

The Groundwater (Water Framework Directive) (England) Direction 2016

The Secretary of State, in exercise of the powers conferred by section 40(2) of the Environment Act 1995(a), gives the following Direction to the Environment Agency for the implementation of Articles 3, 4 and 5 of the Groundwater Directive.

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The Secretary of State has consulted the Welsh Ministers, to the extent that there is any effect in those parts of Wales that are within the catchment areas of the rivers Dee, Wye and Severn, and the Environment Agency.

Citation and commencement

1. This Direction may be cited as the Groundwater (Water Framework Directive) (England) Direction 2016 and comes into force on 11th July 2016.

Interpretation

2.—(1) In this Direction—

“the 2014 Direction” means the Groundwater (Water Framework Directive) (England) Direction 2014 as in force immediately before this Direction comes into force;

“the 2015 Directions” means the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015(b);

(a) 1995 c.25; section 40(2)(a) was amended by S.I. 2011/1043, article 6(1)(a).

(b) http://www.legislation.gov.uk/ukxi/2015/1623/pdfs/ukxi0d_20151623_en.pdf

“the Groundwater Directive” means Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration(a);

“the Water Framework Directive” means Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy(b);

“the Agency” means the Environment Agency;

“approved threshold value” means a threshold value approved, and not revoked, by the Secretary of State under article 5 of this Direction or under article 5 of the 2014 Direction, pursuant to article 3 of the Groundwater Directive(c);

“background level” means the concentration of a substance or the value of an indicator in a body of groundwater corresponding to no, or only very minor, anthropogenic alterations to undisturbed conditions;

“baseline levels” means the average value measured at least during the reference years 2007 and 2008 on the basis of monitoring programmes implemented under Article 8 of the Water Framework Directive or, in the case of substances identified after these reference years, during the first period for which a representative period of monitoring data is available;

“the Dee and Severn River Basin Districts” means those areas identified as such for the purposes of regulation 4(1) of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003(d);

“groundwater quality standards” means the environmental quality standards set out in Schedule 1 and expressed as the concentration of a particular pollutant, group of pollutants or indicator of pollution in groundwater which should not be exceeded in order to protect human health and the environment;

“the Northumbria River Basin District” means the area identified by regulation 3(1) of the Water Environment (Water Framework Directive) (Northumbria River Basin District) Regulations 2003(e);

“NRW” means the Natural Resources Body for Wales;

“river basin district” means—

(a) an area identified by regulation 4(1) of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003, being the main unit for the management of river basins for the purposes of the Water Framework Directive and being made up of a river basin or neighbouring river basins, together with associated groundwater, transitional waters and coastal waters;

(b) the Northumbria River Basin District;

(c) the Solway Tweed River Basin District;

“SEPA” means the Scottish Environment Protection Agency;

“the Solway Tweed River Basin District” means the area identified by regulation 3(1) of the Water Environment (Water Framework Directive) (Solway Tweed River Basin District) Regulations 2004(f);

“starting point”, in relation to trend reversal, means the point at which measures must be implemented to reverse a significant and sustained upward trend in pollutant concentrations or indicators of pollution identified under article 7(1) of this Direction or under article 7(1) of the 2014 Direction.

(a) OJ No L 372, 27.12.2006, p. 19 as amended by Directive 2014/80/EU (OJ No L182, 21.6.2014, p.52).

(b) OJ No L 327, 22.12.2000, p.1 as last amended by Directive 2014/101/EU (OJ No L 311, 31.10.2014, p 32).

(c) The threshold values approved by the Secretary of State are set out in Table 1 in Schedule 5 to the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. That Table, along with articles 5(3) and 6 of those Directions, transposes the requirements of Article 3(1)(b) and the second paragraph of Article 3(1) of the Groundwater Directive.

(d) S.I. 2003/3242; relevant amending instruments are S.I. 2013/755 (W.90), 2015/1623 and 2016/138.

(e) S.I. 2003/3245, amended by S.I. 2016/139.

(f) S.I. 2004/99, amended by S.I. 2016/139; there are other amending instruments but none is relevant.

(2) Any expression used in this Direction which is also used in the Water Framework Directive or the Groundwater Directive and which is not otherwise defined in this Direction has the same meaning for the purposes of this Direction as it has for the purposes of those Directives.

General duty in the Solway Tweed River Basin District

3. In discharging its functions in compliance with this Direction in relation to the Solway Tweed River Basin District, the Agency must co-operate with SEPA, in relation to the exercise by SEPA of corresponding functions, so as to secure that the assessment of groundwater chemical status, identification of significant and sustained upward trends in pollution concentrations and determination of the starting point for trend reversal is co-ordinated for the whole of that river basin district.

General duty in the Dee and Severn River Basin Districts

4. In discharging its functions in compliance with this Direction in relation to the Dee and Severn River Basin Districts, the Agency must co-operate with NRW, in relation to the exercise by NRW of corresponding functions, so as to secure that the assessment of groundwater chemical status, identification of significant and sustained upward trends in pollution concentrations and determination of the starting point for trend reversal is co-ordinated for the whole of those river basin districts.

Threshold values

5.—(1) Where new information indicates that, in order to protect human health and the environment, a threshold value should be set for a substance, or an approved threshold value should be revised, the Agency must prepare, and submit to the Secretary of State for approval, proposals for new or revised threshold values.

(2) Threshold values must be determined in accordance with Parts A and B of Annex II to the Groundwater Directive on the basis of methodologies approved by the Secretary of State.

(3) When determining threshold values the Agency must consider the following guidelines—

- (a) the determination of threshold values should be based on—
 - (i) the extent of interactions between groundwater and associated aquatic and dependent terrestrial ecosystems;
 - (ii) the interference with actual or potential legitimate uses or functions of groundwater;
 - (iii) all pollutants which characterise bodies of groundwater as being at risk, including, as a minimum, those listed in Schedule 2; and
 - (iv) hydrogeological characteristics including information on background levels and water balance;
- (b) the determination of threshold values may take account of the origins of the pollutants, their possible natural occurrence, their toxicology and dispersion tendency, their persistence and their bioaccumulation potential;
- (c) wherever elevated background levels of substances or ions or their indicators occur due to natural hydrogeological reasons, those background levels in the relevant body of groundwater must be taken into account when establishing threshold values; and
- (d) the determination of threshold values should be supported by a control mechanism for the data collected, based on an evaluation of data quality, analytical considerations, and background levels for substances which may occur both naturally and as a result of human activities.

(4) When determining background levels for the purposes of paragraph (3)(c), the Agency must take into account the following principles—

- (a) the determination of background levels should be based on the characterisation of groundwater bodies in accordance with Annex II to the Water Framework Directive and on the results of groundwater monitoring in accordance with Annex V to that Directive;
- (b) the monitoring strategy and interpretation of the data should take account of the fact that flow conditions and groundwater chemistry vary laterally and vertically;
- (c) where only limited groundwater monitoring data are available, more data should be gathered and, in the meantime, background levels should be determined based on those limited monitoring data, where appropriate, by a simplified approach using a subset of samples for which indicators show no influence of human activity;
- (d) information on geochemical transfers and processes should be taken account of, where available;
- (e) where insufficient groundwater monitoring data are available and the information on geochemical transfers and processes is poor, more data and information should be gathered and, in the meantime, background levels should be estimated, where appropriate, based on statistical reference results for the same type of aquifers in other areas having sufficient monitoring data.

(5) Where, in the opinion of the Agency, a body of groundwater is no longer at risk from a pollutant, group of pollutants or an indicator of pollution, the Agency may prepare, and submit to the Secretary of State for approval, proposals for the revocation of the approved threshold value for that pollutant, group of pollutants or indicator of pollution.

(6) The Agency must supply to the Scottish Ministers copies of proposals submitted to the Secretary of State under this article relating to threshold values for bodies of groundwater associated with the Solway Tweed River Basin District.

(7) The Agency must supply to the Welsh Ministers copies of proposals submitted to the Secretary of State under this article relating to threshold values for bodies of groundwater associated with the Dee and Severn River Basin Districts.

Criteria for assessing groundwater chemical status

6.—(1) When assessing groundwater chemical status as required by article 3 of the 2015 Directions, the Agency must apply the approach in the relevant provisions of the Groundwater Directive.

(2) The relevant provisions of the Groundwater Directive for the purposes of paragraph (1) are—

- (a) Article 3(1) (quality standards and threshold values for assessing groundwater chemical status);
- (b) Article 3(6) (revising threshold values as a result of new information);
- (c) Article 4(1), (2) and (3) (procedure for assessing groundwater chemical status);
- (d) Annex I (groundwater quality standards);
- (e) Parts A and B of Annex II (guidelines for establishing threshold values and minimum list of pollutants) and
- (f) Paragraphs 1 to 4 of Annex III (procedure for assessing groundwater chemical status).

(3) Whenever technically possible the Agency must take into account inputs of pollutants from diffuse sources of pollution having an impact on groundwater chemical status.

(4) The groundwater quality standards referred to in Annex I of the Groundwater Directive are set out in Schedule 1.

Significant and sustained upward trends in pollution concentrations and the starting point for trend reversal

7.—(1) This article applies where the Agency has—

- (a) characterised a body or group of bodies of groundwater as being at risk of failing to meet the objectives under Article 4 of the Water Framework Directive for the purposes of giving effect to paragraphs 2.4.4 and 2.4.5 of Annex V to that Directive;
 - (b) identified any significant and sustained upward trend in pollutant concentrations or indicator of pollution (whether under the 2014 Direction or this Direction); and
 - (c) determined the starting point for reversal of each trend so identified (whether the determination was made under the 2014 Direction or this Direction).
- (2) By 22nd December 2020, and subsequently by each sixth anniversary of that date, the Agency must review and where necessary revise—
- (a) its identification of any significant and sustained upward trend in pollutant concentrations or indicators of pollution; and
 - (b) its determination of the starting point for reversal of each trend so identified.
- (3) A body of groundwater must be treated as being subject to a significant and sustained upward trend in pollution concentrations where it is subject to a statistically significant increase of concentrations of a pollutant, group of pollutants or indicator of pollution, which presents a significant environmental risk.
- (4) The Agency must base the assessment of whether a body of groundwater is subject to a significant and sustained upward trend in pollution concentrations on information from the sources specified in paragraph (5), assessed in accordance with paragraph 2(c) and (d) of Part A of Annex IV to the Groundwater Directive.
- (5) The sources are—
- (a) monitoring programmes for groundwater—
 - (i) established under the provisions specified in paragraph (10); and
 - (ii) designed in accordance with the requirements of those provisions and paragraphs 1 and 2(a) and (b) of Part A of Annex IV to the Groundwater Directive;
 - (b) relevant data gathered before the start of the monitoring programmes for the purposes of identifying trends for the first river basin management plans; and
 - (c) baseline levels.
- (6) The Agency must carry out an additional trend assessment in the circumstances described in Article 5(5) of the Groundwater Directive in order to verify that a plume of pollution from a contaminated site does not—
- (a) expand;
 - (b) cause a deterioration in the chemical status of a body or group of bodies of groundwater; or
 - (c) present a risk to human health or the environment.
- (7) The starting point for trend reversal must be determined in accordance with Article 5(3) and paragraph 1 of Part B of Annex IV to the Groundwater Directive.
- (8) Trend reversals must be demonstrated taking into account the relevant monitoring provisions in paragraph 2 of Part A of Annex IV to the Groundwater Directive.
- (9) The identification of significant and sustained upward trends in pollution concentrations in relation to substances which occur both naturally and as a result of human activities must take account of the baseline levels.
- (10) The provisions are—
- (a) in relation to the Solway Tweed River Basin District, regulation 2(1) and paragraph 5 of Schedule 1 to the Water Environment (Water Framework Directive) (Solway Tweed River Basin District) Regulations 2004;
 - (b) in relation to any other river basin district, regulation 9 of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003.

Information to be included in the river basin management plan

8.—(1) The Agency must ensure each river basin management plan which is updated under the provisions specified in paragraph (2) includes, in relation to the river basin district—

- (a) details of approved threshold values together with the information specified in Part 1 of Schedule 3;
- (b) details of any applicable changes to the list of approved threshold values since the date of publication of the previous version of the plan;
- (c) a summary of the assessment undertaken for the purposes of determining groundwater chemical status, including an explanation as to the manner in which exceedances of groundwater quality standards or approved threshold values at individual monitoring points have been taken into account;
- (d) a summary of the information specified in Part 2 of Schedule 3;
- (e) details of the starting point for trend reversal determined under article 7(7), together with a summary of the reasons for each determination; and
- (f) a summary of the results of any additional trend assessments carried out under article 7(6).

(2) The provisions are—

- (a) in relation to the Solway Tweed River Basin District, regulation 2(1) and paragraph 7 of Schedule 1 to the Water Environment (Water Framework Directive) (Solway Tweed River Basin District) Regulations 2004;
- (b) in relation to any other river basin district, regulation 11(4) of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003.

Revocation

9. The Groundwater (Water Framework Directive) (England) Direction 2014 is revoked.

Signed by authority of the Secretary of State

David Cooper
Senior Civil Servant in the
Department for Environment, Food and Rural Affairs

24 May 2016

SCHEDULE 1

Article 2(1)

Groundwater Quality Standards

Table 1

<i>Pollutant</i>	<i>Quality Standards</i>
Nitrates	50 mg/l
Active substances in pesticides including their relevant metabolites, degradation and reaction products ⁽ⁱ⁾	0.1 µg/l 0.5 µg/l(total) ⁽ⁱⁱ⁾

⁽ⁱ⁾ 'Pesticides' means plant protection products and biocidal products as defined in Article 2 of Directive 91/414/EC and in Article 2 of Directive 98/8/EC respectively.

⁽ⁱⁱ⁾ 'Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure, including their relevant metabolites, degradation and reaction products.

SCHEDULE 2

Article 5(3)(a)(iii)

Minimum list of pollutants and their indicators

1. Substances or ions or indicators which may occur both naturally and/or as a result of human activities

Arsenic
Cadmium
Lead
Mercury
Ammonium
Chloride
Sulphate
Nitrites
Phosphorus (total)/Phosphates⁽ⁱ⁾

⁽ⁱ⁾ Threshold values may be established for either phosphorus (total) or for phosphates.

2. Man-made synthetic substances

Trichloroethylene
Tetrachloroethylene

3. Parameters indicative of saline or other intrusions⁽ⁱⁱ⁾

Conductivity

⁽ⁱⁱ⁾ With regard to saline concentrations resulting from human activities, threshold values may be established for either sulphate and chloride, or for conductivity.

Information to be included in river basin management plans

PART 1

Information to be provided under article 8(1)(a) (regarding the pollutants and their indicators for which threshold values have been established)

1. Information on the way the procedure set out in Part A of Annex II of the Groundwater Directive has been followed.
2. Information on each of the bodies or groups of bodies of groundwater characterised as being at risk, including the following—
 - (a) the size of the bodies;
 - (b) each pollutant or indicator of pollution which characterises bodies of groundwater as being at risk;
 - (c) the environmental quality objectives to which the risk is related, including the actual or potential legitimate uses or functions of the groundwater body, and the relationship between the bodies of groundwater and the associated surface waters and directly dependent terrestrial ecosystems;
 - (d) in the case of naturally-occurring substances, the natural background levels in the bodies of groundwater;
 - (e) information on the exceedances where threshold values are exceeded.
3. The threshold values, whether they apply at the national level, at the level of the river basin district or at the level of a body or bodies of groundwater.
4. The relationship between the threshold values and each of the following—
 - (a) in the case of naturally-occurring substances, the background levels;
 - (b) associated surface waters and directly dependent terrestrial ecosystems;
 - (c) the environmental quality objectives and other standards for water protection that exist at national, European Union or international level;
 - (d) any relevant information concerning the toxicology, eco-toxicology, persistence, bioaccumulation potential, and dispersion tendency of the pollutants.
5. The methodology for determining background levels based on the principles set out in paragraphs (3)(c) and (4) of article 5.
6. The reasons for not having established threshold values for any of the pollutants and indicators identified in Schedule 2.
7. Key elements of the groundwater chemical status, including the level, method and period of aggregation of monitoring results, the definition of the acceptable extent of exceedance, and the method for calculating it, in accordance Article 4(2)(c)(i) of, and point 3 of Annex III to, the Groundwater Directive.
8. Where any of the data referred to in paragraphs 2 to 7 are not included in the river basin management plans, the reasons for this.

PART 2

Information to be summarised under article 8(1)(d)

9. The way in which the trend assessment from individual monitoring points within a body or group of bodies of groundwater has contributed to identifying, in accordance with Section 2.5 of Annex V to the Water Framework Directive, that those bodies are subject to a significant and sustained upward trend in concentration of any pollutant or a reversal of that trend.