

Site:	Breamore Campsite
Client:	Breamore Estates Company Ltd.
Job Number:	B038761
Report Type(s):	Phosphate Balancing Assessment
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INTRODUCTION

Tetra Tech was appointed by Breamore Estate Ltd. in April 2022 to calculate the change in phosphorus outputs from existing to future use associated with a proposed extension to the existing campsite at Breamore.

The site in previous years has been used as a campsite for 28 days per year falling, into the Temporary 'pop-up' Campsites Regulations¹. The Breamore Estate company ltd. proposes to extend the number of days the campsite is open for from 28 days to 120 days with approximately 50 pitches. To comply with the revised Article 4 Direction within the Town and Country Planning Order 2015² within the New Forest National Park Authority which came into effect on 30th September 2022, a planning application for the proposals is required.

The proposals for the campsite do not include the construction of any additional facilities, with those existing capable of supporting an increase in users. The wastewater generated by the campsite users will be continuing to be stored on site and then tankered away out of the catchment area to be treated.

The calculations are required in response to recent consultation with Natural England on residential projects in the vicinity of the Solent following the findings of the Integrated Water Management Study for South Hampshire, published by the Partnership for Urban South Hampshire³¹. This has been followed by further updated advice from Natural England, most recently in April 2022.

Due to the uncertainty over whether new overnight accommodation including camp sites can be accommodated by existing wastewater treatment infrastructure without causing harm to Habitats Sites, Natural England advise that all development resulting in an increase in overnight accommodation should achieve nutrient neutrality. As the site lies within the catchment of the River Avon SAC (and Avon Valley SPA), the key nutrient is phosphorus.

This report has been prepared by Consultant Ecologist Emma Taylor and the conditions pertinent to it are provided in Appendix A.

¹ New Forest National Park, (2021) Guidance for Complying with Habitat Regulations, [online] Available at, [Guidance-for-temporary-campsites-to-comply-with-Habitats-Regulations-May-2021.pdf](#) (newforestnpa.gov.uk), Accessed May 2022.

² New Forest National Park Authority, (2021) Town and Country Planning Order 2015 [online] Available at [Confirmed-Article-4-Direction.pdf](#) (newforestnpa.gov.uk). Accessed May 2022.

³ PUSH, (2018), Integrated Water Management Study, [online] Available at <https://www.push.gov.uk/wp-content/uploads/2018/07/IWMS-Appendix-1.pdf>, Accessed May 2022 .

METHODOLOGY

To make the assessment, the following guidance documents were used:

- Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impacts on habitats sites (Natural England, 16th March 2022);
- Nutrient Neutrality Generic Methodology Issue 1 (Natural England and Ricardo Energy and Environment, February 2022);
- Nutrient Budget Calculator Guidance Document (Natural England and Ricardo Energy and Environment, March 2022); and
- Nutrient Neutrality Budget Calculator Avon (Natural England and Ricardo Energy and Environment, March 2022).

ASSESSMENT

The assumptions relevant to this this project in addition to those included in the updated Natural England methodology are provided in Table 1.

Table 1: Project Assumptions

Number of proposed pitches:	50
Occupancy rate:	1 per person per pitch based on a total rate for a 1-bedroom dwelling for each pitch.
Water consumption:	120 l/person/day The calculator multiplies water consumption by 365.25 days to calculate the output per year (this cannot be modified). As the application restricts the use of the camp site to 120 days per year, the water consumption value has been reduced to 40 l/person/day to account for this.
The total site area:	3.69 ha
The current land uses are:	Greenspace
The future land uses will be:	Greenspace
The wastewater from the site will be treated at this wastewater treatment works (WwTW):	The wastewater will stored on site and will tankered off site and treated outside the River Avon catchment.
The consent limit for the WwWT is:	11.6 mg/l TP (Septic Tank default)
Surface water catchment:	River Avon
Standard annual average rainfall:	700.1 - 750 mm
Soil scape category:	Freely draining (Freely draining slightly acid loamy soils)
Phosphate Vulnerable Zone:	Yes

An occupancy rate of 1 per person per pitch based on a total rate for a 1-bedroom dwelling for each pitch, based on the Mitigation for Recreational Impact on the New Forest European Site Supplementary Planning Document⁴, that sets out mitigating for visitor accommodation.

The results using the method for determining the phosphorus.

budget for the proposals are provided in Table 2, with full details in Appendix B.

Table 2: Summary of the results

Calculating Total Phosphorus (TP) Load From Development Wastewater	Calculating TP Load From Current Land Use	Calculating TP Load From Future Land Uses	Calculating Net Change in TP From the Development	Apply 20% Buffer
8.47 Kg/TP/yr	0.07 Kg/TP/yr	0.07 Kg/TP/yr	8.47 Kg/TP/yr	10.17 Kg/TP/yr

The calculations show that the extension to the campsite which will be open for 120 days a year would result in an increased TP budget of 10.17 Kg/TP/yr.

Typically, this would give rise to an in-combination effect upon the River Avon SAC. However, the site does not make a connection to the public sewer network. The wastewater generated from the camp site users will be stored in large tanks which will be removed from site regularly by a tanker. The wastewater will subsequently be taken to a WwTW for treatment outside the catchment of the River Avon SAC (e.g. Cranborne STW which discharges to the Moors River in the Dorset Stour catchment). Therefore, although a net increase in total phosphorus will result from the proposals, there will be no increase in total phosphorus within the River Avon catchment. Provided this protocol for wastewater removal is secured through an appropriate planning or legal obligation, there will be no potential for a likely significant effect upon the River Avon SAC or Avon Valley SPA to occur.

Document Control			
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Prepared by: Emma Taylor, Consul Ecologist		Checked & Approved By: David West CEnv MCIEEM, Associate Director	
Summary of changes: n/a			

⁴ New Forest District Council (2021) Mitigation for Recreational Impacts on New Forest European Sites. Available at [online] [Ref \(microshadeapplications.co.uk\)](https://www.microshadeapplications.co.uk). Accessed May 2022.

APPENDIX A: REPORT CONDITIONS

This Report has been prepared using reasonable skill and care for the sole benefit of [Breamore Estate Company Ltd.] (“the Client”) for the proposed uses stated in the report by [Tetra Tech Environment Planning Transport Limited] (“Tetra Tech”). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder’s permission.

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary, and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The “shelf life” of the Report will be determined by a number of factors including its original purpose, the Client’s instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX B: PHOSPHORUS CALCULATING

Development site details

Date (dd/mm/yyyy):	01.06.2022
Site Name:	Breamore Campsite
Planning Application number:	
Site Address:	Breamore Estate, Fordingbridge SP6 2DF

1.1 STAGE 1

Stage 1

User Inputs

Date of first occupancy:	26/05/2022
Average occupancy rate:	1.00
Water usage (litres/person/day):	40
Development Proposal (dwellings/units):	50
Wastewater treatment works:	Septic Tank default <input type="button" value="v"/>
Wastewater treatment works P permit (mg TP/litre):	11.6

Stage 1 Calculated Loading

TP discharge from WwTW	23200	mg TP/day
Convert to kg/TP/d	0.0232	kg TP/day
Convert to kg/TP/yr	8.47	kg TP/yr
Annual wastewater TP load	8.47	kg TP/yr

1.2 STAGE 2

Stage 2

User Inputs

Catchment:	Avon Hampshire
Soil drainage type:	Freely draining
Annual average rainfall (mm):	700.1 - 750
Within Nitrate Vulnerable Zone (NVZ):	Yes

Existing land use type(s)	Area (ha)	Annual phosphorus nutrient export (kg TP)
Greenspace	3.69	0.07
Total:	3.69	0.07

Please enter area in hectares.

1.3 STAGE 3

Stage 3

User Inputs

New land use type(s)	Area (ha)	Annual phosphorus nutrient export (kg TP)
Greenspace	3.69	0.07
Total:	3.69	0.07

Please enter area in hectares.

1.4 STAGE 4

Stage 4

Calculated Outputs

Annual Nutrient Budget

The total annual phosphorus load to mitigate is:	10.17 kg TP/year
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