SCHEDULE 1 Regulation 7(1)

Sampling points for measurement of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter, lead, benzene and carbon monoxide in ambient air

PART 1

General

1. Ambient air quality must be assessed at sampling points located in accordance with this Schedule, except those listed in paragraph 2.

2. Compliance with limit values directed at the protection of human health shall not be assessed at the following locations:—

(a) any location situated within areas where members of the public do not have access and there is no fixed habitation;

(b) on factory premises or at industrial locations to which all relevant provisions concerning health and safety at work apply;

(c) on the carriageway of roads and on the central reservations of roads except where there is normally pedestrian access to the central reservation.

3. Insofar as they are relevant, the principles set out in this Schedule also apply to indicative measurement and modelling.

PART 2

Macroscale siting of sampling points (sampling points for the protection of human health)

1. Sampling points directed at the protection of human health must be sited to provide data on—

(a) the 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 limit value(s); and

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

2. Sampling points must in general be sited to avoid measuring very small micro-environments in their immediate vicinity. Where feasible, sampling points must be located so as to be representative of air quality in a street segment of no less than 100m in length at traffic-orientated sites or an area of at least 250m x 250m at industrial sites.

3. Sampling points in urban background locations must be located so that their pollution level is influenced by the combined contribution from all sources upwind of the station. The pollution level should not be dominated by a single source unless such a situation is typical for a larger urban area. Those sampling points must, as a general rule, be representative for several square kilometres.

4. Where the objective is to assess rural background levels, the sampling point must not be influenced by agglomerations or industrial sites in its vicinity, i.e. closer than five kilometres.

5. Where contributions from industrial sources are to be assessed, at least one sampling point must be installed downwind of the source in the nearest residential area. Where the background concentration is not known, an additional sampling point must be situated within the main wind direction.

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

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

Macroscale siting of sampling points (sampling points for the protection of ecosystems and vegetation)

8. Sampling points targeted at the protection of ecosystems or vegetation must be sited more than 20 km away from agglomerations or more than 5 km away from other built-up areas, industrial installations or motorways or major roads with traffic counts of more than 50,000 vehicles per day.

9. Sampling points must be located so as to be representative of air quality in a surrounding area of at least 1000 km². 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 or opportunities to protect particularly vulnerable areas. Account must be taken of the need to assess air quality on islands.

PART 3

Microscale siting of sampling points

1. Insofar as is practicable, sampling points must be situated in accordance with the following criteria:—

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

(b) in general, the inlet sampling point must 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. Higher siting may also be appropriate if the station is representative of a large area;

(c) the inlet probe must 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 must be positioned so that recirculation of exhaust air to the sampler inlet is avoided;

(e) in relation to the location of traffic-orientated samplers sampling points must be at least 25 m from the edge of major junctions and no more than 10m from the kerbside.

2. 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.