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Our Ref: NC/2505500/L001

21st April 2026

By E-mail: FloodRiskManagement@westsussex.gov.uk

Dear Natalie

DC/24/0021 – Thakeham Mushrooms Site, Storrington Road, Thakeham, Pulborough, West Sussex, RH20 3DY – Response to LLFA Comments

Further to the West Sussex County Council (WSCC) consultee response dated 20th March 2026, we acknowledge the current objection as Lead Local Flood Authority (LLFA), with reasoning and comments provided there-in. Based upon this, we have made amendments to the Flood Risk Assessment & Drainage Strategy as included, with reference and response to the points previously raised provided below.

LLFA comments of 20th March 2026, with Ardent response

Comment 1 - The Downstream Connection – The Applicant has stated they are to survey the culvert and onward watercourse that forms the current and proposed discharge mechanism. We would ask that the survey works are completed at this stage. As this is a full application we need to be satisfied that the downstream connectivity is viable and in good condition, as any unforeseen change to the proposal may affect site layout. Please also provide an additional or revised drainage plan showing this. It is also noted that there is a section of 525 dia pipe retained upstream of the system outfall, terminating in a manhole (please confirm this is correct). Can the Applicant clarify whether this is being retained and its intended use post development.

Response – LLFA request to survey the point of connection and downstream watercourse to prove condition and suitability for continued use noted. As appropriate, it is trusted the need for these works could be placed as a pre-commencement condition.

It would be confirmed that the immediate point of connection is to a 525mm dia. pipe that drained the former land use, which following re-development of the site would be anticipated to become otherwise redundant. On this basis, the existing 525mm dia. pipe could be abandoned upstream of the proposed point of connection

Comment 2 - Exceedance Events – The current calculations illustrate a number of system exceedance events, particularly in the 1% AEP event (plus allowance for climate change) with the CV value at 0.95. In order for us to review further we require:

- The CV value calculations at 0.95 to be substituted for a CV value of 1, as per HR Wallingford guidance.
- An exceedance flow routing plan showing finished floor levels, arrows showing the direction of surface water flows during a 1 in 100 climate change event (design event), the depth and extent of any flooding that would occur within this design event (based on the above hydraulic calculations). Please also include node numbers in order for this to be cross referenced to the calculations.

Response - The suitability of applying a Cv value of 1.0 would be challenged, as interception and losses from fully impermeable catchments would still be anticipated to occur. With this it would be proposed to design for 'default' Cv values, with a sensitivity check at 1.0. These updates are reflected within paragraph 6.11 of the reporting, along with Appendix H calculations.

With respect of exceedance flow routing, this is now shown upon drawing 2505500-ACE-XX-DR-C-105, contained within Appendix G, and summarised within Table 6-2 for the Cv 1.0 scenario.

Comment 3 - The half drain time for the intermediate basin exceeds 24 hours by some margin. Action will need to be taken to ensure this is not the case and thus ensure capacity is not compromised for concurrent storm events.

Response – The extended half drain time is due to the lower outflow rate, set to ensure the full storage volume of the basin is utilised. However, as the basin has capacity to contain a 1-year storm 24-hours on from a 100-year event (see below), the extended half drain time would be considered acceptable.

Total basin capacity to lowest top of bank level = $1,765\text{m}^3$

100-year+40% storage requirement at Cv of 1.0 = $1,571\text{m}^3$

Volume discharged over 24-hours at 1.8l/s = $1.8 \times 3600 \times 24 \times 10^{-3} = 155\text{m}^3$

Volume available after 24-hours = $(1,765 - 1,571) + 155 = 349\text{m}^3$

1-year storage requirement at Cv of 1.0 = 301m^3

We trust the above and enclosed allows WSCC as the LLFA to remove the current objection, with recommendation of conditions as appropriate. However, should this not be the case, we would welcome a meeting to address any remaining concerns in a timely manner.

In the interim, should you wish to discuss any points further, please do not hesitate to contact the undersigned in the first instance.

Yours sincerely,

Neil Chalmers

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Associate

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