

## APPENDIX 10.4- VERIFICATION

Verification (LAQM.TG 16)

	Henney Way/Stroud Close	North Bar/ Horse Fair
Background NO <sub>2</sub>	13.30	11.48
Background NO <sub>x</sub>	18.11	15.37

Site ID	Location		Modelled Road Contribution NO <sub>x</sub> (ex-background)	Monitored Total NO <sub>2</sub>	Monitored Road Contribution Nox*	Monitored Total NO <sub>x</sub>	Ratio of Monitored Road Contribution NO <sub>x</sub> / Modelled Road Contribution NO <sub>x</sub>
	X (m)	Y (m)					
Hennef Way	446535	241721	14.45	77.5	154.94	173.1	10.8
Stroud Close	446334	241676	6.73	23.5	19.32	37.4	2.9
North Bar	445352	240774	7.84	34.6	44.69	60.1	5.7
Horse Fair	445351	240578	9.33	38.6	54.98	70.4	5.9

Hennef Way	Verification Factor	10.8
Stroud Close		2.9
North Bar and Horse Fair		5.8

### Root Mean Square Error (RMSE)

$$RMSE = \sqrt{\frac{1}{N} \sum_{i=1}^N (Obs_i - Pred_i)^2}$$

Name	Observations	Predictions	Observations – Predictions	Squared
Hennef Way	77.5	77.39	0.11	0.01
Stroud Close	23.5	23.6	-0.1	0.01
North Bar	34.6	34.41	0.19	0.04
Horse Fair	38.6	38.27	0.33	0.11
			<b>Total</b>	<b>0.17</b>

0.17/4=0.0425

$\sqrt{0.0425} = 0.206$

$(0.206/40) \times 100 = 1\%$