

Gutner Lane, Hayling Island

Nutrient Neutrality Assessment



16th July 2026

Document control

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Declaration	I confirm that the information provided in this document is truthful and accurate at the time of completion.	
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Executive summary	
Purpose of report	<ul style="list-style-type: none"> • To provide the details of the nutrient neutrality calculation. • To confirm any requirements for mitigation
Context of report	<p>The Site comprised of an agricultural plot of land. The proposals are for:</p> <ul style="list-style-type: none"> • Conversion of 1 barn on Site to a residential dwelling
Methodology	<ul style="list-style-type: none"> • The calculation has been completed using the Nutrient Neutrality standard calculator and methodology produced by Natural England
Results	<p>It was calculated that the proposed development will result in a net increase in nitrogen of 0.78kg total nitrogen per year.</p> <p>Credits will need to be purchased from a nitrogen credit provider in the region to provide mitigation.</p>

1. Introduction

1.1. Background

1.1.1. In June 2026, Wessex Ecology Ltd was commissioned by AR Design Studio to undertake a nutrient neutrality assessment of land located at Gutner Lane, Hayling Island.

1.1.2. The purpose of this report was to:

- Provide the baseline information that informed the nutrient neutrality assessment
- To provide the details of the nutrient neutrality calculation
- To confirm any requirements for mitigation

1.2. Site Description

1.2.1. The land off Gutner Lane, hereafter referred to as 'the Site', measured approximately 0.2ha and was situated on Gutner Lane, which ran to the east of the Site (approximate OS grid reference: SU 73436 02256), see Figure 1.

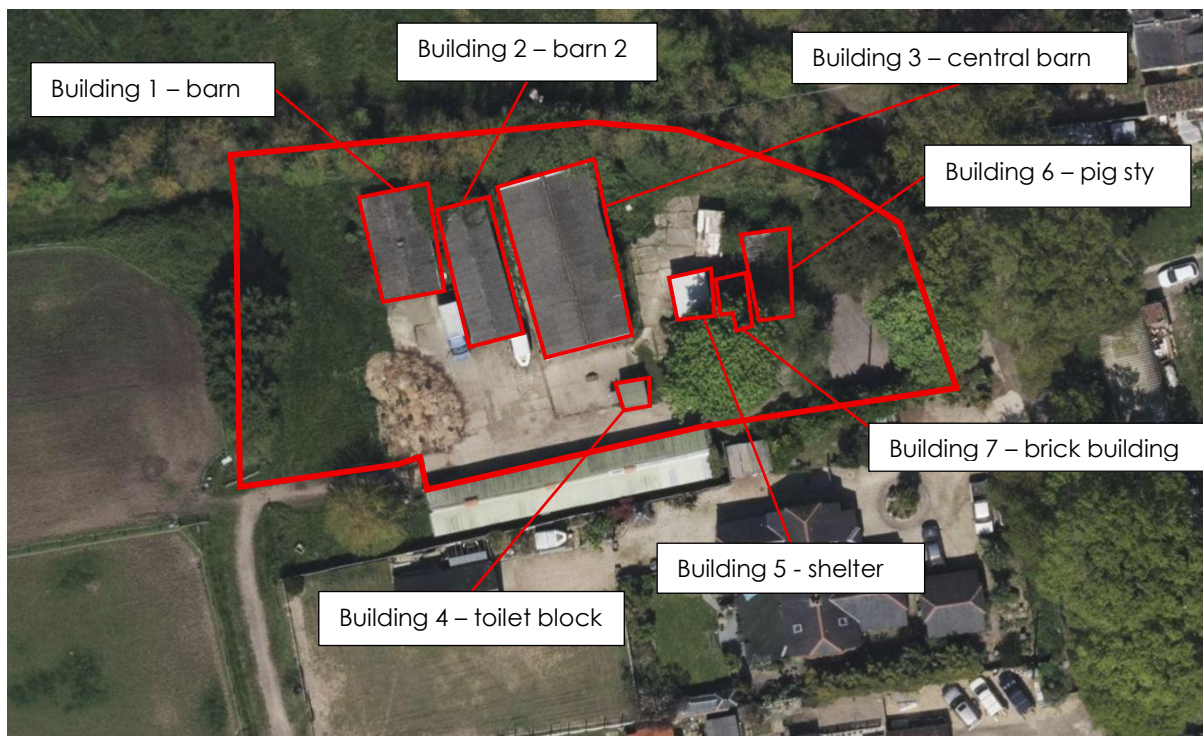
1.2.2. The Site was comprised of agricultural buildings and the surrounding land.

1.2.3. At the time of writing, the proposed developments and alterations to the Site were as follows, see Figure 2:

- Conversion of one barn to a residential dwelling (building 3 noted on Figure 1)

1.2.4. All ecological surveys are led by Ecologists who are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) at the appropriate level. By joining the CIEEM staff sign up to a professional code of conduct.

Figure 1. Site location with red line boundary



NEW WALLS
DEMOLITION
STRUCTURE ABOVE

Bedroom 1
 P14.4.10
 all voided
 1000

FAMILY BATHROOM
 P14.4.10
 all voided

Bedroom 2
 P14.4.10
 all voided

SHED/GAMES ROOM
 P14.4.10
 all voided

DINING
 P14.4.10

LIVING
 P14.4.10
 all voided

KITCHEN
 P14.4.10

OFFICE
 P14.4.10
 all voided

BOOT/UTILITY ROOM
 P14.4.10
 all voided

Scale 1:100

For Planning Purposes only

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Project:
 Gutter Lane
 Proposed Ground Floor plan

Planning

Drawn by	Drawn by	Scale	Drawn at
1003	10	1:100	1:100
1003	P105		

2. Personnel

2.1. Nutrient neutrality assessment and report

2.1.1. Darrelle Moffat is an experienced senior ecologist and an Associate member of CIEEM and holds a Natural England Class 1 Bat Licence and Class 1 GCN licence. Darrelle has extensive experience working on a range of ecological projects including nutrient neutrality, biodiversity net gain, protected species and designing appropriate mitigation strategies.

2.2. Field survey

2.2.1. The field work that informed the assessment is provided in the Preliminary Ecological Appraisal (PEA) by Daniel Ahern Ecology (now known as Wessex Ecology), details of which are provided in a separate report. The field survey was carried out by Megan Conway.

3. Methodology

3.1. Calculation

3.1.1. The methodology for the assessment of the net change in nitrogen to the Solent catchment is based on the updated Natural England advice on achieving nutrient neutrality (Natural England & DEFRA, 2024), the Nutrient Neutrality Generic Methodology (Natural England, 2022) and the associated published *Nitrogen Budget Calculator Version 3* (Natural England, 2024).

3.1.2. As recommended, only the expected area to be impacted for change in land use is calculated. The calculator includes instructions and five worksheets.

3.1.3. The methodology for the stages of the calculation is provided in Table 1.

Table 1. Methodology for the nutrient calculator worksheets.

Worksheet	Description
Nutrients from wastewater	<p>This worksheet contains two tables and calculates the new nutrient load associated with the additional wastewater that would exit the site through wastewater into the Solent. Information on the proposed development and wastewater infrastructure is entered for the calculation.</p> <p>The default setting for water use is 120L / day per person. Where the permit limit of the WwTW is planned to be change, this calculation may result in more than one output result, based on the date this change is targeted for.</p>

	Havant has a specific occupancy calculator to determine the average occupancy. This has been used for the calculation.
Nutrients from current and future land use	<p>These worksheets calculate the change in nutrients from the proposed change in land use on Site. Each land use in the calculator has a set average nitrogen leaching rate. Some environmental information is entered to adjust site conditions.</p> <p>The land use areas have been calculated using QGIS mapping. The land use definitions provided by Natural England & DEFRA (2024) have been used, see Table 2 below.</p>
SuDS	This worksheet is available if the nutrient load will be reduced through a SuDS feature on site. It has not been used on this calculation as no SuDS are proposed.
Final Nutrient Budget	The final worksheet provides the results of the calculation. A precautionary buffer of 20% is built into the calculation.

Table 2. Land Use Types in the calculator with descriptions provided in the guidance

Land Use Type	Description
Cereals	Agricultural areas on which cereals, combinable crops and set-aside are farmed.
General	Agricultural areas on which arable crops (including field scale vegetables) are farmed.
Horticulture	Agricultural areas on which fruit (including vineyards), hardy nursery stock, glasshouse flowers and vegetables, market garden scale vegetables, outdoor bulbs and flowers, and mushrooms are farmed.
Pig	Agricultural areas on which pigs farmed.
Poultry	Agricultural areas on which poultry are farmed.
Dairy	Agricultural areas on which dairy cows are farmed.
LFA	Agricultural areas on which cattle, sheep and other grazing livestock are farmed in locations where agricultural production is difficult. An area is classified as a Less Favoured Area (LFA) holding if 50% or more of its total area is classed as LFA.
Lowland	Agricultural areas on which cattle, sheep and other grazing livestock are farmed. A holding is classified as lowland if 50% or more of its area is classified as a lowland grazing area.
Mixed	Agricultural areas in which none of the above categories are farmed or where it is too difficult to select a single category to describe the farm type.
Greenspace	Natural and semi-natural outdoor spaces provided for recreational use where fertilisers will not be applied and dog waste is managed. For example, semi-natural parks. This does not include green infrastructure within the built urban environment, such as sports fields, gardens, or grass verges, as these are included in the residential urban land category.
Woodland	Natural and semi-natural outdoor wooded areas.
Shrub	Natural and semi-natural outdoor shrubland area.
Water	Areas of surface water, including rivers, ponds and lakes.
Residential urban land	Areas of houses and associated infrastructure. This is inclusive of roads, driveways, grass verges and gardens.

Commercial or industrial urban land	Areas that are used for industry. These are businesses that typically manufacture, process or otherwise generate products. Included in the definition of industrial land are factories and storage facilities as well as mining and shipping operations.
Open urban land	Area of land in urban areas used for various purposes such as leisure and recreation, may include open land. For example, sports fields, playgrounds, public squares or built facilities such as sports centres
Community food growing	Areas that are used for local food production, such as allotments.

3.2. Limitations

3.2.1. There were no limitations to the assessment.

4. Assessment

4.1. Nutrients from wastewater

4.1.1. The development is for a single two-bedroom dwelling. The Havant occupancy calculator results in an average occupancy of 2.00 people, see Figure 3.

4.1.2. The development proposes use of a package treatment plant for wastewater treatment. It is understood the Premier Tech Solido Smart system will be used, which has a total nitrogen testing rate of 10mg/L. This has been used as the user defined level in the calculation and the testing certificate for this system is appended.

4.1.3. All other settings have been left at default.

Figure 3. Results of average occupancy calculator in Havant borough

Occupancy calculator

Date 24.06.2026

Site name Gutner Lane, Hayling Island

Site address Land off Gutner Lane, Hayling Island, PO11 0RN

	Gross new homes proposed	Gross losses proposed	Net new homes proposed
1 bed			0
2 bed	1		1
3 bed			0
4 bed			0
5+ bed			0
Total	1	0	1

**Average occupancy to include in Solent
Nutrient Calculator:**

2.00

4.2. Land Uses

4.2.1. The entire site is currently in agricultural use, considered to be mixed use as there is no more accurate classification. The client has confirmed aside from the building, the rest of the Site will remain in agricultural use and therefore only the building (0.02ha) has been included in the calculation as changing from mixed to residential urban land.

4.2.2. This results in a net change in land use of -0.09kg TN/year.

4.3. Results

4.3.1. The proposed development will result in 0.73kg of Total Nitrogen per year. The full calculation can be found in the accompanying calculation but the results are shown below.

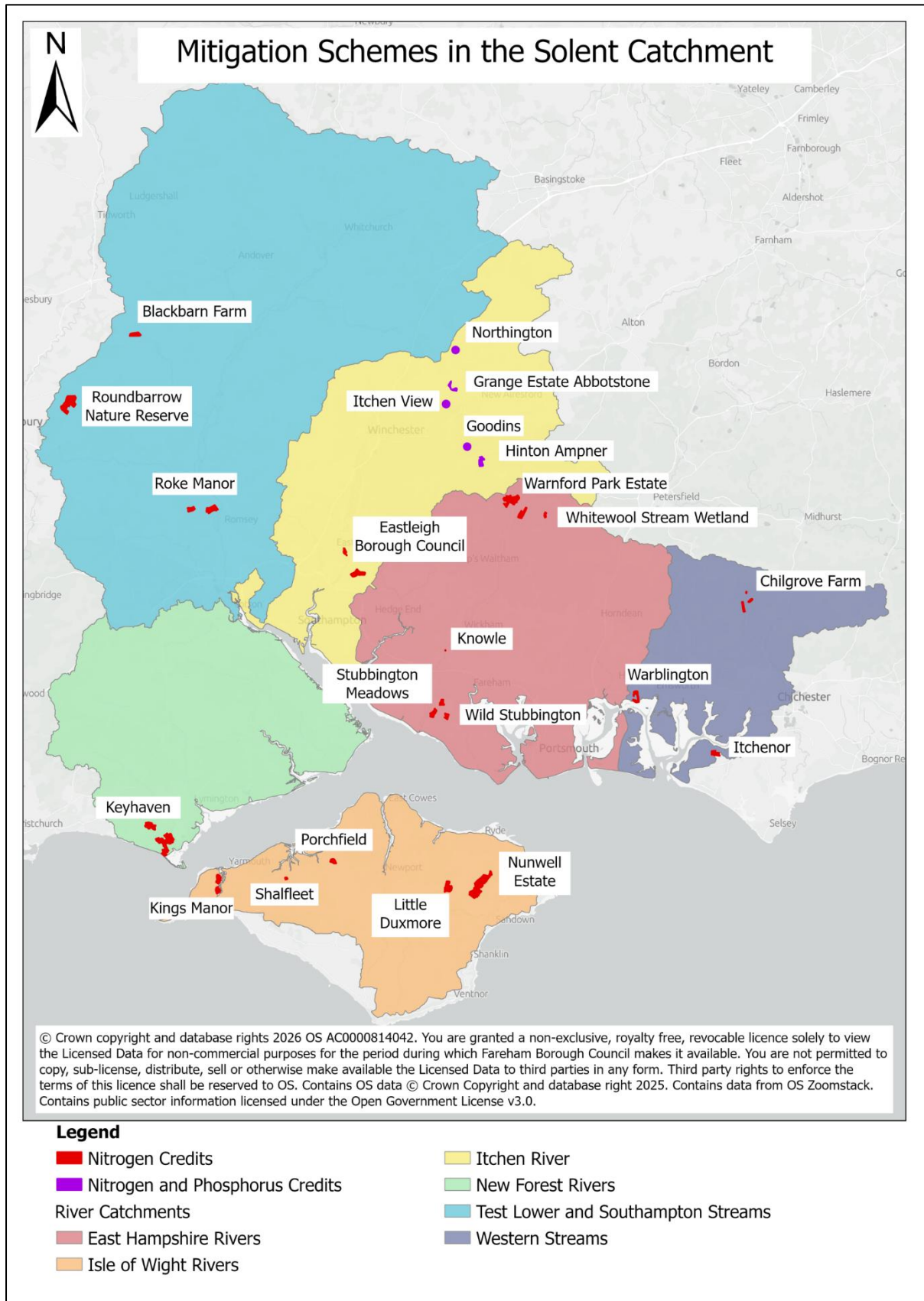
Figure 4. Screenshot of results from the nutrient calculator

Total nutrient budget calculations	
Description of values generated	Values generated
Wastewater TN load (kg TN/year):	0.70
Net land use TN change (kg TN/year):	-0.09
TN budget:	0.61
TN budget + 20% buffer:	0.73
Annual nutrient budget	
The total annual nitrogen load to mitigate is (kg TN/yr):	0.73

5. Mitigation & Conclusion

- 5.1.1. Mitigation will be required to offset the increase in nutrient loading through purchase of offsite credits. There are a number of approved offsite mitigation schemes present within the East Hampshire Rivers catchment, as identified by Partnership for South Hampshire (2026), see Figure 5.
- 5.1.2. With provision of credits, it is considered the increased nutrient load from the development will be mitigated.

Figure 5. Map of mitigation schemes available in the Solent, updated February 2026 (PfSH, 2026)



6. References

Daniel Ahern Ecology (2025) *Land at Gutner Lane, Hayling Island Preliminary Ecological Appraisal Survey Report*. Version 5619.3.

HMSO (2017) *The Conservation of Habitats and Species Regulations*. Statutory Instrument 2010 No. 490. HMSO, London.

HMSO (2019) *The Conservation of Habitats and Species Regulations*. Statutory Instrument 2019 No. 579. HMSO, London.

Natural England (2022) *Nutrient Neutrality Generic Methodology (NECR459)*. – November 2022.

Natural England & DEFRA (2024) *Using the nutrient neutrality calculators*. Available at: <https://www.gov.uk/guidance/using-the-nutrient-neutrality-calculators>

Natural England (2024) *Nitrogen Budget Calculator Version 3_01_3*.

Appendix 1 – Certificate of Testing for wastewater treatment plant

Certificate



Premier Tech Water and Environment Ltd.
2 Whitehouse Way, South West Industrial Estate, SR8 2RA, Peterlee, County Durham, UK

EN 12566-3, Annex A, B and C
Small wastewater treatment systems for up to 50 PT

Small wastewater treatment system "Rewatec Solido Smart"
One-chamber SBR system in one PE tank

Test report PIA2015-239B22.e

Evaluation of the nominal sequences of the 38-week

Nominal organic daily load	0.30 kg BOB ₅ /d		
Nominal hydraulic daily load	0.90 m ³ /d		
Material	Polyethylene		
Watertightness	pass		
Structural behaviour (pit test)	pass (also wet)		
Durability	pass		
Treatment efficiency			
	Efficiency	Effluent	
	COD	95.1 %	39 mg/l
	BOD ₅	98.5 %	5 mg/l
	NH ₄ -N*	98.0 %	0.7 mg/l
	N _{tot}	83.1 %	10 mg/l
	P _{tot}	68.5 %	2.3 mg/l
	SS	97.1 %	1.3 mg/l

Evaluation of the complete 38-week testing

Electrical consumption	0.81 kWh/d
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**determined for temperatures $\geq 12^{\circ}\text{C}$ in the bioreactor*

Tested by:

PIA – Prüfinstitut für Abwassertechnik GmbH
(PIA GmbH)
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52074 Aachen, Germany

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M. Wermter / D. Schmitz

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