

Date: 14 October 2022
Our ref: 406469
Your ref: Y19/0257/FH



James Farrar
Folkestone and Hythe District Council

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BY EMAIL ONLY

Dear James Farrar,

Planning consultation: Further Information - Outline application, with all matters reserved, for a comprehensive residential led mixed use development.

Location: Land Bounded By; The M20 And Channel Tunnel Railway Link (Ctrl) To The North; The A20/Stone Street And Sandling Park To The East; Harringe Lane To The West, And; Aldington Road To The South

Thank you for your consultation on the above dated 12 September 2022 which was received by Natural England on the same date.

Following our letter on the 5 August 2022 in which we provided our advice on designated sites, Soils and Agricultural Land Quality, and Protected Species, I am pleased to provide our further advice in relation to the recently submitted Nutrient Budget Analysis Update document (July 2022).

Natural England welcomes the steps that have been taken to address the 'nutrient neutrality' issues affecting the Stodmarsh designated sites. We also welcome the resubmission of the nutrient budget for the development, which now utilises the updated Stodmarsh nutrient budget calculator (March 2022).

Updated Nutrient Budget

Natural England has reviewed the latest nutrient budget calculations and we advise that we consider it has one error within the calculations. From reviewing the average annual rainfall at the site using the National River Flow Archive ([Catchment Info for 40011 - Great Stour at Horton \(ceh.ac.uk\)](https://catchment.info/40011-Great-Stour-at-Horton-ceh.ac.uk)), we advise that the annual average rainfall (mm) used in Stage 2 of the calculations should be set as 750.1 – 800, not 700.1 – 750.

Aside from the above point, Natural England does not have any further comments to make on the nutrient budget calculations.

Proposed Mitigation Wetlands

Natural England, in partnership with The Rivers Trust and Constructed Wetland Association, has recently published the document '[Framework approach for Responding to Wetland Mitigation Proposals](#)' which can be found on The Rivers Trust [Constructed Wetland Hub](#). This wetland mitigation framework is being used by Natural England to adequately review wetland proposals and designs which are focused on Nutrient Neutrality mitigation. For this reason, we recommend that the developers utilise this document to assist in their wetland designs.

Natural England notes that the Arcadis Nutrient Budget Analysis Update (July 2022) has used the medium nutrient removal efficiency ratings based on literature from Land et al., 2016, to calculate the required size of mitigation wetlands required for the development. However, we advise that this approach does not take into account the inlet concentration, which will strongly influence the load removal in most wetland treatment systems. If the inlet nutrient concentrations are low, then it is unlikely that the wetlands will remove the required load of nutrients sufficiently to achieve nutrient

neutrality for the development. We therefore recommend that further design of the wetland should utilise industry best-practice approaches to calculate the nutrient removal and associated wetland area. These include;

- The P-K-C* approach
- A 'plug flow' model termed the k-C* approach; or
- Regression (or exponential decay) equations;

Please also note that we advise the wetland designs should use at least two of these approaches, and then the most precautionary calculation should be used to inform the nutrient removal rating of the wetland.

Natural England notes that the Onsite WwTW will discharge effluent into one of the proposed wetlands. As the nutrient permit levels and effluent volume from the onsite WwTW are known, it is possible to utilise the recommended above approaches to accurately calculate the nutrient removal rate of this wetland.

We advise that there are a multitude of factors that can influence the effectiveness of constructed mitigation wetlands. Therefore, we highly recommend that information found in the [Wetland Mitigation Framework](#) is considered when designing the nutrient mitigation wetlands. Additionally, further background information on constructed wetlands can be found within the '[Introduction to Freshwater Wetlands for Improving Water Quality \(JP044\)](#)' report, which was recently published by Natural England.

Final Comments

Please note that if your authority is minded to grant planning permission contrary to the advice in this letter, you are required under Section 281 (6) of the Wildlife and Countryside Act 1981 (as amended) to notify Natural England of the permission, the terms on which it is proposed to grant it and how, if at all, your authority has taken account of Natural England's advice. You must also allow a further period of 21 days before the operation can commence.

I hope these comments are helpful and we remain fully committed to working with Folkestone and Hythe District Council and the applicant to ensure that the proposed development avoids or fully mitigates adverse impacts on designated sites. We would be pleased to provide further advice through our Discretionary Advice Service if this would be helpful.

If you have any queries relating to the advice in this letter please contact me at thomas.scott-heagerty@naturalengland.org.uk.

Yours sincerely,

Thomas Scott-Heagerty
Sussex and Kent Area Team