

Land near Touchwood, Stockbridge Road, Lopcombe Corner, Wiltshire, SP5 1BW
Nutrient Neutrality Assessment

Prepared by
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Letter Report Information

Site Address:	Land near Touchwood, Stockbridge Road, Lopcombe Corner, Wiltshire, SP5 1BW
Report Revisions:	N/A
Report Author:	William Davis BSc MSc (*Hons*) ACIEEM
Report Reviewer:	Katie Warren BSc *(Hons)* MSc MIEnvSc MRSB Mem.RES Natural England (NE) Level 1 Bat Licence: 2021-52120-CLS-CLS NE Barn Owl Survey Licence: 2021-52120-CLS-CLS NE Level 1 Great Crested Newt Licence: 2022-10883-CL08-GCN Natural Resource Wales Bat Licence: S093440/1

Report Author

William Davis graduated with a merit after completing his master's degree in species identification and habitat survey from the University of Reading. This degree was designed with the consultancy RSK and involved a six-month placement at EPR. William has worked as an ecological consultant since 2014 and he holds a European protected species survey licence for both great crested newt and dormouse. William has experience working on a wide range of projects from major infrastructure projects in England and Wales to modifications to single residences. William's work covers all elements of ecological consultancy and includes ecological survey, mitigation and enhancement planning, clerk of works and project support work. William has a significant amount of experience in surveying for bats, reptiles, great crested newt, dormouse, otters, water vole and in the creation of mitigation and enhancement for these species.

Report Reviewer

Katie Warren is an Independent Ecologist with seven years of experience in the ecology sector. Katie has Natural England and Natural Resource Wales survey licences for bats. She has also Natural England survey licences for great crested newts (Level 1) and barn owls. Katie is a full member of the Institute of Environmental Sciences (MIEnvSc), full member of the Royal Society of Biology (MRSB) and a member of the Royal Entomological Society (Mem.RES). She has worked on a wide range of projects from residential developments to commercial developments to large infrastructure projects (highways and rail). Her ecological expertise includes Preliminary Ecological Appraisals, Preliminary Roost Assessments, Ecological Impact assessments (EcIA) and surveying for various notable and European Protected Species. Katie is skilled in the production of reports providing advice to ensure legal compliance and consistency with recognised best practice.

To: Mr Ashley Jones
Land near Touchwood,
Stockbridge Road,
Lopcombe Corner,
Wiltshire,
SP5 1BW

Nutrient Neutrality Assessment – Land Near Touchwood, Stockbridge Road, Lopcombe Corner, Wiltshire, SP5 1BW.

Dear Ashley,

A Nutrient Neutrality Assessment was undertaken in relation to the design proposals for the development at Land Near Touchwood, Stockbridge Road, Lopcombe Corner, Wiltshire, SP5 1BW.

The Solent Marine Habitats sites comprise a range of Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar Sites, with water pollution and eutrophication considered a threat to its condition. Increased levels of nitrogen and phosphorus entering aquatic environments via surface water and groundwater can severely threaten these sensitive habitats and species within the designated sites. Where new residential development is proposed, the additional nutrient load from an increase in wastewater and/or the change in the land use of the development land created by a new residential development can create an impact pathway for potential adverse effects on the statutory sites. Natural England advises that a nutrient budget is calculated for new developments that have the potential to result in increases of nitrogen/phosphorus entering the international site.

In accordance with the standing guidance outlined with Wiltshire Authority, the Nutrient Calculator for the Solent Marine Sites was utilised to determine the nutrient budget for the development. To inform these calculations the assumptions of standard methodology were applied in accordance with the standing guidance. These assumptions include an average water use of 120 litres of water per day per resident with an occupancy average of 2.4 person per unit. A total of four units are proposed with wastewater being processed by PTP in lieu of a WwTW connection. Full specifications of the PTP have been provided and the model proposed is The Premier Tech range of Rewatec sequencing batch reactors. This PTP model has the capacity to process 10mg/ TN/l with an efficiency rating of 83.1%. The site is located within the Upper and Middle Test Catchment.

The pre-development site land use types comprise 0.21 hectares greenspace, 0.45 hectares shrub and 0.08 hectares open urban land which generates 2.68 kg/TN/Yr. The post development land use comprises 0.27 hectares greenspace, 0.18 hectares shrub and 0.28 hectares residential urban land which generates 5.72 kg/TN/Yr.

The total nutrient budget for the proposed development is outlined in Table 1 below.

Table 1. Total Nutrient Budget Calculations.

Description	Values Generated
Wastewater TN load (kg TN/ year)	3.37
Net Land Use TN Change (kg TN/ year)	3.03
TN Budget	6.40
TN Budget + 20% Buffer	7.68
Total Annual Nitrogen Load to Mitigate (kg TN/ yr)	**7.68**

The total annual nitrogen load to mitigate is 7.68 kg TN/yr. The mitigation routes for offsetting are limited to onsite and offsite means of nutrient reduction. As the development cannot accommodate any means of offsetting the loading within the site, the only viable option is payment for off-site measures. Within Wiltshire, off-site mitigation is accommodated through a strategic nitrogen mitigation scheme. This will require application to the local planning authority and the submission of payment to purchase nitrogen credits. These credits will offset one kg TN/ yr and are secured through planning obligations pursuant to Section 106 of the Town and Country Planning Act 1990.

The local planning authority has prepared a unilateral undertaking that can be used for this process. This will need to be signed by the applicant before planning permission is granted, with payment prior to commencement of works. The price for nitrogen offsetting credits has been set at £2,650 for 1kg of nitrogen (plus legal and admin fees).

The development will need to purchase approximately eight of these credits for a total of £21,200 in addition to the other stated fees. It should be noted that this process requires a successful application to be made to the strategic nitrogen mitigation scheme. Other bespoke options of mitigation may be possible pending approval by Natural England, however given the scope of the development, it is unlikely that this route represents a viable mitigation route.

I do hope this is a useful summary however, if you do have any further queries or require any additional information, please don’t hesitate to contact me.

Best Wishes

Willam Davis BSc MSc (*Hons*) ACIEEM

Reviewed by Katie Warren BSc (*Hons*) MSc MIEnvSc MRSB Mem.RES

END OF LETTER REPORT

Prepared by Katie Warren BSc (Hons) MSc MIEnvSc MRSB Mem.RES

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