

Nitrate Statement

Cabbagefield Row
Land at Swanmore Road
Leigh Park
Havant
PO9 4EY

28079

Nutrient Neutrality Calculations for Planning Application at Cabbagefield Row, Leigh Park, Havant

Purpose of this Statement:

Nutrient Neutrality Calculations are set out for the proposed development for Portsmouth City Council at land known as Cabbagefield Row to the north of Swanmore Road, Leigh Park, Havant PO9 4EY, which will provide 150 dwellings, in line with the current guidance produced by Natural England.

Methodology and Model Assumptions:

Guidance produced by Natural England sets out four stages, within each are a number of steps to determine the net impact on the potential total nitrogen load caused by the development.

Natural England's Nutrient Neutrality Budget Calculator has been used with occupancy set at 2.47 people per dwelling calculated using Havant Occupancy Calculator Tool as per below:

Occupancy calculator

Date

20/07/2022

Site name

Cabbagefield Row

Site address

Land opposite 123-133, Swanmore Road, Havant PO9 4EY

	Gross new homes proposed	Gross losses proposed	Net new homes proposed
1 bed	12	0	12
2 bed	36	0	36
3 bed	72	0	72
4 bed	27	0	27
5+ bed	3	0	3
Total	150	0	150

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

2.47

The Site

Development site details	
Date (dd/mm/yyyy):	20/07/2022
Site Name:	Cabbagefield Row
Planning Application number:	APP/21/00989
Site Address:	Cabbagefield Row, opposite 123-133, Swanmore Road, Havant PO9 4EY

Stage 1: Calculation of the potential total nitrogen from the proposed development that would exit the Wastewater Treatment Works (WwTW) after treatment.

Calculation based on the development producing a population of 370.5 people and wastewater discharging to Budds Farm

Stage 1		
User Inputs		
Date of first occupancy:	01/03/2024	
Average occupancy rate:	2.47	
Water usage (litres/person/day):	120	
Development Proposal (dwellings/units):	150	
Include deductible acceptable loading?	Yes	
Wastewater treatment works:	Budds Farm WwTW	
Wastewater treatment works N permit (mg TN/litre):	7.7	
Stage 1 Calculated Loading		
Stage 1 Nutrient Loading		
Additional population	370.5	people
Wastewater by development	44460	litres/day
Annual wastewater TN load	112.54	kg TN/yr

Stage 2 Adjust Nitrogen Load to offset existing nitrogen from current land use:

The land is currently classed as open urban land and whilst part the norther part of the site will remain as such, the developable area of land is 3.3ha.

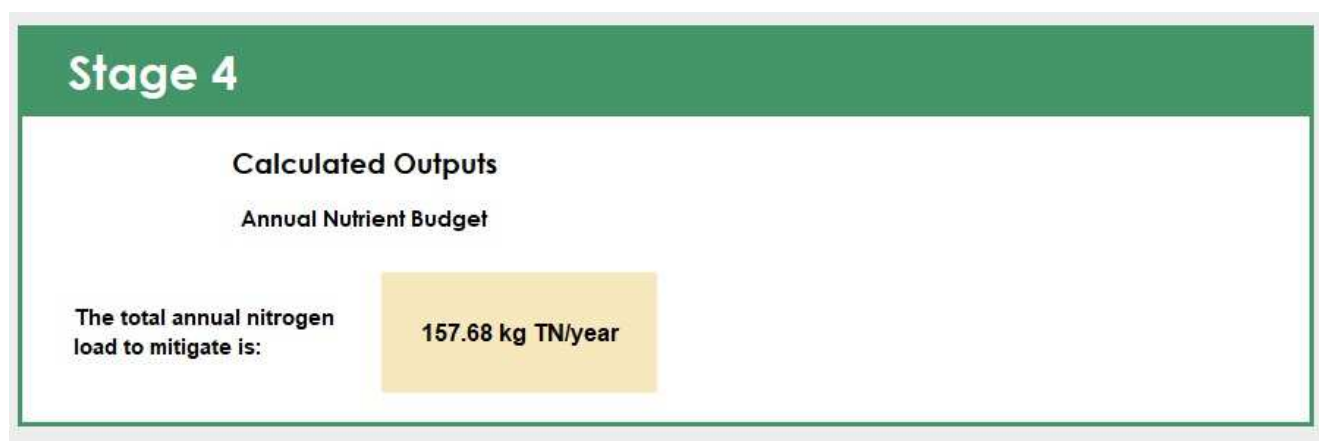
Stage 2		
User Inputs		
Catchment:	East Hampshire Rivers	
Soil drainage type:	Naturally wet	
Annual average rainfall (mm):	700.1 - 750	
Within Nitrate Vulnerable Zone (NVZ):	Yes	
Existing land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Open urban land	3.30	26.28
Total:	3.3	26.28

Stage 3 Adjust nitrogen load to account for land uses with the proposed development:

The proposed use of the developed land is residential urban land with a small area of orchard also included.

Stage 3		
User Inputs		
New land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Residential urban land	3.20	43.23
Community food growing	0.10	1.91
Total:	3.3	45.14

Stage 4 Calculate the net change in the Total Nitrogen load that would result from the development:



Conclusion and Mitigation:

The calculations above have demonstrated that the development at Cabbagefield Row, Leigh Park, Havant PO9 4EY for 150 dwellings will result in an additional 370.5 additional persons on the site, yielding a wastewater total nitrogen load of 157.68Kg/TN/yr.

Option 1 - On Site Mitigation:

The site is not currently categorised as Agricultural Land (following Natural England's categories).

It is therefore not feasible for the scheme to mitigate on site.

Off-site mitigation is the only option.

Note:

The site is not of the size or suitable setting for wetlands or reed beds. The ecology survey and impact assessments confirm the type of habitats that are to be retained and enhanced, appropriate to the site and adjacent habitats. The scheme does however incorporate very bespoke SUDS (Sustainable Drainage Systems: note the "urban" was removed in the early 2000's).

The scheme incorporates oversized SUDS as per the FRA&SUDS report. One of the potential SUDS specifications is for the rain downpipes to drain directly to planters with storage.

This will provide an interception to the overall surface water volume generated and natural filtration to capture any nutrients within the soil stratum of the planters.

The scheme also incorporates permeable paving; this again will provide interception and natural filtration.

These are confirmed "Source Control" measures and therefore suitable small scale mitigation measures suitable for the proposed urban setting.

Option 2 - Off-Site Mitigation:

Given the scheme and site setting, a Nutrient Balance was undertaken using the Natural England Calculation spreadsheet.

The 4 Steps of the Natural England calculation have been undertaken.

Based on the current layout and outline stage of the scheme designs, the likely Total Nutrient loading requiring mitigation is c. 157.68kg per year.

The council has a mitigation charge currently of £1,241/kg.

The mitigation will be secured as is relevant for the discharge to Budds Farm / Warblington Farm Mitigation Scheme as per the Havant Position Statement and Mitigation Plan for Nutrient Neutral Development.

The contribution can be secured by a Section 106 / Grampian Condition and additional mitigation measures can be secured during reserved matters / planning conditions and developed further in detailed design.

Other Mitigation Measures:

In addition to SUDS, the scheme is committed to minimising the use of and waste of potable water. The scheme is committed to the 110litres pppd target and will incorporate the required range of water saving technologies and infrastructure where appropriate. Water Butts will be incorporated wherever feasible to reduce the need for potable water.

All measures will be secured through Building Regulations (current and enhanced), the SAP commitments and relevant technical planning conditions.

No additional assessment is required based on the site and scheme specific assessment.