# Nitrogen Budget Calculation

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| **Planning Application Reference No.** | App/20/01217 |
| **Site Name:** | 3 Nutbourne Road, Hayling island, PO11 9RT |

**Additional Information:**

The application is for the demolition of a 2-bedroom chalet bungalow to be replaced by a 2-bedroom home.

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| **Date:** | **03 March 2020** |

**Stage 1** **Calculate total Nitrogen in kg per year derived from the development that would exit the Wastewater Treatment Works (WwTW) into Solent catchments after treatment**

**Step 1** **Calculate additional population**

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| Enter the number of units proposed | 1 |
| Net population increase per housing unit | 2.40 |
| ***Total net population increase generated by the development*** | 2.40 |

**Step 2** **Calculate wastewater volume generated by the development**

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| Water use in litres per person per day | 110 |
| ***Total wastewater volume generated by the development (litres per day)*** | 264 |

**Step 3** **Confirm receiving WwTW and permit limit**

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| Select the wastewater treatment works the development will connect to | Not Known |
| ***Wastewater treatment works' permit limit (mg per litre)*** | 27.0 |
| ***Wastewater treatment works' discharge level (mg per litre)*** | 27.0 |

**Step 4** **Calculate total nitrogen in kg per year discharged by the WwTW**

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| ***Deduct acceptable Nitrogen loading in wastewater (mg per litre)*** | 25.0 |
| ***Total Nitrogen discharged by WwTW (mg per day)*** | 6,600.0 |
| ***Total Nitrogen discharged by WwTW (kg per day)*** | 0.0066 |
| ***Total Nitrogen discharged by WwTW (kg per year)*** | 2.4 |

**Stage 2** **Calculate existing (pre-development) nitrogen from current land use of the development site**

**Step 1** **Total area of development site**

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| Enter the total area of the development site (hectares) | 0.10 |

**Step 2** **Identify current land uses of the development site**

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| Enter area currently used for urban development (hectares) | 0.10 |
| Enter area currently used for open space / greenfield (hectares) | 0.00 |
| Enter area currently used for woodland (hectares) | 0.00 |
| Enter area currently used for community food growing / catchment average (hectares) | 0.00 |
| Enter area currently used for cereals (hectares) | 0.00 |
| Enter area currently used for dairy (hectares) | 0.00 |
| Enter area currently used for general cropping (hectares) | 0.00 |
| Enter area currently used for horticulture (hectares) | 0.00 |
| Enter area currently used for pig farming (hectares) | 0.00 |
| Enter area currently used for lowland grazing (hectares) | 0.00 |
| Enter area currently used for mixed farming (hectares) | 0.00 |
| Enter area currently used for poultry farming (hectares) | 0.00 |
| ***Check to help ensure that sum total of land uses in Step 2 equals site area in Step 1*** | 0.1 |

**Step 3** **Calculate nitrogen load from current land usage**

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|---|---|
| ***Total Nitrogen load from current land usage (kg per year)*** | 1.4 |

# Nitrogen Budget Calculation

**Stage 3** Calculate nitrogen load for the non-built land uses proposed for the development site

**Step 1** Identify proposed land uses of the development site

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| Enter the total urban area to be created (hectares) | 0.00 |
| Enter the total designated open space / SANG area to be created (hectares) | 0.00 |
| Enter the total nature reserve area to be created (hectares) | 0.00 |
| Enter the total woodland area to be created (hectares) | 0.00 |
| Enter the total community orchard area to be created (hectares) | 0.00 |
| Enter the total community food growing / allotment area to be created (hectares) | 0.00 |
| *Check to help ensure that sum total of proposed land uses equals site area in Stage 2* | 0.00 |

**Step 2** Calculate total Nitrogen load from proposed land uses

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| *Total Nitrogen load from future land uses (kg per year)* | 0.00 |

**Stage 4** Calculate the net change in Nitrogen load from the proposed development

**Step 1** Identify Nitrogen load from wastewater (Stage 1)

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| *Nitrogen leaving wastewater treatment works (kg per year)* | 2.41 |

**Step 2** Calculate net change in Nitrogen load from land use changes

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| *Total Nitrogen load from future land use (kg per year)* | -1.43 |

**Step 3** Calculate total Nitrogen budget for the development site

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| *Nitrogen budget for the site (kg per year)* | 0.98 |

**Step 4** Calculate precautionary buffer if Nitrogen budget exceeds zero

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| *Precautionary Nitrogen buffer (kg per year)* | 0.20 |

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| **Total Nitrogen budget for the proposed development (kg per year)** | **1.2** |

**Development will generate additional Nitrogen - Mitigation is required**
**Please liaise with your Local Planning Authority for advice on next steps**