APPENDIX 5.2

Verification

Model verification was undertaken using monitoring sites close to the route and with sufficient data capture. The measurement sites used for the verification are set out in Table 5-16.

Uncertainty in modelled estimates has been considered by calculating root mean square error (RMSE) and fractional bias statistics. An air quality model can be considered to perform reasonably well where modelled concentrations are within 25% of monitored concentrations in accordance with DEFRA's Technical Guidance LAQM.TG(16). The RMSE should ideally be within 10% of the relevant air quality criterion (4 µg/m^3), but is acceptable where it is within 25% of the relevant air quality criterion (10 µg/m^3).

Table 5-15 sets out the model adjustment factor calculated for the assessment and the uncertainty.

Table 5-15. Model Adjustment Factors

	NOx Roads Adjustment
Adjustment Factor	3.56
RMSE	6.40

Table 5-16 Monitoring Data Used in Assessment

ID	X (m)	Y (m)	Z (m)	Monitored NO$_2$ Concentration (µg/m^{-3})
AECOM_DT1	474263	320956	2.5	19.1
AECOM_DT3	476409	320088	2.6	27.5
AECOM_DT4	477016	320134	2.2	24.1
AECOM_DT5	476202	317497	2.6	19.3
AECOM_DT6	476791	316866	2.3	31.2
AECOM_DT7	476087	319142	2.5	30.4
AECOM_DT8	477366	319297	2.6	18.6
DT4	475843	319401	3.0	29.6
DT5	475583	319310	3.0	24.1
DT6	475782	317922	3.0	17.3
DT7	474621	320330	3.0	24.7
DT9	474901	318949	3.0	24.8
DT10	475048	319109	3.0	28.8
DT11	475394	319128	3.0	34.7
DT13	475342	318960	3.0	32.9