

Engineers Comments Regarding Surface Water Drainage

Application Reference:	A/44/26/PL	Reviewer Reference:	ADC/EXT5/AF
Planning Officer:	Neil Crowther	Date of Review:	26/08/2026
Site Name:	Former Shrublands Nursery Roundstone Nursery Angmering BN13 4AT		
Application Description:	Retention of 40 No dwellings (after demolition of previous buildings) and associated operations (resubmission following A/115/25/PL). This application is in CIL Zone 2 and is CIL Liable as new dwellings.		
Assessment Number:	4		

Policy and Guidance Information	
Arun District Council Surface Water Drainage Guidance (including design checklists) - 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/ Arun District Council Land Drainage Byelaws - https://www.arun.gov.uk/byelaws/ Arun District Council surface water pre-commencement conditions - https://www.arun.gov.uk/planning-pre-commencement-conditions The National Standards for 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	No objection subject to condition
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References
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' [NsTS] 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. The NsTS have been superseded by the National Standards for Sustainable Drainage Systems [NSfS] from 19 June 2025. This consultation has been primarily informed by the NSfS and The SuDS Manual.

Summary

This summary highlights if critical items aligning with each of the standards have been met. Critical items are highlighted in **bold** on our surface water drainage design checklist (linked above). A failure to address these will likely result in an **objection** to an objection to a full or reserved matters planning application.

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, or the provision of other important infrastructure to satisfy the NSfS set out below.

A full written explanation of the assessment and response is given in the consultation comments to the planning officer.

Standard	Assessment	Response
1. Runoff destination	Compliant	No Objection
2. Interception drainage	Compliant	No Objection
3. Extreme Rainfall and Flooding	Compliant	No Objection
4. Water Quality	Compliant	No Objection
5. Amenity	Insufficient	No Objection
6. Biodiversity	Insufficient	No Objection
7. Construction, operation, maintenance, decommissioning and structural integrity	Compliant	No Objection subject to condition

Reviewed Plans

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

- Drainage Construction Details (Sheet 2) 21-254-502 Rev E
- Drainage Construction Details (Sheet 4) 21-254-504 Rev D
- BRE365 vs Infiltration Features 21-254-700 Rev A
- Drainage (Sheet 1) 21-254-701 Rev D
- Drainage (Sheet 2) 21-254-702 Rev D
- Drainage Alteration Works 21-254-703 Rev D
- SW Catchment Plan 21-254-704 Rev A
- Block plan of the site BLOC_001 Rev A
- The location plan LOC-001 Rev A
- Site layout PL-101 Rev P2
- Site Materials Plan PL-102 Rev P2
- Landscape Masterplan PR123161 10
- Soft Landscaping Proposals PR123161 11_A
- Soft Landscaping Proposals PR123161 11_A

- Soft Landscape Proposals PR1231611 11_A
- Soft Landscape Proposals PR123161 11_A
- Hard Landscape Proposals PR123161 12_A
- Hard Landscape Proposals PR123161 12_A
- FRA AND DRAINAGE STRATEGY
- REMEDIATION METHOD STATEMENT AND FINAL GARDEN VERIFICATION REPORT
- Landscape Management and Maintenance Plan Ref: PR123161 Man 16/02/2021
- Landscape Management and Maintenance Plan - Draft not for Submission 16/02/2021
- Soft Landscape Specification February 2021
- Soft Landscape Specification - Draft not for submission February 2021
- Archaeological Desk-based Assessment
- Archaeological evaluation 8th April 2022
- Factual Groundwater Monitoring Report
- Phase I Desk Study, Site Reconnaissance & Phase II Site Investigation Report Ref: LP2386 22.02.2021 Part 1
- Phase I Desk Study, Site Reconnaissance & Phase II Site Investigation Report Ref: LP2386 22.02.2021 Part 2
- Flood risk assessment and drainage strategy April 2026
- Topographic Survey - Sheet 1 - Dec 2019
- Topographic Survey - Sheet 2 Dec 2019
- Topographic Survey - Sheet 3 Dec 2019
- Tree Layout Plan NJCL 645_01_020321 02.03.2021
- 21-254-701 Rev E Drainage Sheet 1
- 21-254-702 Rev E Drainage Sheet 2
- 21-254-703 Rev E Drainage Alteration Works
- Revised Appendix F, part 1 to the FRA
- Revised Appendix F, part 2 to the FRA
- Applicant Response to Drainage Consultation 16.06.26
- 21-254-101C Levels Sheet 1
- 21-254-102C Levels Sheet 2
- 21-254-201 External Works Sheet 1
- 21-254-202A External Works Sheet 2
- 21-254-305A MH Schedule_FW.
- 21-254-311D Permeable Paving Sheet 1
- 21-254-312D Permeable Paving Sheet 2
- 21-254-501 Drainage Construction Details Sheet 1
- 21-254-511B Construction Makeup Details Sheet 1
- 21-254-601A Highway Long Sections
- 21-254-602 Permeable Paving Cross Sections
- Letter dated 16 July 2026 Response to Comments.
- Drainage Maintenance and Management Plan dated July 2026
- **21-254-702H Drainage Sheet 2**
- **21-254-703F Drainage Alteration Works**
- **21-254-01D Drainage Maintenance and Management Plan**

Plans/Documents to be listed as approved

The following plans/documents should be listed as approved:

- 21-254-01D Drainage Maintenance and Management Plan
- 21-254-101C Levels Sheet 1
- 21-254-102C Levels Sheet 2
- 21-254-201 External Works Sheet 1
- 21-254-202A External Works Sheet 2
- 21-254-304B MH Schedules SW
- 21-254-305A MH Schedules FW
- 21-254-311D Permeable Paving Sheet 1
- 21-254-312D Permeable Paving Sheet 2
- 21-254-501 Drainage Construction Details Sheet 1
- 21-254-502E Drainage Construction Details Sheet 2
- 21-254-504D Drainage Constriction Details Sheet 4
- 21-254-511B Construction Makeup Details Sheet 1
- 21-254-601A Highway Long Sections
- 21-254-602 Permeable Paving Cross Sections
- 21-254-701E Drainage Sheet 1
- 21-254-702H Drainage Sheet 2
- 21-254-703F Drainage Alteration Works

Consultation comments to the planning officer

0. General

- 0.1. The application is a major residential development which is already constructed and in use. The designs set out remedial works to address the deficiencies in the drainage system.
- 0.2. We note the refusal of discharge of conditions application (Condition 28) under reference A/57/24/DOC and the subsequent Planning Appeal under reference APP/C3810/W/24/3349316 which was dismissed.
- 0.3. We also note the previous planning refusal of the similar recent application under reference A/115/25/PL and the comments made by WSCC LLFA and ourselves at that time.
- 0.4. Both previous applications were refused due to inadequate ground investigation to support the drainage design specifically the proposed soakaways. New installation testing and groundwater monitoring is presented with this current application and is discussed below.
- 0.5. We note the comments from WSCC LLFA on this application dated 14 May 2026 which recommends conditions. The LLFA should be re-consulted in the context of not applying planning conditions.
- 0.6. The applicant's design and modelling approach to the remedial works is to connect the existing soakaways and permeable paving together via overflows (piped connections to distribution tanks in the permeable pavement stone layer) such that surface water will drain to the central soakaway (SA1) and fill the soakaway (and a shallow open basin above) prior to flooding from any other part of the linked system. A network drainage model is presented which effectively conveys the entire development's drained area to SA1 and relies entirely upon the infiltration through the base of SA1 and the storage within SA1 (and the basin above) to serve the development. The infiltration and storage provided by the other soakaways and the permeable paving and associated infiltration trenches is disregarded. This is a robust approach and no further hydraulic modelling is required.

- 0.7. The infiltration testing which supports the calculations for SA1 were undertaken at the end of April (2025). BRE DG365 (2016 revision) recommends that testing should be undertaken under worst case conditions (in winter or spring). Our position is that since the groundwater levels during a very wet February (2026) are known to not rise above a metre distance of the base of the proposed soakaway, and the method includes three fills to replicate saturated conditions, that the testing is acceptable with a suitable factor of safety applied in accordance with NSfS clause 3.17. This has now been incorporated and is acceptable.
- 0.8. We understand there will not be the opportunity to attach planning conditions to this application and therefore we have reviewed the designs in the context of no planning conditions and therefore must include all the technical design and details which would be required at discharge of conditions stage. This therefore adds additional comments beyond those which were raised in our previous advice.
- 0.9. We have reviewed the letter report dated 16 July 2026 with responses to our comments within, together with the drawing package provided.

1. Runoff destination

- 1.1. Water butts are noted in the Drainage Statement report to be retrofit at the existing properties and are shown on all properties. The product specification is noted as Wicks 210 litres water butts, which is acceptable.
- 1.2. The groundwater monitoring within the Southern Testing report indicates peak winter grounder around 19th-24th February 2026 with the highest reading at 6.07m above Ordnance Datum (AOD) at BH02 on 19th February. The readings are shown on graphs as continuous data from 30 September 2025 to 2 April 2026 and the dataset is acceptable.
- 1.3. The lowest soakaway base has been set at 7.07m AOD and we are satisfied that an additional buffer is not required to maintain a vertical discharge of 1 metre above the high ground water level.
- 1.4. Soakage testing from Spring 2025 is now relied upon to inform the remedial works. Testing was undertaken within as-built trench soakaways. For the SA1 location and we note the depths and fill depths are such that the testing is below the existing soakaway construction.
- 1.5. The in-situ testing and groundwater monitoring demonstrate infiltration in the locations of SA3 and SA4 is viable. Infiltration testing in locations around SA2 show varying infiltration rates along the length but also shows infiltration to be viable. We note these soakaways are currently not included in the hydraulic calculations and the site is not reliant upon their infiltration potential, as SA1 will provide the infiltration solution. The Network model provided demonstrates the entire site can drain to SA1 and therefore the evidence to demonstrate the other soakaways function in their own right for the design storm is not necessary. The evidence provided is sufficient to demonstrate the other soakaways would not become semi-permanently full.
- 1.6. We are satisfied that the current groundwater monitoring and infiltration testing evidences that the site can be drained by discharge to ground via soakaways and that the location of SA1 provides acceptable infiltration characteristics.

2. Interception drainage

- 2.1. The design achieves interception drainage through infiltration to ground.

3. Extreme rainfall and flooding

- 3.1. The remedial designs are accompanied by drainage calculations which show that based upon the parameters and infiltration rates used, the system does not flood during the design storm.
- 3.2. The infiltration testing for soakaway SA1 includes a range of results and the designer has correctly selected the worst case, being 8.13×10^{-6} . Modelling is now provided with a factor of safety applied to the soakaway design of 5, which is acceptable for the circumstances. As a base draining

soakaway the correct design standard is Ciria 156 for which the NSfS requires this level of FoS. It is noted that minor flooding at the head of one of the runs (pipe ref 7.000) is predicted during the 15 minute summer design storm. This is acceptable in the basis of omitted chambers and pipes extant in the design together with the infiltration potential in the permeable paving and other soakaways which is omitted following a precautionary approach.

- 3.3. The network model includes the permeable pavement together with SA2, SA3 and SA4 without any information coefficient. SA2, SA3 and SA4 are also modelled to have almost no volume capacity (1%). The calculations demonstrate that flows from the catchments draining to these soakaways can be conveyed to SA1. The infiltration potential from SA2, SA3, SA4 and the permeable paving therefore becomes an additional factor of safety.
- 3.4. A technical design has been provided including finished levels plans, construction details, drainage schedules and an update to the detailed Management and Maintenance Plan. The technical design is acceptable and the design documents are noted above in the list of approved documents.

4. Water quality

- 4.1. The mitigation provided by the permeable paving is sufficient to mitigate the risk of pollution from the development.

5. Amenity

- 5.1. There is limited scope to meaningfully increase the amenity value beyond the previously consented scheme and in this circumstance we do not require detailed assessment of the amenity multifunctional benefits of the scheme.

6. Biodiversity

- 6.1. There is limited scope to meaningfully increase the biodiversity value beyond the previously consented scheme and in this circumstance we do not require detailed assessment of the biodiversity benefits of the scheme.

7. Construction, operation, maintenance, decommissioning and structural integrity

- 7.1. There is no significant concern regarding the construction of the SuDS design. The ground investigation report notes low risk of dissolution of the chalk stratum.
- 7.2. A detailed Management and Maintenance Plan is submitted and is acceptable.
- 7.3. The works will alter the existing works and verification will be necessary which can be the subject of a planning condition.

8. Suggested conditions / Overcoming the objection

- 8.1. No planning conditions for further technical design are necessary.
- 8.2. The following condition is proposed to ensure the works are installed in accordance with the technical design and that verification of the completed works is undertaken in a timely manner.

Immediately following implementation of the approved surface water drainage system and within six months of the date of planning consent, the developer/applicant shall provide the local planning authority with as-built drawings of the implemented scheme together with a completion report prepared by an independent engineer that confirms that the scheme was built in accordance with the approved drawings and is fit for purpose. The scheme shall thereafter be maintained in perpetuity.

Reason: To ensure that the proposed development is satisfactorily drained and in accordance with policies W SP1, W DM1, W DM2 and W DM3 of the Arun Local Plan.

Drainage Impact on Other Planning Matters

This application has been assessed with regards to surface water drainage design only, together with land drainage aspects if deemed necessary.

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, River Arun internal drainage board, groundwater source protection zones)
- ☐ Southern Water (foul drainage and surface water disposal to public sewer network/groundwater source protection zones)
- ☐ Portsmouth Water (groundwater source protection zones)
- ☒ **Lead local flood authority (all other sources of flooding and ordinary watercourses)**
- ☐ Other: Specify
- ☐ None

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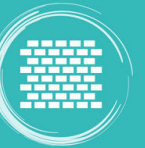
Improving the wellbeing of Arun



Delivering the right homes in the right places



Supporting our environment to support us



Fulfilling Arun's economic potential



Our core foundations



From: Paul Cann <Paul.Cann@arun.gov.uk>
Sent: 26 August 2026 13:16
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Cc: Land Drainage <Land.Drainage@arun.gov.uk>; Simon Davis <Simon.Davis@arun.gov.uk>; Neil Crowther <Neil.Crowther@arun.gov.uk>
Subject: RE: Planning Consultation on: A/44/26/PL

Please find enclosed our consultants response, recommending approval, subject to a verification condition being applied.

Regards

Paul Cann
Principal Drainage Engineer, Coastal Engineers and Flood Prevention

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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: Planning.Responses <Planning.Responses@arun.gov.uk>
Sent: 25 August 2026 16:49

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To: Land Drainage <Land.Drainage@arun.gov.uk>
Subject: Planning Consultation on: A/44/26/PL

To: **Engineers (Drainage)**

NOTIFICATION FROM ARUN DISTRICT COUNCIL

TOWN AND COUNTRY PLANNING ACT 1990

Application No:	A/44/26/PL
Registered:	28th April 2026
Site Address:	Former Shrublands Nursery Roundstone Nursery Angmering BN13 4AT
Grid Reference:	507314 103492
Category:	Plan Applicat'n
Description of Works:	Retention of 40 No dwellings (after demolition of previous buildings) and associated operations (resubmission following A/115/25/PL). This application is in CIL Zone 2 and is CIL Liable as new dwellings .

I am able to inform you that I have received an amendment to the above application dated 18th August 2026 relating to:- Substitute drainage plans

If you should wish to make further representations as a result of this amendment, please make any further comment by **9th September 2026**.

[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

Mr N Crowther

Planning Case Officer- Arun District Council

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Email: neil.crowther@arun.gov.uk

PLRECON (ODB) 2018