Reserved Matters Applications: Flood Risk and Drainage Checklist

This document provides a list of the information that, in general, must be submitted to support reserved matters applications in relation to flood risk and drainage. Note that this checklist must be read alongside the checklist for outline planning applications that should have been completed previously.

Application details

SITE:	Land to the north of the Roman Road and west of the A49, Holmer West, Hereford
DESCRIPTION:	Application for approval of reserved matters (Specialist Housing Scheme) following outline approval. (150478). Proposed erection of 80 residential units and communal facilities retirement accommodation over a mixture of 3 and 2 storey blocks with associated parking and landscape
APPLICATION NO:	201183
GRID REFERENCE:	350125, 242300
APPLICANT:	Mr Michael Baggett
DATE OF THIS RESPONSE:	13/05/2020

The outline planning application for the entire site proposed up to 460 new dwellings (Ref 150478) including affordable housing, public open space, a Park and Ride facility with associated landscaping access, drainage and other associated works. This was approved with the following conditions relating to flood risk and drainage:

Condition 7 - Finished floor levels shall be set no lower than the levels indicated in Figure 3.1 of the Flood Risk Assessment and Table 4.1 of the Hydraulic Modelling Technical Note unless otherwise agreed in writing by the Local Planning Authority.

Reason: To protect the proposed dwellings from flood risk for the lifetime of the development including culvert blockages so as to comply with Policy SD3 of the Herefordshire Local Plan – Core Strategy and the National Planning Policy Framework.

Condition 22 - No development shall commence until a drainage scheme for the site has been submitted to and approved in writing by the local planning authority. The scheme shall provide for the disposal of foul, surface and land water, and include an assessment of the potential to dispose of surface and land water by sustainable means. Thereafter the scheme shall be implemented in accordance with the approved details prior to the first occupation of an agreed individual phase of the development and no further foul water, surface water and land drainage shall be allowed to connect directly or indirectly with the public sewerage system.

Reason: To prevent hydraulic overloading of the public sewerage system, to protect the health and safety of existing residents and ensure no pollution of or detriment to the environment.

This response is in regard to flood risk and drainage aspects, with information obtained from the following sources:

- Application for approval of reserved matters
- Flood Risk Assessment (Rev P02 dated 22/03/2019)
- Location Plan (Drawing ref B6494_PL_001, dated Nov 2019)
- Proposed Site Plan (Drawing ref B6494_PL_003, dated 19.08.2019)

We highlight that any planning application should be submitted in accordance with the Herefordshire SuDS Handbook and the Herefordshire Council Planning Applications Flood Risk & Drainage Checklist available on the Council's website:
https://www.herefordshire.gov.uk/info/200142/planning_services/66/about_planning_services/11

Development description

The Applicant proposes the construction of c.80 dwellings with communal facilities, associated car parking and landscaping. The site occupies an area of approx. 0.7ha and is currently greenfield land. This phase of the development is referred to as the Specialist Housing Scheme. The development is situated within the boundary of an existing outline planning application (ref 150478) for the much larger Homer West development of c.460 houses with a site area of approximately 60ha.

Condition 7

The site is located in Flood Zone 1 and property has been set back from the Ayles Brook that flows parallel to the southern site boundary. The site is served by safe access and egress. Blockage assessment has also been undertaken and demonstrates no increased risk to the site.

The FRA has provided an updated assessment of flood risk in line with amended climate change considerations since the submission of the outline planning application. This states that the 25% Central climate change allowance is considered applicable for this development, however we highlight that in accordance with the Council's SFRA the design should be based on the 35% Higher Central allowance and tested against the 70% Upper End allowance.

The FRA states that finished floor levels will be set a minimum of 600mm above the 100 year + 25%CC event. We agree with this in principle but stress that: a) FFLs should be 600mm above the 100 year + 35%CC event, and above the 100 year + 70%CC and 1000 year events (without freeboard). This suggests a minimum FFL of c.65.72mAOD.

Review of the site plan indicates a minimum FFL of 66.90mAOD. This is therefore considered appropriate and no further assessment is required.

The updated FRA is sufficient to discharge Condition 7.

Condition 22

Surface Water Management Strategy

The development will discharge into the Homer West scheme-wide attenuation basin located to the south-west of this site. The design of this basin and the proposed discharge rate is being approved as part of the Phase 2 development application which is separate to this application for the Specialist Housing Scheme. The design of the basin has not yet been agreed and, as such, this may impact the detailed design of the Specialist Housing Scheme drainage strategy.

The sizing of the attenuation basin that serves the wider Homer West development would have made assumptions regarding the proposed impermeable area and discharge from the Specialist Housing Scheme phase of the development. The FRA submitted to support this phase of the development states that "if the proposed development exceeds its allocated discharge rate to the basin, then appropriate supplementary attenuated storage should be provided on plot". This detailed assessment will be required to inform the discharge of Condition 22.

Detailed drainage plans or detailed calculations for the proposed development have not been provided. We therefore recommend that the following information is submitted for review and approval prior to the discharge of Condition 22:

- Calculations to demonstrate that the discharge from this phase of the development does not exceed the rate and volume of discharge allowed for in the design of the central attenuation basin, noting that this may differ from the proposals put forward as part of the outline planning application.
- Provision of a detailed drainage strategy that demonstrates that opportunities for the use of SUDS features have been maximised, including use of at-source infiltration techniques and on-ground

conveyance and storage features where possible to reduce site runoff. Whilst we appreciate that in larger storms the control of discharge from the central attenuation basin may limit the flow rate to below greenfield values, we consider that there is still an opportunity to reduce greenfield rates on a plot scale and provide further betterment downstream. This would ideally include features that slow down the rate and volume of runoff and promote infiltration/evapotranspiration during smaller rainfall events.

- Calculations to demonstrate that the proposed surface water drainage system has been designed to prevent the surcharging of any below ground drainage network elements in all events up to an including the 1 in 2 annual probability storm event and no flooding of the site in all events up to an including the 1 in 30 annual probability storm event. FEH 2013 rainfall data should be used in line with current best practice. As a minimum, drainage systems should be designed for a 20% increase in rainfall intensity and tested for a 40% increase in rainfall intensity.
- Demonstrate that appropriate pollution control measures are in place, most notably to provide treatment of runoff from vehicular areas.
- Description and drawings demonstrating the management of surface water runoff during events that may exceed the capacity of the drainage system up to the 1 in 100 annual probability event with climate change (including assessment of where water is likely to emerge) and noting that surface water should be retained within the site boundary and not pose risk to the development. This includes events that may temporarily overwhelm the capacity of inlet systems such as gullies.
- Information regarding the proposed adoption and maintenance of the drainage system, and an operational and maintenance manual for all proposed drainage features that are to be adopted and maintained by a third party management company.

Foul Water Management Strategy

In accordance with Policy SD4 of the Core Strategy, the Applicant should provide a foul water drainage strategy showing how it will be managed. Foul water drainage must be separated from the surface water drainage. The Applicant should provide evidence that contaminated water will not get into the surface water drainage system, nearby watercourse and ponds.

No information regarding the foul water drainage strategy has been provided. We therefore recommend that the following information is submitted for review and approval prior to the discharge of Condition 22:

- Detailed drawing of the proposed drainage strategy illustrating the location of key features, pipe runs and connection to the site-wide drainage system / Welsh Water public sewerage network.
- Confirmation that the foul water discharge rate has been agreed with Welsh Water.
- If pumping is required, calculations or other evidence that the on-site foul water storage volume required for the proposed development has been provided either in accordance with Sewers for Adoption requirements or Part H of the Building Regulations.
- Confirmation of the proposed adoption and maintenance of the foul water drainage system.

Overall Comment

The applicant has provided sufficient information to discharge Condition 7.

The applicant has not provided sufficient information to discharge Condition 22. A detailed surface water and foul water drainage design is required. The current design of the balancing pond is not acceptable in it's current form and amendments to the flow controls are required to replicate greenfield runoff rates.