

From: Anita Gardner <Anita.Gardner@arun.gov.uk>
Sent: 05 October 2020 13:08
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Subject: FW: F/21/20/DOC Wicks Farm

Please scan as correspondence

Anita Gardner
Principal Planning Officer,
Directorate of Place

T: 01903 737529
E: anita.gardner@arun.gov.uk



Arun District Council, Civic Centre, Maltravers Rd, Littlehampton, West Sussex, BN17 5LF
www.arun.gov.uk

Sign up to our newsletter [here](#)



From: Stuart Magowan [REDACTED]
Sent: 05 October 2020 12:58
To: Paul Cann <Paul.Cann@arun.gov.uk>; Anita Gardner <Anita.Gardner@arun.gov.uk>
[REDACTED]

Subject: RE: F/21/20/DOC Wicks Farm

Hi Paul

Thank for these comments we will review and confirm our response as soon as possible.

Regards

Stuart

Stuart Magowan



The Civil Engineering Practice

11 Tungsten Building

George Street



Fishergate

Sussex



BN41 1RA



As an ISO 9001 : 2008 certified company, we invite you to reply to this email with any feedback (positive or negative) that you would like to share. Any response will be reviewed by the directors and quality assurance department.

This transmission contains information which may be confidential and which may also be privileged. It is intended for the named addressee only. Unless you are the named addressee, or authorised to receive it for the addressee, you may not copy or use it, or disclose it to anyone else. If you have received this transmission in error, please contact [REDACTED]

Whilst this e-mail and any attachments are believed to be free of any virus, it is the recipient's responsibility to ensure that they are virus-free and no responsibility is accepted by The Civil Engineering Practice for any loss or damage arising in any way from receipt or use thereof.

The Civil Engineering Practice is GDPR compliant. The security of your data is important to us. Please contact us if you want to update, change, amend or remove your personal information.

From: Paul Cann <Paul.Cann@arun.gov.uk>

Sent: 05 October 2020 12:21

To: Stuart Magowan [REDACTED] Anita Gardner <Anita.Gardner@arun.gov.uk>



Subject: RE: F/21/20/DOC Wicks Farm

Hi Stuart

I have summarised my comments below in respect to the outstanding issues;

1. Ok
3. Ok
7. Ok
8. Ok
9. The cover level (3.330) of manhole S10 is below the standing water level of the reservoir, not to mention the predicted 1 in 100 yr storm (+ 40%) event, so will overflow at this point. Please reconsider – you may wish to omit this manhole and take the pipeline direct from S9 to the reservoir? All the outfalls into the reservoir are below the standing water level of 3.85m, hence they will be surcharged most of the time. On the basis of there being no flap valves, they will provide additional storage for the reservoir. Manhole cover levels have been set at 4.647, slightly above the predicted 1 in 100 yr flood level of 4.557 but below to the top of the reservoir bank, so these will be the first points of overflow should the capacity of the system be exceeded. In order to undertake maintenance of these incoming systems, the reservoir will need to be sufficiently drained down to below the outlet levels – your client should be made aware of this.
13. Ok
14. Ok
15. Southern catchment revised calculations not provided?
16. Ok
17. Ok

- 19. Ok
- 21. Drg 51B – manhole construction detail – 1500mm rings are also specified on the manholes on the northern reservoir catchment.
- 22. Ok
- 23. Land drainage consent applications are required for the two outfalls to the ditches. Fees will be £300.

I await your revised details, etc.

Regards

Paul Cann
Principal Engineer (Drainage)

Paul Cann | Principal Engineer (Drainage), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

Internal: 37819 | External: +44 (0) 1903 737819 | Fax: +44 (0) 1903 716019 | E-mail: Paul.Cann@arun.gov.uk

Arun is Working in Partnership with Chichester District Council

Visit Arun's web site at <http://www.arun.gov.uk/> and www.chichester.gov.uk



Save the environment - think before you print.

From: Stuart Magowan [REDACTED]
Sent: 25 September 2020 11:36
To: Anita Gardner <Anita.Gardner@arun.gov.uk>; Paul Cann <Paul.Cann@arun.gov.uk>
[REDACTED]

Subject: RE: F/21/20/DOC Wicks Farm

Hi Anita and Paul

The following link will allow a download of the drawings as noted on the attached drawing issue register together with the updated Reservoir Calculations and Management and Maintenance Plan. For ease of reference I have noted our responses in green below to the latest comments.

[REDACTED]

Reservoir Catchment:

1. The northern boundary ditch in vicinity of the proposed reservoir is currently located on the other side of the network rail fence and not within the redline boundary. As previously suggested a ditch will be required within the red line boundary and running parallel to the network rail ditch. Please adjust drawings and provide a typical profile cross section. Land drainage consent is also required for the new ditch and headwall outlet. There is an existing ditch on site at the northern boundary and a further ditch the other side of the Network Rail fence, the existing ditch is noted to be cleared of debris, vegetation and silt and regraded where required. This is indicated on drawings 21E, 22E and 24E. The comments on Land Drainage Consent are noted but are not a reason to refuse discharge of condition as they are covered by separate legislation. My last visit to site indicated that there was no obvious ditch in vicinity of the reservoir, apart from the one on the other side of the Network Rail

fence, however, provided the ditch is installed as per the drawings then this is not an issue. On the cross sections ie. D-D and E-E, clearly indicate the ditch base width and the gradient of the side slopes. Land drainage consent is an integral part of the outstanding conditions ie. no.8, and in this instance, I am prepared to allow the consent to be just made for the headwall structure/discharge – please therefore submit as necessary. Noted. The ditch base and bank gradients have been added to all sections A-A to E-E. See Drawing 70. Ok

2. The pipe outlet invert (1.500) from the reservoir is currently shown below ditch bed level. Noted, this was a typo and has been corrected to 2.1m AOD (100mm above bed level) and detailed on drawing 22E. ok. Noted.
3. Adequate freeboard (ie. min 300mm) is required between the predicted top water levels in the reservoir and top of bank ie. may need to lower outlet level. Also, ensure the hydrobrake design head takes account of any adjustments to the design to achieve this. We propose a minor raising of the bank level, this has been updated to provide 300mm minimum freeboard. The hydrobrake design remains unchanged as the design head remains the same. Ok but update reservoir section drg. 51A with the newbank level and also the pipe invert level. This drawing should also show the reservoir lining ie. impermeable liner, assuming one is to be used. Adjust the crest level note on drg.23E ie. 4.86 not 4.60. The bank level on the section and the crest level noted on revised Drawings 23F and 52A has been changed to 4.86m. The Reservoir Lining has been shown on the reservoir section detail on Drawing 51B.
4. Provide hydraulic calculations (to include upstream network) for the 1 in 100 year storm event + 40% climate change allowance. Please note that the guttering on the greenhouse should not be a limiting

factor and the calculations need to allow for the full 100yr run off flows from the roof/s. These were provided on 13 July 2020 and are included in the link above. Ok. Noted.

5. **Overflow pipe from reservoir provide headwall with cranked grille with bar spacings to suit 150mm diameter pipe. Include construction detail.** Detail of Althon Headwall R10CA with cranked grill and installation instructions provided on 13 July 2020 and are included in the link above on drawing 53. Ok. Noted.
6. **Specify gradient between overflow pipe and hydrobrake chamber.** The gradient is 1 in 44 and is included on drawing 22E. ok. Noted.
7. **Provide hydrobrake chamber construction detail.** Noted and included in the link above on drawing 52B. Cover level and invert level are relevant to SW-07 – I would suggest just adding a note – ie. refer to the relevant layout drawing. Whilst the chamber construction details make reference to the details shown on 'manhole construction no.12 drawing', please specifically mention a granolithic finish to the benching. The Hydrobrake detail has been amended to say refer to layout Drawings 22 and 24 for Cover Levels, Invert Levels and Sump Levels. The note regarding the manhole construction and granolithic benching finish updated on detail also. See Drawing 52C.
8. **Outlet headwall at ditch Scour protection IS required. Provide construction detail (no grille required).** Headwall with scour protection was provided on 13 July 2020 and is included in the link above on drawing 51 A. ok but add note to indicate a 100mm drop between pipe invert and ditch bed. Also, indicate extent of paving slab scour protection ie. to 7metres downstream of outlet pipe. Dimension of 100mm between pipe invert and ditch bed added to details. The paving slab scour protection is now noted to extend 750mm either side of the centre of the outlet pipe. See Drawing 51B
9. **RWP inlets Headwalls required. Specify diameters/gradients/invert levels. Provide construction details for headwalls. Fully detail pipework/manholes upstream between guttering and connection/s to reservoir. Silt traps required prior to entry to reservoir (provide construction details).** This is design preference, the RWPs convey clean roof water to a reservoir for recycling, settlement in the reservoir will remove any silt present, the reservoir is not the receiving watercourse. RWPs will be below ground and discharge to the Reservoir, headwalls will be provided as headwall detail in the above link on drawing 22E, 23E and 51 A. There is no requirement for catchpits, silt traps prior to entering reservoir, this is a private facility maintained by the operator and this is not a reason for refusal of the submitted details. This is an integral part of the surface water drainage system. The idea is to intercept any potential silt from the roofs before it can enter the reservoir – this makes maintenance easier and minimises the loss of capacity in the reservoir, which are important considerations in our appraisal. Also, these are large scale RWP's and need to be fully detailed as requested. Manholes are required on significant bends. The headwall details need to be specific to the arrangement here ie. paving slabs not required (scour protection not required if discharging onto an impermeable liner). Raise the connection levels into the reservoir to reduce the frequency of surcharged outfalls. This matter had previously been given some consideration by Jackson Purdue Lever (drg 4004). Noted. Drawings 21-23 updated to show the Jackson Purdue Drainage design into the Reservoir. The Headwall IL have been raised to reduce the frequency they are submerged.
10. **The layout drawings indicates the structure to be drained as a polytunnel rather than a glass greenhouse. Please confirm if this is the case.** It is a Glass House drawings have been updated to remove the polytunnel note. Ok. Noted.

Western Ditch

11. **Provide longitudinal section showing existing and proposed bed levels.** This is an existing ditch, we have provided the existing levels on the submitted drawings, long section is included in the above link on drawing 70. Ok. Noted.

12. Show the infilled section to be reinstated, including the trees to be removed to facilitate this. We have noted on the submitted drawings that the existing ditch is to be cleared of vegetation, silt and debris and to be regraded where necessary to provide continuous fall from the headwall. Ok. Noted.
13. If the ditch is being significantly deepened in places then the banks may need reprofiling to avoid them being too steep. Please advise and provide cross sections if necessary. Please also confirm that the regrading/profiling proposals will not have a negative impact on existing trees and their root systems. The ditch is proposed to be lowered locally at the inflow headwall by up to 500mm the gradient of the banks remains consistent with other sections of the ditch. Cross sections are included in the link above on drawing 70. ok. Your client needs to give due consideration to any potential impact on existing trees and should seek specialist advice. Noted, we will confirm this to our Client.

Southern Catchment

14. Provide headwall construction details for headwall discharge to western ditch. This will need to include scour protection measures. Noted, included in the link above on drawings 24E and 51A ok but specify length of paving slab protection area. Land drainage consent is also required. The paving slab scour protection is now noted to extend 750mm either side of the centre of the outlet pipe. See detail Drawing 51B.
15. Provide hydraulic calculations for the 1 in 100 year storm event + 40% climate change allowance. These were submitted on 13 and 14 July 2020 and are included in the link above. The calculations need updating to reflect the current drawings. The micro drainage reservoir calculations have been updated to reflect the current drawings.
16. Provide french drain construction details, hydraulic calculations and full details of the percolation rates used. The French drain has been provided to a landscaped area to prevent surface ponding but is not formally part of the drainage scheme for the building or hard landscaping, it is purely to collect and allow to drain any rainwater running off the south elevation detail is indicated n drawing 51A. If it just drains the land falling to that area and any rain that runs off the vertical elevation of the greenhouse, then we can accept the arrangement on the proviso that the pipe diameter/permeable geotextile wrapping/fully perforated pipe is specified. If it drains any part of the roof of the greenhouse, then it will be a totally different consideration. Landscaping should also consider minimizing as much as possible, the land runoff to this area. The french drain only drains the landscaping area and not the glass house. We have noted the perforated pipe to be 150mm in diameter on both the details drawing 51B, and the layout drawings 25C & 26C.
17. Provide hydrobrake chamber construction detail. Noted, included in the link above on drawing 52B. See item 7 above – similar comment applies. Noted. See my response to item 7 above.
18. The pond/swale needs a slight gradient east to west (as has been employed on the upstream swales) to improve the hydraulics and ensure water movement. Please note the base level at the eastern end is currently lower than the base level at the western end. Adjust pipe inverts to suit. The submitted drawings have a 1:400 gradient and pipework has been designed accordingly included in the link above on drawing 24E. ok. Noted.
19. Short swale 225mm pipe connection raise invert to increase freeboard ie. to say 4.270. Provide headwall construction details. Invert levels have being raised as requested and headwall details are included in the link above on drawing 25B ok but specify length of paving slab scour protection for all connections to swales. The paving slab scour protection is now noted to extend 750mm either side of the centre of the outlet pipe. See detail Drawing 51B.
20. Pipeline 1.001 provide 100mm freeboard between pipe invert and swale bed. This pipe has been raised to 4.875m AOD on the updated drawing 26B included in the link above. Ok. Noted.

General

21. Provide construction details for all manholes, pipe bedding, channel drains, etc. These details were provided on 13 July 2020 and are included in the link above on drawing 51A. Channel drain – specify concrete surround thickness. Add PCC ring diameter table to type 2 manhole. The concrete surround to the channel drain is 150mm as shown on the detail (See Drawing 51B). I have noted on the detail that all type 2 manholes are to have a diameter of 1200mm, except for the two manholes containing the hydrobrakes, these are to be 1500mm in diameter. All manhole diameters have been added on the drainage layout drawings 21-26.
22. Provide revised management and maintenance manual. This was submitted on 13 July 2020 and is included in the link above. The drainage maintenance schedule produced by CEP needs to be incorporated into the main manual produced by Jackson Purdue Lever or vice versa, so that there is one document. A paragraph giving an overview of how the system (each catchment) is designed to work is required and how the individual components interact with one another. The drawings in the main manual are now irrelevant and will need to be updated with CEP drawings once approved. Ponds are not relevant to this site so that section needs removal, however specific sections on reservoir maintenance and the perimeter ditches maintenance need to be included. Trash screen maintenance should also be highlighted. Hydrobrake technical detail sheets and the manufacturers maintenance recommendations should also be included as an appendix. Once the documents have been amalgamated/amended I can then provide more detailed comments if required. Noted. Updated as per your comments.

I trust this will now allow a discharge of the outstanding conditions. If you have any queries or if I can be of any further assistance please do not hesitate to contact me.

Regards

Stuart

Stuart Magowan



The Civil Engineering Practice
11 Tungsten Building
George Street
Fishersgate
Sussex
BN41 1RA

As an ISO 9001 : 2008 certified company, we invite you to reply to this email with any feedback (positive or negative) that you would like to share. Any response will be reviewed by the directors and quality assurance department.

This transmission contains information which may be confidential and which may also be privileged. It is intended for the named addressee only. Unless you are the named addressee, or authorised to receive it for the addressee, you may not copy or use it, or disclose it to anyone else. If you have received this transmission in error, please contact [REDACTED]

Whilst this e-mail and any attachments are believed to be free of any virus, it is the recipient's responsibility to ensure that they are virus-free and no responsibility is accepted by The Civil Engineering Practice for any loss or damage arising in any way from receipt or use thereof.

The Civil Engineering Practice is GDPR compliant. The security of your data is important to us. Please contact us if you want to update, change, amend or remove your personal information.

From: John Hall <John.Hall@johnhallconsulting.co.uk>

Sent: 17 September 2020 14:36

To: Anita Gardner <Anita.Gardner@arun.gov.uk>



Stuart Magowan [REDACTED]
Subject: FW: F/21/20/DOC Wicks Farm

Hello Anita,

Thanks very much for this.
I will discuss with Stuart Magowan at CEP and respond as quickly as possible.

Many thanks, John.

John Hall MBA MCIHort
John Hall Consulting Ltd.
113 Limmer Lane
Felpham
West Sussex
PO22 7LR

[REDACTED]
www.johnhallconsulting.co.uk

From: Anita Gardner <Anita.Gardner@arun.gov.uk>
Sent: 17 September 2020 12:57
To: John Hall [REDACTED]
Subject: F/21/20/DOC Wicks Farm

Dear John,
Please see attached comments from Engineers. Can you let me have a response within the next 10 days or the application will be determined on the basis of the information submitted?
Regards
Anita Gardner

Anita Gardner
Principal Planning Officer,
Directorate of Place

T: 01903 737529
E: anita.gardner@arun.gov.uk

Arun District Council, Civic Centre, Maltravers Rd, Littlehampton, West Sussex, BN17 5LF
www.arun.gov.uk



Sign up to our newsletter [here](#)



<http://www.arun.gov.uk>
DX 57406 Littlehampton
You can view Arun District Council's Privacy Policy from <https://www.arun.gov.uk/privacy-policy>

Important Notice This e-mail is intended exclusively for the addressee and may contain information that is confidential and/or privileged. If you are not the intended recipient (or authorised to receive it for the addressee), please notify the sender and delete the e-mail immediately; using, copying, or disclosing it to anyone else, is strictly prohibited and may be unlawful. Any views, opinions or options presented are solely those of the author and do not necessarily represent those of Arun District Council. The information in this e-mail may be subject to public disclosure under the Freedom of Information Act 2000, therefore we cannot guarantee that we will not provide the whole or part of this e-mail to a third party. The Council reserves the right to monitor e-mails in accordance with relevant legislation. Whilst outgoing e-mails are checked for viruses, we cannot guarantee this e-mail is virus-free or has not been intercepted or changed and we do not accept liability for any damage caused. Any reference to "e-mail" in this disclaimer

includes any attachments.

<http://www.arun.gov.uk>

DX 57406 Littlehampton

You can view Arun District Council's Privacy Policy from <https://www.arun.gov.uk/privacy-policy>

Important Notice This e-mail is intended exclusively for the addressee and may contain information that is confidential and/or privileged. If you are not the intended recipient (or authorised to receive it for the addressee), please notify the sender and delete the e-mail immediately; using, copying, or disclosing it to anyone else, is strictly prohibited and may be unlawful. Any views, opinions or options presented are solely those of the author and do not necessarily represent those of Arun District Council. The information in this e-mail may be subject to public disclosure under the Freedom of Information Act 2000, therefore we cannot guarantee that we will not provide the whole or part of this e-mail to a third party. The Council reserves the right to monitor e-mails in accordance with relevant legislation. Whilst outgoing e-mails are checked for viruses, we cannot guarantee this e-mail is virus-free or has not been intercepted or changed and we do not accept liability for any damage caused. Any reference to "e-mail" in this disclaimer includes any attachments.
