

and Hong Kong Island are predicted to rise by at least  $2.5 \mu\text{gm}^{-3}$ . The most significant increases are predicted to arise in the vicinity of Wan Chai and Causeway Bay.

### Maximum Hourly Average Concentrations of Nitrogen Dioxide and Ozone

Table 5.3q presents the predicted maximum hourly average concentrations of nitrogen dioxide and ozone under typical photochemical smog conditions. In addition to the presentation of predictions at each of the AQMS, the table also shows the threshold concentration and the maximum increase predicted in the model domain.

**Table 5.3q**  
**Changes in the Maximum Hourly Average Concentrations ( $\mu\text{gm}^{-3}$ )**  
**Under Typical Photochemical Smog Conditions**

AQMS	Nitrogen dioxide	Threshold	Ozone	Threshold
Central/Western	15.7	284.3	-12.2	252.2
Mong Kok	4.8	295.2	0.1	239.9
Sha Tin	-1.2	301.2	3.2	236.8
Yuen Long	-3.2	303.2	0.4	239.6
Tsuen Wan	-4.9	304.9	1.0	239.0
Kwai Chung	-2.9	302.9	0.0	240.0
Sham Shui Po	2.1	297.9	-1.5	241.5
Kwun Tong	9.3	290.7	0.8	239.2
Tai Po	-2.2	302.2	0.3	239.7
Maximum	25.9 East of Chai Wan	N/A	6.0 Junk Island	

Increased peak nitrogen dioxide concentrations are predicted at four of the AQMS, ie: Central/Western, Mong Kok, Shum Shui Po and Kwun Tong. As described in Table 5.3a, the AQMS at Kwun Tong, Mong Kok and Sham Shui Po reported exceedances of the AQO in 1997 and it is predicted that these will continue. However, the number of non-compliant AQMS will remain at one (Mong Kok). It is predicted that Kwun Tong and Sham Shui Po AQMS would continue to report three and two exceedances of the AQO per annum respectively, thereby remaining in compliance. The largest increases are predicted to be at the Central/Western AQMS but are not anticipated to result in exceedances of the AQO. For example, the maximum reported nitrogen dioxide concentration at the Central/Western AQMS in 1997 was  $205 \mu\text{gm}^{-3}$ , the predicted increase of approximately  $16 \mu\text{gm}^{-3}$  (8%) would result in a concentration of  $221 \mu\text{gm}^{-3}$  in 2016, well within the AQO of  $300 \mu\text{gm}^{-3}$ .

Figure 5.3q presents the predicted changes in peak nitrogen dioxide concentrations on a territory-wide basis. It is evident from the figure that both significant decreases and increases in the concentrations are predicted over quite large areas of the SAR. Increases of more than  $15 \mu\text{gm}^{-3}$  are predicted in the Chai Wan and Lei Yue Mun areas. The most significant improvements in air quality are in the New Territories. In these areas, reductions in nitrogen dioxide concentrations of up to  $7.5 \mu\text{gm}^{-3}$  are predicted.