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Arun District Council, Civic Centre, Maltravers Rd, Littlehampton, West Sussex, BN17 5LF
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From: Sarah Burrow <Sarah.Burrow@arun.gov.uk>

Sent: 24 February 2021 15:05

To: Planning.Responses <Planning.Responses@arun.gov.uk>

Cc: James Cross <James.Cross@arun.gov.uk>; Paul Cann <Paul.Cann@arun.gov.uk>; Laura Gibbons <Laura.Gibbons@arun.gov.uk>

Subject: RE: Planning Consultation on: BN/153/20/PL

Engineers Comments Regarding Surface Water Drainage

An FRA and preliminary drainage strategy have been submitted as part of this application. The drainage strategy is noted to be a 'high level' strategy which has been produced without soakage testing data. It should be assumed that the drainage strategy for the site will change once informed by winter infiltration testing. As such it is requested that neither the Drainage Strategy or the FRA are listed as approved plans should you be minded to approve the application.

The applicant's engineers have been in contact with this department regarding our infiltration testing requirements and to discuss the proposed surface water drainage strategy for the site. At the time of the initial correspondence (and prior to this application being made) groundwater monitoring data was not supplied. Since that time infiltration testing has been completed which shows that infiltration at shallow depths is likely to be viable for parts of the site. However, some areas evidenced little to no infiltration potential and groundwater was found to be high in the south of the site (0.42mbgl – incorrectly noted as 0.34mbgl in the FRA). Unfortunately as the testing was completed below peak groundwater levels in a number of locations, the applicant will either have to repeat the tests or for calculation purposes ignore infiltration in the centre and south of the site and design as an attenuation system, but allowing for infiltration in the construction (where structure bases are above peak groundwater levels).

Therefore it is expected that the final surface water drainage strategy will be a 'hybrid' system, utilising infiltration where possible and attenuating water in lined ponds or equivalent in the south before a restricted discharge to the watercourse. We do believe that there is a watercourse in this location however this is not mapped on our system. A site visit will have to be organised with the Principal Drainage Engineer, Paul Cann, to confirm the existence of, and assess the condition of this watercourse. It is likely that improvements will need to be made to this ditch in order to ensure that it can receive the proposed flows.

As noted by the applicant, Land Drainage Consent will be required to discharge flow to any ordinary watercourse. This is available through this department. The applicant proposes restricting discharge rates to the southern watercourse to 1.6l/s in critical 1% + 40%CC event (QBAR), this is acceptable in principle, however it will be necessary to ensure that filtration devices are in place to trap floating debris due to the small orifices that will likely be required to achieve this rate. It is also worth noting that there are number of mature trees to the south of the site, it will not be possible to route the connection to the watercourse through any root protection zones, future growth should also be considered when assuming those areas. We would expect to see the tree root protection areas shown on any submitted drainage strategy to aid assessment.

As noted by Sue Howell (Greenspace) SuDS features are not considered part of the public open space quantities, yet we would encourage the applicant to utilise open water features which can provide ecological and biodiversity benefits, as well as water storage and treatment as opposed to underground crate systems which serve only as storage. We would also encourage the use of permeable paving throughout the site, to infiltrate where possible and to act as water treatment and conveyance where infiltration is not viable. The bases of all permeable paving must be above peak groundwater level.

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.

The applicant is encouraged to maintain contact with this department and to ensure they fully understand the expectations of the extent of a DOC submission before making one. The requirements are set out in the Drainage Checklist linked below.

PCENG2 (modified to remove the requirement for further 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:

INFORMD

"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 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 event plus 40% on stored volumes, as an allowance for climate change. 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 <https://www.arun.gov.uk/surfacewater> 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."

PCENG D3

"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. No construction is permitted, which will restrict current and future land owners 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 W DM1, W DM2 and W DM3 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:

INFORM D2

"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."

PCENG D4

"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 W DM1, W DM2 and W DM3 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.

ENG D1

"Immediately following implementation of the approved surface water drainage system and prior to occupation of any part of the development, the developer/applicant shall provide the local planning authority with as-built drawings of the implemented scheme together with a completion report prepared by an independent engineer that confirms that the scheme was built in accordance with the approved drawing/s and is fit for purpose. The scheme shall thereafter be maintained 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.

Kind Regards

Sarah Burrow

Engineering Assistant, Engineering Services



Whilst national restrictions are in place I will be working flexibly between the hours of 8am and 8pm. I appreciate your patience if I am slower than usual to respond. Equally I understand that you may be facing similar challenges and varying work patterns and will not be expecting immediate responses to my e-mails.

Arun District Council, Civic Centre, Maltravers Rd, Littlehampton, West Sussex, BN17 5LF

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From: Planning.Responses <Planning.Responses@arun.gov.uk>

Sent: 13 January 2021 11:19

To: Land Drainage [REDACTED]

Subject: Planning Consultation on: BN/153/20/PL

To: Engineers (Drainage)

NOTIFICATION FROM ARUN DISTRICT COUNCIL

Town & Country Planning Act 1990 (as amended)

Town and Country Planning (Development Management Procedure) (England) Order 2015

Planning Permission

Application No: BN/153/20/PL

Registered: 13th January 2021

Site Address: Warwick Nursery Barnham Road Eastergate Bognor Regis PO203RT

Grid Reference: 494969 105256

Description of Works: 44 No. dwellings & associated infrastructure. This site falls within the BEW Strategic Site, CIL Zone 1 (Zero Rated).

The Council have received the above application.

[Click here to view the application details](#)

Should you have any comments to make, these should be sent by replying to this email by 11th February 2021 . You can also monitor the progress of this application through the Council web site:

www.arun.gov.uk/planning

The application will be determined having regard to the development plan policies (if any are relevant) and other material considerations. The development plan can be accessed via the website <https://www.arun.gov.uk/development-plan> as can the the leaflet how to respond to planning applications <https://www.arun.gov.uk/planning-application-comments> which deals with material planning considerations.

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.

Should the application go to appeal the Planning Inspectorate will publish any comments made to the Council on their website: <https://www.planningportal.co.uk/info/200207/appeals> but they will protect personal details.

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

Yours sincerely

James Cross

Planning Officer- Arun District Council

Telephone: 01903 737784

Email: james.cross@arun.gov.uk

PLCONSULT (ODS) 2020