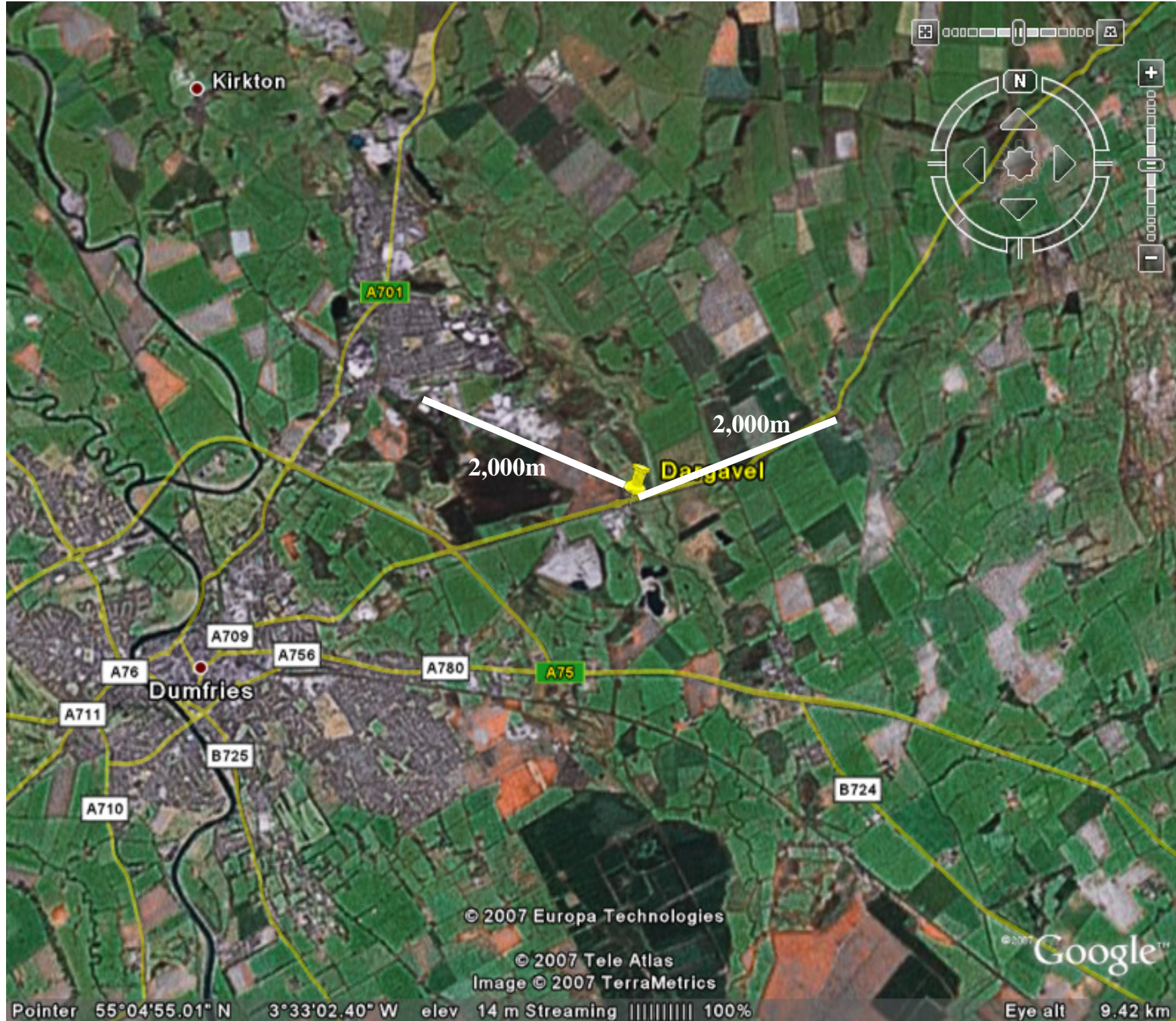




**PLAN 1**  
**RELATIVE POSITION OF PROPOSED GASIFICATION PLANT AND SCHOOL AND RESIDENTIAL AREAS IN TOCKWITH**



PLAN 2 - RELATIVE POSITIONS OF DARGAVEL GASIFICATION PLANT AND RESIDENTIAL AREAS

**Table 10.9 Source and emissions data**

Item	Unit	Proposed plant
Stack Height	m	18
Effective Internal Stack Diameter	m	1.56
Stack Position (E,N)	m, m	44566, 45240
Stack Flue Gas Exit Velocity	m/s	21
Flue Gas Conditions	Temperature °C	175
Oxygen	%v/v, dry	8
Moisture Content	% v/v	15.85%
Vol at reference conditions	Nm3/s	38.4
	Nm3/h	230,059
Vol at discharge conditions	Am3/s	40.1
	Am3/h	144498

**TABLE 1  
CALCULATION OF BCB'S ESTIMATED EMISSIONS  
OF TOXIC SUBSTANCES  
AS ANNUAL TOTALS**

*Note: Figures in black provided by BCB in their Environmental Impact Statement, figures in Red calculated by Clive Billenness CISA*

Actual Cubic Metres/Sec	<b>40.1</b>
Actual Cubic Metres/hr	<b>144,498.0</b>
Actual Cubic Metres/day	<b>3,467,952.0</b>

*Figures are based on 50 weeks' operation per annum (2 weeks' shutdown for planned maintenance) and that the plant will never exceed design maxima*

Emissions	Concentration at ref conditions (mg/Nm3) @ 11% O2	Concentration (mg/m3) actual wet basis	Release Rate (g/s)	Release Rate g/hr (g/s x 3600)	Release rate g/day	Release Rate kg/hr	Release Rate kg/day	Release Rate Metric TONS per annum	
Nitrogen oxides (as NO2)	35	26	1.05	<b>3,757</b>	<b>90,167</b>	<b>3.76</b>	<b>90.17</b>	<b>31.65</b>	Nitrogen oxides (as NO2)
Sulphur dioxide	50	37	1.49	<b>5,346</b>	<b>128,314</b>	<b>5.35</b>	<b>128.31</b>	<b>45.04</b>	Sulphur dioxide
Particulates (PM10)	10	7.4	0.3	<b>1,069</b>	<b>25,663</b>	<b>1.07</b>	<b>25.66</b>	<b>9.01</b>	Particulates (PM10)
Hydrogen Chloride	10	7.4	0.3	<b>1,069</b>	<b>25,663</b>	<b>1.07</b>	<b>25.66</b>	<b>9.01</b>	Hydrogen Chloride
Hydrogen Fluoride	1	0.74	0.03	<b>107</b>	<b>2,566</b>	<b>0.11</b>	<b>2.57</b>	<b>0.90</b>	Hydrogen Fluoride
VOCs	10	7.4	0.3	<b>1,069</b>	<b>25,663</b>	<b>1.07</b>	<b>25.66</b>	<b>9.01</b>	VOCs
Mercury	0.05	0.037	0.0015	<b>5</b>	<b>128</b>	<b>0.01</b>	<b>0.13</b>	<b>0.05</b>	Mercury
Cadmium and Thallium	0.025	0.019	0.00075	<b>3</b>	<b>66</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	Cadmium and Thallium
Other Metals	0.056	0.042	0.0017	<b>6</b>	<b>146</b>	<b>0.01</b>	<b>0.15</b>	<b>0.05</b>	Other Metals
PAHs	0.0001	0.000074	0.000003	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	PAHs
Dioxins and Furans	0.0000001	0.000000074	0.000000003	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	Dioxins and Furans
Ammonia	40	30	1.2	<b>4,335</b>	<b>104,039</b>	<b>4.33</b>	<b>104.04</b>	<b>36.52</b>	Ammonia
<b>GRAND TOTAL</b>							<b>402.41</b>	<b>141.25</b>	