

**From:** Tony Symonds <[REDACTED]>  
**Sent:** 04 June 2021 10:31  
**To:** Stephen Reed <[Stephen.Reed@westsussex.gov.uk](mailto:Stephen.Reed@westsussex.gov.uk)>  
**Subject:** FW: A29 - WSCC Planners Drainage Comments

Hi Stephen,

Please see our drainage responses below.

WSCC Comment	Response	
<p>2.1 Overland flow routes were identified as a potential flood risk issue as part of the design process (paragraph 6.2.9 of Appendix 11.1).</p> <p><i>At the Barnham Road tie-in, the existing road is very flat to the west of the proposed roundabout where it has been indicated that some overland flow may be occurring. With our proposed alignment of roundabout raising the carriageway level there is a risk that an existing flooding issues may be exacerbated. We therefore propose to provide extra gullies at the low point, these will connect to the existing highway drainage.</i></p> <p>In addition, two CCTV condition surveys were carried out along Barnham Road to confirm the final road</p>	<p>The section to the west of the rbt provides a combined drainage kerb system on both sides of the channel lines discharging to the proposed separate highway drainage system. The low point at 10.72m has been removed with the rbt vertical alignment.</p> <p>The next low point to the west with level 10.75m the road catchment area has not changed, maintaining the existing gullies.</p> <p>We understand that WSCC would be reviewing the CCTV survey to</p>	<p>EA extract plan - Risk of Flooding to surface water, indicating the medium risk chance of flooding of between the 1 in 30 and 1 in 100 year.</p> <p>Extent of flooding from surface water</p> <p> <input checked="" type="radio"/> High         <input checked="" type="radio"/> Medium         <input type="radio"/> Low         <input type="radio"/> Very low       </p>

design/mitigation measures at the proposed roundabout with Barnham Road (para 6.2.11 and Appendix D). The surveys identified issues in the pipe work and the need for further works noting that *if the faults of and the obstruction in the pipes are not fixed then this will be a potential flood risk issue* (para 6.2.15). A number of grade 5 defects requiring urgent action to prevent total failure

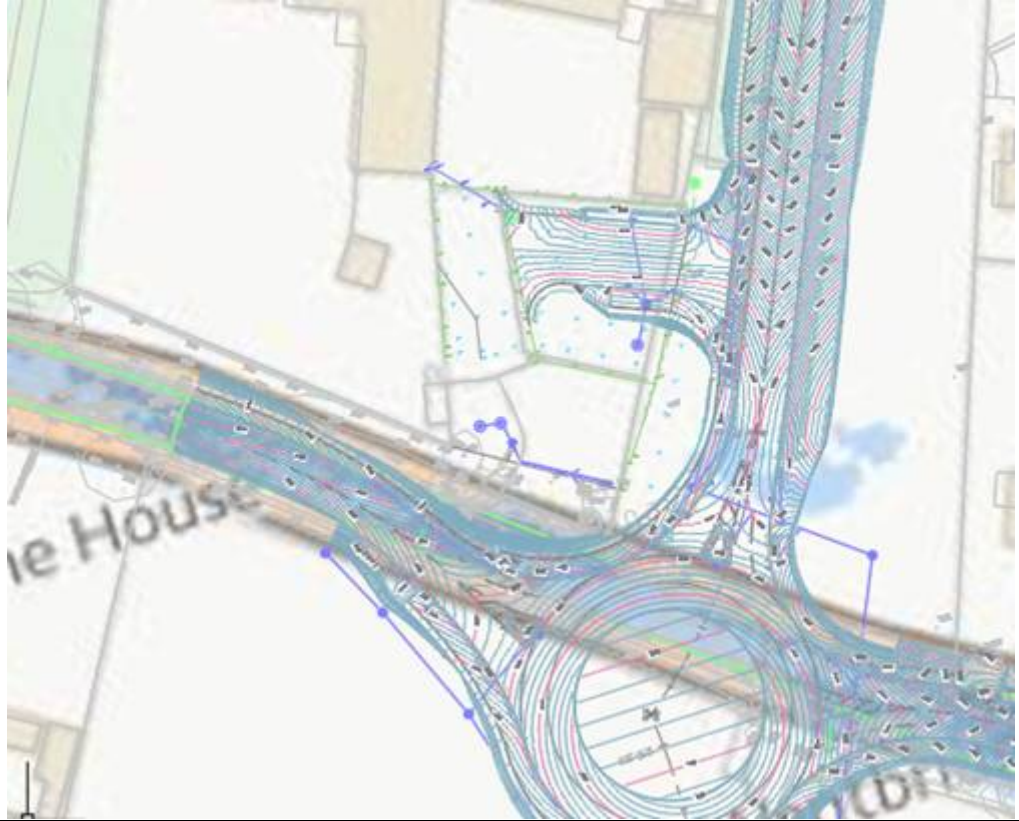
determine the repair works to be undertaken as a separate package of works.



Existing



Proposed

		
<p>2.2 The LLFA's approval in principle for the design was also qualified by the statement: <i>The recent CCTV survey of the Barnham Road system will highlight any issues with the existing pipe runs which should be repaired prior to the Phase 1 roundabout</i></p>	<p>We understand that WSCC would be reviewing the CCTV survey to determine the repair works to be undertaken as a separate package of works.</p>	

<p><b>construction</b> [ emphasis added].</p>		
<p>2.3 A combination of the increase in impermeable area associated with the proposed scheme, and the recently identified defects in the existing Barnham Road drainage and the associated flood risk issue have all been referred to in this ES. On the basis that new development should not increase flood risk elsewhere, additional information is sought on the measures being put in place to address the existing deficiencies in the Barnham Road drainage system prior to the construction of the Phase 1 roundabout</p>	<p>The catchment area discharging to the existing highway drainage is reduced, with the surface runoff for the proposed rbt collecting into the proposed separate highway drainage to pond 4.</p> <p>See comments to 2.1 for the CDK along the western arm of the rbt.</p>	

3.1 Appendix F2 Drainage Proposals incorrectly makes reference to Document W5-074-A-TR-1 'Preliminary rainfall runoff management for developments'. This 2007 EA document has long been superseded by EA (2013) SC030219 Rainfall runoff management for developments

The WSCC – ‘Adoptable Highway Drainage and Sustainable Drainage Systems Guidance for Developers’ - highway drainage criteria - dated 2019 still refers to the W5-074-A-TR-1 rev E.

The Drainage Strategy TN refers to the W5-074-A-TR-1-Rec R regarding the practicable minimum limit on the discharge rate set a 5l/s. this is the same in the Report SC030219 (Item 17.).

Comparing the two documents W5-074-A-TR-1 rev E and Report SC030219, the Table 1 is the same for the methods to be used for calculation of greenfield run-off peak flow rates.

### Adoptable Highway Drainage Criteria

The following table outlines the fundamental requirements.

Criteria	Requirements
Baseline Discharge	To greenfield rates (Preliminary rainfall run-off management for development ref: W5-074-A-TR-1 Rev E by H R Wallingford) <b>or</b> otherwise agreed with the ultimate governing body. Flow rates shall be controlled by way of suitable flow control device.
Highway Drain Standard Design Return Period	1:2yr Design 1:5yr Design (flood zones)

The logo for Jackson, featuring the word "Jackson" in a bold, black, sans-serif font on a yellow rectangular background.

**Tony Symonds**

Design Manager

M [REDACTED]



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