




From: Laura Gibbons

Sent: 20 July 2018 14:46

To: 'Chris Frost'

Cc: Michael Eastham; 'Philip Todd'; 'Mateusz Debczak'; 'James Richardson'; 'Garry Hutchinson'; 'Joe O'Meara'; 'Alan Morris'

Subject: RE: A/82/18/DOC - Quiet Water, Angmering - Condition 7 - SUDs

Hi Chris,

Thank you for supplying that information.

I have concerns regarding the efficacy of the design. There is little evidence based research regarding EGRP that proves that the system works for such purposes and that the design life is sufficient for the development. I have also been in conversation with Simon Deacon at the Environment Agency regarding the proposals, he has the same concerns. He also has concerns over pollution control with the proposed design.

Also, the justification provided to date for using such a system is in my opinion insufficient. The proposed drainage scheme relies on the construction of 2m deep trenches, so to say trenches are not safe to construct and that you do not want to use them is puzzling. Trenches can be safely dug and secured during works with what I would have thought is very little effort compared to drilling 300 boreholes.

As I stated to your consultant, I would recommend you use far more traditional methods for drainage and use similar methods to those utilised on the neighbouring site.

It should be noted that worst case infiltration rates should be used in design and not average. And I am puzzled by the statement that an un-tanked permeable paving system will silt up more than a tanked one.

However, I am very pleased to see that the foul drainage is now going to be connected into the main foul sewer.

Regards,

Laura Gibbons, MEng, GMICE
Engineer (Drainage & Coastal)

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Save the environment - think before you print.

From: Chris Frost

Sent: 17 July 2018 16:07

To: Laura Gibbons

Cc: Michael Eastham; 'Philip Todd'; 'Mateusz Debczak'; 'James Richardson'; 'Garry Hutchinson'; 'Joe O'Meara'; 'Alan Morris'

Subject: FW: A/82/18/DOC - Quiet Water, Angmering - Condition 7 - SUDs

Hi Laura

Further to our email of 13 July, I attach the following drawings and information:

1. Drawings J5762/EX01 rev. B and /EX01 rev. B, which propose a foul water connection to the public sewer
2. Drawing FSC4082-D1 & D100 (AQUAFLOW PERMEABLE PAVING LAYOUT FOR PARKING AREA AND ACCESS ROAD AND CONSTRUCTION DETAILS)
3. Proposed Infiltration Drainage by EGRP Design Statement(rev D) including micro-drainage calculations
4. Borehole Details drawing
5. Site Investigation Report

For completeness, we have set out below the measures we have taken to address the points raised in your email from 20 June 2018:

- *No winter groundwater monitoring results have been provided with the application, the acceptability of the proposed design cannot therefore be assessed. We have provided comparable result from the neighbouring sites which you have agreed.*
- *The use of boreholes 6.3m deep to dispose of surface water and effluent from a foul package treatment plant are of concern. The Environment Agency should therefore be consulted regarding this. The proposed revisions mean that the foul package treatment plant is no longer connected to the boreholes, which have been reduced to 3.3m. I understand that the EA have been consulted.*
- *Why can more traditional means of infiltration not be used? The poor quality ground on the site makes trenches difficult to construct and has on-site safety issues. The EGRP borehole method is significantly more efficient.*
- *Why can foul water not be disposed of by connection to the main sewer system? We have now proposed a connection to the foul sewer*
- *The infiltration test results are insufficient. Please provide the ground investigation report that was completed by GD. Copy of ground investigation report prepared by Hemsley Consulting is attached.*
- *Full details of the proposed boreholes will need to be provided before the condition is discharged. Borehole details drawing attached.*
- *We would encourage that the proposed porous pavement is left un-tanked to allow for some infiltration. The SUDS system is designed to be tanked. An untanked system would be liable to silt up resulting in longer term maintenance issues for the site.*
- *Insufficient detail regarding calculations has been provided. Please provide Micro drainage printouts. Micro-drainage calculations are included within the Drainage Design Statement (rev D).*
- *The drainage layout plan provided shows a different proposed arrangement of the site to other plans submitted. Please confirm which layout is correct. The plans have been updated to the current scheme, with the exception of the playspace layout, which does not affect the drainage design.*

We trust that the details submitted fully address your concerns and you are now able to recommend approval of the details submitted for Condition 7.

Best regards

Chris Frost, MRTPI
Director

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Future Planning and Development Limited
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From: Garry Hutchinson [REDACTED]
Sent: 13 July 2018 11:30
[REDACTED]

Cc: Chris Frost; 'James Richardson'; 'Mateusz Debczak'; [REDACTED]
Subject: A/82/18/DOC - Queit Qater, Angmering - Condition 7 - SUDs

Dear Laura

In response to your comments dated 20 June 2018 (attached) and the subsequent conversations with our drainage engineer, we have amended the foul water from the initial proposed bio-disk to a new connection to the public sewer.

I understand that you are now satisfied with the ground water monitoring having assessed the comparable site to the north. We have revised surface water drainage details and will provide the updated report and micro-drainage calculations this afternoon.

I would be most grateful if you can confirm that the revised scheme and additional information submitted overcomes your initial concerns and you can recommend approval of condition.

Many thanks

Garry Hutchinson, MRTPI
Associate Planner

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