

From: Andrew Wood <Andrew.Wood@arun.gov.uk>
Sent: 21 October 2019 13:58
To: Robert Steventon [REDACTED]
Cc: Richard Sloman [REDACTED]
Subject: FW: Planning Consultation on A/113/19/DOC - Angmering site

Please see comments relating to Condition 11 in email below:

Condition 11

Development shall not commence until full details of the maintenance and management of the SuDS system is set out in a site-specific maintenance manual and submitted to, and approved in writing, by the Local Planning Authority. The manual is to include (a) details of financial management of the site including arrangements made in the event that the management company (or any subsequent management company) is no longer able to fulfil its duties; and (b) arrangements for the replacement of major components at the end of the manufacturers recommended design life.

Reason: To ensure the efficient maintenance and on-going operation of the SuDS system and to ensure the best practice in line with guidance set out in 'The SuDS Manual' CIRIA publication ref: C753 Chapter 32. This is required to be a pre-commencement condition because it is necessary to implement the surface water drainage system prior to commencing any building works.

Andrew Wood MRTPI | Senior Planning Officer, Planning Department, Arun District Council |
Location: 1st Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF
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From: Sarah Burrow <Sarah.Burrow@arun.gov.uk>
Sent: 21 October 2019 13:48
To: Andrew Wood <Andrew.Wood@arun.gov.uk>
Subject: RE: Planning Consultation on A/113/19/DOC - Angmering site

Andrew,

I have now had a chance to look through the 'Surface Water Drainage Maintenance' section of the Drainage Calculations. The information submitted could not possibly be called a 'site specific maintenance manual'. The applicant is required to submit a stand-alone document, which is intended to act as a guide for the

company/individual who will be responsible for maintenance of the surface water drainage system. It should give clear guidance on when and how it is expected that the features will be maintained. The language used is ambiguous, 'should be', 'can be', 'recommended'; these phrases are not clear enough for the desired purpose.

The applicant will need to submit a stand-alone document, with explicit instructions for exactly how they want the system to be maintained in the future. In addition, they will need to state how the management company will be funded and give an overview of how the surface water drainage design works, so that future residents can understand the system.

Kind Regards

Sarah

From: Sarah Burrow
Sent: 21 October 2019 13:04
To: Andrew Wood <Andrew.Wood@arun.gov.uk>
Subject: RE: Planning Consultation on A/113/19/DOC - Angmering site

Hi Andrew,

Yes you are correct and Paul is in liaison with the applicant regarding the consent. However he has many other applications to handle and can not prioritise one over another. They will have to wait in the queue I'm afraid.

Sarah

From: Andrew Wood <Andrew.Wood@arun.gov.uk>
Sent: 21 October 2019 13:00
To: Sarah Burrow <Sarah.Burrow@arun.gov.uk>
Subject: RE: Planning Consultation on A/113/19/DOC - Angmering site

Sarah,

Regarding Condition 10. Pls see condition below. I note that consent can be received from its agent ADC. Is there any chance of us providing consent?

The development shall not proceed until formal consent has been approved in writing from the Lead Local Flood Authority (WSCC) or its agent (ADC) for the discharge of any flows to watercourses, or the culverting, diversion, infilling or obstruction of any watercourse on the site.

Any discharge to a watercourse must be at a rate no greater than the pre-development run off values.

Reason : To ensure that the proposed development is satisfactorily drained in accordance with policies GEN7 and GEN9 of the Arun District Council Local Plan. This is required to be a pre-commencement condition because it is necessary to implement the surface water drainage system prior to commencing any building works.

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From: Sarah Burrow <Sarah.Burrow@arun.gov.uk>
Sent: 21 October 2019 12:44

To: Andrew Wood <Andrew.Wood@arun.gov.uk>

Subject: RE: Planning Consultation on A/113/19/DOC - Angmering site

Hi Andrew,

I have just discussed this at length with the Engineering Services Manager and a member of our Building Control team. We are satisfied that you can discharge condition 9 on the understanding that Building Control will raise any further concerns. However, the applicant should be aware that in order to locate the diffusers within 5m of the properties they may be required by a building inspector to amend their foundation design. If they choose instead to amend the drainage design to distance the diffusers further from the buildings they will be required to submit another DOC application as the drainage design will have changed from the one approved today.

I have discussed condition 10 with Paul, and as per the wording of the condition, we can not recommend it is discharged until the applicant has written approval from the LLFA. To have submitted an application and be awaiting a response is not enough. Once they have received written approval we can discharge.

On the basis of the plans we are happy for you to discharge condition 13.

I shall get back to you later regarding condition 11.

Kind Regards

Sarah

From: Andrew Wood <Andrew.Wood@arun.gov.uk>

Sent: 21 October 2019 12:08

To: Sarah Burrow <Sarah.Burrow@arun.gov.uk>

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

Subject: RE: Planning Consultation on A/113/19/DOC - Angmering site

Thanks for your email and I do hope we can progress these conditions asap! .

Re condition 9 - I would note that building control issues will be dealt with at building control stage and do not need to be addressed now at planning stage i.e. if diffusers are set within 5 metres of the building they will only be approved by building control if they pass building regulations. If an alternative foundation type due to diffusers is required building control will specify.

I have asked the agent for the information requested however I would prefer it if the condition was approved now as the request for building control officer consent at this stage seems onerous and is causing delay.

Thank you,

Andrew Wood

Andrew Wood MRTPI | Senior Planning Officer, Planning Department, Arun District Council |
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From: Sarah Burrow <Sarah.Burrow@arun.gov.uk>
Sent: 21 October 2019 11:42
To: Andrew Wood <Andrew.Wood@arun.gov.uk>
Subject: RE: Planning Consultation on A/113/19/DOC - Angmering site

Hi Andrew,

Having read through the various correspondence, including the letter from Robert Seventon (thank you), my assessment is as follows:

Comments Regarding Condition 9- surface water drainage design

Laura requested the following: "If you are to provide diffusers within 5m of the building I will need you to provide confirmation from a building inspector that this is acceptable taking into account the foundation design that you are proposing." As far as I am aware once this has been provided (or the design updated to move the diffusers further from the buildings), we will be able to recommend that the condition is discharged.

Comments Regarding condition 10 and 11 (Discharge of flows to watercourse, and, SuDS maintenance manual)

As far as I can tell, Laura was not intending on reviewing these until she was satisfied with the drainage design to discharge condition 9. This will now lie with myself and Paul Cann to assess. I shall look in to this today and update you if I require any more information.

I have no information from Laura regarding condition 13, but will assume that myself and Paul will assess as above.

Kind Regards

Sarah

From: Andrew Wood <Andrew.Wood@arun.gov.uk>
Sent: 21 October 2019 09:23
To: Sarah Burrow <Sarah.Burrow@arun.gov.uk>
Subject: FW: Planning Consultation on A/113/19/DOC - Angmering site

Please see attached letter.

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From: Robert Steventon [REDACTED]
Sent: 02 October 2019 16:38
To: Laura Gibbons <Laura.Gibbons@arun.gov.uk>
[REDACTED]

Subject: RE: Planning Consultation on A/113/19/DOC - Angmering site

Laura,

Thanks for your responses, we have provided additional information in the enclosed letter.

Please call if you wish to discuss.

Kind regards,

Robert Steventon

Civil Engineer

 LANMCO

Civil Engineers & Transport Planning

From: Laura Gibbons <Laura.Gibbons@arun.gov.uk>

Sent: 17 September 2019 16:14

To: Robert Steventon

Subject: RE: Planning Consultation on A/113/19/DOC - Angmering site

Hi Robert,

Comments below.

Key

Original comments

Your response

My response

1. Groundwater monitoring was undertaken and recorded groundwater to shallow depths of 0.43, 0.66 and 0.89mbgl. It is accepted that the results from WS1 and WS2 should be used for the surface water drainage design as they are relevant to the areas proposed for infiltration. It is not clear what the maximum recorded groundwater level was at each monitoring location respectively. Please can this be confirmed.

We enclose additional documents from Constructive Evaluation as part of their investigation. This provides full details of the groundwater monitoring. The highest and lowest groundwater levels at each location are as follows;

WS1 max = 1.48m bgl min = 1.69m bgl

WS2 max = 0.83m bgl min = 1.13m bgl

WS3 max = 0.43m bgl min = 1.04m bgl

2. Infiltration testing was completed at one location and gave rates of $5.13 \times 10^{-4} \text{ms}^{-1}$ at 0.9m depth. This is deeper than the highest recorded groundwater levels and the scarcity of infiltration testing is of significant concern. We would have expected at least one further infiltration test, ideally two further tests at the proposed location and depth of infiltrating structures.

The infiltration test was close to WS3 where the groundwater level is lower. The testing was in accordance with BRE365 and the location and depth close to the proposed filter drain. *You state that testing was completed at WS3, maximum recorded groundwater level here was 0.43mbgl. Therefore, I stand by my comment that this was completed deeper than maximum recorded groundwater level. One test location is inadequate. The test location is also a long way from the proposed infiltrating structures.*

3. Please can an impermeable areas plan be provided that clearly shows the impermeable areas draining to each surface water drainage feature. Please refer to enclosed drawing 191183/SK/04 for impermeable areas. *This will likely need to be revised due to comment 9 below.*
4. The filter drain is inadequate. Maximum modelled water depths are nearly 1m. This clearly will not be able to be contained above maximum recorded groundwater level. The groundwater monitoring found that the highest groundwater level in the vicinity of the filter drain was 1.48m below ground level. This has been shown on the filter drain long section 191183 2 Crete Nursery, Dappers Lane, Angmering, Bn16 4en11

September 2019 drawing 191183/520/02 and therefore the filter drain will be above the maximum groundwater level. As shown on the drawing, Filter Drain 1 is flat, and Filter Drain 2 is sloped, and this is correctly reflected in the MicroDrainage calculations. Location actually appears to be between WS1 and WS2. For clarity, please overlay monitoring locations onto drainage strategy drawing.

5. From looking at cross sections it also appears that the filter drain will be on a slope, please ensure this is accurately depicted within calculations.
6. Please provide evidence that a resin bound surface with open surface course asphalt is permeable. We have significant concerns over the permeability of this type of surface now and over the design lifetime. Please refer to the enclosed brochure for the Clearstone permeable resin bound surfacing. *The brochure provides us with no confidence regarding this. Type 3 is not permeable. We would require independent evidence of permeability.*
7. A permeable liner should fully wrap around the sub-base of the permeable paving areas. Please refer to drawing 191183/SD/01. *Okay.*
8. Please confirm material specification for filter drain. All sub-base material should be no fines. Please refer to drawing 191183/SD/01. *Type 3 is not permeable.*
9. Are diffusers to be used to disperse surface water into permeable paving subbases? Please provide construction details and locations of these if so. Diffusers should be located 5m from buildings, therefore the use of permeable patios to receive roof water is not acceptable. Diffusers have been added to the drawing. The patios have an impermeable surface so that rainwater runs off onto the grass and the subbase is only infiltrating the roof runoff. *As stated, diffusers should not be located within 5m of buildings. Permeable structures adjacent to buildings can receive water falling directly upon them, but should not receive concentrated rainwater within 5m of buildings.*
10. Catchpits must be provided upstream of all connections to permeable paving. Please ensure the location of rwp, catchpits, and connections to permeable areas are clearly shown on plan. The discharge into the permeable paving is only taking roof runoff so will contain minimal silt/fines and it is considered excessive to provide catchpits on all connection to the patios and driveways. The rainwater down pipes will have access points to allow for maintenance. *Catchpits must be provided upstream of all connections to permeable paving, this is as per CIRIA C753. Think about how much debris sits in a standard gutter.*
11. Please provide invert levels and cover levels of all inspection chambers, manholes, filter drains, etc. Please also ensure that finish and formation level of permeable paving is clearly provided on plan. Please refer to drawing 191183/500/01. *I will review further once GW and infiltration testing result acceptability has been agreed.*

Kind Regards,

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

Laura Gibbons | Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

Internal: 37818 | External: +44 (0) 1903 737818 | Fax: +44 (0) 1903 716018 | E-mail: laura.gibbons@arun.gov.uk

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From: Robert Steventon [REDACTED]
Sent: 11 September 2019 15:15
To: Laura Gibbons <Laura.Gibbons@arun.gov.uk>

[REDACTED]

Subject: FW: Planning Consultation on A/113/19/DOC - Angmering site

Laura,

Further to your comments below we enclose a letter providing responses and the updated engineering drawings for the development.

The aim of the surface water strategy is to discharge all runoff to ground in accordance with the SuDS hierarchy. Due to the high groundwater table the use of soakaways is not viable, so runoff is discharged via permeable paving. If this strategy is not acceptable then the only alternative is to provide an attenuation tank with a discharge to the culvert, which we are trying to avoid.

Please call if you have any queries.

Kind regards,

Robert Steventon
Civil Engineer

Civil Engineers & Transport Planning

[REDACTED]

From: Mark Goodchild [REDACTED]
Sent: 06 September 2019 16:07

[REDACTED]

Subject: FW: Planning Consultation on A/113/19/DOC - Angmering site

Dear Robert,

Please see below for an email from the local authorities drainage consultant.

Regards

Mark Goodchild

Architect & Director



[REDACTED]

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From: Admin Dept. [REDACTED]
Sent: 06 September 2019 13:28
To: Mark Goodchild [REDACTED]; Richard Sloman [REDACTED]
Subject: FW: Planning Consultation on A/113/19/DOC - Angmering site

From: Andrew Wood <Andrew.Wood@arun.gov.uk>
Sent: 06 September 2019 11:03
To: Admin Dept. [REDACTED]
Subject: FW: Planning Consultation on A/113/19/DOC

Attention Richard Sloman,

Please see additional information request. Please do negotiate directly with Laura Gibbons ADC Drainage Engineer. Contact details below. Thank you,

Andrew Wood

[Andrew Wood](#) MRTPI | Senior Planning Officer, Planning Department, [Arun District Council](#) |
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From: Laura Gibbons <Laura.Gibbons@arun.gov.uk>
Sent: 05 September 2019 10:37
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Cc: Andrew Wood <Andrew.Wood@arun.gov.uk>
Subject: RE: Planning Consultation on A/113/19/DOC

Engineers Comments Regarding Condition 9- surface water drainage design

1. Groundwater monitoring was undertaken and recorded groundwater to shallow depths of 0.43, 0.66 and 0.89mbgl. It is accepted that the results from WS1 and WS2 should be used for the surface water drainage design as they are relevant to the areas proposed for infiltration. It is not clear what the maximum recorded groundwater level was at each monitoring location respectively. Please can this be confirmed.
2. Infiltration testing was completed at one location and gave rates of $5.13 \times 10^{-4} \text{ms}^{-1}$ at 0.9m depth. This is deeper than the highest recorded groundwater levels and the scarcity of infiltration testing is of significant concern. We would have expected at least one further infiltration test, ideally two further tests at the proposed location and depth of infiltrating structures.

3. Please can an impermeable areas plan be provided that clearly shows the impermeable areas draining to each surface water drainage feature.
4. The filter drain is inadequate. Maximum modelled water depths are nearly 1m. This clearly will not be able to be contained above maximum recorded groundwater level.
5. From looking at cross sections it also appears that the filter drain will be on a slope, please ensure this is accurately depicted within calculations.
6. Please provide evidence that a resin bound surface with open surface course asphalt is permeable. We have significant concerns over the permeability of this type of surface now and over the design lifetime.
7. A permeable liner should fully wrap around the sub-base of the permeable paving areas.
8. Please confirm material specification for filter drain. All sub-base material should be no fines.
9. Are diffusers to be used to disperse surface water into permeable paving subbases? Please provide construction details and locations of these if so. Diffusers should be located 5m from buildings, therefore the use of permeable patios to receive roof water is not acceptable.
10. Catchpits must be provided upstream of all connections to permeable paving. Please ensure the location of rwp, catchpits, and connections to permeable areas are clearly shown on plan.
11. Please provide invert levels and cover levels of all inspection chambers, manholes, filter drains, etc. Please also ensure that finish and formation level of permeable paving is clearly provided on plan.

Comments Regarding condition 10- discharge of flows to watercourse

It would not be appropriate to approve condition 10 whilst the surface water drainage design is still being revised.

Comments Regarding condition 11- SuDS maintenance manual

It would not be appropriate to review the adequacy of the maintenance manual whilst the surface water drainage design is still being revised. I will provide comments once the details of condition 9 are agreed.

Regards,

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

Laura Gibbons | Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF
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From: planning.responses@arun.gov.uk <planning.responses@arun.gov.uk>

Sent: 02 September 2019 11:06

To: Land Drainage <Land.Drainage@arun.gov.uk>

Subject: Planning Consultation on A/113/19/DOC

To: **Engineers (Drainage)**

NOTIFICATION FROM ARUN DISTRICT COUNCIL

TOWN AND COUNTRY PLANNING ACT 1990

APPLICATION NO: A/113/19/DOC

Registered: 22-AUG-19

Site Address: Crete Nursery Dappers Lane Angmering BN16 4EN

Description of Works: Approval of details reserved by condition imposed under ref A/178/17/OUT relating to Condition Nos 4 - external lighting, 5 - construction management plan, 6 - road safety audit, 7 - visibility splays, 8 - footway, 9 - proposed surface water drainage, 10 - discharge flows to watercourses, 11 - SuDs system and 13 - future access & management of any watercourse or culvert.

The Council have received the above application to discharge conditions. I shall be pleased to receive any observations you may wish to make in respect of those conditions relating to your field of expertise.

[Click here to view the Discharge of Condition application](#)

[Click here to view conditions on original application - click on decision tab](#)

Should you have any comments to make, these should be sent by replying to this email by 16th September 2019.

www.arun.gov.uk/planning

Please be aware that any comments you may make will be available on our website so please do not insert personal details or signatures on your reply.

In the absence of a reply within the period stated, I shall assume that you have no observations to make.

The officer dealing with this application is Andrew Wood who can be contacted on telephone number 01903 737768.

Thanking you in anticipation

Planning Case Officer
Arun District Council

<http://www.arun.gov.uk>

DX 57406 Littlehampton

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