SCOTTISH STATUTORY INSTRUMENTS

2010 No. 204

ENVIRONMENTAL PROTECTION

The Air Quality Standards (Scotland) Regulations 2010

Made - - - -	*19th May 2010*
Laid before the Scottish Parliament - - - -	*20th May 2010*
Coming into force - -	*11th June 2010*

The Scottish Ministers make the following Regulations in exercise of the powers conferred by section 2(2) of the European Communities Act 1972(**1**) and all other powers enabling them to do so.

PART 1

General

Citation, commencement and extent

1.—(1) These Regulations may be cited as the Air Quality Standards (Scotland) Regulations 2010 and come into force on 11th June 2010.

(2) These Regulations extend to Scotland only.

Definitions

2. In these Regulations—

"ambient air" means outdoor air in the troposphere, excluding workplaces as defined by Council Directive 89/654/EEC(**2**) where provisions concerning health and safety at work apply and to which members of the public do not have regular access;

"AOT 40" (expressed in (µg/m^3).hours) means the sum of the difference between hourly concentrations greater than 80 µg/m^3 (= 40 parts per billion) and 80 µg/m^3 over a given period using only the one-hour values measured between 0800 hours and 2000 hours Central European Time each day;

(**1**) 1972 c.68. Section 2(2) was amended by the Scotland Act 1998 (c.46), Schedule 8, paragraph 15(3), the Legislative and Regulatory Reform Act 2006 (c.51), section 27 and Part 1 of the Schedule to the European Union (Amendment) Act 2008 (c.7). The functions conferred upon the Minister of the Crown under section 2(2) of the European Communities Act 1972, insofar as within devolved competence, were transferred to the Scottish Ministers by virtue of section 53 of the Scotland Act 1998.

(**2**) O.J. No. L 393, 30.12.1989, p.1, amended by Directive 2007/30/EC (O.J. No. L 165, 27.6.2007, p.21).

"arsenic", "cadmium", "nickel" and "benzo(a)pyrene" mean the total content of those elements and compounds within the PM_{10} fraction present in ambient air;

"Directive 2004/107/EC" means Directive 2004/107/EC of the European Parliament and of the Council relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air(**3**);

"Directive 2008/50/EC" means Directive 2008/50/EC of the European Parliament and of the Council on ambient air quality and cleaner air for Europe(**4**);

"fixed measurements" means measurements taken at fixed locations, either continuously or by sampling from time to time, to determine levels of pollutants in accordance with the relevant data quality objectives;

"indicative measurements" means measurements which meet data quality objectives that are less strict than those required for fixed measurements;

"margin of tolerance" means the percentage of the limit value by which that value may be exceeded in a given year;

"oxides of nitrogen" means the sum of the volume mixing ratio (ppbv) of nitrogen monoxide (nitric oxide) and nitrogen dioxide expressed in units of mass concentration of nitrogen dioxide ($\mu g/m^3$);

"ozone precursor substances" means substances which contribute to the formation of ground level ozone;

"PM_{10}" means particulate matter which passes through a size-selective inlet as defined in the reference method for the sampling and measurement of PM_{10}, EN 12341: 1998(**5**), with a 50 per cent efficiency cut-off at 10 µm aerodynamic diameter;

"$PM_{2.5}$" means particulate matter which passes through a size-selective inlet as defined in the reference method for the sampling and measurement of $PM_{2.5}$, EN 14907: 2005c, with a 50 per cent efficiency cut-off at 2.5µm aerodynamic diameter;

"particulate matter" means $PM_{2.5}$ and PM_{10};

"pollutant" means any of the following:—

(a) sulphur dioxide;

(b) nitrogen dioxide;

(c) oxides of nitrogen;

(d) particulate matter;

(e) lead;

(f) benzene;

(g) carbon monoxide;

(h) arsenic;

(i) cadmium;

(j) mercury;

(k) nickel;

(l) benzo(a)pyrene or other polycyclic aromatic hydrocarbons;

(m) ozone;

(**3**) O.J. No. L 23, 26.1.05, p.3, amended by Regulation (EC) No. 219/2009 (O.J. No. L 87, 31.3.09, p.109).
(**4**) O.J. No. L 152, 11.6.08, p.1.
(**5**) These standards are issued by the European Committee for Standardisation (CEN). Copies may be obtained from CEN at 36, Rue de Strassart B-1050, Brussels, Belgium, http://www.cenorm.be.

"polycyclic aromatic hydrocarbons" means those organic compounds composed of at least two fused aromatic rings made entirely from carbon and hydrogen; and

"total gaseous mercury" means elemental mercury vapour (Hg^0) and reactive gaseous mercury, being water-soluble mercury species with sufficiently high vapour pressure to exist in the gas phase.

Designation of competent authority

3. The Scottish Ministers are designated as the competent authority for the purposes of Directive 2008/50/EC (other than for the purpose specified in Article 3(f) of that Directive) and for the purposes of Directive 2004/107/EC.

Zones and agglomerations

4.—(1) The Scottish Ministers must, for the purposes of these Regulations, divide the territory of Scotland into zones and agglomerations.

(2) A zone is classified as an agglomeration if it is a conurbation with a population in excess of 250,000 inhabitants.

(3) Unless the context otherwise requires, in these Regulations references to a zone includes a zone which has been classified as an agglomeration.

PART 2

Assessment of ambient air quality

CHAPTER 1

Sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter, lead, benzene and carbon monoxide

Assessment thresholds

5.—(1) The Scottish Ministers must classify each zone according to whether or not the upper or lower assessment thresholds specified in Section A of Annex II to Directive 2008/50/EC are exceeded in relation to sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter, lead, benzene and carbon monoxide.

(2) The Scottish Ministers must review the classification of zones carried out in accordance with paragraph (1) at least every five years, and must do so more frequently than every five years if there are significant changes in the activities which may affect levels of sulphur dioxide, nitrogen dioxide or oxides of nitrogen, particulate matter, lead, benzene or carbon monoxide in ambient air.

(3) When reviewing the classification of zones in accordance with assessment thresholds, the Scottish Ministers must comply with Section B of Annex II to Directive 2008/50/EC.

Assessment criteria

6.—(1) The Scottish Ministers must assess the level of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter, lead, benzene and carbon monoxide in ambient air in all zones.

(2) In all zones where the level of any pollutant mentioned in paragraph (1) exceeds the upper assessment threshold for that pollutant referred to in regulation 5, fixed measurements must be used in relation to that pollutant, but may be supplemented by modelling or indicative measurements or both in order to provide adequate information on the spatial distribution of the ambient air quality.

(3) In all zones where the level of any pollutant mentioned in paragraph (1) is below the lower assessment threshold for that pollutant referred to in regulation 5, modelling or estimation techniques or both may be used instead of fixed measurements in relation to that pollutant.

(4) In zones where the level of any pollutant mentioned in paragraph (1) is at or between the upper and lower assessment thresholds for that pollutant, a combination of fixed measurements together with modelling or indicative measurements or both may be used in relation to that pollutant.

(5) In addition to the measurements referred to in paragraphs (1) to (4), the Scottish Ministers must measure $PM_{2.5}$ at rural background locations away from significant sources of air pollution, in order to provide information on an annual average basis on the total mass concentration and chemical speciation concentrations of that pollutant.

(6) For the purposes of paragraphs (1) to (5), measurements must be carried out in accordance with the data quality objectives set out in Sections A and C of Annex I to Directive 2008/50/EC, and for the purposes of paragraph (5), measurements must also be carried out in accordance with the criteria set out in Annex IV to the same Directive.

(7) Save as provided for in paragraph (8), measurements for the purposes of this regulation must be taken in accordance with the reference measurement methods specified in Sections A and Section C of Annex VI to Directive 2008/50/EC.

(8) Alternative methods to those referred to in paragraph (7) may be used provided the conditions set out in Section B of that Annex are complied with.

(9) Where measurements are supplemented by modelling or indicative measurements the Scottish Ministers must take account of the results of those supplementary methods in assessing ambient air quality for the purposes of these Regulations.

(10) In this regulation, "chemical speciation concentrations" means the concentrations of different chemical components or species of $PM_{2.5}$.

Location and number of sampling points

7.—(1) The Scottish Ministers must install sampling points in accordance with Schedule 1 for the assessment of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter, lead, benzene and carbon monoxide.

(2) In zones where fixed measurements are the sole source of information for the assessment of air quality in relation to any pollutant mentioned in paragraph (1), the number of sampling points for that pollutant must be more than or equal to the minimum number specified in Section A of Annex V to Directive 2008/50/EC for the purpose of assessing compliance with limit values and alert thresholds.

(3) In zones other than agglomerations where fixed measurement is the sole source of information for the assessment of air quality in relation to sulphur dioxide or oxides of nitrogen, the number of sampling points for that pollutant must be more than or equal to the minimum number specified in Section C of Annex V to Directive 2008/50/EC for the purpose of assessing compliance with critical levels for the protection of vegetation.

(4) In zones where the information from fixed measurements is supplemented by information from modelling or indicative measurements or both—

(a) the number of sampling points specified in Section A of Annex V may be reduced by up to 50 per cent provided that the following conditions are met:—

(i) the supplementary methods provide sufficient information for the assessment of air quality in relation to limit values or alert thresholds;

(ii) the supplementary methods provide sufficient information to inform the public as to the state of ambient air quality; and

(iii) the number of sampling points to be installed and the spatial resolution of other techniques are sufficient for the concentration of the relevant pollutant to be established in accordance with the data quality objectives specified in Section A of Annex I to Directive 2008/50/EC and to enable assessment results to meet the criteria in Section B of that Annex; and

(b) the number of sampling points in Section C of Annex V to Directive 2008/50/EC may be reduced by up to 50 per cent provided that the assessed concentrations of the relevant pollutant can be established in accordance with the data quality objectives specified in Section A of Annex I to Directive 2008/50/EC.

(5) For the measurement of $PM_{2.5}$ in rural background locations, the Scottish Ministers must install a sampling point for every 100,000km^2.

CHAPTER 2

Ozone

Assessment criteria

8.—(1) The Scottish Ministers must assess the level of ozone in ambient air in all zones.

(2) The Scottish Ministers must ensure that fixed measurements are taken in any zone where concentrations of ozone have exceeded the long-term objectives specified in Schedule 4 during any of the five years preceding those measurements.

(3) For the purposes of paragraph (1), measurements must be carried out in accordance with the data quality objectives set out in Sections A and C of Annex I to Directive 2008/50/EC.

(4) Save as provided for in paragraph (5), for the purposes of paragraph (2), measurements must be taken in accordance with the reference measurement method specified in point 8 of Section A of Annex VI to Directive 2008/50/EC.

(5) Alternative methods to that referred to in paragraph (4) may be used provided the conditions set out in Section B of that Annex are complied with.

(6) Where fixed measurements are supplemented by modelling or indicative measurements the Scottish Ministers must take account of the results of those supplementary methods in assessing ambient air quality for the purposes of these Regulations.

Location and number of sampling points

9.—(1) The Scottish Ministers must install sampling points in accordance with the criteria set out in Annex VIII to Directive 2008/50/EC.

(2) In zones where fixed measurement is the sole source of information for the assessment of air quality, the number of sampling points must be more than or equal to the minimum number specified in Section A of Annex IX to Directive 2008/50/EC.

(3) In zones where concentrations of ozone have been below the long-term objectives for each of the previous five years of measurement, the number of sampling points must be determined in accordance with the criteria set out in Section B of Annex IX to Directive 2008/50/EC.

(4) In zones where the information from fixed measurements is supplemented by information from modelling or indicative measurements or both, the number of sampling points referred to in paragraph (2) may be reduced provided that the following conditions are met:—

(a) the supplementary methods provide sufficient information for the assessment of air quality in relation to target values, long-term objectives, information and alert thresholds;

(b) the number of sampling points to be installed and the spatial resolution of supplementary methods are sufficient for the concentration of ozone to be established in accordance with the data quality objectives set out in Section A of Annex I to Directive 2008/50/EC and to enable assessment results to meet the criteria specified in Section B of the same Annex;

(c) there is at least one sampling point in each zone, with a minimum of one sampling point per two million inhabitants or one sampling point per 50,000km^2, whichever produces the greater number of sampling points; and

(d) nitrogen dioxide is measured at all remaining sampling points except at rural background stations as referred to in Section A of Annex VIII to Directive 2008/50/EC.

(5) The Scottish Ministers must ensure that nitrogen dioxide is measured at no less than 50 per cent of the sampling points required under Section A of Annex IX to Directive 2008/50/EC.

(6) The measurement referred to in paragraph (5) must be continuous except at rural background stations.

(7) In choosing the location and number of sampling points for measurements of ozone precursor substances, the Scottish Ministers must take into account the objectives and methods set out in Annex X to Directive 2008/50/EC.

CHAPTER 3

Arsenic, cadmium, nickel, mercury, benzo(a)pyrene and other polycyclic aromatic hydrocarbons

Assessment thresholds

10.—(1) The Scottish Ministers must classify each zone according to whether or not the upper and lower assessment thresholds specified in Section I of Annex II to Directive 2004/107/EC are exceeded in relation to arsenic, cadmium, nickel and benzo(a)pyrene.

(2) The Scottish Ministers must review the classification of zones carried out in accordance with paragraph (1) at least every five years, and must do so more frequently than every five years if there are significant changes in the activities which may affect levels of the pollutants referred to in paragraph (1) in ambient air.

(3) When considering the classification of zones in accordance with assessment thresholds, the Scottish Ministers must comply with Section II of Annex II to Directive 2004/107/EC.

Assessment criteria

11.—(1) The Scottish Ministers must assess concentrations of arsenic, cadmium, nickel and benzo(a)pyrene in ambient air in all zones.

(2) In zones where the level of any pollutant mentioned in paragraph (1) is above the upper assessment threshold for that pollutant, fixed measurements must be used in relation to that pollutant but may be supplemented by modelling techniques to provide an adequate level of information on ambient air quality.

(3) In zones where the level of any pollutant mentioned in paragraph (1) is above the lower assessment threshold but below the upper assessment threshold for that pollutant, fixed measurements must be used in relation to that pollutant but may be supplemented by indicative measurements as referred to in Section I of Annex IV to Directive 2004/107/EC or modelling, or both, to assess the level of these pollutants in ambient air.

(4) In zones where the level of any pollutant mentioned in paragraph (1) is below the lower assessment threshold for that pollutant, modelling or objective estimation techniques may be used instead of measurement in relation to that pollutant.

Location and number of sampling points

12. The Scottish Ministers must determine the location and number of sampling points for the assessment of arsenic, cadmium, nickel and benzo(a)pyrene in accordance with Annex III to Directive 2004/107/EC.

Monitoring of polycyclic aromatic hydrocarbons

13.—(1) The Scottish Ministers must monitor concentrations of other relevant polycyclic aromatic hydrocarbons in addition to benzo(a)pyrene as they think fit, including at least the following:—

(a) benzo(a)anthracene;

(b) benzo(b)fluoranthene;

(c) benzo(j)fluoranthene;

(d) benzo(k)fluoranthene;

(e) indeno(1,2,3-cd)pyrene; and

(f) dibenz(a,h)anthracene.

(2) Monitoring sites must be located together with sampling points for benzo(a)pyrene.

(3) Monitoring sites must be selected so that geographical variations and long term trends in the concentrations of polycyclic aromatic hydrocarbons can be identified.

(4) Monitoring sites must be selected in accordance with the criteria in Sections I to III of Annex III to Directive 2004/107/EC.

Background monitoring

14.—(1) The Scottish Ministers must operate background sampling points to provide the indicative measurements of—

(a) concentrations of—

(i) arsenic, cadmium, nickel and benzo(a)pyrene;

(ii) the polycyclic aromatic hydrocarbons referred to in paragraph (1) of regulation 13;

(iii) total gaseous mercury.

(b) total depositions of—

(i) arsenic, cadmium, nickel and benzo(a)pyrene within the PM_{10} fraction;

(ii) the polycyclic aromatic hydrocarbons referred to in paragraph (1) of regulation 13;

(iii) mercury.

(2) For the purposes of paragraph (1) the Scottish Ministers must ensure that—

(a) at least one sampling point is installed for every 100,000 km^2 ; and

(b) each sampling point is located in accordance with Sections I to III of Annex III to Directive 2004/107/EC.

Data quality objectives

15. When assessing levels of arsenic, cadmium, nickel, benzo(a)pyrene and other polycyclic aromatic hydrocarbons and total gaseous mercury, the Scottish Ministers must apply the data quality objectives and other standards contained in Annex IV to Directive 2004/107/EC.

Reference methods for sampling and analysis

16. Measurements of arsenic, cadmium, mercury, nickel, benzo(a)pyrene and other polycyclic aromatic hydrocarbons in ambient air and deposition of those pollutants must be made in accordance with the reference methods set out in Annex V to Directive 2004/107/EC.

PART 3

Duties of the Scottish Ministers in relation to limit values etc.

Duties in relation to limit values

17.—(1) The Scottish Ministers must ensure that levels of sulphur dioxide, nitrogen dioxide, benzene, carbon monoxide, lead and particulate matter do not exceed the limit values set out in Schedule 2.

(2) In zones where levels of the pollutants mentioned in paragraph (1) are below the limit values set out in Schedule 2, the Scottish Ministers must ensure that levels are maintained below those limit values and must endeavour to maintain the best ambient air quality compatible with sustainable development.

(3) Where, in accordance with Article 20 of Directive 2008/50/EC, the Commission has been informed that a limit value has been exceeded for a reason attributable to natural sources, that limit value will not be considered to be exceeded for the purposes of these Regulations.

Duties in relation to target values

18.—(1) The Scottish Ministers must ensure that all necessary measures not entailing disproportionate costs are taken to ensure that concentrations of $PM_{2.5}$, ozone, arsenic, cadmium, nickel and benzo(a)pyrene do not exceed the target values in Schedule 3.

(2) The Scottish Ministers must draw up a list of all zones where the target values for arsenic, cadmium, nickel or benzo(a)pyrene are met, and in relation to those zones must maintain the levels of those pollutants below those target values and must endeavour to achieve the best ambient air quality compatible with sustainable development.

(3) The Scottish Ministers must draw up a list of all zones in which the target values for arsenic, cadmium, nickel or benzo(a)pyrene are exceeded, and in doing so must identify the areas where those values are exceeded and the relevant sources of pollutants.

(4) In relation to the zones to which paragraph (3) applies, the measures referred to in paragraph (1) must be directed in particular at the predominant sources of emission which have been identified, and where applicable must entail the application of best available techniques in accordance with Directive 2008/1/EC of the European Parliament and of the Council concerning integrated pollution prevention and control(**6**).

(5) In zones where the level of ozone exceeds the target value for that pollutant, the Scottish Ministers must implement the programme prepared pursuant to Article 6 of Council Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants(**7**) in order to attain the target value, unless it cannot be achieved other than through measures that would entail disproportionate costs.

(**6**) O.J. No. L 24, 29.1.2008, p.8, amended by Directive 2009/31/EC (O.J. No. L 140, 5.6.2009, p.114).
(**7**) O.J. No. L 309, 27.11.01, p.22, last amended by Regulation (EC) No. 219/2009 (O.J. No. L 87, 31.3.2009, p.109).

Date of application for limit values and target values in regulations 17 and 18

19.—(1) The limit values and target values referred to in regulations 17 and 18 apply—

(a) from the date specified in the relevant Schedule for each limit value or target value concerned; or

(b) when these Regulations come into force, if no such date is specified.

(2) Where, in accordance with Article 22 of Directive 2008/50/EC, the Commission has been notified that conformity with the limit values for nitrogen dioxide set out in Schedule 2 has not been achieved in any zone, the date for compliance with that limit value specified in Section B of Annex XI to that Directive is postponed for such period up to five years as the Scottish Ministers may determine if—

(a) the Scottish Ministers have prepared an air quality plan under regulation 24 for that pollutant in the zone to which the notification relates (together with the information required by Section B of Annex XV to that Directive) and have demonstrated how conformity with the limit values for that pollutant will be achieved in that zone by the postponed date; and

(b) the Commission has raised no objections under Article 22 of that Directive.

(3) Where the notification referred to in paragraph (2) has been made the Scottish Ministers must ensure that the limit values for nitrogen dioxide are not exceeded by more than the maximum margin of tolerance specified in Annex XI of Directive 2008/50/EC for that pollutant.

Duties in relation to long-term objectives for ozone

20.—(1) The Scottish Ministers must ensure that all necessary measures not entailing disproportionate costs are taken to attain the long-term objectives for ozone set out in Schedule 4.

(2) Measures taken pursuant to paragraph (1) must be consistent with the programme referred to in regulation 18(5) and any air quality plan prepared and implemented in accordance with regulation 24(3).

(3) In zones where the long-term objectives for ozone have been attained, the Scottish Ministers must, insofar as factors including meteorological conditions and the transboundary nature of ozone pollution permit—

(a) ensure that they continue to be met;

(b) maintain the best ambient air quality compatible with sustainable development; and

(c) maintain a high level of protection for the environment and human health.

Duty in relation to information and alert thresholds

21. Where any of the information or alert thresholds in Schedule 5 are exceeded the Scottish Ministers must inform the public by means of radio, television, newspapers or the internet.

Duty in relation to critical levels for the protection of vegetation

22. The Scottish Ministers must ensure that the critical levels set out in Schedule 6 are not exceeded.

PART 4

National Exposure Reduction for $PM_{2.5}$

Duty to limit exposure to $PM_{2.5}$

23.—(1) The Scottish Ministers must ensure that all necessary measures not entailing disproportionate costs are taken in relation to Scotland with a view to attaining the national exposure reduction target by 2020.

(2) The Scottish Ministers must base assessment of compliance with paragraph (1) on a comparison of the average exposure indicator for 2020 with that for 2010.

(3) The Scottish Ministers must ensure that all appropriate measures are taken in relation to Scotland with a view to ensuring that the average exposure indicator for 2015 does not exceed 20µg/m^3.

(4) In this regulation—

(a) "national exposure reduction target" means the target established by the Secretary of State in accordance with regulation 24 of the Air Quality Standards Regulations 2010(**8**); and

(b) references to an average exposure indicator for a certain year are references to the indicator for that year calculated by the Secretary of State in accordance with regulation 23 of those Regulations.

PART 5

Plans

Air quality plans

24.—(1) Where in any zone the levels of sulphur dioxide, nitrogen dioxide, benzene, carbon monoxide, lead or PM_{10} in ambient air exceed any of the limit values in Schedule 2 or the level of $PM_{2.5}$ exceeds the target value in Schedule 3, the Scottish Ministers must draw up and implement an air quality plan for that zone so as to achieve that limit value or target value.

(2) Where, in accordance with Article 21 of Directive 2008/50/EC, the Scottish Ministers have designated zones within which limit values for PM_{10} are exceeded due to the re-suspension of particulates following winter sanding or salting of roads, the Scottish Ministers' duty under paragraph (1) applies to those zones only in so far as the excess is attributable to other sources of PM_{10}.

(3) In zones where the level of ozone exceeds the target value for that pollutant in Schedule 3, the Scottish Ministers must draw up and implement an air quality plan to achieve the relevant target value, unless it cannot be achieved other than through measures that would entail disproportionate costs.

(4) Between the date when these Regulations come into force and 31st December 2014, the Scottish Ministers must draw up and implement an air quality plan if levels of $PM_{2.5}$ in ambient air exceed a level calculated by applying the margin of tolerance set out in Schedule 2 to the limit value for that pollutant.

(5) Air quality plans must set out the measures intended to ensure compliance with the relevant limit value or target value within the shortest possible time.

(**8**) S.I. 2010/1001.

(6) Air quality plans must include the information listed in Schedule 7.

(7) Wherever possible, air quality plans must be consistent with other plans drawn up in accordance with obligations imposed under Council Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants(**9**), Council Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants, and Council Directive 2002/49/EC relating to the assessment and management of environmental noise(**10**).

(8) Where an air quality plan is required in relation to more than one pollutant, the Scottish Ministers must, where appropriate, draw up and implement an integrated plan in relation to all pollutants concerned.

Short-term action plans

25.—(1) Where, in any zone, there is a risk that levels of sulphur dioxide or nitrogen dioxide will exceed the alert thresholds set out in Schedule 5, the Scottish Ministers must draw up and implement a short-term action plan.

(2) A short-term action plan must set out the measures intended to reduce the risk of alert thresholds being exceeded, or in the event of the levels being exceeded, to reduce the duration of such an incident.

(3) Where, in any zone, levels of ozone exceed the alert threshold set out in Schedule 5 or there is a risk that they will exceed that threshold, the Scottish Ministers must draw up and implement a short-term action plan taking into account Decision 2004/279/EC(**11**), if of the opinion that it is reasonably likely that the risk of, or severity or duration of, the excess level of ozone can be reduced taking into account geographical, meteorological and economic conditions.

(4) For the purposes of paragraph (3), levels must have exceeded, or be predicted to exceed, the alert threshold for at least three consecutive hours.

(5) Short-term action plans may also be drawn up where there is a risk that any of the limit values or target values set out in Schedules 2 or 3 will be exceeded.

Public participation in drawing up air quality and short-term action plans

26.—(1) The Scottish Ministers must consult the public where they propose to prepare, modify or review an air quality plan or a short-term action plan.

(2) Where paragraph (1) applies, the Scottish Ministers must—

(a) inform the public as to the proposal, any relevant background information and the right of the public to participate in the drawing up of the plan;

(b) specify the means by which the public can participate in the consultation with regard to the drawing up of the plan, including an address for responses, and a reasonable timescale for the consultation;

(c) take account of the results of the consultation in drawing up the plan.

(3) When the plan is published, the Scottish Ministers must also provide information to the public as to the reasons for the contents of the plan together with information about the public participation process that has been carried out.

(**9**) O.J. No. L 309 27.11.01, p.1, last amended by Directive 2009/31/EC (O.J. No. L 140, 5.6.2009, p.114).
(**10**) O.J. No. L 189 18.7.02, p.12, amended by Regulation (EC) No. 1137/2008 (O.J. No. L 311, 21.11.2008, p.1).
(**11**) O.J. No. L 87, 25.3.04, p.50.

PART 6

Public information

Public information

27.—(1) The Scottish Ministers must make the following available to the public and appropriate interested organisations:—

(a) up-to-date information given on at least a daily basis, and if possible on an hourly basis, on concentrations of sulphur dioxide, nitrogen dioxide, PM_{10} (and if possible, $PM_{2.5}$), ozone and carbon monoxide;

(b) up-to-date information on concentrations of benzene and lead, presented as an average over the last 12 months, and updated every three months or if possible every month;

(c) up-to-date information as to any amendment to the attainment dates for limit values for nitrogen dioxide or PM_{10};

(d) up-to-date information on concentrations and deposition rates of arsenic, cadmium, mercury, nickel, benzo(a)pyrene and other polycyclic aromatic hydrocarbons;

(e) information about cases where target values for arsenic, cadmium, nickel and benzo(a)pyrene are exceeded, together with reasons for such cases, the area concerned, and appropriate information regarding effects on health and the environment;

(f) information on measures taken to achieve target values for arsenic, cadmium, nickel and benzo(a)pyrene;

(g) information about actual or predicted instances where pollutants exceed alert or information thresholds;

(h) air quality plans;

(i) short-term action plans.

(2) The information in paragraph (1)(g) must be made available in accordance with Schedule 8.

(3) Information must be distributed free of charge in a clear and comprehensible manner via any easily accessible media including the internet or other appropriate means of telecommunication taking into account the requirements of Council Directive 2007/2/EC on establishing an infrastructure for spatial information in the European Community (INSPIRE)(**12**).

(4) For the purposes of this regulation, "interested organisations" includes environmental organisations, consumer organisations, organisations representing sensitive populations, relevant healthcare bodies and industrial federations.

Annual reports

28.—(1) The Scottish Ministers must publish annual reports for all the pollutants.

(2) Annual reports must contain the following information:—

(a) details of all cases where levels of pollutants have exceeded limit values, target values, long term objectives, information and alert thresholds set out in Schedules 2 to 5 for the relevant averaging periods; and

(b) a summary assessment of the effects of the cases referred to in sub-paragraph (a).

(3) Annual reports may contain further information where appropriate, including assessments on forest protection and information as to ozone precursor substances listed in section B of Annex X to Directive 2008/50/EC as the Scottish Ministers think appropriate.

(**12**) O.J. No. L 108, 25.4.07, p.1.

PART 7

Revocation

Revocation

29. The Air Quality Standards (Scotland) Regulations 2007(**13**) are revoked.

St Andrew's House,
Edinburgh
19th May 2010

R CUNNINGHAM
Authorised to sign by the Scottish Ministers

(**13**) S.S.I. 2007/182.

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.

SCHEDULE 2 Regulations 17(1) and (2),19(2), 24(1) and (4), 25(5), 28(2)

Limit values

Sulphur dioxide

Averaging period	*Limit value*
One hour	350 μg/m^3 not to be exceeded more than 24 times a calendar year
One day	125 μg/m^3 not to be exceeded more than 3 times a calendar year

Nitrogen dioxide

Averaging period	*Limit value*
One hour	200 μg/m^3 not to be exceeded more than 18 times a calendar year
Calendar year	40 μg/m^3

Benzene

Averaging period	*Limit value*
Calendar year	5 μg/m^3

Carbon monoxide

Averaging period	*Limit value*
Maximum daily eight hour mean	10 mg/m^3

The maximum daily eight hour mean concentration of carbon monoxide must be selected by examining eight hour running averages, calculated from hourly data and updated each hour. Each eight hour average so calculated will be assigned to the day on which it ends, i.e. the first calculation period for any one day will be the period from 1700 hours on the previous day to 0100 hours on that day, the last calculation period for any one day will be the period from 1600 hours to 2400 hours on that day.

Lead

Averaging period	*Limit value*
Calendar year	0.5 μg/m^3

PM_{10}

Averaging period	*Limit value*
One day	50 μg/m^3, not to be exceeded more than 35 times a calendar year
Calendar year	40 μg/m^3

$PM_{2.5}$

Averaging period	*Limit value*	*Margin of tolerance*	*Date by which limit value is to be met*
Calendar year	25 μg/m^3	20% on 11th June 2008, decreasing on the next 1st January and every 12 months thereafter by equal annual percentages to reach 0% by 1st January 2015	1st January 2015

SCHEDULE 3 Regulations 18(1), 24(1) and (3),25(5), 28(2)

Target values

Arsenic, cadmium, nickel and benzo(a)pyrene

Pollutant	*Target value for the total content in the PM_{10} fraction averaged over a calendar year*	*Date by which target value should be met*
Arsenic	6 ng/m^3	31st December 2012
Cadmium	5 ng/m^3	31st December 2012
Nickel	20 ng/m^3	31st December 2012
Benzo(a)pyrene	1 ng/m^3	31st December 2012

Ozone

Objective	*Averaging period*	*Target value*
Protection of human health	Maximum daily eight hour mean(a)	120 µg/m^3 not to be exceeded on more than 25 days per calendar year averaged over three years(b)
Protection of vegetation	May to July	AOT 40 (calculated from 1h values) 18,000 µg/m^3 .h averaged over five years(b)

(a) The maximum daily eight hour mean concentration must be selected by examining eight hour running averages, calculated from hourly data and updated each hour. Each eight hour average so calculated must be assigned to the day on which it ends, that is, the first calculation period for any one day will be the period from 1700 hours on the previous day to 0100 hours on that day; the last calculation period for any one day will be the period from 1600 hours to 2400 hours on the day.

(b) If the three or five year averages cannot be determined on the basis of a full and consecutive set of annual data, the minimum annual data required for checking compliance with target values will be as follows:—
(i) for the target value for the protection of human health: valid data for one year; and
(ii) for the target value for the protection of vegetation: valid data for three years.

$PM_{2.5}$

Averaging period	*Target value*
Calendar year	25 µg/m^3

SCHEDULE 4

Regulations 8(2), 20(1), 28(2)

Long term objectives for ozone

Objective	*Averaging period*	*Long term objective*
Protection of human health	Maximum daily eight hour mean within a calendar year	120 µg/m^3
Protection of vegetation	May to July	AOT 40 (calculated from 1h values) 6000 µg/m^3.h.

SCHEDULE 5 Regulations 21, 25(1) and (3),28(2)

Information and alert thresholds

Alert thresholds for Sulphur dioxide and Nitrogen dioxide

Pollutant	*Alert threshold(a)*
Sulphur dioxide	500 μg/m^3
Nitrogen dioxide	400 μg/m^3

(a) To be measured over three consecutive hours at locations representative of air quality over at least 100 km^2 or an entire zone, whichever is smaller.

Information and alert thresholds for ozone

Purpose	*Averaging period*	*Threshold*
Information	1 hour	180 μg/m^3
Alert	1 hour	240 μg/m^3

SCHEDULE 6 Regulation 22

Critical levels for the protection of vegetation

Sulphur dioxide

Averaging period	*Critical level*
Calendar year and winter (1 October to 31 March)	20 μg/m^3

Oxides of Nitrogen

Averaging period	*Critical level*
Calendar year	30 μg/m^3 NO_x

SCHEDULE 7 Regulation 24(6)

Information to be included in air quality plans

1. Localisation of excess pollution—

(a) region;

(b) city (map);

(c) measuring station (map, geographical co-ordinates).

2. General information—

(a) type of zone (city, industrial, rural);

(b) estimate of the polluted area (km^2) and of the population exposed to the pollution;

(c) useful climatic data;

(d) relevant data on topography; and

(e) sufficient information on the type of targets requiring protection in the zone.

3. Responsible authorities (names and addresses of persons responsible for the development and implementation of air quality plans).

4. Nature and assessment of pollution—

(a) concentrations observed over previous years (before the implementation of the improvement measures);

(b) concentrations measured since the beginning of the project; and

(c) techniques used for the assessment.

5. Origin of pollution—

(a) list of the main emission sources responsible for pollution (map);

(b) total quantity of emissions from these sources (tonnes per year); and

(c) information on pollution imported from other regions.

6. Analysis of the situation—

(a) details of those factors responsible for exceeding the limit value or target value (transport, including cross-border transport, formation of secondary pollutants in the atmosphere); and

(b) details of possible measures for improvement of air quality.

7. Details of those measures or projects for improvements which existed prior to 11th June 2008—

(a) local, regional, national and international measures; and

(b) observed effects of those measures.

8. Details of those measures or projects adopted with a view to reducing pollution following 11th June 2008—

(a) listing and description of all the measures set out in the project;

(b) timetable for implementation;

(c) estimate of the improvement of air quality planned and of the expected time required to attain these objectives.

9. Details of the measures or projects planned or being researched for the long term.

10. List of the publications, documents and work etc. used to supplement information required by this Schedule.

SCHEDULE 8

Regulation 27(2)

Public information in relation to information and alert thresholds for nitrogen dioxide, sulphur dioxide and ozone

1. In cases where either the information threshold or the alert threshold for nitrogen dioxide, sulphur dioxide or ozone are exceeded the details set out in paragraphs 3 to 6 must, as a minimum, be made available to the public.

2. In cases where either the information or alert thresholds are predicted to be exceeded, the information set out in paragraphs 3 to 6 must be provided where practicable.

3. Information on any incident where information or alert thresholds are exceeded—

(a) the location or area where thresholds are exceeded;

(b) the type of threshold exceeded (information or alert threshold);

(c) the time at which the threshold was exceeded and the duration of the incident; and

(d) the highest 1-hour and (in the case of ozone) 8-hour mean concentration.

4. Forecast for the following afternoon, day and days—

(a) the geographical area in which it is expected that an information or alert threshold will be exceeded; and

(b) the expected changes in pollution (that is, improvement, stabilisation or deterioration), together with the reasons for those changes.

5. Information on the type of population concerned, possible health effects and recommended conduct in particular—

(a) information on the population groups at risk;

(b) description of likely symptoms;

(c) recommended precautions to be taken by the population concerned; and

(d) where to find further information.

6. Information provided under this Schedule must also include—

(a) information on preventive action to reduce pollution or exposure to it;

(b) an indication of main source sectors; and

(c) recommendations for action to reduce emissions.

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations, which extend to Scotland only, implement the following Directives:—

(a) Directive 2008/50/EC of the European Parliament and of the Council on ambient air quality and cleaner air for Europe ; and

(b) Directive 2004/107/EC of the European Parliament and of the Council relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air.

Directive 2008/50/EC replaces Council Directive 96/62/EC on ambient air quality assessment and management, Council Directive 1999/30/EC relating to limit values for sulphur dioxide, nitrogen dioxide, oxides of nitrogen, particulate matter and lead in ambient air, Directive 2000/69/EC of the European Parliament and of the Council relating to limit values for benzene and carbon monoxide in ambient air, Directive 2002/3/EC of the European Parliament and of the Council relating to ozone in ambient air, and Council Decision 97/101/EC of 27 January 1997 establishing a reciprocal exchange of information and data from networks and individual stations measuring ambient air pollution within the Member States.

The Regulations also incorporate requirements imposed by Directive 2003/35/EC of the European Parliament and of the Council providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC.

These Regulations replace the Air Quality Standards (Scotland) Regulations 2007 (S.S.I. 2007/182), which are revoked (regulation 29).

Part 1 of the Regulations provides for definitions and designates the Scottish Ministers as a competent authority for the purposes of Directives 2008/50/EC and 2004/107/EC.

Part 2 of the Regulations provides for the assessment of ambient air quality. Chapter 1 relates to the assessment of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter, lead benzene and carbon monoxide. Chapter 2 relates to the assessment of ozone, and Chapter 3 relates to the assessment of arsenic, cadmium, nickel, mercury, benzo(a)pyrene and other polycyclic aromatic hydrocarbons.

Part 3 of the Regulations sets out the duties of the Scottish Ministers in relation to the limit values, target values, long-term objectives, information and alert thresholds and critical levels for the protection of vegetation, all of which are set out in Schedules 2 to 6.

Part 4 of the Regulations provides for requirements in relation to $PM_{2.5}$ in addition to the limit value and target value for this pollutant. The national exposure reduction target and average exposure indicators for $PM_{2.5}$ are set by the Secretary of State in accordance with Part IV of the Air Quality Standard Regulations 2010 (S.I. 2010/1001).

Part 5 of the Regulations imposes requirements on the Scottish Ministers to draw up air quality plans in relation to limit values and target values and short-term action plans in relation to alert thresholds. Short-term action plans may also be used in relation to limit values and target values.

Part 6 of the Regulations relates to public information.

Schedule 1 to the Regulations sets out the requirements for the siting of sampling points for the assessment of sulphur dioxide, nitrogen dioxide, oxides of nitrogen, particulate matter, lead, benzene and carbon monoxide.

Schedules 2 to 6 set out limit values, target values, long term objectives for ozone, information and alert thresholds, and critical levels for the protection of vegetation.

Schedule 7 sets out the information to be included in air quality plans.

Schedule 8 sets out the public information to be provided where information or alert thresholds are exceeded or are predicted to be exceeded.

A Regulatory Impact Assessment has been prepared and placed in the Scottish Parliament Information Centre. Copies can be obtained from the Air, Noise and Nuisance Team, Rural Affairs, Environment and Services Directorate, Victoria Quay, Edinburgh EH6 6QQ.