

## Engineers Comments Regarding Surface Water Drainage

<b>Application Reference:</b>	BE/48/25/PL	<b>Reviewer Reference:</b>	ADC/EXT4
<b>Planning Officer:</b>	Amber Willard	<b>Date of Review:</b>	20/08/2025
<b>Site Name:</b>	Rear of Regal House And Wayside Shripney Road Bognor Regis PO22 9NP		
<b>Application Description:</b>	7 No. residential dwellings and associated works including new access. This application is a Departure from the Development Plan and is in CIL Zone 3 and is CIL Liable as new dwellings.		
<b>Assessment Number:</b>	2 of 2		

### Policy and Guidance Information

Arun District Council Surface Water Drainage Guidance - <https://www.arun.gov.uk/surfacewater>

Land Drainage Consent – <https://www.westsussex.gov.uk/fire-emergencies-and-crime/dealing-with-extreme-weather/flooding/flood-risk-management/ordinary-watercourse-land-drainage-consent/> and <https://www.arun.gov.uk/land-drainage-consent/>

Arun District Council surface water pre-commencement conditions - <https://www.arun.gov.uk/planning-pre-commencement-conditions>

The SuDs Manual [C753] by CIRIA

Sustainable drainage systems: non-statutory technical standards' <https://assets.publishing.service.gov.uk/media/5a815646ed915d74e6231b43/sustainable-drainage-technical-standards.pdf>

Response	Objection
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### Critical Items for Surface Water Drainage Design Conditions

The failure to adequately address the following items will result in an objection to a surface water drainage design.

If any of these items are inadequately addressed by the submission, then their correction may result in a redesign of the surface water drainage scheme. A redesign is likely to have site wide implications such as the potential for storage structures to increase in volume or plan area.

Critical Item	Reason	Status
<b>Winter groundwater monitoring data.</b>	<p>Adequate winter groundwater monitoring data must be supplied to evidence that infiltration designs have sufficient freeboard from the base of structures and the peak groundwater level.</p> <p>The same data is necessary to ensure that the potential for buoyancy has been adequately considered in attenuation designs.</p>	<b>Sufficient</b>

<p><b>Winter infiltration testing data.</b></p>	<p>Adequate winter infiltration testing must be supplied to justify the proposed discharge method and design infiltration rates.</p> <p>Infiltration tests must be completed strictly in accordance with BRE DG 365, CIRIA R156 or a similar approved method. Testing depths must account for peak groundwater levels and correspond with the location and depth of proposed infiltration features.</p> <p>Designs must be based upon the <u>slowest</u> infiltration rate evidenced closest to a proposed infiltration feature. Average design rates will not be accepted.</p> <p>The results of incomplete tests should not be extrapolated to obtain design values for infiltration rates.</p>	<p><b>Sufficient</b></p>
<p><b>The hierarchy for sustainable drainage.</b></p>	<p>The proposed discharge method must accord with the SuDS hierarchy as given below. Evidence must be supplied to justify the proposed discharge method.</p> <ol style="list-style-type: none"> <li>1. Rainwater reuse where possible.</li> <li>2. Complete discharge into the ground (infiltration).</li> <li>3. Hybrid infiltration and restricted discharge to an appropriate water body or surface water sewer.</li> <li>4. Restricted discharge to an appropriate water body.</li> <li>5. Restricted discharge to a surface water sewer.</li> <li>6. Restricted discharge to a combined sewer.</li> </ol> <p>A water body may be defined as a river, watercourse, ditch, culverted watercourse, reservoir, wetland or the sea.</p> <p><b>Engineers cannot support any proposed connection of surface water to the foul sewer.</b></p>	<p><b>Insufficient</b></p> <p>The current proposals seek to discharge the western part of the site to the existing highway drainage system within Shripney Road. There existing risk of surface water flooding within Shripney Road. The applicant has not provided confirmation whether or not the Highway Authority has accepted these proposals and if there sufficient capacity within the existing highway drainage network to accommodate the discharge from the wester part of the site.</p>
<p><b>Calculations</b></p>	<p>Calculations for pre-development run off rates must be based upon the positively drained area only.</p> <p>Proposed discharge rates must not increase flood risk on site or elsewhere. Discharge</p>	<p><b>Sufficient</b></p>

	<p>rates must be restricted to QBAR or 2 l/s/ha, depending on whichever is higher.</p>	
	<p>Designs must be based on the most recently available rainfall data at the time of conditions being applied. <b><u>FSR rainfall data will not be accepted.</u></b> FEH rainfall data is based upon more recent records and continues to be updated.</p>	<b>Compliant</b>
	<p>Submit the FEH 22 point data files for this site, in accordance with clause 5.1.7 of the FEH Web Service terms of use (<a href="https://fehweb.ceh.ac.uk/Home/Terms">https://fehweb.ceh.ac.uk/Home/Terms</a>).</p> <p>These must be submitted directly to <a href="mailto:land.drainage@arun.gov.uk">land.drainage@arun.gov.uk</a> rather than to the planning portal (via the planning officer), this is to ensure that the data remains confidential in accordance with those terms.</p>	<b>Not supplied</b>
	<p>Designs must use the correct climate change allowances at the time of determination of the outline or full planning application.</p> <p>CV values for all events must be set to 1. This includes summer, winter, design, and simulation events.</p> <p>The correct allowance for urban creep must be applied.</p> <p>Additional storage must be set to zero unless it can be evidenced where this is provided.</p> <p>Infiltration half-drain times must be less than 24 hours.</p> <p>Infiltration design rates must be applied to the sides of soakaways, or to the base of infiltration blankets. Design rates must not be applied to both the base and sides of infiltration structures.</p> <p>A surcharged outfall must be modelled.</p>	<b>Sufficient</b>
<b>Natural catchments design.</b>	<p>The submission must define the natural drainage characteristics within, and hydraulically linked to, the site and demonstrate that the drainage proposals will integrate with and not compromise the function of the natural and existing drainage systems.</p>	<p><b>Not supplied</b>  A Baseline hydrology plan is required to demonstrate existing drainage regime, and that proposals are compliant with this.</p>

	<p>The condition, performance (including capacity where appropriate) and ownership of any existing site surface water drainage infrastructure must be accurately reported.</p> <p>Appropriate easements to watercourses and other services must be shown on all plans.</p> <p>Where there are areas of flood risk from any source on the site, it must be shown how a sustainable surface water drainage design can be accommodated on the site without conflicting with those areas of flood risk.</p> <p>Designs must replicate the natural drainage catchments of the site. All surface water drainage designs must therefore drain via gravity to corresponding points of discharge.</p> <p><b>The use of pumps for surface water drainage is not sustainable and will only be considered where the designer has fully demonstrated that they are proposed as a last resort.</b></p>	<p><b>Not supplied</b> Condition of highway sewer not indicated for catchment A. Condition of surface water sewer being connected to and headwall outfall are not indicated for catchment B and whether both connections are feasible based on current condition.</p> <p><b>Not supplied</b> easements not indicated on plans</p> <p><b>Not supplied</b> There is flooding noted at Manhole S3 with no details of how this is to be retained within the site.</p>
<p><b>Plans</b></p>	<p>Plan areas, depths and levels of drainage infrastructure must accurately correspond with the supporting calculations.</p>	<p><b>Insufficient</b> Drainage plan indicates Geocellular soakaways for both catchments but calculations suggest these are attenuation tanks-please clarify. Tank depths/Invert Levels do not match calculations-please clarify.</p>
<p><b>Water quality benefits.</b></p>	<p>An assessment of water quality is necessary to evidence that the proposed design provides adequate treatment of surface water.</p>	<p><b>Not supplied</b> No details are provided of water treatment to catchment A. The applicant will need to consider to provide a form of surface water treatment for run-off from this catchment</p>
<p><b>Biodiversity and amenity benefits.</b></p>	<p>The surface water drainage design must provide biodiversity and amenity benefits.</p>	<p><b>Not supplied</b></p>

<p><b>Trees and planting</b></p>	<p>There should be no conflict between surface water drainage infrastructure and existing or proposed trees or planting.</p> <p>The design must consider the potential growth of proposed trees and adequate mitigation must be provided to protect drainage infrastructure where conflict <b>cannot</b> be avoided.</p>	<p><b>Insufficient</b></p> <p>Confirmation required the Attenuation Tank/ Geocellular soakaway indicated does not clash with proposed tree.</p>
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**Drainage Impact on Other Planning Matters**

This application has been assessed with regards to surface water drainage design only.

Other planning matters occasionally effect the surface water drainage design. If plans relating to other matters have been assessed for their impact on the proposed drainage, then it must not be assumed that they have been assessed for any other purpose. The planning officer is advised to check for conflicts with any existing approved plans and to consult any relevant consultees as appropriate.

It has been identified that the following consultees may have comments about the plans that have been submitted and reviewed for this application:

- Landscaping officer (proposed trees and landscaping)
- Tree officer (existing trees)
- Environment Agency (main rivers and fluvial/tidal flood risk, groundwater source protection zones)
- Southern Water (foul drainage and surface water disposal to public sewer network)
- Portsmouth Water (groundwater source protection zones)
- Lead local flood authority (all other sources of flooding and ordinary watercourses)
- Other: WSCC Highways for proposed connection into highway drain
- None

**Additional comments to the planning officer**

The NPPF states that when determining any planning application, local planning authorities should ensure that flood risk is not increased elsewhere (paragraph 181, 182 and 187e). The PPG guides local planning authorities to refer to ‘Sustainable drainage systems: non-statutory technical standards’ and detailed industry guidance like The SuDS Manual [C753] by CIRIA to guide decisions about the design, maintenance, and operation of sustainable drainage systems for non-major development.

This consultation has been primarily informed by The SuDS Manual.

The following documents have been submitted and reviewed to inform this consultation with reference to surface water drainage:

BP Civils Surface Water Drainage Design and Calculations document dated 08/01/25

BP Civils Site Location Plan drawing PL001 Rev P01 dated January 2025

BP Civils Topographic Survey with Contours drawing PL002 Rev P01 dated January 2025

BP Civils Constraints Plan PL003 Rev P01 dated January 2025

BP Civils Impermeable Areas 004 Rev P01 dated January 2025

BP Civils Catchment Areas 005 Rev P01 dated January 2025

BP Civils Proposed Drainage 006 Rev P01 dated January 2025

BP Civils Proposed Levels 007 Rev P01 dated January 2025

Manhire LLP Proposed Site Plan RH24/SL-30C dated July 2024

HR Wallingford Greenfield Run off Calculations dated January 7<sup>th</sup> 2025

Site 3D Drainage simulations results dated 13<sup>th</sup> March 2025

RSPD FRA and Drainage & SUDs strategy dated September 2024

Comments where information is deemed/missing/insufficient has been provided in the applicable status column.

The main concern in the review of the information which has informed our objection is due to the risk of increased flooding in Shripney Road which requires additional information to overcome this objection.

Whilst we acknowledge the email provided by the applicant its not clear whether WSCC are only open consideration of the flows being directed to the west or whether they formally approve and accept that the flows will not impact the current existing flood risk in Shripney Road.

### **Overcoming our objection**

As this is not a holding objection or a request for further information, requested conditions are not listed. If you are minded to approve this application, please reconsult engineers for a list of suggested conditions to ensure that the development is adequately drained and does not increase flood risk elsewhere.

**The imposition of conditions at this stage rather than overcoming the objection could result in a circumstance where the condition cannot be discharged. In the event of attaching a condition that cannot be discharged, permission may be invalid.**

If the planning officer is minded to allow the applicant additional time to submit further documents to support this application, then the following evidence may overcome the objection. Please do not submit further documents without prior discussion with the planning officer as to whether it will be possible for these to be assessed or influence their determination:

1. Confirmation from West Sussex County Council Highways Authority of acceptance of these additional flows to their network without increasing flood risk and/or an acceptable alternative proposal to drain the access road

The following items are informatives, not affecting the objection and can be dealt with via condition once the objection has been overcome:

1. Baseline hydrology plan outlining existing drainage regime
2. Details of how flooding volume is retained within site
3. Details of water treatment being provided to the western catchment prior to connection of the highway drain.
4. Proposed trees being indicated on drainage plan to confirm there are no clashes.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Arun District Council, Civic Centre, Maltravers Rd  
Littlehampton, West Sussex, BN17 5LF  
[www.arun.gov.uk](http://www.arun.gov.uk)

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**Our priorities...**

 Improving the wellbeing of Arun	 Delivering the right homes in the right places	 Supporting our environment to support us	 Fulfilling Arun's economic potential	 
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**From:** Paul Cann <Paul.Cann@arun.gov.uk>  
**Sent:** 20 August 2025 13:55  
**To:** Planning.Responses <Planning.Responses@arun.gov.uk>  
**Cc:** Amber Willard <Amber.Willard@arun.gov.uk>  
**Subject:** RE: Planning Consultation on: BE/48/25/PL

Please find enclosed our external consultants response, an objection.

Regards

**Paul Cann**

## Principal Drainage Engineer, Coastal Engineers and Flood Prevention

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**From:** Planning.Responses <[Planning.Responses@arun.gov.uk](mailto:Planning.Responses@arun.gov.uk)>

**Sent:** Monday, August 4, 2025 1:33:30 PM (UTC+00:00) Monrovia, Reykjavik

**To:** Land Drainage <[Land.Drainage@arun.gov.uk](mailto:Land.Drainage@arun.gov.uk)>

**Subject:** Planning Consultation on: BE/48/25/PL

To: **Engineers (Drainage)**

### NOTIFICATION FROM ARUN DISTRICT COUNCIL

#### TOWN AND COUNTRY PLANNING ACT 1990

**Application No:** BE/48/25/PL  
**Registered:** 15th April 2025  
**Site Address:** Rear of Regal House And Wayside Shripney Road Bognor Regis PO22 9NP  
**Grid Reference:** 493949 101991  
**Category:** Plan Applicat'n  
**Description of Works:** 7 No. residential dwellings and associated works including new access. This application is a Departure from the Development Plan and is in CIL Zone 3 and is CIL Liable as new dwellings.

I am able to inform you that I have received an amendment to the above application dated 1st August 2025 relating to:- Drainage correspondence with WSCC.

If you should wish to make further representations as a result of this amendment, please make any further comment by **26th August 2025**.

[Click here to view the application, documents and make further comments](#)

**Please be aware that Planning Services operate an 'open file' policy and will publish your comments including your name and address on the website. We will aim to redact signatures, telephone numbers and email addresses but please help us by not incorporating them in the body of your text. Please make sure that you only include information that you are happy will be published in this way. If you supply information belonging to a third party, you must make sure you have their permission to do so.**

Yours sincerely

Amber Willard

Planning Case Officer- Arun District Council

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Email: [amber.willard@arun.gov.uk](mailto:amber.willard@arun.gov.uk)

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