

EXTERNAL EMAIL: Be cautious when opening attachments or clicking links

Dear Paul,

Thank you very much for your comments below. My client is very keen to find a mutually acceptable way forward and so we would like to put forward the following proposal that we hope will allow us to progress the project, whilst accepting that further monitoring may be necessary to confirm the initial findings.

We would like to propose that an initial investigation is carried out based on the attached plan and proposal.

1. Tests proposed include further testing of the chalk which will allow our geotechnical advisers, Leap Environmental, to review their advice on solution features and determine whether we can provide soakaways closer to structures than was previously anticipated, thus potentially opening up further drainage options.
2. Shallow tests within the natural ground will look at whether permeability values on the site are such that use of permeable paving is feasible. Could you confirm:
 - a) Whether you are happy for us to use small pits for this testing?
 - b) That if these tests show insufficient permeability in summer we will not be required to repeat them in winter?
 - c) How many tests will need to be repeated in winter?
3. Constant head tests will be carried out in boreholes as proposed in the attached documents. There is a very limited depth of chalk between the peak ground water level measured on site and the top of the chalk (less than 1m) based on water monitoring to date.
4. We will use the permeability values obtained, together with the minimum distance identified between soakaways and structures to see whether a feasible solution can be developed using borehole soakaways for the volume of water running off the site, or a practical portion of it.
5. Could you confirm:
 - a) That if we design on the basis of summer data, combined with the highest ground water level recorded last winter and demonstrate that a solution using borehole soakaways is not feasible further testing will not be required?
 - b) If we show that permeability in summer is sufficient, how much repeat testing will be required and whether this can be carried out in October, as the start of the winter period?
6. It is our intention to contact the Environment Agency in parallel with this work so we can confirm what they will accept being discharged to the groundwater without an unsaturated zone. We will confirm their response to you when we receive it.
7. Our groundwater monitoring, whilst not carried out for the full 6 months was carried out between December 2020 and February 2021. Would it be possible to accept these water levels as including the peak level given the range of winter months included? I have attached a further copy of the LEAP Environmental report on this for ease.
8. If following the above we find an acceptable solution for the drainage, subject to winter testing would you be happy to remove your objection to the planning application and allow the development to move forward with a relevant condition relating to further testing required during the winter months?

Thank you for your help. We will give you a call next week to confirm whether we can provide any further information or need to make any variations in the above proposals.

Kind regards,

Clare Richards
Technical Director


116 High Street
The French Quarter
Southampton SO14 2AA



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

Sent: 24 June 2021 14:47

To: Clare Richards 

Cc: May, Dylan (SKAUKPLC)  Oliver Woolf 

Subject: RE: Land adjacent to Littlehampton Academy

Hi Clare

My comments are below;

1. Groundwater monitoring has been very limited to date. Our requirement is 6 months monitoring for a development of this size (ie. Oct to Mar). Hence, further monitoring required (ensuring the entire site is adequately covered).
2. Based upon the available data, I cannot currently see why infiltration into the chalk cannot be investigated further, as whilst groundwater was located within the chalk, there was a depth of chalk above the groundwater (If you have information to the contrary, please share). Peak levels will be verified by further groundwater monitoring of course. Winter infiltration testing will be required above PEAK recorded ground water levels – precise details will need to be agreed nearer the time.
3. An unsaturated zone between the PEAK groundwater level and the base level of any soakaway structure is not a requirement. This is on the proviso that adequate water treatment is included in the scheme. The EA will also need to be consulted on this aspect and see enclosed correspondence fyi.
4. I have spoken to West Sussex County Council and their engineers who dealt with the Fitzalan Road extension scheme, whereby part of the scheme involved an infiltration basin with deepbore soakaways (as you are aware) into the upper layer of chalk. I enclosed some details for your information. I am trying to find more information but their records are sparse.
5. If the chalk can be utilised for infiltration, then I see the scheme taking the form of deepbore soakaways to the top of the chalk, combined with shallower infiltration structures making use of the gravels/sands, etc, no matter how minimal the infiltration rates, as it all helps. The shallower structures will be linked to the deeper ones. Water treatment will take the form of permeable paving/basins/swales, etc. Open features are encouraged but cannot be considered part of the public open space provision.
6. As you are aware, the presence of dissolution/solution features will need to be taken into account if considered a risk on this site. This will obviously affect the development layout to ensure adequate distance between buildings and deepbore soakaways.
7. Until such time that the above matters have been addressed, it is not possible to confirm as to whether a suitable suds scheme can be accommodated within the proposed development layout.

8. Connections to combined sewers will only be discussed further if infiltration is proven not to be feasible or does not provide a total solution.

Any queries, let me know.

Regards

Paul Cann
Principal Drainage Engineer
Engineering Services



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From: Clare Richards [REDACTED]
Sent: 11 June 2021 17:14
To: Paul Cann <Paul.Cann@arun.gov.uk>
Cc: May, Dylan (SKAUKPLC) [REDACTED] Oliver Woolf [REDACTED]
Subject: Land adjacent to Littlehampton Academy

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Hi Paul,

I have tried to call but understand that you are out of the office. We have seen your comments regarding the proposed development on the land to the south of Littlehampton Academy and would like to discuss this with you. I have provided an initial response to your comments below, but wondered whether you would be available to discuss the scheme on Tuesday or Wednesday next week by phone or on a Teams call?

Although only one soakage test was completed this was due to the limited options for soakaways within the different ground strata. In much of the site the chalk is overlain with significant depths of clay or made ground. Although this was not fully compliant with BRE 365 this was due to the test being aborted due to the length of time it was taking for the water level to drop within the pit. Water level monitoring indicated water close to the top of the chalk during the winter, ruling out soakaways within the chalk. The letter report prepared by Leap Environmental dated 23rd February 2021 and included within the drainage strategy for the scheme in Appendix B provides an explanation of the ground conditions on site and the reasons that this justified not using soakaways.

As we are sure you are aware Southern Water will not permit an overflow from a soakaway so that we cannot use some element of soakage combined with an overflow.

We were aware of the existence of solution features in the area that you mention and this has also influenced the chosen drainage solution.

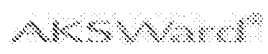
Our understanding is that the highway drainage adjacent to the site is provided using a borehole soakaway in the base of the basin into the chalk. As our records show the groundwater towards the top of the chalk this does not provide an acceptable route for discharge of surface water from our site.

It would be most helpful to understand the details of the further information that you are requesting, perhaps to understand if there is a particular part of the site where you feel that soakaways could be included that we have missed as we believe that we have provided comprehensive information.

Thank you for your help.

Kind regards,

Clare Richards
Senior Project Engineer


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