

---

STATUTORY INSTRUMENTS

---

**2023 No. 96**

**The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023**

**PART 1**

**Introduction**

**Citation, commencement, extent and application**

1.—(1) These Regulations may be cited as the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023.

(2) Subject to paragraph (3), these Regulations come into force on the day after the day on which they are made.

(3) Paragraph 3(1)(b) of Schedule 2 comes into force on 1st January 2024.

(4) These Regulations extend to England and Wales but apply in relation to England only.

**Interpretation**

2.—(1) In these Regulations—

“the 2021 Act” means the Environment Act 2021;

“the 2010 Regulations” means the Air Quality Standards Regulations 2010(1);

“ambient air” means outdoor air, excluding the air in workplaces where members of the public do not have regular access;

“AQSR monitoring station” means a monitoring station which is used to measure PM<sub>2.5</sub> levels for the purposes of the 2010 Regulations;

“fixed measurement” means a measurement taken at a fixed location, either continuously or by sampling at regular intervals, to determine levels of PM<sub>2.5</sub>;

“minimum annual data capture requirement” has the meaning given in regulation 14(4);

“monitoring station” is to be interpreted in accordance with regulation 12(4);

“ratified” has the meaning given in regulation 14(5);

“year” means a calendar year;

“zone” means one of the zones or agglomerations into which England is divided for air quality monitoring purposes, as determined under regulation 4 of the 2010 Regulations.

(2) For the purposes of these Regulations—

- (a) particulate matter is to be treated as meeting the definition of PM<sub>2.5</sub>(2) if it passes through a size-selective inlet with a 50% efficiency cut-off at 2.5 micrometres aerodynamic diameter;
- (b) a reference to the “level” of PM<sub>2.5</sub> means the mass concentration of PM<sub>2.5</sub> measured in micrograms per cubic metre (“µg/m<sup>3</sup>”).

### **Air quality targets**

3.—(1) Regulation 4 specifies a target (“the annual mean concentration target”) for the purposes of the Secretary of State’s duty in section 2 of the 2021 Act to set a target in respect of the annual mean level of PM<sub>2.5</sub> in ambient air.

(2) Regulation 7 specifies a target (“the population exposure reduction target”) for the purposes of the Secretary of State’s duty in section 1 of the 2021 Act to set a long-term target in respect of air quality.

## **PART 2**

### **Annual Mean Concentration Target for PM<sub>2.5</sub>**

#### **Target**

4. The annual mean concentration target is that by the end of 31st December 2040 the annual mean level of PM<sub>2.5</sub> in ambient air must be equal to or less than 10 µg/m<sup>3</sup> (“the target level”).

#### **Measurement**

5.—(1) The annual mean concentration target is met by 31st December 2040 if, at every relevant monitoring station, the annual mean level of PM<sub>2.5</sub> in ambient air, calculated in accordance with regulation 15 and rounded to the nearest whole number of µg/m<sup>3</sup>, is equal to or less than the target level in the year 2040.

(2) In paragraph (1), “relevant monitoring station” means a monitoring station from which fixed measurements of PM<sub>2.5</sub> are taken—

- (a) throughout the whole of the year 2040, disregarding any periods during that year in which the monitoring station is temporarily out of operation, for example for repair or maintenance; and
- (b) which meet the minimum annual data capture requirement in that year.

#### **Reporting date**

6. For the purposes of section 6(1) of the 2021 Act the reporting date for the annual mean concentration target is 15th July 2041.

---

(2) See section 2(3) of the 2021 Act.

## PART 3

### Population exposure reduction target for PM<sub>2.5</sub>

#### Target

7. The population exposure reduction target is that there is at least a 35% reduction in population exposure by the end of 31st December 2040 (“the target date”), as compared with the average population exposure in the three-year period from 1st January 2016 to 31st December 2018 (“the baseline period”), determined in accordance with regulation 8.

#### Measurement

8.—(1) The percentage change in population exposure between the baseline period and the target date is to be measured by—

- (a) determining, for each year from 2019 to 2040, the amount (in  $\mu\text{g}/\text{m}^3$ ) by which the Population Exposure Indicator for that year is greater or less than the Reference Indicator for that year;
- (b) determining the sum of annual changes in population exposure between the baseline period and the target date, by adding together the amounts determined under sub-paragraph (a) for all years from 2019 to 2040; and
- (c) expressing the sum of annual changes in population exposure, as represented by the amount determined under sub-paragraph (b), as a percentage of the Population Exposure Indicator for the baseline period, rounded to the nearest whole number.

(2) Schedule 1 specifies calculations which the Secretary of State is to carry out, for the purposes of enabling the determinations in paragraph (1) to be made and progress towards meeting the population exposure reduction target to be measured.

#### Reporting date

9. For the purposes of section 6(1) of the 2021 Act, the reporting date for the population exposure reduction target is 15th July 2041.

#### Interpretation of this Part

10. In this Part and in Schedule 1—

“the baseline period” has the meaning given in regulation 7;

“population exposure” means population exposure to PM<sub>2.5</sub>;

“the Population Exposure Indicator”—

- (a) for the baseline period is a measure of average population exposure in that period;
- (b) for a year from 2019 onwards is a measure of average population exposure in the three-year period ending on 31st December in that year,

calculated in accordance with Schedule 1;

“the Reference Indicator” for a year is a measure of average population exposure in the three-year period ending on 31st December in the preceding year, calculated in accordance with Schedule 1 and to be used only for the purposes of making the determination required by regulation 8(1)(a) and the calculations required by paragraphs 1(d) and 2(c) of Schedule 1.

## PART 4

### Monitoring and assessment

#### Scope of this Part

**11.** This Part applies in relation to monitoring and assessment of PM<sub>2.5</sub> levels carried out for the purposes of the annual mean concentration target and the population exposure reduction target.

#### Monitoring stations

**12.—**(1) The Secretary of State must ensure that the requirements in Schedule 2 (relating to the location and number of monitoring stations and position of monitoring equipment) are met.

(2) Subject to any determination under paragraph (3)(b), every AQSR monitoring station which was in operation immediately before the coming into force of this regulation is a monitoring station for the purposes of these Regulations.

(3) The Secretary of State may from time to time—

- (a) establish new monitoring stations to measure PM<sub>2.5</sub> levels for the purposes of these Regulations; or
- (b) determine that a monitoring station is to cease to be used for the purposes of these Regulations, provided that the requirements in paragraph 3 of Schedule 2 (minimum number of monitoring stations) continue to be met.

(4) References to monitoring stations in these Regulations are to monitoring stations for the measurement of PM<sub>2.5</sub> levels to which paragraph (2) applies or which are established by the Secretary of State under paragraph (3)(a) except—

- (a) in the expression “AQSR monitoring station” and its definition (see regulation 2(1)); and
- (b) where specific provision is made in relation to the meaning of “monitoring station” in relation to a time before these Regulations come into force (see regulation 14(5) and the definition of “background monitoring station” in paragraph 5 of Schedule 1).

#### Assessment

**13.—**(1) The Secretary of State must ensure that PM<sub>2.5</sub> levels at each monitoring station are assessed as follows.

(2) Fixed measurements of PM<sub>2.5</sub> must be taken either continuously or at hourly or other regular intervals which are not less frequent than once per day—

- (a) in accordance with the method described in BS EN 12341:2014 (“the reference method”); or
- (b) by another method which is equivalent to the reference method (“an equivalent method”).

(3) For the purposes of paragraph (2)(b), a method of assessing PM<sub>2.5</sub> levels is an equivalent method if it gives results which—

- (a) are equivalent to the results which would be given by the reference method; or
- (b) otherwise bear a consistent relationship with the results which would be given by the reference method, disregarding any change to that relationship as a result of changes in the composition of PM<sub>2.5</sub> in ambient air over time.

(4) If PM<sub>2.5</sub> levels are assessed by a method to which paragraph (3)(b) applies, the results must be adjusted to produce results equivalent to the results which would be given by the reference method.

(5) If PM<sub>2.5</sub> levels are assessed otherwise than in accordance with paragraph (2)(a), the Secretary of State must keep under review whether that method satisfies the requirements in paragraph (3).

(6) In this regulation “BS EN 12341:2014” means the British Standard so numbered and titled ‘Ambient Air – standard gravimetric measurement method for the determination of the PM<sub>10</sub> or PM<sub>2.5</sub> mass concentration of suspended particulate matter’<sup>(3)</sup>.

### **Measurement, data ratification and minimum annual data capture requirement**

**14.**—(1) For the purposes of these Regulations, PM<sub>2.5</sub> levels are to be measured in µg/m<sup>3</sup> to at least one decimal place.

(2) The data obtained from fixed measurements of PM<sub>2.5</sub> must be independently checked, and not used for the purposes of any calculations if it is determined that they are likely to be incorrect.

(3) The data obtained from fixed measurements of PM<sub>2.5</sub> at a monitoring station in a year are not to be used for the purposes of any calculations unless the minimum annual data capture requirement is met by the monitoring station in that year.

(4) The minimum annual data capture requirement for a monitoring station is that fixed measurements of PM<sub>2.5</sub> levels are taken, and the data from such measurements are ratified, for at least 85% of the hours in a year, or if measurements are taken at periodic intervals less frequent than hourly, for at least 85% of those periods in a year.

(5) In this regulation—

“monitoring station” in relation to any time before these Regulations came into force includes any AQSR monitoring station which was in operation at that time;

“ratified” means that data have been checked in accordance with paragraph (2) and not excluded from being used in calculations.

### **Calculation of annual mean PM<sub>2.5</sub> level at monitoring stations**

**15.**—(1) The Secretary of State must ensure that, as soon as reasonably practicable after the end of each year, the annual mean PM<sub>2.5</sub> level is calculated for each monitoring station.

(2) If PM<sub>2.5</sub> levels are measured at periodic intervals, the annual mean PM<sub>2.5</sub> level at a monitoring station is to be calculated as the mean of all the ratified periodic measurements taken in a year.

## **PART 5**

### **Supplementary**

#### **Information**

**16.**—(1) The Secretary of State must publish on a website the information specified in Schedule 3.

(2) The information must be published within a reasonable time after—

(a) the information is available to the Secretary of State; and

(b) in the case of the data specified in paragraphs 8 to 11 of Schedule 3, the Secretary of State is satisfied that the data are correct.

---

(3) Published by the British Standards Institution. Digital and hard copies can be purchased online from the BSI Group at <http://www.bsigroup.com>. Hard copies can also be purchased by post from the BSI Group Customer Services Department at 389 Chiswick High Road, London W4 4AL. A copy is available for inspection free of charge at the offices of the Department for Environment, Food and Rural Affairs, 2 Marsham Street, London SW1P 4DF.

---

**Status:** This is the original version (as it was originally made). This item of legislation is currently only available in its original format.

---

30th January 2023

*Trudy Harrison*  
Parliamentary Under Secretary of State  
Department for Environment, Food and Rural  
Affairs