

Land at Hazelwood Farm, Sutton Benger  
Planning application reference: 13/04038/FUL  
Gleeson Developments Ltd

Supplemental note on drainage, dated 26<sup>th</sup> June 2013.

This note should be read in conjunction with the Flood Risk Assessment (FRA) submitted with the planning application in December 2012, and the FRA Addendum dated 29<sup>th</sup> May 2013, both prepared by R.J. Fillingham Associates on behalf of Gleeson Developments Ltd.

Drainage strategy overview:

- The flood risk to the proposed development from all sources is low
- The proposed development area is located within Flood Zone 1, which means there will be no displacement of flood water
- The implementation of Sustainable Urban Drainage (SUDs) strategy will ensure that there is no increase in flood risk to surrounding areas through the disposal of surface water run-off post development scenarios under normal circumstances
- The proposed development will reduce the existing surface water discharge rate into Seagry Brook by 50%
- Assuming the implementation of the mitigation measures, then residual flood risk to the proposed development will be at a minimum, and there will be no increase in residual flood risk to other areas
- The attenuation ponds illustrated on the proposed site layout (to the north of Hazelwood House) do not serve any drainage purpose, only ecological enhancement
- The restriction by 50% of the average surface water discharge rate from the existing site, with the balance of flows attenuated on site up to the 1 in 100 year climate change event
- The present flooding risk to adjacent properties will be reduced for the majority of less intense storms and will remain unchanged for the very few more severe floods.
- The Environment Agency and Wiltshire Council drainage engineers have no objection to this planning application subject to the use of Planning Conditions
- With the inclusion of the suggested Conditions this application has an Officers Recommendation for approval
- Planning Conditions will be used by Wiltshire Council and the Environment Agency to ensure that the drainage strategy is appropriately designed and implemented

This planning application is supported by a site specific Flood Risk Assessment (FRA). The FRA has been prepared in accordance with the NPPF Technical Guidance for residential development, classified as “more vulnerable” development. More vulnerable development uses are appropriate within Flood Zones 1, 2 and 3 subject to the application of the Exception tests.

The FRA references the Environment Agency’s hydraulic model of the Seagry Brook. This model takes account of it’s catchment, including any tributaries such as the Seagry Hill Brook, and also the receiving River Avon. This model has been considered appropriate to use in respect of the proposed development, with no further site specific modelling being requested by the Environment agency under consultation. Indeed, a conservative approach has been adopted within the FRA Addendum by assuming that the functional floodplain (usually the 1 in 20 year event) extends as far as the 1 in 100 year climate change floodplain.

The proposal has no objections from the Environment Agency and Wiltshire Council Drainage Engineers, and this application has an Officers Recommendation for Approval.

On the basis that the developable area of this application site is within Flood Zone 1, the exception test is not necessary for this application. Paragraphs 100 and 101 of the NPPF state that the risk based sequential test should be applied at all stages of the planning process to steer new development to areas with the lowest probability of flooding. The sequential approach has been applied to this application scheme at a local level with all proposed homes located within Flood Zone 1, and is therefore at the lowest probability of flooding.

The Environment Agency flood mapping demonstrates that the proposed development sites does fall within flood zones 2 and 3, but the proposed homes are all located outside of the zones identified as being subject to flood risk. As noted within the FRA the 1 in 100 year floodplain does extend onto Seagry Road to the south of the site towards the High Street, and the FRA acknowledges that Seagry Road is susceptible to highway flooding where it crosses Seagry Brook.

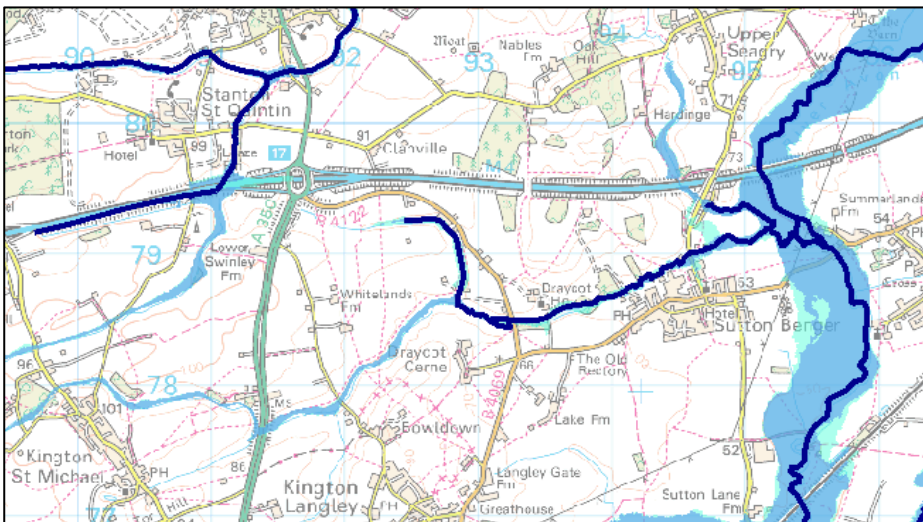
As outlined within the submitted FRA Addendum it has been agreed with the Wiltshire Council Drainage Engineer and the EA that the maximum surface water discharge from the proposed development to the Seagry Brook will be restricted to 50% of the average current discharge from the existing site. The balance of the flows will be attenuated on the site, up to the 1 in 100 year climate change event. As well as offering the 50% reduction in flows, this restriction will also provide significant betterment in more severe rainfall events. The attenuation will be accommodated within a network of oversized pipework, located outside of the flood plain extents with the discharge restricted by a vortex flow control device. The outfall to the Seagry Brook will be fitted with a flap valve to prevent backing up.

It should be noted that the attenuation ponds illustrated on the proposed site layout (to the north of Hazelwood House) are intended only as an ecological enhancement measures and do not serve any purpose in drainage attenuation.

The implementation of the sustainable surface water drainage strategy will ensure that there is no increase in flood risk to surrounding areas through the disposal of surface water run-off after development completion under normal circumstances. Due to the provision of on-site attenuation there will be a reduction in flood risk during more extreme rainfall events.

The Environment Agency flood data (shown below) shows the areas liable to flooding and also the alignment of significant water courses. Using this mapping it is possible to see that the flows travel from west to east along Seagry Brook, a natural channel which flows into the River Avon. To the north of Sutton Benger is the Seagry Hill Brook which is identified as a Main River and provides an outfall from Brookside (adjacent to the southern side of the M4 motorway) towards the River Avon. From the mapping provided by the Environment Agency there is no indications to suggest that run-off from M4 motorway discharges into Seagry Brook, but instead discharges into the Seagry Hill Brook to the north east of Sutton Benger. With no evidence to suggest that the run-off from the M4

will have any direct impact on the site, this has not been considered specifically within the FRA. In any event, the EA hydraulic model will take account of the run-off from the M4, whatever the outfalls.



Environment Agency flood mapping <http://maps.environment-agency.gov.uk/wiyby/wiybyController#x=394542&y=177452&lq=1.&scale=8>



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The Planning Conditions recommended by Wiltshire Council and the Environment Agency are:

**Condition 11**

No development shall commence on site until a scheme for the discharge of surface water from the site, incorporating sustainable drainage details, has been submitted to and approved in writing by the Local Planning Authority. The scheme shall also include details of how the scheme shall be maintained and managed after completion. The development shall not be first occupied until surface water drainage has been constructed in accordance with the approved scheme.

REASON: To ensure that the development can be adequately drained.

**Condition 12**

No development shall commence on site until details of the works for the disposal of sewerage including the point of connection to the existing public sewer have been submitted to and approved in writing by the Local Planning Authority. No dwelling shall be first occupied until the approved sewerage details have been fully implemented in accordance with the approved plans.

REASON: To ensure that the proposal is provided with a satisfactory means of drainage and does not increase the risk of flooding or pose a risk to public health or the environment.

**Condition 13**

The development hereby permitted shall not be first occupied until the approved sewage disposal works proposed have been completed in accordance with the submitted and approved details.

REASON: To ensure that the development is provided with a satisfactory means of drainage.

**Condition 14**

No development shall commence on site until an investigation of the history and current condition of the site to determine the likelihood of the existence of contamination arising from previous uses has been carried out and all of the following steps have been complied with to the satisfaction of the Local Planning Authority:

Step (i) A written report has been submitted to and approved by the Local Planning Authority which shall include details of the previous uses of the site for at least the last 100 years and a description of the current condition of the site with regard to any activities that may have caused contamination. The report shall confirm whether or not it is likely that contamination may be present on the site.

Step (ii) If the above report indicates that contamination may be present on or under the site, or if evidence of contamination is found, a more detailed site investigation and risk assessment shall be carried out in accordance with DEFRA and Environment Agency's "Model Procedures for the Management of Land Contamination CLR11" and other authoritative guidance and a report detailing the site investigation and risk assessment shall be submitted to and approved in writing by the Local Planning Authority.

Step (iii) If the report submitted pursuant to step (i) or (ii) indicates that remedial works are required, full details have been submitted to the Local Planning Authority and approved in writing and thereafter implemented prior to the commencement of the development or in accordance with a timetable that has been agreed in writing by the Local Planning Authority as part of the approved remediation scheme. On completion of any required remedial works the applicant shall provide written confirmation to the Local Planning Authority that the works have been completed in accordance with the agreed remediation strategy.

REASON: To ensure that land contamination can be dealt with adequately prior to the use of the site hereby approved by the Local Planning Authority.

**Condition 15**

Notwithstanding the approved drawings, no works shall commence until details of the following have been submitted to and approved in writing by the Local Planning Authority:

- (i) Full details of the estate roads, footways, footpaths, verges, junctions, street lighting, sewers, drains, retaining walls / walls, service routes, surface water outfall, visibility splays, accesses, carriageway gradients, driveway gradients, car parking and street furniture, including timetable for provision of such works unless an alternative timetable is agreed in the approved details;
- (ii) Submission of a Landscape and Ecological Management Plan, to include details of pre and post-construction measures together with monitoring details; and
- (iii) Full details and samples of all external materials. The works shall be carried out in accordance with the approved details.

REASON: In the interests of the character, appearance, amenity and highway safety of the area.

**Condition 17**

Finished floor levels shall be set no lower than 55.305 metres above Ordnance Datum.

REASON: To reduce the risk of flooding to the proposed development and future occupants.

Conclusion

The SFRA has been reviewed by the statutory authorities and there are no technical reasons why this application should be considered further. The statutory consultees, including the Environment Agency and County Drainage Engineer have determined that this scheme would provide betterment to the existing drainage position for existing residents and the implementation of this scheme can be adequately approved through the discharging of conditions.