SCHEDULE 6 Regulation 15(3) and (8) Regulation 17(2)(b)(ii) Regulation 19(2)(b) Regulation 20(3)(b)

Location of sampling points

PART 1

Macroscale siting for Group A pollutants

Sampling points for the protection of human health

1. Sampling points directed at the protection of human health shall be sited to provide data on:–

(a) areas within zones where the highest concentrations occur to which the population is likely to be directly or indirectly exposed for a period which is significant in relation to the averaging period of the relevant limit value; and

(b) concentrations in other areas within the zones which are representative of the exposure of the general population.

2. Sampling points shall in general be sited to avoid measuring very small micro-environments in their immediate vicinity. Where possible, the Scottish Ministers shall locate sampling points so as to be representative of air quality in a surrounding area of no less than 200 m^2 at traffic-orientated sites and of several square kilometres at urban-background sites.

3. Sampling points shall also, where possible, be representative of similar locations not in their immediate vicinity.

4. Account shall be taken of the need to locate sampling points on islands, where that is necessary for the protection of human health.

Protection of ecosystems and vegetation

5. Sampling points targeted at the protection of ecosystems or vegetation shall be sited more than 20 km from agglomerations or more than 5 km from other built-up areas, industrial installations or motorways. Where possible, the Scottish Ministers shall locate sampling points so as to be representative of air quality in a surrounding area of at least 1000 km^2. A sampling point may be sited at a lesser distance or to be representative of air quality in a less extended area, taking account of geographical conditions. Account shall be taken of the need to assess air quality on islands.

PART 2

Macroscale siting for Group B pollutants and polycyclic aromatic hydrocarbons

6. The sites of sampling points shall be selected in such a way as to provide data on–

(a) the areas within zones where the population is likely to be directly or indirectly exposed to the highest concentrations averaged over a calendar year;

(b) concentrations in other areas within zones which are representative of the exposure of the general population;

(c) deposition rates representing the indirect exposure of the population through the food chain.

7. Sampling points shall in general be sited so as to avoid measuring very small micro-environments in their immediate vicinity. Where possible, the Scottish Ministers shall locate sampling points so as to be representative of air quality in surrounding areas of no less than 200 m^2 at traffic-orientated sites, at least 250 m × 250 m at industrial sites, where feasible, and several square kilometres at urban-background sites.

8. Where the objective is to assess background levels the sampling site shall not be influenced by agglomerations or industrial sites in its vicinity, i.e. sites closer than a few kilometres (as the Scottish Ministers may determine in light of the circumstances of each case).

9. Where contributions from industrial sources are to be assessed, at least one sampling point shall be installed downwind of the source in the nearest residential area. Where the background concentration is not known, an additional sampling point shall be situated within the main wind direction. In particular in cases falling within regulation 9(1)(a), the sampling points shall be sited such that the application of the measures referred to at regulation 7(2)(b) can be monitored.

10. Sampling points shall also, where possible, be representative of similar locations not in their immediate vicinity. Where appropriate they shall be co-located with sampling points for PM_{10}.

PART 3

Macroscale siting for ozone

11. Sampling points for ozone shall be located in accordance with the considerations set out in the following table–

Type of station	*Objective of measurement*	*Representativeness*[(1)]	*Macroscale siting criteria*
Urban	*Protection of human health*: to assess the exposure of the urban population to ozone, i.e. where the population density and ozone concentration are relatively high and representative of the exposure of the general population	A few km^2	Away from the influence of local emissions such as traffic, petrol stations etc.; vented locations where well mixed levels can be measured; locations such as residential and commercial areas of cities, parks (away from the trees), big streets or squares with very little or no traffic open areas characteristic of education, sports or recreation facilities
Suburban	*Protection of human health and vegetation*: to assess the exposure of the population and vegetation located	Some tens of km^2	At a certain distance from the area of maximum emissions, downwind following the main wind

(1) Sampling points shall also, where possible, be representative of similar locations not in their immediate vicinity.

Type of station	*Objective of measurement*	*Representativeness*[(1)]	*Macroscale siting criteria*
	in the outskirts of the agglomeration, where the highest ozone levels, to which the population and vegetation is likely to be directly or indirectly exposed, occur		direction during conditions favourable to ozone formation; where population, sensitive crops or natural ecosystems located in the outer fringe of an agglomeration are exposed to high ozone levels; where appropriate, some sub urban stations also upwind of the area of maximum emissions, in order to determine the regional background levels of ozone
Rural	*Protection of human health and vegetation*: to assess the exposure of population, crops and natural ecosystems to sub-regional scale ozone concentrations	Sub-regional levels (a few km^2)	Stations can be located in small settlements and/or areas with natural ecosystems, forests or crops; representative for ozone away from the influence of immediate local emissions such as industrial installations and roads; at open area sites, but not on higher mountain-tops
Rural background	*Protection of vegetation and human health*: to assess the exposure of crops and natural ecosystems to regional-scale ozone concentrations as well as exposure of the populations	Regional/national/ continental levels (1,000 to 10,000 km^2)	Station located in areas with lower population density, e.g. with natural ecosystems, forests, far removed from urban and industrial areas and away from local emissions; avoid locations which are subject to locally enhanced formation of near ground inversion conditions, also summits of higher mountains; coastal

(1) Sampling points shall also, where possible, be representative of similar locations not in their immediate vicinity.

Type of station	*Objective of measurement*	*Representativeness*[(1)]	*Macroscale siting criteria*
			sites with pronounced diurnal wind cycles of local character are not recommended by Directive 2002/3/EC

(1) Sampling points shall also, where possible, be representative of similar locations not in their immediate vicinity.

12. For rural and rural background stations, consideration shall be given, where appropriate, to co ordination with the monitoring requirements of Commission Regulation 1091/94(**1**) concerning protection of the Community's forests against atmospheric pollution.

PART 4

Microscale siting

13. The following guidelines shall be met as far as practicable–

(a) the flow around the inlet sampling probe shall be unrestricted, (and, for ozone sampling, free in an arc of at least 270°) without any obstructions affecting the airflow in the vicinity of the sampler–

(i) in the case of Group A and Group B pollutants, the inlet sampling probe shall normally be some metres away from buildings, balconies, trees and other obstacles and at least 0.5 m from the nearest building in the case of sampling points representing air quality at the building line; and

(ii) in the case of ozone, the inlet sampling probe shall be away from buildings, balconies, trees and other obstacles by more than twice the height the obstacle protrudes above the sampler;

(b) in general, the inlet sampling point shall be between 1.5 m (the breathing zone) and 4 m above the ground. However, higher positions (up to 8 m) may be necessary in some circumstances and (for ozone sampling) in wooded areas. Higher siting may also be appropriate if the station is representative of a large area;

(c) the inlet probe shall not be positioned in the immediate vicinity of sources in order to avoid the direct intake of emissions unmixed with ambient air;

(d) the sampler's exhaust outlet shall be positioned so that recirculation of exhaust air to the sampler inlet is avoided;

(e) in relation to the location of traffic orientated samplers for Group A and Group B pollutants:–

(i) sampling points shall be at least 25 m from the edge of major junctions and at least 4 m from the centre of the nearest traffic lane;

(ii) for nitrogen dioxide and carbon monoxide, inlets shall be no more than 5 m from the kerbside; and

(iii) for PM_{10}, lead, benzene and Group B pollutants, inlets shall be sited so as to be representative of air quality near to the building line;

(**1**) O.J. No L 125, 18.05.94, p.1.

(f) for ozone, the inlet probe shall be positioned well away from such sources as furnaces and incineration flues and more than 10 m from the nearest road, with distance increasing as a function of traffic intensity; and

(g) for deposition measurements in rural background areas as respects Group B pollutants and other pollutants falling within regulations 19 and 20, the European Monitoring and Evaluation of Pollutants guidelines and criteria shall be applied as far as practicable and where not provided for elsewhere in these Regulations.

14. The following factors may also be taken into account–

(a) interfering sources;

(b) security;

(c) access;

(d) availability of electrical power and telephone communications;

(e) visibility of the site in relation to its surroundings;

(f) safety of public and operators;

(g) the desirability of co-locating sampling points for different pollutants;

(h) planning requirements.

PART 5

Documentation and review of site selection

15. The site-selection procedures shall be fully documented at the classification stage by such means as compass-point photographs of the surrounding area and a detailed map. Sites shall be reviewed at regular intervals with repeated documentation to ensure that selection criteria remain valid over time.

16. For ozone, this requires screening and interpretation of the monitoring data in the context of the meteorological and photochemical processes affecting the ozone concentrations measured at the respective site.