



10th December 2014

Nicholas Head
 Planning Officer
 South Somerset District Council
 Council Offices
 Brympton Way
 Yeovil
 Somerset
 BA20 2HT

Our Ref: RMA/LC1241 – Curry Rivel FRA Addendum
 Your Ref: 14/03154/FUL

Dear Mr Head,

RE: LAND NORTH OF STANCHESTER WAY, CURRY RIVEL, SOMERSET – ADDITIONAL FLOOD RISK AND DRAINAGE INFORMATION

This additional flood risk and drainage information is submitted in response to queries raised by the Area North Committee of South Somerset District Council on application 14/03154/FUL 'Land North Of Stanchester Way, Curry Rivel, Somerset'.

In particular, four points have been raised regarding the proposed development as follows:

"At its meeting of 27 November 2011, the Area North Committee of the Council deferred the consideration of this application for additional information on:

- *The capacity of the attenuation ponds and other attenuation measures proposed for the site. Confirmation is sought that all water flows affecting this land have been taken into account in the assessment of the required amount of attenuation to ensure that surface water runoff is not increased by the proposal. This should include water entering the site from adjoining land (e.g. from Dyers Road).*
- *The capacity of existing watercourses to accommodate outflows from the attenuation pond proposed for the site.*
- *The history of flooding events on the site. At the meeting, local residents produced photographic evidence of amounts of surface water affecting both streets and houses during recent heavy rainfall.*
- *Any evidence or documentation of localised problems having been recorded in relation to the above."*

This letter is set out to provide a response to each of these points and review the information available from public representations received for the planning application. The key considerations for the proposed development are surface water run-off and drainage and the following sub-sections provide additional information on these.

It is noted from the Officer Report on the planning application that a number of public representations were received in response to the application; comments on fluvial and surface water flood risk are summarised as follows:

- *"The slope of the site and scale of development will exacerbate surface water runoff issues and localised flooding; and*
- *Flooding of rivers will result from the development."*

It is noted that many of the public representations refer to previous examples of flooding within Curry Rivel. Whilst written anecdotal evidence can be informative, it is considered appropriate that only the photographic evidence provided via public representations should be reviewed here. Therefore, in considering a response to the Planning Committee queries, the following public representations have been considered.

- Jason Youé, 28th July 2014;
- Carol Youé, 30th July 2014;
- Stanchester Way Action Group, 31st July 2014; and
- Wendy and Richard Collins, 17th August 2014.

Furthermore, additional images and an indicative surface water drainage plan (refer to Appendix A) were provided by a Ward Member which are also considered.

Surface Water Runoff and Flood Risk

Images have been provided showing:

- surface water flooding affecting a property at Dyers Road and the public highway;
- surface water flooding affecting a property at the A378 and the public highway;
- increased flows within the watercourse channel adjacent to the western boundary of the site; and
- increased flows within the watercourse channel to the south of the A378 and Drayton Lane.

Dyers Road and the Site

The site is located downstream of Dyers Road and, therefore, the proposed development would not increase the risk of flooding at this location. However, surface water flows from the upstream catchment could affect the site and this is considered further below.

It was noted when undertaking the site visit for the FRA that immediately upstream of Dyers Road (to the north) the fluvial channel was shallow and entered a culverted section beneath Dyers Road (refer to images provided in Appendix B). The images provided with the public representations show that this culvert capacity is exceeded and/or is susceptible to blockage. As such, this causes surface water to exit the channel and flow across the surface of the public highway and affect the property at Dyers Road.

It is apparent that these flows are shallow in nature, as evident by a dog-walker traversing the affected area and a comparison against the roadside kerb heights. These images also show that floodwaters are contained within the banks of the watercourse downstream of the Dyers Road culvert.

The EA's risk of flooding from surface water maps have been modelled to show *"what happens when rainwater does not drain away through the normal drainage systems or soak into the ground, but lies or flows over the ground instead."* This mapping shows the flooding that occurs along Dyer Road

and also shows a surface water flow route to the south towards the direction of Maple Road. The surface water flood depths for all events up to the 1 in 1,000 (0.1%) annual chance of occurring are not predicted to exceed 300 mm which, as discussed above, is evident from the images provided.

As discussed within the FRA, the EA's risk of flooding from surface water map identifies that land around the western boundary of the site has a 'Low' risk of flooding from this source. A Low flood risk is defined as an area *that "has a chance of flooding of between 1 in 1,000 (0.1%) and 1 in 100 (1%)"*. It is noted that a ditch is present along the western boundary and the anticipated flood depth of up to 300 mm is likely to be retained within bank. The images provided would agree with this as they show that, as flows pass over Dyers Road and into the site, these return to and remain within the watercourse channel and do not affect any other area of the site.

The A378 and Parsonage Place

The surface water drainage map provided by the Ward Member indicates that surface water flows into this area originate from the catchment to the north as well as diverted flow from Dyers Road and the site via a culverted section through Parsonage Place. This is then routed to the south adjacent to Parsonage Place prior to entering a culverted section beneath the A378. Furthermore, the EA's risk of flooding from surface water map shows that an overland flow route is identified adjacent to Parsonage Place which affects the A378 and accompanying properties.

The images provided by the public representations show that the A378 culvert (marked H on the Ward Member map) exceeds capacity causing fluvial flows to overtop the channel banks adjacent to Parsonage Place and subsequently affect the A378 and nearby properties.

A historic flood record (F_101) within the South Somerset District Council Strategic Flood Risk Assessment (SFRA; Halcrow, August 2008) is applicable for this area and states that flooding was caused by 'drains under capacity' (no specific date was given). An indicative frequency for this flooding was identified as 1 in 100 years; however, it is anticipated that flooding at this area is likely to be more frequent.

The total catchment area draining to this point is approximately 0.63 km² (via FEH CD-ROM 3) and the site comprises just 0.012 km² of this.

Site Drainage

In accordance with the National Planning Policy Framework, surface water arising from a developed site should, as far as is practicable, be managed to mimic the surface water flows arising from the site prior to the proposed development while reducing the flood risk to the site itself and elsewhere.

Currently, any rainfall that falls on the site and does not infiltrate into the ground flows into the watercourse at the western boundary of the site. The post-development impermeable area (which takes into account buildings, drives, roads and pathways) has been estimated at 50% of the total site area.

It is therefore proposed to reduce the discharge rate, so that the proposed development will discharge at 20% less than the current greenfield runoff rate. As calculated in the FRA, the current greenfield runoff rate for the 100 year event is conservatively estimated at 4.3 l/s for the site. This runoff rate would be reduced to 3.5 l/s to provide a betterment on the current greenfield scenario and therefore reduce downstream flows. The outfall into the western boundary ditch will mimic any surface water flows that would have flowed into this pre-development.

Summary

The key points of this additional flood risk and drainage information are as follows:

- overland flow from the north of the site exceeds channel and culvert capacity causing flooding on Dyers Road; however, images and EA mapping identify that flows in the open channel downstream of the Dyers Road culvert remain in bank up to the 1 in 1,000 year event;
- the proposed drainage strategy is in accordance with local and national drainage policy and will mimic the flows that would have occurred pre-development. The original drainage strategy presented in the FRA was accepted by the EA. However, in order to provide additional benefit, it is proposed to attenuate flows from the site and discharge them at 20% less than the greenfield runoff rate, therefore providing a reduction in downstream flows; and
- flooding to Parsonage Place and the A378 appears to occur when the A378 Culvert is exceeded. It is possible that flows have been increased alongside Parsonage Place due to surface water from other catchments (such as from the Dyers Road catchment) being routed into this catchment. The proposed development does not increase surface water runoff from the site and, therefore, would not increase flood risk at this (or any other) location.

Voluntary Works

It is proposed to offer the undertaking of investigatory works along the culvert at Parsonage Place in the form of CCTV survey and subsequent cleaning or removal of blockages, if required.

Furthermore, it is proposed to construct a gravel-filled infiltration trench adjacent to the eastern boundary of the site and the southern boundary of the remaining non-developed area to the east. This will provide additional surface water storage as well as dissipating any overland flows which may be routed naturally towards properties along Stanchester Way.

Please do not hesitate to get in touch should you have any further questions.

Yours sincerely



Dr Rob Murdock
Director

Encs: Appendix A: Ward Member Surface Water Drainage Plan
Appendix B: Site Visit Photographs



Photo B: Culvert entry from channel to north of Dyers Road



Photo A: Channel to the north of Dyers Road

APPX 2.



Photo C: Culvert exit from Dyers Road



Photo D: Culvert immediately downstream of the site.



Photo E -- View upstream of Photo D Culvert

APPX 2.