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Contact: Flood Risk Management Team
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Date 12 December 2024

Dear Ben

RE: 24/02432/DOC – Details reserved by Condition 21 (Drainage scheme) of outline planning permission reference 18/01502/OP granted on 25 July 2024 – Land Between Royston Road and Cambridge Road, Barkway

Thank you for your consultation on the above site, received on 12 November 2024. We have reviewed the application as submitted and wish to make the following comments.

We advise that there **isn't sufficient technical information** to support the application in relation to the wording of Condition 21. For reference, this is worded as follows:

'Before each phase of development approved by this planning permission no development of that phase shall take place until the final design of the drainage scheme has been submitted to, and approved in writing by, the local planning authority. The surface water drainage system will be based on the submitted Flood Risk Assessment carried out by Ardent Consulting reference 163461-02a dated June 2018. The scheme shall also include;

- 1. Full detailed engineering drawings including cross and long sections, location, size, volume, depth and any inlet and outlet features. This should be supported by a clearly labelled drainage layout plan showing pipe networks. The plan should show any pipe 'node numbers' that have been referred to in network calculations and it should also show invert and cover levels of manholes.*
- 2. Detailed surface water calculations and modelling for all rainfall events up to and including the 1 in 100 year + climate change event for the whole site.*
- 3. All calculations/modelling and drain down times for all storage features.*
- 4. Confirmation of which SuDS features will be infiltrating and specific infiltration rates for each feature.*

5. *Demonstrate an appropriate SuDS management and treatment train and inclusion of above ground features reducing the requirement for any underground storage.*
6. *Silt traps for protection for any residual tanked elements.*
7. *Details regarding any areas of informal flooding (events those exceeding 1 in 30-year rainfall event), this should be shown on a plan with estimated extents and depths.*
8. *Details of final exceedance routes, including those for an event which exceeds to 1:100 + climate change rainfall event.*

Reason: *To prevent flooding by ensuring the satisfactory storage of/disposal of surface water from the site’.*

We have concerns that the submitted information does not meet with NPPF, PPG or the LLFA Flood Risk Management Strategy policies and the proposal will either increase the risk of flooding elsewhere or to the proposed development. We provide the following technical review for your consideration.

The main issues include;

- Maintenance and management plan cannot be located.
- Discharge point has no discharge rate associated with it.
- Exceedance flow routes are going over buildings.
- No information provided for informal flooding.

The LLFA technical review includes;

1. Whilst we note that all cover and invert levels, volumes of attenuation and top of features have been provided, the deep bore soakaways are located very close to each other. We cannot confirm that these are 10m away from each other. Additionally, the discharge point has no discharge rate attached to it. Upon return, these should be clearly evidenced. **Further information is required.**
2. Full network calculations have been provided. **No further information is required.**
3. All half drain down times have been provided and are within the 24-hour period. **No further information is required.**
4. Whilst the calculations have infiltration features listed, we cannot locate the specified infiltration rate for each feature. Additionally, the deep bore soakaways do not seem to have a rate attached to them. We would like to remind the applicant that the worst infiltration rate should be used, and the location of this infiltration should be within the area of the soakaway. **Further information is required.**
5. We cannot locate a maintenance and management plan under this planning reference. Upon return, this should outline the responsibility of maintenance, frequency of maintenance and the required action of maintenance. **Further information is required,**
6. Information has been submitted for silt traps as catch pits. **No further information is required.**
7. We cannot locate details regarding any areas of informal flooding (exceeding the 1 in 30-year rainfall event). Upon return, this should be confirmed if it would occurred and if so, shown on a drawing with estimated extents and depths. **Further information is required.**

8. The exceedance flow routes (shown on the existing flow plan – dated 06 August 2024, REF 4929-002-5080-P02) currently are running over buildings. Exceedance flow routes should minimise the risk of flooding to vulnerable infrastructure on site where possible. **Further information is required.**

Informative:

We would recommend that the calculations are re-ran using the correct parameters (FEH2013/FEH22 CV value of 1 and correct climate change allowance on the 3.33% and 1% AEP event). This is to check on the long-term sustainability and residual risk.

Yours sincerely

Ellie

Ellie Miller
SuDS and Watercourses Support Officer
Growth and Environment

Annex

The following documents have been reviewed, which have been submitted to support the application;

- Drawing: Proposed Drainage Details Sheet 1, prepared by Robert West, 6 August 2024, REF 4929-002-5051-T01
- Drawing: Proposed Drainage Details Sheet 2, prepared by Robert West, 6 August 2024, REF 4929-002-5052-T01
- Drawing: Proposed Drainage Details Sheet 3, prepared by Robert West, 14 August 2024, REF 4929-002-5053-T01
- Drawing: Proposed Drainage Details Sheet 4, prepared by Robert West, 14 August 2024, REF 4929-002-5053-T01
- Drawing: Trial Pit Locations, prepared by RPS, 05 March 2024, REF BMK23256-RPS-SI-00-DR-S-0050
- Calculations: Surface Water Calculations for Network 1, prepared by Robert West, 14 August 2024
- Calculations: Surface Water Calculations for Network 2, prepared by Robert West, 06 August 2024
- Drawing: Proposed Drainage Sheet 1, prepared by Robert West, 30 September 2024, REF 4929-002-5001-T02
- Drawing: Proposed Drainage Sheet 2, prepared by Robert West, 30 September 2024, REF 4929-002-5002-T02
- Drawing: Proposed Drainage Sheet 3, prepared by Robert West, 30 September 2024, REF 4929-002-5003-T02
- Drawing: Proposed Drainage Sheet 4, prepared by Robert West, 30 September 2024, REF 4929-002-5004-T02
- Drawing: Proposed Drainage Sheet 5, prepared by Robert West, 30 September 2024, REF 4929-002-5005-T02
- Drawing: Proposed Drainage Sheet 6, prepared by Robert West, 30 September 2024, REF 4929-002-5006-T02
- Drawing: Impermeable Areas Plan, prepared by Robert West, 14 August 2024, REF 4929-002-5090-P03
- Drawing: Proposed Exceedance Flow Plan, prepared by Robert West, 14 August 2024, REF 4929-002-5081-P03
- Drawing: Existing Flow Plan, prepared by Robert West, 6 August 2024, REF 4929-002-5080-P02