

CALCULATION FOR NUTRIENT NEUTRALITY

relating to a

NEW DETACHED TWO BEDROOM BUNGALOW

at rear of

**12 MARSHALL ROAD, HAYLING ISLAND
HAMPSHIRE PO11 9NH**

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CALCULATION FOR NUTRIENT NEUTRALITY

To be read in conjunction with the Water Use Calculation

This calculation of nitrogen load arising from the proposed development uses the methodology contained in Section 4 of '*Advice on Achieving Nutrient Neutrality for New Development in the Solent Region - Version 5 June 2020*'.

Step 1

Additional population per dwelling based on average figures provided by the Office for National Statistics = 2.4 persons

Step 2

Maximum water use per person = 110 litres/day

Wastewater volume generated by one dwelling = 2.4×110 = 264 l/day

Step 3

Receiving WwTW environmental permit limit for TN at 90% consent limit = $9.0 \text{ mg/l TN} \times 90\% = 8.1 \text{ mg/l TN}$

Step 4

Deduct acceptable TN loading @ 2 mg/l TN = $8.1 - 2 = 6.1 \text{ mg/l TN}$

Step 5

TN discharged after WwTW treatment = 264×6.1 = 1610.4 mg/TN/day

Steps 6 & 7

Convert mg/TN/day to kg/TN/year = $\frac{1610.4 \times 365}{1,000,000} = \mathbf{0.5878 \text{ kg/TN/yr}}$

NB: No adjustments for land use change is applicable in this case

Identify Nitrogen Load with 20% buffer = $0.5878 \times 120\% = \mathbf{0.705 \text{ kg/N/yr}}$