

STAGE 1 - WORKED EXAMPLE TO CALCULATE TOTAL NITROGEN (TN) LOAD FROM DEVELOPMENT WASTEWATER – 143 Blendworth Crescent, Havant

Step	Measurement	Value	Unit	Explanation	Site
Development proposal	Development types that would increase the population served by a wastewater system	1000	Residential dwellings		2 bed dwelling
Step 1	Additional population	2400	Persons	Uses an average household size of 2.4 x 1000 dwgs (greenfield site).	
Step 2	Wastewater volume generated by development	264,000	litres/day	2400 persons x 110 litres Where relevant, deduct wastewater volume of population displaced by the proposed development	
Step 3	Receiving WwTW environmental permit limit for TN	9.0	mg/l TN		
Step 4	TN discharged after WwTW treatment	2,376,000	mg/TN/day	9.0 mg/l TN. 264000 x 9.0	9.0 mg x 110 = 990
Convert mg/TN to kg/TN per day	2.376	Kg/TN/day	Divide by 1,000,000		0.000990
Convert kg/TN per day to kg/TN per year	781	Kg/TN/yr	X 365 days		0.36135

Wastewater total nitrogen load	781 kg/TN/yr				0.36135 kg/TN/yr
Wastewater total nitrogen load plus 20% precautionary buffer					0.433 Kg/TN/yr