

Name	Shannon RBD Transitional and Coastal Waters Action Plan
Length of Coastline	1004km, (Mainland), 178km (Islands)
Main Counties	Clare, Limerick, Westmeath. Longford, Roscommon.
Protected Areas	<p>14 Bathing Water; Ballyheigue, Ballyunion South, Maharabeg, Ballyunion North, White Strand, Doonbeg, Lahinch, Castlegregory, Fenit, Banna Strand, Spanish Point, Kilkee, Fanore, White Strand, Miltown Malbay, Cappagh Pier, Kilrush.</p> <p>6 Shellfish Water; Tralee Bay, West Shannon Poulmasherry Bay, West Shannon Carrigaholt, West Shannon Rinevella, West Shannon Ballylongford, Maharaees.</p> <p>3 Nutrient Sensitive Water; Lee Estuary Upper (Tralee), Feale Estuary Upper, Cashen / Feale Estuary.</p> <p>10 SPA; Akeragh, Banna and Barrow Harbour SPA, Cliffs of Moher SPA, Illaunonearaun SPA, Loop Head SPA, Lough Gill, Magharee Islands SPA, Mattle Island, Mutton Island (Clare), River Shannon and River Fergus Estuarary, Tralee bay.</p> <p>11 SAC; Black Head-Poulsallagh Complex, Inagh River Estuary, Akeragh, Banna And Barrow Harbour, Mount Brandon, Carrowmore Point To SPAnish Point And Islands, Tralee Bay And Magharees Peninsula, West To Cloghane, Blasket Islands, Carrowmore Dunes, Magharee Islands, Kerry Head Shoal, Kilkee Reefs.</p>

STATUS/IMPACTS																																			
Overall status	<p>There are 20 Transitional Waterbodies within this RBD; 7 good, 7 moderate (or less) and the remainder are unassigned.</p> <p>There are 11 Coastal Waterbodies within this RBD; 1 high, 2 good, and the remainder are unassigned.</p> <p>2 Chemical status fails – Lower Shannon Estuary, Limerick Dock</p>																																		
Status elements	<p>Moderate (or less) water bodies with monitoring data indicating the test determining below good status classification are as follows:</p> <p>Lee K Estuary - fish Cashen - BOD Upper Feale Estuary - DO, BOD, High Phytoplankton Counts, fish Lower Shannon Estuary - Specific pollutants Deel Estuary- MRP, fish Mague Estuary - DO, fish Fergus Estuary - DO</p>																																		
Possible Impacts -	Nutrient input																																		
PRESSURES/RISKS																																			
LAND BASED PRESSURES	<p>Pressure Based Risk Assessment results (2008) identify the following waterbodies as at risk from land based point source pressures:</p> <table> <tr> <td>Transitional</td><td>Risk Test Identified as "at risk" or "probably at risk"</td></tr> <tr> <td>Cashan</td><td>Point Source - WWTPs</td></tr> <tr> <td>Deel Estuary</td><td>Point Source - WWTPs</td></tr> <tr> <td>Inagh Estuary</td><td>Point Source - WWTPs</td></tr> <tr> <td>Limerick Dock</td><td>Point Source - Combined Sewer Overflows & Treatment Plant Overflows</td></tr> <tr> <td>Mague Estuary</td><td>Point Source - WWTPs</td></tr> <tr> <td>Upper Shannon Estuary</td><td>Point Source - WWTPs</td></tr> <tr> <td>Lower Shannon Estuary</td><td>Point Source - WWTPs</td></tr> </table> <table> <tr> <td>Coastal</td><td>Risk Test Identified as "at risk" or "probably at risk"</td></tr> <tr> <td>Outer Tralee Bay</td><td>Point Source - WWTPs</td></tr> <tr> <td>Mouth of the Shannon</td><td>Point Source - WWTPs</td></tr> <tr> <td>Shannon Plume</td><td>Point Source - WWTPs</td></tr> </table> <p>Pressure Based Risk Assessment results (2005) identifies the following waterbodies as at risk from land based diffuse pressures (nutrient input):</p> <table> <tr> <td>Transitional</td><td>Risk Test Identified as "at risk" or "probably at risk"</td></tr> <tr> <td>Lee K Estuary</td><td>Nutrient Input</td></tr> <tr> <td>Upper Feale Estuary</td><td>Nutrient Input</td></tr> <tr> <td>Deal Estuary</td><td>Point Source - WWTPs and Section 4 local authority licensed discharges and Nutrient Input</td></tr> <tr> <td>Limerick Dock</td><td>Point Source - WWTPs, Combined Sewer Overflows & Treatment Plant Overflows, IPPC and Section 4 local authority licensed discharges</td></tr> </table>	Transitional	Risk Test Identified as "at risk" or "probably at risk"	Cashan	Point Source - WWTPs	Deel Estuary	Point Source - WWTPs	Inagh Estuary	Point Source - WWTPs	Limerick Dock	Point Source - Combined Sewer Overflows & Treatment Plant Overflows	Mague Estuary	Point Source - WWTPs	Upper Shannon Estuary	Point Source - WWTPs	Lower Shannon Estuary	Point Source - WWTPs	Coastal	Risk Test Identified as "at risk" or "probably at risk"	Outer Tralee Bay	Point Source - WWTPs	Mouth of the Shannon	Point Source - WWTPs	Shannon Plume	Point Source - WWTPs	Transitional	Risk Test Identified as "at risk" or "probably at risk"	Lee K Estuary	Nutrient Input	Upper Feale Estuary	Nutrient Input	Deal Estuary	Point Source - WWTPs and Section 4 local authority licensed discharges and Nutrient Input	Limerick Dock	Point Source - WWTPs, Combined Sewer Overflows & Treatment Plant Overflows, IPPC and Section 4 local authority licensed discharges
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	<p>Maigue Estuary</p> <p>Lower Shannon Estuary</p> <p>Cashen</p> <p>Fergus Estuary</p> <p>Inagh Estuary</p> <p>Upper Shannon Estuary</p> <p>Shannon Airport Lagoon</p> <p>Foynes Harbour</p> <p>Further detail on the land based pressures which affect marine waters in this RBD, such as WWTP discharges, septic tanks, and agriculture are detailed in the following Water Management Unit Action Plans:</p>	<p>Point Source - WWTPs and Section 4 local authority licensed discharges and Nutrient Input</p> <p>Point Source - WWTPs, IPPC and Section 4 local authority licensed discharges and Nutrient Input</p> <p>Point Source – WWTPs and Nutrient Input</p> <p>Point source- Section 4 Local Authority licensed discharges</p> <p>Point Source - WWTPs</p> <p>Point Source - WWTPs and Section 4 local authority licensed discharges</p> <p>Point Source - WWTPs and Section 4 local authority licensed discharges</p> <p>Point Source - WWTPs</p>
	<p>Transitional/Coastal Water Body</p> <p>Aille Clare Estuary</p> <p>Clonderalaw Bay</p> <p>Doonbeg Estuary</p> <p>Inagh Estuary</p> <p>Lough Donnell</p> <p>Blennerville Lake East</p> <p>Blennerville Lake West</p> <p>Lough Gill</p> <p>Poulaweala Lough / Quayfield Lough</p> <p>Shannon Airport Lagoon</p> <p>Foynes Harbour</p> <p>Liscannor Bay</p> <p>Smerwick Harbour</p> <p>Brandon Bay</p> <p>Outer Tralee Bay</p> <p>Mouth of the Shannon (HAs 23;27)</p> <p>Doonbeg Bay</p> <p>Shannon Plume (HAs 27;28)</p> <p>Cloonconeen Pool</p> <p>Scattery Island Lagoon</p> <p>Southwestern Atlantic Seaboard (HA 23)</p> <p>Inner Tralee Bay</p> <p>Lee K Estuary</p> <p>Cashen</p> <p>Upper Feale Estuary</p> <p>Lower Shannon Estuary</p> <p>Deel Estuary</p> <p>Maigue Estuary</p> <p>Upper Shannon Estuary</p> <p>Limerick Dock</p> <p>Fergus Estuary</p>	<p>Relevant Water Management Unit Action Plan</p> <p>Inagh WMU</p> <p>South Clare Shannon Estuary WMU</p> <p>Inagh WMU</p> <p>Inagh WMU</p> <p>Inagh WMU</p> <p>North Kerry Tralee Bay WMU</p> <p>North Kerry Tralee Bay WMU</p> <p>North Kerry Tralee Bay WMU</p> <p>Deel Shannon Estuary WMU</p> <p>Fergus WMU</p> <p>Feale WMU</p> <p>Inagh WMU</p> <p>North Kerry Tralee Bay WMU</p> <p>North Kerry Tralee Bay WMU</p> <p>North Kerry Tralee Bay WMU</p> <p>South Clare Shannon Estuary / North Kerry Tralee Bay / Deel Shannon Estuary WMUs</p> <p>Inagh WMU</p> <p>South Clare Shannon Estuary / Inagh WMUs</p> <p>South Clare Shannon Estuary WMU</p> <p>--</p> <p>North Kerry Tralee Bay WMU</p> <p>North Kerry Tralee Bay WMU</p> <p>North Kerry Tralee Bay WMU</p> <p>Feale WMU</p> <p>Feale WMU</p> <p>South Clare Shannon Estuary / Feale WMUs</p> <p>Deel Shannon Estuary WMU</p> <p>Maigue WMU</p> <p>Deel Shannon Estuary / Maigue / Fergus WMUs</p> <p>Maigue / Fergus WMUs</p> <p>South Clare Shannon Estuary / Fergus WMUs</p>
	<p>Transitional and coastal water bodies where Shellfish designations are located will also include more detail in the relevant Pollution Reduction Programmes:</p>	

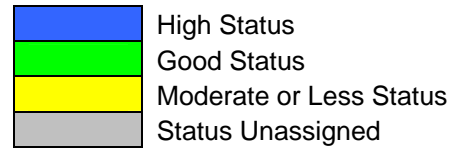
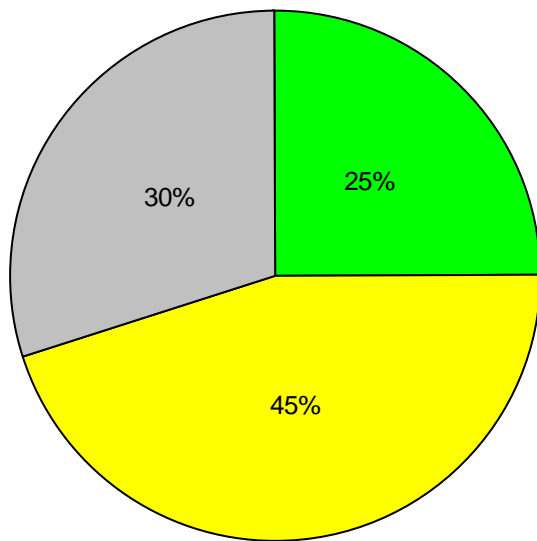
	http://www.environ.ie/en/Environment/Water/WaterQuality/ShellfishWaterDirective/ShellfishWatersDraftCharacterisationReportsandPRPs/
MARINE PRESSURES	
Morphology	<p>Pressure Based Risk Assessment results (2008) identify the following waterbodies as at risk from morphological pressures:</p> <p>Inner Tralee Bay: Embankments and shoreline reinforcement, along with port activities at Fenit Harbour.</p> <p>Lee K Estuary: Shoreline reinforcement.</p> <p>Upper Feale Estuary: Extensive subtidal embankments on both banks</p> <p>Cashen: Shoreline reinforcement.</p> <p>Limerick Dock: HMWB due to significant stretches of embankments</p> <p>Maigue Estuary: Embankments</p> <p>Foynes Harbour: HMWB due to hard defences and port activities</p>
Aquaculture	<p>There are 32 licensed aquaculture areas in the SHRBD. The waterbodies with aquaculture areas are:</p> <p>Outer Tralee Bay</p> <p>Mouth of the Shannon</p> <p>Lower Shannon Estuary</p>

SELECTED ACTION PROGRAMME	
Bathing Waters	<p>The Bathing Water Quality Regulations (SI 79 of 2008) which transposed the new Bathing Waters Directive (2006/7/EC) establishes a new classification system for bathing water quality and require monitoring and management plans to preserve, protect and improve the quality of bathing waters. Local Authority responsibilities are:</p> <p>Identify bathing waters.</p> <p>Monitor and classify bathing water quality status.</p> <p>Develop Bathing Waters Management Plans, including any necessary measures, to achieve bathing water quality standards.</p> <p>Disseminate bathing water quality information to the public.</p> <p>Guidance is being prepared in the preparation of management plans to minimise risk to bathers and human health. Where water quality problems exist, preventative and remedial action must be taken.</p>
Shellfish Waters	<p>Measures are included in the Pollution Reduction Programmes under the Quality of Shellfish Waters Regulations. DAFF licence shellfish growing areas under the Fisheries (Amendment) Act, 1997</p> <p>Aquaculture: Aquaculture is regulated and licensed by the Department of Agriculture, Fisheries and Food; local authorities control discharge licenses for fin fish farms. The Department of the Environment, Heritage and Local Government makes shellfish pollution reduction programmes which provide general water quality protection. A multi-department Marine Coordination Group has recently been established to ensure ongoing co-ordination of marine management activities and application of Appropriate Assessment through strengthened regulation; and coordination of biodiversity issues at an EU level.</p>

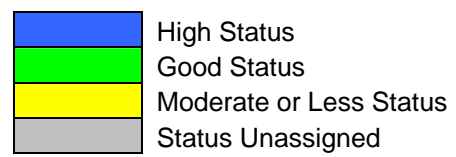
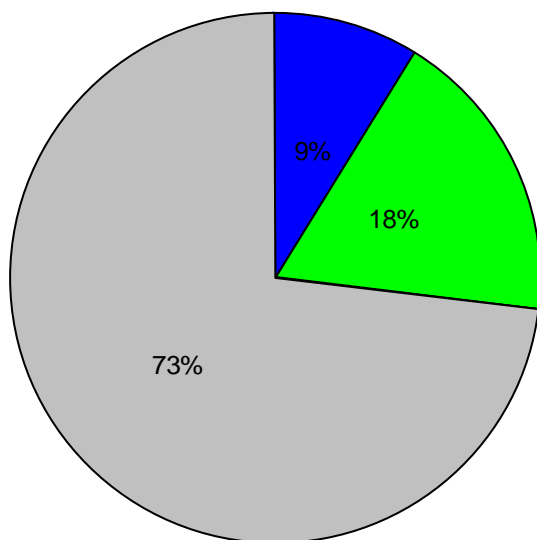
Water Pollution Acts & Water Services Act & IPPC AND Foreshore	<p>Local Authority Licensing of trade effluent to surface waters (under the Local Government (Water Pollution) Acts 1977 – 1990) include discharges to transitional and coastal waters</p> <p>IPPC licensed discharges under the integrated pollution prevention control directive and Environmental Protection Agency Acts</p> <p>Foreshore Acts – development under the mean High Water Mark within transitional and coastal waters are subject to control under the Foreshore Acts.</p>
Birds and Habitats directive	Key provisions of the habitat regulations introduced under these directives allow for the DEHLG to control damaging activities within and outside designated sites. All planned projects not necessary for the management of the Natura 2000 network will be subject to appropriate assessment under Article 6 of the habitats Directive
Urban Wastewater Treatment	The Urban Waste Water Treatment Regulations (S.I No. 48 of 2010) deal with the collection, treatment and discharge of urban wastewater and wastewater from certain industrial sectors. Transitional and coastal waters receive direct discharges from Wastewater Treatment Plants and industry. Controls under these Regulations and the Environmental Objectives Regulations will provide the basis for deciding on appropriate treatment required to meet the objectives of the WFD. In addition Wastewater Discharge Authorisation Regulations (S.I. No. 684 of 2007) require Local Authorities to hold a licence from the EPA authorising a discharge for WWTPs >500pe (or a certificate in the case of agglomerations <500pe).
Morphology (Controls on Physical Modifications)	Marine morphological impacts can impact ecological standards. Ireland's existing planning and development controls and marine licensing systems provide a general level of control for new development. The DEHLG is considering the introduction of new regulations to control physical modifications in our surface waters which may involve an authorisation system where low risk activities may simply be registered and higher risk works would be subject to more detailed assessment and more prescriptive licences.

OBJECTIVES	
Protect / Restore 2015	8 Transitional, 3 coastal.
Alternative Objectives	<p>Extended Deadlines – 6 Transitional.</p> <p>Remaining water bodies are yet to have objectives determined.</p> <p>New Modifications – Foynes - future flood relief measures (modifications) by OPW under the Floods Directive; and port expansion by Port of Foynes. Limerick Dock – Flow amelioration works Abbey River.</p> <p>HMWB – Limerick Dock. Foynes Harbour.</p>

TRANSTIONAL



COASTAL



Transitional and Coastal Status

WATER BODY INFORMATION					GENERAL CONDITIONS				BIOLOGY					HYDRO-MORPHOLOGY	SPECIFIC POLLUTANTS ¹⁴	ECOLOGICAL STATUS ¹⁵	CHEMICAL STATUS ¹⁶	Protected Areas				OBJECTIVES			
									Phyto-plankton	Macroalgae ⁸		Angio-sperms ⁹													
MS_CD	RBD	TYPE	NAME	MONITORED (Y) EXTRAPOLATED (N)	DIN ¹	MRP ²	DO ³	BOD ⁴	Phyto Biomass ⁷	Opportunistic	Reduced Species List	Seagrass	Benthos	Fish ¹¹	Hydrology ¹²	Morphology ¹³	HMMWB	Annex VIII		Bathing Waters	Shellfish Waters	Nutrient Sensitive Water	SAC		
SH_040_0100	SHIRBD	TW	Lough Gill	Y															ua				Yes	-	
SH_050_0200	SHIRBD	TW	Blennerville Lake East	N															ua				Yes	-	
SH_050_0300	SHIRBD	TW	Blennerville Lake West	N															ua				Yes	-	
SH_060_0400	SHRBD	TW	Poulaweala Lough / Quayfield Lough	N															ua				Yes	-	
SH_060_1000	SHIRBD	TW	Shannon Airport Lagoon	Y															ua				Yes	-	
SH_090_0100	SHIRBD	TW	Lough Donnell	Y															ua				Yes	-	
SH_050_0100	SHIRBD	TW	Lee K Estuary	Y	G	G	G	H	H					P					G		Yes	Yes	Yes	Protect	
SH_060_0100	SHIRBD	TW	Cashen	Y	G	G	H	M	G					G		M			M			Yes	Yes	Restore 2021	
SH_060_0200	SHIRBD	TW	Upper Feale Estuary	Y	G	G	M	M	M					M		M			M			Yes	Yes	Restore 2015	
SH_060_0300	SHIRBD	TW	Lower Shannon Estuary	Y	G	G	H	H	H					H		G		Fail	M	Fail	Yes	Yes		Yes	Restore 2021
SH_060_0350	SHIRBD	TW	Foynes Harbour	N													Y		M				Yes	Restore 2021	
SH_060_0600	SHIRBD	TW	Deel Estuary	Y	M	M	G	H	H					M		G			M				Yes	Restore 2021	
SH_060_0700	SHIRBD	TW	Maigue Estuary	Y	M	G	M	H	H					M		M			M				Yes	Restore 2021	
SH_060_0800	SHIRBD	TW	Upper Shannon Estuary	Y	G	H	H	H	H					G		G			G				Yes	Protect	
SH_060_0900	SHIRBD	TW	Limerick Dock	Y	G	H	H	H	H					G		M	Y	Pass	G	Fail			Yes	Restore 2021	
SH_060_1100	SHIRBD	TW	Fergus Estuary	Y	G	H	M	H	H					G		G			M				Yes	Restore 2015	
SH_060_1200	SHIRBD	TW	Clonderalaw Bay	N															G				Yes	Protect	
SH_100_0100	SHIRBD	TW	Inagh Estuary	N															G				Yes	Protect	
SH_110_0100	SHIRBD	TW	Aille Clare Estuary	N															G					Protect	
SH_050_0000	SHIRBD	CW	Inner Tralee Bay	Y	G	M	H	H	H							M		Pass	G	G	Yes	Yes	Yes	Protect	
SH_020_0000	SHIRBD	CW	Smenwick Harbour	N															G					Protect	
SH_030_0000	SHIRBD	CW	Brandon Bay	N															ua				Yes	-	
SH_040_0000	SHIRBD	CW	Outer Tralee Bay	N															ua	Yes	Yes		Yes	-	
SH_080_0000	SHIRBD	CW	Doonbeg Bay	N															ua	Yes			Yes	-	
SH_010_0000	SHIRBD	CW	Southwestern Atlantic Seaboard (HA 23)	N															ua				Yes	-	
SH_060_0000	SHIRBD	CW	Mouth of Shannon (Has 23;27)	Y	H	G	H	H	H							H			H		Yes	Yes	Yes	Yes	Protect
SH_070_0000	SHIRBD	CW	Shannon Plume (HAs 27;28)	N															ua	Yes			Yes	-	
SH_100_0000	SHIRBD	CW	Liscannor Bay	N															ua	Yes			Yes	-	
SH_060_1300	SHIRBD	CW	Scattery Island Lagoon	N															ua				Yes	-	
SH_060_1400	SHIRBD	CW	Cloonconeen Pool	N															ua				Yes	-	

Glossary and Abbreviations

Biodiversity:	Word commonly used for biological diversity and defined as assemblage of living organisms from all habitats including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part.
BOD	Biological Oxygen Demand
Coastal waters:	That area of surface water on the landward side of a line, every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional waters.
DAFF:	Department of Agriculture, Fisheries and Food.
DEHLG:	Department of Environment, Heritage and Local Government.
DETE:	Department of Enterprise, Trade and Employment.
Diffuse sources (of pollution):	Non-point sources primarily associated with run-off and other discharges related to different land uses such as agriculture and forestry, from septic tanks associated with rural dwellings and from the land spreading of industrial, municipal and agricultural wastes.
DO	Dissolved Oxygen
EC:	European Commission
Ecological status:	An expression of the structure and functioning of aquatic ecosystems associated with surface waters. Such waters are classified as being of good ecological status when they meet the requirements of the Water Framework Directive.
Ecology:	The study of the relationships among organisms and between those organisms and their non-living environment.
EPA:	Environmental Protection Agency.
EU:	European Union
Good status:	A collective term used to refer to the status achieved by a surface water body when both its ecological status and its chemical status are at least good or, for groundwater, when both its quantitative status and chemical status are at least good.
HMWB (Heavily modified water body):	A water body that has been changed substantially in character as a result of physical alterations by human activity.
Inland surface waters:	All standing or flowing water on the surface of the land (such as reservoirs, lakes, rivers) on the landward side of the baseline from which the breadth of territorial waters is measured.
Macroalgae	Multicellular algae such as seaweeds and filamentous algae.
Mitigation measures:	Measures to avoid, prevent, minimise, reduce or, as fully as possible, offset or compensate for any significant adverse effects on the environment, as a result of implementing a plan or programme.
On-site system:	Septic tank or other system for treating wastewater from unsewered properties.
Opportunistic	One of the elements used in classification of Ecological Status of

Macroalgae		transitional and coastal waters measured by spatial extent and biomass of macroalgae. While these algae are natural components of estuarine systems and play important roles in several estuarine processes, macroalgal blooms are of ecological concern because they can reduce the habitat quality.
Phytoplankton		Solitary and colonial unicellular algae and cyanobacteria that live in the water column, at least for part of their lifecycle.
Phytoplankton Biomass		One of the elements used in classification of Ecological Status of transitional and coastal waters measured by the total weight of phytoplankton, a free-floating flora, at a given time per unit area.
PRP		Pollution reduction programme
Programme measures:	of	Those actions, defined in detail, which are required to achieve the environmental objectives of the Directive within a river basin district.
Protected area		Water protected by European legislation including drinking waters, shellfish waters, bathing waters, urban wastewater nutrient sensitive areas or sites designated as Special areas of Conservation or Special Protected Areas
River Basin District (RBD) & International River Basin District (IRBD):		Administrative area for coordinated water management, composed of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD.
River basin		The area of land from which all surface water run-off flows, through a sequence of streams, rivers and lakes into the sea at a single river mouth, estuary or delta.
SERBD		South Eastern River Basin District
Special Area of Conservation (SAC):		Site designated according to the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora).
Special Protection Area (SPA):		Area designated under the European Directive on the Conservation of Wild Birds.
Statutory Instrument (SI):		Any order, regulation, rule, scheme or bye-law made in exercise of a power conferred by statute.
Surface water		Inland waters on the land surface (such as reservoirs, lakes, rivers, transitional waters, coastal waters) within a river basin.
Transitional waters		Bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their vicinity to coastal waters, but which are substantially influenced by freshwater flows.
Water body		A coherent sub-unit in the river basin (district) to which the environmental objectives of the directive must apply. Hence, the main purpose of identifying "water bodies" is to enable the status to be accurately described and compared to environmental objectives
Water Framework Directive (WFD)		The Water Framework Directive is European legislation that promotes a new approach to water management through river basin planning. It covers inland surface waters, estuarine waters, coastal waters and groundwater.
WMU		Water Management Unit – geographical sub unit of a river basin district
WWTP		Waste Water Treatment Plant

