# 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: DESCRIPTION:	Land to the north of the Roman Road and west of the A49, Holmer West, Hereford Application for approval of reserved matters following outline approval. (150478) Site for 77 dwellings.
APPLICATION NO:	201445
GRID REFERENCE:	350182, 242541
APPLICANT:	Mr Nicholas Rawlings
DATE OF THIS	09/06/2020
RESPONSE:	

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 application is for the discharge of reserved matters for Phase 3 of the wider Homer West development, comprising 77 dwellings with associated open space and highway infrastructure. This response is specifically in regard to flood risk and drainage aspects, with information obtained from the following sources:

- Application for approval of reserved matters
- Proposed Slab Levels and Drainage Plan (Drg ref: WE086-ENG-300)

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







### Condition 7

The site is located in Flood Zone 1 and within the north of the outline planning application boundary. The Ayles Brook flows adjacent to the east of the site and the eastern site boundary is located immediately adjacent to the mapped fluvial floodplain. Table 4.1 of the FRA submitted to support the outline planning application recommended a minimum FFL of 73.33mAOD at model node R and 74.97mAOD at model node S that are located adjacent to the eastern site boundary. The Proposed Slab Levels and Drainage Plan indicates a slab level in this area of 73.90mAOD close to node R and 74.40mAOD close to node S.

The level proposed close to node R is acceptable. However, the levels proposed close to node S should be raised to a minimum level of 74.97mAOD. We recommend this is applied to plots 313 to 317 inclusive.

#### Condition 22

#### Surface Water Management Strategy

The development will discharge into the Homer West scheme-wide piped drainage system located in the proposed access road, which is turn discharges to the 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 Phase 3. The design of the basin has not yet been agreed and, as such, this may impact the detailed design of the Phase 3 drainage strategy.

The sizing of the drainage network and attenuation basin that serves the wider Homer West development would have made assumptions regarding the proposed impermeable area and discharge from Phase 3 of the development. Whilst we agree with the strategy in principle, the applicant is required to demonstrate how the impermeable areas drainage to the drainage network and attenuation basin have changed since the approval of the outline application and if this requires amendments to the piped drainage network or attenuation basin to serve the Phase 3 development without increasing flood risk elsewhere.

Detailed drainage plans or detailed calculations for Phase 3 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 and upstream piped network, 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

The development will discharge into the Homer West scheme-wide foul drainage system located in the proposed access road. We assume that the foul drainage network will be approved and adopted by Welsh Water, however we recommend that this is confirmed by the application prior to the discharge of Condition 22.

## **Overall Comment**

The applicant has not provided sufficient information to discharge Condition 7. We recommend that finished floor levels are revised as per our comments above.

The applicant has not provided sufficient information to discharge Condition 22. A detailed surface water drainage design is required. Furthermore we highlight that the current design of the balancing pond is not acceptable in its current form and amendments to the flow controls are required to replicate greenfield runoff rates. The applicant is also required to confirm that the proposed foul water drainage will be approved and adopted by Welsh Water.

