

Engineers Comments Regarding Surface Water Drainage

Application Reference:	WA/50/25/DOC	Reviewer Reference:	ADC/EXT4
Planning Officer:	Amber Willard	Date of Review:	11/12/202
Site Name:	Fleurie Nursery Lake Lane Barnham PO22 0AL		
Application Description:	Approval of details reserved by condition imposed under reference WA/75/20/PL relating to condition number 3 - surface water drainage scheme, condition number 4 - surface water drainage system and condition number 7 - surface water drainage scheme.		
Assessment Number:	2 of 2		

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

Condition 3 – Surface water drainage scheme: **Objection**

Condition 4 – Surface water drainage system: **Objection**

Condition 7 – Surface water drainage scheme: **Objection**

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The NsTS have been superseded by the National Standards for Sustainable Drainage Systems [NSfS] from 19 June 2025.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.

Reviewed Plans

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

- Phase 1 Drainage Plan 1120-012b August 2021
- Drainage SE Glass exceedance Bund area and level 23.11.23
- Drawing #2.North area - route of watercourse ditches and culverts
- Drawing #3.North area - 8.5m contour containment
- Drainage Pipe routes 23.11.23
- Drainage Invert levels & pipe details 23.11.23
- East Glass exceedance Bund area and level 5.1.25
- Headwalls
- Outfall North and South, uploaded in 2 parts on public planning portal
- Drainage statement referring to WA/75/22/DOC
- As-built details of drainage and attenuation system. 23.11.23
- Flood risk assessment for proposed greenhouse structures
- Condition 7 Maintenance and operation
- Drain down pump data sheet
- Drain down sump
- Drain installation details
- E exceedance
- Flap_valves
- Headwall data sheet
- Invert levels 1-5, uploaded in 5 parts on the public planning portal
- Maintenance and operation summary
- Layout
- N E SW Orifice plate outlet detail
- N exceedance
- Outfall construction detail v3
- Outfall construction notes
- SE exceedance
- SE Orifice plate outlet detail
- Strainer data
- SW exceedance
- Tank-installation-manual-
- EMAIL 22.10.25 Drainage sub plans

Condition wording

Condition 3 is worded as follows:

"Development shall not be brought into use until full details of the proposed surface water drainage scheme have been submitted to and approved in writing by the Local Planning Authority. The design should follow the hierarchy of preference for different types of surface water drainage disposal systems as set out in Approved Document H of the Building Regulations, and the recommendations of the SuDS Manual produced by CIRIA. Winter groundwater monitoring to establish highest annual ground water levels and winter Percolation testing to BRE 365, or similar approved, will be required to support the design of any Infiltration drainage. No building / No part of the extended building shall be occupied until the complete

surface water drainage system serving the property has been implemented in accordance with the agreed details and the details so agreed shall be maintained in good working order in perpetuity.

Reason: To ensure that the proposed development is satisfactorily drained in accordance with policies W SP1, W DM1, W DM2 and W DM3 of the Arun Local Plan. This is required to be a pre-commencement condition because it is necessary to implement the surface water drainage system prior to commencing any building works."

Condition 4 is worded as follows:

"Immediately following implementation of the approved surface water drainage system and prior to occupation of any part of the development, 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 drawing/s and is fit for purpose. The scheme shall thereafter be maintained in perpetuity.

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

Condition 7 is worded as follows:

"Development shall not be brought into use until a surface water drainage scheme for the site, based on sustainable drainage principles and an assessment of the hydrological and hydro geological context of the development, has been submitted to and approved in writing by the local planning authority. The scheme shall subsequently be implemented in accordance with the approved details before the development is completed. The scheme shall also include details of how the scheme shall be maintained and managed after completion.

Reason: To prevent the increased risk of flooding/, to improve and protect water quality/, improve habitat and amenity/, and ensure future maintenance of these/ in accordance with Arun Local Plan Policies WSP 1, W DM1, W DM2 & W DM3. It is considered necessary for this to be a precommencement condition because the site drainage needs to be approved and implemented before the dwellings are occupied."

Consultation comments to the planning officer

1. Please see the attached comment tracker for detailed comments relating to the submission.
2. **The information provide is unclear and insufficient level of detail to enable a full review of the drainage proposals. Without clear and detailed information it is not possible to assess the application as to whether the proposals could inadvertently increase the risk of surface water flooding both on and offsite.**

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

Application Reference: WA/50/25/DOC Site Name: Fleurie Nursery Lake Lane Barnham PO22 0AL	Initial Issue Date: 11/12/2025 Issue Date: 11/12/2025 Reviewer Reference: ADC/EXT4
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Summary and Recommendation:

Condition 3: **Objection**

Condition 4: **Objection**

Condition 7: **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:	04/09/2025	16/10/2025	11/12/2025		
Condition Number: 3					
Comment Number					
1.	The current level of detail provided appears to only be very outline schematic proposal in nature. Full detailed design proposals of the layout, which should include construction details of the attenuation tanks, pipework, bedding details, drainage inspection chambers, manholes, manhole schedules etc.. should be provided	To some extent this is covered in the following sections, which add detail and are specific to the points raised. We have assumed this to be the case since there is overlap between Point 1 and Point 4 in particular. We hope this is satisfactory, and if not would request that a split between them be proposed that we can then work to. In addition where some items are generic type, for example plastic inspection chambers made up of a base unit, risers and lid, and where there	The information provided in the resubmission is unclear and insufficient. Detailed designs with supporting design construction details with clear cross references to proposals need to be provided. We would refer you to the Arun District Council website for the designer checklist on the minimum information required to be submitted in support of the discharge of the surface water drainage conditions https://www.arun.gov.uk/designer-checklists		

		are multiple manufacturers of such items; we have merely detailed the main requirements and stated that they should be installed to manufacturer's' installation guidelines, which vary slightly from product to product. Different contractors prefer different products and it is best to leave them free to choose the one that they prefer.			
2.	The information provides is unclear and we would request that the applicant provides a clear drainage statement providing background information and clearly present proposals and design intent for the drainage system	See attached document "System outline". See also "Layout" drawing for introduction. See also "Drain down sump" drawing.	The document "system outline" appears to be missing from the submission documents. Please provide this		
3.	The long sections provided are too basic and unclear and do not appear to provide any details on chamber locations, depths of chambers etc.. nor is there a clear correlation to the drainage layouts	e presume that this relates to drawing "Invert levels", and have added additional items that hopefully render it clearer. If it refers to a different drawing please identify it for us. This drawing has now been expanded out into 5 drawings for clarity. Pipe and invert #1 - overall site layout naming the blocks as detailed in #2-5. Pipe	As per item 1, the information submitted is still insufficient, please refer to the Arun District Council website for the designer checklist on the minimum information required to be submitted in support of the discharge of the surface water drainage conditions https://www.arun.gov.uk/designer-checklists		

		and invert #2 - North greenhouses (which are the only ones to feed the north outfall) Pipe and invert #3 - South east greenhouses (which feed the south outfall) Pipe and invert #4 - East greenhouses (which feed the south outfall) Pipe and invert #5 - South west greenhouses (which feed the south outfall) See also "layout" drawing. See also "Drain installation details" drawing.			
4.	The drainage layouts provide are unclear. Detailed external drainage layouts which should include clear information on pipe diameters, chamber depths and drainage chamber and pipe number references should be provided to allow a cross reference to the calculations.	Diameter / depths etc. As far as we are aware all this information is submitted, but we have tried to make it clearer and split drawings, add text etc. to assist in this. This is all contained on the "Pipe and invert" drawings. Inspection chambers. The system (other than the discharges to outfalls) is a flooded one, thus the height difference from the greenhouse gutter to the attenuation tanks provided the hydraulic gradient to allow for gravity operation. As such it is in general undesirable to have inspection chambers	Thank you and noted on the reasoning for the omission of chambers at certain key points. However the information provided is still unclear. As per point 1 we would refer to you the ADC checklist for the minimum standard of information required to be submitted.		

		since these require to be sealed. Consequently these are only provided in limited locations: for the drain down sump / pumps, for the discharge from the orifice plates, and for the connection of the 3 orifice plate discharges to the southern outfall. This is normal in commercial greenhouse installations, which are of course unadopted drainage systems, and it is common to have drain pipe runs in excess of 500m with no ICs. Experience over decades on very many sites dictates that this is not a problem. The purpose of an IC is generally accepted to be for (a) inspection, and (b) maintenance. Inspection is not required in this manner since it is evident from the operation of the system, thus if there is a blockage along the main collector run it would be evidenced by overflow from the gutters up to that point, and if it were after the collector then all gutters would manifest it. Proper operation is evidenced by			
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		visible flow into the attenuation tanks. Experience and reason also dictate that for a large bore pipes with solely clean water in large volumes going along them blockages are not likely to occur. Self propelled CCTV inspection devices can reach 200m from entry, and none of our runs are as long as this so this is not a problem if required.			
5	The exceedance flow layouts are unclear. Further information is required on areas of temporary ponding, flow directional arrows etc...	The exceedance in this case is to cater for (a) an event greater than the system capacity (which makes it greater than the 1:100 years event plus 40% for CCA), and (b) catastrophic failure of 1 of the tanks. It is based on impoundment, using the natural levels and earth bunds. This approach has been acceptable to date. The volume required is based on that of the largest tank in the group, and the volume available by the design to achieve this is simply the depth over the area (using battered banks) minus the footprint of the remaining tanks. The	The design and exceedance flow layouts need to be based on either proposed level and or consideration to existing topographic level information as well. Currently the drawings provided appear to have very limited level information provided. Without this information it's unclear on the final direction of exceedance flows		

		volumes are now shown on the drawings. The required alterations to the exceedance drawings have been made, see drawings "SE exceedance", "SW exceedance", "E exceedance" and "N exceedance".			
6.	The headwall outfall details provided are insufficient and do not provide any construction details on specific type of headwall, bedding details, interface with the existing earthworks etc..	Construction details for the headwall as agreed as part of the Ordinary Discharge Consent are enclosed, see drawings "Outfall North", "Outfall South", "Outfall construction v2" and also "Construction Notes".	Thank you noted and closed		
7	Please provide details on existing trees and any proposed planting to ensure that the proposed drainage does not conflict with existing//proposed planting	There are no trees on site that are close enough to be relevant to this proposal.	From review of satellite images there appears to be trees along the watercourse as well as northern side of Lake Lane which potential proposals could impact with existing trees or their respective root protection areas. Please provide a clear topographic survey clearly identifying existing trees and overlay with the drainage proposal		
8	Please provide construction details for orifice flow controls. The construction details should clearly show how these are fitted within the flow control chamber and	"See attached drawing "Orifice plate outlet detail". The installation is straightforward, with a tank connector from the attenuation tank connected to a pipe (all pipework	Thank you Please provide specific level information on this orifice plate detail. I.E cover level, invert level etc....		

	relationship with drainage network	75mm PVC glued or threaded joints) passing through an isolating valve, then a T piece for connection to draindown valve (maintenance) and thence t a strainer (filter) and to the T where the flow will normally exit through the lower orifice plate, but as levels in the tank rise to above the upper orifice plate then through this too. Orifice plates are stainless steel with EPDM gaskets (both sides) and clamped in position by the flanges it is mounted between, with coupling bolts to hold it in situ. The outlet from the plates goes to an inspection pit, with low level exit (110mm dia) to the discharge outfall."			
9			It appears in some instances that both the bunds and tanks may impede on maintenance easements associated with the existing watercourse. Please provide a clear plan indicating required 3m easements to existing watercourse within the site.		
Condition Number: 4					
Comment Number					

1.	The verification statement provided is insufficient to address this condition. Please refer to the Arun District Council Checklist on what items should be provided as a minimum to seek to satisfy this condition	In view of the comments received, we ask that Condition 3 is resolved before further verification information is provided	Information awaited		
2.	Please provide as-built drainage information including a CCTV survey of the main drainage runs installed		Information awaited		
Condition Number: 7					
Comment Number					
1.	The current maintenance and management plan should be a "standalone" document and prepared in a format which is available for any management company or individual responsible for maintaining this system	See document "Maintenance and operation summary" and associated items now added to it (see list at end of it)." We also note that there are additional requirements which came in with the 2024/5 change, which would in this case be retrospective, but additionally many of which really aren't relevant or helpful, for example pollution protocol to be included in maintenance. The site already has protocols for pollution in place under other	The maintenance plan will need to be updated with detailed information following items in condition 3 being adequately addressed.		

		regulations, and (a) it is not really likely that in the event of a pollution incident someone would look in the drainage maintenance document rather than the pollution incident action guidance, and (b) duplicate (redundant) information has a habit of being missed when systems are updated, and could end up with the 2 duplicates differing from each other which is not helpful (and this concept of redundancy has been established in planning, for example Circular 11/95 states that "a condition which duplicates the effect of other controls will normally be unnecessary).			
2.	The maintenance plan should include all relevant detailed design drawings for ease of reference.		As per item 1		
3.	The maintenance plan should include manufacturers details		As per item 1		

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: Breezie Allwright
Sent: 16 December 2025 09:29
To: Planning Scanning
Subject: Fw: Planning Re-Consultation on: WA/50/25/DOC
Attachments: WA-50-25-DOC – Fleurie Nursery.docx

WA/50/25/DOC
PL- consultation- drainage engineer response

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Please note my working days are Monday, Tuesday, Wednesday and Friday.

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



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: Sarah Burrow <Sarah.Burrow@arun.gov.uk>
Sent: 15 December 2025 10:50
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Cc: Land Drainage <Land.Drainage@arun.gov.uk>; Amber Willard <Amber.Willard@arun.gov.uk>
Subject: RE: Planning Re-Consultation on: WA/50/25/DOC

Hi Amber,
Find the consultation – 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

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Delivering the right homes in the right places

Supporting our environment to support us

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From: Planning.Responses <Planning.Responses@arun.gov.uk>
Sent: 22 October 2025 12:34
To: Land Drainage <Land.Drainage@arun.gov.uk>
Subject: Planning Re-Consultation on: WA/50/25/DOC

To: **Engineers (Drainage)**

NOTIFICATION FROM ARUN DISTRICT COUNCIL
TOWN AND COUNTRY PLANNING ACT 1990

Application No:	WA/50/25/DOC
Registered:	20th June 2025
Site Address:	Fleurie Nursery Lake Lane Barnham PO22 0AL
Grid Reference:	497622 104682
Category:	Discharge of Condi
Description of Works:	Approval of details reserved by condition imposed under reference WA/75/20/PL relating to condition number 3 - surface water drainage scheme, condition number 4 - surface water drainage system and condition number 7 - surface water drainage scheme.

I am able to inform you that I have received an amendment to the above application dated 22nd October 2025 relating to: Additional drainage information

If you should wish to make further representations as a result of this amendment, please make any further comment by **5th November 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

Amber Willard

Planning Case Officer-Arun District Council

Telephone: 01903 737942

Email: amber.willard@arun.gov.uk

PLRECON_DOC (ODB) 2020