

Engineers Comments Regarding Surface Water Drainage

Application Reference:	WA/11/25/DOC	Reviewer Reference:	ADC/PC
Planning Officer:	Hebe Smith	Date of Review:	12/09/2025
Site Name:	Snetterton West Walberton Lane Walberton BN18 0QS		
Application Description:	Approval of details reserved by condition imposed under WA/46/22/HH relating to condition 3-surface water drainage.		
Assessment Number:	1 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>

National standards for sustainable drainage systems
[National standards for sustainable drainage systems - GOV.UK](https://www.gov.uk/national-standards-for-sustainable-drainage-systems)

Response	Condition 3: 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.

Items are further elaborated upon in the attached comment tracker where necessary.

Further comments which are unlikely to impact the design methodology will be provided in the comment tracker, these relate to the detailed design. Unless clearly stated, it is considered that these additional comments are unlikely to result in a redesign of the system. These can be addressed following a second consultation to prevent unnecessary refusals.

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
Winter infiltration testing data.	Adequate winter infiltration testing must be supplied to justify the proposed discharge method and design infiltration rates. 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. 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. The results of incomplete tests should not be extrapolated to obtain design values for infiltration rates.	Not supplied and not required – infiltration not viable due to high groundwater.
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.	Sufficient

	Engineers cannot support any proposed connection of surface water to the foul sewer.	
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.	Sufficient
	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. 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.	Insufficient – surcharged outfall implications to be considered further.
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	Sufficient

	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 not be supported.	
Plans	Plan areas, depths and levels of drainage infrastructure must accurately correspond with the supporting calculations.	Sufficient
Water quality benefits.	An assessment of water quality is necessary to evidence that the proposed design provides adequate treatment of surface water.	Sufficient
Trees and planting	There should be no conflict between surface water drainage infrastructure and existing or proposed trees or planting. The design must consider the potential growth of proposed trees and adequate mitigation must be provided to protect drainage infrastructure where conflict <u>cannot</u> be avoided.	Compliant

Additional comments to the planning officer

Please refer to the enclosed comment tracker for detailed commentary.

Application Reference: WA/11/25/DOC Site Name: Snetterton West Walberton Lane Walberton BN18 0QS	Initial Issue Date: 07/10/2024 Issue Date: 12/09/2025 Reviewer Reference: ADC/PC
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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	ADC Further Comment	ADC Further Comment	Designer Comments	ADC Further Comment	Designer Comments	ADC Further Comment
Date:	07/10/2024	20/01/2025	16/05/2025		02/07/2025	14/07/25	12/09/2025
Condition Number: 3							
Comment Number							
1.	Groundwater has been evidenced 350mm below ground level. The location of the monitoring is unknown but given the scale of the site the location is not challenged. No further detail is required regarding groundwater monitoring or infiltration testing as infiltration will not be viable.						
2.	The proposed discharge method is unacceptable. Observed groundwater levels are too high to achieve 1m freeboard between the base of the soakaway and the peak groundwater level. The applicant will have to revise the design to attenuate water in a lined system to prevent groundwater ingress and discharge at a restricted rate to the highway drainage system. This ensures that flood risk is not increased with unrestricted flow from the proposed garage or from groundwater being discharged to the highway drainage system.	The design is unchanged. The soakaway is still permeable and will allow groundwater ingress/infiltration with an unrestricted overflow the highway drainage system. This is unacceptable.	There is now a proposal to connect directly to the highway drainage system in West Walberton Lane and a soakaway is no longer proposed.	Existing soakaway is to be abandoned and connection to highway drain is proposed	Comment closed.	CLOSED	
3.	Rainwater reuse must be proposed where possible.	Unaddressed.	Unaddressed.	Proposed to connect RWP's to Rainwater butts prior to discharge below Ground	Noted. Comment closed.	CLOSED	

Surface Water Drainage Comment Tracker

4.	Please submit evidence of WSCC agreement and any conditions relating to the proposed connection to the highway drainage system.	Not submitted.	Not submitted.	Refer to email from Kevin Macknay Drainage and Flooding Lead Professional Highways, Transport and Planning dated 15/08/2024 11:01	Noted that WSCC have agreed in principle to the proposed connection to the highway drainage system. Comment closed.	CLOSED	
5.	Please submit any relevant investigations into the highway drainage network – particularly the levels at connection.	Not submitted.	If the connection is being made to an 'online' road gully, please provide details of the existing inlet outlet pipes (ie. configuration, diameter and invert levels). Specify the 100mm diameter pipe connection level (needs to achieve soffit to soffit) and gradient. If this is not an 'online' road gully, then the connection will need to be made at a more suitable location and in an agreed method.	The existing road gully has been inspected, it is an off line gully with outlet 550mm below ground level. The connection from the site will be made to the outgoing pipe outside of the road gully and a will be inspected and approved by WSCC Highways	I have spoken to WSCC who have in turn contacted the applicant. Essentially, the proposed point of connection is not acceptable and the connection will need to be made to the existing road gully, which will need to be rebuilt in the form of a catchpit manhole with grated cover. A soffit to soffit connection will need to be achieved. As a result, the bend outside SW MH 02.00 will be even tighter, and therefore the arrangement will need to be adjusted – a suggestion would be to make the southern most proposed road gully a catchpit manhole with grated cover, and use this to provide the outlet towards the WSCC system. The connection details to the highway drainage system will need to be detailed and formally agreed with WSCC. Drawings to be updated to include all the relevant agreed details and evidence provided to confirm that WSCC have approved them.	Drawing updated to show catchpit manhole Gully for both the offsite Highway Gully and the onsite gully, in accordance with WSCC-SD1-0500-025	It is unclear why there is a bend outside the proposed gully within the site bellmouth. It should be possible to provide a straight pipe between this gully and the replacement gully on the existing highway drain. Please revised. As previously requested, provide evidence to show that WSCC have agreed the proposed rebuilding of the road gully, etc.
6.	The only mapped source of flood risk is groundwater which has been identified to be high and will be factored into design.						
7.	Please submit any relevant correspondence between the Local Planning Authority or West Sussex County Council.	Not submitted.	Not submitted.	Refer to email from Kevin Macknay Drainage and Flooding Lead Professional Highways, Transport and Planning dated 15/08/2024 11:01	Noted. Comment closed.	CLOSED	
8.	Please submit calculations to support the design – refer to the attached checklist for requirements.	Thank you, but the design is still allowing infiltration, and the overflow is unrestricted. Best practice design rules are unchecked. The garage is	The pipework between MH SW 02.00 and the existing road gully needs to be included in the calculations. CV values for all events must be set to 1. This includes summer, winter, design, and simulation events. Urban creep needs to be applied;	Pipework between MH SW 02.00 and Existing Highway Road gully added CV set as 1 for winter and summer 10% Urban Creep has been applied FEH 22 used, excel attached	Noted. It is unclear how the surcharged outfall has been modelled. The surcharged outfall is normally specified as such in the simulation settings. In the calculations, an additional flow control has been added to SW MH 02.00?? Please explain/adjust.	A 1mm orifice was put on the EX HW RG note to represent no flow through the gully due to it silting up. Revised calculations attached with a surcharge outfall using the Hydrograph section of Flow	Two sets of calculations have been provided, one with a surcharged outfall and the other not. The set without a surcharged outfall should be labelled as such (both currently labelled as surcharged). Following the redesign of the pipework/chamber

		claimed to be on existing driveway, this is not shown on the previous block plans for the site. The previous garage was in a different location. The proposed discharge rate must be as close to greenfield (QBAR for all events) as possible without risking blockage	ie. 10% increase in impermeable area. The use of FSR rainfall data is not acceptable and FEH must be used. Submit the FEH 22 point data files for this parcel, in accordance with clause 5.1.7 of the FEH Web Service terms of use (https://fehweb.ceh.ac.uk/Home/Terms). These must be submitted directly to land.drainage@arun.gov.uk rather than to the planning portal (via the planning officer), this is to ensure that the data remains confidential in accordance with those terms. Correct climate change allowances to be used ie. 1/100 year event 45% and 40% for all other storms. A surcharged outfall must be modelled ie. assume the cover level of the existing road gully	1:100+45%, 1:30+40% and 1:1+40% modelled. We have provided calculations showing 0 discharge from MH 02.00. If the Highway drainage was to become surcharged water from the site would surcharged from the two gullies on to the highway	Thus the connection to the assumed 150mm diameter highway drain gully (to be rebuilt as per item no.5) will need to achieve a connection invert level of 13.330, unless you propose to lay a 150mm diameter pipe as opposed to a 100mm diameter pipe. Adjust calculations to suit new level.	arrangements downstream of SW MH 02.00 it is necessary to model the networked system up to the replacement catchpit gully in West Walberton Lane – please revise accordingly. The surcharge level/depth should reflect the cover level at this location ie. 13.830. Although the current modelling needs to be revised to reflect the above, it is noted that there is currently above ground flooding on both the 1 in 30 and 1 in 100 year events. Flooding on a 1 in 30 event is not acceptable and must be retained below ground. Any flooding resulting from a 1 in 100 year event must be retained on site. Based upon the modelling and topography, this is not being achieved, as excess water would flow onto West Walberton Lane. It is clear that the applicant needs to reconsider their design to ensure that the 1 in 30 year event is stored below ground and the 1 in 100 year event does not flow off site.
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9.	Evidence that there will be no clashes with tree roots. If any measures are needed to protect drainage infrastructure from tree root damage, please show these on the plan and construction details.	Thank you, point closed.					
10.	Please provide water treatment. For a residential roof a catch pit or silt trap to capture debris and silt is normally adequate.	Designer proposes no water treatment due to the small contributing area and low risk of pollutants. The SuDS manual states in Table 4.3 that the minimum water quality management requirements for residential roofs is removal of gross solids and sediments. Comment outstanding.	Unaddressed. It is unclear if a catchpit is proposed.	The SEL Environmental WASP Orifice Manhole has a filter box on the outlet, which is a geotextile fabric filter, we have also added a standard catchpit manhole	Catchpit now provided at manhole SW MH 01.00. Please note that the orifice filter is usually perforated plastic for these type products, which is obviously more robust than geotextile fabric (which would not be permitted for that fact).	Changed to perforated plastic	Noted. Comment closed.
11.	Please detail sump levels for catch pits or silt traps where they are proposed.	Unaddressed.	Unaddressed.	300mm SUMP shown	Noted. Comment closed.	CLOSED	
12.	Please evidence interception drainage, for a site of this scale that cannot infiltrate interception can usually be achieved with water butts which will also fulfil the water reuse criteria.	Unaddressed.	Unaddressed.	Water butts added to design	Noted but please specify their capacity (litres).	210 litre proposed, note added to drawing	Noted. Comment closed.
13.	Please consider the risk of buoyancy in the design.	Unaddressed.	No attenuation tank currently proposed.	N/A	Noted. Comment closed.	CLOSED	
14.	Further detail is required on the drainage layout – please refer to attached checklist.	The design requires amendment as per point 2. Invert levels not provided for SW MH 01.00 No levels or dimensions provided for the tank.	No attenuation tank currently proposed.	N/A	Noted. Comment closed.	CLOSED	
15.	Construction detail drawings are required for all drainage components – please refer to attached checklist.	Unaddressed.	Unaddressed.	Details sheet provided	Please include outlet pipe diameter on proposed road gully construction details. Specify overflow level in flow control chamber.	Note added to road gully and level added to weir	Noted. Comment closed.

Surface Water Drainage Comment Tracker

16.			The gradient of pipe length SWMH 01.50 to 02.00 is slacker than the minimum permissible gradient for a 100mm pipe. A minimum 1 in 100 gradient or steeper must be achieved.	Gradient amended to 1:100	Noted. Comment closed.	CLOSED	
17.			The proposed surface water drain is shown running between two existing manholes adjacent the house. Assuming these relate to existing foul drainage, please provide details ie. pipework configuration, diameters, invert levels). This is to ensure that the proposed surface water drainage does not clash with existing pipework, in terms of levels.	Inverts of foul drainage added, the proposed surface water run is deep than the existing foul drainage so there is no clash	Noted. Comment closed.	CLOSED	
18.			Driveway – please confirm that the driveway and any other hardstandings are not being reconstructed. If reconstruction is proposed, then full details will be required and flows would need to be attenuated to provide betterment/water treatment considered.	No plans to reconstruct, other than make good once the new surface water system has been installed	Noted. Comment closed.	CLOSED	
19.			The proposal for two road gullies at the end of the driveway before it meets West Walberton Lane is noted. Whilst it is appreciated that the surface water runoff from the existing driveway discharges onto the public road, WSCC will still need to agree this arrangement. Please provide evidence of this approval.	WSCC have approved the connection and arrangement of the surface water drainage, refer to email	Noted but see comment no.5. Comment closed.	CLOSED	
20.			Proposed manhole SW MH 02.00 may be located in public highway. Please provide evidence that this is acceptable to WSCC.	This has been moved to the end of the drive	Noted but see comment no.5. Comment closed.	CLOSED	
21.			The proposed road gully directly east of MH SW 02.00 is connecting against the flow in the pipeline and will need to be reconfigured.	This has been resolved with a standard 450 dia radius on the outlet pipe so that the PPIC can be oriented to have the gullies coming in the side	Noted but see comment no.5. Comment closed.	CLOSED	
22.			Specify proposed discharge rate on drainage layout plan.	Added to plan	Noted. Comment closed.	CLOSED	
23.			Flows to be restricted to 0.5 l/s for all storm events.	Noted, maximum rate for the 1:100+45% storm is 0.5l/s	Noted. Comment closed.	CLOSED	

24.					Upstream of SW MH 01.00, where there are rodding eye arrangements. Please either replace this arrangement with new manholes at the points of redirection or show the rodding eye arrangement more clearly ie. indicate the pipes downstream of the RWP's connecting just downstream of the rodding points via oblique 45 degree junctions.	RE moved further away from point of connection	Noted. Comment closed.
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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.

From: Nicola Oktay on behalf of Planning.Responses
Sent: 15 September 2025 11:13
To: Planning Scanning
Subject: FW: Planning Re-Consultation on: WA/11/25/DOC
Attachments: WA-11-25-DOC - Snetterton Comment Tracker 2 of 2.docx; WA-11-25-DOC - Snetterton 1 of 2.docx

Drainage Engineers response

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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



From: Paul Cann <Paul.Cann@arun.gov.uk>
Sent: 12 September 2025 10:56
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Cc: Sarah Burrow <Sarah.Burrow@arun.gov.uk>; Hebe Smith <Hebe.Smith@arun.gov.uk>
Subject: RE: Planning Re-Consultation on: WA/11/25/DOC

Please find enclosed my consultation, an objection.

Regards

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Principal Drainage Engineer, Coastal Engineers and Flood Prevention

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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



From: Planning.Responses <Planning.Responses@arun.gov.uk>
Sent: Tuesday, July 15, 2025 10:18:29 AM (UTC+00:00) Monrovia, Reykjavik

To: Land Drainage <Land.Drainage@arun.gov.uk>
Subject: Planning Re-Consultation on: WA/11/25/DOC

To: **Engineers (Drainage)**

NOTIFICATION FROM ARUN DISTRICT COUNCIL

TOWN AND COUNTRY PLANNING ACT 1990

Application No:	WA/11/25/DOC
Registered:	6th February 2025
Site Address:	Snetterton West Walberton Lane Walberton BN18 0QS
Grid Reference:	496455 106279
Category:	Discharge of Condi
Description of Works:	Approval of details reserved by condition imposed under WA/46/22/HH relating to condition 3-surface water drainage.

I am able to inform you that I have received an amendment to the above application dated 14th July 2025 relating to: Substitute MH Storage Documents, Drainage Plans and Comments.

If you should wish to make further representations as a result of this amendment, please make any further comment by **29th July 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

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Email: hebe.smith@arun.gov.uk

PLRECON_DOC (ODB) 2020