SITE :	Land West of Patrick Orchard, Canon Pyon, HR4 8NY
TYPE:	Planning Permission
DESCRIPTION:	Proposed construction of 27 dwellings to include 9 affordable, new access,
	sustainable drainage and landscape works
APPLICATION NO:	P141917/F
GRID REFERENCE:	OS 346182 248902
DATE OF	
THIS RESPONSE:	24 th November 2014

This is our second response in regard to flood risk and land drainage aspects. In our first response we recommended that the council objects to the application on the grounds of insufficient information relating to drainage. Whilst the proposals were acceptable in principle, further detail regarding the proposed drainage strategy should be provided to support the Application.

This response follows receipt of further information provided by the Applicant, as follows:

- Amended drawings, numbers 2533_002b (layout) and 021 (pond outfall detail);
- Cover Letter from Russell Pryce, dated 26th September 2014, to address various comments on the proposals;

A further objection letter has also been received and reviewed for this response.

Further information to support the surface water drainage strategy

The amended site layout shows a "sustainable drainage pond" in an area of open space to the east of the site. The same plan shows the pond located outside of the 100 year (climate change) flood extent. The cover letter provides further details of the proposed attenuation pond and confirms the existing site levels allow for the pond to be constructed at existing ground levels. The letter also confirms that infiltration tests have been completed and do not support the use of soakaways at the site. Details of the test results have not been provided. It is recommended they are provided to the Council to support the detailed drainage design.

Details of measures to manage exceedance flows have not been provided, however the cover letter states that "the SUDS drainage strategy will ensure that existing surface water runoff is properly managed rather than running off the field directly onto the highway". Elsewhere it is stated that levels at the site generally fall south to north (towards the brook) and that slab levels can be set a minimum of 300mm above the 100 year (climate change) flood level. In the original FRA it was stated that floor levels would be set a minimum of 300mm above surrounding ground levels. On this basis it is considered that exceedance flows can likely be safely managed in the development without increasing flood risk to existing properties.

This information is considered sufficient for planning however the Applicant should provide a detailed drainage layout and supporting calculations prior to construction, clearly demonstrating how discharge rates and volumes are managed for a range of events up to the 100 year (climate change) event so as not to increase off site discharges. The layout should also clearly show how exceedance flows will be managed through the development.

Justification of the use of the rational method to calculate greenfield runoff rates

The cover letter correctly refers to the recent science report (SCO90031) which recommends the use of FEH methods in preference to other methods (including the IH124 method). However the report and EA Flood Estimation Guidelines do not state that the Rational method is therefore preferred, which the letter implies. The EA guidelines reiterate the science report recommendation that for

greenfield runoff calculations FEH estimates for a nearby catchment should be obtained and scaled down to the site area, assuming the study site is representative of the surrounding area. A second phase of the study is expected to provide guidance on the practical implementation of this recommendation for site runoff calculations. The EA guidelines also reiterate FEH guidance against the use of the Rational method as "it gives peak flows typically twice as large as those from the FEH rainfall runoff estimates for small lowland catchments".

If the IH124 method has been discounted, we recommend that either FEH methods should be used to estimate the greenfield runoff rate at the site or various methods should be used to assess the range of greenfield runoff rate estimates and the implications considered in the drainage strategy. Our primary concern is that by adopting the Rational method the existing greenfield runoff rate at the site has been overestimated, which in turn would underestimate the storage volume required. The site layout indicates that space is available to provide additional storage if required however we recommend the Applicant considers the implications of a significant change to the greenfield runoff rate.

We are satisfied that the information presented is acceptable for planning purposes however the Applicant should provide greenfield runoff rates, calculated in accordance with current guidance, to support the detailed drainage design.

Proposals for adoption & maintenance of drainage

The cover letter states that Herefordshire will adopt the SUDS with a commuted sum for maintenance. It is unclear from the letter if this proposal has been discussed with the council to confirm they would adopt the SUDS. If not done already, it is recommended that this is confirmed with the Council's land drainage department and if necessary the Applicant should consider an alternative proposal.

Separation and / or treatment of polluted water

The cover letter states that pollution prevention measures will be installed prior to water entering the pond (details to be confirmed at a later stage in consultation with Welsh Water and the Council). The letter also states that the attenuation pond will include micro pools to catch finer sediment. The site layout plan indicates there should be sufficient space to accommodate these measures.

This information is considered sufficient for planning however the Applicant should provide a detailed drainage layout and supporting calculations prior to construction, clearly demonstrating how adequate separation and treatment is achieved.

Sequential Test & Access / Egress

The cover letter states that the sequential test is not applicable to development proposed in Flood Zone 1. The NPPF states that the SFRA is the basis for applying the test and the sequential approach should be used in areas known to be at risk from any form of flooding. Whilst the accompanying practice guidance refers to steering development towards Flood Zone 1 it also states that "within each flood zone, surface water and other sources of flooding also need to be taken into account in applying the sequential approach to the location of development".

As part of the site is located in Flood Zone 3 and there is evidence that surface water flooding may compromise access to the development we consider that the sequential test should apply to this development. However we note that the proposed development itself is to be located in Flood Zone 1, and is not at significant risk of surface water flooding. Flood risks to the main road in the village may also affect other potential development sites as well as existing development. This should be

considered in the application of the sequential test. We also note that for alternative sites to be considered they must be "reasonably available". We accept that safe access and egress is available within the development however information provided indicates that the A4110 may become impassable at times where the brook crosses and at the Nupton Road junction. As this is the main access road through the village we suggest the main factor to consider in the application of the test is whether this flooding would have the same or similar impacts on potential alternative sites. We recommend the Council's emergency planning team is consulted to confirm that the additional properties will not lead to an unacceptable strain on resources in the event of a flood preventing access to the village. They may also be able to advise on whether there would be any significant implications of development at the proposed site compared with alternative sites in the village.

Overall Comment

We have no objections in principle to this development if the Council is satisfied that the development meets the requirements of the sequential test. We also recommend that the Council confirms they would be in a position to adopt and maintain the proposed SUDS. If this is not the case, or cannot be confirmed at the present time, the Applicant should confirm what alternative arrangements can be made. If not already completed, we also recommend the emergency planning team is consulted to confirm the additional properties will not lead to an unacceptable strain on resources in the event of a flood.

If the Council is minded to grant planning permission the Applicant should provide the following information prior to construction, secured through appropriate planning conditions:

- Provision of a detailed drainage strategy, with supporting calculations, that demonstrates opportunities for the use of SUDS features have been maximised. The results of infiltration tests should be provided to support the strategy. The supporting calculations should demonstrate that discharge rates are not increased for a range of events up to the 100 year (with climate change allowance); greenfield runoff rates should be estimated in accordance with current guidance. The strategy should also clearly show how exceedance flows will be safely managed within the development without increasing flooding to 3rd parties.
- Details of proposed pollution control measures.
- Details of proposals for adoption and maintenance of the drainage system.