

## 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>	03/10/2025
<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>	3 of 3		

### 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>

<b>Response</b>	<b>No Objection</b>
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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>Sufficient</b></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>	<b>Sufficient</b>

	<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>	
<b>Plans</b>	Plan areas, depths and levels of drainage infrastructure must accurately correspond with the supporting calculations.	<b>Sufficient</b>
<b>Water quality benefits.</b>	An assessment of water quality is necessary to evidence that the proposed design provides adequate treatment of surface water.	<b>Not supplied</b>
<b>Biodiversity and amenity benefits.</b>	The surface water drainage design must provide biodiversity and amenity benefits.	<b>Not supplied</b>
<b>Trees and planting</b>	<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>	<b>Insufficient</b>

### 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

West Sussex County Council email dated 9 September 2025

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

Whilst we are able to remove our objection at this stage based on the recent correspondence provided by West Sussex County Council, the proposed discharge to the west of the site will need further justification for discharging at that rate at the discharge of conditions stage; however it is expected that any further restriction would and could be achieved within the confines of the layout.

Please also include the following conditions if minded to support the application:

#### Design

*“Prior to the commencement of development, full details of the proposed surface water drainage scheme must be submitted and approved in writing by the local planning authority. The full details submitted for approval shall include:*

1. *Winter groundwater monitoring,*
  2. *Winter infiltration testing strictly in accordance with BRE DG 365 or similar approved,*
  3. *Details of the proposed method and location of surface water disposal, in accordance with the SuDS hierarchy,*
  4. *Contributing area plans,*
  5. *Calculations modelling the surface water drainage network for the following storm events:*
    - a. *100% Annual Exceedance Probability [AEP]*
    - b. *10% AEP + climate change allowance*
    - c. *3.3% AEP + climate change allowance*
    - d. *1% AEP + climate change allowance*
- All storm events must include an allowance for urban creep and surcharged outfalls where appropriate,*
6. *Detailed drainage plans conforming to Local Planning Authority guidance,*
  7. *Specifications for all surface water drainage components and associated infrastructure or flow control mechanisms,*
  8. *Any relevant permissions relating to the discharge location, works to watercourses or adoption of the SuDS scheme.*

*The scheme shall then be constructed as per the approved plans. The surface water drainage scheme shall remain for the lifetime of the development unless agreed in writing by the local planning authority.”*

#### Maintenance

*“Prior to commencement of development, a site-specific SuDS Maintenance and Management Manual must be submitted and approved in writing by the Local Planning Authority. The SuDS Maintenance and Management Manual submitted for approval shall include:*

- I. details of SuDS features, connecting drainage infrastructure and watercourses with maintenance requirements for each element,*
- II. a management and maintenance plan for the lifetime of the development, including a schedule for the timing and funding of planned replacement of components at the end of their design life,*
- III. details of the financial management of the maintenance of the surface water drainage on the site,*
- IV. details of who is responsible for the implementation of the SuDS Maintenance and Management Manual,*
- V. details of the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the surface water drainage scheme for the lifetime of the development.*

*Upon completed construction of the approved drainage system, the persons responsible for the maintenance of drainage on the site shall strictly adhere to and implement the recommendations contained within the manual.”*

#### Verification

*“Prior to occupation of the final building, a verification report must be submitted and approved in writing by the local planning authority. The verification report submitted for approval must:*

- I. be written and informed by a surveyor or engineer that is independent of the contractor,*
- II. demonstrate that the surface water drainage system has been constructed in accordance with the details approved pursuant to condition **x – detailed design**,*
- III. include full as-built survey drawings,*
- IV. include photographs of excavations, installation of any surface water structure, control mechanism or other drainage infrastructure,*
- V. detail any corrective works that are necessary with a timetable for their completion.
  - a. Where corrective works are required, these must be carried out in accordance with the approved timetable.*
  - b. Corrective works must be subsequently resurveyed with the findings submitted to and approved in writing by the local planning authority.”**

**From:** Nicola Oktay on behalf of Planning.Responses  
**Sent:** 07 October 2025 09:24  
**To:** Planning Scanning  
**Subject:** FW: Planning Consultation on: BE/48/25/PL  
**Attachments:** BE-48-25-PL Regal House ADC EXT4-25-10-03.docx

Drainage Engineers response

**Nikki Oktay**  
**Planning Receptionist, Planning Department**

**T:** 01903 737965  
**E:** Nicola.Oktay@arun.gov.uk

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 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:** Sarah Burrow <Sarah.Burrow@arun.gov.uk>  
**Sent:** 06 October 2025 11:28  
**To:** Planning.Responses <Planning.Responses@arun.gov.uk>  
**Cc:** Amber Willard <Amber.Willard@arun.gov.uk>; Paul Cann <Paul.Cann@arun.gov.uk>  
**Subject:** RE: Planning Consultation on: BE/48/25/PL

Hi Amber,

Find the consultation – no objection subject to conditions – attached. Apologies for the delay in response.

I am submitting this consultation on behalf of Paul, our Principal Drainage Engineer. It has been completed by one of our external consultants.

Kind regards

**Sarah Burrow**  
**Flood Risk and Drainage Engineer, Coastal Engineers and Flood Prevention**

**T:** 01903 737815  
**E:** [sarah.burrow@arun.gov.uk](mailto:sarah.burrow@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:** Planning.Responses <[Planning.Responses@arun.gov.uk](mailto:Planning.Responses@arun.gov.uk)>  
**Sent:** 10 September 2025 10:49  
**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 10th September 2025 relating to:- DRAINAGE EMAIL

If you should wish to make further representations as a result of this amendment, please make any further comment by **9th October 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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