

Bronte Welham

From: Amanda Scholes on behalf of Planning.Responses
Sent: 14 August 2017 09:43
To: Planning Scanning
Subject: FW: Fwd: FP/134/17/DOC 20 Sea Drive, Felpham
Attachments: Southern Water.pdf; Drainage - Supplementary Guidance Notes.pdf

From: Richard Temple
Sent: 11 August 2017 16:02
To: Planning.Responses
Subject: FW: Fwd: FP/134/17/DOC 20 Sea Drive, Felpham

Please scan as correspondence.

Thanks

Richard Temple | Senior Planning Officer, Directorate of Place, [Arun District Council](#) | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

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Save the environment - think before you print.

From: Paul Cann
Sent: 11 August 2017 15:57
To: 'Trevor Pullen'; Richard Temple

Subject: RE: Fwd: FP/134/17/DOC 20 Sea Drive, Felpham

Trevor

Discharging surface water to the foul system is a last resort, particularly in a known flooding problem area. All other options need to be fully investigated before this can be considered further, as per Approved Document H of the Building Regulations and our own supplementary guidance notes (enclosed). Please could you therefore provide further information as detailed below;

1. The southern water approval relates to the means and mode of connection. It does not confirm that there is adequate capacity in the system, since this is established using the capacity check procedure. Has this been undertaken?
2. Provide a copy/details of the soils report/groundwater monitoring and percolation testing.
3. I note the pump to deal with any groundwater seepage through the basement structure.
4. There is a public surface water sewer directly east of the site (approx. 15m distance). Have Southern Water been approached in respect to a connection? I appreciate that third party land is involved, but this can be

overcome via the requisition procedure (Section 98 Water Industry Act). If this has not been investigated, why not?

- Any discharge of surface water from the existing property to the foul system does not set a precedent for new development.

I look forward to hearing from 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

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Sent: 03 August 2017 15:15

To: Richard Temple; Paul Cann

Subject: FW: Fwd: FP/134/17/DOC 20 Sea Drive, Felpham

Gentlemen,

Re; Discharge of Surface water drainage. 20 Sea Drive. Felpham

Further to your recent correspondence regarding the above, please see the below email a response from our Structural Engineer's who have addressed your concerns.

I trust this clarifies matters and that you are now in a position to clear this planning condition.

Kind Regards,
Trevor

Trevor Pullen
Director

PULLEN & WELLS
ARCHITECTS

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Subject: Re: Fwd: FP/134/17/DOC 20 Sea Drive, Felpham

Trevor,

Please see our response below;.

Alex provided a letter which outlined the potential connection proposals and options we had (please see attached) which also comments on ground conditions and the reasoning behind the proposed design.

Our original proposal is as per the P1 revision drawing attached which indicated the collection of surface water to be stored via an attenuation tank followed by a flow restriction to restrict the run-off which would then require third party land agreement for an off-site connection to an existing Southern Water manhole. This system would work via gravity with sump pumps being provided for the cavity wall drainage which would discharge via infiltration devices. Sump pumps would also be required for the lightwell drainage which would connect back into the gravity surface water system.

It was at this point of the design that Southern Water confirmed the surface water from the site could be connected to the foul system (see letter attached). We then revised the design as per the P2 revision attached which indicated a gravity connection for the surface water system to the existing foul on-site manhole with a flow restriction. The attenuation was removed due to larger pipes and manholes being used for storage. The cavity wall drainage will once again be pumped then infiltrate via infiltration devices. The lightwell drainage would be pumped back into the gravity surface water system.

Our design was then revised to suit FFL levels. Our final proposal is attached below.

To address the specific questions asked by Paul Cann and Richard Temple, please see below our responses in blue.

1. That Southern Water have agreed in principle to surface water being connected to the foul sewer (in a known problem area).

Please see attached letter from Southern Water

2. That surface water is proposing to be pumped (not sustainable).

The only water to be pumped is that at lower level for both the cavity wall and lightwells as explained above.

3. A lack of evidence to suggest that alternative means of surface water disposal have been investigated."

Soakage devices are deemed to be ineffective for all but the smallest volume of discharge due to the existing ground conditions, therefore discharging to the ground was deemed unachievable to required standards.

We provided a potential connection to an existing Surface Water Southern Water manhole as indicated on drawing 5050 P1, however this would have required third party land owner agreement to make the connection.

If you require any further information please let me know.

Regards

Ryan Irvine
Senior Engineer

CampbellReith

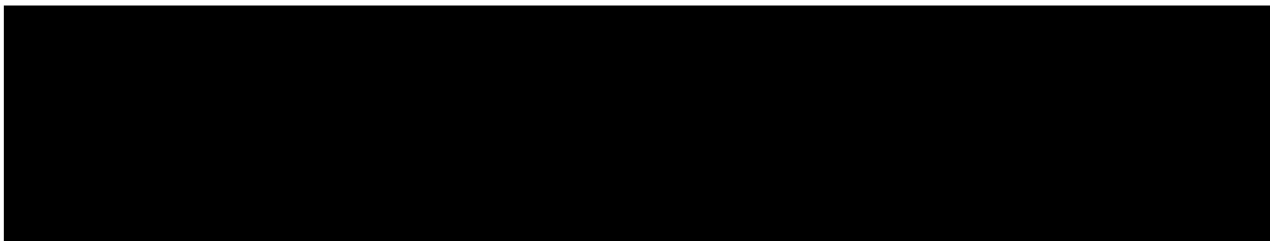
Raven House,
29 Linkfield Lane,
Redhill, Surrey
RH1 1SS



Ryan
Please see e mail from Trevor.
I will discuss with you tomorrow.
Thanks
Sabe

Sent from my iPhone

Begin forwarded message:



Subject: FW: FP/134/17/DOC 20 Sea Drive, Felpham

Dear Alex & Sabe,

As you'll now be aware from the minutes of the recent site meeting and attached, ADC Services Engineer; Mr Paul Cann has concern with discharging the storm water into the existing mains foul water system, albeit Nicholls original proposals were approved by Southern Water.

Richard Temple, the case officer dealing our application to clear the planning conditions is now also asking that we clarify the scheme.

It's my understanding that although Nicholls presented the original approved scheme, with an attenuation tank located under the front driveway & then pumped (max rate 5ltrs/sec) into the existing manhole, you subsequently prepared a revised scheme omitting the attenuation tank and mechanical pumps in favour of larger diameter pipework, but still introducing a mechanical restrictor to maintain the max flow rate of 5ltrs/sec into the existing system via an existing manhole.

In light of this, and comments raised by both Mr Cann and Mr Temple, would you be kind enough to submit your scheme to them, addressing their concerns.

Kind Regards,

Trevor

Trevor Pullen
Director

[attachment "image001.png" deleted by Ryan Irvine/CRH]

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Registered Office: 3 Park Court, West Byfleet, Surrey, KT14 6SD.

From: Sara Rielly
Sent: 25 July 2017 09:53

[REDACTED]
Subject: FW: FP/134/17/DOC 20 Sea Drive, Felpham

[REDACTED]
Sent: 25 July 2017 09:46

[REDACTED]
Subject: FP/134/17/DOC 20 Sea Drive, Felpham

Dear Mr Pullen,

I am the case officer dealing with the above application for conditions approval.

These are the comments we have received from the Drainage Engineer regarding condition 5:-

"I am very concerned by the surface water drainage proposals, for several reasons;

1. That Southern Water have agreed in principle to surface water being connected to the foul sewer (in a known problem area).

2. That surface water is proposing to be pumped (not sustainable).

3. A lack of evidence to suggest that alternative means of surface water disposal have been investigated."

Would you be able to provide additional information regarding the above?

Regards,

Richard Temple | Senior Planning Officer, Directorate of Place, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF



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Southern Water
Sparrowgrove House
Sparrowgrove
Otterbourne
Hampshire
SO21 2SW

Tel: 0330 303 0119

Your Reference:

Our Reference:
SWS-SUSXW-S106-009604

Date:
28/04/2017

Application to Connect to the Public Sewerage System - Section 106 Water Industry Act 1991. Location: 20 Seapoint, Felpham, Bognor Regis, West Sussex, PO22 7NE.

Dear Mr Eade,

Further to your recent application to connect to the public sewerage system at the above location, I am pleased to inform you that your proposal to connecting combined flows to the foul sewers via an existing manhole has been approved subject to the following provision: -

Connections to existing manholes and arrangement of pipe junctions within the manhole should be in accordance with Sewers for Adoption 7th edition and Southern Water guidance documentation.

This letter is for the purpose of approval to permit communication to be made to the public sewer, under S106 of the Water Industry Act 1991.

This approval is to the means and mode of construction.

It does not confirm that capacity is available for the proposed development in the public sewer network. Lack of such capacity may increase the risk of flooding and pollution and is a material drainage matter, for the Planning Authority to consider, by way of appropriate Planning Conditions. The availability of such capacity may be assessed through the Capacity Check process.

Any works required to provide such capacity may require the application of a S98 application and agreement.

This letter should not be considered as approval by Southern Water, to the discharge of any relevant Planning Conditions, relating to drainage.

If there is any change in the approved connection point, as above, you must provide us with your revised drawing and obtain our approval for the revision prior to the connection being made.

Please contact Mick Vince our Assistant Project Manager for this area on 07803 259227 giving at least 2 full working days notice, in order for a mutually convenient date and time for the inspection of the works to be arranged.

If connection is to be made through the lands of another, the works may not proceed until the Landowners consent has been obtained.

In approving this application, it is assumed that you have obtained any necessary Building Regulations Approval and /or Highway Authority Road Opening License.

I refer you to Southern Water Health and Safety Advisory which can be viewed in the Developer and Builders section of the Southern Water website as the link below:
<https://www.southernwater.co.uk/health-safety-advisory>.

This approval is given on the basis that you will review this Advisory and take the necessary actions with regards to Health and Safety.

Yours sincerely,



David Akehurst
Developer Services

Supplementary Requirements for Surface Water Drainage Proposals

Any proposed surface water scheme must consider sustainable drainage principles.

SuDS Selection

The following destinations must be considered for surface runoff in order of preference:

1. Discharge into the ground (infiltration);
2. Controlled discharge to a surface water body;
3. Controlled discharge to a surface water sewer.

Surface water must not be discharged into the foul sewer system. Infiltration structures include soakaways, basins, swales and permeable paving. Discharge to surface water bodies and surface water sewers must be restricted to an agreed rate.

SuDS selection hierarchy based on:

CIRIA C753 - The SuDS Manual

BS8582:2013 – Code of Practice for Surface Water Management for Development Sites

Approved Document H of the Building Regulations

Infiltration Drainage Design

Infiltration rates for soakage structures are to be based on percolation tests undertaken in the winter period at the location and depth of the proposed structures. The percolation tests must be carried out in accordance with BRE 365, CIRIA R156 or a similar approved method, and cater for the 1 in 10 year storm event between the invert of the lowest entry pipe into the infiltration structure and the base. For the purpose of design, the percolation rate must be applied to the sides of the infiltration structure only and the rate for the base must be zero. This does not apply to infiltration basins or permeable pavements, whereby the percolation rate is applied to the base only. There must be provision to ensure that there is capacity in the system to contain the 1 in 100 year storm event plus 30% on stored volumes, as an allowance for climate change. The infiltration structure should also drain 50% of its total volume in 24 hours or less for both the 1 in 10 and 1 in 100 year (plus 30%) storm events, in order to provide spare capacity for subsequent storms.

Any infiltration drainage design must include adequate winter groundwater monitoring data to determine the highest winter groundwater table. Residential developments in excess of five properties will require ground water monitoring to be carried out between October and March inclusive. The extent of monitoring required for smaller developments will be subject to agreement with the Council's Engineers.

Adequate freeboard must be provided between the base of the soakaway structure and the highest recorded groundwater level identified in that location.

Restricted Discharge

Discharge to a watercourse or surface water sewer must be restricted to the estimated mean greenfield runoff rate (Q_{bar}) by means of a controlled outflow (or restricted to existing runoff rates for brownfield sites). This can be derived from IH124 or a similar approved method. Any storage design must be submitted with groundwater monitoring data where applicable to ensure there will be no detrimental effect on the structure or storage. Storage areas are preferred to be in an 'open' form such as ponds, rather than underground tanks.

Flow Exceedance Routes

The drainage design should show flow routes through the proposed development, demonstrating where surface water will be conveyed for three types of flow:

1. Low flow routes

Regular flow from source control features such as permeable pavements should travel in low flow channels through the development in a controlled way contributing to landscape quality.

2. Overflows

In the event of local blockages or surcharge a simple overflow arrangement should allow water to bypass the obstruction and return to the management train sequence until conditions return to normal.

3. Exceedance routes

When SuDS are overwhelmed by exceptional rainfall, then exceedance routes are required to protect people and property. These provide unobstructed overland flow routes from the development and should be considered for all drainage schemes. Exceedance routes should also be protected from future changes in land use.

Culverting a Watercourse

Culverting (piping) a watercourse is not advised unless there is no alternative. The resulting reduction in storage volume, flow capacity and habitat potential would be unacceptable. Culverted watercourses are also more difficult to maintain due to the limited accessibility.

Land Drainage Consent must be sought from the Lead Local Flood Authority (West Sussex County Council), or its agent (Arun District Council – land.drainage@arun.gov.uk), prior to starting any works (temporary or permanent) that affect the flow of water in the watercourse. Such works may include culverting, channel diversion and the installation of trash screens.

The development layout must take account of any existing watercourses (open or culverted) to ensure that future access for maintenance is not restricted.

See also:

Land Drainage Act 1991 (amended 1994)

Maintenance and Management

Ditches and watercourses (including culverts) should retain a three metre easement with access that allows for its future maintenance.

Details of the maintenance and management of the SuDS system are to be set out in writing in a site specific maintenance manual. This manual shall include details of the financial management and arrangements for the replacement of components at the end of the manufacturers recommended design life. This document is then to be submitted as part of the planning process.

References

The Building Regulations 2000
Drainage and waste disposal
Approved document H
ISBN: 1-859462-08-1

Building Research Establishment,
Soakaway Design – Digest 365 (BRE 365)
ISBN: 1 86081 604 5, 1991

Centre for Ecology and Hydrology
Flood Estimation for Small Catchments - IH Report 124
Marshall, D.C.W. & Bayliss, A.C.
ISBN: 0948540621, 1994

CIRIA
C697 The SUDs Manual
Woods-Ballard, B.; Kellagher, R. et al
ISBN: 978-0-86017-697-8, 2007

CIRIA
R156 Infiltration Drainage – Manual of Good Practice
Bettess, R.
ISBN: 0 86017 457 3

British Standards Institution
BS8582:2013 – Code of Practice for Surface Water Management for Development Sites
ISBN: 978 0 580 76700 5