

[REDACTED]

From: Paul Cann

Sent: 14 December 2017 11:54

[REDACTED] Richard Temple; Trevor Pullen; David Eade; Ben Hume; Sara Rielly; Family; Jeff Thompson; Richard Nicholls

Subject: RE: Fw: Sea Point, 20 Sea Drive, Felpham, PO22 7NE FP/100/15/PL

Hi Simon

Comments in respect to the previous points and your subsequent response;

1. Noted, but please forward a written response from Southern Water confirming that there is adequate capacity to accept your proposed flows.
2. Noted
3. Noted
4. Noted
5. Noted
6. Noted
7. Noted

8. Noted
9. Noted
10. Noted
11. Noted
12. Winter percolation testing is our standard requirement, in order to replicate worst case conditions. It goes hand in hand with our requirement for winter groundwater monitoring, whereby the percolation testing is carried out at an agreed depth once the peak winter groundwater levels are known. Winter ground conditions and groundwater levels can obviously have a major impact on soakaway performance, hence, why are requirements are very stringent. As we are now just talking about the driveway discharging via infiltration, please increase the safety factor on the percolation rate to say 2.5 to allow for non-winter testing. The percolation rate achieved in that area was 5.95×10^{-7} m/s which is very poor and does not usually constitute the use of soakage. Half emptying within 24 hours is unlikely to be achieved as a result. However, better percolation will probably be achieved at shallower depths ie. at the formation level of the permeable pavement. At the same time, I appreciate that existing surface water flows are being removed from the foul drainage system and therefore I think it is a case of ensuring that adequate storage capacity is built into the system. Please could you provide 1 in 100 year storm calculations (+30% climate change allowance) to prove that the storm can be accommodated within the soakaway and permeable pavement/on site.
13. Noted
14. The granular sub base for the permeable pavement will require a flat formation in order to ensure that water does not all collect at one end, unless you wish to incorporate stanks. If you do not incorporate stanks, then the sub base thickness will need to increase where necessary. Please adjust details.
15. Noted

I await the further information.

Regards

Paul Cann
Senior Engineer (Drainage & Coastal)

Paul Cann | Senior Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre,
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Save the environment - think before you print.

Sent: 05 December 2017 10:39

To: Paul Cann

Subject: Re: Fw: Sea Point, 20 Sea Drive, Felpham, PO22 7NE FP/100/15/PL
Richard Temple; Trevor Pullen; David Eade; Ben Hume; Sara Rielly; Family; Jeff Thompson; Richard Nicholls

Paul

Further to your email of the 24th November, please find attached our response to your questions with additional information, where required.

Regards

Simon Boots

Partner

CampbellReith

London - Surrey - Manchester - Bristol - Birmingham - Johannesburg - UAE

www.campbellreith.com

Ryan

Please see below my comments;

1. I note Southern Waters approval to the method and construction of the connection to the public surface water sewer. However, please forward their confirmation that there is adequate capacity to accept the proposed flows.
2. The basement sump pump/soakaway will not be considered as part of the surface water drainage planning condition. It may therefore need to be approved by Building Control when the time comes.
3. Show pipe gradients on layout plan.
4. Provide further details of connection to public surface water sewer ie. external backdrop with connection at soffit to soffit level? Indicate on drawing including connection levels.
5. The calculations show the discharge level to be 45.99 (0.82m AOD). This suggests that the connection is not being made at soffit to soffit level. A connection at the invert level of the 675mm diameter public sewer would not be acceptable.
6. Show cover and invert levels against each manhole on the layout drawing, to make it easier to interpret. The 'contractor to confirm as constructed levels' label also obscures figures in the manhole schedule.
7. The pipe gradient on pipeline 1.007 is too steep and therefore needs adjustment.
8. Calculations indicate pipeline 1.004 having a gradient of 1 in 506.6 – This is too slack and needs adjustment.

9. Climate change in the calculations needs to be 30%.
10. Show proposed ground levels/falls for the access road/circulation areas.
11. Show finished floor level of property.
12. Investigate connecting the channel drain into the system draining to the public surface water sewer. Levels will need adjustment to accommodate it. If this is not an option (specify reasons) and a soakaway is being proposed as shown, then winter percolation testing will be required together with hydraulic calculations. Construction details also required.
13. Provide revised hydraulic calculations.
14. Provide relevant construction details ie. manholes, backdrop, etc.
15. Sump pumps for light wells – rising mains should connect directly to manholes. Are the sump pumps being fitted with non-return valves? Specify on drawing.

I look forward to receiving the information requested.

Regards

Paul Cann
Senior Engineer (Drainage & Coastal)

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Sent: 16 November 2017 17:53

To: Paul Cann

Richard Temple

Subject: Re: Fw: Sea Point, 20 Sea Drive, Felpham, PO22 7NE FP/100/15/PL

Paul,

Please find attached letter and associated documents to discharge condition No.5 relating to discharge of surface water from the site.

If you have any question please contact myself.

Regards

Ryan Irvine
Senior Engineer

CampbellReith

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29 Linkfield Lane,
Redhill, Surrey
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