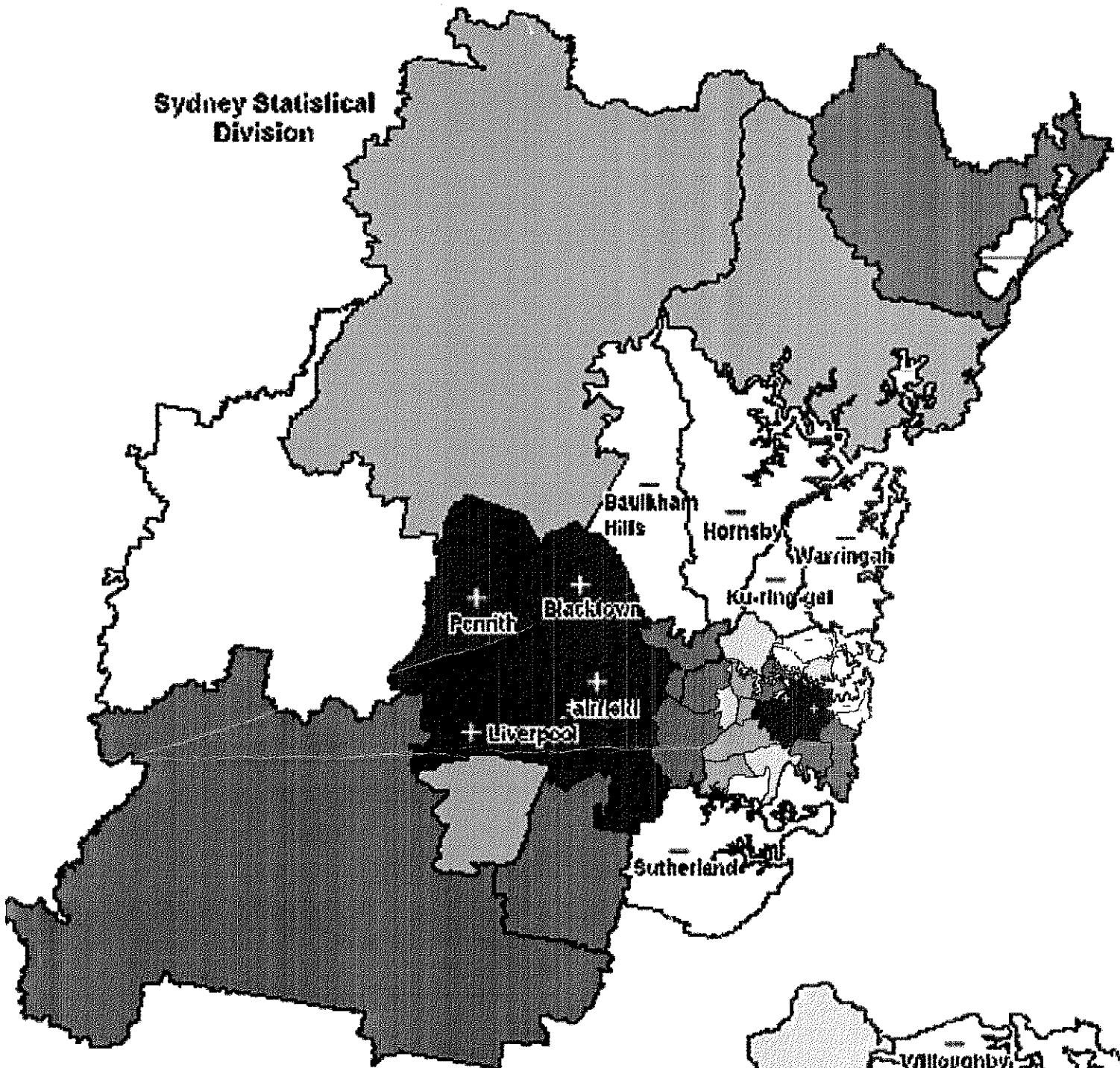


Sydney Statistical Division



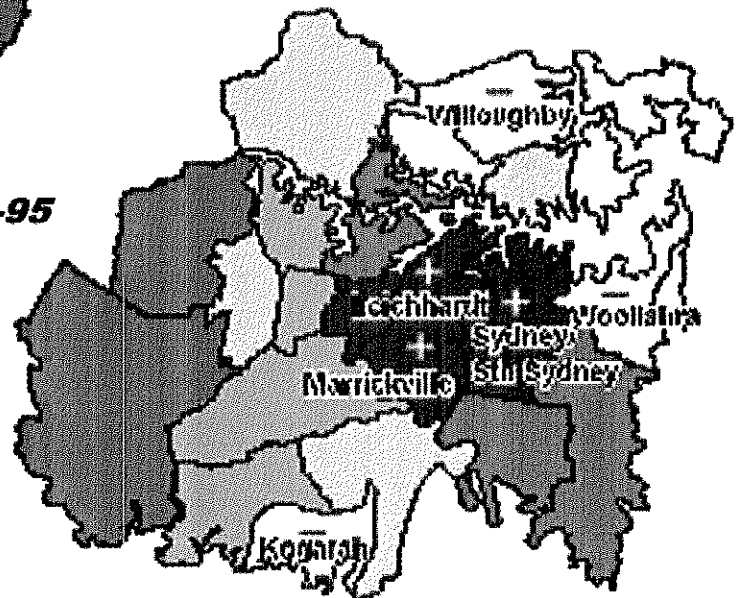
Lung Cancer, Males, Sydney 1991-95

Source: NSW Cancer Council

Smoothed SIR

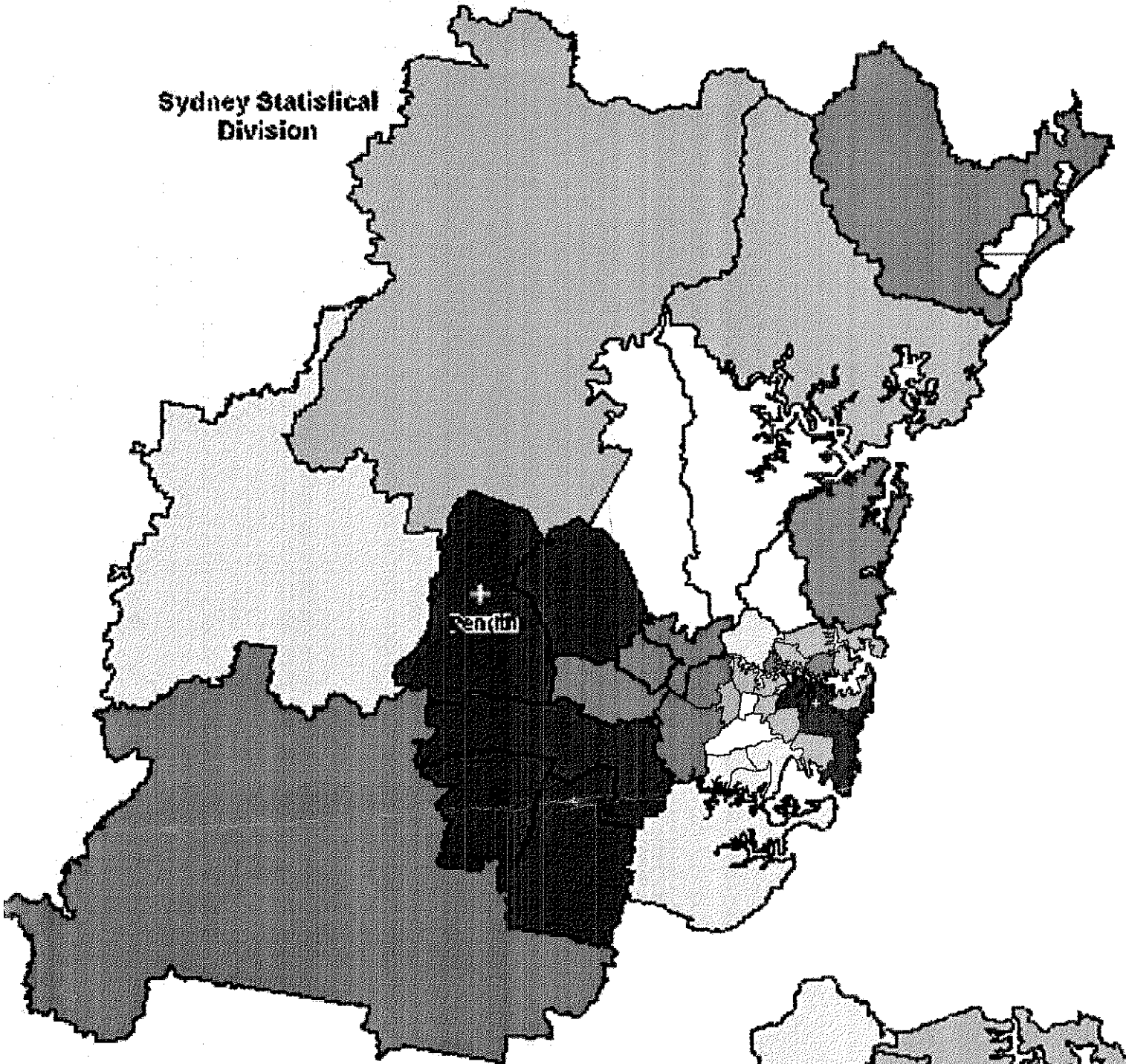
1 (low)	= 84.9 or less
2	= 85 to 94.9
3	= 95 to 104.9
4	= 105 to 114.9
5 (high)	115 or more

— Significantly lower than NSW average
 + Significantly higher than NSW average



Inner Sydney LGAs

Sydney Statistical Division



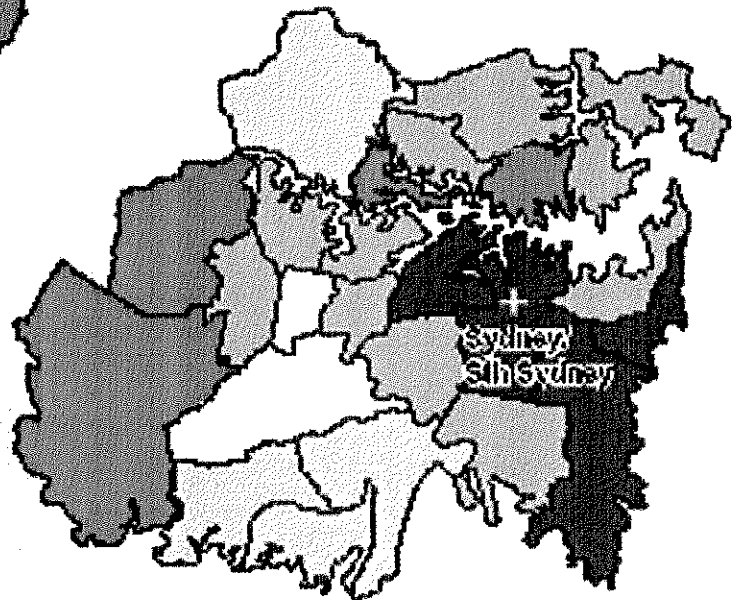
Lung Cancer, Females, 1991-95

Source: NSW Cancer Council

Smoothed SIR

	1 (low)	= 84.9 or less
	2	= 86 to 94.9
	3	= 96 to 104.9
	4	-----
	5 (high)	-----

Significantly lower than NSW average
 Significantly higher than NSW average



Inner Sydney LGAs

Table 3.1 TOTAL ESTIMATED EMISSIONS FROM SYDNEY AIRPORT FOR 1992

Pollutant	Aircraft Operations	Aircraft Maintenance	Aircraft Refuelling & Fuel Storage	Service Vehicles	Surface Traffic	Other Airport Sources	TOTALS (Kg/day)
Carbon Monoxide (CO)	7412	168	N/A	623	1228	441	9872
Oxides of Nitrogen (NO _x)	4984	136	N/A	88	156	292	5656
Hydrocarbons (HC)	2076	87.2	30.2	43	113	236	2586
Sulfur dioxide (SO ₂)	334.2 (as SO _x)	3.1 (as SO _x)	N/A	-	-	0.2	337.5
Particulate Matter (PM)	1-12.2*	1-12.2*	N/A	-	-	1.0	1.0

Note: Carbon dioxide (CO₂) is not considered a pollutant although its contribution to the Greenhouse Effect is recognised.

N/A Not applicable

* No relevant ICAO/AP42 emission data to calculate particulate matter emissions. However, ICAO Annex 16 Volume II specifies a Regulatory Smoke Number for all turbo-jet and turbo-fan engines in each operating mode. The estimates given are, therefore, a range encompassing aircraft and mode presented in the Inventory.

*Air Quality Survey
air reg. Plan*

Table 3.2 TOTAL PREDICTED EMISSIONS FROM SYDNEY AIRPORT FOR 2010

Pollutant	Aircraft Operations	Aircraft Maintenance	Aircraft Refuelling & Fuel Storage	Service Vehicles	Surface Traffic	Other Airport Sources	TOTALS (Kg/day)
Carbon Monoxide (CO)	9668	78	N/A	870	1970	608	13194
Oxides of Nitrogen (NO _x)	7824	156	N/A	120	250	402	8752
Hydrocarbons (HC)	1220	11	35.9	60	220	328	1875
Sulfur dioxide (SO ₂)	612 (as SO _x)	3.4 (as SO _x)	N/A	-	-	0.3	616
Particulate Matter (PM)	1-12.2*	1-12.2*	N/A	-	-	1.4	1.4

Note: Carbon dioxide (CO₂) is not considered a pollutant although its contribution to the Greenhouse Effect is recognised.

N/A - Not applicable

* - No relevant ICAO/AP42 emission data to calculate particulate matter emissions. However, ICAO Annex 16 Volume II specifies a Regulatory Smoke Number for all turbo-jet and turbo-fan engines in each operating mode. The estimates given are, therefore, a range encompassing aircraft and mode presented in the Inventory.

3.3 AIRPORT EMISSIONS IN A REGIONAL CONTEXT

Estimates of the contribution of emissions from the airport to overall emissions in the Sydney Airshed are given in Table 3.3. These estimates show that in 1992 Sydney Airport contributed between 0.6 and 3.2 per cent of the total pollutants in the Sydney Airshed. Similar results of the contribution of airport operations to total airshed emissions have been reported in Switzerland (Elektrawatt, 1991). This was discussed in Section 2.3.

The predictions for 2010 show that the airport's proportional contribution of emissions will remain generally constant, although there will be a slight rise in the proportional contribution of NO_x and a fall in the contribution of HCs.

Table 3.3 CONTRIBUTION OF AIRPORT EMISSIONS TO SYDNEY AIRSHED

Pollutants	Sydney Airport Emissions (tonnes/day)		Sydney Airshed Emissions (tonnes/day)		Contribution of Sydney Airport to Sydney Airshed %	
	1992	2010	1990	2010	1992	2010
Carbon Monoxide (CO)	9.9	13.2	1776	2213	0.6	0.6
Oxides of Nitrogen (NO_x)	5.7	8.8	180	246	3.2	3.6
Hydrocarbons (HC)	2.6	1.9	424	533	0.6	0.4

3.4 CONCLUSIONS

The investigations of emissions at and around the airport show the following:

- total emissions from Sydney Airport in 1992 were estimated to be 9872 kg/day of CO, 5656 kg/day of NO_x and 2586 kg/day of HCs. The major contributor to these emissions was aircraft operations;
- total emissions from the airport in 2010, based on a 16 hour day with a third runway, were estimated to be 13194 kg/day of CO, 8752 kg/day of NO_x and 1875 kg/day of HC;