SITE:	Land situated between the B4221 and Lovers Walk, Gorsley
APPLICATION:	Outline
DESCRIPTION:	Proposed residential development for up to 36 dwellings, of which 35% will
	be affordable
APPLICATION NO:	151589
GRID REFERENCE:	OS 367881, 226022
APPLICANT:	Mr. J Hickton
DATE OF THIS	17/06/2015
REPONSE:	

Introduction

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

- Environment Agency (EA) indicative flood maps available through the EA website;
- EA groundwater maps available through the EA website;
- Ordnance Survey mapping;
- Strategic Flood Risk Assessment for Herefordshire;
- Herefordshire Unitary Development Plan March 2007.

Our knowledge of the development proposals has been obtained from the following sources:

- Application for Outline Panning Permission with Some Matters Reserved form, dated 19 May 2015;
- Design and Access Statement, dated April 2015;
- Flood Risk Assessment, dated May 2015;
- Site Location Plan, drawing no. Zeb817/001;
- Existing Site Plan, drawing no. Zeb817/003;
- Proposed Site Plan, drawing no. Zeb817/005.

Site location

Figure 1: Environment Agency Flood Map for Planning (Rivers and Sea), June 2015



Overview of the Proposal

The Applicant is proposing to erect up to 36 residential dwellings on a greenfield site.

The site area is stated to measure 1.74 hectares (ha) on the submitted Application Form. The site is located within the catchment of an ordinary watercourse flowing east approximately 150m south of the site.

Fluvial Flood Risk

Figure 1 indicates that the site is located in the low risk Flood Zone 1, where the annual probability of flooding from fluvial sources is less than 0.1% (1 in 1000). As the site area is greater than 1 ha and in accordance with the requirements of the National Planning Policy Framework (NPPF), a Flood Risk Assessment (FRA) is required in support of this application.

A FRA has been submitted by the Applicant and confirms the low risk to the site from fluvial flood risk. We concur with this assessment.

Other Considerations and Sources of Flood Risk

The submitted FRA considers the risk of flooding to the development from off-site overland flows, groundwater, reservoirs and sewers to be minimal. We concur with this assessment

Surface Water Drainage

The Applicant has provided an outline surface water drainage strategy which indicates that all surface water runoff from impermeable surfaces will be disposed of by infiltration. Dwelling roofs and private driveways will be drained to soakaways and permeable paving, with prospective adopted roads being drained by a combination of porous paving and gullies, underground drains and an infiltration pond.

The soakaways serving dwellings will be designed for the 1 in 10 year event, with all permeable paving and the infiltration pond being designed for the 1 in 100 year + 30% climate change allowance event.

We welcome the use of infiltration as the primary means of surface water disposal. We would however request that the Applicant submits details of infiltration testing prior to construction (undertaken to the requirements of BRE 365), with demonstration that local groundwater levels are at a minimum of one metre below the invert level of any proposed infiltration structure.

Should infiltration not prove to be a feasible means of managing surface water runoff, the Applicant should first investigate the discharge of runoff to a watercourse prior to considering the discharge of runoff to the public sewerage network. In accordance with Defra's Non-statutory technical standards for sustainable drainage systems (March 2015): 'For greenfield developments, the peak runoff 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 runoff rate for the same event'. We promote the use of combined attenuation and infiltration structures where possible, subject to consideration of groundwater levels.

We recommend that the Applicant considers the control of potential pollution of ground or surface waters from vehicles or other potentially contaminating sources. Evidence of adequate separation and/or treatment of polluted water should be provided to ensure no risk of pollution is introduced to groundwater or watercourses both locally and downstream of the site, especially from proposed parking and vehicular areas. SUDS treatment of surface water is considered preferential but 'Pollution Prevention Guidance: Use and design of oil separators in surface water drainage systems: PPG 3' provides guidance on the necessity and application of oil separators should one be required.

The Applicant has outlined that the site contours will be designed to ensure flow exceedance routeing through the development will prevent flooding of sensitive areas and over land flows will discharge to porous paving areas and the infiltration pond. We recommend that this information is provided prior to construction.

We request that the Applicant submits finalised adoption and maintenance arrangements for all surface water drainage systems prior to commencement of construction.

Foul Water Drainage

The Applicant has stated that all domestic sewerage from the development will be conveyed to a private on-site treatment unit discharging to a dedicated effluent soakaway. The Applicant should consult with the EA regarding the use of a package treatment plant or other on-site method of wastewater treatment and disposal. If an on-site treatment unit and soakaway is approved by the Environment Agency the Applicant should submit details of infiltration testing undertaken at the location of the proposed soakaway to the Council prior to construction. The Applicant should also submit details of the maintenance agreement entered into with a suitable management company for the maintenance of the proposed treatment unit and soakaway. Final confirmation of the foul drainage proposals and for adoption and maintenance mechanisms is to be provided prior to the commencement of construction.

Overall Comment

We have no objections in principal to the development on the grounds of flood risk and drainage. The site is located wholly within Flood Zone 1 and the submitted FRA and proposed drainage strategy has demonstrated that flood risk both to the site and downstream of the site is likely to be manageable. However, we recommend the following is provided as part of any subsequent reserved matters application:

- Finalised drainage arrangements and details with supporting calculations for surface water and foul drainage systems including further details of pollution prevention control measures and exceedance flow routes;
- Results of infiltration testing undertaken in accordance with BRE 365 and results of recorded groundwater levels;
- Details of any proposed attenuation systems, including cross section and proposed inlet/outlet structures.
- Confirmed proposals for the adoption and maintenance of surface water and foul drainage systems.

If infiltration is not found to be feasible, the surface water drainage system should be revised to incorporate an alternate means of sustainable surface water management and submitted to the Council for approval.