NORTH YORKSHIRE COUNTY COUNCIL

BUSINESS and ENVIRONMENTAL SERVICES

LEAD LOCAL FLOOD AUTHORITY

CONSIDERATIONS and RECOMMENDATION

Application No:	**NYM/2017/0412/FL**		
Proposed Development:	Application for erection of livestock building		
Location:	St Athanasius Monastery, Langdale Bridge to Black Beck, Langdale End		
Applicant:	Coptic Orthodox Monastery		
District/Borough:	North York Moors National Park Authority		
FRM Engineer:	Paul Tweed	**LPA Case Officer:**	Hilary Saunders

NYMNPA
- 2 OCT 2018

Note to the Planning Officer:

Thank you for consulting the Lead Local Flood Authority (LLFA) on the planning application referenced above.

The following documents are noted:

- Flood Risk & Drainage Assessment, Alan Wood & Partners, Reference MCB/JL/41200, Revision FRDA-001, Dated 20th September 2018.

In assessing the submitted proposals and reaching its recommendation the Authority would like to make the following comments:

1. Runoff Destinations

Surface water runoff not collected for use must be discharged to one or more of the following in the order of priority shown:

a) Discharge into the ground (infiltration).
b) Discharge to a surface water body.
c) Discharge to a surface water sewer, highway drain or other drain.
d) Discharge to combined sewer.

As per section 4.1.2.2 of the submitted Flood Risk & Drainage Assessment, percolation

Date:	2 October 2018	**Approved by:**	Emily Mellalieu Flood Risk Management Team Leader
FAO:	Hilary Saunders		
Issued by:	Paul Tweed		

testing has been undertaken to determine infiltration rates. A copy of the test has been attached as Appendix C of the report. Infiltration rates suitable for the discharge of surface water were found, and it is proposed to discharge surface water via soakaway.

It should be noted that the development site is situated in a valley bottom, and as per section 2.5 of the submitted Flood Risk & Drainage Assessment is underlain by superficial alluvium deposits on top of bedrock. As such it is likely that there will be times when the ground is saturated and groundwater levels are high. Soakaways will be less effective under these conditions and may not work at all.

However, this is not a residential development and any heightened level of risk would be confined to the applicant and their operations and would not adversely effect other parties.

2. Flood Risk

The drainage system must be designed so that, unless an area is designed to hold and/or convey water, flooding does not occur on any part of the site for a 1 in 30 year rainfall event. Calculations must include an allowance for urban creep where required and climate change.

The drainage system must be designed so that, unless an area is designed to hold and/or convey water, flooding does not occur during a 1 in 100 year rainfall event in any part of a building (including a basement) or in any utility plant susceptible to water (e.g. pumping station or electricity substation) within the development. Calculations must include an allowance for urban creep where required and climate change.

The development site is within flood zone 3 and at risk from fluvial flooding. The submitted Flood Risk & Drainage Assessment, section 6, proposes a number of mitigation measures which would address some of these risks and it would be prudent of the applicant to adhere to these recommendations.

3. Peak Flow Control

Discharge to ground via infiltration is proposed, therefore peak flow control is not a significant consideration.

4. Volume Control

Volume control is likewise not a consideration as surface water will be directed into the ground.

5. Pollution Control

SuDS design must ensure that the quality of any receiving water body is not adversely affected and preferably enhanced.

Section 4.1.7 of the submitted Flood Risk & Drainage Assessment recommends several measures to protect the environment. In particular water from paved areas where contamination is possible should discharge through sand or a filter mechanism. Roof water can be discharged directly to soakaway. Areas which could be contaminated from washing down facilities should discharge to a sealed tank during cleaning operations.

6. Designing for Exceedance

Site design must be such that when SuDS features fail or are exceeded, exceedance flows do not cause flooding of properties on or off site. This is achieved by designing suitable ground exceedance or flood pathways. Runoff must be completely contained within the drainage system (including areas designed to hold or convey water) for all events up to a 1 in 30 year event.

The design of the site must ensure that flows resulting from rainfall in excess of a 1 in 100 year rainfall event are managed in exceedance routes that avoid risk to people and property both on and off site.

Because of the site's proximity to the watercourse, it is expected that exceedance flows will be directed to the watercourse. This should be confirmed at the detailed design stage.

7. Climate Change and Urban Creep

An allowance for a 20% increase in peak rainfall due to the anticipated effect of climate change has been proposed for the lifetime of the development. No allowance for urban creep has been proposed or is necessary for this development.

8. Maintenance

Paragraph 4.3.8 of the submitted Flood Risk and Drainage Assessment identifies the landowners, SP & LM Mason, as being responsible for the maintenance requirements of the proposed drainage system which are set out in table 3 of appendix F. These are not the same people named as the applicants for this development proposal and confirmation of their agreement to assume maintenance responsibilities should be submitted with any detailed drainage proposal.

Recommendation to the Local Planning Authority:
The submitted documents demonstrate a reasonable approach to the management of surface water on the site. I recommend that the following conditions are attached to any permissions granted:

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LLFA C1 - Standard Detailed Drainage Design Condition (FRA amendment)

Development shall not commence until a scheme detailing foul and surface water drainage has been submitted to and approved in writing by the Local Planning Authority. The scheme shall be in accordance with the submitted "Alan Wood & Partners - Flood Risk & Drainage Assessment" and shall demonstrate that the surface water drainage system(s) are designed in accordance with the standards detailed in North Yorkshire County Council SuDS Design Guidance (or any subsequent update or replacement for that document). The scheme shall detail phasing of the development and phasing of drainage provision, where appropriate. Principles of sustainable urban drainage shall be employed wherever possible. The works shall be implemented in accordance with the approved phasing. No part or phase of the development shall be brought into use until the drainage works approved for that part or phase has been completed. Note that further restrictions on surface water management may be imposed by Yorkshire Water and the Local Planning Authority.

Reason: To ensure the provision of adequate and sustainable means of drainage in the interests of amenity and flood risk.