

[REDACTED]

From: Elizabeth Lawrence [REDACTED]
Sent: 16 July 2021 10:16
To: Simon Davis <Simon.Davis@arun.gov.uk>
Subject: Fw: Planning Consultation on: AL/75/21/PL

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Dear Simon

Please our drainage engineers comments below.

I am happy for this to be dealt with by condition. If you or your drainage engineer would like testing now please let me know.

My client is happy either way, but if it can be conditioned it makes sense.

Kind regards

Liz

----- Forwarded message -----

From: Dan Lytton [REDACTED]
To: Elizabeth Lawrence [REDACTED]
Cc: Richard Atkinson [REDACTED]
Sent: Friday, 16 July 2021, 10:04:24 BST
Subject: RE: Planning Consultation on: AL/75/21/PL

Hi Liz,

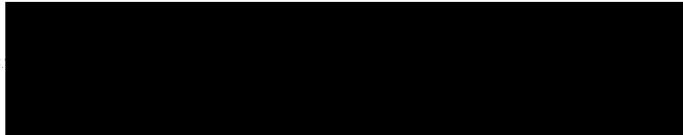
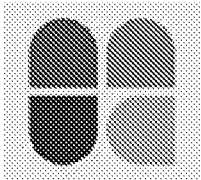
No need to undertake this testing at present. This is a conditional approval and the comments are no different to what was provided in March, other than request for groundwater monitoring now removed.

As per our previous response (attached), winter infiltration testing at a shallow level above 0.75mbgl where the permeable pavement is proposed will need to be undertaken as part of the detailed design to discharge these conditions.

As far as I am concerned we are happy with these conditions which can be addressed after planning approval is granted. Please contact me later this year should you wish for our input on detailed design and to liaise with your geotechnical contractor to ensure the correct infiltration testing is undertaken this winter.

Kind Regards,

Dan Lytton MEng
Engineer



 www.bpcivils.co.uk

Bright Plan Civils, Transport Planning and Civil Engineering Consultants

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From: Elizabeth Lawrence [REDACTED]
Sent: 16 July 2021 09:49
To: Richard Atkinson [REDACTED] Dan Lytton [REDACTED]

----- Forwarded message -----

From: Simon Davis <simon.davis@arun.gov.uk>
[REDACTED]

Sent: Thursday, 15 July 2021, 14:24:09 BST

Subject: FW: Planning Consultation on: AL/75/21/PL

Hi Liz,

Please see below drainage comments FYI, particularly the section about infiltration testing.

Kind Regards

Simon J Davis MRTPI

Principal Planning Officer

Directorate of Place



T: 01903 737874

E: simon.davis@arun.gov.uk

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From: Sarah Burrow <Sarah.Burrow@arun.gov.uk>
Sent: 15 July 2021 14:04
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Cc: Simon Davis <Simon.Davis@arun.gov.uk>; Paul Cann <Paul.Cann@arun.gov.uk>
Subject: RE: Planning Consultation on: AL/75/21/PL

Engineers Comments Regarding Surface Water Drainage

The applicant has provided a Flood Risk Assessment [FRA] and conceptual Surface water Drainage Strategy for the site. Groundwater monitoring has been undertaken over winter 2020-2021 at two points on the site, this shows groundwater to peak at 0.75mbgl at WS3 on 29/01/2021. The groundwater monitoring that has been provided is sufficient for the purposes of the surface water drainage design and as such we will not be requesting further groundwater investigation should the application be approved.

Preliminary infiltration testing was undertaken in two boreholes on the site. This testing was not in accordance with DG365 as such will not be accepted as a justification for ruling out infiltration on the site. Whilst it is accepted that infiltration potential is likely to be limited/non-existent on the site, this needs to be evidenced with appropriate testing undertaken in winter months. The FRA acknowledges the need for these tests (paragraph 5.1.5) as does the Leap ground investigation report supplied by the applicant (p29) and Paul Cann's e-mail of 9/2/2021 indicated the same (see appendices - point 6).

If it is believed that infiltration will not be possible on the site, the applicant may wish to undertake the DG365 testing now, as if infiltration is not viable in Spring/Summer, it certainly won't be in winter. However, if summer testing shows infiltration to be viable then we will expect the tests to be repeated in the winter period. The infiltration tests should be completed in the location of the proposed permeable paving and at shallow depths (above peak groundwater level).

Assuming that infiltration is found to not be viable on the site, then the applicant proposes to dispose of surface water via permeable paving which provides water treatment and storage before discharging at a restricted rate of 2l/s to the watercourse at the north of the site. We are agreeable to this solution, as groundwater did not peak above 0.75mbgl we would like to see the permeable paving lined with a permeable liner to make use of whatever limited infiltration potential there may be on the site.

Site investigations will be necessary to investigate the condition of the receiving watercourse and it is likely that remedial works will need to be carried out to this watercourse to ensure that it is capable of taking the flows proposed. Please contact Paul Cann of this department to organise a site visit so that he can discuss any works that may be required and the requirements for the Ordinary Watercourse Land Drainage Consent which will need to be applied for, for authorisation to make a connection to the ditch.

The applicants engineers are aware of the required easements to the watercourse as these are cited within the FRA. Please ensure that not only buildings, but also boundary fences are not sited within 3m of the watercourses. Please provide a plan showing the buffers and the flood zones when a Discharge of Conditions application is made (if this application is approved).

If you are minded to approve the application please apply the following conditions to ensure that the development is adequately drained and does not increase flood risk elsewhere.

PCENG2 (modified to remove the need for groundwater monitoring):

"Development shall not commence, other than works of site survey and investigation, until full details of the proposed surface water drainage scheme have been submitted to and approved in writing by the Local Planning Authority. The design should follow the hierarchy of preference for different types of surface water drainage disposal systems as set out in Approved Document H of the Building Regulations, and the recommendations of the SuDS Manual produced by CIRIA. Winter Percolation testing to BRE 365, or similar approved, will be required to support the design of any Infiltration drainage. No building / No part of the extended building shall be occupied until the complete surface water drainage system serving the property has been implemented in accordance with the agreed details and the details so agreed shall be maintained in good working order in perpetuity."

Reason: To ensure that the proposed development is satisfactorily drained in accordance with policies W SP1, W DM1, W DM2 and W DM3 of the Arun 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.

And the accompanying informative:

INFORM2

"Infiltration rates for soakage structures are to be based on percolation tests undertaken in the winter period and at the location and depth of the proposed structures. The percolation tests must be carried out in accordance with BRE365, CIRIA R156 or a similar approved method and cater for the 1 in 10 year storm event plus 40% on stored volumes (allowance for climate change) between the invert of the entry pipe to the soakaway, and the base of the structure. It must also have provision to ensure that there is capacity in the system to contain below ground level the 1 in 100 year storm event plus 40% on stored volumes. Adequate freeboard must be provided between the base of the soakaway structure and the highest recorded annual groundwater level identified in that location. Any SuDS or soakaway design must include adequate groundwater monitoring data to determine the highest winter groundwater table in support of the design. The applicant is advised to discuss the extent of groundwater monitoring with the Council's Engineers."

Supplementary guidance notes regarding surface water drainage are located here [Drainage Planning Consultations | Arun District Council](#) on Arun District Councils website. A surface water drainage checklist is available on Arun District Councils website, this should be submitted with a Discharge of Conditions Application."

PCENG3

"The development shall not proceed until details have been submitted to and approved in writing by the Local Planning Authority for any proposals: to discharge flows to watercourses; or for the culverting, diversion, infilling or obstruction of any watercourse on or adjacent to the site. Any discharge to a watercourse must be at a rate no greater than the pre-development run-off values and in accordance with current policies. No construction is permitted, which will restrict current and future landowners from undertaking their riparian maintenance responsibilities in respect to any watercourse or culvert on or adjacent to the site."

Reason: To ensure that the proposed development is satisfactorily drained in accordance with policies WDM1, WDM2 and WDM3 of the Arun Local Plan. And to ensure that the duties and responsibilities, as required under the Land Drainage Act 1991, and amended by the Flood and Water Management Act 2010, can be fulfilled without additional impediment following the development completion. It is considered necessary for this to be a pre-commencement condition to protect existing watercourses prior to the construction commencing.

And the accompanying informative:

INFORMD2

"Under Section 23 of the Land Drainage Act 1991 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 an ordinary watercourse. Such works may include culverting, channel diversion, discharge of flows, connections, headwalls 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. No development is permitted within 3m of the bank of an ordinary watercourse, or 3m of a culverted ordinary watercourse."

PCENG4

"Development shall not commence until full details of the maintenance and management of the surface water drainage 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 details of financial management and arrangements for the replacement of major components at the end of the manufacturer's recommended design life. Upon completed construction of the surface water drainage system, the owner or management company shall strictly adhere to and implement the recommendations contained within the manual."

Reason: To ensure that the proposed development is satisfactorily drained in accordance with policies WDM1, WDM2 and WDM3 of the Arun Local Plan. It is considered necessary for this to be a pre-commencement condition to ensure that the future maintenance and funding arrangements for the surface water disposal scheme are agreed before construction commences.

Kind regards

Sarah Burrow

Engineering Assistant, Engineering Services



T: 01903 737815

E: sarah.burrow@arun.gov.uk

Current working pattern: Monday 8am-2.30pm, Tuesday 8am-5.30pm, Wednesday 8am-5pm, Thursday 8am-5.30pm, Friday 8am-11.30am.

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