predicted for nitrogen dioxide, decreases in the predicted concentrations are anticipated in the southern tip of the Kowloon Peninsula (Hung Hom and Tsimshatsui). Concentrations are also predicted to decline in the Wan Chai and Causeway Bay areas on Hong Kong Island by up to 15 μgm^{-3}.

Daily Average Concentrations of Nitrogen Dioxide and RSP

Table 8.2i presents the changes in the daily average concentrations of nitrogen dioxide and RSP predicted to occur under conditions typical of a photochemical smog episode in the SAR. As episodes of photochemical smog are all slightly different from each other and attributable to slightly different factors, the results presented in this analysis should not be taken as being applicable to all episodes. The table also shows the threshold concentration for observations in 1997. The threshold concentration is used to determine the number of exceedances of the AQO anticipated in 2016. For example, at the Central/Western AQMS, an increase of 15.8 μgm^{-3} is predicted in 2016 for nitrogen dioxide. In order to result in an exceedance of the AQO, the concentration reported in 1997 would therefore have to be greater than 134.2 μgm^{-3}. The database for air quality in 1997 is therefore searched to identify the number of days in 1997 on which the daily average concentration was in excess of 134.2 μgm^{-3} and this statistic is used as the basis for estimating the number of exceedances.

Table 8.2i
Changes in Daily Average Concentrations (μgm^{-3})
under Typical Photochemical Smog Conditions

AQMS	Nitrogen dioxide	Threshold	RSP	Threshold
Central/Western	15.8	134.2	5.7	174.3
Mong Kok	-1.3	151.3	9.9	170.1
Sha Tin	-3.1	153.1	7.0	173.0
Yuen Long	-1.8	151.8	1.4	178.6
Tsuen Wan	-3.6	153.6	2.1	177.9
Kwai Chung	-4.5	154.5	6.0	174.0
Sham Shui Po	-1.6	151.6	5.6	174.4
Kwun Tong	-0.2	150.2	8.9	171.1
Tai Po	-2.8	152.8	2.1	177.9

The predictions indicate that nitrogen dioxide concentrations at most of these stations would be likely to decrease under photochemical smog conditions, relative to levels reported in 1997. In the absence of the additional measures, nitrogen dioxide concentrations were predicted to increase at all stations. The number of exceedances reported at Mong Kok is expected to reduce from 6 to 5; from 4 to 2 at Kwun Tong and from 1 to 0 at Kwai Chung. The numbers of exceedances at Sham Shui Po and Tai Po are predicted to remain at 3 and 1, respectively.