

Arun District Council
Arun Civic Centre (1) Maltravers Road
Littlehampton
West Sussex
BN17 5LF

Our ref: HA/2021/122910/01-L01
Your ref: BN/155/20/EIS
Date: 05 February 2021

Dear Sir/Madam

**SCOPING OPINION FOR UP TO 600 RESIDENTIAL DWELLINGS AND CARE HOME
LAND NORTH OF BARNHAM ROAD EASTERGATE**

Thank you for consulting the Environment Agency on the above application.

Environment Agency Position

We have reviewed the documents related to the scoping opinion for this application. The proposed site rests upon River Terrace Deposits underlain by London Clay (secondary and unproductive aquifers respectively). There is a Source Protection Zone 1 associated with a Portsmouth Water public water abstraction (approx. 300m north of the northern boundary).

We have identified the following points as aspects of investigation that will require additional attention:

Land Contamination

We note that the site has been identified as agricultural land and as such, the risk of gross contamination is negligible. We would expect at least a phase 1 desktop study/site walkover to be conducted to rule out any areas that may be affected by unexpected contamination (the proximity to old landfill sites needs to be considered), as well as identifying any hitherto unknown pathways (such as old boreholes or soakaways).

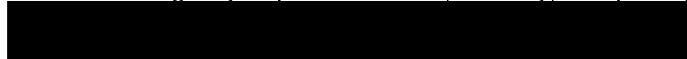
We would also expect the applicant to develop a strategy/procedure to deal with any unexpected contamination encountered during the construction phase of the proposed development.

Groundwater:

The site of the proposed development is located in proximity to an SPZ 1 associated with the Fontwell public water abstraction (Portsmouth Water). The abstraction is from the Chalk (Principal aquifer) which is overlain by the Lambeth Group (Secondary A aquifer) and London Clay (Unproductive aquifer) respectively (the site is underlain by London Clay) with sporadic superficial deposits (secondary aquifer) in the vicinity (the site is underlain by River

Environment Agency

Environment Agency Depot Canal Walk, Romsey, Hampshire, SO51 7LP.



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Terrace Deposits). Whilst it would appear that the London Clay would provide suitable mitigation for vertical migration of contaminants, the applicant should note that the thickness and heterogeneity of this formation varies in certain areas.

The construction phase of the project also presents a potential risk to groundwater with any penetrative foundation works potentially providing pathways for contaminated material to sensitive groundwater. There is also the potential for this activity to cause turbidity which could compromise the integrity of local drinking water supplies.

We have yet to receive any information regarding the use of SuDS or soakaways for surface water drainage. Whilst the use of SuDS is encouraged, the viability of soakaways in this area is questionable. The use of soakaways may allow direct surface run off to be discharged into a principal aquifer, which we could not support.

With regards to clean roof water, we have no objection to this being discharged to ground. However surface water drainage from car parking areas and roads has the potential to contain pollutants and hazardous substances. We would expect a risk assessment to be carried out to determine the level of treatment required prior to the water from these areas being discharged to ground. We would like to direct the developer to the Ciria SuDs manual C753 where industry best practice is provided. It provides further information and guidance on risk assessment and the likely level of treatment needed for such sites. This can be found at <http://www.susdrain.org/>.

The applicant should also be aware of the prevalence of solution features in the area. These features not only provide preferential flow pathways for surface run off to rapidly enter the Chalk, but also enable the rapid and erratic flow of groundwater in the area. This mechanism has been noted as active in this area and directly affects local groundwater abstractions.

Therefore, we would expect the applicant to submit a thorough hydrogeological risk assessment, foundation works risk assessment and drainage strategy. All these documents should consider the sensitivity of groundwater in the area.

It is our understanding that any foul run off will be sent to the mains network, this will need to be evidenced in any drainage strategy.

Should you have any further queries please do not hesitate to contact me.

Yours sincerely

Miss Hannah Brothwell
Sustainable Places Advisor

