

INTERNAL MEMORANDUM

FROM: Flood Risk Management Team

Date: 19th May 2014

Development Management Case Officer: Lee Bowering

Application:

Screening opinion as to whether an Environmental Impact Assessment is required to be submitted with a planning application for a proposal to erect up to 200no. dwellings; new accesses for vehicles, pedestrians and cyclists; creation of general amenity areas and open space; sustainable drainage measures, including storage ponds and land for a primary school.

Reference Number: 15/P/0872/EIA1

Location:

Land off Arnolds Way, Yatton

Formal comments regarding the above. (If not indicated above please clarify which section your comments are from)

Overall concerns relating to drainage in Yatton

Since the original application in Arnolds Way, Yatton we have had several pre-planning enquiries and both Flood Risk Management NSC and the Internal Drainage Board are now concerned about how surface water (peaks and runoff volumes) from these new developments will be conveyed from the area without causing standing water on the new sites or increasing the risk to existing properties on the fringes of the village.

The pressure on the network around Yatton can particularly be seen around the Wemberham Rhyne System as here several of the commercial developments have installed water harvesting techniques and pumps to allow them to reduce flood risk on site. Development on the other side of Yatton goes into the Stowey Rhyne, here the rhyne network upstream feeds the Little River and the Ham Bow structure and Black Ditch sluice require work to provide the capacity to drain the area. Upstream at Claverham there is also development interest which will add to flows and volumes.

It is the combination of several developments which will influence the drainage of the area. Therefore we would like to see developers working together to consider how they can influence the volume and flow leaving their sites so the drainage system can accommodate the growth in the area

- The sharing of the costs between developers to improve the network would help to facilitate these developments
- The upgrading of the structures Crossmans Hatch, Ham Bow and Black Ditch would allow better conveyance
- Additional maintenance of the rhyne network to improve the standard

Site specific requirements

Flood Risk Management does not have a specific requirement for an EIA to be carried out at this site. However the following advice should be considered when developing an overall drainage strategy for the development.

The drainage strategy for the site will need to demonstrate that the following guidance has been followed, the NPPF (paragraph:103) plus the PPG and local guidance which is set out in SPD Creating Sustainable Buildings and Places in North Somerset.

The following hierarchy of drainage options should be followed:

1. into ground (infiltration)
2. to a surface water body
3. to a surface water sewer

The master plan must take into account the constraints on this site from a drainage point of view and provide a SuDS scheme which takes these into account.

The site is within the Internal Drainage Board Area and as such the applicant will need to agree a drainage strategy both with ourselves and IDB. Who are promoting a scheme to improve the drainage in the area and are actively looking for contributions towards the scheme.

Our recommendation is that on-site storage is used. Our preference would be for above ground swales, which lead to the ponds, pipe work could then be kept to a minimum. If underground storage or conveyance is used at this location or rainwater harvesting then a clear maintenance programme will need to be established and we will need the as built drawings together with details of ownership and how maintenance will be maintained over the lifetime of the development.

The drainage system must be designed so that, unless an area is designated to flood as part of the design, flooding does not occur on any part of the site for a 1 in 30 year rainfall event and that at 1 in 100 year rainfall event no flooding occurs to 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. Any flows resulting from rainfall in excess of a 1 in 100 year rainfall event should be managed in conveyance routes that minimise the risks to people and property.

The runoff volume from the developed site to any, sewer or surface water body in the 1 in 100 year, 6 hour rainfall event must not exceed the greenfield runoff volume. Or as agreed with the IDB.

The peak runoff rate from the development to any off site area, must not exceed the greenfield runoff rate from the site at equivalent greenfield event, or as agreed with the IDB

The site layout must respect the natural drainage pattern across the site, and the rhyne network must remain open and culverted for access only, this is in line with our LFRMS and our planning policies. As the site lies within the Internal Drainage Board area they must be consulted at an early stage as their Byelaws require a 9 metre corridor free of all development (including roads, street furniture and vegetation to maintain and access for maintenance). We would strongly recommend that the site needs to be discussed with the IDB before the site layout is agreed.

The site also lies in an area where Wessex Water have concerns over flooding and pipe capacity therefore early consultation with them is advised.

To discharge any drainage condition attached to the application our minimum requirements would be:

- A detailed layout of the drainage scheme demonstrating a drainage system, which includes storage, with the flooding routes or any alternative sustainable drainage system which has been agreed with the IDB in the light of the drainage problems in this location.
- The calculations to allow us to check the drainage runoff and storage
- Design of swales and ponds to CIRIA 697, BS8582
- Infiltration tests to BRE Digest 365
- Details of the connections to the watercourse so we can assess if any Land Drainage Consents are required
- Plan showing the flooded area at a 1 in 100 year event before and after development
- A maintenance schedule showing the ownership and future maintenance regimes of all SuDS elements and any rhyme network for the lifetime of the development.