PUBLIC

Flood Risk Management
Derbyshire County Council
County Hall
Matlock, Derbyshire
DE4 3AG

Mr Mark Penford
Development Management
Amber Valley Borough Council
Town Hall
Ripley
Derbyshire
DE5 3BT

Telephone 01629 538571
Ask for William Treves
Email William.treves@derbyshire.gov.uk
Our ref AVBC/2021/21
Your ref AVA/2020/0994
Date 29 March 2021

Dear Mark Penford

Proposal: **Residential development consisting of up to 17 dwellings including details of access to be considered**

Location: **Land behind 129 Peasehill Ripley Derbyshire**

Application reference **AVA/2020/0994**

No objections in principle		Conditions Recommended	X	Objection Recommended	

Derbyshire County Council as the Lead Local Flood Authority (LLFA) has reviewed the information submitted for this application, which was received on 9th February 2021. The LLFA has no objection subject to the conditions below.

To ensure adherence to National Planning Policy Framework, DEFRAs Non-statutory technical standards for sustainable drainage systems and local guidance, these recommended conditions should not be altered without consulting the County Council Flood Risk Management team.

1. "No development shall take place until a detailed design and associated management and maintenance plan of the surface water drainage for the site, in accordance with the principles outlined within:
   a. FLOOD RISK ASSESSMENT & OUTLINE SUSTAINABLE DRAINAGE STRATEGY by Roy Lobley Consulting dated February 2021 Reference RLC/0660/FRA+OSDS01 Revision 2 and including any subsequent amendments or updates to those documents as approved by the Flood Risk Management Team
   b. And DEFRA's Non-statutory technical standards for sustainable drainage systems (March 2015),

have been submitted to and approved in writing by the Local Planning Authority."

Reason: To ensure that the proposed development does not increase flood risk and that the principles of sustainable drainage are incorporated into this proposal, and sufficient detail of the construction, operation and maintenance/management of the sustainable drainage systems are provided to the Local Planning Authority, in advance of full planning consent being granted.

2. "No development shall take place until a detailed assessment has been provided to and approved in writing by the Local Planning Authority, to demonstrate that the proposed destination for surface water accords with the drainage hierarchy as set out in paragraph 80 reference ID: 7-080-20150323 of the planning practice guidance."

Reason: To ensure that surface water from the development is directed towards the most appropriate waterbody in terms of flood risk and practicality by utilising the highest possible priority destination on the hierarchy of drainage options. The assessment should demonstrate with appropriate evidence that surface water runoff is discharged as high up as reasonably practicable in the following hierarchy:

I. into the ground (infiltration);
II. to a surface water body;
III. to a surface water sewer, highway drain, or another drainage system;
IV. to a combined sewer.

3. "Prior to commencement of the development, the applicant shall submit for approval to the LPA details indicating how additional surface water run-off from the site will be avoided during the construction phase. The applicant may be required to provide collection, balancing and/or settlement systems for these flows. The approved system shall be operating to the satisfaction of the LPA, before the commencement of any works, which would lead to increased surface water run-off from site during the construction phase."

Reason: To ensure surface water is managed appropriately during the construction phase of the development, so as not to increase the flood risk to adjacent land/properties or occupied properties within the development.

4. "The attenuation tank should not be brought into use until such a time as it is fully designed and constructed in line with CIRIA SuDS manual C753 and specifications, and an associated management and maintenance plan, in line with CIRIA SuDS Manual C753 is submitted to and approved in writing by the Local Planning Authority"

Reason: To ensure that the proposed attenuation pond does not increase flood risk, that the principles of sustainable drainage are incorporated into the proposal, the system is operational prior to first use and that maintenance and management of the sustainable drainage systems is secured for the future.

5. "Prior to the first occupation of the development, a verification report carried out by a qualified drainage engineer must be submitted to and approved by the Local Planning Authority. This must demonstrate that the drainage system has been constructed as per the agreed scheme (or detail any minor variations), provide the details of any management

company and state the national grid reference of any key drainage elements (surface water attenuation devices/areas, flow restriction devices and outfalls).

Reason: To ensure that the drainage system is constructed to the national Non-statutory technical standards for sustainable drainage and CIRIA standards C753.

SITE SPECIFIC COMMENTS

A blockage test is to be undertaken at detail design, this should inform the final layout submitted at reserved matters stage;

A 6 metre strip will be left clear for future access to the watercourse;

A full CCTV survey will be undertaken at detail design stage and any remedial works required to the culvert will be undertaken.

Advisory/Informative Notes (It should be noted that the information detailed below (where applicable), will be required as an absolute minimum in order to discharge any of the drainage conditions set by the LPA):

A. The County Council does not adopt any SuDS schemes at present (although may consider ones which are served by highway drainage only). As such, it should be confirmed prior to commencement of works who will be responsible for SuDS maintenance/management once the development is completed.

B. Any works in or nearby an ordinary watercourse may require consent under the Land Drainage Act (1991) from the County Council. For further advice, or to make an application please contact Flood.Team@derbyshire.gov.uk.

C. No part of the proposed development shall be constructed within 5-8m of an ordinary watercourse and a minimum 3 m for a culverted watercourse (increases with size of culvert). It should be noted that DCC have an anti-culverting policy.

D. The applicant should be mindful to obtain all the relevant information pertaining to proposed discharge in land that is not within their control, which is fundamental to allow the drainage of the proposed development site.

E. The applicant should demonstrate, to the satisfaction of the Local Planning Authority, the appropriate level of treatment stages from the resultant surface water discharge, in line with Table 4.3 of the CIRIA SuDS Manual C753.

F. The County Council would prefer the applicant to utilise existing landform to manage surface water in mini/sub-catchments. The applicant is advised to contact the County Council's Flood Risk Management team should any guidance on the drainage strategy for the proposed development be required.

G. The applicant should provide a flood evacuation plan which outlines:

- The flood warning procedure
- A safe point of extraction
- How users can safely evacuate the site upon receipt of a flood warning
- The areas of responsibility for those participating in the plan
- The procedures for implementing the plan
- How users will be made aware of flood risk
- How users will be made aware of flood resilience
- Who will be responsible for the update of the flood evacuation plan

H. Flood resilience should be duly considered in the design of the new building(s) or renovation. Guidance may be found in BRE Digest 532 Parts 1 and 2, 2012 and BRE Good Building Guide 84.

I. Surface water drainage plans should include the following:

- Rainwater pipes, gullies and drainage channels including cover levels.
- Inspection chambers, manholes and silt traps including cover and invert levels.
- Pipe sizes, pipe materials, gradients, flow directions and pipe numbers.
- Soakaways, including size and material.
- Typical inspection chamber / soakaway / silt trap and SW attenuation details.
- Site ground levels and finished floor levels.

J. On Site Surface Water Management;

- The site is required to accommodate rainfall volumes up to the 1% probability annual rainfall event (plus climate change) whilst ensuring no flooding to buildings or adjacent land.

- The applicant will need to provide details and calculations including any below ground storage, overflow paths (flood routes), surface detention and infiltration areas, etc, to demonstrate how the 100 year + 40% Climate Change rainfall volumes will be controlled and accommodated. In addition, an appropriate allowance should be made for urban creep throughout the lifetime of the development as per 'BS 8582:2013 Code of Practice for Surface Water Management for Developed Sites' (to be agreed with the LLFA).

- Production of a plan showing above ground flood pathways (where relevant) for events in excess of the 1% probability annual rainfall event, to ensure exceedance routes can be safely managed.

- A plan detailing the impermeable area attributed to each drainage asset (pipes, swales, etc).

Peak Flow Control

- For greenfield developments, the peak run-off rate from the development to any highway drain, sewer or surface water body for the 1 in 1 year rainfall event and the 1 in 100 year rainfall event, should never exceed the peak greenfield run-off rate for the same event.

Volume Control

- For greenfield developments, the runoff volume from the development to any highway drain, sewer or surface water body in the 6 hour 1% probability annual rainfall event must not exceed the greenfield runoff volume for the same event.

  Note:- If the greenfield run-off for a site is calculated at less than 2 l/s, then a minimum of 2 l/s could be used (subject to approval from the LLFA).

- Details of how the on-site surface water drainage systems shall be maintained and managed after completion and for the lifetime of the development to ensure the features remain functional.

- Where cellular storage is proposed and is within areas where it may be susceptible to damage by excavation by other utility contractors, warning signage should be provided to inform of its presence. Cellular storage and infiltration systems should not be positioned within the highway.

- Guidance on flood pathways can be found in BS EN 752.

- The Greenfield runoff rate which is to be used for assessing the requirements for limiting discharge flow rates and attenuation storage for a site should be calculated for the whole development area (paved and pervious surfaces - houses, gardens, roads, and other open space) that is within the area served by the drainage network, whatever the size of the site and type of drainage system. Significant green areas such as recreation parks, general public open space, etc., which are not served by the drainage system and do not play a part in the runoff management for the site, and which can be assumed to have a runoff response which is similar to that prior to the development taking place, may be excluded from the greenfield analysis.

K. If infiltration systems are to be used for surface water disposal, the following information must be provided:
   - Ground percolation tests to BRE 365.

   - Ground water levels records. Minimum 1m clearance from maximum seasonal groundwater level to base of infiltration compound. This should include assessment of relevant groundwater borehole records, maps and on-site monitoring in wells.

   - Soil / rock descriptions in accordance with BS EN ISO 14688-1:2002 or BS EN ISO 14689-1:2003.

   - Volume design calculations to 1% probability annual rainfall event + 40% climate change standard. An appropriate factor of safety should be applied to the design in accordance with CIRIA C753 – Table 25.2.

   - Location plans indicating position (soakaways serving more than one property must be located in an accessible position for maintenance). Soakaways should not be used within 5m of buildings or the highway or any other structure.

   - Drawing details including sizes and material.

   - Details of a sedimentation chamber (silt trap) upstream of the inlet should be included.

Soakaway detailed design guidance is given in CIRIA Report 753, CIRIA Report 156 and BRE Digest 365.

L. All Micro Drainage calculations and results must be submitted in .MDX format, to the LPA. (Other methods of drainage calculations are acceptable.)

M. The applicant should submit a comprehensive management plan detailing how surface water shall be managed on site during the construction phase of the development ensuring there is no increase in flood risk off site or to occupied buildings within the development.

Yours sincerely

[redacted]

William Treves
Technician, Flood Risk Management Team

Checked by: Farhad Poursadr
Date:
30/03/2021