The River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Directions 2009

The Secretary of State and the Welsh Ministers, with the agreement of the Secretary of State to the extent that there is any effect in England or those parts of Wales that are within the catchment areas of the rivers Dee, Wye and Severn, in exercise of the powers conferred by section 40(2) of the Environment Act 1995(**a**) and now vested in them(**b**), and having consulted the Environment Agency, hereby give the following Directions to the Environment Agency for the implementation of Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy(**c**):

Citation and commencement and extent

1.—(1) These Directions may be cited as the River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Direction 2009 and shall come into force on 22nd December 2009.

Interpretation

2.—(1) In these Directions—

"the Agency" means the Environment Agency;

"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(**d**);

"the Priority Substances Directive" means Directive 2008/105/EC of the European Parliament and of the Council on environmental quality standards in the field of water policy(**e**);

"threshold value" has the same meaning as in the Groundwater Directive; and

"the Directive" means Directive 2000/60/EC of the European Parliament and of the Council of 23rd October 2000 establishing a framework for Community action in the field of water policy.

(2) Any expression used in both these Directions and the Directive and not otherwise defined in this Direction has the same meaning for the purposes of this Direction as it has for the purposes of the Directive.

Application of the Directions

3. For the purposes of Article 4(2) of the Directive, where an environmental standard has been specified for a parameter or quality element as regards any protected area, or part of such area, of a type referred to in section 1 of Annex IV to the Directive, and that environmental standard is more stringent than the equivalent environmental standard specified in Part 2 of the Schedule to

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(**a**) 1995 c. 25.
(**b**) By article 2 of and schedule 1 to the National Assembly for Wales (Transfer of Functions) Order 1999 (S.I. 1999/672), the
(**b**) By article 2 of and schedule 1 to the National Assembly for Wales (Transfer of Functions) Order 1999 (S.I. 1999/672), the functions under section 40 of the Environment Act 1995 are exercisable by the Secretary of State and the National Assembly for Wales concurrently in relation to the Environment Agency as a cross border body. The functions of the National Assembly for Wales are now exercisable by the Welsh Ministers by virtue of section 162 of and schedule 11 to the Government of Wales Act 2006 (c. 32). The Welsh Ministers may exercise these functions only with the agreement of the Secretary of State where such exercise would have an effect in England or where the exercise of the functions relates to matters including water resources management, rivers or other water courses or control of pollution of water resources, in those parts of Wales which are within the catchment areas of the rivers Dee, Wye or Severn.
(**c**) O.J. No. L327, 22.12.2000, p. 1; as last amended by Directive 2008/105/EC of the European Parliament and Council on environmental standards in the field of water policy (OJ No. L348, 16.12.2009, p.84.
(**d**) OJ No L 327, 27.12.2006, p.19.
(**e**) OJ No L348, 24.12.2008, p.84

these Directions in respect of the same parameter or quality element, then the more stringent standard shall apply.

Directions

4. For the purposes of characterisation, classification, objective setting, establishing programmes of measures and monitoring of water bodies, the Agency is directed as follows.

5. Subject to paragraph 6, in order to work towards achieving the environmental objectives laid down in the Directive, and in particular when exercising the functions listed in paragraph 7, the Agency must, as applicable, in respect of inland waters, transitional waters and coastal waters, or parts of such waters—

(a) assign a Type or Types in accordance with Part 2 of the Schedule;

(b) apply environmental standards to each river, lake, transitional water and coastal water, or part of such river , lake, transitional water or coastal water, according to its assigned Type or Types, as applicable, in accordance with Part 3 of the Schedule;

(c) apply the standards for Specific Pollutants in accordance with Part 4 of the Schedule;

(d) apply the environmental quality standards for priority substances in accordance with Part 5 of the Schedule;

(e) apply the biological element status boundary values in accordance with Part 6 of the Schedule; and

(f) apply the threshold values for groundwater in Table 1 of Part 7 of the schedule to each body of groundwater and, if any threshold value is exceeded, undertake an appropriate investigation to determine whether or not the applicable conditions for good groundwater chemical status are met in accordance with the procedure set out in Article 4 of the Groundwater Directive.

6. Except where the quality elements are so affected by the use and modified characteristics of an artificial or heavily modified water body as to make them inappropriate for classifying that water body, the quality elements and standards applicable to such a water body shall be those applicable to the surface water body type most closely comparable to that water body.

7.—(1) The functions referred to in paragraph 5 are—

(a) any review of the characterisation of each river basin district;

(b) monitoring and classifying the status of the water environment in each river basin district;

(c) the setting of environmental objectives for each body of surface water in each river basin district; and

(d) preparing a programme of measures to achieve those objectives.

(2) The values for the boundary between ‘moderate’ and ‘poor’ and the boundary between ‘poor’ and ‘bad’ for the physico-chemical elements listed in Part 3 of the Schedule must not be used for the processes at sub-paragraph (b).

Solway Tweed River Basin District

8.—(1) In relation to the Solway Tweed River Basin District, in order to ensure a common approach, the Agency must act jointly with the Scottish Environment Protection Agency and may, as necessary, adapt the requirements of these Directions for that purpose.

(2) In this Direction, “Solway Tweed River Basin District” means the area identified in regulation 3 of the Water Environment (Water Framework Directive) (Solway Tweed River Basin District) Regulations 2004(**a**).

(**a**) S.I. 2004/99.

Chris Ryder

21 December 2009 Signed by the Authority of the Secretary of State
A Senior Civil Servant in the
Department for Environment, Food and Rural Affairs

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21 December 2009

Claire Bennett
Head of Climate change and Water Division under authority of the
Minister for Environment, Sustainability and Housing, one of the Welsh Ministers

SCHEDULE

Direction 5

PART 1

Definitions

"5-percentile standard" means a standard that is failed if the measured value of the parameter to which the standard refers is less than the standard for more than 5 % of the time;

"10-percentile standard" means a standard that is failed if the measured value of the parameter to which the standard refers is less than the standard for more than 10 % of the time;

*"*90-percentile standard" means a standard that is failed if the measured value of the parameter to which the standard refers (e.g. concentration of a pollutant) is greater than the standard for 10 % or more of the time;

"95-percentile standard" means a standard that is failed if the measured value of the parameter to which the standard refers (e.g. concentration of a pollutant) is greater than the standard for 5 % or more of the time;

"98-percentile standard" means a standard that is failed if the measured value of the parameter to which the standard refers (e.g. concentration of a pollutant) is greater than the standard for 2 % or more of the time;

"99-percentile standard" means a standard that is failed if the measured value of the parameter to which the standard refers (e.g. concentration of a pollutant) is greater than the standard for 1 % or more of the time;

"Ambient river temperature" means the river temperature in degrees centigrade of a river or part of such river in the absence of any heat pollution or artificial release of water affecting the river temperature of that river or part;

"Annual mean standard" means a standard for which the compliance assessment period is a period of 12 consecutive months or a multiple of such period;

"Compliance assessment period" means the period over which measured values are obtained for the purposes of calculating an arithmetic average or a percentile value and may be part of a year; a year; part of several years; or several years;

"Good" means the boundary between the conditions consistent with the description of "good ecological status" and "moderate ecological status" in accordance with section 1.2 of Annex V

to the Directive; Values on the boundary are consistent with the description of good status. In relation to the priority substance and dangerous substance environmental standards, "good" also means the boundary between conditions consistent with the description of "good surface water chemical status" and "failing to achieve good surface water chemical status" in Article 2 of, and Annex V to, the Directive;

"High" means the boundary between the conditions consistent with the description of "high ecological status" and "good ecological status" in accordance with section 1.2 of Annex V to the Directive. Values on the boundary are consistent with the description of high status;

"Lagoon" means a body of water partially separated from its adjacent estuary or coastal water by a barrier of sand, other sediment or rocks, which retains all or most of its water mass during periods of low tide in the adjacent estuary or coastal water but has persistent natural water exchange between with the adjacent estuary or coastal water by percolation through, or overtopping of, the barrier or through inlet/outflow channels;

"Mean standard" means a standard that is failed if the arithmetic average of all measured values during the compliance assessment period exceeds the standard;

"Moderate" means the boundary between the conditions consistent with the description of "moderate ecological status" and "poor ecological status" in accordance with section 1.2 of Annex V to the Directive. Values on the boundary are consistent with the description of moderate status;

"percentile standard" means a standard which, to be achieved, must be complied with for a defined percentage of the time in the compliance assessment period; and any time spent at the standard value is considered to be in compliance;

"Poor" means the boundary between the conditions consistent with the description of "poor ecological status" and "bad ecological status" in accordance with section 1.2 of Annex V to the Directive. Values on the boundary are consistent with the description of poor status;

"Salinity" means the ratio of the electrical conductivity of a sample of water (at 15 °C, and one standard atmospheric pressure) to that of a standard solution of Potassium Chloride (KCl). A ratio of 1 is equivalent to a salinity of 35;

"specified lakes" means the lakes shown in Part 8;

"Year" means a period of 12 consecutive months.

PART 2

Criteria for identifying the types of river, lake, transitional or coastal water to which the environmental standards specified in Part 3 of this Schedule apply

Rivers

1. Subject to paragraph 2, to determine the ammonia, the dissolved oxygen and biochemical oxygen demand standards applicable to a river or any part of such river, the Type specified in Table 1 of this Part must be assigned which corresponds with the applicable site altitude specified in column 1 and the applicable alkalinity range specified in column 2, 3, 4, 5 or 6 of that Table.

2. The type "salmonid" must be assigned to any river designated as a salmonid water for the purposes of Directive 2006/44/EC on the quality of fresh waters needing protection or improvement in order to support fish life (**a**) ("the Freshwater Fish Directive") as being of the Type "salmonid" for the purpose of determining which of the standards for dissolved oxygen and biochemical oxygen demand specified in Table 1 and 2 in Part 3, respectively, apply.

(**a**) OJ No L44, 11.12.2008, p.1. Directive 2006/44/EC of the European Parliament and of the Council on the quality of fresh waters needing protection or improvement in order to support fish.

3. To determine the reactive phosphorus standards applicable to a river or any part of such river, the Type specified in Table 2 of this Part must be assigned which corresponds with the applicable site altitude specified in column 1 of that Table and the applicable alkalinity range specified in column 2 or 3 of that Table.

4. The type "cyprinid water" must be assigned to any river or part of such river designated as being of the type cyprinid under the Freshwater Fish Directive for the purpose of determining which of the standards for temperature specified in Table 6 of Part 3 apply.

5. The type "non-cyprinid water" must be applied to any river or parts of such river not designated as being of the type cyprinid under the Freshwater Fish Directive for the purpose of determining which of the standards for temperature specified in Table 6 of Part 3 apply.

Lakes

6. To determine the dissolved oxygen standards applicable to a freshwater lake or any part of such lake, the Type specified in column 1 of Table 3 of this Part must be assigned which corresponds with the applicable description specified in column 2 of that Table.

7. To determine the appropriate total phosphorus standard to apply to a freshwater or brackish lake or any part of such lake and subject to paragraphs 8, 9 & 10, the following steps must be taken—

(a) determine the geographical region for the lake (Region 1 or 2) as shown in column 4 of Part 8 in order to use the appropriate formula;

(b) categorise all brackish lakes as being of the geological category; "high alkalinity";

(c) categorise all freshwater lakes as being of the geological category specified in Column 1 of Table 4 of this Part, which corresponds with the annual mean alkalinity range specified in Column 2 of that Table which is applicable to the lake; and

(d) categorise the depth characteristics of the lake as being of the depth category specified in Column 1 of Table 5 of this Part which corresponds with the depth range specified in Column 2 of that Table which is applicable to the lake.

8. For a freshwater lake with an annual mean alkalinity of greater than 1000 micro-equivalents per litre, the geological category specified in Column 1 of Table 4 of this Part must be assigned which corresponds with the description of the solid geology of the catchment of the lake specified in Column 4 of that Table.

9. Subject to paragraph 10, where there is insufficient data to categorise the geological characteristics of a freshwater lake in accordance with the procedure set out in sub-paragraphs (b), (c) and (d) of paragraph 7, the geological category specified in Column 1 of Table 4 of this Part must be assigned to the lake which corresponds with the annual mean conductivity range specified in Column 3 of that Table.

10. For a freshwater lake with an annual mean conductivity of 250 to 1,000 micro Siemens per centimetre, the geological category specified in Column 1 of Table 4 of this Part must be assigned to the lake which corresponds with the description of the solid geology of the catchment of that lake specified in Column 4 of that Table.

11. Where there is insufficient data to classify the geological characteristics of a freshwater lake using the criteria set out in paragraphs 7 to 10, the geological category specified in column 1 of Table 4 of this Part must be assigned to the lake which corresponds with the description of the solid geology of the catchment of the lake specified in Column 4 of that Table.

Transitional and coastal waters

12. To determine the dissolved inorganic nitrogen standards applicable to a transitional or coastal water, or part of such water, the Type specified in Column 1 of Table 6 of this part must be

assigned which corresponds with the applicable description of the transitional water or part of such water in Column 2 of that Table.

Table 1: Criteria for identifying the types of river to which the dissolved oxygen(a), biochemical oxygen demand(b) and ammonia(c) standards for rivers apply					
Site Altitude	Alkalinity (as mg/l CaCO3)				
	Less than 10	10 to 50	50 to 100	100 to 200	Over 200
Under 80 metres	Type 1	Type 2	Type 3	Type 5	Type 7
Over 80 metres			Type 4	Type 6	

Notes to Table 1—

(a) The environmental standards for dissolved oxygen are specified in Table 1 in Part 3 of this Schedule.

(b) The environmental standards for biochemical oxygen demand are specified in Table 2 in Part 3 of this Schedule.

(c) The environmental standards for ammonia are specified in Table 3 in Part 3 and Table 20 in Part 4 of this Schedule.

Table 2: Criteria for identifying types of river to which the reactive phosphorus standards for rivers apply(a)		
Altitude	Annual mean alkalinity (as mg/l $CaCO_3$)	
	< 50	> 50
Under 80 metres	Type 1n	Type 3n
Over 80 metres	Type 2n	Type 4n

Note to Table 2—

(a) The environmental standards for reactive phosphorus are specified in Table 5 in Part 3 of this Schedule.

Table 3 Criteria for identifying types of lake to which the dissolved oxygen standards for freshwater lakes apply(a)	
Type	Description
Salmonid	Freshwater lakes which would naturally support populations of salmonid fish
Cyprinid	Freshwater lakes which do not naturally support populations of salmonid fish

Note to Table 3—

(a) The environmental standards for dissolved oxygen in freshwater lakes are specified in Table 7 in Part 3 of this Schedule.

Table 4: Geological characteristics used to identify geological categories to which the lake total phosphorus standards apply			
Geological category	Annual mean alkalinity Micro-equivalents per litre	Annual mean conductivity Micro Siemens per centimetre	Solid geology of the catchment of the [lake] (% of catchment)
Low alkalinity	< 200	≤ 70	
			> 90 % siliceous
Moderate alkalinity	200 - 1000	> 70 - 250	> 50 % siliceous and ≤ 90 % siliceous
High alkalinity	> 1000	> 250 - 1000	≥ 50 % calcareous
Marl		>250 - 1000	> 65 % limestone

Table 5: Depth characteristics used to identify depth categories to which the lake phosphorus standards apply	
Depth category	Mean depth (metres)
Very shallow	< 3
Shallow	3 - 15
Deep	> 15

Table 6: Criteria for identifying types of transitional and coastal water to which the dissolved inorganic nitrogen standards for transitional and coastal waters apply	
Type Very turbid	Annual mean concentration of suspended particulate matter (mg/l) > 300
Medium turbidity	100 - 300
Intermediate	10 < 100
Clear	< 10

PART 3

General Physico-chemical Standards

Environmental standards for river water quality

1. Where, in accordance with paragraphs 1 and 2 of Part 2 of this Schedule, there has been assigned to a river or part of such river a Type—

(a) specified in column 1 of Table 1 of this Part, the "high", "good", "moderate" or "poor" dissolved oxygen standards specified in columns 2, 3, 4 and 5 respectively of that Table must be applied, as applicable, to that river or part;

(b) specified in column 1 of Table 2 of this Part, the "high", "good" "moderate" or "poor" biochemical oxygen demand standards specified in columns 2, 3, 4 and 5 respectively of that Table must be applied, as applicable, to that river or part;

(c) specified in column 1 of Table 3 of this Part, the "high", "good" "moderate" or "poor" ammonia standards specified in columns 2, 3, 4 and 5 respectively, of that Table must be applied, as applicable, to that river or part,

2. The "high" or "good" acid condition standards specified in columns 1 and 2, respectively, of Table 4 of this Part must be applied in relation to any river or part of such river.

3. Where, in accordance with paragraph 3 of Part 2, a Type specified in column 1 of Table 5 of this Part has been assigned to a river or part of such river, the the "high", "good" "moderate" or "poor" reactive phosphorus standards specified in columns 2, 3, 4 and 5 respectively, of that Table must be applied, as applicable, to that river or part.

4. Where, in accordance with, paragraphs 4 and 5 of Part 2, a Type specified in Row 2 of Table 6 of this Part has been assigned to a river or part of such river—

(a) the "high", "good" "moderate" or "poor" temperature standards specified in Row 3; Columns 2, 3, 4 and 5, respectively; and

(b) the "high" or "good" temperature standards specified in Row 4; Columns 2 and 3, respectively, of that Table,

must be assigned to that river or part.

Environmental standards for lake water quality

5. Where, in accordance with paragraph 6 of Part 2, the Type "salmonid" or "cyprinid" has been applied to a lake or part of such lake, the "high", "good", "moderate" or "poor" dissolved oxygen standards specified in rows 2 to 5, respectively, of Table 7 of this Part must, according to its Type, be applied to that lake or part.

6. Subject to paragraph 7, the "high" or "good" acid condition standards specified in columns 1 and 2, respectively, of Table 8 of this Part must be applied to all freshwater lakes or parts of such lakes.

7. Where the reference condition established in accordance with section 1.3 of Annex II of the Directive is ≤ 20 micro-equivalents per litre of acid neutralising capacity, an appropriate value of between 0 and 20 micro-equivalents per litre must be identified that is protective of the lake or part and which reflects reference conditions.

8. The "good" salinity standard specified in Table 9 of this Part must be applied to all freshwater lakes or parts of such lakes with no natural saline influence.

9. Subject to paragraphs 10, 11 and 12 the "high", "good","moderate" or "poor" total phosphorus standard must be applied to the lake or part of such lake calculated in accordance with

the formulæ specified in Columns 1, 2, 3 and 4, respectively, of Table 10 of this Part, where in relation to those formulæ—

"R" represents the annual mean total phosphorus concentration expected for the lake in the absence of more than very minor phosphorus inputs to the lake resulting from human activities and, where a reliable estimate of 'C' is available, shall have the value given by the formula; Antilog10 [I - (0.09 × A) + (0.24 × B)]; or 35, whichever is the smaller value;

"A" = Log10 of the altitude in metres above mean sea level of the lake;

"B" = Log10(C ÷ D);

"C" = the mean alkalinity of the lake in milli-equivalents per litre estimated for the lake when (i) in accordance with paragraphs 6 and 7 of Part 2, its acid neutralising capacity is at least 'good'; and (ii) its alkalinity has not been otherwise altered as a result of point or diffuse pollution;

"D" = the mean depth of the lake in metres;

"H" = 0.755 + (0.012 × C) - (0.001 × D); or 0.7, whichever is the larger value; and

"G" = 0.506 + (0.023 × C) - (0.002 × D); or 0.46, whichever is the larger value.

"I" = 1.36 in region 1 of the specified lakes and 1.55 in region 2 of the specified lakes.

10. If, in accordance with paragraphs 7-11 of Part 2, the geological characteristics of a lake have been classified as being of the geological category "Marl", the "high", "good", "moderate" or "poor" total phosphorus standard specified in Columns 2, 3, 4 and 5, respectively, of Table 11 of this Part must be applied to the lake or part which corresponds with the combination of geological and depth categories specified in Column 1 of that Table that is applicable to that lake or part.

11. If the value of "C" in paragraph 9 cannot be reliably estimated for the purpose of calculating the value "R" in accordance with that paragraph, either—

(a) an alternative method must be used for estimating the value "R", provided that, for other lakes for which the value "C" can be reliably estimated, that alternative method produces an equivalently unbiased estimate of the value "R" to that produced by the application of the formula specified in paragraph 9; or

(b) the procedure specified in paragraph 12 applied.

12. Where there is insufficient data to calculate the total phosphorus standard applicable to a lake or part in accordance with paragraph 10 or sub-paragraph (a) of paragraph 11, the "high", "good", "moderate" or "poor" total phosphorus standard specified in Columns 2, 3, 4 and 5, respectively, of Table 11 of this Part must be applied to that lake or part which corresponds with the combination of geological and depth categories specified in Column 1 of that Table that is applicable to the lake or part.

Environmental standards for Transitional and Coastal Waters

13. The dissolved oxygen standards for "high", "good" "moderate" or "poor" specified in column 2 of Table 12 of this part must be applied to transitional waters or parts of such waters and to coastal waters or parts of such waters with salinities normalised to 35.

14. The "high", "good" or "moderate" dissolved oxygen standards specified in column 2 of Table 13 of this part for transitional or coastal waters or parts of such waters with salinities < 35 must be calculated and applied using the applicable formula specified in column 2 of that Table.

15. For coastal waters, or parts of such water, with mean salinities for the period 1st November to 28th February of between 30 and 34.5 units, the 'high', or 'good' dissolved inorganic nitrogen standards specified in Columns 2 and 3 respectively of Table 14 of this part must be applied.

16.—(1) For coastal waters, or part of such waters, with a mean salinity for the period 1st November to 28th February in the range 30 - 34.5, the following must be calculated, as applicable, in accordance with paragraph 17—

(a) the equation for the linear regression line, y = mx + c, describing the relationship between the variables dissolved inorganic nitrogen concentration and salinity for such periods; or

(b) the series of equations for the linear regression lines, (y = mx + c)n, describing the relationship between the variables dissolved inorganic nitrogen concentration and salinity for each set of relevant sampling data collected during such periods

(2) In sub-paragraph (1)—

"y" is dissolved inorganic nitrogen concentration in micromoles per litre;

"x" is salinity;

"m" is the slope of the regression line;

"c" is the value of "y" when "x" = 0; and

"n" is the number of sets of sampling data from which linear regression lines are calculated.

17. Either of the methodologies specified in points (a) and (b) of paragraph 16 may be used provided that, given the available sampling data, the methodology used ensures that the estimate of the mean dissolved inorganic nitrogen concentration calculated in accordance with paragraph 18 is a reliable estimate.

18. The equation or the series of equations calculated in accordance with paragraph 17 must be used to estimate the mean dissolved inorganic nitrogen concentration for the period 1st November to 28th February, as if the mean salinity in the coastal water, or part of such water, were 32.

19. The value for the mean dissolved inorganic nitrogen concentration estimated in accordance with paragraph 18 must be compared with, as applicable, the 'high' or 'good' dissolved inorganic nitrogen standard specified in Columns 2 and 3 of Table 14 of this Part, respectively, for coastal waters with mean salinities in the range of 30–34.5.

20. In order to determine and assign, as appropriate, the dissolved inorganic nitrogen standard for—

(a) 'high' specified in Column 2 of Table 15 of this part for transitional waters of any type listed in Column 1 of that Table; or

(b) 'good' specified in Column 3 of Table 15 of this part for transitional waters assigned the Type 'clear' in accordance with paragraph 12 of part 2 ,

either of the methodologies specified in points (a) and (b) of paragraph 21 may be used provided that, given the available sampling data, the methodology used ensures that the estimate of the mean dissolved inorganic nitrogen concentration calculated in accordance with paragraph 23 is a reliable estimate.

21. —(1) The methodologies cited in paragraph 20 are—

(a) the equation for the linear regression line, y = mx + c, describing the relationship between the variables dissolved inorganic nitrogen concentration and salinity for the period 1st November to 28th February and resulting from the increasing dilution of dissolved inorganic nitrogen inputs in the transitional water; or

(b) the series of equations for the linear regression lines, (y = mx + c)n, describing the relationship between the variables dissolved inorganic nitrogen concentration and salinity for each set of relevant sampling data collected during such periods and resulting from the increasing dilution of dissolved inorganic nitrogen inputs in the transitional water

(2) In sub-paragraph (1)—

"y" is dissolved inorganic nitrogen concentration in micromoles per litre;

"x" is salinity;

"m" is the slope of the regression line;

"c" is the value of "y" when "x" = 0;

"n" is the number of sets of sampling data from which linear regression lines are calculated.

22. The equation or equations determined in accordance with paragraph 21 must be used to estimate the mean dissolved inorganic nitrogen concentration for the period 1st November to 28th February, as if the mean salinity in the transitional water, or part such water, for that period, were 25.

23. The value for the mean dissolved inorganic nitrogen concentration estimated in accordance with paragraph 22 must be compared with, as applicable—

(a) the 'high' dissolved inorganic nitrogen standard specified in Column 2 of Table 15; or

(b) the 'good' dissolved inorganic nitrogen' standard specified in Column 3 of Table 15, for transitional waters or parts of such waters classified as being of the Type 'clear' in accordance with paragraph 12 of part 2.

24. For transitional waters, or parts of such waters, where, in accordance with, paragraph 12 of Part 2, one of the Types 'intermediate', 'turbid' or 'very turbid' specified in Column 1 of Table 15 has been assigned to that water or part, as appropriate, the corresponding 'good' dissolved inorganic nitrogen standard specified in Column 3 of that Table must be applied.

Table 1:Standards for dissolved oxygen in rivers				
Dissolved Oxygen (per cent saturation)				
(10-percentile)				
1	2	3	4	5
Type	High	Good	Moderate	Poor
1,2,4 and 6 Salmonid	80	75	64	50
3,5 and 7	70	60	54	45

Table 2: Biochemical oxygen demand (BOD) standards for rivers(i)				
Biochemical Oxygen Demand (mg/l)				
(90-percentile)				
Type	High	Good	Moderate	Poor
1,2,4,6 and Salmonid	3	4	6	7.5
3,5 and 7	4	5	6.5	9

Note to table 2—

(i) Biochemical oxygen demand shall not be used in classifying the status of water bodies

Table 3: Ammonia standards for rivers				
Total Ammonia as nitrogen (mg/l)				
(90-percentile)				
Type	High	Good	Moderate	Poor
1,2,4,and 6	0.2	0.3	0.75	1.1
3,5 and 7	0.3	0.6	1.1	2.5

Table 4: Standards for acid conditions in rivers	
pH – all river types in England andWales	
High	Good
pH 6 as 5 percentile	pH 5.2 as a 10 percentile
pH 9 as a 95 percentile	

Table 5: Phosphorus standards for rivers				
Reactive Phosphorus standards	Concentrations as ug/l as annual means			
Type	High	Good	Moderate	Poor
1n	30	50	150	500
2n	20	40	150	500
3n & 4n	50	120	250	1000

Table 6: Temperature standards for rivers								
Column 1	Column 2		Column 3		Column 4		Column 5	
	High		Good		Moderate		Poor	
River temp type	Non-cyprinid	Cyprinid	Non-cyprinid	Cyprinid	Non-cyprinid	Cyprinid	Non-cyprinid	Cyprinid
River temp (°C) as an annual 98-percentile standard	20	25	23	28	28	30	30	32
Increase or decrease in temp (°C) in relation to the ambient river temp, as an annual 98-percentile standard	2	2	3	3	-	-	-	-

Note to Table 6—

The standards specified for temperature in Row 4; Columns 2 and 3 of Table 6 must not be used for the purpose of classifying the status of bodies of surface water except where the water receives consented thermal discharges.

Table 7: Dissolved oxygen standards for freshwater lakes		
Status	mean in July – August (mg/l)	
	Salmonid	Cyprinid
High	9	8
Good	7	6
Moderate	4	4
Poor	1	1

Note to table 7—

The mean for mixed lakes is throughout the whole water column and the mean for stratified lakes is for readings taken in the hypolimnion

Table 8: Acid condition standards for all freshwater lakes	
High	Good
Acid Neutralising Capacity (micro equivalents per litre) as annual mean values	
> 40	> 20

Table 9: Salinity standards for freshwater lakes with no natural saline influence	
Status	Proposed boundary
	Annual mean (micro Siemens per centimetre)
Good	1000

Table 10: Standards for Total phosphorus standards for freshwater and brackish lakes			
Annual mean total phosphorus concentration (µg/l)			
Column 1	Column 2	Column 3	Column 4
High	Good	Moderate	Poor
(R ÷ H) or 5, whichever is the larger value	(R ÷ G) or 8, whichever is the larger value	[(R ÷ G) ÷ 0.5] or 16, whichever is the larger value	[(R ÷ G) ÷ 0.25] or 32, whichever is the larger value

Table 11: Type-specific total phosphorus standards for freshwater and brackish lakes where the standards specified in Table 10 do not apply				
Type	Annual mean concentration of total phosphorus (µg/l)			
Column 1	Column 2	Column 3	Column 4	Column 5
Geological and depth category	High	Good	Moderate	Poor
High alkalinity; shallow - Region 1	16	23	46	92
High alkalinity; shallow-Region 2	25	35	70	140
High alkalinity; very shallow – Region 1	23	31	62	124
High alkalinity; very shallow - Region 2	35	49	98	196
Moderate alkalinity; deep	8	12	24	48
Moderate alkalinity; shallow	11	16	32	64
Moderate alkalinity; very shallow	15	22	44	88
Low alkalinity; deep	5	8	16	32
Low alkalinity; shallow	7	10	20	40
Low alkalinity; very shallow	9	14	28	56
Marl; shallow	9	20	40	80
Marl; very shallow	10	24	48	96

Table 12: Dissolved oxygen standards for transitional and coastal waters with salinities (i) normalised to 35	
Column 1	Column 2
Boundaries	Dissolved oxygen concentrations (mg/l) as 5-percentile values with a compliance period of at least one year
High	5.7
Good	4.0
Moderate	2.4
Poor	1.6

Table 13: Dissolved oxygen standards for transitional and coastal waters with salinities (i) < 35	
Column 1	Column 2
Boundaries	Dissolved Oxygen concentrations (mg/l) as 5-percentiles
High	=7 – (0.037 x (salinity))
Good	=5 – (0.028 x (salinity))
Moderate	=3 – (0.017 x (salinity))

Table 14: Dissolved inorganic nitrogen standards for coastal waters salinity 30-34.5		
Mean dissolved inorganic nitrogen concentration (micromoles per litre) during the period 1st November to 28th February		
Column 1	Column 2	Column 3
Type	High	Good
clear	12(i)	18(i)
		99-percentile standard for the period 1st November to 28th February
Intermediate turbidity	18(i)	70(i)
Medium turbidity	18(i)	180(i)
Very turbid	18i)	270(i)

Notes to Table 14—

(i)The standard refers to the concentration of dissolved inorganic nitrogen at a mean salinity for the period 1st November to 28th February of 32. If the standard in column 3 is exceeded then status is moderate.

Table 15: Dissolved inorganic nitrogen standards for transitional waters (salinity 25), or parts thereof		
Mean dissolved inorganic nitrogen concentration (micromoles per litre) during the period 1st November to 28th February		
Column 1	Column 2	Column 3
Type	High	Good
Clear	20(i)	30(i)
		99-percentile standard for the period 1st November to 28th February
Intermediate turbidity	30	70

Medium turbidity	30	180
Very turbid	30	270

Note to Table 15—

[(i)]The standard refers to the concentration of dissolved inorganic nitrogen at a mean salinity of 25 for the period 1st November to 28th February. If the standard in column 3 is exceeded then status is moderate.

PART 4

Specific Pollutants

The standards for Specific Pollutants set out-below must be applied for the purposes of classification of the relevant components of Ecological Status of Surface Waters.

Table 1: Environmental standards for 2,4-Dichlorophenoxyacetic acid (2,4-D)			
'Good' standards for rivers and freshwater lakes		'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3	Column 4
Annual mean (μg/l)	95-percentile (μg/l)	Annual mean (μg/l)	95-percentile (μg/l)
0.3	1.3	0.3	1.3

Note to Table 1—

The standards for 2,4-D specified in Column 2 and Column 4 of Table 1 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 2: Environmental standards for 2,4-Dichlorophenol		
'Good' standard for rivers and freshwater lakes		'Good' standard for transitional and coastal waters
Column 1		Column 2
Annual mean (μg/l)		Annual mean (μg/l)
20		20

Table 3: Environmental standards for un-ionised ammonia as nitrogen		
'Good' standard for rivers and freshwater Lakes		'Good' standard for transitional and coastal waters
Annual mean (μg/l)		Annual mean (μg/l)
Not applicable		21

Table 4: Environmental standards for arsenic		
'Good' standard for rivers and freshwater lakes		'Good' standard for transitional and coastal waters
Column 1		Column 2
Annual mean (μg/l)		Annual mean (μg/l)
50		25

Note to table 4—

The standard for arsenic refers to the dissolved fraction of a water sample obtained by filtration through a 0.45μm filter or any equivalent pre-treatment.

Table 5: Environmental standards for chlorine(a)		
'Good' standards for rivers and freshwater lakes		'Good' standard for transitional and coastal waters
Column 1	Column 2	Column 3
Annual mean concentration (μg/l) of total available chlorine(**a**)	95-percentile concentration (μg/l) of total available chlorine	95-percentile concentration (μg/l) of total residual oxidant[(b)]
2	5	10

Notes to Table 5—

(a) The standards for chlorine specified in Column 2 and 3 of Table 5 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

(b) The term "total residual oxidants" refers to the sum of all oxidising agents existing in water, expressed as available chlorine.

Table 6: Environmental standards for chromium VI		
'Good' standard for rivers and freshwater lakes	'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3
Annual mean concentration (μg/l) of dissolved chromium VI	Annual mean concentration (μg/l) of dissolved chromium VI	95-percentile concentration (μg/l) of dissolved chromium VI
3.4	0.6	32

Note to Table 6—

The standard for chromium VI specified in Column 3 of Table 6 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 7: Environmental standards for chromium III	
'Good' standards for rivers and freshwater lakes	
Column 1	Column 2
Annual mean concentration (μg/l) of dissolved chromium III	95-percentile concentration (μg/l) of dissolved chromium III
4.7	32

Note to Table 7—

The standard for chromium III specified in Column 2 of Table 7 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

(**a**) Total available chlorine is the sum of the residuals of free available chlorine (FAC) and combined available chlorine (CAC). FAC is defined as that residual chlorine existing in water as chlorine, as chlorine, hypochlorous acid and hypochlorite ion. CAC is defined as that residual chlorine existing in water in chemical combination with ammonia (i.e monochloramine, dichloramine or nitrogen trichloride) or organic nitrogen compounds.

Table 8: Environmental standards for copper		
Water hardness bands to which the corresponding river and freshwater lake standards in Column 2 apply	'Good' standards for rivers and freshwater lakes	'Good' standards for transitional and coastal waters
Column 1	Column 2	Column 3
Annual mean concentration of CaCO3 (mg/l)	Annual mean concentration (µg/l) of dissolved copper	Annual mean concentration (µg/l) of dissolved copper
0 - 50	1	5
50 - 100	6	
100 - 250	10	
>250	28	

Table 9: Environmental standards for cyanide			
'Good' standards for rivers and freshwater lakes		'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3	Column 4
Annual mean concentration (µg/l) of hydrogen cyanide	95-percentile concentration (µg/l) of hydrogen cyanide	Annual mean concentration (µg/l) of hydrogen cyanide	95-percentile concentration (µg/l) of hydrogen cyanide
1	5	1	5

Note to Table 9—

The standards for cyanide specified in Column 2 and Column 4 of Table 9 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 10: Environmental standards for cypermethrin			
'Good' standards for rivers and freshwater lakes		'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3	Column 4
Annual mean (ng/l)	0.1	Annual mean (ng/l)	0.1
95-percentile (ng/l)	0.4	95-percentile (ng/l)	0.4

Note to Table 10—

The 95-percentile standards for cypermethrin specified in Row 2 of Table 10 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 11: Environmental standards for diazinon			
'Good' standards for rivers and freshwater lakes		'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3	Column 4
Annual mean (µg/l)	95-percentile (µg/l)	Annual mean (µg/l)	95-percentile (µg/l)
0.01	0.02	0.01	0.1

Note to Table 11—

The standards for diazinon specified in Column 2 and Column 4 of Table 11 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 12: Environmental standards for dimethoate			
'Good' standards for rivers and freshwater lakes		'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3	Column 4
Annual mean (μg/l)	95-percentile (μg/l)	Annual mean (μg/l)	95-percentile (μg/l)
0.48	4.0	0.48	4.0

Note to Table 12—

The standards for dimethoate specified in Column 2 and Column 4 of Table 12 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 13: Environmental standards for iron	
'Good' standard for rivers and freshwater lakes	'Good' standard for transitional and coastal waters
Column 1	Column 2
Annual mean concentration (mg/l) of dissolved iron	Annual mean concentration (mg/l) of dissolved iron
1	1

Table 14: Environmental standards for linuron			
'Good' standards for rivers and freshwater lakes		'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3	Column 4
Annual mean (μg/l)	95-percentile (μg/l)	Annual mean (μg/l)	95-percentile (μg/l)
0.5	0.9	0.5	0.9

Note to Table 14—

The standards for linuron specified in Column 2 and Column 4 of Table 14 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 15: Environmental standards for mecoprop			
'Good' standards for rivers and freshwater lakes		'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3	Column 4
Annual mean (μg/l)	95-percentile (μg/l)	Annual mean (μg/l)	95-percentile (μg/l)
18	187	18	187

Notes to Table 15—

The standards for mecoprop specified in Column 2 and Column 4 of Table 15 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 16: Environmental standards for permethrin	
'Good' standard for rivers and freshwater lakes	'Good' standard for transitional and coastal waters
Column 1	Column 2
95-percentile (μg/l)	95-percentile (μg/l)
0.01	0.01

Table 17: Environmental standards for phenol			
'Good' standards for rivers and freshwater lakes		'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3	Column 4
Annual mean (μg/l)	95-percentile (μg/l)	Annual mean (μg/l)	95-percentile (μg/l)
7.7	46	7.7	46

Note to Table 17—

The standards for phenol specified in Column 2 and Column 4 of Table 17 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 18: Environmental standards for toluene			
'Good' standards for rivers and freshwater lakes		'Good' standards for transitional and coastal waters	
Column 1	Column 2	Column 3	Column 4
Annual mean (μg/l)	95-percentile (μg/l)	Annual mean (μg/l)	95-percentile (μg/l)
50	380	40	370

Note to Table 18: The standards for toluene specified in Column 2 and Column 4 of Table 18 must not be used for the purpose of classifying the ecological status or potential of bodies of surface water.

Table 19: Environmental standards for zinc		
Water hardness to which the corresponding river and freshwater lake standards in Column 2 apply*	'Good' standards for rivers and freshwater lakes	'Good' standards for transitional and coastal waters
Column 1	Column 2	Column 3
Annual mean concentration of CaCO3 (mg/l)	Annual mean concentration (μg/l) of total zinc	Annual mean concentration (μg/l) of dissolved zinc
0-50	8	40
50-100	50	
100-250	75	
>250	125	

Note to Table 19— *The standards applicable to intermediate water hardness must be calculated by simple linear interpolation.

Table 20: Environmental standards for total ammonia in all freshwater lakes			
High		Good	
Standard for lakes with: an annual mean concentration of CaCO3 (mg/l) ≤ 50; or an annual mean concentration of CaCO3 (mg/l) > 50 to ≤ 200 and an altitude > 80 metres above mean sea level.	Standard for lakes with: an annual mean concentration of CaCO3 (mg/l) > 50 to ≤ 200 and an altitude ≤ 80 metres above mean sea level.	Standard for lakes with: an annual mean concentration of CaCO3 (mg/l) ≤ 50; or an annual mean concentration of CaCO3 (mg/l) > 50 to ≤ 200 and an altitude > 80 metres above mean sea level.	Standard lakes with: an annual mean concentration of CaCO3 (mg/l) > 50 to ≤ 200 and an altitude ≤ 80 metres above mean sea level.
90-percentile (milligrams of ammoniacal nitrogen per litre)			
0.2	0.3	0.3	0.6

PART 5

Environmental quality standards for priority substances

1. Subject to paragraphs 2 to 4 the environmental quality standards for the priority substances(**a**) set out in the Table below must be applied.

2. The arithmetic mean must be calculated in accordance with the procedure set out in paragraph 1 of Part B of Annex 1 to the Priority Substances Directive.

3. In order to calculate the maximum allowable concentration for a priority substance, statistical methods may be introduced in accordance with the procedure set out in paragraph 2 of Part B of Annex 1 to the Priority Substances Directive.

4. Before applying the environmental quality standards, the following may be taken into account—

(a) natural background concentrations of the metals cadmium, lead, mercury or nickel, or natural background concentrations of their compounds, which are such as to prevent the achievement of one or more of the environmental quality standards; and

(b) hardness, pH or other water quality parameters that increase or decrease the bioavailability of the metals.

5.—(1) The following environmental quality standards may be substituted for those set out in the Table—

(a) in relation to mercury and its compounds, an environmental quality standard of 20 μg/kg of prey tissue (wet weight);

(b) in relation to hexachlorobenzene, an environmental quality standard of 10 μg/kg of prey tissue (wet weight);

(c) in relation to hexachlorobutadiene, an environmental quality standard of 55 μg/kg of prey tissue (wet weight),

and in each case, prey tissue must be taken from whichever of fish, molluscs, crustaceans or other biota are judged to provide the most suitable indicator of any risk posed to the structure and functioning of the aquatic ecosystem concerned.

(2) If a biota environmental quality standard is not applied for the substances specified in sub-paragraph (1), stricter environmental quality standards must be introduced for water in order to achieve the same level of protection as the environmental quality standards for biota set out in Article 3(2) of the Priority Substances Directive.

6. Stricter environmental quality standards for water must not be introduced without first carrying out a public consultation.

(a) Annex X to the Directive as amended by the Priority Substances Directive..

Table of environmental quality standards for Priority Substances and other pollutants used to classify chemical status

(Note: With the exception of cadmium, lead, mercury and nickel the EQS values are expressed as total concentrations in the whole water sample. In the case of metals the EQS refers to the dissolved concentration, i.e. the dissolved fraction of a water sample obtained by filtration through a 0.45 µm filter or any equivalent pre-treatment.)

No	Name of substance	CAS number (**a**)	AA-EQS[(i)] Inland surface waters[(ii)]	AA-EQS[(i)] Other surface waters	MAC-EQS[(iii)] Inland surface watersii	MAC-EQS[(iii)] Other surface waters
(1)	Alachlor	15972-60-8	0.3	0.3	0.7	0.7
(2)	Anthracene	120-12-7	0.1	0.1	0.4	0.4
(3)	Atrazine	1912-24-9	0.6	0.6	2.0	2.0
(4)	Benzene	71-43-2	10	8	50	50
(5)	Brominated diphenylether [(iv)]	32534-81-9	0.0005	0.0002	N/A	N/A
(6)	Cadmium and its compounds (depending on water hardness classes)[(v)]	7440-43-9	≤ 0.08 (Class 1) 0.08 (Class 2) 0.09 (Class 3) 0.15 (Class 4) 0.25 (Class 5)	0.2	≤ 0.45 (Class 1) 0.45 (Class 2) 0.6 (Class 3) 0.9 (Class 4) 1.5 (Class 5)	≤ 0,45 (Class 1) 0,45 (Class 2) 0,6 (Class 3) 0,9 (Class 4) 1,5 (Class 5)
(6a)	Carbon-tetrachloride [(vi)]	56-23-5	12	12	N/A	N/A
(7)	C10-13 Chloroalkanes	85535-84-8	0.4	0.4	1.4	1.4
(8)	Chlorfenvinphos	470-90-6	0.1	0.1	0.3	0.3
(9)	Chlorpyrifos (Chlorpyrifos-ethyl)	2921-88-2	0.03	0.03	0.1	0.1
(9a)	Cyclodiene pesticides: Aldrin[(vi)] Dieldrin[(vi)] Endrin[(vi)] Isodrin[(vi)]	309-00-2 60-57-1 72-20-8 465-73-6	Σ=0.01	Σ=0.005	N/A	N/A
(9b)	DDT total[(vi), (vii)]	not applicable	0.025	0.025	N/A	N/A
	para-para-DDT[(vi)]	50-29-3	0.01	0.01	N/A	N/A
(10)	1,2-Dichloroethane	107-06-2	10	10	N/A	N/A
(11)	Dichloromethane	75-09-2	20	20	N/A	N/A

(**a**) Chemical Abstracts Service.

(12)	Di(2-ethylhexyl)-phthalate (DEHP)	117-81-7	1.3	1.3	N/A	N/A
(13)	Diuron	330-54-1	0.2	0.2	1.8	1.8
(14)	Endosulfan	115-29-7	0.005	0.0005	0.01	0.004
(15)	Fluoranthene	206-44-0	0.1	0.1	1	1
(16)	Hexachloro-benzene	118-74-1	0.01	0.01	0.05	0.05
(17)	Hexachloro-butadiene	87-68-3	0.1	0.1	0.6	0.6
(18)	Hexachloro-cyclohexane	608-73-1	0.02	0.002	0.04	0.02
(19)	Isoproturon	34123-59-6	0.3	0.3	1.0	1.0
(20)	Lead and its compounds	7439-92-1	7.2	7.2	N/A	N/A
(21)	Mercury and its compounds	7439-97-6	0.05	0.05	0.07	0.07
(22)	Naphthalene	91-20-3	2.4	1.2	N/A	N/A
(23)	Nickel and its compounds	7440-02-0	20	20	N/A	N/A
(24)	Nonylphenol (4-Nonylphenol)	104-40-5	0.3	0.3	2.0	2.0
(25)	Octylphenol ((4-(1,1',3,3'-tetramethylbutyl) -phenol))	140-66-9	0.1	0.01	N/A	N/A
(26)	Pentachloro-benzene	608-93-5	0.007	0.0007	N/A	N/A
(27)	Pentachloro-phenol	87-86-5	0.4	0.4	1	1
(28)	Polyaromatic hydrocarbons (PAH)[(viii)]	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	50-32-8	0.05	0.05	0.1	0.1
	Benzo(b)fluor-anthene	205-99-2	Σ=0.03	Σ=0.03	N/A	N/A
	Benzo(k)fluor-anthene	207-08-9				
	Benzo(g,h,i)-perylene	191-24-2	Σ=0.002	Σ=0.002	N/A	N/A
	Indeno(1,2,3-cd)-pyrene	193-39-5				
(29)	Simazine	122-34-9	1	1	4	4
(29a)	Tetrachloro-ethylene[vi]	127-18-4	10	10	N/A	N/A
(29b)	Trichloro-ethylene[(vi)]	79-01-6	10	10	N/A	N/A
(30)	Tributyltin compounds (Tributhyltin-cation)	36643-28-4	0.0002	0.0002	0.0015	0.0015
(31)	Trichloro-benzenes	12002-48-1	0.4	0.4	N/A	N/A
(32)	Trichloro-	67-66-3	2.5	2.5	N/A	N/A

	methane					
(33)	Trifluralin	1582-09-8	0.03	0.03	N/A	N/A

Notes to Table of Priority Substances:

(i) This parameter is the annual average value of the Environmental Quality Standard expressed as the arithmetic mean of the concentrations measured at each representative monitoring point within the water body at different times during the year. Unless otherwise specified, it applies to the total concentration of all isomers

(ii) Inland surface waters encompass rivers and lakes and related artificial or heavily modified water bodies.

(iii) This parameter is the Environmental Quality Standard expressed as a maximum allowable concentration (EQS-MAC). Where the MAC-EQS are marked as "not applicable", the AA EQS values are considered protective against short-term pollution peaks in continuous discharges since they are significantly lower than the values derived on the basis of acute toxicity.

(iv) For the group of priority substances covered by brominated diphenylethers (No. 5) listed in Decision 2455/2001/EC, an EQS is established only for congener numbers 28, 47, 99, 100, 153 and 154.

(v) For Cadmium and its compounds (No. 6) the EQS values vary dependent upon the hardness of the water as specified in five class categories (Class 1: <40 mg CaCO3/l, Class 2: 40 to <50 mg CaCO3/l, Class 3: 50 to <100 mg CaCO3/l, Class 4: 100 to <200 mg CaCO3/l and Class 5: ≥200 mg CaCO3/l).

(vi) This substance is not a priority substance but one of the other pollutants for which the EQS are identical to those laid down in the legislation that applied prior to the entry into force of this Directive.

(vii) DDT total comprises the sum of the isomers 1,1,1-trichloro-2,2 bis (p-chlorophenyl) ethane (CAS number 50-29-3; EU number 200-024-3); 1,1,1-trichloro-2 (o-chlorophenyl)-2-(p-chlorophenyl) ethane (CAS number 789-02-6; EU Number 212-332-5); 1,1-dichloro-2,2 bis (p chlorophenyl) ethylene (CAS number 72-55-9; EU Number 200-784-6); and 1,1-dichloro-2,2 bis (p-chlorophenyl) ethane (CAS number 72 54-8; EU Number 200-783-0).

(viii) For the group of priority substances of polyaromatic hydrocarbons (PAH) (No. 28), each individual EQS is applicable, i.e., the EQS for Benzo(a)pyrene, the EQS for the sum of Benzo(b)fluoranthene and Benzo(k)fluoranthene and the EQS for the sum of Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene must be met.

PART 6

Biological Element Status Boundary Values

(i)

Rivers

1. In relation to any river or part of such river, the "high", "good", "moderate" or "poor" boundary values must be applied—

(a) in relation to phytobenthos boundaries specified in Table 1 below, by calculating the ecological quality ratio for phtyobenthos in that river or part in accordance with the method "DARES";

(b) in relation to aquatic macrophyte boundary values for rivers specified in Table 2 below, by calculating the ecological quality ratio in that river or part in accordance with the method, "LEAFPACS";

(c) in relation to benthic invertebrate fauna boundary values for rivers specified in Tables 3 and 4 below, by calculating the ecological quality ratios for the parameters referred to in Tables 3 and 4 in that river or part in accordance with the method, "River Invertebrate Classification Tool (RICT)";

(d) in relation to fish fauna boundary values for rivers specified in Table 5 below, by calculating the ecological quality ratios for the parameters referred to in that Table in that river or part in accordance with the method "Fish Fauna Fish Classification System (FCS)".

Table 1: Macrophytes and Phytobenthos - Phytobenthos boundary values for rivers	
UKTAG River Assessment Methods: Macrophtyes and Phytobenthos (DARES) ISBN 978-1-906934-08-8	
Column 1	Column 2
	Ecological quality ratio
High	0.93
Good	0.78
Moderate	0.52
Poor	0.26

Table 2: Macrophytes and Phytobenthos - Aquatic macrophyte boundary values for rivers	
UKTAG River Assessment Methods: Macrophtyes and Phytobenthos - Macrophytes (Macrophyte Assessment of River & Lake Ecological Quality (LEAFPACS) ISBN978-1-906934-06-4	
Column 1	Column 2
	Ecological quality ratio
High	0.80
Good	0.60
Moderate	0.40
Poor	0.20

Table 3: Benthic invertebrate fauna boundary values for rivers (Number of TAXA)	
UKTAG River Assessment Method Benthic Invertebrate Fauna River Invertebrate Classification Tool (RICT) ISBN 978-1-906934-07-1	
Column 1	Column 2
	Ecological quality ratio
High	0.85
Good	0.71
Moderate	0.57
Poor	0.47

Table 4: Benthic invertebrate fauna boundary values for rivers (Average Score Per Taxon)	
UKTAG Method River Assessment Methods Benthic Invertebrate Fauna River Invertebrate Classification Tool (RICT) ISBN 978-1-906934-07-1	
Column 1	Column 2
High	0.97
Good	0.86
Moderate	0.75
Poor	0.63

Table 5: Fish boundary values for rivers	
(UKTAG River Assessment Methods: Fish Fauna Fish Classification System (FCS) ISBN 978-1-906934-09-5	
Column 1	Column 2
High	0.700
Good	0.400
Moderate	0.200
Poor	0.125

(ii)

Freshwater and brackish lakes

1. Subject to paragraphs 2 and 3 below, the "high", "good", "moderate" or "poor" phytoplankton boundary value for must be applied to the lakes specified in Columns 2, 4, 6 and 7 of Table 1 below by─calculating, as applicable, the annual mean chlorophyll *a* concentration for phytoplankton in the lake or part in accordance with the method, "Chlorophyll a and Percentage Nuisance Cyanobacteria"(**a**) where, in relation to the equations in Columns 2, 4, 6 and 7 of that Table—

> "R_c" represents the value for the parameter, chlorophyll *a* concentration, expected in the lake in the absence of more than very minor disturbance to phytoplankton in the lake resulting from human activities and shall be determined in accordance with the method, "Chlorophyll *a* and Percentage Nuisance Cyanobacteria" referred to above.

2. Where the "high" boundary value calculated using the equation in Column 2 of Table 1 below—

(a) is less than the corresponding "minimum constraining value" in Column 3, the minimum constraining value must be taken to be the "high" boundary value for the lake or part;

(a) UKTAG (2008) UKTAG Lake Assessment Methods, Phytoplankton, Chlorophyll a and Percentage Nuisance Cyanobacteria: ISBN: 978-1-906934-03-3.

(b) is greater than the corresponding "maximum constraining value" in Column 3, the maximum constraining value must be taken to be the "high" boundary value for the lake or part.

3. Where the "good" boundary value calculated using the equation in Column 4—

(a) is less than the corresponding "minimum constraining value" in Column 5, the minimum constraining value shall be taken to be the "good" boundary value for the lake or part;

(b) is greater than the corresponding "maximum constraining value" in Column 5, the maximum constraining value shall be taken to be the "good" boundary value for the lake or part.

4. In relation any lake or part of such lake, the following boundary values must be applied—

(a) "high", "good", "moderate" or "poor", in relation to phytoplankton boundaries specified in Table 2 below, taking account of the geological and depth characteristics of the lake or part assigned in accordance with tables 4 and 5 in Part 2 of the schedule, by calculating the ecological quality ratio for the parameter, percentage nuisance cyanobacteria in the lake or part in accordance with the method, "Chlorophyll *a* and Percentage Nuisance Cyanobacteria";

(b) "high", "good" or "moderate", in relation to the phytobenthos boundary values for lakes specified in Table 3 below, taking account of the lake's geological type assigned in accordance with Table 4 in Part 2, by calculating the ecological quality ratio for phytobenthos in the lake or part in accordance with the method, "Diatom Assessment of Lake Ecological Quality (Lake DARLEQ)";

(c) "high", "good", "moderate" or "poor", in relation to the aquatic macrophyte standard for lakes specified in Table 4 below, by calculating the ecological quality ratio for aquatic macrophytes in the lake or part in accordance with the method, "Macrophytes (Lake LEAFPACS)";

(d) "high", "good", "moderate" or "poor", in relation to the benthic invertebrate standard for lakes specified in Table 5 below, by calculating the the ecological quality ratio for benthic invertebrates in the loch or part in accordance with the method, "Chironomid Pupal Exuviae Technique (CPET)"

(e) "high", "good" or "moderate", in relation to the benthic invertebrate boundary values for lakes specified in Table 6 below, by calculating the ecological quality ratio (EQR_{HLAMM} or EQR_{CLAMM}, as applicable) for benthic invertebrates in the lake or part in accordance with the method, "Lake Acidification Macroinvertebrate Metric (LAMM)".

Table 1: Phytoplankton standards for lakes — Chlorophyll a						
UKTAG Lake Assessment Methods: Phytoplankton Chlorophyll *a* and Percentage Cyanobacteria ISBN 978-1-906934-03-3						
	Mean ecological status boundary values for the parameter, chlorophyll concentration(**a**) and associated constraining values					
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
	Mean chlorophyll a concentration in µg/l					
Lake Type	High(i)	High constraining values(ii)	Good(i)	Good constraining values(ii)	Moderate(i)	Poor(i)
High alkalinity, shallow lakes	(R_c ÷ 0.55)	Min = 4.6 Max = 7	(R_c ÷ 0.32)	Min = 8 Max = 12	(R_c ÷ 0.16)	(R_c ÷ 0.05)
High alkalinity, very shallow lakes	(R_c ÷ 0.63)	Min = 9.9 Max = 11.7	(R_c ÷ 0.30)	Min = 21 Max = 25	(R_c ÷ 0.15)	(R_c ÷ 0.05)
Moderate alkalinity, deep lakes	(R_c ÷ 0.50)	-	(R_c ÷ 0.33)	Min = 7.5 Max = 10.5	(R_c ÷ 0.17)	(R_c ÷ 0.05)
Moderate alkalinity, shallow lakes other than peat lakes	(R_c ÷ 0.50)	Min = 5 Max = 7	(R_c ÷ 0.33)	Min = 7.5 Max = 10.5	(R_c ÷ 0.17)	(R_c ÷ 0.05)
Moderate alkalinity, shallow peat lakes	(R_c ÷ 0.50)	Min = 7 Max = 10	(R_c ÷ 0.33)	Min = 10.5 Max = 15	(R_c ÷ 0.17)	(R_c ÷ 0.05)
Moderate alkalinity, very shallow lakes	(R_c ÷ 0.63)	-	(R_c ÷ 0.34)	-	(R_c ÷ 0.17)	(R_c ÷ 0.06)
Low alkalinity, deep lakes	(R_c ÷ 0.50)	Min = 3 Max = 5	(R_c ÷ 0.33)	Min = 4.5 Max = 7.5	(R_c ÷ 0.17)	(R_c ÷ 0.05)
Low alkalinity, shallow, lowland or high altitude lakes other than peat lakes	(R_c ÷ 0.50)	Min = 3 Max = 5	(R_c ÷ 0.29)	Min = 5 Max = 8.5	(R_c ÷ 0.15)	(R_c ÷ 0.05)
Low alkalinity, shallow,	(R_c ÷ 0.50)	Min = 5 Max = 7	(R_c ÷ 0.30)	Min = 8 Max = 12	(R_c ÷ 0.15)	(R_c ÷ 0.05)

(**a**) The range of reference chlorophyll concentration values is taken from Commission Decision 2008/E915/EC establishing, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, the values of the Member State monitoring system classifications as a result of the intercalibration exercise.

lowland or high altitude, peat lakes						
Low alkalinity, shallow, mid-altitude lakes other than peat lakes	(R_c ÷ 0.50)	Min = 2 Max = 4	(R_c ÷ 0.33)	Min = 3 Max = 6	(R_c ÷ 0.17)	(R_c ÷ 0.05)
Low alkalinity, shallow, mid-altitude, peat lakes	(R_c ÷ 0.50)	Min = 4 Max = 6	(R_c ÷ 0.33)	Min = 6 Max = 9	(R_c ÷ 0.17)	(R_c ÷ 0.05)
Low alkalinity, very shallow lakes	(R_c ÷ 0.63)	-	(R_c ÷ 0.33)	-	(R_c ÷ 0.17)	(R_c ÷ 0.05)
Marl lakes	(R_c ÷ 0.55)	Min = 4.6 Max = 7	(R_c ÷ 0.32)	Min = 8 Max = 12	(R_c ÷ 0.16)	(R_c ÷ 0.05)

Notes to Table 1—

The denominators in the equations in Columns 2 4, 6and 7 are the values for the "high", "good","moderate" and "poor" ecological quality ratios for parameter chlorophyll *a*.

Table 2: Phytoplankton boundary values for lakes —percentage cyanobacteria			
UKTAG Lake Assessment Methods: Phytoplankton Chlorophyll a and Percentage Cyanobacteria ISBN 978-1-906934-03-3			
	Ecological quality ratio		
Column 1	Column 2	Column 3	Column 4
Geological characteristics*	High Alkalinity	Moderate Alkalinity	Low alkalinity
High	0.97	0.95	0.97
Good	0.82	0.77	0.82
Moderate	0.61	0.61	0.61
Poor	0.15	0.15	0.15

Note to Table 2—

The geological characteristics of lakes applicable to Columns 2, 3 and 4 are assigned in accordance with tables 4 and 5 of Part 2.

Table 3: Macrophytes and Phytobenthos — Phytobenthos boundary values for lakes		
UKTAG Lake Assessment Methods: Macrophyte and Phytobenthos (Diatoms Assessment of River & lake Ecological Quality (DARLEQ) ISBN 978-1-906934-00-2		
	Ecological quality ratio	
Column 1	Column 2	Column 3
	Low alkalinity lakes	Moderate alkalinity lakes; high alkalinity lakes; and marl lakes
High	0.90	0.90
Good	0.63	0.66
Moderate	0.44	0.44

Table 4: Macrophytes and Phytobenthos — Aquatic macrophyte boundary values for lakes	
UKTAG Lake Assessment Methods: Macrophytes and Phytobenthos (Macrophyte) Assessment of River & Lake Ecological Quality LEAFPACS)) ISBN 978-1-906934-01-9	
	Ecological quality ratio
Column 1	Column 2
High	0.80
Good	0.60
Moderate	0.40
Poor	0.20

Table 5: Benthic invertebrate fauna boundary values for lakes (1)	
UKTAG Lake Assessment Methods: Benthic Invertebrate fauna Chironomid Pupal Exuviae Technique (CPET) Method ISBN 978-1-906934-04-0)	
	Ecological quality ratio
Column 1	Column 2
High	0.77
Good	0.64
Moderate	0.49
Poor	0.36

Table 6: Benthic invertebrate fauna boundary values for lakes (2)		
UKTAG Lake Assessment Methods: Benthic Invertebrate Fauna Lake Acidification Macroinvertebrate Metric (CLAMM for clear lakes and HLAMM for humic lakes) ISBN 978-1-906934-05-7)		
	Ecological quality ratio	
Column 1	Column 2	Column 3
Geological characteristics	Low alkalinity with < 5mg dissolved organic carbon (DOC) –Clear lakes	Low alkalinity with ≥ 5 mg/l dissolved organic carbon (DOC) – Humic lakes
High	0.86	0.83
Good	0.70	0.61
Moderate	0.54	-

(iii)

Transitional and coastal waters

1.—(1) The coastal water or part of such water must have applied to it—

(a) the "high", "good", "moderate" or "poor" benthic invertebrate boundary value for coastal waters specified in Table 1 below by calculating the ecological quality ratio, EQR, for benthic invertebrates in the coastal water or part in accordance with the method, "Dogwhelks (nucella lapillus) – imposex assessment"(**a**).

(b) the "high", "good", "moderate" or "poor" benthic invertebrate boundary value for coastal waters specified in Table 2 below by calculating the ecological quality ratio, EQR_{IQI}, for benthic invertebrates in the coastal water or part in accordance with the method, "Infaunal Quality Index (IQI)"(**b**).

(a) UKTAG Coastal Water Assessment Methods: Benthic Invertebrate fauna Dog whelks (Nucella lapillus) - imposex assessment ISBN 978-1-906934-16-3.

(b) UKTAG (2008) UKTAG Coastal Water Assessment Method, Benthic Invertebrate Fauna, Invertebrates in soft sediments, Infaunal Quality Index (IQI); ISBN: 978-1-906934-13-2.

(c) the "high", "good", "moderate" or "poor" fish boundary value for transitional waters specified in Table 3 below by calculating the ecological quality ratio, EQR_{TFCI}, for fish in the transitional water or part in accordance with the method, "Transitional Fish Classification Index (TFCI) Index".

(d) the "high", "good", "moderate" or "poor" seagrass boundary value for coastal waters and transitional waters specified in Table 4 as follows–

(i) by calculating the ecological quality ratios as percentages for each of the parameters listed in Column 1 of Table 5 below in accordance with the method, " Angiosperms Sea grass (Zostera) bed assessment "";

(ii) by linear interpolation with reference to the boundary values for each parameter-specific ecological quality ratio scale given in columns 3, 4, 5 and 6 of Table 5 below and the upper limits of "high" and "bad" status on each of those scales in columns 2 and 7 of that Table, converting the calculated percentages for each parameter to values on a common ecological quality ratio scale with the values for high, good, moderate and poor on that common scale being those given in Column 2 of Table 4; and

(iii) by calculating the ecological quality ratio for the Angiosperms Sea grass (Zostera) bed assessment index, EQR_{ISGI}, using the equation—

$EQR_{ISGI} = [EQR_{TCL} + EQR_{SLyr} + EQR_{SEL}] \div 3$; or

where data is available for a period of five years or more,

$EQR_{ISGI} = [EQR_{TCL} + EQR_{SL5yr} + EQR_{SEL}] \div 3$

where—

EQR_{TCL} is the % taxonomic composition loss

EQR_{SLyr} is the % annual shoot loss;

EQR_{SL5yr} is the % five year shoot loss

EQR_{SEL} is the % spatial extent loss

(e) the "high", "good", "moderate" or "poor" phytoplankton boundary value for coastal waters specified in Table 6 below as follows– .

(i) by calculating the ecological quality ratios for each of the parameters listed in Column 1 of Table 7 below in accordance with the method, "phytoplankton multi-metric toolkit";

(ii) by linear interpolation with reference to the boundary values for each parameter-specific ecological quality ratio scale given in columns 3, 4, 5 and 6 of Table 7 below and the upper limits of "high" and "bad" status on each of those scales in columns 2 and 7 of that Table, converting the calculated ecological quality ratios for each parameter to values on a common ecological quality ratio scale with the values for high, good, moderate and poor on that common scale being those given in Column 2 of Table 6 below; and

(iii) by calculating the ecological quality ratio for the phytoplankton multi-metric toolkit index, EQR_{PMTI}, using the equation—

$EQR_{PMTI} = [{}^{C}EQR_{PB} + [{}^{C}EQR_{BF} + {}^{C}EQR_{SS}] \div 3$

where—

${}^{C}EQR_{PB}$ is the calculated value of the ecological quality ratio for the parameter, phytoplankton biomass, converted to a value on the common ecological quality ratio scale;

$^{C}EQR_{BF}$ is the calculated value of the ecological quality ratio for the parameter, bloom frequency, converted to a value on the common ecological quality ratio scale; and

$^{C}EQR_{SS}$ is the calculated value of the ecological quality ratio for the parameter, seasonal succession of functional groups, converted to a value on the common ecological quality ratio scale.

(f) the "high", "good", "moderate" or "poor" macroalgae boundary value for transitional waters specified in Table 8 below by calculating the ecological quality ratio, EQR_{fucoid}, for macroalgae in the transitional water or part in accordance with the method, "Fucoid Extent"(**a**).

(g) the "high", "good", "moderate" or "poor" macroalgae boundary value for coastal waters and transitional waters specified in Table 9 below—

(i) for the coastal water or part, or transitional water or part, by calculating the ecological quality ratios for each of the parameters listed in Column 1 of Table 10 below in accordance with the method, "macroalgal bloom assessment - opportunistic macroalgae"(**b**);

(ii) by linear interpolation with reference to the boundary values for each parameter-specific ecological quality ratio scale given in columns 3, 4, 5 and 6 of Table 10 below and the upper limits of "high" and "bad" status on each of those scales in columns 2 and 7 of that Table, converting the calculated ecological quality ratios for each parameter to values on a common ecological quality ratio scale with the values for high, good, moderate and poor on that common scale being those given in Column 2 of Table 9 below; and

(iii) by calculating the ecological quality ratio for the macroalgal bloom index, EQR_{MBI}, using the equation:

$$EQR_{MBI} = [^{C}EQR_{TE} + {}^{C}EQR_{CAIH} + {}^{C}EQR_{BAA} + {}^{C}EQR_{BAIH} + {}^{C}EQR_{PEA}] \div 5$$

where—

$^{C}EQR_{TE}$ is the calculated value of the ecological quality ratio for the parameter, total extent of macroalgal bed, converted to a value on the common ecological quality ratio scale;

$^{C}EQR_{CAIH}$ is the calculated value of the ecological quality ratio for the parameter, cover of intertidal habitat, converted to a value on the common ecological quality ratio scale;

$^{C}EQR_{BAA}$ is the calculated value of the ecological quality ratio for the parameter, biomass of opportunistic macroalgal mats, converted to a value on the common ecological quality ratio scale;

$^{C}EQR_{BAIH}$ is the calculated value of the ecological quality ratio for the parameter, biomass over the available intertidal habitat, converted to a value on the common ecological quality ratio scale; and

$^{C}EQR_{PEA}$ is the calculated value of the ecological quality ratio for the parameter, proportion of entrained algae, converted to a value on the common ecological quality ratio scale.

(h) the "high", "good", "moderate" or "poor" macroalgae boundary value for coastal waters specified in Table 11 below as follows–

(**a**) UKTAG (2009) UKTAG Transitional Water Assessment Methods, Macroalgae, Fucoid Extent; ISBN: 978-1-906934-11-8.
(b) UKTAG (2009) UKTAG Transitional and Coastal Water Assessment Methods, Macroalgae, Macroalgal Bloom Assessment - Opportunistic Macroalgae; ISBN: 978-1-906934-15-6.

(i) by calculating the ecological quality ratios for each of the parameters listed in Column 1 of Table 11 below in accordance with the method, "macroalgae - reduced species list"(**a**);

(ii) by linear interpolation with reference to the boundary values for each parameter-specific ecological quality ratio scale given in columns 3, 4, 5 and 6 of Table 12 below and the upper limits of "high" and "bad" status on each of those scales in columns 2 and 7 of that Table, converting the calculated ecological quality ratios for each parameter to values on a common ecological quality ratio scale with the values for high, good, moderate and poor on that common scale being those given in Column 2 of Table 11 below; and

(iii) by calculating the ecological quality ratio for the macroalgae - reduced species list method, EQR_{MRSL}, using the equation—

$$EQR_{MRSL} = [{}^{C}EQR_{n} + {}^{C}EQR_{ch} + {}^{C}EQR_{rh} + {}^{C}EQR_{op} + {}^{C}EQR_{ESGR}] \div 5$$

Where—

$^{C}EQR_{n}$ is the calculated value of the ecological quality ratio for the parameter, normalised number of macroalgal taxa, converted to a value on the common ecological quality ratio scale;

$CEQR_{ch}$ is the calculated value of the ecological quality ratio for the parameter, normalised proportion of Chlorophyta, converted to a value on the common ecological quality ratio scale;

$CEQR_{rh}$ is the calculated value of the ecological quality ratio for the parameter, normalised proportion of Rhodophyta, converted to a value on the common ecological quality ratio scale;

$CEQR_{op}$ is the calculated value of the ecological quality ratio for the parameter, proportion of opportunist macroalgal taxa, converted to a value on the common ecological quality ratio scale; and

$^{C}EQR_{ESGR}$ is the calculated value of the ecological quality ratio for the parameter, ecological status group ratio, converted to a value on the common ecological quality ratio scale.

(2) In paragraphs 1(1)(d)(ii), 1(1)(e)(ii), 1(1)(g)(ii) and 1(1)(h)(ii), the upper limit of high status on the common ecological quality ratio scale is "1" and the lower limit of bad status, "0".

Table 1: Benthic invertebrate fauna boundary values for coastal waters		
UKTAG Coastal Water Assessment Methods: Benthic Invertebrate fauna Dog whelks (Nucella lapillus) - imposex assessment ISBN 978-1-906934-16-3		
	Ecological quality ratio	Vas Deferens Stage Index (VDSI)
Column 1	Column 2	Column 3
High	0.95	0.3
Good	0.33	4
Moderate	0.17	5

(a) UKTAG (2009) UKTAG Coastal Water Assessment Methods, Macroalgae, Macroalgae - Rocky Shore Reduced Species List; ISBN: 978-1-906934-17-0.

Table 2: Benthic invertebrate fauna boundary values for coastal waters	
UKTAG Coastal Water Assessment Methods: Benthic invertebrate fauna - Invertebrates in soft sediments (Infaunal Quality Index (IQI)) ISBN 978-1-906934-13-2	
	Ecological quality ratio
Column 1	Column 2
High	0.75
Good	0.64
Moderate	0.44
Poor	0.24

Table 3: Fish boundary values for transitional waters	
UKTAG Transitional Water Assessment Methods: Fish Fauna ISBN 978-1-906934-10-1)	
	Ecological quality ratio
Column 1	Column 2
High	0.8
Good	0.6
Moderate	0.4
Poor	0.2

Table 4: Aquatic angiosperm boundary values for transitional waters and coastal waters	
(UKTAG Transitional and Coastal Water Assessment Methods: Angiosperms Sea grass (Zostera) bed assessment ISBN 978-1-906934-14-9)	
	Ecological quality ratio
Column 1	Column 2
High	0.8
Good	0.6
Moderate	0.4
Poor	0.2

Table 5 Parameter-specific percentage boundaries for the purpose of converting the results for each parameter used in Table 4 above to a common ecological quality ratio scale						
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Parameter	Upper limit of "high status" on parameter-specific EQR scales	High	Good	Moderate	Poor	Lower limit of "bad status" on parameter-specific EQR scales
Taxonomic composition (expressed as % loss)	0	<25	<33.3	<66.6	<75	100
Shoot loss (expressed as %) (annual)	0	10	30	50	70	100
Shoot loss (expressed as %) (5 year rolling mean)	0	5	15	25	35	100
Extent loss, (expressed as %)	0	10	30	50	70	100
Score	1	0.80	0.60	0.40	0.20	0

Table 6: Phytoplankton boundary values for transitional waters and coastal waters	
Boundary values relating to mean of the results for each of the indicators of the condition of phytoplankton (UKTAG Method Transitional and Coastal Water Assessment Methods: Phytoplankton ISBN 978-1-906934-12-5)	
	Ecological quality ratio
Column 1	Column 2
High	0.8
Good	0.6
Moderate	0.4
Poor	0.2

Table 7: Parameter-specific ecological quality ratio (EQR) scales for the purpose of converting the results for each parameter used in the "Phytoplankton Multi-metric Toolkit" method to a common ecological quality ratio scale						
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Parameter	Upper limit of "high status" on parameter-specific EQR scales	High	Good	Moderate	Poor	Lower limit of "bad status" on parameter-specific EQR scales
EQR scale for the parameter, phytoplankton biomass (EQR_{PB}) in Sea Region A	1	0.67	0.33	0.22	0.17	0
EQR scale for the parameter, phytoplankton biomass (EQR_{PB}) in Sea Region B	1	0.67	0.44	0.34	0.27	0
EQR scale for the parameter, bloom frequency (EQR_{BF})	1.06	1	0.89	0.67	0.44	0
EQR scale for the parameter, seasonal succession of functional groups (EQR_{SS})	1.25	1	0.75	0.50	0.25	0

Table 8: Aquatic macroalgae boundary values for transitional waters	
UKTAG Transitional Water Assessment Methods: Macroalgae Fucoid extent Method ISBN 978-1-906934-11-8)	
	Ecological quality ratio
Column 1	Column 2
High	0.8
Good	0.6
Moderate	0.4
Poor	0.2

Table 9: Aquatic macroalgae boundary values for transitional waters and coastal waters	
Boundary values calculated from the combined results of the different indicators of macroalgae specified in UKTAG Coastal and Transitional Water Assessment Methods: Macroalgal bloom assessment (Opportunistic Macroalgae) Method ISBN 978-1-906934-15-6	
	Ecological quality ratio
Column 1	Column 2
High	0.8
Good	0.6
Moderate	0.4
Poor	0.2

Table 10: Parameter-specific ecological quality ratio (EQR) scales for the purpose of converting the results for each parameter used in Table 9 above to a common ecological quality ratio scale						
1	2	3	4	5	6	7
Parameter	Upper limit of "high status" on parameter-specific EQR scales	High	Good	Moderate	Poor	Lower limit of "bad status" on parameter-specific EQR scales
EQR scale for the parameter, total extent of macroalgal bed (EQR_{TE})	1.02	1	0.93	0.83	0.56	0
EQR scale for the parameter, cover of intertidal habitat (EQR_{CAIH})	1.05	1	0.9	0.79	0.26	0
EQR scale for the parameter, biomass of opportunistic macroalgal mats (EQR_{BAA})	1.02	1	0.93	0.85	0.51	0
EQR scale for the parameter, biomass over the available intertidal habitat (EQR_{BAIH})	1.02	1	0.93	0.85	0.51	0
EQR scale for the parameter, proportion of entrained algae (EQR_{PEA})	1.01	1	0.96	0.81	0.51	0

Table 11: Aquatic macroalgae boundary values for coastal waters	
UKTAG Coastal Water Assessment Methods: Macroalgae Macroalgae - Rocky Shore Reduced Species List ISBN 978-1-906934-17-0	
	Ecological quality ratio
Column 1	Column 2
High	0.8
Good	0.6
Moderate	0.4
Poor	0.2

Table 12: Parameter-specific ecological quality ratio (EQR) scales for the purpose of converting the results for each parameter used in Table 11 above to a common ecological quality ratio scale						
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Parameter	Upper limit of "high status" on parameter-specific EQR scales	High	Good	Moderate	Poor	Lower limit of "bad status" on parameter-specific EQR scales
EQR scale for the parameter, normalised number of macroalgal taxa (EQR_n)	2	1	0.71	0.49	0.14	0
EQR scale for the parameter, proportion of Chlorophyta (EQR_{ch})	1.14	1	0.91	0.80	0.23	0
EQR scale for the parameter, proportion of Rhodophyta (EQR_{rh})	1.82	1	0.82	0.64	0.27	0
EQR scale for the parameter, proportion of opportunists (EQR_{op})	1.11	1	0.94	0.83	0.56	0
EQR scale for the parameter, ecological status group ratio (EQR_{ESGR})	1.2	1	0.80	0.70	0.20	0

PART 7

Groundwater Threshold Values

1. Where any threshold value for groundwater in Table 1 below is failed, an appropriate investigation must be undertaken in order to determine whether or not the applicable conditions for good groundwater chemical status are met in accordance with the procedure set out in Article 4 of the Groundwater Directive.

Pollutant	Mean concentration (or parameter value) in groundwater					
	Saline Intrusion [1] (Test 1)	Groundwater Impacts on Surface Water [2] (Test 2)		Groundwater Drinking Water Protected Areas [3] (Test 4)	General Quality of Groundwater Body [3] (Test 5)	Units
		Min TV	**Max TV**			
1,1,1-Trichloroethane		101	552		7.5	ug/l
1,1,2-Trichloroethane		404	2210		7.5	ug/l
1,2-dichloroethane				2.25	2.25	ug/l
Aluminium				150		ug/l
Ammonia		0.3	1.73	0.29	0.29	mg/l
Anthracene		0.1	0.55			ug/l
Arsenic		51.6	199	7.5		ug/l
Atrazine		0.62	3.47	0.075	0.075	ug/l
Bentazone		514	2890	0.075	0.075	ug/l
Benzene		10.1	55.2	0.75	0.75	ug/l
Benzo(a)pyrene				0.075		ug/l
Boron				750		ug/l
Bromate				0.0075	0.0075	mg/l
Cadmium		0.2	1.1	3.75		ug/l
Carbendazim				0.075		ug/l
Carbetamide				0.075		ug/l
Carbon tetrachloride		12.1	66.2	2.25	2.25	ug/l
Chlorfenvinphos		0.1	0.58	0.075	0.075	ug/l
Chloride	NBC			188	187.5	mg/l
Chloroform		2.53	13.8	75	75	ug/l
Chlortoluron				0.075		ug/l
Chromium		5	27.6	37.5		ug/l
Clopyralid				0.075		ug/l
Copper		10.1	57.8	1500		ug/l
Cyanazine				0.075		ug/l
Cypermethrin		0.0001	0.0005	0.075	0.075	ug/l
Dalapon				0.075		ug/l
Diazinon		0.01	0.06	0.075	0.075	ug/l

Dichloromethane		20.7	62.2		7.5	ug/l
Dichlorprop				75		ug/l
Diuron		0.2	1.2	0.075	0.075	ug/l
Electrical conductivity	NBC			1880		uS/cm
Fluoranthene		0.1	0.6			ug/l
Fluoride				1.1		mg/l
Glyphosate				0.075		ug/l
Isoproturon		0.3	1.7	0.075	0.075	ug/l
Lead		7.3	39.8	18.8		ug/l
MCPA				0.075		ug/l
Mecoprop		5.1	28.9	0.075	0.075	ug/l
Mercury				0.75		ug/l
Metazachlor				0.075		ug/l
Naphthalene		2.4	13.2			ug/l
Nickel		20.2	116	15		ug/l
Nitrate				42	42	mg/l
Pentachlorophenol		0.4	2.2	0.075	0.075	ug/l
Permethrin-cis+trans		0.01	0.06	0.075	0.075	ug/l
Phenol		15.2	82.8		7.5	ug/l
Phosphate		41.4	536			ug/l
Propazine				0.075		ug/l
Propetamphos				0.075	0.075	ug/l
Simazine		1	5.8	0.075	0.075	ug/l
Sodium				113		mg/l
Sulphate	NBC			188	188	mg/l
Terbutryn				0.075		ug/l
Tetrachloroethene (PCE)		10.1	57.8	7.5	7.5	ug/l
Toluene		50.5	276			ug/l
Trichloroethene (TCE)		10.1	55.2	7.5	7.5	ug/l
Trietazine				0.075		ug/l
Trifluralin				0.075		ug/l
Xylene -p+m		30.3	166		37.5	ug/l
Zinc		75.8	414	3750		ug/l

Notes to table of threshold values:

1. For the Saline Intrusion Test (Test 1) the threshold values are set as the natural background concentration or parameter value (NBC) for the pollutants indicative of the intrusion, e.g. chloride, sulphate or electrical conductivity.

2. The individual Threshold Values applicable to each groundwater body are given in the River Basin Management Plans.

3. These threshold values have been designed to be equivalent to a 95-percentile standard (See Annex 2 of UKTAG guidance on Groundwater Chemical Status Assessment).

PART 8

Specified lakes

WATER BODY	*NAME*	*River Basin District*	*Region*
GB31033803	Llyn Ogwen	10	1
GB31033537	Dulyn Reservoir	10	1
GB31033337	Llyn Coron	10	1
GB31047043	Hafoty Reservoir	10	1
GB31032435	Llyn Llygeirian	10	1
GB31034042	Glaslyn	10	1
GB31035561	Llyn Bodlyn	10	1
GB31033722	Marchlyn Bach Reservoir	10	1
GB31034870	Llyn Trawsfynydd	10	1
GB31042079	Eglwys Nunydd Reservoir	10	1
GB31038409	Llyn Egnant	10	1
GB31041219	Llyn Fawr	10	1
GB31035426	Llyn Hywel	10	1
GB31038390	Llyn Teifi	10	1
GB31034866	Llyn Tecwyn Uchaf	10	1
GB31035180	Llyn Cwm Bychan	10	1
GB31041203	Cwm Lliedi Reservoir	10	1
GB31036267	Llyn Cau	10	1
GB31034249	Llyn Cwm Dulyn	10	1
GB31034400	Llyn Conwy	10	1
GB31033828	Llyn Peris	10	1
GB31041177	Lower Lliw Reservoir	10	1
GB31038398	Pond y Gwaith	10	1
GB31034008	Llyn Elsi Reservoir	10	1
GB31035111	Llyn Gelli Gain	10	1
GB31040457	Ystradfellte Reservoir	10	1
GB31042170	Kenfig Pool	10	1
GB31037596	Nant-y-moch Reservoir	10	1
GB31039942	Rosebush Reservoir	10	1
GB31038394	Llyn Hîr	10	1
GB31032926	Cefni Reservoir	10	1
GB31041050	Upper Lliw Reservoir	10	1
GB31035712	Llyn Cynwch	10	1
GB31034613	Llyn Morwynion	10	1
GB31039020	Llyn Brianne Reservoir	10	1
GB31034002	Llyn Cwellyn	10	1
GB31034033	Llyn Llydaw	10	1
GB31034490	Llyn Cwmystradllyn	10	1
GB31033730	Llyn Padarn	10	1
GB31037641	Llyn Llygad Rheidol	10	1

GB31034511	Llynnau Gamallt	10	1
GB31040990	Penderyn Reservoir	10	1
GB31037834	Llynnoedd Ieuan	10	1
GB31032538	Llyn Alaw	10	1
GB31033261	Plas Uchaf and Dolwen Reservoirs	10	1
GB31033578	Melynllyn	10	1
GB31037690	Llyn Craigypistyll	10	1
GB31033974	Llyn Cwmffynnon	10	1
GB31035578	Llyn Cwm-mynach	10	1
GB31033737	Marchlyn Mawr Reservoir	10	1
GB31033699	Ffynnon Llugwy Reservoir	10	1
GB31034895	Llyn y Garn	10	1
GB31041602	Lily Ponds or Bosherston Lake (includes Central, Lower and Upper)	10	1
GB31041145	Upper Lliedi Reservoir	10	1
GB31033836	Llyn Idwal	10	1
GB31033686	Llyn Cowlyd Reservoir	10	1
GB31032948	Llyn Dinam	10	1
GB31036405	Tal-y-llyn Lake	10	1
GB31034319	Llyn Llagi	10	1
GB31033571	Llyn Eigiau Reservoir	10	1
GB31035056	Llyn Eiddew-mawr	10	1
GB31040087	Llys-y-frân Reservoir	10	1
GB31133644	Reservoir No. 2	11	1
GB31134167	Pendinas Reservoir	11	1
GB31133854	Llyn Bran	11	1
GB31134633	Llyn Arenig Fach	11	1
GB31134813	Llyn Bedydd	11	2
GB31134864	Llyn Arenig fawr	11	1
GB31134454	Pencaye Top Reservoir	11	1
GB31134377	Pant Glas	11	1
GB31133976	Alwen Reservoir	11	1
GB31134780	Hanmer Mere	11	2
GB31134038	Llyn Cyfynwy	11	1
GB31134854	Llyn Tryweryn	11	1
GB31134987	Llyn Tegid or Bala Lake	11	1
GB31133923	Llyn Brenig	11	1
GB31134102	Nant-y-Ffrith Reservoir	11	1
GB31147045	Mill Pond	11	1
GB31133659	Moel Dywyll	11	1
GB31134451	Pencaye Bottom Reservoir	11	1
GB31133661	Cilcain Reservoir 3	11	1
GB31134644	Llyn Celyn	11	1

GB31134331	Ty Mawr Reservoir	11	1
GB31229052	Buttermere	12	1
GB31247026	Mawbray Banks	12	1
GB31232665	Appleton Reservoir	12	2
GB31230883	Fishmoor Reservoir	12	1
GB31229097	Blea Tarn	12	1
GB31232960	Tabley Mere or Tabley Moat	12	2
GB31229371	unnamed	12	1
GB31228806	Over Water	12	1
GB31230390	Black Moss Reservoirs	12	1
GB31230769	Clowbridge Reservoir	12	1
GB31233474	Oak Mere	12	2
GB31232066	Swineshaw Reservoirs	12	1
GB31231200	Wayoh Reservoir	12	1
GB31231013	Ogden Reservoir	12	1
GB31234260	Norbury Meres	12	2
GB31231312	Springs Reservoir	12	1
GB31231214	Upper Naden Reservoir	12	1
GB31230422	Ogden Reservoir	12	1
GB31247019	Black Mere	12	2
GB31232136	Rhodeswood Reservoir	12	1
GB31247027	Sound Common North Pond	12	2
GB31229285	Levers Water	12	1
GB31231267	Ashworth Moor Reservoir	12	1
GB31232744	The Mere	12	2
GB31231229	Middle Naden Reservoir	12	1
GB31229488	Simpson Ground Reservoir	12	1
GB31231190	Anglezarke Reservoir	12	1
GB31229419	Ghyll Head Reservoir	12	1
GB31229184	Grasmere	12	1
GB31231508	New Years Bridge Reservoir	12	1
GB31232650	Rostherne Mere	12	2
GB31231306	Jumbles Reservoir	12	1
GB31234162	Chapel Mere	12	2
GB31231043	Sunnyhurst Hey Reservoir	12	1
GB31231033	Roddlesworth Reservoirs	12	1
GB31247004	Bollinhurst Reservoir	12	1
GB31231496	Worthington Reservoir	12	1
GB31230858	Clough Bottom Reservoir	12	1
GB31230585	Lee Green Reservoir	12	1
GB31233247	Trentabank Reservoir	12	1
GB31231405	Hanging Lees Reservoir	12	1
GB31231435	Rooden Reservoir	12	1
GB31230625	Hurstwood Reservoir	12	1
GB31229021	Thirlmere	12	1

GB31230030	Stocks Reservoir	12	1
GB31231398	Ogden Reservoir	12	1
GB31234330	Betley Mere	12	2
GB31229000	Crummock Water	12	1
GB31231027	Holden Wood Reservoir	12	1
GB31231476	Adlington Reservoir	12	1
GB31229607	Pennington Reservoir	12	1
GB31233063	Lamaload Reservoir	12	1
GB31230591	Swinden Reservoirs	12	1
GB31229388	unnamed	12	1
GB31231250	Lower Naden Reservoir	12	1
GB31231791	Yeoman Hey Reservoir	12	1
GB31231141	Cowm Reservoir	12	1
GB31232242	Glossop Upper Swineshaw Reservoir	12	1
GB31232898	unnamed	12	2
GB31229183	Wast Water	12	1
GB31231025	Calf Hey Reservoir	12	1
GB31233344	Petty Pool	12	2
GB31232085	The Flash or Pennington Flash	12	2
GB31229353	Skelsmergh Tarn	12	1
GB31231042	Roddlesworth Reservoirs	12	1
GB31234328	Bar Mere	12	2
GB31229233	Windermere	12	1
GB31233310	Black Lake	12	2
GB31231266	Yarrow Reservoir	12	1
GB31232166	Arnfield Reservoir	12	1
GB31231039	Earnsdale Reservoir	12	1
GB31229222	Elter Water or Elterwater	12	1
GB31229153	Scoat Tarn	12	1
GB31231404	Readycon Dean Reservoir	12	1
GB31230459	Churn Clough Reservoir	12	1
GB31233210	Hatch Mere	12	2
GB31231168	Blackstone Edge Reservoir	12	1
GB31230203	Grizedale Lea Reservoir	12	1
GB31232245	Swineshaw Reservoir	12	1
GB31230025	Damas Gill	12	1
GB31231264	Delph Reservoir	12	1
GB31231288	Rivington Reservoirs	12	1
GB31229334	Three Dubs Tarn	12	1
GB31232094	Swineshaw Reservoirs	12	1
GB31230377	Laneshaw Reservoir	12	1
GB31232183	Audenshaw Reservoirs	12	1
GB31230600	Dean Clough Reservoir	12	1
GB31247021	Cockerham	12	1
GB31229254	Dubbs Reservoir	12	1

GB31231260	Greenbooth Reservoir	12	1
GB31231393	Piethorne Reservoir	12	1
GB31231164	Watergrove Reservoir	12	1
GB31230958	Pickup Bank Reservoir	12	1
GB31228965	Derwent Water	12	1
GB31231367	Norman Hill Reservoir	12	1
GB31231115	Cowpe Reservoir	12	1
GB31228847	Bassenthwaite Lake	12	1
GB31233250	Ridgegate Reservoir	12	1
GB31232950	Fernilee Reservoir	12	1
GB31231942	Chew Reservoir	12	1
GB31232729	unnamed	12	2
GB31230531	Alston Reservoirs	12	1
GB31232804	Tatton Mere	12	2
GB31232499	Kinder Reservoir	12	1
GB31234545	Oss Mere	12	2
GB31229430	Killington Reservoir	12	1
GB31230222	Barnacre Reservoirs	12	1
GB31233236	Teggs Nose Reservoir	12	1
GB31230533	Coldwell Reservoirs	12	1
GB31229988	Langthwaite Reservoir	12	1
GB31232793	Toddbrook Reservoir	12	1
GB31247005	Horse Coppice Reservoir	12	1
GB31231036	Rake Brook Reservoir	12	1
GB31232108	Walkerwood Reservoir	12	1
GB31231202	Turton and Entwistle Reservoir	12	1
GB31231232	High Bullough Reservoir	12	1
GB31229323	Priest Pot	12	1
GB31229321	Coniston Water	12	1
GB31229338	Devoke Water	12	1
GB31232895	unnamed	12	2
GB31229328	Esthwaite Water	12	1
GB31231829	Dovestone Reservoir	12	1
GB31231130	Scout Moor Reservoir	12	1
GB31228833	unnamed	12	1
GB31228873	unnamed	12	1
GB31232150	Valehouse Reservoir	12	1
GB31230812	Mitchells House Reservoirs	12	1
GB31232112	Walkerwood Reservoir	12	1
GB31230515	Walverden Reservoir	12	1
GB31233043	Errwood Reservoir	12	1
GB31229203	unnamed	12	1
GB31234438	Quoisley Big Mere	12	2
GB31231778	Greenfield Reservoir	12	1
GB31231454	Crook Gate Reservoir	12	1

GB31230523	Coldwell Reservoirs	12	1
GB31232111	Torside Reservoir	12	1
GB31232787	Melchett Mere	12	2
GB31229215	Burnmoor Tarn	12	1
GB31234441	Quoisley Meres	12	2
GB31229599	Harlock Reservoir	12	1
GB31229615	Poaka Beck Reservoir	12	1
GB31228796	Chapelhouse Reservoir	12	1
GB31230199	Grizedale Reservoir	12	1
GB31228986	Loweswater	12	1
GB31231531	Castleshaw Reservoirs	12	1
GB31230663	Cant Clough Reservoir	12	1
GB31229647	Hawes Water, Silverdale	12	1
GB31229270	Blelham Tarn	12	1
GB31234480	Comber Mere	12	2
GB31231482	Dowry Reservoir	12	1
GB31231212	Spring Mill Reservoir	12	1
GB31233243	Bottoms Reservoir Macclesfield	12	1
GB31229231	Little Langdale Tarn	12	1
GB31229275	Tarn Hows	12	1
GB31230431	Ogden Reservoir	12	1
GB31231399	Kitcliffe Reservoir	12	1
GB31229062	Ennerdale Water	12	1
GB30229146	Blea Water	2	1
GB30229125	Hayeswater	2	1
GB30229073	Haweswater Reservoir	2	1
GB30229083	Red Tarn, Helvellyn	2	1
GB30229129	Grisedale Tarn	2	1
GB30228559	unnamed	2	1
GB30229116	Brothers Water	2	1
GB30228429	Thurstonfield Lough	2	1
GB30228955	Ullswater	2	1
GB30228476	Castle Carrock Reservoir	2	1
GB30329099	Lockwood Beck Reservoir	3	2
GB30328743	unnamed	3	1
GB30328172	Broomlee Lough	3	1
GB30328504	Airy Holm Reservoir	3	1
GB30328825	Hurworth Burn Reservoir	3	2
GB30328720	Tunstall Reservoir	3	1
GB30328850	Crookfoot Reservoir	3	2
GB30327568	Catcleugh Reservoir	3	1
GB30329015	unnamed	3	2
GB30328862	unnamed	3	1
GB30327979	Hallington Reservoirs	3	1

GB30327698	Kielder Water	3	1
GB30329022	unnamed	3	2
GB30329027	Blackton Reservoir	3	1
GB30328629	unnamed	3	1
GB30328236	Great Southern Reservoir	3	1
GB30327976	Little Swinburne Reservoir	3	1
GB30329053	unnamed	3	1
GB30347034	Snipe Lane Pond	3	2
GB30329102	unnamed	3	2
GB30328395	Tindale Tarn	3	1
GB30328671	Hisehope Reservoir	3	1
GB30328751	unnamed	3	2
GB30328222	Harlow Hill Reservoir	3	1
GB30329112	unnamed	3	2
GB30328742	Burnhope Reservoir	3	1
GB30327556	Linshiels Lake	3	1
GB30328165	Greenlee Lough	3	1
GB30328481	unnamed	3	1
GB30328804	unnamed	3	1
GB30329202	unnamed	3	2
GB30329104	unnamed	3	2
GB30329148	unnamed	3	2
GB30347033	Blue Lagoon Kildale	3	2
GB30347031	Elton Pond	3	2
GB30329175	unnamed	3	2
GB30328686	Brasside Pond	3	1
GB30327677	Fontburn Reservoir	3	1
GB30329101	unnamed	3	2
GB30328996	unnamed	3	2
GB30328519	Derwent Reservoir	3	1
GB30327960	Colt Crag Reservoir	3	1
GB30347035	Redcar Stell	3	2
GB30327908	Bolam Lake	3	1
GB30328779	unnamed	3	2
GB30328776	unnamed	3	2
GB30328810	unnamed	3	1
GB30328805	unnamed	3	1
GB30347032	Lane Foxes Pond	3	2
GB30347025	New Hartley Ponds	3	1
GB30328860	Cow Green Reservoir	3	1
GB30328946	unnamed	3	2
GB30329103	unnamed	3	2
GB30328220	Crag Lough	3	1
GB30326917	unnamed	3	1
GB30328803	Lochnaw	3	1

GB30328225	Low Reservoir to Henderson Filters	3	1
GB30329011	Hury Reservoir	3	1
GB30328674	Smiddy Shaw Reservoir	3	1
GB30328314	Sibdon Pond Nature Reserve, Blaydon	3	1
GB30329091	unnamed	3	2
GB30329204	unnamed	3	2
GB30329025	Balderhead Reservoir	3	1
GB30328696	Waskerley Reservoir	3	1
GB30328866	unnamed	3	1
GB30328202	Great Northern Reservoir	3	1
GB30328995	Selset Reservoir	3	1
GB30328075	Big Water Reservoir	3	1
GB30347036	Bakethin	3	1
GB30328967	unnamed	3	2
GB30328976	Grassholme Reservoir	3	1
GB30327880	Sweethope Loughs	3	1
GB30329002	unnamed	3	2
GB30429612	Leighton Reservoir	4	1
GB30431685	Digley Reservoir	4	1
GB30432299	Howden Reservoir	4	1
GB30430571	Leeming Reservoir	4	1
GB30430357	Reva Reservoir	4	1
GB30431809	Cadney Reservoir	4	2
GB30435122	Church Wilne Reservoir	4	2
GB30432034	Langsett Reservoir	4	1
GB30429697	unnamed	4	2
GB30430370	Gaincliff Reservoir	4	1
GB30431382	Blackmoorfoot Reservoir	4	1
GB30431609	Wessenden Reservoir	4	1
GB30430012	Upper Barden Reservoir	4	1
GB30436331	Cropston Reservoir	4	2
GB30433781	Ogston Reservoir	4	1
GB30429844	Malham Tarn	4	1
GB30431153	Ryburn Reservoir	4	1
GB30434977	Attenborough NR	4	2
GB30436108	Swithland Reservoir	4	2
GB30433178	Linacre Reservoirs	4	1
GB30432223	Broomhead Reservoir	4	1
GB30431994	Windleden Reservoirs	4	1
GB30432627	Redmires Reservoirs	4	1
GB30431731	Brownhill Reservoir	4	1
GB30430917	Ardsley Reservoir	4	1
GB30431169	Ringstone Edge Reservoir	4	1
GB30430670	Dean Head Reservoirs	4	1
GB30430504	Lower Laithe Reservoir	4	1

GB30430124	Chelker Reservoir	4	1
GB30431740	Ingbirchworth Reservoir	4	1
GB30431104	White Holme Reservoir	4	1
GB30431968	Windleden Reservoirs	4	1
GB30433056	Clumber Lake	4	2
GB30430575	Walshaw Dean Reservoirs	4	1
GB30436433	Stowe Pool, Lichfield	4	2
GB30430033	Lower Barden Reservoir	4	1
GB30430694	Castle Carr Reservoir	4	1
GB30431248	Booth Wood Reservoir	4	1
GB30431800	Royd Moor Reservoir	4	1
GB30437497	Shustoke Reservoirs	4	2
GB30430372	Weecher Reservoir	4	1
GB30431247	Green Withens Reservoir	4	1
GB30430244	Hornsea Mere	4	2
GB30431667	Wessend Reservoir	4	1
GB30430596	Thornton Moor Reservoir	4	1
GB30431517	Butterley Reservoir	4	1
GB30430099	Scargill Reservoir	4	1
GB30447001	Moor Monkton Storage Reservoir	4	2
GB30431821	Yateholme Reservoir	4	1
GB30432240	Misson Line Bank	4	2
GB30431725	Broadstone Reservoir	4	1
GB30430068	Fewston Reservoir	4	1
GB30434995	Attenborough NR	4	2
GB30431796	Riding Wood Reservoir	4	1
GB30432418	Strines Reservoir	4	1
GB30430809	unnamed	4	2
GB30430079	Beaver Dyke Reservoir	4	1
GB30429545	Gormire Lake	4	2
GB30429769	Lumley Moor Reservoir	4	1
GB30431565	Blakeley Reservoir	4	1
GB30436536	Groby Pool	4	2
GB30430722	Barmby	4	2
GB30432459	Ladybower Reservoir	4	1
GB30430323	Carr Beck Reservoir	4	1
GB30431071	Ramsden Clough Reservoir	4	1
GB30429770	Gouthwaite Reservoir	4	1
GB30436396	Belvide Reservoir	4	2
GB30430374	Eccup Reservoir	4	1
GB30429479	Semer Water	4	1
GB30435548	Foremark Reservoir	4	2
GB30432352	Agden Reservoir	4	1
GB30433908	Rainworth Lake	4	2
GB30429990	Thruscross Reservoir	4	1

GB30431297	Deanhead Reservoir	4	1
GB30433790	Tittesworth Reservoir	4	1
GB30431864	Harden Reservoir	4	1
GB30430091	Swinsty Reservoir	4	1
GB30430735	Mixenden Reservoir	4	1
GB30430435	Keighley Moor Reservoir	4	1
GB30433100	Great Lake	4	2
GB30436523	Chasewater	4	2
GB30429634	Roundhill Reservoir	4	1
GB30430598	Stubden Reservoir	4	1
GB30437109	Bracebridge Pool	4	2
GB30430999	Gorpley Reservoir	4	1
GB30430633	Gorple Reservoirs	4	1
GB30447020	Clumber Park Lake West	4	2
GB30435028	unnamed	4	2
GB30434709	unnamed	4	2
GB30430996	Withens Clough Reservoir	4	1
GB30431243	Scammonden Water	4	1
GB30430489	Ponder Reservoir	4	1
GB30434401	unnamed	4	2
GB30437758	Edgbaston Pool	4	2
GB30436069	Colony Reservoir	4	2
GB30431876	Winscar Reservoir	4	1
GB30429866	Grimwith Reservoir	4	1
GB30431693	Bilberry IRE	4	1
GB30432568	Rivelin Dams	4	1
GB30430563	Walshaw Dean Reservoirs	4	1
GB30435310	The Old Dove	4	2
GB30435238	Cop Mere	4	2
GB30430604	Widdop Reservoir	4	1
GB30430471	Water Sheddles Reservoir	4	1
GB30432209	Covenham Reservoir	4	2
GB30430632	Gorple Reservoirs	4	1
GB30433784	Rudyard Reservoir	4	1
GB30432002	unnamed	4	2
GB30430651	Ogden Water	4	1
GB30430081	Embsay Reservoir	4	1
GB30435554	Staunton Harold Reservoir	4	2
GB30429658	Angram Reservoir	4	1
GB30433316	Thoresby Lake	4	2
GB30431771	Ramsden Reservoir	4	1
GB30430621	Warley Moor Reservoir	4	1
GB30430594	Walshaw Dean Reservoirs	4	1
GB30447006	Carsington Water	4	1
GB30429122	Scaling Dam Reservoir	4	2

GB30431150	Baitings Reservoir	4	1
GB30431455	Deer Hill Reservoir	4	1
GB30434381	unnamed	4	2
GB30432078	Midhope Reservoir	4	1
GB30430680	Dean Head Reservoirs	4	1
GB30431070	Warland Reservoir	4	1
GB30429639	Scar House Reservoir	4	1
GB30430102	Ten Acre Reservoir	4	1
GB30435928	Blackbrook Reservoir	4	2
GB30429296	Cod Beck Reservoir	4	2
GB30431848	Snailsden Reservoir	4	1
GB30435478	Blithfield Reservoir	4	2
GB30435060	Attenborough NR	4	2
GB30432388	Dale Dike Reservoir	4	1
GB30435572	unnamed	4	2
GB30432359	Derwent Reservoir	4	1
GB30541427	Hanningfield Reservoir	5	2
GB30538199	Pitsford Water	5	2
GB30536422	Tallington Lakes	5	2
GB30537461	unnamed	5	2
GB30538167	unnamed	5	2
GB30537306	Thompson Water	5	2
GB30535655	Barton Broad	5	2
GB30536202	Upton Broad	5	2
GB30536989	Fritton Decoy	5	2
GB30535640	Hickling Broad	5	2
GB30536730	Rockland Broad	5	2
GB30535953	Wroxham Broad	5	2
GB30535977	Hoveton Great Broad	5	2
GB30538230	Ravensthorpe Reservoir	5	2
GB30539554	Brogborough Reservoir	5	2
GB30536975	Hingham Sea Mere	5	2
GB30540418	Abberton Reservoir	5	2
GB30538132	Hollowell Reservoir	5	2
GB30535981	Rollesby Broad or Ormesby Broad	5	2
GB30536050	Ranworth Broad	5	2
GB30537309	Stanford Water	5	2
GB30535959	Decoy Broad	5	2
GB30537913	Thrapston Lake	5	2
GB30533426	Swanholme Lakes	5	2
GB30536344	Langtoft Gravel Pits	5	2
GB30539944	Ardleigh Reservoir	5	2
GB30533852	Tattershall Gravel Pits, Mr Windleys Pit 3	5	2
GB30539699	Foxcote Reservoir	5	2

GB30539450	Stewartby Lake	5	2
GB30535738	Martham Broad	5	2
GB30535645	Horsey Mere	5	2
GB30539264	Glemsford pits	5	2
GB30538310	Grafham Water	5	2
GB30538826	unnamed	5	2
GB30536219	Costessey Pit No. 2	5	2
GB30535397	Captains Pond	5	2
GB30537182	Eyebrook Reservoir	5	2
GB30536029	Cockshoot Broad	5	2
GB30537033	Hardley Flood	5	2
GB30533132	unnamed	5	2
GB30536980	Lound Mill Water	5	2
GB30539601	Alton Water Reservoir	5	2
GB30536479	Rutland Water	5	2
GB30536480	Tallington Lakes	5	2
GB30547028	Syderstone Common	5	2
GB30538633	unnamed	5	2
GB30641922	Reservoir No 4	6	2
GB30643315	Fleet Pond	6	2
GB30644482	Woolmer Pond	6	2
GB30641956	Warwick Reservoir	6	2
GB30642614	Kempton Park Reservoir(E)	6	2
GB30641865	Lockwood Reservoir	6	2
GB30642538	Heron Lake	6	2
GB30642622	Ameys Lake or Theale Lakes	6	2
GB30644398	Bewl Water	6	2
GB30644023	Hedgecourt Lake	6	2
GB30639472	Grimsbury Reservoir	6	2
GB30644576	Forest Mere	6	2
GB30641907	Mid Colne Valley	6	2
GB30643758	The Tarn	6	2
GB30641884	Walthamstow Reservoirs	6	2
GB30642393	Sonning Eye gravel pit	6	2
GB30641939	Warwick Reservoir	6	2
GB30641796	Bentley Priory	6	2
GB30643125	Stew Pond	6	2
GB30642155	Coate Water	6	2
GB30643602	Bough Beech Reservoir	6	2
GB30644031	Frensham Great Pond	6	2
GB30647003	Banbury Reservoir	6	2
GB30644464	Cranmer Pond	6	2
GB30642407	unnamed	6	2
GB30642639	Queen Mary Reservoir	6	2

GB30641523	King Georges Reservoir	6	2
GB30642779	Bessborough Reservoir	6	2
GB30643218	Bolder Mere	6	2
GB30640488	Cornbury Park Lakes	6	2
GB30642488	King George VI Reservoir	6	2
GB30641313	Bowyers Water	6	2
GB30641924	Reservoir no 1	6	2
GB30642945	Heath Lake	6	2
GB30642956	Murston Lakes, angling lakes	6	2
GB30643359	Whitmoor Common Pond	6	2
GB30644310	Weir Wood Reservoir	6	2
GB30642334	The Queen Mother Reservoir	6	2
GB30642424	unnamed	6	2
GB30642490	Staines Reservoirs	6	2
GB30642691	Virginia Water	6	2
GB30643126	Milford Lake	6	2
GB30641198	North Metropolitan pit	6	2
GB30642489	Wraysbury II Gravel Pit/ Wellapool Lake	6	2
GB30642813	Queen Elizabeth 2 Storage Reservoir	6	2
GB30644358	Douster Pond	6	2
GB30642841	Island Barn Reservoir	6	2
GB30641559	Cotswold Water Park Lake 12	6	2
GB30642611	Farnham Flint or Englefield Lagoon	6	2
GB30642569	Queensmead	6	2
GB30647024	Marden Meadow Ponds	6	2
GB30642417	Wraysbury Reservoir	6	2
GB30642430	Wraysbury No1 Gravel Pit	6	2
GB30641975	Stoke Newington East Reservoir	6	2
GB30643054	Black Pond	6	2
GB30643943	Frensham Little Pond	6	2
GB30642923	Murston Lakes, nature reserve	6	2
GB30641011	Farmoor Reservoir	6	2
GB30641193	Seventy Acres	6	2
GB30643485	Bay Pond	6	2
GB30641900	Walthamstow Reservoirs	6	2
GB30642875	unnamed	6	2
GB30643001	unnamed	6	2
GB30643339	Mytchett Lake	6	2
GB30642757	Englemere Pond	6	2
GB30641659	William Girling Reservoir	6	2
GB30642791	Knight Reservoir	6	2
GB30647022	Littleworth Ponds	6	2
GB30642525	Staines Reservoirs	6	2

GB30642753	Manor Lake or Fleet Lake or Abbey Lake	6	2
GB30643117	Snodland Reservoir	6	2
GB30641274	Cheshunt Lake	6	2
GB30745055	Nook Beach	7	2
GB30745015	Dungeness Gravel Pit	7	2
GB30743127	Westbere Lakes	7	2
GB30744545	unnamed	7	2
GB30743087	Stodmarsh Nature Reserve Pool	7	2
GB30744522	The Lake	7	2
GB30744067	unnamed	7	2
GB30745108	Burton Mill Pond	7	2
GB30744588	Hawkins Pond	7	2
GB30743164	Fordwich Lakes	7	2
GB30745224	unnamed	7	2
GB30744533	Ardingly Reservoir	7	2
GB30745212	Pett Pools	7	2
GB30745009	North Point Lake, Rye golf club	7	2
GB30745035	Castle Water	7	2
GB30743097	Great Puckstone	7	2
GB30744738	unnamed	7	2
GB30745429	Arlington Reservoir	7	2
GB30745790	Sowley Pond	7	2
GB30745064	Long Pit	7	2
GB30744431	Old Alresford Pond	7	2
GB30745011	Powdermill Reservoir	7	2
GB30745606	Titchfield Haven	7	2
GB30743156	Westbere Lakes	7	2
GB30745061	unnamed	7	2
GB30745652	Hatchet Pond	7	2
GB30744955	Darwell Reservoir	7	2
GB30745060	Burrows Pit	7	2
GB30744422	unnamed	7	2
GB30744935	Greatstone Lake	7	2
GB30845446	Linbrook Lake	8	2
GB30847016	Ibsley Water	8	2
GB30845143	Sherborne Lake	8	2
GB30845316	Sutton Bingham Reservoir	8	2
GB30846556	The Loe	8	1
GB30846123	Fernworthy Reservoir	8	1
GB30843794	Slade Reservoirs	8	1
GB30845598	unnamed	8	2
GB30843764	Slade Reservoirs	8	1
GB30846317	unnamed	8	1
GB30844261	Durleigh Reservoir	8	2

GB30846232	Dozmary Pool	8	1
GB30846262	Siblyback Lake	8	1
GB30846526	Argal Reservoir	8	1
GB30845377	Mockbeggar Lake	8	2
GB30846284	Red Lake Pool	8	1
GB30845271	Otterhead Reservoir	8	2
GB30844471	Wimbleball Lake	8	1
GB30845945	Meldon Reservoir	8	1
GB30844473	Clatworthy Reservoir	8	1
GB30846102	Little Sea	8	2
GB30845428	Blashford Lake	8	2
GB30846279	Burrator Reservoir	8	1
GB30846264	Venford Reservoir	8	1
GB30843922	Wistlandpound Reservoir	8	1
GB30846509	Cargenwyn Reservoir	8	1
GB30846225	Colliford Lake	8	1
GB30843906	Pinkery Pond or Pinkworthy Pond	8	1
GB30845115	Luxhay Reservoir	8	2
GB30847017	Rockford Lake	8	2
GB30846501	Stithians Reservoir	8	1
GB30846305	Ugborough Reservoir	8	1
GB30846229	Stover Lake	8	1
GB30845427	Ellingham	8	2
GB30846516	College Reservoir	8	1
GB30847044	Priors Park Reservoir	8	2
GB30845010	Melbury Reservoir	8	1
GB30845412	Ivy Lake	8	2
GB30845324	Lower Tamar Lake	8	1
GB30844798	Gammaton Reservoirs	8	1
GB30845729	unnamed	8	2
GB30846472	Slapton Ley	8	1
GB30846138	Tottiford Reservoir	8	1
GB30844801	Jennetts Reservoir	8	1
GB30844781	Gammaton Reservoirs	8	1
GB30845095	unnamed	8	2
GB30845117	Leigh Reservoir	8	2
GB30843867	Nutscale Reservoir	8	1
GB30846129	Sqabmoor Reservoir	8	2
GB30844158	Ashford Reservoir	8	2
GB30846547	Drift Reservoir	8	1
GB30846131	Crowdy Reservoir	8	1
GB30845441	Snails Lake	8	2
GB30847000	Roadford Lake	8	1
GB30844267	Hawkridge Reservoir	8	2
GB30846495	Bussow Reservoir	8	1

GB30846291	Avon Dam Reservoir	8	1
GB30846161	Trenchford Reservoir	8	1
GB30846114	Kennick Reservoir	8	1
GB30845277	Upper Tamar Lake	8	1
GB30938250	Draycote Water	9	2
GB30940869	Scotch Peters Reservoir	9	1
GB30940712	Shon-Sheffreys Reservoir	9	1
GB30941829	Pant-yr-eos Reservoir	9	1
GB30940987	Nant-moel Reservoir	9	1
GB30935724	Aqualate Mere	9	2
GB30937959	Trimpley Reservoir	9	1
GB30940067	Llangorse Lake	9	1
GB30941762	Wentwood Reservoir	9	1
GB30941175	Cwmsychan Reservoir	9	1
GB30936544	Bomere Pool	9	2
GB30934859	Maer Pool	9	2
GB30940626	Cairn Mound Reservoir	9	1
GB30940714	unnamed	9	1
GB30940946	Frampton Gravel Pits	9	2
GB30938525	Llyn Gynon	9	1
GB30940302	Cray Reservoir	9	1
GB30939891	Grwyne Fawr Reservoir	9	1
GB30936566	Betton Pool	9	2
GB30937599	Fens Top Pool	9	2
GB30943135	Blagdon Lake	9	2
GB30937446	Llyn Clywedog	9	1
GB30940636	Blaen-y-cwm Reservoir	9	1
GB30936634	Berrington Pool	9	2
GB30937631	Chelmarsh Reservoir	9	1
GB30935620	Fenemere	9	2
GB30939967	Usk Reservoir	9	1
GB30940556	Pentwyn Reservoir	9	1
GB30941926	Ynysyfro Reservoir	9	1
GB30940472	Lower Neuadd Reservoir	9	1
GB30936624	unnamed	9	1
GB30940604	Llangynidr Reservoir	9	1
GB30938427	Claerwen Reservoir	9	1
GB30938240	Llyn Fyrddon Fawr	9	1
GB30935211	Crose Mere	9	2
GB30941303	Lluest-wen Reservoir	9	1
GB30943348	Cheddar Reservoir	9	2
GB30941167	Nanntymailor Reservoir	9	1
GB30942598	Monkswood Reservoir	9	2
GB30940542	Cantref Reservoir	9	1
GB30935570	Morton Pool	9	2

GB30941017	Nanthir Reservoir	9	1
GB30940441	Beacons Reservoir	9	1
GB30938214	Craig Goch Reservoir	9	1
GB30940648	Llwyn-on Reservoir	9	1
GB30935212	Sweat Mere	9	2
GB30940635	Carno Reservoir	9	1
GB30940600	Pontsticill Reservoir	9	1
GB30938356	Penygarreg Reservoir	9	1
GB30935568	Lake Vyrnwy / Llyn Efyrnwy	9	1
GB30943096	Chew Valley lake	9	2
GB30941363	Llandegfedd Reservoir	9	1
GB30934844	unnamed	9	2
GB30935079	Cole Mere	9	2
GB30935091	White Mere	9	2
GB30941377	Castell Nos Reservoir	9	1
GB30936881	Marton Pool or Marton Pool, Chirbury	9	1
GB30938282	Llyn Cerriglllwydion Isaf	9	1
GB30937926	Coombe Pool	9	2
GB30943528	unnamed	9	2
GB30947042	Cardiff Bay	9	1
GB30936578	Shomere Pool	9	2
GB30938419	Caban-coch Reservoir	9	1
GB30942798	Barrow Reservoir	9	2
GB30937864	Stanford Reservoir	9	2
GB30940411	Dowdeswell Reservoir	9	2
GB30940429	Upper Neuadd Reservoir	9	1
GB30938586	Great Pool or Westwood Great Pool	9	2
GB30940365	Talybont Reservoir	9	1
GB30940941	St James Reservoir	9	1
GB30947023	Lyppard Grange	9	2

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