

# The Groundwater (Water Framework Directive) (Wales) Direction 2016 (2016 No.14)

The Welsh Ministers, in exercise of the powers conferred by article 11 of the Natural Resources Body for Wales (Establishment) Order 2012<sup>(1)</sup>, give the following Direction to the Natural Resources Body for Wales for the implementation of Directive 2006/118/EC on the protection of groundwater against pollution and deterioration<sup>(2)</sup>.

In accordance with article 11(2)(b) and (5) the Welsh Ministers have consulted the Secretary of State<sup>(3)</sup>.

## **Title and commencement**

1.The title of this Direction is the Groundwater (Water Framework Directive) (Wales) Direction 2016 and it comes into force on 11 July 2016.

## **Interpretation**

2.—(1) In this Direction—

“the 2003 Regulations” means the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003<sup>(4)</sup>;

“the 2014 Direction” means the Groundwater (Water Framework Directive) (Wales) 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;

“the Groundwater Directive” means Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration;

“the Water Framework Directive” means Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy<sup>(5)</sup>;

“the Agency” means the Environment Agency;

“background levels” 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;

---

(1) S.I. 2012/1903 (W. 230), amended by S.I. 2013/755 (W.90).

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

(3) Article 11(2)(b) provides that the power in paragraph (1) may also be exercised by the Secretary of State for the purpose of directing the Body as to the exercise of its relevant transferred functions, where the direction relates to water resources management, water supply, rivers or other watercourses, control of pollution of water resources, sewerage or land drainage, and would have any effect in the catchment areas of the rivers Dee, Wye and Severn. Article 11(5) provides that the Welsh Ministers may give a direction falling within paragraph (2) only after consulting the Secretary of State.

(4) S.I. 2003/3242, as amended by S.I. 2005/2035, 2007/3538, 2008/1097, 2010/630, 2010/675, 2011/556, 2011/603, 2011/1043, 2013/755 (W.90), 2013/1675, 2015/1623, 2016/138.

(5) 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).

“the Dee River Basin District” means that area shown and identified as such on the official map referred to in regulation 4(2) of the 2003 Regulations (official map of river basin districts);

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

“new threshold value” means a value submitted by NRW to the Welsh Ministers in accordance with article 4(1) of this Direction for inclusion in the 2015 Directions;

“NRW” means the Natural Resources Body for Wales;

“river basin district” means any area shown and identified as such on the official map referred to in regulation 4(2) of the 2003 Regulations (official map of river basin districts), 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;

“the Severn River Basin District” means that area shown and identified as such on the official map referred to in regulation 4(2) of the 2003 Regulations (official map of river basin districts);

“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 in article 6(1) of this Direction; and

“approved threshold value” means a threshold value included in the 2015 Directions<sup>(1)</sup>.

(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.

(3) For the purposes of this Direction, any reference in the Groundwater Directive to a threshold value means a value included in the 2015 Directions.

### **Requirement on NRW to co-operate with the Agency in relation to the Dee River Basin District and the Severn River Basin District**

3. In discharging its functions in compliance with this Direction in relation to the Dee River Basin District and the Severn River Basin District, NRW must co-operate with the Agency in relation to the exercise by the Agency of corresponding functions so as to secure that, in respect of each of those river basin districts, the—

- (a) assessment of groundwater chemical status;
- (b) identification of significant and sustained upward trends in pollution concentrations; and
- (c) determination of the starting point for trend reversal,

are co-ordinated for the whole of that district.

### **Threshold values**

4.—(1) Where NRW determines, on the basis of new information, that in order to protect human health and the environment—

- (a) a new threshold value should be set for a substance; or
- (b) an approved threshold value should be changed,

NRW must prepare proposals for the new threshold value or revisions to the approved threshold value and submit those proposals to the Welsh Ministers.

---

(1) The threshold values approved by the Welsh Ministers are set out in Table 1 in Schedule 5 to the 2015 Directions. That Table, along with articles 5 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.

(2) When determining new threshold values or revisions to approved threshold values NRW must consider the following guidelines—

- (a) the determination of threshold values should be made 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, taking into account the minimum list set out in Schedule 2 to this Direction; and
  - (iv) hydro-geological characteristics including information on background levels and water balance;
- (b) the determination of threshold values should also 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 hydro-geological reasons, those background levels in the relevant body of groundwater must be taken into account when determining 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.

(3) When determining background levels for the purposes of paragraph (2)(c), NRW 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 also be taken account of, where available;
- (e) where insufficient groundwater monitoring data is 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.

(4) Where NRW determines that a body of groundwater is no longer at risk from a pollutant, group of pollutants or an indicator of pollution in relation to which an approved threshold value applies, NRW must submit to the Welsh Ministers a proposal that the approved threshold value should no longer apply in relation to that pollutant, group of pollutants or indicator of pollution.

(5) NRW must supply to the Secretary of State copies of proposals submitted to the Welsh Ministers under this article relating to any body of groundwater associated with the Dee River Basin District or the Severn River Basin District.

(6) NRW must apply approved threshold values for the purposes of assessing groundwater chemical status and determining the starting point for trend reversal.

#### **Criteria for assessing groundwater chemical status**

5.—(1) When assessing groundwater chemical status NRW must apply the approach in the provisions mentioned in paragraph (2).

(2) The provisions are—

- (a) article 4 of this Direction;
- (b) Schedule 1 to this Direction;
- (c) Article 4(1), 4(2) and 4(3) of the Groundwater Directive;
- (d) paragraphs 1 to 4 of Annex III to the Groundwater Directive;
- (e) article 3(d) of the 2015 Directions;
- (f) article 5 of the 2015 Directions;
- (g) article 6 of the 2015 Directions; and
- (h) Schedule 5 to the 2015 Directions.

(3) In any case where it is technically possible to do so, NRW must take into account inputs of pollutants from diffuse sources of pollution which it considers likely to be having an impact on groundwater chemical status.

**Identification of significant and sustained upward trends in pollution concentrations and the determination of starting points for trend reversal**

6.—(1) When monitoring groundwater chemical status NRW must—

- (a) identify any significant and sustained upward trend in concentrations of pollutants, groups of pollutants or indicators of pollution found in bodies or groups of bodies of groundwater identified as being at risk; and
- (b) determine the starting point for reversing that trend.

(2) Paragraphs (3) to (11) apply in any case where NRW has, by virtue of paragraph (1) of this article or by virtue of article 6(1) of the 2014 Direction—

- (a) identified any significant and sustained upward trend in pollutant concentrations or indicator of pollution; and
- (b) determined the starting point for reversal of each trend so identified.

(3) NRW must review and (if 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.

(4) NRW must carry out the review and (if necessary) make the revisions mentioned in paragraph (3)—

- (a) by 22 December 2020; and
- (b) before the end of each period of six years starting with 22 December 2020.

(5) 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.

(6) NRW 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 (7), assessed in accordance with paragraph 2(c) and (d) of Part A of Annex IV to the Groundwater Directive.

(7) The sources mentioned in paragraph (6) are—

- (a) monitoring programmes for groundwater—
  - (i) established under regulation 9 of the 2003 Regulations (monitoring); 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.

(8) NRW 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.

(9) 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.

(10) 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.

(11) 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.

#### **Information to be included in river basin management plans**

7.—NRW must ensure each river basin management plan which is updated under regulation 11(4) of the 2003 Regulations (river basin management plans) includes, in relation to that river basin district—

- (a) details of approved threshold values together with the information specified in Part 1 of Schedule 3 to this Direction;
- (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 to this Direction;
- (e) details of the starting point for trend reversal determined under article 6(1) of this Direction, 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 6(7) of this Direction.

#### **Revocation**

8. The 2014 Direction is revoked.

Signed by the authority of the Welsh Ministers



Senior civil servant in the  
Welsh Government

Date 23 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 <sup>(1)</sup>	0.1 µg/l 0.5 µg/l(total) <sup>(2)</sup>

<sup>(1)</sup> '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.

<sup>(2)</sup> 'Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure, including their relevant metabolites, degradation and reaction products

## 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<sup>(1)</sup>

---

<sup>(1)</sup> 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<sup>(2)</sup>***

---

Conductivity

---

<sup>(2)</sup> 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 7(a) (regarding the pollutants and their indicators for which threshold values have been established)

- (a) Information on the way the procedure set out in Part A of Annex II of the Groundwater Directive has been followed.
- (b) Information on each of the bodies or groups of bodies of groundwater characterised as being at risk, including the following;—
  - (i) the size of the bodies;
  - (ii) each pollutant or indicator of pollution which characterises bodies of groundwater as being at risk;
  - (iii) 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;
  - (iv) in the case of naturally-occurring substances, the natural background levels in the bodies of groundwater;
  - (v) information on the exceedances where approved threshold values are exceeded;
- (c) The approved 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;
- (d) The relationship between the approved threshold values and each of the following;—
  - (i) in the case of naturally-occurring substances, the background levels;
  - (ii) associated surface waters and directly dependent terrestrial ecosystems;
  - (iii) the environmental quality objectives and other standards for water protection that exist at national, European Union or international level;
  - (iv) any relevant information concerning the toxicology, eco-toxicology, persistence, bioaccumulation potential, and dispersion tendency of the pollutants;
- (e) The methodology for determining background levels based on the principles set out in paragraphs (2)(c) and (d) and (4) of article 4 of this Directive;
- (f) The reasons for not having approved threshold values for any of the pollutants and indicators identified in Schedule 2;
- (g) 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) and point 3 of Annex III to the Groundwater Directive;
- (h) Where any of the data referred to in paragraphs (b) to (g) are not included in the river basin management plans, NRW must provide the reasons for this in the plans.

## PART 2

Information to be summarised under article 7(d)

- (i) 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.