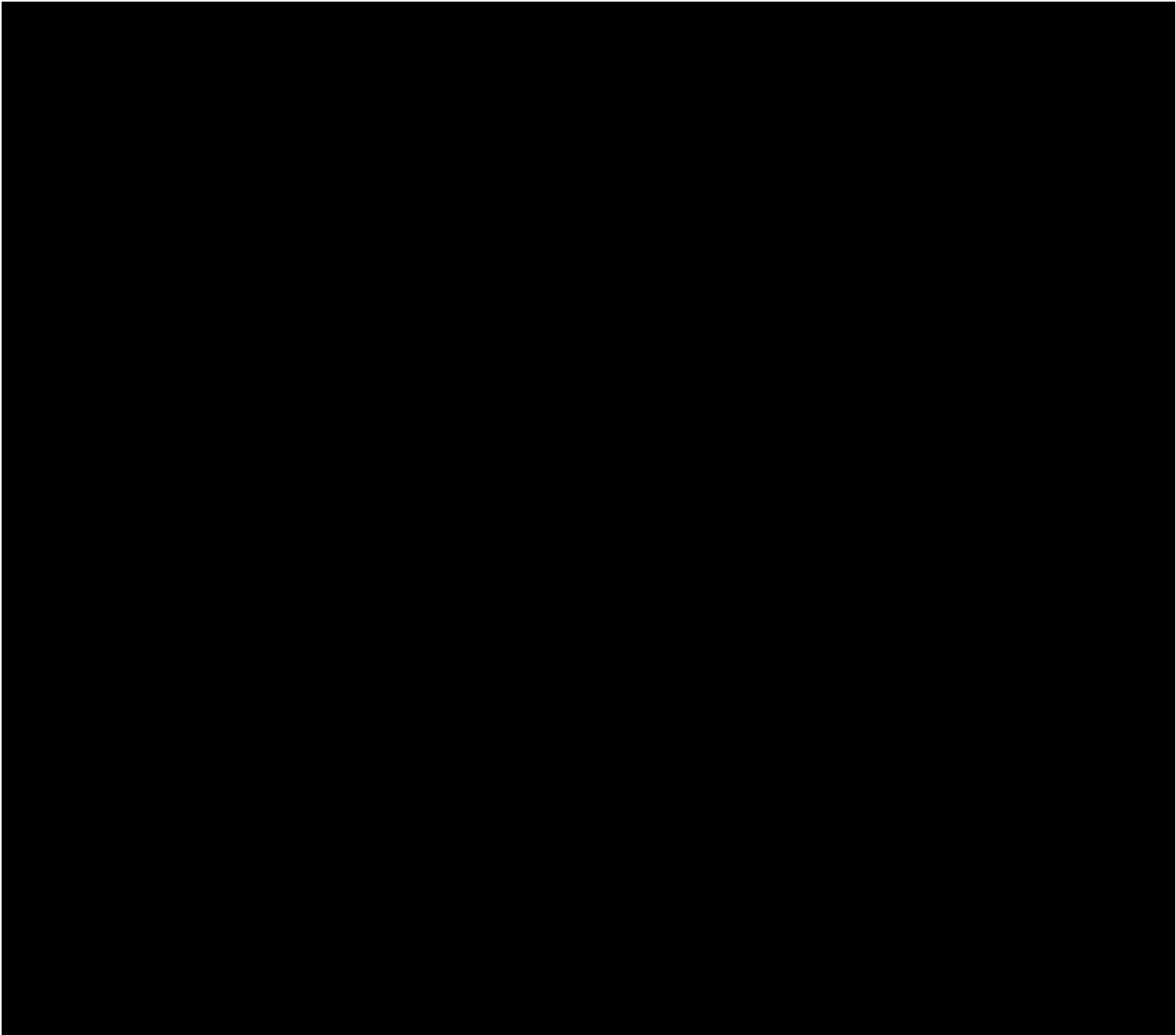




From: Sarah Burrow <Sarah.Burrow@arun.gov.uk>
Sent: 07 September 2022 15:53
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Cc: Katie Sharp <Katie.Sharp@arun.gov.uk>; Paul Cann <Paul.Cann@arun.gov.uk>
Subject: RE: Planning Consultation on: AL/55/22/DOC

Engineers Comments Regarding Surface Water Drainage - Condition 10

Thank you for consulting us on this DOC submission. I have picked up on the following points that require further explanation, adjustment or detail:

1. The infiltration rate calculations use an ap50 value of 0.93m². This value should be 1.08m² on the basis of the trial pit dimensions provided. The correct value will decrease the infiltration rate for the design. Please adjust accordingly.
2. Please include a scale bar on the drainage layout so impermeable areas and diffuser distances from structures can be checked. Alternatively please show measurements for the same purpose.

3. The design calculations require adjustment in addition to the infiltration rate adjustment mentioned in point 2:

- a. If the drainage calculations only account for runoff draining from impermeable surfaces, then the calculations should use a CV of 1.0. The requirement to use CV 1.0 is based on recent clarifications from HR Wallingford which suggest the values of 0.84 and 0.75 often used are in error and confirm that a value of CV = 1 should be used in situations where runoff from only the impermeable areas is considered. It is noted that CV 1.0 is only considered applicable to the sizing of the SuDS, and pipework may still be designed to lower values.
- b. A 20m³ per ha additional storage volume is shown, which is not included within the design. A justification for this value should be provided, or this value reduced to 0.
- c. A Ratio-R of 0.400 has been used, this needs to be reduced to reflect the FSR map for the area.
- d. Enforce best practice design rules has been crossed, please correct.
- e. Both base and side infiltration have been allowed for, please only utilise the base.
- f. The total impermeable area in the report is listed as 0.083ha but the calculations use an impermeable area of 0.081ha.
- g. Please supply the calculations for the 1 in 10 year + 40% event.
- h. The permeable paving invert level is set to 0.380, yet formation level is shown as 9.370 on the drainage layout. The value of 9.370 corresponds with the formation shown in the construction details, therefore please correct the calculations to reflect this.
- i. Slope is listed as 1:800 but on the drainage layout it is stated that sub base is laid at 1:500. Please correct.
- j. The safety factor can be reduced to 3 on the basis of minor inconvenience (surface water on carpark) as a consequence of failure, with a Cv of 1 for an impermeable area of <1000m².
- k. Please include a 10% allowance for urban creep.

A second design check will be required on the back of these alterations and there may be further comments following an updated design and calculations.

4. Drainage layout

- a. Please include pipe gradients.
- b. Diffuser blocks should be set above the 1 in 10 year +40% critical storm event. They are currently set below the formation level of the permeable paving (diffuser inverts at 9.350 – permeable paving formation at 9.370). These should also be located a minimum of 5m from all controlled structures, see point 3. Please correct.
- c. It is not clear why there are apparently random dotted lines on the drainage layout, please can their use be clarified or they be removed.
- d. Please detail sump depths for catchpits.

5. Please amend Typical distribution Tank Outflow Detail to show all diffuser blocks above the 1 in 10 year + 40% critical event as per point 5b.

The use of FEH rainfall data would be preferred, however, in this case due to the small scale of the proposed development, FSR rainfall is considered acceptable.

It is also noted that recent changes have been made to climate change allowances (May 2022). As this proposal was submitted prior to these changes being made, this does not need to be considered as part of this submission.

On the basis of the above it is not recommended that Condition 10 imposed under AL/28/21/PL is discharged at this time. A second design check will be required on the back of these alterations and there may be further comments following an updated design and calculations. Please reconsult me once further information and detail has been provided.

Kind regards

Sarah Burrow
Engineering Assistant, Coastal Engineers and Flood Prevention

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

Sent: 25 May 2022 11:04

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

Subject: Planning Consultation on: AL/55/22/DOC

To: **Engineers (Drainage)**

NOTIFICATION FROM ARUN DISTRICT COUNCIL

Town & Country Planning Act 1990 (as amended)

Town and Country Planning (Development Management Procedure) (England) Order 2015

Application No: AL/55/22/DOC

Registered: 25th May 2022
Site Address: The Grange Westergate Street Westergate PO20 3SQ
Grid Reference: 493982 104365
Description of Works: Approval of details reserved by condition imposed under AL/28/21/PL relating to conditions 3-schedule of materials and finishes, 5-Construction Management Plan, 6-protection of dwellings from noise and vibration from railway line, 8-covered and secure cycle parking, 9-level survey, 10-surface water drainage, 11-foul drainage system, 13-landscaping, 15-Landscape and Ecological Management Plan and 16-electric vehicle charging points.

The Council have received the above application.

[Click here to view the application details](#)

Should you have any comments to make, these should be sent by replying to this email by . You can also monitor the progress of this application through the Council web site:

<https://www.arun.gov.uk/planning-application-search>

The application will be determined having regard to the development plan policies (if any are relevant) and other material considerations. The development plan can be accessed via the website

<https://www.arun.gov.uk/development-plan> as can information on what comments we can consider

<https://www.arun.gov.uk/planning-application-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.

Should the application go to appeal the Planning Inspectorate will publish any comments made to the Council on their website: <https://acp.planninginspectorate.gov.uk/> but they will protect personal details.

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

Yours sincerely

Katie Sharp

Planning Officer- Arun District Council

Telephone: 01903 737832

Email: katie.sharp@arun.gov.uk

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