided if discharge to ground is not proposed. Justification could be in the form of an infiltration assessment, supported by a desk-based assessment of soil types, geology and suitability for infiltration potential (See the Horsham District Council Local Plan evidence base*), together with an alternative option for surface water disposal. However, if discharge via infiltration is proposed, as Per Sections 5.2.2 to 5.2.3 of the West Sussex LLFA Policy for the Management of Surface Water*:*

- *Infiltration structures (to ground) include soakaways, basins, swales and permeable paving. Infiltration rates for soakage structures are to be based on percolation tests undertaken in the winter period at the location and depth of the proposed structures. The percolation tests must be carried out in accordance with BRE DG 365, CIRIA R156 or a similar approved method, and cater for the 1 in 10 year design storm event between the invert of the lowest entry pipe into the infiltration structure and the base. Tests should be undertaken during winter / early spring when ground water levels are typically highest; if groundwater levels are influenced by the tide then tests should be undertaken over a highwater spring tide. For the purpose of design, the percolation rate must be applied to the sides of the infiltration structure only and the rate for the base must be zero, unless otherwise agreed with the LPA engineer. This does not apply to infiltration basins or permeable pavements, whereby the percolation rate is applied to the base only. The infiltration structure should drain 50% of its total volume in 24 hours or less for the 1 in 10 year event and for the 1 in 100 year event (unless otherwise agreed with the LPA engineer) in order to provide spare capacity for subsequent storms. Flood risk assessments: climate change allowances can be viewed via the following link:* https://www.gov.uk/guidance/floodriskassessmentsclimatechangeallowances
- *Any infiltration drainage design must include adequate winter groundwater monitoring data in areas of known groundwater issues, to determine the highest winter groundwater table. Residential developments in excess of five properties will require ground water monitoring to be carried out between October and March inclusive. The extent of monitoring required for smaller developments will be subject to agreement with the District or Borough Council Engineers. Adequate freeboard must be provided between the base of the soakaway structure and the highest recorded groundwater level identified in that location; ideally this should be 1m where possible.*
- The LLFA Policy notes the minimum design event for traditional soakaways is the 10 year event + climate change. As per best practice infiltration devices should be 5m from structures and boundaries, in addition to avoiding Root Protection Zones.

- The applicant should provide a Fully designed surface water management strategy including: the aim to achieve and better greenfield runoff rates and adherence to the drainage hierarchy, rationale for SuDS selected in line with the West Sussex LLFA Policy for the Management of Surface Water (2018), Horsham District Planning Framework (2015) – Policy 38 and Industry best practice, such as The SuDS Manual (C753).
- The applicant should provide evidence of measures to prevent pollution of the receiving groundwater and/or surface water.
- The applicant should provide a detailed surface water drainage strategy, including supporting calculations, detailing outfall location, runoff rate/s as per the LLFA's SuDS Policy 3, with allowance for urban creep, required and proposed volumes of attenuation storage, freeboard and sizing of all drainage features. A detailed drainage layout plan should reference all assets showing characteristics such as; pipe sizes and materials, gradients, and manhole type, depth, size, SuDS dimensions, materials and depths.
- The applicant should provide evidence of a third-party agreement to discharge surface water, if discharge to ground is not viable.
- The applicant should provide a Maintenance and Management Plan including access requirements, maintenance frequency and responsibility, and proprietary device manuals, for all drainage features and SuDS devices.
- The applicant should provide drawings showing conveyance routes for flows exceeding the 1 in 100 year plus climate change event and consideration of how exceedance flows for events greater than the 1 in 100 year + 40% Climate Change event will be managed and mitigated on site without significantly increasing flood risk (both on site and outside the development).
- The applicant should provide a foul water drainage strategy, with supporting flow calculations in line with Sewerage Sector Guidance and/or Building Regulations Part H, including a detailed drainage layout, showing pipe sizes, materials, gradients and outfall location. Confirmation of permission to connect to a private/public sewer, if applicable, should also be provided.

MAIN COMMENTS:

As above

ANY RECOMMENDED CONDITIONS:

N/A

NAME:	A Yardley S Odigie P Mennell
DEPARTMENT:	Horsham District Council - Drainage
DATE:	20/06/2024