

The river basin management plan for the Solway Tweed river basin district 2009–2015

Chapter 5 Appendices

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Appendix A: Public drinking water sources that are at risk of deteriorating

Protected area ID	Drinking water source that are at risk of deterioration	River catchment	Issue(s) causing risk of deterioration	Catchment activities likely to be the cause of issue(s)	Current/proposed mitigation actions
GB102076070690	River Lowther	Eden and Esk	Iron	Industry, manufacturing and other business	Further monitoring required to confirm risk of deterioration
GB102076074020	Old Water	Eden and Esk	Colour	Agriculture and rural land management	Further monitoring required to confirm risk of deterioration Targeted action to address diffuse pollution in the catchment
GB30229073	Haweswater Reservoir	Eden and Esk	Colour	Agriculture and rural land management	Further monitoring required to confirm risk of deterioration
GB30228955	Ullswater	Eden and Esk	Total Organic Carbon	Agriculture and rural land management	Further monitoring required to confirm risk of deterioration
GB30228476	Castle Carrock Reservoir	Eden and Esk	Colour	Agriculture and rural land management	Further monitoring required to confirm risk of deterioration
150166	Cargen Borehole	Nithdale	Nitrates	Dairy farming	NVZ Action Plan SEPA's Priority Catchment Strategy work to fully characterise issues and partnership working to identify measures

Appendix B: Results of shellfish waters assessment for faecal coliforms (2008 and three-year assessment) and target objectives based on current guide value for faecal coliforms

Protected area ID	Designation name	Assessment against the directive guide value for faecal coliforms		Target objectives based on current guide value for faecal coliforms		
		Annual assessment (2008)	Has the guide value been achieved in each of the three years from 2006 to 2008?	2015	2021	2027
UKS799236	Loch Ryan	Achieved	No	Achieved	Achieved	Achieved
118	Silloth	Not achieved	No	Not achieved	Achieved	Achieved
119	Solway	Not achieved	No	Not achieved	Achieved	Achieved

Appendix C: Projected classification under Directive 2006/7/EC (based on data from 2005 to 2008) and target objectives for bathing waters

Protected area ID	Bathing water name	Projected classification under Directive 2006/7/EC	Target objectives based on Directive 2006/7/EC for 2015
UKS7616050	Sandyhills	Poor	Sufficient
UKS7616010	Carrick	Poor	Sufficient
UKS7616053	Southernness	Poor	Sufficient
UKS7616047	Rockcliffe	Poor	Sufficient
UKS761606	Brighthouse Bay	Poor	Sufficient
UKS7616069	Dhoon Bay	Poor	Sufficient
UKS7616080	Mossyard	Sufficient	Sufficient
03600	Spittal	Poor	Sufficient
46300	Silloth	Poor	Sufficient
46500	Skinburness	Sufficient	Sufficient

Appendix D: Site condition assessment, target objectives and site-specific measures for SACs and SPAs currently classed as at unfavourable status

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
UK0014778	Asby Complex	SAC	Calcium-rich, nutrient-poor lakes and ponds Purple moor-grass meadows Calcium-rich fen dominated by great fen sedge Hardwater springs depositing lime Calcium-rich springwater-fed fens Geyer's whorl snail Slender green feather-moss	Water pollution – agriculture/ run-off	Develop pollution action plan (evaluate impacts and apply appropriate solution, eg Catchment Sensitive Farming, Water Protection Zone or control of discharges)	Favourable condition	Favourable condition	Favourable condition	N/A

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
UK0017072	Berwicks hire and North Northumb erland Coast	SAC	Grey seal Intertidal mudflats and sandflats Reefs Sea caves Shallow inlets and bays	Water pollution – agriculture/ run-off	Develop pollution action plan (evaluate impacts and apply appropriate solution, eg Catchment Sensitive Farming, Water Protection Zone or control of discharges)	Favourable condition	Favourable condition	Favourable condition	N/A
				Water pollution – discharge	Discharge/ PPC consent				
UK0030362	Bolton Fell Moss	SAC	Active raised bogs	Inappropriate ditch management	SSSI management agreement	Favourable condition	Favourable condition	Favourable condition	N/A
				Peat extraction	Investigation; revoke planning permission				
UK0012960	Lake District High Fells	SAC	Clear-water lakes with aquatic	Drainage	Agri-environment scheme	Favourable condition	Favourable condition	Favourable condition	N/A

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
			vegetation and moderate nutrient levels Wet heathland with cross-leaved heath Blanket bog Bog woodland Alkaline fen Slender green feather-moss	Water pollution – agriculture/ run-off	Develop pollution action plan (evaluate impacts and apply appropriate solution, eg Catchment Sensitive Farming, Water Protection Zone or control of discharges)				

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
UK0030335	Naddle Forest	SAC	Wet heathland with cross-leaved heath Western acidic oak woodland	Water pollution – agriculture/ run-off	Develop pollution action plan (evaluate impacts and apply appropriate solution, eg Catchment Sensitive Farming, Water Protection Zone or control of discharges)	Favourable condition	Favourable condition	Favourable condition	N/A
UK0030033	North Pennine Moors	SAC	Wet heathland with cross-leaved heath	Drainage	Agri-environment scheme	Favourable condition	Favourable condition	Favourable condition	N/A
			Blanket bog	Pesticide/ herbicide use	Agri-environment scheme				

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
			Hardwater springs depositing lime Calcium-rich springwater-fed fens Western acidic oak woodland Marsh saxifrage	Water pollution – discharge	Revoke or amend discharge consent				
UK0012643	River Eden	SAC	Clear-water lakes with aquatic vegetation and moderate nutrient levels Rivers with floating	Water abstraction	Revoke or amend abstraction licence Implement water company Asset Management Plan scheme	Favourable/unfavourable recovering condition	Favourable condition	Favourable condition	Invasive freshwater species – technically infeasible: practical constraints of a technical nature

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
				Invasive freshwater species	Invasive Species Control Programme for protected areas				
				Inland flood defence works	River Restoration Programme for protected areas				
				Water pollution – agriculture/run-off	Develop pollution action plan (evaluate impacts and apply appropriate solution, eg Catchment Sensitive Farming, Water Protection Zone or control of discharges)				

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
				Water pollution – discharge	Revoke or amend discharge consent Implement water company Asset Management Plan Scheme				

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
UK0012691	River Tweed	SAC	Rivers with floating vegetation often dominated by water-crowfoot Brook lamprey River lamprey Sea lamprey Atlantic salmon Otter	Combination of unknown pressure and effects of alien species, giant hogweed, Japanese knotweed, Himalayan balsam and North American signal crayfish Invasive freshwater species	Research to identify cause and design measures and control of non-native invasive species Invasive Species Control Programme for Protected Areas	Unfavourable	Unfavourable	Favourable/ unfavourable recovering	Technical infeasible: improvement delayed because cause of impact unknown so not yet feasible to identify action Also no known effective means of control for North American signal crayfish

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
				Inland flood defence works	River Restoration Programme for protected areas				
				Water pollution – agriculture/ run-off	Develop pollution action plan (evaluate impacts and apply appropriate solution, eg Catchment Sensitive Farming, Water Protection Zone or control of discharges)				
UK0030310	South Solway Mosses	SAC	Active raised bogs Degraded raised bog	Drainage	Agri-environment scheme Water level management plan	Favourable condition	Favourable condition	Favourable condition	N/A

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
				Inappropriate ditch management	Agri-environment scheme Compulsory management scheme/notice Invasive Species Control Programme for protected areas				
				Water pollution – agriculture/run-off	Develop pollution action plan (evaluate impacts and apply appropriate solution, eg Catchment Sensitive Farming, Water Protection Zone or control of discharges)				

Protected area ID	Name	SAC / SPA	Species/ habitat of Interest	Estimated cause(s) of unfavourable condition	Planned measures	Target objectives			Reason for extended deadline
						2015	2021	2027	
UK9006272	North Pennine Moors	SPA	Golden plover Hen harrier	Drainage	Agri-environment scheme	Favourable condition	Favourable condition	Favourable condition	N/A
				Fertiliser use	SSSI management agreement				
				Pesticide/ herbicide use	Agri-environment scheme				
UK0013025	Solway Firth	SAC	Atlantic salt meadows	Morphological alterations and effects of alien species, Common cord-grass	Restoration of morphological condition and further research on control measures	Unfavourable	Unfavourable	Favourable/ unfavourable recovering	Technical infeasible: no known effective means of control for this alien species