

## Engineers Comments Regarding Surface Water Drainage

|                                 |                                                                                                                                               |                            |                   |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------|
| <b>Application Reference:</b>   | P/59/25/DOC                                                                                                                                   | <b>Reviewer Reference:</b> | ADC/EXT2/D2134/74 |
| <b>Planning Officer:</b>        | Amber Willard                                                                                                                                 | <b>Date of Review:</b>     | 08.08.2025        |
| <b>Site Name:</b>               | Sefter Farm Pagham Road Pagham PO21 3PX                                                                                                       |                            |                   |
| <b>Application Description:</b> | Approval of details reserved by condition imposed under reference P/117/21/PL relating to condition number 7 - surface water drainage scheme. |                            |                   |
| <b>Assessment Number:</b>       | 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>

### Response

Condition 7: **Further information required**

### 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>Compliant</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>Compliant</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>Compliant</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>Insufficient</b></p> <p>Check for half drain vs solid handling opening required.</p> |

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                     |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                   | rates must be restricted to QBAR or 2 l/s/ha, depending on whichever is higher.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                     |
|                                   | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Compliant</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>Insufficient</b><br><br>Check for half drain vs solid handling opening required. |
| <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> <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</p>                                                        | <b>Compliant</b>                                                                    |

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|                                           | <p>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>Compliant</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>Compliant</b>    |
| <b>Biodiversity and amenity benefits.</b> | The surface water drainage design must provide biodiversity and amenity benefits.                                                                                                                                                                                                                                                                                                                                                                                       | <b>Compliant</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><u>cannot</u></b> be avoided.</p>                                                                                                                                         | <b>Not supplied</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:
- ☐ 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.

#### **Condition 7 wording:**

*"Development shall not commence, other than works of site survey and investigation, 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 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."*

#### **Documents**

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

- Sefter Farm East Surface Water Drainage Statement v1.0
- 101 Existing Site Layout
- 102 Existing Conveyance Channel and Existing Conveyance Channel
- 201 Site Layout - Proposed Drainage - Sheet 1
- 202 Site Layout - Proposed Drainage - Sheet 2
- 203 Site Layout - Proposed Drainage - Sheet 3
- 301 Site Layout - Proposed Levels - Sheet 1
- 302 Site Layout - Proposed Levels - Sheet 2
- 401 Site Layout - Surface Finishes - Sheet 1
- 402 Site Layout - Surface Finishes - Sheet 2

- 311 Proposed Site Sections - Sheet 1
- 312 Proposed Site Sections - Sheet 2
- 501 Construction Details - Surface Finishes
- 511 Construction Details – Drainage
- 512 Construction Details – Headwalls
- 251 Proposed Realigned Coveyance Channel

**Comments**

Please refer to comments tracker.

|                                                                                                        |                                                                                                                        |
|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Application Reference: P/59/25/DOC</b><br><b>Site Name: Sefter Farm Pagham Road Pagham PO21 3PX</b> | <b>Initial Issue Date: 08.08.2025</b><br><b>Issue Date: 08.08.2025</b><br><b>Reviewer Reference: ADC/EXT2/D2134/74</b> |
|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|

**Summary and Recommendation:**

Condition 7: **Further information required**

*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 |  |  |  |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--|--|--|
| <b>Date:</b>               | <b>08.08.2025</b>                                                                                                                                                                                                                                       |                   |  |  |  |
| <b>Condition Number: 7</b> |                                                                                                                                                                                                                                                         |                   |  |  |  |
| Comment Number             |                                                                                                                                                                                                                                                         |                   |  |  |  |
| 1.                         | Please provide a copy of FRA supplied at planning stage as this was not included in your submission. This is required to correlate conclusions and geotechnical testing.                                                                                |                   |  |  |  |
| 2.                         | Geotechnical evidence for groundwater monitoring between Sept 24 – Mar 24 covers a full winter period, is accepted. We concur that infiltration techniques are unsuitable.                                                                              |                   |  |  |  |
| 3.                         | The drainage statement include 'proposed site layout and drained areas plan 03' which is accepted.<br><br>However for completeness please provide similar drawing denoting the 'existing layout' and impermeable/semi-permeable areas.                  |                   |  |  |  |
| 4.                         | The QBAR rates are representative of the developed area being positively drained and are accepted.                                                                                                                                                      |                   |  |  |  |
|                            | <b>LPA Policy:</b>                                                                                                                                                                                                                                      |                   |  |  |  |
| 5.                         | Engineering drawing must show 3.0m buffer zone for all existing watercourses, including conveyance channels to consider access for maintenance and development impacts.                                                                                 |                   |  |  |  |
|                            | <b>Flood Risk:</b>                                                                                                                                                                                                                                      |                   |  |  |  |
| 6.                         | FEH data highlights a significant upstream catchment of the order of 15.84km2 associated with the Main River. Does the FRA identify the risks or is the local topography/elevation such that there is no potential impacts to the site being inundated? |                   |  |  |  |
|                            | <b>General:</b>                                                                                                                                                                                                                                         |                   |  |  |  |

|     |                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| 7.  | The symphonic roof strategy is noted to be designed by others, please provide some further information to verify that there will be no connections and/or potential breach of this system which may inundate the other SW drainage networks.<br><br>Noting parts of this network will be 'above ground', how will this link to the reservoir tank? |  |  |  |  |
| 8.  | Noting the proximity to the Main River and aforementioned 'catchment', is there data in respect of the Main River peak water levels covered in the FRA and is there a potential risk of backing up/surcharge which may affect the conveyance channel outfall?                                                                                      |  |  |  |  |
| 9.  | Whilst the proposed yard and permeable parking are proposed to be laid very flat, the site sections nor surface finishes highlight any boundary kerbs/edging which may have a role in controlling run-off, please confirm.                                                                                                                         |  |  |  |  |
| 10. | Please provide supplier details/quotes for all flow control devices/sump requirements.                                                                                                                                                                                                                                                             |  |  |  |  |
| 11. | Permeable pavement construction details must be updated to qualify kerbs/edgings.                                                                                                                                                                                                                                                                  |  |  |  |  |
| 12. | Flow control manhole construction details are required.                                                                                                                                                                                                                                                                                            |  |  |  |  |
|     | <b>Landscaping:</b>                                                                                                                                                                                                                                                                                                                                |  |  |  |  |
| 13. | Please provide any detailing for proposed landscaping and/or planting, or advise otherwise if nothing is planned for the remaining soft areas.                                                                                                                                                                                                     |  |  |  |  |
|     | <b>Treatment:</b>                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |
| 14. | Whilst water quality is suitably covered in the report, this does not clarify the anticipated daily movements for the commercial yard and/or if vehicle washdown will occur. Higher use or other may require additional apparatus.                                                                                                                 |  |  |  |  |
| 15. | <b>Hydraulic Calculations:</b>                                                                                                                                                                                                                                                                                                                     |  |  |  |  |
| 16. | Whilst the calculation criteria is accepted, please provide a supporting node/pipe drawing (or extract from FLOW) to enable full review and verify inverts match the design.                                                                                                                                                                       |  |  |  |  |

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |
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|     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |
| 17. | Whilst we concur trickle flow rates can be accepted for permeable paving based systems, the potential risk of small solid handling openings must also be considered vs the half drain down times. This shall be reviewed where orifice sizes fall below 50mm as currently specified, however this may be mitigated 'by design' and maintenance strategy so please consider when providing further construction details of the flow controls. |  |  |  |  |
|     | <b>Maintenance:</b>                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |
| 18. | A maintenance report has been provided, however this requires further updates to comply with the PCENG4 Checklist.                                                                                                                                                                                                                                                                                                                           |  |  |  |  |
| 19. | A plan showing maintenance responsibility must be included within the maintenance manual. Plans are included where appropriate showing how SUDS features and watercourses are accessed for maintenance purposes.                                                                                                                                                                                                                             |  |  |  |  |
| 20. | The approved design drawings must be included in the document.                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |
| 21. | The report must ensure there are clear details of who to contact if the surface water drainage system is not functioning correctly.                                                                                                                                                                                                                                                                                                          |  |  |  |  |
| 22. | There is no action plan for dealing with accidental spillages of pollutants.                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |
| 23. | There is no advice provided as to what to do if alterations are to be made to the development or, works are to be carried out which may affect the surface water drainage system.                                                                                                                                                                                                                                                            |  |  |  |  |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |

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](mailto:land.drainage@arun.gov.uk).

**From:** Nicola Oktay on behalf of Planning.Responses  
**Sent:** 12 August 2025 09:59  
**To:** Planning Scanning  
**Subject:** FW: Planning Consultation on: P/59/25/DOC  
**Attachments:** P-59-25-DOC - Sefter Farm 1.docx; P-59-25-DOC - Sefter Farm Comment Tracker.docx

Engineers Drainage response

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

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To register to receive notifications 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:** Paul Cann <Paul.Cann@arun.gov.uk>  
**Sent:** 11 August 2025 12:19  
**To:** Planning.Responses <Planning.Responses@arun.gov.uk>  
**Cc:** Sarah Burrow <Sarah.Burrow@arun.gov.uk>; Amber Willard <Amber.Willard@arun.gov.uk>  
**Subject:** RE: Planning Consultation on: P/59/25/DOC

Please find enclosed our consultants response.

Regards

**Paul Cann**  
**Principal Drainage Engineer**, Coastal Engineers and Flood Prevention

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**E:** [paul.cann@arun.gov.uk](mailto:paul.cann@arun.gov.uk)

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**Our priorities...**

Improving the wellbeing of Arun

Delivering the right homes in the right places

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**From:** Planning.Responses <[Planning.Responses@arun.gov.uk](mailto:Planning.Responses@arun.gov.uk)>  
**Sent:** Friday, May 9, 2025 11:48:56 AM (UTC+00:00) Monrovia, Reykjavik  
**To:** Land Drainage <[Land.Drainage@arun.gov.uk](mailto:Land.Drainage@arun.gov.uk)>  
**Subject:** Planning Consultation on: P/59/25/DOC

To:      **Engineers (Drainage)**

**NOTIFICATION FROM ARUN DISTRICT COUNCIL**

**TOWN AND COUNTRY PLANNING ACT 1990**

**Application No:**                      **P/59/25/DOC**  
**Registered:**                            7th May 2025  
**Site Address:**                        Sefter Farm Pagham Road Pagham PO21 3PX  
**Description of Works:**              Approval of details reserved by condition imposed under reference P/117/21/PL relating to condition number 7 - surface water drainage scheme.

The Council have received the above application to discharge conditions. I shall be pleased to receive any observations you may wish to make in respect of those conditions relating to your field of expertise.

[Click here to view the Discharge of Condition application and view the documents](#) The website is updated once a day in the evening, so you may need to wait until the day after this notification to view the documents.

[Click here to view the original application and decision notice](#)

Should you wish to make any comments click on the link and click into ?Enter Comment? or if this is not possible email your response to [planning.responses@arun.gov.uk](mailto:planning.responses@arun.gov.uk) by **23rd May 2025**.

**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.**

In the absence of a reply within the period stated, I shall assume that you have no observations to make.

Yours sincerely

Amber Willard

Planning Case Officer- Arun District Council

Telephone: 01903 737942

Email: [amber.willard@arun.gov.uk](mailto:amber.willard@arun.gov.uk)