

Thank you for the opportunity to comment upon this application. We have the following comments on flood risk and surface water drainage.

Flood risk- The application site contains areas; within flood zone 3, areas at risk of surface water flooding, and areas at risk from breach of the upstream Somerset's Lake. A detailed flood risk assessment has been submitted including new hydraulic modelling. This has been reviewed by myself and I believe it provides a more accurate representation of predicted flood extents than the mapping currently available as the "flood map for planning". The Environment Agency should be consulted in order for flood extents to be agreed. No development or surface water attenuation features should be located within predicted flood extents. This includes the extents of flooding predicted in the Somerset's Lake breach scenario. We would request that if the application is approved that some form of condition is applied to ensure that development does not occur within this predicted flood extent.

Surface water drainage - the drainage strategy submitted details the opportunities available for surface water drainage and the intention to follow the hierarchy for sustainable drainage. We have been in direct discussions with the applicant's engineer who has supplied evidence that the scale of development proposed can be adequately drained in line with policy. If attenuated discharge to watercourse is required the allowable discharge rate will be the 1 year greenfield runoff rate for the proposed developed area that will be served by a positive drainage network, not that associated with the entire site area.

If you are minded to approve this application please apply the following conditions to ensure the site is adequately drained and does not increase flood risk elsewhere:

"At Reserved Matters stage full details of the proposed surface water drainage scheme shall be submitted to the Local Planning Authority for approval. 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 groundwater monitoring to establish highest annual ground water levels and winter infiltration testing to BRE DG365, or similar approved, will be required to support the design of any Infiltration drainage. Development shall not commence, other than works of site survey and investigation, until full details of the surface water drainage scheme have been approved by the Local Planning Authority. 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."

"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."

"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. "

"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."

and the accompanying informatives:

"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 BRE DG365, 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. Further detail regarding our requirements are available on the following webpage <https://www.adur-worthing.gov.uk/planning/applications/submit-fees-forms>. A surface water drainage checklist is available on this webpage. This clearly sets out our requirements for avoiding pre-commencement conditions, or to discharge conditions"

"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), 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."