

**STATEMENT ON NITROGEN BUDGET**

**relating to**

**PROPOSED REPLACEMENT DETACHED THREE STOREY  
DWELLING WITH INTEGRAL GARAGE**

**at**

**25 SANDY BEACH ESTATE, HAYLING ISLAND  
HAMPSHIRE PO11 9RG**

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## STATEMENT ON NITROGEN BUDGET

1. This statement relates to the proposal to demolish an existing two storey two bedroom detached dwelling with a detached garage and to replace it with a new three storey three bedroom detached dwelling with an integral garage and the net effect of this on the nitrogen discharge.
2. The existing house is believed to have been constructed in 1930s and appears not to have undergone any modernisation work for many years. Therefore, the original fixtures and fittings, including taps, WC and bath are of older redundant low water efficiency standards.
3. The replacement dwelling would incorporate modern water efficient fittings, appliances and sanitaryware which would result in significant reductions in water use in comparison to the original items.
4. By way of illustration, comparable water efficiency calculations for the existing and the proposed dwellings are attached. These indicate that the existing use is calculated at 167 litres/person/day compared to the calculated proposed use of 107 litres/person/day.
5. On this basis, there would be a significant net reduction in nitrogen discharge for the proposed development with no excess nitrogen requiring to be offset.

# Water Efficiency Calculation for Existing Dwelling 25 Sandy Beach Estate, Hayling Island PO11 9RG

| Installation Type                          | Unit of Measure                                                                     | Capacity/Flow rate<br>(1)        | Use Factor<br>(2) | Fixed use<br>(litres/person/day)<br>(3) | Litres/person/day<br>= [(1)x(2)] + (3)<br>(4) |
|--------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------|-------------------|-----------------------------------------|-----------------------------------------------|
| WC (single flush)                          | Flush Volume (litres)                                                               | 8.00                             | 4.42              | 0.00                                    | 35.36                                         |
| WC (dual flush)                            | Full flush Volume (litres)                                                          |                                  | 1.46              | 0.00                                    | 0                                             |
|                                            | Part flush Volume (litres)                                                          |                                  | 2.96              | 0.00                                    | 0                                             |
| WC (multiple fittings)                     | Average effective flushing Volume (litres)                                          |                                  | 4.42              | 0.00                                    | 0                                             |
| Taps (excluding kitchen/utility room taps) | Flow rate (litres/min)                                                              | 8.00                             | 1.58              | 1.58                                    | 14.22                                         |
| Bath (where shower also present)           | Capacity to overflow(litres)                                                        |                                  | 0.11              | 0.00                                    | 0                                             |
| Shower (where bath also present)           | Flow Rate(litres / minute)                                                          |                                  | 4.37              | 0.00                                    | 0                                             |
| Bath Only                                  | Capacity to overflow(litres)                                                        | 185.00                           | 0.50              | 0.00                                    | 92.50                                         |
| Shower Only                                | Flow Rate (litres/minute)                                                           |                                  | 5.60              | 0.00                                    | 0                                             |
| Kitchen/Utility room sink taps             | Flow rate (litres/minute)                                                           | 10.00                            | 0.44              | 10.36                                   | 14.76                                         |
| Washing Machine                            | (Litres/kg dry load)                                                                | 8.17                             | 2.1               | 0.00                                    | 17.16                                         |
| Dishwasher                                 | (Litres/place setting)                                                              | 1.25                             | 3.6               | 0.00                                    | 4.5                                           |
| Waste disposal unit                        | (Litres/use)                                                                        | <input type="checkbox"/> Present | 3.08              | 0.00                                    | 0                                             |
| Water Softener                             | (Litres/person/day)                                                                 |                                  | 1.00              | 0.00                                    | 0                                             |
| (5)                                        | Total Calculated use (litres/person/day)<br>=SUM(column 4)                          |                                  |                   |                                         | 178.50                                        |
| (6)                                        | Contribution from greywater (litres/person/day)                                     |                                  |                   |                                         | 0                                             |
| (7)                                        | Contribution from rainwater (litres/person/day)                                     |                                  |                   |                                         | 0                                             |
| (8)                                        | Normalisation factor                                                                |                                  |                   |                                         | 0.91                                          |
| (9)                                        | Total internal water consumption<br>= [(5)-(6)-(7)]x(8)<br>(litres/person/day)      |                                  |                   |                                         | 162.44                                        |
| (10)                                       | External water use                                                                  |                                  |                   |                                         | 5.0                                           |
| (11)                                       | Total water consumption (Building Regulation 17.K)<br>= (9)+(10)(litres/person/day) |                                  |                   |                                         | 167.4                                         |

| Installation Type | Make/Model (mandatory) | Litres/Person/Day |
|-------------------|------------------------|-------------------|
| WC (single flush) |                        | 35.36             |
| Taps              |                        | 14.22             |
| Bath Only         |                        | 92.50             |
| Kitchen Taps      |                        | 14.76             |
| Washing Machines  |                        | 17.16             |
| Dishwasher        |                        | 4.5               |



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# Water Efficiency Calculation for Proposed Dwelling 25 Sandy Beach Estate, Hayling Island PO11 9RG

| Installation Type                                 | Unit of Measure                            | Capacity/Flow rate<br>(1)                                                           | Use Factor<br>(2) | Fixed use<br>(litres/person/day)<br>(3) | Litres/person/day<br>= [(1)x(2)] + (3)<br>(4) |
|---------------------------------------------------|--------------------------------------------|-------------------------------------------------------------------------------------|-------------------|-----------------------------------------|-----------------------------------------------|
| <b>WC</b> (single flush)                          | Flush Volume (litres)                      |                                                                                     | 4.42              | 0.00                                    | 0                                             |
| <b>WC</b> (dual flush)                            | Full flush Volume (litres)                 |                                                                                     | 1.46              | 0.00                                    | 0                                             |
|                                                   | Part flush Volume (litres)                 |                                                                                     | 2.96              | 0.00                                    | 0                                             |
| <b>WC</b> (multiple fittings)                     | Average effective flushing Volume (litres) | 3.50                                                                                | 4.42              | 0.00                                    | 15.47                                         |
| <b>Taps</b> (excluding kitchen/utility room taps) | Flow rate (litres/min)                     | 3.50                                                                                | 1.58              | 1.58                                    | 7.11                                          |
| <b>Bath</b> (where shower also present)           | Capacity to overflow(litres)               | 175.00                                                                              | 0.11              | 0.00                                    | 19.25                                         |
| <b>Shower</b> (where bath also present)           | Flow Rate(litres / minute)                 | 8.00                                                                                | 4.37              | 0.00                                    | 34.96                                         |
| <b>Bath Only</b>                                  | Capacity to overflow(litres)               |                                                                                     | 0.50              | 0.00                                    | 0                                             |
| <b>Shower Only</b>                                | Flow Rate (litres/minute)                  |                                                                                     | 5.60              | 0.00                                    | 0                                             |
| <b>Kitchen/Utility room sink taps</b>             | Flow rate (litres/minute)                  | 7.50                                                                                | 0.44              | 10.36                                   | 13.66                                         |
| <b>Washing Machine</b>                            | (Litres/kg dry load)                       | 8.17                                                                                | 2.1               | 0.00                                    | 17.16                                         |
| <b>Dishwasher</b>                                 | (Litres/place setting)                     | 1.25                                                                                | 3.6               | 0.00                                    | 4.50                                          |
| <b>Waste disposal unit</b>                        | (Litres/use)                               | <input type="checkbox"/> Present                                                    | 3.08              | 0.00                                    | 0                                             |
| <b>Water Softener</b>                             | (Litres/person/day)                        |                                                                                     | 1.00              | 0.00                                    | 0                                             |
|                                                   | (5)                                        | Total Calculated use (litres/person/day)<br>=SUM(column 4)                          |                   |                                         | 112.11                                        |
|                                                   | (6)                                        | Contribution from greywater (litres/person/day)                                     |                   |                                         | 0                                             |
|                                                   | (7)                                        | Contribution from rainwater (litres/person/day)                                     |                   |                                         | 0                                             |
|                                                   | (8)                                        | Normalisation factor                                                                |                   |                                         | 0.91                                          |
|                                                   | (9)                                        | Total internal water consumption<br>= [(5)-(6)-(7)]x(8)<br>(litres/person/day)      |                   |                                         | 102.02                                        |
|                                                   | (10)                                       | External water use                                                                  |                   |                                         | 5.0                                           |
|                                                   | (11)                                       | Total water consumption (Building Regulation 17.K)<br>= (9)+(10)(litres/person/day) |                   |                                         | 107.0                                         |

| Installation Type         | Make/Model (mandatory)             | Litres/Person/Day |
|---------------------------|------------------------------------|-------------------|
| WC (multiple fittings)    | Dual Flush Concealed Cistern       | 15.47             |
| Taps                      | Monobloc Basin Mixer               | 7.11              |
| Baths (shower(s) present) | 1700 Standard Bath                 | 19.25             |
| Showers (bath(s) present) | Thermostatic Shower Mixer          | 34.96             |
| Kitchen Taps              | Monobloc Mixer                     | 13.66             |
| Washing Machines          | Minimum A rated built in appliance | 17.16             |
| Dishwasher                | Minimum A rated built in appliance | 4.50              |



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