

From: Laura Gibbons <Laura.Gibbons@arun.gov.uk>
Sent: 08 June 2021 16:29
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Cc: Simon Davis <Simon.Davis@arun.gov.uk>
Subject: RE: Planning Consultation on: Y/49/21/RES

Dear Simon,

Thank you for consulting us on this reserved matters application. We have been in discussions with the applicant's engineer regarding drainage, a copy of the comments from these discussions is included below.

We are unable to provide support to the reserved matters application at this time. The outline decision notice requires surface water drainage to be agreed at or before reserved matters. **We therefore raise a holding objection at this time.**

Key

ADC comments 04.05.21

RSK reply 11.05.21

ADC comments 08.06.21

1. Please provide further details of the watercourses in the area and an update on the investigative works completed to date. — Simon Marks (RSK) has provided the information. *My colleague, Paul Cann, will provide responses in due course on ordinary watercourse matters.*
2. I cannot locate the figure with groundwater levels, please can this be resupplied. — This information is located on the Constraints Plan. Please see it enclosed with this response. *Thank you. Please can you provide the peak groundwater levels to mAOD. As you are ground raising it is very difficult to review acceptability of proposals without this.*
3. All incoming connections to soakaways, etc. require catchpits. Please add clarity to the layout plans. — Catchpits are indicated for all manholes before incoming connections to soakaways and ponds. Text is shown next to manhole information. *Catchpits do not appear to be identified on numerous connections into SA1, please review.*
4. Please label finish and formation levels on permeable paving. — Permeable Paving detail included on Typical SuDS Details drawing which details construction depths. IL's of perforated pipes in sub-base are indicated on drainage layout. Finished levels are indicated on proposed levels strategy drawings. *The construction detail drawing refers to a minimum of 400mm depth of sub-base. This is insufficient, it must be clear on plans what formation level is proposed for the permeable paving areas, whether bases are to be flat or fall.*
5. If permeable paving outlets are set above the base then the depth of sub-base below the outlet invert level needs to be discounted in design. — Permeable paving outlets are not above the base. Perforated pipes are located in the base of the permeable paving sub-base which are then

connected into the drainage network. Please refer to the permeable paving detail. *Okay, this will be reviewed further once greater levels detail has been provided (point 4 above)*

6. Pond 2 has a base level of 4.55 on plan, yet the outlet is lower than this, as are the majority of inlets. Please correct. — This is correct. Pond 2 has a base level of 4.55 and a granular blanket below that. The inlets and outlet are below this level and into the granular blanket which has been discounted from the pond storage in the calculations. *Okay, thank you.*
7. Swale 5 has an outlet higher than the base, water will be sat in the swale in the winter up to the outlet level. This is not accounted for in design. Please correct. — Enhanced Swale 5's outlet is at the base of the swale, please refer to the calculations. No water will be sat in the swale in the winter season. *Okay, thank you.*
8. Soakaway 1 has an outlet much higher than the base, this should be accounted for in design calculations, i.e. storage should only be counted above the outgoing outlet level. — Calculations have been updated to suit this.
9. Minimum falls are not achieved on numerous pipes. Including; 1.005, 3.008, 3.009, 3.010, 19.002, 19.003, 19.004, 19.005.

1.005 — This pipe is part of Enhanced Swale 1 so it's shallow fall is not an issue as it is following the proposed levels strategy for the fall. *Okay.*

3.008, 3.009 & 3.010 — These pipes are 300Ø pipes laid at 1:280 which is within the minimum fall (1:300) for a 300Ø pipe. Velocity in pipes are 0.93 m/s which achieves the self-cleansing requirements for the pipe. We normally require 1m/s to be achieved at full bore, on this occasion we will accept 0.93m/s.

19.002, 19.003, 19.004 & 19.005 — These pipes are 300Ø pipes laid at 1:280 which is within the minimum fall (1:300) for a 300Ø pipe. Velocity in pipes are 0.93 m/s which achieves the self-cleansing requirements for the pipe. We normally require 1m/s to be achieved at full bore, on this occasion we will accept 0.93m/s.

10. There are numerous inconsistencies between the calculations and layout drawings. For example,
 1. Swale 1, S12- base width is 2.5m but is 2m on the layout. Swale 1 should be 2.5m wide and has been updated on layout. *Okay, point closed.*
 2. Swale 4, S79- base depth is 1.4m in calculations, 1m on the layout. Depth is 1.0m and has been updated on the layout. *Okay, point closed.*
 3. Pond 3- base level is 6.3m on the calculations, but 6.2 on the layouts. Calculation updated to 6.2. *Okay, point closed.*
 4. Pond 10- inconsistent invert levels between layouts and calculations. Invert level for Pond is 3.70 on both calculations and layout. *Okay, point closed.*
1. There are two orifice manholes labelled S88 on plan, I assume that the downstream one is actually S110, please confirm. — Correct one of them should be S110, this was a typo that has now been resolved. *Okay, point closed.*
2. There is no cover depth above SA1, the base of the trench is located 1m below cover level, and the storage is 1m depth (both on calculations and plans). — Base of SA1 is 5.60, cover level is 6.60, proposed ground level is on average 6.75/6.8 giving 150mm cover minimum. Calculations will change as per comment 8 above. *okay, point closed.*
3. Please detail side slopes on cross sections of basins. — 1:3 gradient labels added to side slopes of cross sections. *okay, point closed.*
4. Pond 1, 2, 6, and 7 have insufficient freeboard, 300mm freeboard must be provided between maximum water levels and top of bank levels. Please review the design of ponds and swales to ensure that adequate freeboard is provided.
 1. Pond 1 top of bank on section has been increased by 79mm to achieve 300mm freeboard. *This is not shown on layouts, please update.*
 2. Pond 2 has the granular blanket below which has been discounted from the calculations and will increase the freeboard by more than the 30mm required to achieve 300mm freeboard due to the additional available storage in this pond which will reduce the water level. *Okay.*
 3. Pond 6 is a conveyance feature more than a detention basin and is only 400mm deep so 300mm freeboard should not be required here. *Okay.*

4. Pond 7 top of bank on section has been increased by 8mm to achieve 300mm freeboard. *Okay.*

I note that your calculations use FEH1999 rainfall. Please ensure they use FEH 2013 rainfall.

5. I note that ponds 3,4 and 7 are bunded, please provide further detail on this, i.e. crest width and slope of bund on landward and pondward sides.
 1. Ponds 3 & 4 do not have bunding and ties into the proposed levels at top of bank. The bunding was indicated previously as the section tied back into the existing levels and not the proposed which has now been updated. *Okay, ground raising proposals will need to be discussed with the planning officer.*
 2. Pond 7 is bunded on the western side only with the rest of the top of banks tying into the proposed levels. *Okay, ground raising proposals will need to be discussed with the planning officer.*
6. I note pond 5 is significantly bunded, water levels do not get into the pond, even in the most extreme event. Is there potential to provide crates, and overlying stone, with a locally raised area here to provide the required cover, instead of a pond? If not, please provide further details of the proposed bund. Pond 5 does not have bunding and ties into the proposed levels at top of bank. The bunding was indicated as the section tied back into the existing levels and not the proposed. It is 0.4m deep and is a conveyance feature. *Okay, ground raising proposals will need to be discussed with the planning officer.*
7. Likewise at pond 8 the water hardly gets into the pond base. Has consideration been given to providing crates with overlying stone, rather than a pond. There should be sufficient depth here to achieve this without needing to locally raise levels for cover. – There is cellular units below Pond 8 which form SA15 and they are fully utilised. The pond is a conveyance feature and ties into the proposed levels on the north, east and western sides with the southern side tying into the existing levels. Slope and width of crest added to section. *0.5m wide crest for a 0.75m high bund is not acceptable. Please review. Once again I would suggest that thought is given as to whether this pond is needed.*
8. Please clearly show a permeable geotextile wrap around the stone on the granular soakaway details. – Shown on the construction detail as requested. *Okay, point closed.*
9. Please provide more detail on layout for enhanced swales, i.e. please state invert level of swale, its depth, side slopes, base width, etc. Invert levels at start and end of enhanced swales are provided along with the details about depth and base width. All side slopes are 1:3 as indicated on the SuDS details. *Okay, point closed.*
10. On construction details of enhanced swales please detail base width and side slopes. – The base width varies as noted on the detail, refer to the plan for base width of the different enhanced swales. Widths of side slopes also vary and are set at 1:3. *We would prefer to see a table on the construction details stating these dims for each swale.*
11. The construction detail of the enhanced swales should be updated to show the permeable geotextile fully wrapping around the sub-base. There shouldn't be a gap in the middle where the swale stone connects the two features, this stone should lay on top of the fully wrapped sub-base. Ingress of fines into the sub-base will occur otherwise. – Detail updated to indicate sub-base is fully wrapped in the permeable geotextile as requested. *One enhanced swale on sheet 2 of the details is still showing a gap in the middle.*
12. Please review and provide further detail on the headwall drawing. I.e. bag material, fill, packing, requirements for stakes. Bagwork headwalls should be two bags deep and in accordance with the attached standard detail. We have specified a slightly different product that has a more aesthetically pleasing green finish. We trust this is acceptable. *The details are not acceptable. We are fine to have a facing bag as you have specified, however there needs to be a solid structure behind this. We would recommend that construction details are in accordance with district and county standards with additional facing bags.*
13. The geocellular storage below pond standard detail- please include a geotextile surround around more of the trench which links the pond and crates. The depth of sacrificial stone which will need frequent replacement due to sedimentation should be reduced. E.g. just 200-300mm of stone on

top of 700mm geotextile surrounded trench. – Permeable geotextile added to detail as requested. Okay, point closed.

14. Please clearly show permeable geotextile around the granular sub-base to pond 2. Permeable geotextile added to detail around the gravel blanket as requested in this comment. *This needs to show the wrap around the top of the granular sub-base too.*
15. The layout states that the gravel will have an impermeable geotextile below it. Please include this on the construction detail drawing. Refer comment 14 above. Permeable geotextile has been detailed and reference to an impermeable geotextile has been removed. *Groundwater monitoring will be reviewed once supplied to AOD, and acceptability of permeable liners commented on.*
16. Please detail minimum cover depth of soil over the geocellular storage below POS depressions. Note added to backfill detailing the minimum depth of cover as 0.3m in accordance with the Aquacell guidance. Depths of cover will vary. Okay.
17. Please provide greater detail on the permeable paving construction detail, i.e. blocks, bedding, geotextiles, sub-base material. - Permeable Paving construction detail included on Typical SuDS Details drawing. Okay.
18. Please confirm where the construction detail for the enhanced swale with adjacent granular soakaway is on plan. There is no longer an enhanced swale with adjacent soakaway on the site. The adjacent soakaway has been removed from the SuDS detail. Okay.

As can be seen from the above we are awaiting some further information, particularly regarding ground water levels. This will enable us to comment upon proposals and any potential conflict with landscaping proposals.

We wish to highlight that proposals include ground raising, the acceptability of this should be reviewed in more detail.

Kind regards,

Laura Gibbons

Drainage Engineer

Engineering Services

Please note that I work Tuesdays 08:00-16:00 for Arun only.



T: 01903 221374

E: laura.gibbons@arun.gov.uk or [REDACTED]

Arun District Council, Civic Centre, Maltravers Rd, Littlehampton, West Sussex, BN17 5LF

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

Sent: 19 April 2021 10:13

To: Land Drainage <Land.Drainage@arun.gov.uk>
Subject: Planning Consultation on: Y/49/21/RES

To: **Engineers (Drainage)**

NOTIFICATION FROM ARUN DISTRICT COUNCIL

The Town & Country Planning Act 1990 (as amended)

Town & country Planning (Development Management Procedure) (England) Order 2015 - Article 6

Approval of Reserved Matters Following Outline Approval

Application No: Y/49/21/RES
Registered: 19th April 2021
Site Address: Land East of Drove Lane Yapton BN18 0EB
Grid Reference: 497380 103194
Description of Works: Approval of reserved matters following Y/92/17/OUT for 300 No. dwellings covering landscape, layout, scale & external appearance (resubmission following Y/78/20/RES). This application affects the setting of listed buildings, affects the character & appearance of the Main Road/Church Road, Yapton Conservation Area & affects a Right of Way. This site falls within Strategic Site SD7 (Zero Rated).

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 21st May 2021 . You can also monitor the progress of this application through the Council web site:

www.arun.gov.uk/planning.

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 the the leaflet how to respond to planning applications <https://www.arun.gov.uk/planning-application-comments> which deals with material planning considerations.

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://www.planningportal.co.uk/info/200207/appeals> 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

Mr S Davis

Planning Officer- Arun District Council

Telephone: 01903 737874

Email: Simon.Davis@arun.gov.uk

PLCONSULT (GOB) 2020