

[REDACTED]

From: Paul Cann
Sent: 02 January 2018 09:14
To: [REDACTED]
Cc: [REDACTED] Ben Hume; David Eade; Family; Jeff Thompson; Richard Nicholls; Richard Temple; [REDACTED] Sara Rielly; Trevor Pullen
Subject: RE: Fw: Sea Point, 20 Sea Drive, Felpham, PO22 7NE FP/100/15/PL

Simon

Since your email, I have spoken to Stuart Ward and can now confirm that your proposals are acceptable.

Richard – the condition can be discharged based upon the information supplied to date. Note sure if you want them to submit the details formally to you?

Regards

Paul Cann
Senior Engineer (Drainage & Coastal)

Paul Cann | Senior Engineer (Drainage & Coastal), 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



From: [REDACTED]
Sent: 21 December 2017 09:58
To: Paul Cann
Cc: [REDACTED] Ben Hume; David Eade; Family; Jeff Thompson; Richard Nicholls; Richard Temple; [REDACTED] Sara Rielly; Trevor Pullen
Subject: RE: Fw: Sea Point, 20 Sea Drive, Felpham, PO22 7NE FP/100/15/PL

Paul

Please find attached an updated construction detail showing the subgrade to be laid flat, as requested:

In regards the sewer capacity check, I have now spoken to Stuart Ward at Southern Water and attach a copy of his response confirming that providing our flow rate into the surface water sewer is less than existed into the foul Southern Water are happy to accept the proposed flow.

I trust that this now concludes your queries in respect to the discharge of Condition 5 and that you can respond positively to the Planning Authority in relation to its discharge.

Many thanks and Merry Christmas

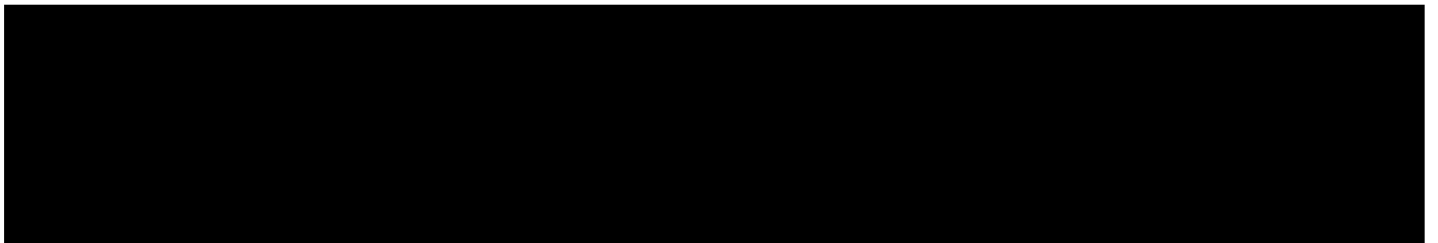
Regards

Simon Boots

Partner

CampbellReith

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



Hi Simon

Irrespective of whether the contractor has installed the permeable paving, please add a suitable note on the drawing in respect to item 14, so that the drawings are clear/correct.

I have spoken to Lauren Westwood (customer services agent) at Southern Water. I appreciate the size of the impermeable area, however, a capacity check is normally their requirement and if you haven't applied for one, then this may be the reason why they won't put anything in writing. As a result, she would not confirm if there is sufficient capacity. I would suggest speaking Stuart Ward in developer services in this respect.

Once the above two issues have been resolved, I can then recommend to planning that the condition can be discharged, once the approved details have been submitted to them.

Regards

Paul Cann
Senior Engineer (Drainage & Coastal)

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Internal: 37819 | External: +44 (0) 1903 737819 | Fax: +44 (0) 1903 716019 | E-mail: Paul.Cann@arun.gov.uk
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From: [REDACTED]
Sent: 14 December 2017 12:40
To: Paul Cann
Cc: [REDACTED] Ben Hume; David Eade; Family; Jeff Thompson; Richard Nicholls; Richard Temple; [REDACTED] Sara Rielly; Trevor Pullen
Subject: RE: Fw: Sea Point, 20 Sea Drive, Felpham, PO22 7NE FP/100/15/PL

Paul

1. Southern Water have have verbally confirmed that they are unaware of any issues with capacity and content for the connection to be made but have refused to go into writing. They are aware and have consented to us quoting their remarks and are more than happy for you to make contact and confirm this for yourself. The additional area contributing into the sewer is 430 sq.m and surely does not warrant significant studies by Southern Water to confirm what they already have confirmed verbally they are happy with. Can I suggest that you make contact with Lauren Westwood at Southern Water to confirm their position should you require any further satisfaction in this matter.

12. We would consider that the driveway drainage already has a factor of safety of 4 given that both the permeable paving and the soakaway tank have been sized to accept the full area of the driveway. Essentially, the primary infiltration drainage from the driveway is via the permeable paving at a shallow depth should this surcharge then the soakaway tank has additional capacity at a deeper depth. That said, we have re-run the simulations for the soakaway tank with an increased factor of safety of 2.5 and for the 1yr, 30yr and 100yr + 30% climate change and the device surcharges but does not flood.

14. We confirm that builder has installed the permeable paving and that the sub formation was generally levelled prior to installation.

Could you please confirm your acceptance to these last points such that the condition can now be finally discharged.

Regards

Simon Boots
Partner

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 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 Carr
Senior Engineer (Drainage & Coastal)

Paul Cann | Senior Engineer (Drainage & Coastal), 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

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From

Sent: 05 December 2017 10:39

To: Paul Cann

Cc: [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

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

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)

Paul Cann | Senior Engineer (Drainage & Coastal), Engineering Services, [Arun District Council](#) | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

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From: [REDACTED]

Sent: 16 November 2017 17:53

To: Paul Cann

Cc: [REDACTED] 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

Raven House,
29 Linkfield Lane,
Redhill, Surrey
RH1 1SS



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