

1 September 2016

Arun District Council
Development Control
Arun Civic Centre
Maltravers Road
Littlehampton
West Sussex
BN17 5LF



The Civil Engineering Practice
11 Tungsten Building
George Street
Fishersgate
Sussex BN41 1RA

By email

Dear Sirs

**Your reference P/76/16/PL
Sefter Farm, Pagham, Bognor Regis**

We refer to the Environment Agency letter reference HA/2016/118460/01-L01 dated 4 August 2016.

We note the Environment Agency's no objection response to the Planning Authority on flood risk grounds. We also note the comments about the watercourse byelaws with regard to the proposed wetland. The byelaws will be taken into account as part of the design process and any consent application dealt separately as the design progress further.

The Environment Agency has requested comments from the drainage engineers with regard to surface water runoff in particular the climate change allowance used. We comment as follows:

The proposed drainage strategy identified in Section 6 of the Flood Risk Assessment (FRA) has been designed to cater for all rainfall events up to the 1 in 100 year plus climate change allowance.

The guidance from Environment Agency on climate change allowances published on 19 February 2016 states that the potential anticipated change to rainfall events are as follows:

Statistical Range	Total Potential Change anticipated for 2040 to 2059	Total Potential Change anticipated for 2060 to 2115
Upper End	20%	40%
Central	10%	20%

Appendix 9 of the submitted FRA contains calculations demonstrating that a climate change allowance of 30% increase in rainfall intensities has been made. Taking account of the upper end potential increase for rainfall intensities by 40% the attached calculation sheet shows that the anticipated surface water runoff volume would be 1,330m³ compared to 1,220m³ stated at paragraph 6.2.3 of the FRA which allowed for a climate change allowance of 30%.



As stated at paragraph 6.2.6 of the FRA, the reservoir used for storing the surface water runoff is artificially maintained with a minimum freeboard of 500mm. Best practice guidance seeks a freeboard allowance of 300mm. Any increase in surface water runoff between the 30% climate change allowances to 40% can be accommodated within the extra 200mm freeboard allowance in the reservoir over a surface area of 10,000m² amounting to an available extra storage volume of 2,000m³.

The climate change guidance suggests that the impact of increased climate change allowance has to be assessed but does not state whether extra allowance should be made for surface water drainage/storage provisions.

The proposed development is for commercial use. In accordance with best practice, the impact of commercial development does not need to be assessed over the same lifetime of 100 years as would be required for residential developments and the development should generally be regarded to have a shorter lifetime.

Whilst there is no specific requirements to provide a surface water drainage system to cater for the 1 in 100 year plus 40% climate change allowance, the surface water runoff from the proposed development can be accommodated onsite without increasing flood risk either onsite or offsite for all rainfall events up to the 1 in 100 year plus a 40% climate change allowance.

Yours faithfully

S B Sathan

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Enclosure