

Engineers Comments Regarding Surface Water Drainage

Application Reference:	Y/37/25/DOC	Reviewer Reference:	ADC/EXT4
Planning Officer:	Hebe Smith	Date of Review:	14/11/2025
Site Name:	18 West View Drive Yapton BN18 0JR		
Application Description:	Approval of details reserved by condition imposed under reference Y/56/24/HH relating to condition number 3 - surface water drainage scheme.		
Assessment Number:	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>

National Standards for Sustainable Drainage Systems (SuDS) - <https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds>

The SuDs Manual [C753] by CIRIA

Response	Condition 3: Objection
-----------------	-------------------------------

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
Winter groundwater monitoring data.	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. The same data is necessary to ensure that the potential for buoyancy has been adequately considered in attenuation designs.	Compliant

The hierarchy for sustainable drainage.	The proposed discharge method must accord with the SuDS hierarchy as given below. Evidence must be supplied to justify the proposed discharge method. 1. Rainwater reuse where possible. 2. Complete discharge into the ground (infiltration). 3. Hybrid infiltration and restricted discharge to an appropriate water body or surface water sewer. 4. Restricted discharge to an appropriate water body. 5. Restricted discharge to a surface water sewer. 6. Restricted discharge to a combined sewer. A water body may be defined as a river, watercourse, ditch, culverted watercourse, reservoir, wetland or the sea. Engineers cannot support any proposed connection of surface water to the foul sewer.	Compliant
Calculations	Calculations for pre-development run off rates must be based upon the positively drained area only. Proposed discharge rates must not increase flood risk on site or elsewhere. Discharge rates must be restricted to QBAR or 2 l/s/ha, depending on whichever is higher.	Compliant
	Designs must be based on the most recently available rainfall data at the time of conditions being applied. <u>FSR rainfall data will not be accepted.</u> FEH rainfall data is based upon more recent records and continues to be updated.	Compliant
	Designs must use the correct climate change allowances at the time of determination of the outline or full planning application. CV values for all events must be set to 1. This includes summer, winter, design, and simulation events. The correct allowance for urban creep must be applied.	Insufficient Clarification is required on how the surcharged outfall has been modelled

	Additional storage must be set to zero unless it can be evidenced where this is provided. Infiltration half-drain times must be less than 24 hours. 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. A surcharged outfall must be modelled.	
Natural catchments design.	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. The condition, performance (including capacity where appropriate) and ownership of any existing site surface water drainage infrastructure must be accurately reported. Appropriate easements to watercourses and other services must be shown on all plans. 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. 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. 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.	Compliant
Plans	Plan areas, depths and levels of drainage infrastructure must accurately correspond with the supporting calculations.	Insufficient

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:
- ☐ 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:

- Buoyancy Calculator for a Sealed Geocellular Storage Tank per 1 square metre unit area.
- Groundwater Monitoring
- Ditch and Headwall details Rev 02
- Surface Water Drainage Layout rev03
- Constructional Details rev 03
- Lidsey Impact Assessment Statement - (RC 09-06-2025 version 1) 9th June 2025
- Orifice Drainage Calculations Rev 03
- Surface Water Drainage Statement and Drainage Design Notes Rev 04

Condition 3 is worded as follows:

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. Impermeable area plan,
5. Calculations modelling the surface water drainage network for the following storm events:
 - a. 100% Annual Exceedance Probability
 - b. 10% AEP + climate change allowance
 - c. 3.3% AEP + climate change allowance
 - d. 1% AEP + climate change allowanceAll 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.

There is insufficient information and evidence provided on the existing drainage being proposed for reuse as well as the supporting calculations and details to ensure that the proposals will not inadvertently increase the risk of surface water flooding.

Application Reference: Y/37/25/DOC
Site Name: 18 West View Drive Yapton BN18 0JR

Initial Issue Date: 21/08/2025
Issue Date: 14/11/2025
Reviewer Reference: ADC/EXT4

Summary and Recommendation:

Condition 3: **Objection**

Please note: Any DOC application should only have a maximum of two consultation responses. If this is the second response for an open application and there are still comments outstanding, then please object to the application.

	ADC Drainage Comments	Designer Response	ADC Drainage Comments		
Date:	21/8/25	6 th September 2025	14/11/25		
Condition Number: 3 Revision 03 Drawings					
Comment Number					
1.	Front roof areas noted to drain to an "assumed" soakaway. This needs to be investigated further and onsite assessment through testing to confirm that the existing soakaways can cater for the peak design storm events if looking to reuse.	This is assuming that you don't mean the actual Front Roof which is Unchanged going to a known front soakaway. The assumed front soakaway under the drive drains flows from the existing main side roof and the existing side lean-to roof for a total of 20.2 m2 . The proposed reduced existing side roof area of 9.77 m2 drain as existing to this soakaway. This is over a 50% reduction of flow from re-aligned roof. Betterment is also provided by the installation of a new Silt Trap. As this remains as existing, with a significant reduction in flow, no additional investigations or assessments were required. The single storey side extension now with an increased roof area to 9.93m2 drains with RWP down and across the side wall, under the window, but crucially above ground level, with a minimum fall of 1:50, to be connected to RWP#7 at the rear. New calculations determine an increase to the tank TK#1 to 8.5 metres long. The layout and constructional drawings plus the calculations have all been updated to Revision 03 to reflect this change to the design. The only other practicable option is to run all the roof areas to the rear storage tank TK#1 however this will obviate the removal of the existing rear roof area from the Foul. Removal of the Foul Water flows is not mandatory as regards planning (since it is existing) but is always Best Practice – especially within the Lidsey Catchment Area.	It is understood that the designer is attempting to demonstrate that flood risk will not be increased due to a reduction in the areas to the existing soakaway. However, the matter is that the development proposals are seeking to re-use an existing soakaway for a new extension over the lifetime of the development without knowledge on the location, size, condition and performance of this soakaway, knowing that groundwater levels are high enough in the rear garden to rule out infiltration. Evidence needs to be provided on the existence of this soakaway, location, size, depth as well as to undertake tests to ensure that it will perform to meet the lifetime of the development. If groundwater levels are expected to be different in the front garden to the rear, then evidence to support this assumption should be submitted. Alternatively, a new drainage solution may be submitted for the extension. Existing roof areas, where drainage arrangements are unchanged need not be included in this design solution. However, we support any improvement to the existing surface water drainage of those areas.		
2.	The current drainage layout, includes several assumptions and caveats due to unknown level information. Some of	The front Silt Trap now has a note for its Invert Level (IL) to be determined when	These investigations should be determined prior to main works. These are critical to ensure that the drainage		

	these are critical to the function of the proposed surface water drainage and thus need to be investigated and confirmed	construction begins and excavation of the existing underground pipe establishes its depth, otherwise the pipe will have to be exposed / surveyed / re-instated prior to future commencement. The Sump Depth will have to be a minimum of 435mm below IL. All other 'tbc' have been surveyed inserted on the layout drawing which has been updated to Revision 03	solution being proposed for the discharge of condition are actually deliverable.		
3.	The proposed headwall outfall and works appear to lie outside of the application boundary and potentially outside the extent of ownership of the applicant. Clarification on the extent of proposed works for the construction of the new headwall will be required including either confirmation of land ownership or 3 rd party permissions if application. Please note that the construction of the new headwall will require a and Ordinary Watercourse Consent from West Sussex County Council	The proposed headwall outfall and works lie within the extent of ownership of the applicant. The planning redline application boundary is overlaid onto an OS schematic which only give a basic outline of the ditch. Since the headwall and outfall do not actually protrude into the ditch volume itself only Watercourse Bylaw Consent to Arun DC was required but it was considered that full OWLDC to WSCC would be more appropriate. It should be noted that WSCC approved the consent on the 27th June 2025 with LDC-2025-038	Noted item closed		
4.	The depth of drainage at the rear elevation appears too shallow, with inadequate cover to the pipework. Further details should be provided on this arrangement and potentially re-look at the gradient and depth of pipework leading back from the attenuation tank	Building regulations Approved Document H do not state a minimum cover depth for underground domestic rainwater pipes. The cover at RWP#7 is ~150mm and at the IC at RWP#9 is 198mm. Like all the pipework, the section at the rear elevation falls within Class Z and as such is subject to 150mm concrete bed & surround which will prove to be satisfactory for the non-vehicular soft landscaped garden area.	This is unacceptable. The proposals infer having concrete protection surround being exposed at the heads of the runs. This is giving rise to future failure of the pipework with such reduced cover. Should the proposal seek to maintain near or at surfaces depths of cover then detailed calculations should be provided to confirm the resistance to the proposed loads and maintaining the structural integrity of the pipework, with the nominal concrete surround should be provided. Should the pipework get damaged or deformed due to inadequate cover this will impact the ability of the pipework to convey flows and could cause flooding within the property.		
5.	Please provide clarification on how the surcharge outfall has been modelled.	There was no hydraulic modelling data available from the EA to support a surcharged outfall thus the fall-back is that as per Arun DC statement of . . . where no appropriate Hydraulic Modelling for the surcharge level of the 1% AEP + CCA flood event for the receiving watercourse, then the Top-of-Bank level is the fallback . . . In this instance there will be no flooding within the site, as discussed within the Surface Water Drainage Statement and Design Notes Page #9 -- The Headwall	The response does not provide clarification on how run off from the roof's entering the system will be accommodated during a potential surcharged event within the watercourse. Whilst the bank level is noted and reference is made to the system being entirely surcharged and not above the proposed cover levels, the justification provided does not clarification on what will happen when water enters the same surcharged network. This needs to be modelled		

		and the Ditch. This was confirmed with consultation from the Principal Drainage Engineer (PC) Arun DC on 2nd September 2025	and assessment provided with updated calculations		
--	--	---	---	--	--

If a designer would like a .docx version of this document to aid administration of responses, please request this by email to land.drainage@arun.gov.uk.

To register to receive notifications of planning applications in your area please go to <https://www1.arun.gov.uk/planning-application-finder>



Improving the wellbeing of Arun

Delivering the right homes in the right places

Supporting our environment to support us

Fulfilling Arun's economic potential

ARUN
DISTRICT COUNCIL

Find the consultation response – an objection – 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.

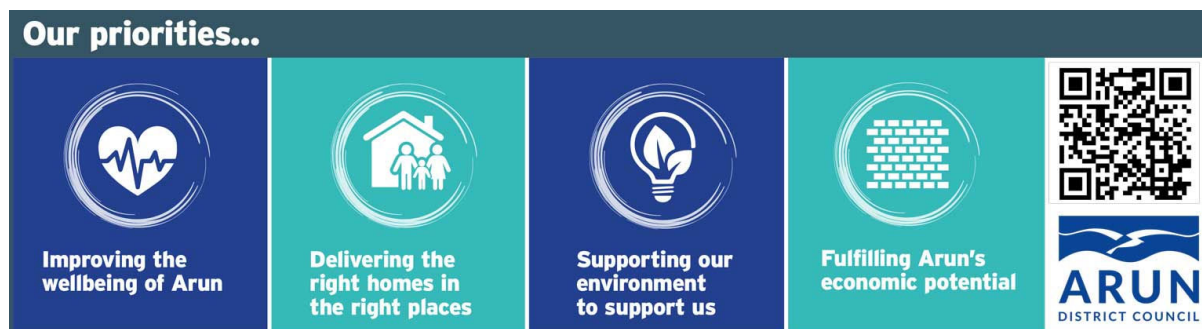
Kind regards

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

T: 01903 737815

E: sarah.burrow@arun.gov.uk

Arun District Council, Civic Centre, Maltravers Rd
Littlehampton, West Sussex, BN17 5LF
www.arun.gov.uk



From: Planning.Responses <Planning.Responses@arun.gov.uk>

Sent: 16 September 2025 13:54

To: Land Drainage <Land.Drainage@arun.gov.uk>

Subject: Planning Re-Consultation on: Y/37/25/DOC

To: **Engineers (Drainage)**

NOTIFICATION FROM ARUN DISTRICT COUNCIL

TOWN AND COUNTRY PLANNING ACT 1990

Application No:	Y/37/25/DOC
Registered:	18th June 2025
Site Address:	18 West View Drive Yapton BN18 0JR
Grid Reference:	497957 102444
Category:	Discharge of Condi
Description of Works:	Approval of details reserved by condition imposed under reference Y/56/24/HH relating to condition number 3 - surface water drainage scheme.

I am able to inform you that I have received an amendment to the above application dated 15th September 2025 relating to: Substitute drainage information and comment tracker

If you should wish to make further representations as a result of this amendment, please make any further comment by **30th September 2025**.

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

Please be aware that any comments you may make will be available on our website so please do not insert personal details or signatures on your reply.

Yours sincerely

Hebe Smith

Planning Case Officer-Arun District Council

Telephone: 01903 737626

Email: hebe.smith@arun.gov.uk

PLRECON_DOC (ODB) 2020