APPENDICES

APPENDIX A LIST OF NATIONAL AND REGIONAL MEASURES

Ę	7		National measu	168				Regional measures	
Less	Secto	Reference/Baseline	Reference/Baseline summary	Draft RUMP	Closing the Gap		Baseline Reference	Draft RISMP	Closing the Gap
				Reduce diffuse source inputs			2		
		Beduce diffuse source insults:		issues Reduce diffuse source insuts	-	-			
	Lucipes	provide first time sewerage	Reduce diffuse pollution inputs	provide first time sewerage Reduce diffuse source inputs					
	र			reduce sources from built environment			8		
		Reduce diffuse source inputs: retrofit improve existing SuBs	1						
				CAR 2005: GBR - diffuse polution, other relevant CAR					
		Integrated Pollution Prevention and		requirements			19	-	
	(/18	Control (IPPC) Regime: pig & poultry farming	1						
	egalatic	NVZ Action Programmes to 2008 NVZ Action Programmes: revised 2007	Regulations, guidelines and standards						
	gine (Sewage Skidge (Use in Agriculture)	to reduce pollutant loads to water bodies			-			
	Agricul	Shellfish Hygiene Directive							
		Slage, Skirry and Fuel OI (SSAFO)		Silage, Sturry and Fuel OI (SSAFO) Regulation (SSAFO					
		Waste Management Licensing		amendments)					
		Accreditation schemes: revised				<u>.</u>		Future CSF including fencing of	
		PEPFAA guidance (2008)		CEDA catchment related			5	butter strips in capital grants scheme	
		Campaign/awareness raising and promotion of best practice: farm		activities: CMPs and regional roll- out in areas at risk of not meeting	Additional investment in catchment-related activities			Promote/encourage uptake of agri-environment schemes in	
		advice from NGOs	Education advice & compaies	WFD and protected areas standards	planning cycles			catchments most at risk	
		Campaian/awareness reising and	awareness					Co-ordination of partnerships and requiatory activities that give	
		promotion of best practice: rural services extension programme						advice to inspect the agricultural sector to ensure activities it is	
		Campairs Isuaranan rainny and						targeted at WPD priority areas	
1	\$	promotion of best practice: rural stewardship schemes						Target EA compliance work and compaigns at WFD risks	
1	guider	Economic incentive: Cross-compliance measures: after 2008 - GAEC							
	hon-re	review/cross.compliance	9						
	othre	Economic Incentive: Cross-compliance measures: before 2008						provide the second capital grants schemes to WFD priorities	
	Agio	Economic Incentive: Scottish Rural	0					Targeting of Rural Development Programme for Endered (RDPD)	
1		(covers agriculture, forestry, land management)						voluntary modulation funding to WFD priorities (C17m)	
1		Economic incentive: Scottish Rural Development Programmes: before	Economic incentives for agriculture to reduce agricultural diffuse poliution					Better publicity of inprovements by CSF and the benefits this has	
		2007 (covers agriculture, forestry, land management)						on the farmers and the environment	
							Repartant Tencing, on 4 rivers (Water of Luce, Blackoch/Cree and Amari)		
							Constructed wetland filtration system at 11 terms in Borders region		
	ary cary)	CAR 2008: GBRs for diffuse polution					3 2		
	Fore (regula	the EIA (Forestry) Scotland Regulations 1999	Regulations to reduce diffuse polution						
		Economic incentive: SRDP before 2007							
		Economic incentive: SRDP 2008 to 2014	Economic incentives for forestry to						
		Voluntary agreements measures delivery plans (e.g. Forest Design	reduce diffuse pollution				15		
	26	Plans)							
	regulat	promotion of best practice: rural services extension programme							
	Forestry (non-	Campaign/awareness raising and promotion of best practice: Forests							
		and Water guidelines Campaign/awareness raising and	Education, advice & compaign						
100		Stewardship Scheme	awareness				0		
pollut		promotion of best practice: Reduced application of pesticides through							
Daffuso		spatial planning					19		
		Pollution Prevention and Control (PPC)	Controls to reduce the effects of air		·		8 <u></u>		
	fory)	Local Authority Air Pollution Control	polition				99 99		
	Aciditics (regula	Planning regulations. LA development plans require SuDs	Regulations to reduce the effects of acidification						
		Planning regulations: Strategic drainage plana							
	otion P	Emission Trading Scheme	Emissions Treding Scheme						
1	Aciditic (not regulat	Forests and Water Guidelines	Guidance						
		CAR 2008: GBRs require Subs for							
	anset (X	Q85 investment programme, Q85 retrofitting of SuBs to industrial							
1	develo	areas CAR 2008: GBRs require SuDs for	CBRs to reduce urban diffuse pollution						
1	Urban (re	new surface water discharges - Charging schemes: drainage							
		charges (surface water draining							
1		Scottish Water's technical manual- design requirements for Subs							
		2007 Voluntary agreements: CFMPs where					-		
		there are relevant actions within the plan							
		Campaign/awareness raising and							
	8	roads - source pollution of polluted road drainage before							
	regulatio	discharging into the public drainage system							
1	1 (non-		Campaign awareness & best practice			-			
1	obment		to reduce diffuse pollution from urban development						
	- and								
	Urte	Campaign/awareness raising and promotion of best practice: local road							
		network - source pollution of polluted road drainage before							
		discharging into the public drainage system							
		International martine legislation: BMO				-			
		ban on use of TBT on vessels <25m (1989)	2						
			tort is						
		International maritime legislation: IMO	tingic e						
	(ens	>25m (2003)	80						
	SVMI		-redere						
1		and the set of an annual set	8	1			1	L	

	and the second side and a subscription of the second secon	2				4
t,	ban on use of TBT treated vessels	2				1
ě.	in European ports (2008)	6				
8	International maritime legislation: IMP	2	-	2	2 · · · · · · · · · · · · · · · · · · ·	
5	'International Convention for the	1				1
5	Control and Management of					1
8	Ships' Ballast water and	e e				1
2	sediments made into legislation'					
8	The Merchant Shipping and Fishing	e e				
8	Vessels (Port Waste Reception	°,				1
	Facilities) Regulations 2003	2				
		8	1	12 C		
1	Hon regulatory.	1 5				
1	Compaign/awareness raising and	<u>a</u>				
1	promotion of best practice: promote	3				
1	better use of part wente reception	2				1
1	uses use or part where reception					
1	facilities through greater understanding	5				
1	among mariners of effects of					
	discharging oly wastes at sea					
	accuracy of a sea					

_			1				1	
		IPPC/CAR: reduce at source	Massure to reduce collition load and	IPPC/CAR: reduce at source (where new standards)				
		IDDC/C/LID: instructor treatment	increase treatment	IPPC/CAR: increase treatment				
	2	INDOLOUR: transfer all or part of		<i>(where new standards)</i> IPPC/CAR: transfer all or part				
	All secto	discharge	Remediation of sediment and water	of discharge (where new standards)				
		IPPC/CAR: remediation of sediments and/or water (either by		sediments and/or water (either by removal or by				
		removal or by treating <i>in situ</i>)	Measures to regulate flow to 'naturalise' the flow regime	treating in situ) (where new standards)				
		IPPC/CAR: change timing or frequency of discharge		frequency of discharge (where new standards)				
		CAR 2005: waste water discharge					Implement first time rural sewerage for	
		to rivers, lochs etc.					key villages such as Cliburn	
	~							
	agulator	Contributive Controls Address	-					
	posal (re	Industry Scotland Act): trade effluent discharges to sewer	Measures to reduce reduce impacts from point source pollution associated with domestic severes disposal				Catchment campaigns to control private discharges	
	age dis	Scottish Government: use of polluting substances in products	war onlesse sewage asposa	Scottish Government: use of polluting substances in products			Water Industry improvements to sewage treatment works discharges	
	Sev			producto				
		Scottish Water Charging schemes:		Scottish Water Charging schemes: provides incentives				
		to reduce the amount of trade effluent they discharge to sewer		for industry to reduce the amount of trade effluent they discharge to sewer				
		Planning regulations: develop integrated surface water		-			<u> </u>	
1		management plans for all urban areas		Hobinto Pinettus				
		Habitats Directive review of consents CAR: Water company AMPs/Quality	-	Consents Water company Quality &				
		& Standards CAR: First time rural sewerage	-	Standards CAR: First time rural				
		Campaign/awareness raising and promotion of best practice: pollution		sewerage programmes				
	×) al (non-	reduction campaigns (SW) Campaign/awareness raising and	Compaign assurances & bast mastice					
	e dispos	environmental best practice: campaigns for industry	to reduce diffuse pollution from sewage disposal					
	Sevege	Campaign/awareness raising and promotion of best practice: pollution reduction and promotion involving						
		NAG and AAG CAR 2005: rate or scale of		CAR 2005: rate or scale of				
80	re/fish gulatory)	discharges arising from fish farms	CAR aimed at regulating effects of	discharges arising from fish farms				
polluti	quacult ming (re	Planning regulations: location of new farms	aquaculture					
aonnos.		2007						
Point	listory)	quality assurance schemes	-					
	Jon-regi	delivery plan: area management agreement: loch wide treatment						
	re/fish farming (n	Campaign/awareness raising and promotion of best practice: code of	Strategic planning and other measures to reduce point source pollution from					
		good practice for Scottish FinFish Aquaculture	aquaculture					
	ntinoentin	Strategic planning: Eel management plans	_					
	hq	Strategic planning: Freshwater fisheries						
		processes to minimise pollution	-					
	ulatory)	CAR 2005: Priority Substances and Specific Pollutants (2008)		CAR 2005: Priority substances and Specific Pollutants (2008)	Scottish Government: Iow P detergents			
	ing (reg.	Planning regulations: local authority development control - siting of	Regulations and standards to reduce point source pollution from				<u> </u>	
	nufactur	industrial developments Planning regulations: local authority contaminated last	manufacturing					
	Mai	European chemical controls: new European chemical regulation (REACH)	1					
		will provide controls over use of hazardous substances						
		Campaign awareness raising and promotion of best practice: EMS	-					
	ory)	Campaign awareness raising and promotion of best practice: NetRegs Campaign awareness raising and						
1	h-regulat	promotion of best practice: HAZREFD - reduce use of hazar dous raw materiale	Campaing awaranaon relation to					
1	ring (noi	Campaign awareness raising and promotion of best practice:	reduce point source pollution from manufacturing					
	mutactu	Envirowise Campaign awareness raising and promotion of best practice:	-					
	Μe	Government's Knowledge Transfer Hetworks						
		Campaign awareness raising and promotion of best practice: SEPA minimising water pollution						
	2	PPC 2005: pollution prevention from new landfill sites						
	ry)	Regulation: mitigation measures to address historic pollution						
	dispose	Contaminated land programme: local authorities' closed landfill site	Measures to reduce point source pollution from landfills					
	Kefuse (Waste Strategy: Scotland's Waste Strategy will progressively						
		to landfill EPA 1990: SEPA can control mine						
	, rying	dewatering and its discharge from existing mines & quarries	-					
	and quar	and restoration of coal mines & quarries	Measures to reduce point source pollution from mining and quarrying					
	Mining (Diagning you deligned an interface						
		wider environmental impacts		+				
			i	1	1	1	1	
	ing and /ing (non .liatory)							

				CAR control abstraction: use alternative source/relocate			
				abstraction			
		CAR control abstraction: improve	Measures to improve efficiency of	improve water efficiency			
		matches need) or reduce need	water use	(e.g. abstraction matches			
		CAR control abstraction: reduce		CAR control abstraction: reduce			
		leakage		leakage			
				CAR control abstraction: control pattern/timing of abstraction			
				(hands off flow/utilisation of			
		CAR control obstraction: reduce risk		CAR control obstraction: reduce			
		of fish mortality in intakes or		risk of fish mortality in			
		screens		intakes or screens			
				CAR control abstraction: provide appropriate baseline			
				flow regime downstream of			
				CAR control abstraction:			
				provide higher flows as			
				appropriate to enable fish migration downstream of			
				impoundment CAR control abstraction:			
				provide higher flows as			
	e			appropriate to maintain/improve habitat			
	secto			downstream of impoundment			
	ৰ	CAR control abstraction: provide fish		CAR control abstraction:			
		access between reservoir and tributaries	CAR regulations to minimise impacts on	between reservoir and			
			fish migration	tributaries			
				impact on DO levels			
				downsteam of impoundment			
				CAR control abstraction: reduce			
				conditions downstream of			
				Impoundment			
				appropriate management of			
				rate and range of artificial drawdown			
				CAR control abstraction:			
				seasonal variation of water			
				level changes behind the impoundment			
				CAR control abstraction: appropriate baseline flow			
				regime downstream of			
				Revision of Catchment			
utati				Abstraction Management Strategies			
041 %				Restoring Sustainable Abstraction Programme			
d flor				CAR 2005: SEPA controls on			
00 00	i i i i i i i i i i i i i i i i i i i			licensed hydropower			
ction	jener:			schemes			
ranchic	jener.		Planning regulations to control	CAR 2005: Fishery (Electricity)			
Abstractic	icity gener- regulatory)		Planning regulations to control abstraction	scnemes CAR 2005: Fishery (Electricity) Committee advice - fisheries protection via SEPA licences			
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				Improve modified habitat: removal of barriers or provision of mechanisms to enable fish migration	Improve modified habitat: removal of barriers or provision of mechanisms to enable fish migration		Identify opportunities to improve morphology through programme of reduction in rural maintenance - also need to ensure no deterioration	Identify opportunities to improve morphology through programme of reduction in rural maintenance - also need to ensure no deterioration
				Improve modified habitat: removal of engineering	Improve modified habitat: removal of engineering		PSA3 targets for river restoration	cristic no detenoration
	2			Improve modified habitat: improvements to condition	Improve modified habitat: improvements to condition			
	All sector			banks/shoreline	banks/shoreline		Working with partners on	
				improvements to condition of riparian zone and/or wetland habitats	improvements to condition of riparian zone and/or wetland habitats		fencing, livestock watering/access and tree planting	
				Improve modified habitat:	Improve modified habitat:		Establish prevention measures for known problem species e.g.	Establish prevention measures for known problem species e.g. removal or where not
				changes to sediment management maintenance regime	changes to sediment management maintenance regime		removal or where not possible then promote habitat management that	possible then promote habitat management that
				CAR 2005: CAR prevent new			favours/restores natural species	species
	gulatory)			damage to the water environment from engineering works on rivers (including maintenance regimes)				
	nent (re	FEPA (Food and Environmental Protection Act)						
	developin	Planning and development control: used to identify restrictions on urban development and						
	rites & urbar	Planning and development control: planning advice notes warn against development on flood	Regulations and development controls to reduce flood risk					
	ng activ	Planning and development control: SPP						
	al engineer	Floods Directive: Development of FRMPs					Identify opportunities to improve morphology through CFMP policies and FRM capital spend	Identify opportunities to improve morphology through CFMP policies and FRM capital
	Historic				Restoration policy framework for taking forward restoration work		Programme of blocking moorland	Programme of blocking
					(incorporating above measures)		grips	moorland grips
vlogy	juliatory)			CAR 2005: CAR prevent new damage to the water environment by engineering works on rivers				
norph	ture (rec		morphological impacts of agricultural sector		Restoration policy framework would allow investment to remove			
anges to	Agrice	Depoint regulations: planning and			abandoned structures such as old embankments			
3		development control PAN SPP Economic incentive: SRDP						
		Economic incentive: Forestry Committee's woodland grant schemes promote riparian	Economic incentives to reduce					
	ulatory)	woodland Economic incentive: Single farm	morphological impacts					
	ion-reg	agricultural practice Campaign awareness raising: SEARS						
	ulture (n	Campaign awareness raising: best practice advice from						
	Agric	NGO/SEPA/SNH/Forest commission on river management	Campiagn/avvareness to reduce morphological impacts					
		Campaign awareness raising: habitat enhancement schemes led by voluntary initiatives						
	Forestry egulatory)	voluntary midadives	Regulations to reduce the impacts of Forestry on morphology	CAR 2005: CAR prevent new damage to the water environment by engineering works on rivers				
	ب 	EIA Felling licences						
		Economic incentive: SRDP	Economic incentives to reduce impacts of forestry on morphology					
	ttory)	Forestry and water guidelines Campaign awareness raising: UK						
	-reguls	Forestry Standards Campaign awareness raising:						
	estry (no.	Voluntary management agreements: measures delivery plan e.g.	measures to reduce impact of forestry on morphology					
	Fore	Forest Design Plan Voluntary management agreements: liaison between agencies and						
		fisheries trust to improve understanding of issues						
	atory)	examing regulations: local authority development controls on new areas of land claim	Planning regulations to reduce the					
	and rec (reguls	Planning regulations: Use of EIA regulations by local authorities	impact of land reclamation on morphology					
	ation L:	FEPA Voluntary management agreements: restoration demonstration		+		 		
	nd reclam on-regulat	projects by SIIH and IIGOs Restoration regulations: develop funding mechanisms to promote	campaign awarness raising to reduce the impact of land reclamation on morphology					
1	ŭ E	managed realignment/retreat (as						

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		Salmon Action Plans (SAPs) to meet the objectives of its National Sea Trout		Control Invasive non-native species: contain to prevent	Restoration policy	Tweed Invasives Partnership		
		& Salmon.		spread	Tramework			
					Marine Protected Areas (MPA)			
		Net Limitation Orders (NLOs) to control			national commitment to			
		legal exploitation of salmon and sea		Control Invasive non-native	achieving a coherent hetwork			
		trout.		species: eradicate in situ	of MPAs to preserve			
					biodiversity and socio-			
	2			Centrel Investive nen netive	economic uses			
	융		Measures to control the exploitation of	Control invasive non-nauve	Eer Limitation Orders to control			
	ũ N		salmon and sea trout	species: capture & remove	legal exploitation of eels/elver	 		
	R.			control invasive non-native				
				Fish Health Directive - limit fish				
				disease & non-native species				
\$				introductions, audit high risk				
3				movements, enforce against				
ð				illegal activity				
se				Alien Species Regulations to				
÷.				control non-native fish n				
÷.				aquaculture				
101	ω	Control of pesticides regulations (use						
ē	∠ P ∰ S	of herbicides to control invasive plants						
2	to ctila di	in or near water)	Regulations to reduce the impacts of					
Ĩ.	a la al	The prohibition of keeping or release of	Invasive non-native species					
	je tru B	live fish (specified species) (Scotland)						
	- or the	Order 2003						
		Species action framework (Scottish						
	ā	Government/SNH)						
	nt C	Implementation of GB Framework						
	d D	Strategy and Implementation Plan when						
	and	available						
	Freg	Campaign awareness: NetRegs	Campaign awarness to reduce the					
	10 C	advice on best practice for control	impact of Invasive non-native species				1	
	50	of certain alien plant species					1	
	vitie							
1	acti-	voluntary management agreement:						
	0.0	local authority and local voluntary					1	
1	œ	projects to address problem					1	
		species					1	

	Colour code	•			Colour code	
Baseline mechanisms (and measures) are listed as:		RBMP mechanisms:	Related policy/mechanism:	Baseline mechanisms (and measures) are listed as:	RBMP mechanisms:	Related policy/mechanism:
Available for water mgt. prior to VVFD and recognised in first RBMP (B)		Contribute to the 1st RBMP delivery and have been introduced to support meeting WFD objectives (M)	Required under another driver/government policy other than the WFD and viewed as providing significant benefits of co-delivery (note - also likely to be considered as a part of the future baseline) (FB)	Black = EA measure for ST; Blue = SEPA measure for ST; Green = SEPA measure for ST; red = uncertain	Black = EA measure for ST; Blue = SEPA measure for ST; Green = SEPA measure for ST; red = uncertain	Black = EA measure for ST; Blue = SEPA measure for ST; Grey = SEPA measure for ST; red = uncertain
New measures from related Drivers that count towards baseline in 2nd and 3rd RBMP (FB)		Potentially contributes to RBMP delivery, if approved by government. This has been identified by which cycle it may influence (i.e. RBMP 1, 2, 3) - RBMP GAP (AM)				

Measures excluded from assessment	Reason
Water Protection Zones	Not scoped in
Work with Newcastle University to reduce/control runoff from arable land	Local measure/not strategic
Till ponds project	Local measure/not strategic
Till wetlands restoration project	Local measure/not strategic
Wooler water flood restoration scheme	Local measure/not strategic
Monitor/influence change in land use from forestry	Local measure/not strategic
Implement additional investigative ecological monitoring	Information gathering/not a strategic effect
Implement additional investigative chemical monitoring	Information gathering/not a strategic effect
Better understanding of apportionment of P to contributing sectors	Information gathering/not a strategic effect
Work with Highways Agency to reduce the impact of road runoff, particularly from the M6	Local measure/not strategic
Modifications of discharge consents/PPC permits	Local measure/not strategic
Publicity on improvements	Local measure/not strategic
Waver/Wampool FRM strategy	Local measure/not strategic
Point source mines	No information
Review of gravel abstraction programmes	Information gathering/not a strategic effect
Research and demonstration projects to improve understanding of cost effectiveness of removing or adapting physical modifications	Information gathering/not a strategic effect
Review all physical barriers to fish passage and culvert and assess the options for improvement	Information gathering/not a strategic effect
Establish a robust monitoring scheme to identify distribution of non-native invasive species. To include the education of key groups through species guides etc.	Information gathering/not a strategic effect
New/enhanced local education campaigns to prevent non-native species instruction	Local measure/not strategic
Provide advice on best method of control and disposal to ensure landowners are given consistent advice	Local measure/not strategic
Develop and deploy a rapid response control programme	Local measure/not strategic
Support the development of the Cumbria Invasive Species forum to co-ordinate invasive species control in Cumbria	Information gathering/not a strategic effect
Link control of WFD invasive species to broader control of invasive species to ensure multiple benefits	Not a strategic effect
Eden Rivers Trust (ERT) - sub-catchment plans for the River Eden	Local measures, but many of the measures already dealt with but other national and regional measures
Cumbria Wetlands Partnership	Local measures, but many of the measures already dealt with but other national and regional measures
EA science	Information gathering/not a strategic effect
ERT flood modelling project	Information gathering/not a strategic effect
Apply Sustainable catchment management plan (SCAMP) to Haweswater catchment	Not a strategic effect
Prevent bank and channel damage by reducing the negative impacts of water and land based activities through better management and ecologically sensitive maintenance (links to reduction in maintenance)	Not a measure
Creation of buffer zones and removal of livestock from watercourse	Local measure/not strategic
Install fish pass under GAT?	Local measure/not strategic

Return substrate through boulder placement	Local measure/not strategic
Removal of conifers exceeding F&WG requirements and work funded by CASS	Local measure/not strategic
In area of long term retention forestry, brashing of riparian strip to 5m high.	Local measure/not strategic

Forest Design Plan has felled large areas that were previously planted to the banks: River Esk, Annan	Not a measure
American Signal crayfish present in this water body, prevention of spread measures include education	Local measure/not strategic
Prevention of crayfish spreading downstream from Water of Ken	Local measure/not strategic
Craik Village reinstatement of original meander	Local measure/not strategic
Craik Village planting of riparian vegetation	Local measure/not strategic
Creation of a wildlife pond at 6 farms in Borders region	Local measure/not strategic
Haltree Willow Spilling Project	Local measure/not strategic
Extension of CSF to cover all of the Waver and Wampool	Local measure/not strategic
Target land drainage consents	Not a measure
Tweed Foundation signal crayfish project	Local measure/not strategic
Reduce illegal fishing on coasts, rivers & still waters. Assess non-compliance with existing and new fisheries management legislation and where appropriate, take enforcement action for non-compliance. Examples include: rod licence evasion, illegal fish movements, illegal fishing/poaching	Similar measure already included in assessment
National Spring Salmon Byelaws. Renewal for a period of another 10 years of the existing national spring salmon byelaws that expire in Dec 08 and give protection to early run salmon by stating that: • no salmon or sea trout may be removed by rod and line or net before the 1st June • fish caught on rod and line between the 1st and the 16th June must be returned alive, • rod and line fishing must be by artificial fly or lure only before the 16th June Ban on the sale of rod caught salmon: "No person shall sell, offer or expose for saleany salmon or migratory trout which has been taken by rod and line." Carcass tagging: except those caught by rod and line, salmon and migratory trout must be tagged after capture. Log books shall be issued to licensed net fishers, who must be in possession of the book when fishing and correctly fill it out with details of:• number and weight of fish caught • location of capture • time spent fishing • where the fish are sold Subject to on-going ministerial approval.	Similar measure already included in assessment
Promotion of voluntary catch and release for recreational angling by ongoing public campaigns such as leaflets.	Local measure, not strategic
Removal byelaws for coarse fish create the ability to set minimum and maximum sizes for fish that can be removed: At present, byelaws can require fish below a minimum size to be returned alive to the water body but no byelaws exist that require fish above a maximum size to be returned. The marine bill includes a proposal to allow maximum sizes of fish to be taken to be set by byelaws. The advantage is that large, mature individual fish often have a disproportionately high fecundity and are therefore of high importance to the population.	Not strategic
Increase in sites requiring fish screening (fish farm intakes & discharge points)	Local measure, not strategic
Increase awareness / education on fish stocking hazards & regulations (IFM Accreditation scheme; fund training etc)	Similar measure already included in assessment
Removal of undesirable fish species in partnership with owners/tenants, for example topmouth gudgeon	Similar measure already included in assessment
Re-stock elvers to catchments – subject to stock status assessment / recommendations in Eel Management Plan	Local application, not strategic
Stocking of salmon, sea trout and brown trout in relation to restoration, mitigation and inaccessible stretch's. Smolt (juvenile fish ready to migrate to the sea) stocking or fry stocking using local broodstock	Local application, not strategic
Monitoring parasites & diseases	Not strategic
Removing or adapting barriers to fish passage/migration which fall outside the Restoring Sustainable Abstraction programme	Similar measure already included in assessment
Climate Proofing the Cheviot	Local measure, not strategic
RAFTS biosecurity plans	Local measure, not strategic

Support the development of the Cumbria Invasive Species Forum to co-ordinate invasive species control in Cumbria (priority of all INNS measures) including:(a) establish a robust monitoring scheme to identify distribution of non native invasive species, to include the education of key groups through species guides etc.(b) new/enhanced local education campaigns to prevent non-native species introduction(c) establish prevention measures for known problem species - eg removal or where not possible then promote habitat management that favours / restores natural species(d) provide advice on best method of control and disposal to ensure landowners are given consistent advice(e) develop and deploy a rapid response control programme(f) link control of WFD invasive species to broader control of invasive species to ensure multiple benefits.	Local measure, not strategic
2001 & 2008 NVZ Action Plan	Similar measure already included in assessment
Further investigation - monitoring (nutrients)	Not strategic
Catchment Sensitive Farming - Hazardous substances and other pollutants	Similar measure already included in assessment
2001 NVZ Action Plan - advice	Not strategic
2008 NVZ Action Plan - advice	Not strategic
2001 NVZ Action Plan - advice	Not strategic
2008 NVZ Action Plan - advice	Not strategic
Suspension (temporary) on use as sheep-dip	Captured under measure CAR 2005: Priority substances and specific pollutants
Encourage uptake of Voluntary Initiative best practice advice by farmers and agronomists.	Similar measure already included in assessment
Investigate groundwater as potential cause of failure	Similar measure already included in assessment
Re-target regional surface water monitoring to align with highest use areas in England and Wales and check EQS compliance in high use locations. Seek advice from Pesticides Policy.	Similar measure already included in assessment
Pollution prevention - PHS & SPs	Similar measure already included in assessment
Local pollution prevention campaign (including, where appropriate, campaigns to raise awareness of existing Marketing and Use Restrictions) - PS & PHS	Similar measure already included in assessment
Restriction on use of PAH content in oil used in the manufacture of tyres	Captured under measure CAR 2005: Priority substances and specific pollutants
Investigate emissions from sites and appraise options (to reduce at source or treat) to meet EQS in this or subsequent rounds	Not strategic, outcome of investigations cannot be known
Investigate emissions from installations and appraise options (to reduce at source or treat, up to BATNEEC) to meet EQS in this or subsequent rounds	Not strategic, outcome of investigations cannot be known
Investigate emissions from sites and appraise options (to reduce at source or treat) to meet EQS in this or subsequent rounds	Not strategic, outcome of investigations cannot be known
Restrict the use of compounds containing TBT in plastic in applications where the TBT may leach , e.g. PVC use in garage roofs, guttering etc	Captured under measure CAR 2005: Priority substances and specific pollutants
Implementation of best practice controls and remediation at Abandoned Coal Mines	Not strategic, uptake of best practice cannot be known
Investigate discharges from Abandoned Metal Mines and prioritise sites for inclusion in HO agreement with metal mine authorities	Not strategic, outcome of investigations cannot be known
Investigate emissions from working sites and appraise options (of best practice controls at mines and quarries including spoil dumping) to meet EQS in this or subsequent rounds	Not strategic, outcome of investigations cannot be known
Investigate discharges from Abandoned Metal Mines and prioritise sites for inclusion in HO agreement with metal mine authorities	Not strategic, outcome of investigations cannot be known
Implementation of best practice controls and remediation at Abandoned Metal Mines	Not strategic, uptake of best practice cannot be known
Implementation of best practice controls and remediation at Abandoned Metal Mines	Not strategic, uptake of best practice cannot be known
Ban on TBT marketing in the EU. (Imports of products containing TBT still allowed if products not marketed as biocides).	Not strategic, effect of ban cannot be known

Identify hot spots for sediment and other pollutants from highway run-off	Not strategic, outcome of investigations cannot be known
Improved design or improved codes of practice for runoff, e.g. from highways, and other transport	Not strategic, outcome of improved design cannot be known
Ban domestic waste burning, construction and demolition waste burning	Not strategic

Evaluate options to further reduce domestic waste burning, construction and demolition waste burning	Not strategic
Encourage enhanced use of SUDs	Not strategic, uptake of encouragement cannot be known
Initiatives to reduce vehicle emission limits	Not strategic, outcome of initiatives cannot be known
Improved street and green space cleaning	Not strategic
Investigate emissions from STWs and confirm whether further investigation into sources discharging to sewer is required	Not strategic, outcome of investigations cannot be known
Investigate emissions from STWs and confirm whether further investigation into sources discharging to sewer is required	Not strategic, outcome of investigations cannot be known
Investigate discharges to sewer from auction markets and appraise options (to reduce emissions at source or at STWs) to achieve EQS in this or subsequent rounds.	Not strategic, outcome of investigations cannot be known
Extension of abstraction control to include previously exempt areas	Local effect, not strategic
Reduction of demand through promotion of free household meters	Similar measure already included in assessment
Coordinated education and awareness on water efficiency and re-use to promote value of water	Similar measure already included in assessment
Reduction in water use for specific sectors - including water efficiency plans that incorporate water reuse / recycling, rainwater harvesting and other similar methods, clean and dirty water separation	Similar measure already included in assessment
Reduction of leakage through active leakage control and customer supply pipe repair policies	Similar measure already included in assessment
Include strong water efficiency policies in Spatial Strategies and Local Development Plans / Frameworks	Similar measure already included in assessment
Investigate the use of smart meters.	Similar measure already included in assessment
Promote the efficient and responsible use of water through a targeted water efficiency campaign	Similar measure already included in assessment
Reduction of leakage through active leakage control and customer supply pipe repair policies	Similar measure already included in assessment
Reduction of demand through promotion of free household meters	Similar measure already included in assessment
Reduction of demand through installation of domestic meters on change of occupier	Similar measure already included in assessment
Natura 2000 sites Modification of Abstraction licences to ensure no adverse effect on site integrity	Similar measure already included in assessment
Sites of Special Scientific Interest - Modification of Abstraction licences to ensure no adverse impact on conservation objectives	Similar measure already included in assessment
Investigations at other water dependent nature conservation sites perceived to be adversely affected by abstraction	Not strategic, outcome of investigations cannot be known
Improved flow estimates for surface water bodies and water balances for groundwater bodies	Outcome of investigations cannot be known
Review and improve Environmental Flow Indicators	Outcome of investigations cannot be known
Investigations to determine cost effective measures to manage abstraction to support Good Ecological Status	Outcome of investigations cannot be known
Investigations to determine cost effective measures to manage abstraction to support Good Ecological Status	Outcome of investigations cannot be known
Investigations to determine cost effective measures to manage abstraction to support Good Quantitative Status	Outcome of investigations cannot be known
Investigations to determine cost effective measures to manage abstraction to support Good Quantitative Status	Outcome of investigations cannot be known
Investigations to determine cost effective measures to support Good Ecological Potential	Outcome of investigations cannot be known

Revoke unused licences on the Caldew and Lower Eden.	Local measure, not strategic
Retro fitting of rainwater harvesting systems in homes.	Local measure, not strategic
Investigate the use of smart meters.	Similar measure already included in assessment
Retro fitting of grey water recycling systems in homes.	Local measure, not strategic
Measures to prevent unacceptable impact on local water environment caused by licensed abstraction	Similar measure already included in assessment
Measures to prevent unacceptable impact on local water environment caused by licensed abstraction	Similar measure already included in assessment
Measures to prevent unacceptable impact on local water environment caused by licensed abstraction	Similar measure already included in assessment
Modification of abstraction licences to support Good Status (groundwater or surface water)	Similar measure already included in assessment
Measures to prevent unacceptable impact on local water environment caused by licensed abstraction	Similar measure already included in assessment

APPENDIX B ENVIRONMENTAL BASELINE

SECTION 1 - INTRODUCTION

- 1.1 In order to be able to understand the significant environmental effects of the Solway Tweed River Basin Management Plan (RBMP), it is necessary to set out some basic information about the current environment in the district. From the many possible water related topics that the RBMP will cover, the Agencies¹ have sought to focus on those that we consider will allow us to carry out the most appropriate level of assessment. Accordingly, given the wide geographic coverage of the Solway Tweed RBMP, and the range of water related issues the RBMP will touch upon, it is not possible to provide baseline information to a very detailed level.
- 1.2 More detailed information, particularly about the water environment and water dependent biodiversity, is available in the Significant Water Management Issues (SWMI) Report for the Solway Tweed RBD which was published for consultation on 25 September 2007 and is available at <u>www.sepa.org.uk/consultation/index.htm</u>. Where appropriate, such information is signposted in this baseline. Further information will also be included within the draft RBMP when published.
- 1.3 The Solway Tweed RBD, as shown in Map 1, covers an area from Stranraer on the west coast to Berwick upon Tweed on the east coast, and from Peebles in the north to Brough in the south. The RBD incorporates the catchments that feed into the Solway Firth and Tweed Estuary, the estuaries themselves and the groundwater that underlies the district. The district has an area of around 17,500 km² (of which approximately 3,739km² falls within England, the remainder in Scotland). The main river catchments in Scotland include the Rivers Tweed, Esk, Annan, Nith, Ken, Dee and Cree and their associated wetlands. In England the catchment includes the Rivers Eden, Irthing, Petteril, Esk, Wampool, Till and Beamish.
- 1.4 The landscape is largely rural with an extensive coastline. The RBD has extensive agricultural activity, although as the rural economy continues to diversify, tourism has increased in importance. The RBD supports a wide range of internationally important habitats and wildlife, with many of the water bodies designated as Special Areas of Conservation and Special Protection Areas, notably the River Eden and tributaries and the Solway Firth. There are also many excellent salmon and sea trout rivers in the district.
- 1.5 The area is home to approximately 450,000 people, with key economic activities including tourism, agriculture, forestry, fish farming and manufacturing.
- 1.6 The Solway Tweed RBD has higher rainfall than much of the rest of the UK, particularly in the west. The vast majority of public water supply comes from surface waters, the remainder from groundwater. There are many excellent salmon rivers in the district and the generally clean water supports sectors such as fish farming and whisky manufacture.
- 1.7 The most important water related environmental problem is diffuse pollution. This is related to the importance of agriculture in the region and is summarised in detail in Section 5.3

¹ The Solway Tweed RBMP is being prepared jointly by the Environment Agency and the Scottish Environment Protection Agency.

Map 1 - Solway Tweed River Basin District



SECTION 2 - BIODIVERSITY, FLORA AND FAUNA

- 2.1 Biodiversity is the variety of life. It is also important for our health and well being, and as a provider of natural services. These ecosystem services sustain the environment on which we depend and mitigate impacts arising from human activity. The RBD's peat bogs, for example, contribute to the purification of water and to the locking-up of carbon dioxide and along with other wetland habitats can help control and mitigate the impacts of flooding.
- 2.2 The RBD's biodiversity has developed over a relatively short period since the last ice age, which ended around 10,000 years ago. The relatively short period for the establishment of the species and habitats which make up the area's ecosystems means that there has been little time for new species to evolve from existing ones. The fauna and flora of the RBD are, therefore, generally characterised by species that have good dispersal abilities or which have arrived from neighbouring geographical areas².
- 2.3 The RBD supports tens of thousands of species of animal, plant and microbes. The vast majority of these we know very little about, the focus of our knowledge being largely on birds, mammals, fish, amphibians, reptiles and vascular plants, even though together they make up a small amount of the total species. These species inhabit a wide range of habitats that are present across the RBD. Habitats in the RBD's landscape that we see today consist of:
 - a few remnants of the original colonising species and habitats;
 - · habitats derived from prehistoric human activities and species that these support;
 - habitats resulting from the more recent intensification of agricultural and industrial activity, and increasing urbanisation over the last 250 years, with the species that inhabit these.
- 2.4 Many of the habitats are internationally important. In terms of protected sites, the importance of the RBD in a European context is recognised in the designation of 27 Special Areas of Conservation (SACs)³. Most notable are the Inner Solway Firth, which has the third largest area of intertidal sand and mudflats in Britain, the Wigtownshire mosses, which are considered to be some of the best blanket bogs in the United Kingdom and the River Eden. SACs have also been designated to protect a number of key species, including lamprey.
- 2.5 The RBD's location, extensive coastline and wetlands make it very important for bird life, particularly for migrating wildfowl and seabirds. 10 Special Protection Areas (SPAs)⁴ have been established under the EU Birds Directive to protect the breeding, feeding and roosting habitats of migrating bird species. The locations of all SPAs and SACs in the Solway Tweed RBD are shown in Map 2.
- 2.6 In addition to these European designations, the RBD also has a network of over 220 Sites of Special Scientific Interest (SSSIs)⁵.
- 2.7 A breakdown of all protected sites in the Solway Tweed RBD is provided in Table 1.

² SEPA (2006) Change Tomorrow Today: State of Scotland's Environment.

³ Special Areas of Conservation (SACs) are areas designated under the European Directive commonly known as the "Habitats Directive" where they support rare, endangered or vulnerable natural habitats and species of plants or animals (other than birds). Special Protection Areas (See below) and SACs form what is known as the Natura 2000 network of sites. Together these cover sites of European importance for nature conservation.

⁴ Special Protection Areas (SPAs) are classified under the EC Directive on the Conservation of Wild Birds (79/409/EEC), commonly known as the "Birds Directive". SPAs are intended to safeguard the habitats for which they are selected and to protect birds from significant disturbance. Together with SACs, these cover sites of European importance for nature conservation.

⁵ SSSIs represent the best examples of Scotland's natural heritage and are designated by Scottish Natural Heritage (SNH) for their plants, animals or habitats, their rocks or landforms.

Table 1 - Summary of protected site numbers in Solway Tweed RBD

	SSSI	SAC	SPA	NNR ⁶	Ramsar ⁷
Total in RBD	225	27	10	15	8

- 2.8 The Solway Tweed RBMP will play an important role in protecting and enhancing the area's aquatic biodiversity. Current biodiversity issues being experienced in the water environment include:
 - Continued increases in nitrogen and phosphorus levels in surface waters, principally from intensive agricultural practices, are driving ecological changes in plant communities in a number of rivers, lochs/lakes and estuaries;
 - Certain species of flowering plants and algae thrive on the excess nutrients. The resulting prolific growth may reduce the amount of oxygen and sunlight in the water, threatening the survival of other plants, invertebrate and fish;
 - More frequent and severe river flooding leads to more dynamic river habitats, which can affect river ecology;
 - Increased likelihood of summer droughts, leading to river water quality problems, may have significant impacts on invertebrates and fish;
 - Acidification is a potential problem across large areas of upland Scotland, but evidence of ecological damage is mainly confined to freshwaters in Galloway (in Solway Tweed RBD).
 - Introduction of Invasive non-native species which can compete with native flora and fauna and result in a loss of biodiversity.
- 2.9 Many of the District's rivers are designated under the European Directive (78/659/EEC) as freshwater fish protected areas. This legislation aims to protect and improve the quality of running or standing waters which support or which, if pollution were reduced or eliminated, would become capable of supporting fish life. Member States must designate waters as being capable of supporting salmonid or cyprinid fisheries. They are then obliged to monitor the waters and demonstrate that fish populations are safeguarded from the harmful consequences of pollution. All Scottish waters in the RBD designated by this Directive are identified as salmonid waters.
- 2.10 In addition to sites formally designated for their natural heritage importance, Local Biodiversity Action Plans (LBAPs) have been prepared across the Solway Tweed RBMP area. These set out priority species and habitats and actions for their protection and enhancement. It is not practical or meaningful in a strategic plan like the Solway Tweed RBMP to identify all species and habitats covered, however this information is available from the LBAPs themselves through the links in Table 2.

⁶ National Nature Reserves (NNRs) are designated under the National Parks and Access to the Countryside Act 1949 or the Wildlife and Countryside Act 1981. NNRs are used to protect a range of wildlife and landscapes, including many rare species and habitats of international importance.

⁷ Ramsar sites are wetlands of international importance designated under the Ramsar Convention of 1971.

Name of LBAP	Weblink
Dumfries and Galloway	http://www.dumgal.gov.uk/dumgal/MiniWeb.aspx?id=255&menuid=391 <u>3&openid=3913</u>
Scottish Borders	http://www.ukbap.org.uk/library/LBAPS/ScottishBorders.pdf
Cumbria	http://www.wildlifeincumbria.org.uk/cbap/habitat_biodiversity.asp
Northumbria	http://www.northumberland.gov.uk/drftp/5532.pdf

2.11 In addition, there are numerous sites which are protected by local designations because of their importance to the locality. Given the geographic scale of the Solway Tweed RBMP, it is not proposed to detail the number and location of such sites. Further information on these local designations can be found on the relevant local authority websites.

Map 2 – Location of Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)



SECTION 3 - POPULATION

3.1 Demographic Trends

The Solway Tweed RBD is predominantly rural in nature. Around 450,000 people live in the area, mostly in and around the towns of Penrith, Carlisle, Berwick and Dumfries and in smaller towns such as Galashiels and Hawick. The population density is low at around 23 people per square kilometre. The population is expected to remain roughly constant with declining birth rates offset by in migration to the area. Migration into the Scottish Borders has been more pronounced (3.6% between 1995 and 2005) and this trend is expected to continue. Employment in the Solway Tweed RBD currently stands at almost 175,000 people, and is expected to decline slightly to approximately 162,000 by 2015. This is due to demographic change, with more of the population retiring from the workforce than joining it. Parts of the district have poor or non existent local services (e.g. village shop, post office, local GP etc.) and this has contributed to some outward migration from very rural areas across the district. A small number of areas, both urban and rural, are characterised by pockets of economic deprivation, poor quality housing and degraded environment.

3.2 Employment

In the Solway Tweed RBD, while agriculture and forestry are key land use activities (the south of Scotland has double the Scottish average percentage of employment in these sectors), it is public administration and the service sectors which employ the most people. Manufacturing remains important in the area and is above the UK average, although this is declining. The dependency on agriculture and the non financial service sector is higher than in other parts of Scotland or the North West region of England.

3.3 Tourism

Tourism is an important and growing source of employment and income throughout the RBD. It is expected to support (by 2015) over 10% of employees (14.5% in Eden District) and generate approximately 6% of income. Cumbria received 15.54 million visitors in 2005, with an economic value of £1,129m. With 19% of the Lake District National Park in the RBD, this is a significant industry. The natural beauty of the district is an important factor for tourists, as are the visitor facilities provided to facilitate tourism. In the Visit Scotland Tourism Attitudes Survey 2005 92% of respondents identified scenery as being either important or very important in influencing their choice of Scotland as a tourism destination. 89% also identified the natural environment as being important or very important. The coast to coast, Pennine Way and Hadrian's Wall paths both pass through English part of the RBMP area, as do the Hadrian's, the Pennine, C2C and Penrith to Carlisle cycleways. The Southern Uplands Way extends across much of the Scottish side of the district.

3.4 Recreational Use of Water

There is a wide range of recreational activities that rely on water in the RBD, including activities which take place on water bodies such as canoeing, kayaking, windsurfing and yachting. Some recreational activities abstract and discharge notable amounts of water for recreational use, in particular swimming pools.

Although those taking part in many of these activities are not charged for water use, recreational use of water can contribute significantly to the local economy through spending. For example, angling contributed over £112 million to the Scottish economy in 2003, and is estimated to contribute around £8m to the Scottish Borders economy.

Activities that use water bodies are affected by a range of features of the water body. Bathing and paddling in particular are influenced by water quality. The blue flag standard symbolises water and environmental quality, among other factors such as safety and sanitary facilities. Of the 105 blue flag beaches and 12 marinas in the UK, three are in Solway Tweed RBD (Kirkcudbright, Maryport and Whitehaven).

3.5 Human Pressures on Water

In the Solway Tweed RBD, diffuse pollution and morphological pressures are the most common causes of rivers and lakes being at risk. Transitional water bodies are mainly at risk from point source pollution and morphological pressures. Coastal water bodies are at risk from point and diffuse source pollution, whereas groundwater bodies are mainly at risk from diffuse pollution. These pressures reflect the rural nature of the district and the predominance of agriculture. Further details on the pressures on waterbodies in the RBD are provided in Section 5 and in the Significant Water Management Issues Report (www.sepa.org.uk/consultation/index.htm).

3.6 Economic use of water

"Solway Tweed River Basin Characterisation: An economic analysis of water use", which is available at www.sepa.org.uk/pdf/publications/wfd/Article 5 Solway Tweed Economic.pdf was published in 2005 and sets out the key economic activities dependent upon water in the Solway Tweed RBD. These are summarised in Section 11 (material assets) but for full details please reference the report.

SECTION 4 - HUMAN HEALTH

4.1 Across the district, the generally very good environmental conditions mean that there are few human health issues attributable to the quality of the environment. In respect of the water environment, there are a number of issues which are relevant to human health.

4.2 Bathing Waters

SEPA and the Environment Agency report on the quality of identified bathing waters in Scotland and England. There are 8 identified bathing waters in the district. All but the Sandyhills bathing waters in the district were classified as good status for 2007. Details of the recent monitoring of bathing waters sites to 2007 are provided below.

4.3 Southerness, Dumfries and Galloway

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
n/s	n/s	Good	Good	Poor	Good	Good	Poor	Good	Good	Good

Southerness was identified as an EU Bathing water in 1999. In 2007 all samples passed at least the EU mandatory standards, with most of them meeting the more stringent guideline values. The main threat to water quality is from sewage inputs especially from Dumfries. In addition to the sources of sewage from Dumfries, there are a number of Scottish Water discharges from small communities along the Nith Estuary.

The combined sewer overflows (CSOs) in the Troqueer catchment of Dumfries were upgraded in 2005 to provide better screening and to reduce the frequency of overflows. However, there are still issues with overflow frequency at two outfalls on the Troqueer network and premature overflows of settled sewage at Troqueer waste water treatment works which require to be addressed. The only private waste water treatment plant is at Southerness, which serves the caravan park and village. This discharge was upgraded to full treatment at the end of 2005.

4.4 Sandyhills, Dumfries and Galloway

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Poor	Poor	Good	Poor	Poor	Good	Good	Good	Good	Good	Poor

Sandyhills bathing water has had a varied history of compliance and unfortunately achieved poor water quality in 2007. The main threat to bathing water quality here is agricultural run-off. Work funded by the Scottish Executive, through a biogas and composting project, together with an associated farm inspection programme carried out by SEPA, now appears to be reducing agricultural diffuse pollution.

4.5 Rockcliffe, Dumfries and Galloway

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
n/s	n/s	Good	Poor	Good	Poor	Poor	Good	Good	Good	Good

Prior to its first identification in 1999, the bathing water at Rockcliffe had not been of consistently satisfactory quality. However, since the local sewage treatment upgrading completed by Scottish Water before the 2004 bathing season, it has consistently complied with EU good quality requirements.

4.6 Brighouse Bay, Dumfries and Galloway

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Good	Good	Good	Good	Good	Good	Poor	Good	Good	Good	Good

Brighouse Bay is a small sheltered sandy beach between rocky outcrops. With no significant sewage discharges into this catchment, there is little doubt that the

occasional high bacterial counts in samples from this site are due to agricultural run-off both from farm steadings and diffuse agricultural run-off. A project funded by the Scottish Executive was completed last year. This involved extensive fencing of watercourses and provision of alternative livestock watering points. Two farm wetlands were also introduced to reduce poaching (trampling) of riverbanks and livestock excreta entering the Brighouse Burn. It is not yet clear if the good overall water quality achieved again in Brighouse Bay owes more to the relatively dry weather of the 2005 and 2006 summers, or the extensive efforts to reduce agricultural sources of pollution.

4.7 Carrick, Dumfries and Galloway

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
n/s	n/s	Good	Good	Good	Good	Excellent	Poor	Good	Good	Good

Carrick was identified as a bathing water in 1999, and has since had a rather variable quality record. In 2007 it was of good quality status. As a result of the failure in 2004, a programme of farm inspections was undertaken. The conclusion of these inspections was that agricultural run-off from this catchment was unlikely to have been the cause. However, as there are no major sewage inputs nearby, SEPA is considering further possible contributors to this failure. These include input from nearby islands which are heavily populated with sea birds, or tidal influences carrying diffuse pollutants along the coast from the Cree Estuary.

4.8 Skinburness, Cumbria

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Good	Good	Excellent	Good	Good	Good	Excellent	Good	Good	Good	Good

As shown above, Skinburness, Cumbria has been measured as Good or better for previous eleven years.

4.9 Silloth, Cumbria

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Good	Good	Good	Good	Excellent	Good	Good	Good	Good	Excellent	Good

As shown above, Silloth, Cumbria has been measured as Good or better for the previous eleven years.

4.10 Spittal, Northumberland

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Good	Poor	Good	Poor	Good	Good	Good	Poor	Good	Good	Good

As shown above, measurements at Spittal have been variable over the last ten years, although recent measurements have been at the "good" standard.

4.10 Drinking Water Abstractions

Protected areas for drinking water supplies have been identified as water bodies that supply a daily average of more than 10 m^3 water for drinking or supply more than 50 people. In the Solway Tweed RBD there are 61 water bodies identified as Drinking Water Protected Areas. It is notable that there is significant export of drinking water from the RBD to other parts of the North West region via abstraction from Haweswater Reservoir, which has an average abstraction of 432 million litres per day. There are several other significant public water supply abstractions in the district, including the Rivers Eden and Gelt, which supply to the Carlisle area.

4.11 Private Drinking Water Abstractions

In addition to public supply of water, private abstraction for drinking water also takes place. In the Scottish part of the Solway Tweed RBD there are 2,924 private water

supply abstractions. In the English part there are 19. However, these figures are not directly comparable due to the different licensing regimes in Scotland and England. In England any abstraction of less than 20 m^3 /day does not require a licence. This is considerably more than the average amount used by a single household and therefore there are likely to be significantly more unlicensed private drinking water supply abstractions in England.

4.12 Waste Water Treatment and Disposal

Characterisation data indicate that more than a third of the rivers and lochs/lakes at risk of failing to meet the WFD objectives by 2015 in the Solway Tweed RBD are affected by point source or diffuse source pollution from sewage disposal activities.

As a predominantly rural area, many properties will dispose of waste water to septic tanks. Septic tanks have the potential to discharge nutrients to the water environment including nitrates, phosphates and ammonia. Discharges from septic tanks can also lead to increased biochemical oxygen demand (BOD), reducing oxygen availability for flora and fauna in the water body.

SECTION 5 - WATER

- 5.1 The key purpose of the Solway Tweed RBMP is to protect and enhance the water environment across the district. The bulk of the work undertaken will address issues related to the water environment. The most comprehensive and current assessment of the key environmental issues relating to water is the Significant Water Management Issues (SWMI) report for the Solway Tweed RBD. Both summary and detailed information on the significant pressures and issues in this district can be accessed here www.sepa.org.uk/consultation/index.htm. A summary of the key issues derived from SWMI is set out below.
- 5.2 Overall, water quality in the Solway Tweed area is generally good. However, the Characterisation Report (2005) and more recently the Significant Water Management Issues Report (2007) identify a number of pressures upon the district's waters which may result in some not achieving good status. The initial characterisation assessment indicates that 56% of all water bodies in the Solway Tweed RBD may not meet WFD default objectives. These waters were 289 river, 21 lake, 6 transitional, 2 coastal and 16 groundwater water bodies. In the District, diffuse pollution and morphological pressures are the most common causes of rivers and lakes being at risk. Transitional water bodies are mainly at risk from point source pollution and morphological pressures. Coastal water bodies are at risk from point and diffuse source pollution, whereas groundwater bodies are mainly at risk from diffuse pollution.
- 5.3 For ease of reference, the water environment has been described in relation to pressures upon it from activities which may result in:
 - Pollution (diffuse and point source);
 - Abstraction;
 - Morphology (alterations to the physical form of waterbodies);
 - Invasive non-native species.

Each of these is briefly described in turn.

5.4 Pollution (Diffuse and Point Source)

- 5.4.1 Perhaps the most well-known issue affecting the water environment is pollution. Pollution can threaten the quality of all parts of the water cycle from groundwater to rivers, lochs/lakes, estuaries and coastal waters. Pollution means that there is too much of a material (a pollutant) in the water that is harmful to water quality or aquatic plants or animals. A pollutant can be anything from a poisonous metal or pesticide to a nutrient which can choke waters with excessive growth, or even silt that can smother fish spawning beds.
- 5.4.2 Pollution comes from one of two sources:
 - local (point source pollution) sources, e.g. pipes discharging effluent from industrial sites, wastewater treatment plants or mines;
 - widespread (diffuse pollution) sources, e.g. land use activities such as farming, forestry and urbanisation.
- 5.4.3 The significant issues relating to the pollution of the water environment in the Solway Tweed RBD are listed in Tables 4 and 5 for diffuse source and point source pollution respectively. Information on the individual significant issues is described in Sections 5.4.5 to 5.4.9.

Table 4 - Significant diffuse source pollution issues in the Solway Tweed RBD

Key sector	Rivers	Lochs/ lakes	Transitional	Coastal	Groundwater
Agriculture	~	~	~	~	~
Forestry	~	~			
Sea and coastal water transport				1	
Electricity production (acidification)	~	~			
Sewage disposal activities	~	~	1	1	
Total length/area	2,333 km	18 km ²	322 km ²	177 km ²	6,069 km ²

Table 5 - Significant point source pollution issues in the Solway Tweed RBD

Key sector	Rivers	Lochs/ lakes	Transitional	Coastal	Groundwater
Sewage disposal activities	~	~	4	~	
Manufacturing			~	~	
Electricity generation			~		
Total length/area	660 km	8 km ²	325 km ²	42 km ²	

5.4.5 Diffuse pollution from agriculture

Diffuse agricultural pollution arises from land use activities such as livestock grazing, cultivation of land to grow crops and from farm steading run-off. Such activities can give rise to a loss of potential pollutants which individually may not have an impact but together, at the scale of a river catchment, can impact on water quality. Much of this pollution is unintentional and good agricultural practice can help address the problem.

These types of pollutants can be transported to waters by a number of recognised routes. As a result, both land use and run-off management are important in the control of diffuse agricultural pollution.

Diffuse agricultural pollution can have the following types of impact:

- Losses of nutrients from fertilisers, animal manures and slurries applied to land result in the proliferation of plant growth. This can smother rivers and estuaries while, in lochs/lakes and coastal waters, enhanced growth of plankton reduces light penetration and affects oxygen levels.
- Organic matter from animal manures, slurries and effluent from livestock feeds (e.g. silage) depletes oxygen in rivers. This, together with toxic components such as ammonia, reduces the number of animals and plants which can thrive in our rivers.
- Soil erosion can have a direct physical impact by smothering gravels in rivers and lochs/lakes (important to fish and other organisms) and reducing light penetration in estuaries and coastal waters. It is also important in the transport of other pollutants such as pesticides, nutrients and faecal pathogens attached to soil particles.
- Livestock manures and slurries, and access to watercourses by cattle and sheep can lead to significant losses of micro-organisms from faecal matter to bathing and shellfish waters. This can affect the amenity value of the water environment and can pose a risk to human health.
- Losses of pesticides and veterinary medicines (including sheep dip) during handling, use and washdown can cause severe impacts to plants and animals in rivers and can affect the quality of drinking water.

• Nutrients from fertilisers, animal manure and slurries can enter groundwater, affecting the quality of water available for public water supply abstraction, and affecting rivers and other water bodies that are groundwater fed.

Diffuse pollution from agriculture is a significant issue for groundwater, rivers, lochs/lakes, transitional and coastal waters. It is estimated that over 80% of those water bodies at risk of failing to meet the WFD's environmental objectives by 2015 are affected by diffuse pollution from agriculture.

5.4.6 Diffuse pollution from forestry

Environmental impacts from forestry are generally much lower than those from other land uses. This is partly a result of the lower levels of inputs, cultivation practices and associated losses from forestry but also because of the effective application of codes of good practice which have transformed forestry practice over the past 15 years. However, problems associated to diffuse pollution remain and includes:

- nutrient input to highly sensitive upland lochs/lakes;
- pollution incidents associated with spillages, erosion of roads or the felling and planting of forests.

Characterisation data indicate that more than a quarter of the rivers and lochs/lakes in the RBD at risk of failing to meet the WFD's environmental objectives by 2015 are affected by diffuse pollution related to forestry activities. A particular concern is around upland lochs/lakes having high ecological status and which are very vulnerable to increased nutrient inputs associated with inappropriate re-forestation or felling. Typically this type of lake/loch is very rare across Europe and they therefore have important biodiversity value internationally.

5.4.7 Diffuse pollution from acidification

Acidification of rivers and lochs/lakes occurs where high levels of acidifying pollutants (such as oxides of sulphur and nitrogen from the burning of fossil fuels and ammonia from intensive livestock rearing) are deposited from the atmosphere in catchments overlying hard, slow weathering rocks where soils are thin and provide little buffering capacity. Upland areas receive higher levels of deposition because of higher rainfall and ground level cloud. Sulphur and nitrogen dioxides may be transported considerable distances in the atmosphere and may cross national boundaries before being deposited. Hence emissions of these gases from the rest of the UK and continental Europe contribute to acidification in the Solway Tweed RBD. Although acidification is a potential problem across large upland area, evidence of damage to freshwaters in the Solway Tweed RBD is most prevalent in south west Scotland, particularly Galloway. Parts of the upper Eden catchment are also at risk.

As well as an increase in acidity (lower pH), acidification results in increased concentrations of sulphate, nitrate and labile aluminium in freshwaters and reduced acid-neutralising capacity (ANC). Environmental effects of acidification include:

- The increase in acidity and toxic forms of aluminium cause a decline in the biodiversity of rivers and lochs/lakes. Fish, invertebrates and aquatic flora may all be affected, as may some birds associated with freshwaters (e.g. dippers). The effects of acidification may be mitigated to some extent by naturally occurring organic acids; highly coloured, peaty waters may therefore show less damage.
- Fish such as Atlantic salmon and brown trout are particularly sensitive to acidification and, in some waters; populations of these fish may be lost completely. Early signs of acidification damage include a progressive ageing of the trout population due to poor survival of the more sensitive eggs and fry.

- Aquatic invertebrate communities become impoverished as the more sensitive species are eliminated.
- Many species of molluscs, mayflies, some caddis flies and the freshwater shrimp *Gammarus* are acid-sensitive.
- Many species of diatoms (microscopic algae that live in lochs/lakes or on river beds) are also acid-sensitive. Diatom remains that are preserved in loch sediments provide a useful means of tracking acidification over time.

5.4.8 Diffuse and point source pollution from sewage disposal activities

In urban areas sewers are constructed to collect sewage effluent and transport it to sewage treatment works. In most areas sewers allow the overflow of diluted sewage effluent during heavy rain in order to protect homes and properties from flooding as well as protecting the treatment works from flooding.

In rural areas many houses, small hotels and industrial sites are not connected to a public sewage treatment works and treatment is typically provided by septic tanks or small treatment works, many in private ownership. Much of the pollution from these is diffuse in nature and consequently more difficult to address.

Sewage effluent can be highly polluting as it contains:

- organic matter that removes oxygen from the water, potentially killing fish and other aquatic wildlife;
- nutrients which can allow algae to grow to nuisance levels, smothering fish habitats and requiring expensive treatment of water abstracted for industrial or domestic use;
- toxic substances from industry, household chemicals and run-off from roads which includes hazardous substances that do not degrade and accumulate within fish and marine mammals;
- sewage litter which can affect the amenity value of rivers and beaches;
- bacteria and viruses which can cause health problems with water contact sports such as swimming, canoeing or fishing.

Septic tanks have the potential to input nutrients to the water environment including nitrates, phosphates and ammonia. Discharges from septic tanks can also lead to increased BOD, reducing oxygen availability for flora and fauna in the water body.

Characterisation data indicate that more than a third of the rivers and lochs/lakes at risk of failing to meet the Water Framework Directive's environmental objectives by 2015 in the Solway Tweed river basin district are affected by point source or diffuse source pollution from sewage disposal activities.

5.4.9 Point source pollution from manufacturing

Point source pollution refers to a discrete and identifiable source of pollutants that is affecting the environment. Point source pollution relating to manufacturing can be varied and depends on the process at the factories involved.

Typical pollutants include heavy metals, chlorinated solvents, nitrates, phosphates, organic compounds and pesticides. Although controlled through permitting, discharges can adversely affect water quality especially during times of low flow, when there is less dilution. Addition of any of these pollutants to the environment will impact on the local ecosystem around the discharges, but can also have a wider impact.

Only one water body in the Solway Tweed RBD at risk of failing to meet good ecological status is affected by point source pollution from manufacturing.

5.5 Abstraction

- 5.5.1 Abstraction of too much water is a potential problem for both groundwater and surface water resources. If we remove too much water for drinking or commercial activities, we reduce the system's ability to dilute and cope with pollution. In extreme cases, river beds can dry up or salt water can be drawn into groundwater.
- 5.5.2 The significant issues relating to abstraction and flow regulation pressures on the water environment in the Solway Tweed RBD are listed in Table 6 and described in more detail in Sections 5.5.3 to 5.5.5.

Key sector	Rivers	Lochs/ lakes	Transitional	Coastal	Groundwater
Collection, purification and distribution of water	1	~			
Agriculture	~				
Electricity generation		~			
Total length/area	438 km	20 km ²			

Table 6 - Significant abstraction and flow regulation issues in the Solway Tweed RBD

5.5.3 Abstraction and flow regulation pressures and morphological change from water supply

The amount of water in rivers and lochs/lakes varies naturally. Environmental impacts result when the ecology cannot tolerate the changes in water levels and/or flows. In the most extreme cases, abstraction can result in the drying up of rivers or exacerbation of the impacts associated with dry rivers.

The potential negative environmental impacts from water supply are associated with:

- the abstraction of water;
- the construction and operation of dams and associated engineering.

If not controlled, these may result in:

- low levels of water caused by direct abstraction from rivers (particularly during the summer) leading to damage to the ecology of rivers and their associated wetlands;
- low groundwater levels caused by abstraction leading to the drying out of small tributaries and wetlands and the reduction in river baseflows;
- variable water levels in lochs/lakes and reservoirs leading to regular drying out of the shoreline, preventing the growth of plants and spawning of fish;
- barriers to fish migration caused by dams;
- barriers to sediment movement downstream of dams, reducing the availability of gravels needed by spawning fish;
- loss of bankside river habitat for fish and invertebrates.

Approximately a quarter of at risk water bodies are affected by abstraction for water supply in the Solway Tweed RBD.

5.5.4 Abstraction pressures from agriculture

Abstraction, particularly for irrigation, is typically required during dry weather when river flows are low. Consequently abstraction for irrigation exacerbates naturally occurring low flows. A typical irrigation pump can extract 1,200 m³ of water over a period of 24 hours. This is equivalent to the average water used by 6,000 people. In addition, the distribution of crops means that farmers frequently have to rely on small burns and

tributaries which, during periods of low flows, may not have sufficient water to support the abstraction without causing potential environmental impact.

Abstraction from agriculture is typically at its highest levels between May and August. This has the following environmental impacts:

- Reduced summer flows occasionally lead to stranding of fish and drying out of wetlands.
- It increases the vulnerability of fish and other freshwater life due to raised temperatures in pools isolated by low flows.
- It exacerbates the effects of pollution due to limited dilution.
- Small dams across rivers are sometimes built to assist in the abstraction of water and can, if poorly constructed, impede the migration of fish.
- The effects of agricultural abstraction often combine with the effects of diffuse pollution to seriously damage the ecology of small burns.
- Changes to 'flow variability' are important to many river species including salmon, trout and pearl mussels.

5.5.5 Abstraction and flow regulation pressures from hydropower

The potential negative environmental impacts of hydropower are associated with the abstraction of water and the construction and operation of dams. If these activities are not controlled, they can result in:

- very low flows in rivers, which may periodically be virtually dry;
- highly variable flows below generating stations, resulting in bare banks and potential stranding of fish;
- highly variable water levels in reservoirs leading to regular drying out of the shoreline, preventing the growth of plants and spawning of fish;
- barriers to fish migration caused by dams and death of fish entering unscreened turbines;
- barriers to sediment movement downstream of dams, reducing the availability of gravels needed by spawning fish;
- loss of bankside river habitat for fish and invertebrates.

However, some hydropower reservoirs and rivers affected by hydro schemes create the conditions that have led to sites being designated under conservation legislation. For example, some reservoirs are operated to maintain constant reservoir water levels when black throated divers are nesting. In future it may be possible to deliberately create specific types of habitat below new hydropower sites.

In addition, some naturally inaccessible rivers were opened up to migrating salmon and sea trout as part of the mitigation measures for some hydro schemes and many reservoirs are used for angling (especially for brown trout). Hydropower developments often occur where there are waterfalls or rapids, and so coincide with the type of river used by canoeists and for rafting.

5.6 Morphology

- 5.6.1 The morphological alterations (physical modifications) that have been made to our waters often result from engineering works carried out so that we can make use of our waters or lands. These activities can directly remove habitat, indirectly change flow or alter levels of sediments in our waters. Examples include:
 - drainage of lands for development, agriculture or forestry;
 - construction of flood defences or weirs to control river water levels;
 - damming of lochs/lakes providing storage for power generation or water supply;
 - port developments or construction of coastal defences to prevent flooding or erosion.

5.6.2 The significant issues relating to the morphology of the water environment in the Solway Tweed RBD are listed in Table 7 and described in more detail in Sections 5.6.3 to 5.6.4.

Key sector	Rivers	Lochs/ lakes	Transitional	Coastal	Groundwater
Agriculture	~				
Forestry	~				
Water supply	~	~			
Total length/area	1,574km	13 km ²			

5.6.3 Morphological change from agriculture

Rivers are naturally dynamic; they flood adjacent lands, erode their banks and bed, and move sediment around. These natural processes help create a healthy river (or loch/lake) environment that will support a range of important flora and fauna.

Morphology describes the size, form and character of a river or loch/lake. Under natural conditions, rivers will create a shape, size and character that reflect the balance between local conditions and conditions within the wider catchment. Some agricultural activities (e.g. riverbank engineering) can affect this natural balance and result in morphological change. This can lead to a loss of important habitats, changes to rates of erosion or sediment deposition and, potentially, an increased risk of flooding elsewhere in the catchment.

The activities associated with agriculture can result in the following types of environmental impact.

- Grazing and trampling of river banks by cattle can lead to loss of bankside habitats and vegetation, increased inputs of fine sediments and increased risk of bank erosion.
- The loss of habitat for fish spawning, invertebrates and aquatic plants may lead to increased risk of bank and bed erosion from sediment removal.
- The construction of embankments for flood defence can lead to the loss of floodplain wetlands and associated biodiversity. The presence of structures can also result in a loss of in-channel habitat due to increased erosion during floods affecting fish, invertebrates and aquatic plants. Flood risk downstream may also be increased.
- The loss of bankside vegetation as a result of bank protection work often increases the risk of bank erosion downstream, resulting in loss of in-channel habitat supporting fish, invertebrates and aquatic plants.
- Channel straightening can result in a loss of in-channel habitats and significant changes to erosion and sediment deposition in the surrounding channel.
- The removal of riparian vegetation can lead to increased inputs of fine sediments, increased risk of bank erosion, loss of bankside habitats and elevated water temperatures.

The permanency of engineering structures means that many of these impacts are likely to be cumulative and long lasting.

River engineering in agricultural areas can have direct economic consequences for other land owners. Where engineering has substantially altered the natural character of a river, there may be unplanned impacts that must be addressed by upstream or downstream land owners. In severe cases, these impacts can result in a requirement for continued and costly maintenance works, including sediment management and erosion control.

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In some areas of the country, land drainage and river engineering have contributed to increased flood risk. These impacts are typically restricted to areas where works are undertaken in an ad-hoc manner without full consideration of the flooding processes and other works within the catchment.

5.6.4 Morphological change from forestry

The impact of forestry upon the physical structure of rivers is a historical problem caused by certain forestry practices over the past 60 years. This impact is now largely avoided by the application of good environmental practice.

Damage to the physical structure of rivers by forestry is associated with the following practices.

- Dense planting of coniferous trees up to the bank of rivers creates deep shading that prevents the growth of riparian vegetation which protects the river bank from erosion. The resulting erosion can result in shallow open rivers with little shelter for fish and low biodiversity.
- On steep hillsides, poorly sited culverts constructed as part of forestry road crossings can prevent the migration of fish upstream reducing the areas available for spawning.
- Inappropriate land drainage can increase the rate of run-off from hillsides. The result can be higher peak flows, and the scouring and erosion of river gravels and banks.
- Harvesting can result in direct damage to rivers by machinery crossing, or operating too close to river banks.

5.7 Invasive non-native species

- 5.7.1 Our water environment also faces other threats such as Invasive non-native species. These are non-native plants or animals which compete with, and over-run, our natural aquatic plants and animals.
- 5.7.2 The significant issues relating to Invasive non-native species in the water environment in the Solway Tweed RBD are listed in Table 8 and described in more detail in Section 5.7.3.

Table 8 - Significant Invasive non-native species issues in the Solway Tweed RBD

Key sector	Rivers	Lochs/ lakes	Transitional	Coastal	Groundwater
Recreational, sporting and cultural	~	1			
Total length/area (km/km ²)	26 km	7 km ²			

5.7.3 Invasive non-native species from recreational, sporting and cultural activities

Invasive non-native species have been divided by the UK Technical Advisory Group on the Water Framework Directive (UKTAG) for the purposes of its risk assessment into three categories of impact – high, low, and unknown. To make the task of assessing risk to the water environment manageable, work has concentrated on ten high impact species:

- Australian swamp stonecrop (Crassula helmsii);
- Chinese mitten crab (Eriocheir sinensis).
- common cord-grass (Spartina anglica);
- floating pennywort (Hydrocotyle ranunculoides);
- Japanese weed (Sargassum muticum);

- North American signal crayfish (Pacifastacus leniusculus);
- parrot's feather (Myriophyllum aquaticum);
- slipper limpet (*Crepidula fornicata*);
- water fern (Azolla filiculoides);
- zebra mussel (Dreissena polymorpha);

These species were selected because:

- their impact is known to be severe;
- information on them is usually available for the water bodies in which they occur.

Scottish Natural Heritage (SNH) and Natural England identified records of known locations of these Invasive non-native species in the Solway Tweed RBD. Their presence indicates a risk that the water body will not achieve the WFD default objective of good ecological status. The analysis was not a comprehensive assessment of all Invasive non-native species but indicates the potential extent of the problem in the District.

The following four Invasive non-native species identified by UKTAG as posing a risk to water ecosystems are present in the Solway Tweed RBD.

- North American signal crayfish, *Pacifastacus leniusculus,* are present in several catchments. It has an impact on the fish abundance and age structure, as one of its main food sources are fish eggs and larvae. It also burrows into banks, releasing silt and causing possible slumping of banks.
- Japanese weed, *Sargassum muticum,* is a brown seaweed and impacts through smothering existing marine communities. It also has a potential economic impact as these communities may include shellfish beds. It was first recorded in Loch Ryan.
- Common cord-grass, *Spartina anglica,* is found along the Solway coast where it grows on mudflats and the adjacent merse, changing the habitats to a monoculture and reducing the area of open mud available to estuarine birds. It also tends to change the pattern of accretion of silt.
- Australian swamp stonecrop, *Crassula helmsii*, is a highly invasive water plant which can form dense mats, completely out-competing native water plants and creating a poorer habitat for native invertebrates and fish. It is also extremely difficult to eradicate once established.

In addition, large stands of Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens gladulifera*) are present along river banks. This can result in the structure and condition of riparian zones no longer corresponding to the requirements of the WFD high status morphological condition. Japanese knotweed on the Solway shoreline out-competes the native flora and creates an erosion risk during winter months. However, their presence does not necessarily indicate that a water body will fail to achieve good ecological status.

SECTION 6 - AIR

- 6.1 The Air Quality Strategy for England, Scotland, Wales and Northern Ireland currently sets air quality standards and objectives that have been introduced to protect the most sensitive members of society. Its main objective is to ensure that everyone is able to enjoy an acceptable level of air quality in public places. This level should pose no significant risk to human health or quality of life, and carry no unacceptable social or economic costs.
- 6.2 All local authority areas within the district, with the exception of parts of Carlisle, meet all the required standards. In Carlisle, two Air Quality Management Areas (AQMA) have been declared, which cover the A7 from Carlisle city centre to the M6 and a small area close to the city centre. These have been declared due to pollutants (Nitrogen Dioxide) from traffic. Outside these small areas, air quality across the district is generally excellent. Pockets of poorer air quality do occur in some of the other urban centres and along major roads and motorways, but no further AQMAs have been declared.
- 6.3 Given the very good air quality across the area and the very limited influence that the Solway Tweed RBMP will have upon emissions to air, it is assumed that there will be no significant environmental effects on this SEA receptor and it is, therefore, intended to be scoped out of the assessment. There may however be impacts on the water environment resulting from air pollution e.g. acidification these issues will be addressed via the water objective.

SECTION 7 - CLIMATIC FACTORS

- Climate change is a cross-cutting issue which may affect a wide range of environmental 7.1 conditions and have significant implications for the district's social, economic and environmental assets. The UK Climate Change Programme was published in 2006. This sets out a range of actions which the UK should take both to reduce its contribution to climate change but also to adapt to the effects of climate change which may manifest themselves in the Solway Tweed RBD. Scenario based predictions of possible future climate change in the UK have been made by the UK Climate Impacts (UKCIP) available Programme and details are at www.ukcip.org.uk/climate change/by location.asp.
- 7.2 Climate change will affect all aspects of the water environment but it is still uncertain what the impacts will be and where they will occur. For example, increased rainfall may dilute the pollutants present in water bodies but will also flush a greater concentration of compounds into receiving waters, such as run off of nitrates or cause more frequent sewer overflows, both resulting in deteriorating water quality. The WFD allows for temporary deterioration in the status of water bodies if this arises from exceptional circumstances such as extreme floods and prolonged droughts, but less severe weather changes will also impact indirectly on the water environment. Changes in land-use and water consumption because of climate change are expected, and these may prove to be a significant factor in achieving the overall objective of good status.
- 7.3 The possible consequences of climate change are drier summers and wetter winters with more severe rainfall events. Of particular significance to the Solway Tweed RBMP and the area it covers is the potential for climate change to have the following effects:
 - increases in coastal flooding caused by sea level rises with homes and businesses at risk;
 - resultant loss of coastal wetlands;
 - changes to the volume and timing of river flows, with associated variable dilution for discharges into water bodies;
 - resultant increase in flood risk from river systems;
 - changes to groundwater recharge rates;
 - potential for drought in certain parts with possible limitation to abstraction practices, although this is less likely in the Solway Tweed compared to other (southern) parts of the UK; and
 - soil erosion and landslides, with associated implications for water quality.
- 7.4 The anticipation is that in the present century the district's climate will become wetter and stormier and that sea levels will rise. An increase in flood risk will be damaging to the district's economy and society. Economic assets thought to be especially vulnerable include transport links, residential properties, public services related to water supply and treatment and commercial premises.
- In Scotland, the primary responsibility for safeguarding and insuring land or property 75 against natural hazards such as flooding lies with land owners. Local Authorities also have a duty to assess and maintain watercourses which are in a condition likely to cause flooding and powers to promote flood prevention schemes for non-agricultural Local authorities, government agencies and central government are also land. responsible for flood warnings and grant-aiding flood protection schemes. In England the situation varies slightly in that the Environment Agency has significant responsibility for flood risk management. Under the Water Resources Act 1991 the Agency has powers to maintain and improve main rivers to ensure the efficient passage of flood flow and to manage water levels where this is in line with current practice. The Environment Agency's flood risk management work also includes the development and delivery of flood risk maps, Catchment Flood Management Plans, Public Awareness Campaigns, the flood warning service and the National Flood and Coastal Defence Database.

7.6 Climate Change in the Solway Tweed RBD - predicted impacts and their relevance to water

- 7.6.1 Temperatures may rise by up to 4°C⁸ by the end of the century, with consequences including milder and wetter winters, hotter and drier summers, more extreme weather events and rising sea levels.
- 7.6.2 Climate Change Scenarios for the United Kingdom: The UKCIP02 Scientific Report presents four climate change scenarios. UKCIP02 predicts a number of impacts that may occur in the UK by 2080. The key findings of this work suggest:
 - 1.5 to 2°C warmer in winter; up to 3.5°C warmer in summer; and possibly 4°C warmer in autumn. Summers will suffer some significant heat waves.
 - Milder temperatures in winter will result in wetter conditions, with extremes of rainfall leading to serious flooding events.
 - Precipitation will increase during the winter season. Conversely, summer rainfall will be around 40% less, particularly in the south and east of Scotland.
 - Daily winter rainfall will increase by at least 20% for storms that normally occur only once every two years.
 - Summer cloud cover will decrease by 10%, with a slight increase in winter cloud cover.
 - Daily average wind speed is not likely to change significantly, although the two year daily mean average wind speed could be up to 4% higher. If this increase applies to storm gusts, considerably more damage to infrastructure will be inevitable.
 - Snowfall will decrease by over 90%.
 - Sea level will rise by approximately 60 cm around the coastline and storm surges could be up to 0.7 m higher, resulting in higher risks of coastal flooding.
 - Sea surface temperature will be 1°C to 2.5°C warmer; the greatest increase being off South East Scotland.
 - The frequency of high impact weather events will increase with rising average global temperature
- 7.2.3 Flooding It is likely that with increased average rainfall, increased rainfall intensity and prolonged periods of rain, that more frequent and more severe river flooding will occur. In addition, with higher sea levels and increased wave height, it is predicted that coastal flooding will become both more frequent and more severe. Flooding can have very significant effects on property, businesses and agriculture and can be a risk to life.
- 7.2.4 Droughts Long term predictions are for an increased likelihood of summer droughts. While the observed impacts (in Scotland) have not borne this prediction out, if realised, this could result in river water quality problems (caused by lack of flow), limitations on abstraction of water (particularly for agricultural use) and even possible problems with water supply.
- 7.2.5 Water quality Increased flood events and the potential for summer time droughts may result in water quality issues that need to be addressed. For example, reduced river flows during drought periods will provide less dilution for aquatic discharges which may increase pollution risk. Reduced river flows may also affect abstraction for drinking water or for commercial use. Conversely, increased flooding may increase run off of

⁸ Climate Change Scenarios for the United Kingdom: The UKCIP02 Scientific Report.

pollutants e.g. from agricultural land into waterbodies and which may affect their status e.g. run off impacting on bathing water quality.

- 7.2.6 The Marine Environment It is predicted that sea levels will rise, that there may be increased wave heights (particularly during storms) and that sea temperatures will rise. While the consequences of these are difficult to predict, it is possible that greater coastal erosion will result from higher sea levels and wave heights. This in turn may lead to land and habitat loss. In the marine environment, increased sea temperature may result in changes to the distribution and abundance of marine biodiversity. This may result in the increase of some species and the decrease or even loss of others (with warmer water species replacing colder water species). This may in turn affect other species e.g. the recent poor breeding of seabirds⁹. Changes in marine species may also affect economic activities such as commercial fisheries.
- 7.2.7 Aquatic Biodiversity Climate change predictions for the UK suggest that as the environment changes, biodiversity will be significantly affected. It is still not exactly clear how biodiversity in the area will be affected or how species will adapt to climate change, but it is suggested that there will be the potential for:
 - Changes in the abundance and distribution of species.
 - Changes in the length of growing and breeding seasons.
 - Higher temperatures to be less favourable for native species, while new species may appear. New species may compete with native species for food and habitat.
 - High intensity rainfall and flooding to cause destruction to river habitat.
 - Increased erosion resulting in loss of habitat.
 - Disruption to food chain with potential catastrophic loss of species (e.g. island breeding sea bird populations).

⁹ SNIFFER (2006) A Handbook of Climate Trends Across Scotland.
SECTION 8 - SOIL

- 8.1 Due to its diverse geology and climate, the UK possesses a wide variety of different soil types. Similarly, because of the strongly maritime climate with cool temperatures and rocks which are generally resistant to weathering and base cation deficient, Scottish and Northern English soils are in general more organic, more leached and wetter than those of most other European countries. The area contains greater proportions of podzols (23.7% of the land area), peat soils (histosols, 22.5%) and gleys (20.6%) than Europe as a whole. The Southern Uplands are dominated by peaty soils (peat, peaty gleys and peaty podzols) especially in the west.
- 8.2 The land use in the Solway Tweed RBD can be seen in Map 3. Agricultural land cover remains the dominant land use activity. Approximate half of the English part of the RBD is classified agricultural grade 1-3, whereas the majority of the Scottish part is classified as grade 5, with some grade 3 on the eastern side. This predominantly agricultural use gives rise to a number of environmental issues, particularly for water quality. These were detailed in Section 5.
- 8.3 Soil erosion occurs principally by the action of water and wind, and can become a problem when effects are enhanced through poor management, particularly on exposed, damaged and unstable soils. Examples include coastal erosion and mass erosion by landslides and debris flow. Once soil particles are eroded, they can be carried overland and may enter streams and rivers causing the silting up of watercourses, harm to fish, damage to structures such as bridges and the pollution of watercourses with excess nutrients or harmful chemicals, such as pesticides and metals. Erosion of peat soil also exposes the peat to drying and oxidation which reduces soil carbon stocks and releases gases that contribute to climate change.
- 8.4 Erosion is often triggered by heavy rain falling onto exposed and unstable soil, though the action of wind is important in areas with lighter soils. Other contributing factors include slope steepness and instability, soil texture and structure as well as damage caused by grazing livestock and human trampling
- 8.5 There are 18 designated Nitrate Vulnerable Zones (NVZ) in the RBD. 16 are in England, the majority lying within the Eden Valley in the west, with only a small area located within the North Northumbria Coastal Plain of the Tweed and 2 in Scotland (Lower Nithsdale NVZ in the west and the Edinburgh, East Lothian and Borders NVZ in the east).
- 8.6 There are two Environmentally Sensitive Areas, which offer incentives to encourage farmers to adopt agricultural practices which would safeguard and enhance parts of the country of particularly high landscape, wildlife or historic value The Pennine Dales form a group of sites on border with Humber and NW RBDs.
- 8.7 There are three Catchment Sensitive Farming Delivery Areas in the RBD: the River Waver and Biglands Bog; the River Eden and Tributaries and the English Tweed Catchment Rivers including Lindisfarne. Within these farmers are encouraged to manage their land in a way that is sensitive to the ecological health of the water environment, largely through voluntary initiatives.
- 8.8 Approximately half of the western and half of the eastern areas are designated Less Favoured Areas. The majority of the western half of Scottish part of the RBD is designated as 'Severely Disadvantaged' Less Favoured Area. This designation also covers a large part of the Tweed catchment, except for the areas adjacent to the coast.

Map 3 – Land Use in the Solway Tweed RBD





SECTION 9 - CULTURAL HERITAGE

9.1 The area has a rich cultural heritage which is demonstrated by the number of buildings and sites which have been afforded protection (Map 4). Table 9 shows the number of Listed Buildings and Scheduled Ancient Monuments in the area.

Listed Buildings	Scheduled Ancient Monuments
9,603*	2,530**

Table 9 – Listed Buildings and Ancient Monuments in the Solway Tweed RBD

Sources: <u>www.historic-scotland.gov.uk</u> (search for Scottish LBs and SAMs), English Heritage and <u>www.cumbria.gov.uk</u>.

* Note – Figures are for the whole of Dumfries and Galloway and Scottish Borders and for Eden and Carlisle District Councils.

** Note – Figures are for the whole of Dumfries and Galloway and Scottish Borders and for the whole of Cumbria.

- 9.2 Certain historic buildings, which are of special architectural or historic interest, can be designated as Listed Buildings and receive special treatment under Planning Acts. A procedure known as listed building consent is designed to retain their particular character, while enabling them to remain useful and valuable. In England this process is managed by English Heritage, in Scotland by Historic Scotland. Listed buildings protect the best of our architectural heritage. When a building is listed it is recognised as of special architectural or historical interest or both, and its details become part of a public record. The building is immediately protected by law, and any changes to it must first receive listed building consent.
- 9.3 Scheduled Ancient Monuments are designated under the Ancient Monuments and Archaeological Areas Act 1979 and represent sites of national importance and are afforded legal protection. Certain works to scheduled ancient monuments requires Scheduled Monument Consent before they can be undertaken.
- 9.4 World Heritage Sites The UNESCO World Heritage Convention drawn up in 1972 was ratified by the United Kingdom in 1984. The Convention provides for the identification, protection, conservation and presentation of cultural and natural sites of outstanding universal value, and requires a World Heritage List to be established under the management of an inter-governmental World Heritage Committee. There is one world heritage site in the Solway Tweed RBD: Frontiers of the Roman Empire, part of which is located at Hadrian's Wall. Further details of the designation are available from the UNESCO World Heritage site: http://whc.unesco.org/en/list/430.
- 9.6 While it is considered unlikely that the RBMP will result in detrimental effects on cultural heritage it is important to recognise that some features are either located close to waters or are integral to water management activities e.g. weirs, dams and canals. Some historic features that have resulted in the designation of a water body as heavily modified may reduce the ability to restore such water bodies to good status as this would result in the loss of the protected historic feature. It is, therefore, important that protected cultural heritage is fully considered when identifying measures to protect and enhance water bodies.
- 9.7 Marine Protected Sites These afford statutory protection for cultural heritage sites in the marine environment e.g. protected wrecks. There are no marine protected sites in the Solway Tweed RBD.
- 9.8 Wetlands Archaeology Rivers, lochs and bogs play an important role in archaeology for a number of reasons. Historically, settlement and transport was closely related to river valleys and coastal areas and bogs were an important source of food and fuel. The presence of water on an archaeological site can make an enormous difference in the physical preservation of evidence, as anoxic conditions help preserve organic

materials. A number of archaeological structures reflect the harnessing of water power, such as mills and weirs and the historic importance of fish for food is illustrated by the presence of fish traps and artificial ponds. Management actions taken to protect the natural components of wetlands will have mainly beneficial effects for historic components, however, the effects on the historic environment should be considered when developing management measures.

Map 4 – Designated scheduled monuments, parks and gardens, gardens and designated landscapes, World Heritage Site and listed buildings in the Solway Tweed RBD



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SECTION 10 - LANDSCAPE

- 10.1 The Solway Tweed RBD has a diverse range of landscapes, some of which are afforded protection through a range of designations. Given the rural nature of the district, the landscape is to a certain degree shaped by agricultural land uses, but key landscape features include the mountainous terrain of the southern uplands, the broad, river valley landscapes of productive mixed farmland around the Solway firth, the dramatic coast along both the Solway Firth and the North Sea north of Berwick and the large swathes of semi natural and commercial forestry throughout the area.
- 10.2 Scottish Natural Heritage and Natural England have carried out National Programmes of Landscape Character Assessment (LCA) which identifies key landscape characteristics for the whole of England, Wales and Scotland. The Solway Tweed RBD is largely covered by four such assessments which identify key landscape features which are briefly summarised below:

10.3 Eden Valley

- Broad, river valley landscapes of productive mixed farmland with local variations in topography, scale and landcover.
- Productive improved pasture and arable land with large farms in the lower lying areas.
- Less intensively managed rolling or hilly pasture and lowland heath, intersected by numerous gills, in the foothills of the North Pennines.
- Sandstone hills with woodland and lowland heath vegetation.
- Numerous small basin mires among drumlins.
- Large broadleaved and coniferous estate/farm woodlands and areas of ancient seminatural woodland. Mature hedgerows, hedgerow trees, small copses and shelterbelts contribute to the well wooded character.
- Settlements have strong distinctive character. Red sandstone is the dominant building material and a unifying feature. Limestone is found on the margins of the area.
- Intricate network of narrow minor roads with tall hedgerows and walls.
- Red sandstone features such as walls and gateposts.
- Important transport corridor for the Settle-Carlisle railway line, M6 motorway, A66 trunk road and west coast mainline railway.

10.4 Solway Basin

- Raised beaches, dunes, pebble beaches, and sandy shores along the Irish Sea coast.
- Estuarine intertidal mudflats and salt marshes, with wintering and migrating waders and wildfowl, on the fringes of the Solway Firth.
- Fragmented areas of relatively intact raised peat bogs, or lowland raised mires, of high nature conservation value.
- Flat to gently undulating lowland plain, intensively managed predominantly for pasture.
- Medium to large fields enclosed by windswept hedgerows and stone-faced hedgebanks.
- Dense network of highly managed rivers, streams and ditches.
- Limited woodland cover.
- Rich historic, cultural and archaeological heritage.
- Victorian coastal resorts, small market towns and villages. Considerable variety of building styles and materials.
- Primary transport routes radiating from Carlisle and rectilinear pattern of minor roads and lanes.
- 10.5 Dumfries and Galloway
 - Regional Character Areas At the regional level, the Landscape Character Assessment identifies four distinct landscape areas:

- Rhins and Machars This regional character area makes up the western section of Dumfries and Galloway. It includes principally the Rhins (and Mull of Galloway), the Stranraer lowlands, the Machars peninsula and the Luce moorlands. The area has been extensively modified by glacial deposition and erosion, producing an undulating landscape of relatively low altitude. This is a predominantly pastoral landscape and traditionally the dairy heart of Dumfries and Galloway. Large dairy farms are characteristic features, as are the grazing enclosures and herb rich pastures. The highest areas are towards the north east, where moorland plateaux and mossy basins form in the upper catchments of the area's main rivers: Water of Luce, River Bladnoch and Tarf Water.
- Galloway Uplands The Galloway Uplands regional character area is centred on the Merrick uplands and is closely defined between the valleys of the Rivers Cree and Dee. The underlying geology is dominated by the granite intrusions of Cairnsmore of Fleet and the Merricks. The area is characterised by its relatively rugged and wild topography. The core area, in particular, is one of Scotland's most significant wild areas. Forestry is also a major feature, dominating many of these upland landscape types. A large proportion of the area is within the Galloway Forest Park and, therefore, forest management for recreation is an important characteristic.
- West Southern Uplands The West Southern Uplands regional character area constitutes the landscape of uplands and dales that extends eastwards from the valley of the River Dee. The West Southern Uplands are characteristically smooth, conical peaks with extensive foothills and plateaux. Forestry and upland sheep farming are principal land uses, except in the dales where more cattle are grazed, arable crops and grass silage grown within walled and hedged enclosures. This character area differs significantly from the Galloway Uplands in its more uniform topography and absence of rugged landforms. Forestry, although extensive, does not (as yet) have such continuity of cover. The main settlements and lines of communications are in the dales. The presence here of underlying red sandstone is reflected in the building materials and in the red soils of ploughed fields around Moffat and Thornhill.
- Dumfries Coastlands The Dumfries Coastlands comprise the lower dales and a variety of landscape types centred on Dumfries, but forming a coastal belt between the Southern Uplands and the Solway Firth. Agriculture is an intensive mixture of arable and grazing. Both drystone dykes and hedgerows are features of its landscapes. The influence of designed landscapes is also strong. This is a settled landscape containing the most heavily developed parts of Dumfries and Galloway and a major part of the region's road network. Communications east to west are particularly significant by old and more contemporary roads, inland and following the coast. Trade and communication by sea has been influential in the development of coastal towns and harbours. The coastline itself is dissected by estuaries which afford scenic views of a high order, as reflected in the National Scenic Area designation. The contrast between coastal flats and uplands is an important part of this experience and an essential component of its regional character.

10.6 Scottish Borders

- At the regional level, the Landscape Character Assessment identifies six distinct landscape areas:
- Tweed Lowlands The lowlands that form the heartland of the River Tweed basin. The dominant land use is arable, the soil supporting a wide range of cropping opportunities alongside livestock rearing. At their margins, the arable lowlands begin to merge with the fringes of the higher ground carrying a distinctive land cover of grassland.
- Lammermuir and Moorfoot Hills These form the northern arm of the outer crescent of hills which surround the Tweed basin. The plateau tops are wild, open country, characterised by peaty soils, moorland and unimproved grassland. On the better drained slopes of the valley sides, permanent pastures predominate, with scattered major forestry plantations, particularly adjacent to the Tweed valley.
- Central Southern Uplands This major belt of high ground extends along the main watershed with the Clyde and the Solway, finally merging with the western extremity

of the Cheviot range. This is the heart of the southern uplands. The hills are dominated by heather moor and rough acid grassland and there are extensive coniferous plantations, particularly in the upper Tweed valley and on the gentler plateau further south at upper Teviotdale. Ribbons of improved grassland penetrate into the hills at the valleys of the major rivers.

- Cheviot Hills These constitute a ridge of high ground up to 600 m high extending along the Scotland England border. The area is characterised by a complex mosaic of heather moorland and acid grassland, while to the west, more gentle landforms are dominated by coniferous planting.
- Midland Valley In the extreme North West fringes of the Solway Tweed RBD, this area is characterised by moorland with blanket bog on the highest ground. It is also scattered with coniferous plantations. On the low ground, arable and permanent pastures predominate, although most of the lower ground is outside the Solway Tweed RBD.
- Coastal Zone This extends along the North Sea coast and is exceptional in heritage terms, with important designations. The coastline itself is mostly formed by rugged cliffs carved into the strongly folded sediments. Inland, land cover varies from heather moorland on the highest ground to rolling pastures and arable fields enclosed by dry-stone dykes and hedgerows. Blocks of coniferous woodland are prominent.
- Overall, the area has 30 sites listed in the Gardens and Designed Landscapes Inventory.
- 10.7 In addition to the above, the following landscape character areas are also present in parts of the RBD. Further information can be found at http://www.landscapecharacter.org.uk

Other Landscape Character Areas		
Northumberland Sandstone Hills		
Cheviot Fringe		
Cheviots		
Border Moors and Forests		
Cumbria High Fells		
North Pennines		
Orton Fells		
Yorkshire Dales		

- 10.8 National Parks are designated under the National Parks and Access to the Countryside Act 1949 to conserve and enhance natural beauty, wildlife and cultural heritage and promote opportunities for public understanding and enjoyment. The National Parks in the Solway Tweed RBD are the Lake District National Park, Yorkshire Dales National Park and the Northumberland National Park (Map 5).
- 10.9 Areas of Outstanding Natural Beauty (AONBs) are designated under the National Parks and Access to the Countryside Act 1949. They are classified as fine landscapes of great variety in character and extent. The objective of the designation is the conservation of areas of natural beauty, although many fulfil a great recreational purpose. There are three Areas of Outstanding Natural Beauty that intersect with the RBD; they are the Solway Coast, the Northumberland Coast and the North Pennines AONBs (Map 5).
- 10.10 National Scenic Areas are Scotland's only national landscape designation. They are those areas of land considered of national significance on the basis of their outstanding scenic interest which must be conserved as part of the country's natural heritage. They have been selected for their characteristic features of scenery comprising a mixture of richly diverse landscapes including prominent landforms, coastline, sea and freshwater lochs, rivers, woodlands and moorlands.

Table 10 – Landscape Designations in the Solway Tweed RBD

National Parks	National Scenic Areas	Areas of Outstanding Natural Beauty
3	5	3

Map 5 – Designated National Parks and Areas of Outstanding Natural Beauty in the Solway Tweed RBD



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SECTION 11 - MATERIAL ASSETS

The following information is largely derived from the 2005 Report "Solway Tweed river basin characterisation: An economic analysis of water use". For further details, the full document is available at http://www.sepa.org.uk/pdf/publications/wfd/Article 5 Solway Tweed Economic.pdf

Economic Activities in the Solway Tweed RBD

11.1 Agriculture and forestry

There is a significant agricultural sector in the Solway Tweed RBD, employing 7,600 workers. Agriculture and forestry account for almost 12% of gross value added to the economy of the Solway Tweed RBD. Water is essential to the agricultural sector for irrigation, drinking water for livestock, cleaning etc. Irrigation needs are met by precipitation in most parts of the district; however there is significant abstraction for irrigation purposes in the River Till catchment. Water also carries chemicals away from the land and transports them to other water bodies. As discussed in Section 5, agriculture and forestry contribute significantly to diffuse pollution pressures in Solway Tweed RBD.

11.2 Aquaculture and fisheries management

Coastal waters, lochs/lakes and rivers are all used to support fin fish and shellfish farming and depend on unpolluted water. In the Solway Tweed RBD fin fish farming is predominantly the land based production of rainbow and brown trout. Shellfish waters support the harvest of oysters and other species but cultivation of shellfish is currently limited.

Fish stocks are a complex and precious resource which require expert management in order to sustain them. Fisheries management can help to conserve and maintain the diversity of fish which can in turn enhance the contribution that fishing and fisheries make to the economy through maximising yields, and securing and increasing employment in fishing and related businesses.

11.3 Mining and quarrying

Mining and quarrying takes place on a relatively small scale, accounting for 0.6% of employment and 0.8% of the gross value added to the Solway Tweed RBD economy, with the majority of this value attributable to quarrying. Water use in the mining sector consists of diverting groundwater and drainage with subsequent consented discharges from settlement tanks.

11.4 Food processing

Food processing in Solway Tweed RBD is a diverse industry, although the main economic contribution from the sector is in meat and fish production. The main impacts of the industry on the water environment are through abstraction of water and also from discharges.

11.5 Manufacture of textiles and leather products

Production of textiles and leather is a relatively important economic sector in Solway Tweed RBD, accounting for 4.4% of gross value added. The vast majority of this output occurs in the Scottish area of the District. The industry is also important in terms of water use issues, particularly abstraction and point source pollution.

11.6 Manufacture of wood, pulp and paper products

Wood, wood products, paper and pulp is an important sector employing around 3,400 people in the District. Any impact the industry has on the water environment is largely related to water abstraction and water use supporting industry processes. Due to the significant commercial forestry plantings in the District, much of which is harvested or due for harvest in the next 10 to 20 years, the use and processing of timber is likely to be a growing sector in the District in future years.

11.7 Electricity hydro

Large scale hydropower schemes covering hundreds of square kilometres were created in Scotland in the late 19th century and early 20th centuries. Many of these schemes divert

water across catchments to dams which hold the water until energy generation is required. There are 23 major schemes in Scotland supplied by catchments covering over 8,373 km² of mainland Scotland. While most hydro schemes were created in northern Scotland, the 83 MW Galloway scheme (completed in 1936) is in the Solway Tweed RBD. There is likely to be only limited further development of large scale hydro power schemes in the future as the most suitable sites have already been developed.

Further small scale hydropower plants (installed capacity < 2MW) are owned by private companies and individuals, and there is some potential for further development of such schemes. These small scale schemes may remove water from a river, pass it through a turbine and then return it to the same river.

Electricity from these renewable sources is important in supporting renewable energy production targets and in reducing carbon emissions as part of the general approach to tackling climate change.

11.8 Amenity and recreation

There are a wide range of recreational and amenity uses of water resources including tourism and water-dependent visitor attractions, water-dependent recreation, non-water-dependent recreation, waterside amenity and navigation. Descriptions of these activities are covered earlier in this Appendix.

11.9 Flooding and flood defences

As noted in Section 7, it is predicted that in the future we will have wetter winters and more extreme weather events. A key area of concern in this respect will be around flooding where flood risk is likely to increase both inland and along low lying coasts. Economic assets thought to be especially vulnerable include transport links, residential properties, public services related to water supply and treatment and commercial premises.

Management of flood risk differs between Scotland and England. In Scotland, the primary responsibility for safeguarding and insuring land or property against natural hazards such as flooding lies with land owners. Local Authorities also have a duty to assess and maintain watercourses which are in a condition likely to cause flooding and to promote flood prevention schemes for non-agricultural land. Local authorities, government agencies and central government are also responsible for flood warnings and grant-aiding flood protection schemes. In addition to these obligations the Water Environment and Water Services Act (Scotland) 2003 passes a duty onto Responsible Authorities in Scotland to promote sustainable flood management in exercising their own duties and functions. Responsible authorities are listed in The Water Environment and Water Services (Scotland) Act 2003 (Designation of Responsible Authorities and Functions) Order 2006¹⁰.

In England DEFRA has overall policy responsibility for flood and coastal erosion risk. DEFRA funds most of the Environment Agency's flood management activities and provides grant aid on a project by project basis to the other flood and coastal defence operating authorities (local authorities and internal drainage boards). DEFRA's new strategy (Making space for water) is taking a holistic approach to management of risk from all forms of flooding (river, coastal, groundwater, surface run-off and sewer) and coastal erosion.

The Environment Agency's role includes the maintenance of some flood defences, where maintenance is in line with current practice, but also works towards managing flood risk. This includes the development and delivery of flood risk maps, Catchment Flood Management Plans, Public Awareness Campaigns, the flood warning service and the National Flood and Coastal Defence Database.

11.10 Transport Infrastructure

A number of key England - Scotland transport routes pass through the RBD, including the M6/M74 motorway in the west, the A1 in the east and both the east and west coast rail lines. These are nationally important transport routes. The RBMP is unlikely to have

¹⁰ <u>http://www.opsi.gov.uk/legislation/scotland/acts2003/20030003.htm</u> .

significant effects upon these routes; however some effects on water bodies in the Solway Tweed have been experienced (e.g. run off from the M6 motorway).

APPENDIX C OTHER RELEVANT PLANS AND PROGRAMMES AND ENVIRONMENTAL OBJECTIVES

Set out below is a summary of relevant policies, guidelines, plans and programmes which may influence or be influenced by the Solway Tweed River Basin Management Plan. It covers International, UK National, Scottish National, UK Regional, English Local, Scottish Regional and Local levels of information to ensure all relevant documents have been considered.

Response received from the following consultees:
English Heritage
Natural England
Scottish Natural Heritage
Historic Scotland
ENTEC Report

Plan name	Key policy coverage	Main SEA topics
International		
Water Framework Directive (2000/60/EC)	 Establishes a new legal framework for the protection, improvement and sustainable use of surface waters, transitional waters, coastal waters and groundwater across Europe in order to: prevent deterioration and enhance status of aquatic ecosystems, including groundwater; promote sustainable water use; reduce pollution; and contribute to the mitigation of floods and droughts. 	Biodiversity, flora & fauna, Population & Human Health, Water, Climatic Factors.
Convention on Wetlands of International Importance 1971 (as amended)	The Ramsar Convention on Wetlands is an international treaty that provides the framework for national and international co- operation for the conservation and wise use of wetlands and their resources.	Biodiversity, flora & fauna.
Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)	 The convention sets out to: conserve wild flora and fauna and their natural habitats; promote co-operation between states; monitor and control endangered and vulnerable species; and assist with the provision of assistance concerning legal and scientific issues. The convention led to the creation in 1998 of the Emerald network of Areas of Special Conservation Interest (ASCIs) throughout the territory of the parties to the convention, which operates alongside the European Union's Natura 2000 programme. It also provides for the monitoring and control of endangered species, and the provision of assistance concerning legal and scientific issues.	Biodiversity, flora & fauna.

Plan name	Key policy coverage	Main SEA topics
UN Convention on Biological Diversity (1992)	 The Convention on Biological Diversity, known informally as the Biodiversity Convention, is an international treaty that was adopted in Rio de Janeiro in June 1992. The Convention has three main goals: conservation of biological diversity (or biodiversity); sustainable use of its components; and fair and equitable sharing of benefits arising from genetic resources. 	Biodiversity, flora & fauna.
Habitats Directive Review of Consents (Environment Agency Programme)	 The Habitats Directive has been transposed into English and Welsh law as the Conservation (Natural Habitats & c) Regulations, 1994. Now known as the Habitats Regulations, the Environment Agency is one of the Competent Authorities responsible for implementing them. As people make increasing demands on the environment our wildlife habitats are coming under more and more pressure. The Habitats Directive recognises this and aims to protect the wild plants, animals and habitats that make up our diverse natural environment. This European Directive created a network of protected areas around the European Union of national and international importance. They are called 'Natura 2000' sites. These sites include: Special Areas of Conservation (SACs); and Special Protection Areas (SPAs). 	Biodiversity, flora & fauna.
UNESCO World Heritage Convention	Convention concerning the protection of the world's Cultural and Natural Heritage.	Cultural Heritage.
European Landscape Convention (2000)	The European Landscape Convention (ELC) is a new instrument devoted exclusively to the protection, management and planning of all landscapes in Europe. It highlights the importance and need for public involvement in the development of landscapes. It encourages a joined up approach through policy and planning in all areas of land-use, development and management, including the recognition of landscape in law. The Convention promotes landscape protection, management and planning, and European co-operation on landscape issues. The aim of the common agricultural policy (CAP) is to provide farmers with a reasonable standard of living, consumers with	Landscape.
Common Agricultural Policy Reform (2003)	quality tood at fair prices and to preserve rural heritage. The policy has evolved to meet society's changing needs so that food safety, preservation of the environment, value for money and agriculture as a source of crops to convert to fuel have acquired steadily growing importance.	Cultural Heritage, Soil.

Plan name	Key policy coverage	Main SEA topics
National (UK)		
One Future – Different Paths. UK Shared Framework for Sustainable Development	 Sets out common goal for UK sustainable development and a powerful new set of principles to achieve it. Comprises: a shared understanding of sustainable development; a common purpose outlining what we are trying to achieve and the guiding principles we all need to follow to achieve it; our sustainable development priorities for UK action, at home and internationally; and indicators to monitor the key issues on a UK wide basis. 	Overarching.
Securing the Future – UK Government Sustainable Development Strategy	 The strategy contains: new integrated vision building on the 1999 strategy – with stronger international and societal dimensions; five principles – with a more explicit focus on environmental limits; four agreed priorities – sustainable consumption and production, climate change, natural resource protection and sustainable communities; and a new indicator set, which is more outcome focused, with commitments to look at new indicators such as wellbeing. 	Overarching.
Catchment Sensitive Farming Programme	 Catchment Sensitive Farming is land management that keeps diffuse emissions of pollutants to levels consistent with the ecological sensitivity and uses of rivers, groundwaters and other aquatic habitats, both in the immediate catchment and further downstream. It includes: appropriately managing the use of fertilisers, manures and pesticides; promoting good soil structure and rain infiltration to avoid run-off and erosion; protecting watercourses from faecal contamination, sedimentation and pesticides; reducing stocking density; managing stock on farms to avoid compaction and poaching of land; and separating clean and dirty water on farms. 	Water, Soil
Water Resource for the future: Regional Water Resources Strategy	This Environment Agency strategy is designed to improve the environment, while allowing enough water for human use. The Environment Agency have considered its contribution to sustainable development, including social progress that considers the needs of all, protection of the environment, making wise use of natural resources, and maintenance of high and stable levels of economic growth and employment. The strategy is flexible and phased, so that unnecessary investment can be avoided while retaining the security of our water supply and improving the water environment.	Overarching.
Fisheries Action Plans	The purpose of Fisheries Actions Plans is twofold; firstly to provide greater local stakeholder involvement in the management and development of freshwater fisheries; and secondly to ensure Environment Agency accountability in delivering its fisheries duties at the local level.	Biodiversity, flora & fauna, Population & Human Health, Water.

Plan name	Key policy coverage	Main SEA topics
Salmon Action Plans	Salmon Action Plans set specific spawning targets for individual rivers, against which stock and fishery performance are assessed. This provides a more objective approach than has previously been applied to salmon management in England and Wales and has been advocated by the North Atlantic Salmon Conservation Organisation (NASCO) to facilitate salmon management in the international context. Each river's Salmon Action Plan contains a range of actions to help achieve spawning targets, such as reducing exploitation, improving habitat and water quality and minimising obstructions to migration. In delivering each Salmon Action Plan the Environment Agency seeks the support of local fisheries and other interests. This collaborative approach is vital to secure the best way forward for the management of salmon rivers.	Biodiversity, flora & fauna, Population & Human Health, Water.
UK Biodiversity Action Plan (BAP) Priority Species	UK BAP Priority Species list is a result of the most comprehensive analysis ever undertaken in the UK; 1,149 species and 65 habitats have been listed as priorities for conservation action under the UK BAP. The Action Plans contain actions and targets for conserving these species.	Biodiversity, flora & fauna.
UK Biodiversity Action Plan (BAP) Priority Habitats	UK BAP Priority Habitat Action Plans provide detailed descriptions for 45 habitats falling within the Broad Habitat classification and detailed actions and targets for conserving these habitats.	Biodiversity, flora & fauna.
Restoring Sustainable Abstraction (Environment Agency programme)	There is evidence to suggest that unsustainable abstraction of groundwater and surface water could be contributing to environmental damage of rivers and wetlands, including sites of national and international conservation importance. The Environment Agency investigates over-abstraction and	Biodiversity, flora & fauna, Population & Human Health, Water
The Countryside and Rights of Way Act 2000	The Countryside and Rights of Way Act 2000 (CRoW Act 2000), which applies to England and Wales only, received Royal Assent on 30 November 2000, with the provisions it contains being brought into force in incremental steps over subsequent years. Containing five Parts and 16 Schedules, the Act provides for public access on foot to certain types of land, amends the law relating to public rights of way, increases protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation, and provides for better management of Areas of Outstanding Natural Beauty (AONB). The Act is compliant with the provisions of the European Convention on Human Rights, requiring consultation where the rights of the individual may be affected by these measures. <u>Access to the Countryside</u> The Act provides a new right of public access on foot to areas of open land comprising mountain, moor, heath, down, and registered common land, and contains provisions for extending the right to coastal land. The Act also provides safeguards which take into account the needs of landowners and occupiers, and of other interests, including wildlife. <u>Public Rights of Way and Road Traffic</u> The Act improves the rights of way legislation by encouraging the creation of new routes and clarifying uncertainties about	Biodiversity, flora & fauna, Landscape.

Plan name	Key policy coverage	Main SEA topics
	existing rights. Of particular relevance to nature conservation, the Act introduces powers enabling the diversion of rights of way to protect SSSIs.	
	Nature Conservation and Wildlife Protection The Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted in accordance with the Convention on Biological Diversity.	
	Schedule 9 of the Act changes the Wildlife and Countryside Act 1981, amending SSSI notification procedures and provides increased powers for the protection and management of SSSIs. The provisions extend powers for entering into management agreements, place a duty on public bodies to further the conservation and enhancement of SSSIs, and increase penalties on conviction where the provision are breached.	
	Schedule 12 of the Act amends the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', create a new offence of reckless disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife tissue samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.	
	Areas of Outstanding Natural Beauty The Act clarifies the procedure and purpose of designating AONBs, and consolidates the provisions of previous legislation. It requires local authorities to produce management plans for each AONB, and enables the creation of Conservation Boards to assume responsibility for AONBs, particularly where the land designated crosses several local authority jurisdictions. The Act also requires all relevant authorities to have regard to the purpose of conserving and enhancing the natural beauty of AONBs when performing their functions.	
	 Sets out policies and priorities for action in the UK and internationally. Sets out measures to reduce emissions targets for every sector of the economy and includes: a stricter emissions cap for industry; 	
Tomorrow's Climate, Today's Challenge: UK Climate Change Programme	 measures to encourage the uptake of biofuels in petrol; tighter building regulations; measures to improve household energy efficiency; a renewed emphasis on encouraging and enabling the general public, businesses and public authorities to help achieve the Government's targets; and increased installation of micro-renewables (e.g. solar panels on buildings). 	Overarching.

Plan name	Key policy coverage	Main SEA topics
Planning (Listed Buildings and Conservation Areas) Act 1990	An Act to consolidate certain enactments relating to special controls in respect of buildings and areas of special architectural or historic interest with amendments to give effect to recommendations of the Law Commission.	Cultural Heritage.
Ancient Monuments and Archaeological Areas Act 1970	Legislation to protect the archaeological heritage of Great Britain. Section 61(12) defines sites that warrant protection due to their national importance as 'ancient monuments'. These can be either Scheduled Ancient Monuments or "any other monument which in the opinion of the Secretary of State is of public interest by reason of the historic, architectural, traditional, artistic or archaeological interest attaching to it".	Cultural Heritage.
Planning Policy Statement (PPS) 1: Delivering Sustainable Development	PPS 1 sets out the Government's overarching planning policies on the delivery of sustainable development through the planning system. This PPS replaces Planning Policy Guidance Note 1, General Policies and Principles, published in February 1997.	Overarching.
Planning Policy Guidance (PPG) 15: Planning and the Historic Environment	This PPG lays out government policies for the identification and protection of historic buildings, conservation areas, and other elements of the historic environment. It explains the role of the planning system in their protection.	Cultural Heritage.
Planning Policy Guidance (PPG) 16: Archaeology and Planning	This PPG sets out the government's policy on archaeological remains on land and how they should be preserved or recorded both in an urban setting and in the countryside. It gives advice on the handling of archaeological remains and discoveries through the development plan and development control systems, including the weight to be given to them in planning decisions and planning conditions.	Cultural Heritage.
White Paper: Heritage Protection for the 21 st Century 8 th March 2007	The Draft Bill would reform and unify the terrestrial and marine heritage protection systems in England and Wales, and the marine heritage protection system in Northern Ireland. The Draft Bill would put in place a unified heritage protection system that is easier to understand and use, more efficient, accountable and transparent, and maximises opportunities for public inclusion and involvement. It would remove unhelpful distinctions between different designation regimes (listing, scheduling, registering) to deliver a system that works for the whole historic environment. It would place decision-making powers where they sit most naturally, devolving terrestrial designation decisions on assets in England from the Secretary of State to English Heritage, and unifying consents for works to terrestrial assets which will be administered by Local Authorities in England and in Wales by Local Authorities and Welsh Ministers as appropriate. Supporting sustainable communities by putting the historic environment at the heart of an effective planning system.	Cultural Heritage.

Plan name	Key policy coverage	Main SEA topics
The Historic Environment: A Force for Our Future (DCMS 2001)	As the public's enthusiasm for the past is increasingly evident, not least in the strong media focus on archaeology and history. New, more creative approaches are being used to present historic sites and buildings to visitors and to engage a wider audience. UK heritage continues to be a massive draw for tourists. As such it makes a major contribution to the economy and underpins large numbers of jobs in rural and deprived communities as well as in traditional economic centres. There is, however, much more to be done. Indeed this sector can be regarded as something of a sleeping giant both in cultural and economic terms. We need to find new ways of reaching and empowering excluded individuals and communities. We need to develop new policies to realise economic and educational potential through modernised structures and improved service delivery. Achieving these objectives involves the use of many different policy instruments and the Statement 'The Historic Environment: A Force for Our Future'. This statement looks in detail at all of them: funding; legislation; policy guidance; delivery mechanisms; reprioritisation; and partnership working. It makes proposals to enable organisations to work better together and statutory regimes to operate more effectively. It looks at ways of enhancing the historic environment's contribution to education, both within the school curriculum and through lifelong learning, and of replenishing essential conservation skills. It responds to people's desire to broaden the definition of what should be valued and champions the role of historic assets in the development and regeneration processes and as a focus for community cohesion	Cultural Heritage.
Heritage/Conserva tion Strategies	A good heritage conservation strategy incorporates all aspects of a region's heritage - historical, but also natural and cultural.	Cultural Heritage.
Planning Policy Statement (PPS) 7: Sustainable Development in Rural Areas (2004)	Planning Policy Statement 7 (PPS 7) sets out the Government's planning policies for rural areas, including country towns and villages and the wider, largely undeveloped countryside up to the fringes of larger urban areas.	Overarching.
Planning Policy Statement (PPS) 9: Biodiversity and Geological Conservation (2005)	Planning Policy Statement 9 (PPS 9) sets out planning policies on protection of biodiversity and geological conservation through the planning system.	Biodiversity, flora & fauna, Water, Landscape, Soil.

Plan name	Key policy coverage	Main SEA topics
Working with the Grain of Nature: A Biodiversity Strategy for England (2002)	The England Biodiversity Strategy (EBS), Working with the Grain of Nature, was published in 2002. It reflects the shift in biodiversity delivery from UK to the devolved administrations. It complements the UK BAP with a particular emphasis on whole of government policy and securing support for biodiversity from the general public.	Biodiversity, flora & fauna.
Environmental Quality in Spatial Planning – Incorporating the natural, built and historic environment, and rural issues in plans and strategies	Our quality of life, health and well-being rely on clean land, water and air, productive soils, available minerals and water resources, natural coastal and fluvial systems and processes. They also depend on distinctive and inspirational landscapes, a wealth of wildlife, vibrant communities, a healthy, well managed countryside and open spaces accessible for everyone to enjoy. This guidance is produced by the Countryside Agency, English Heritage, English Nature and the Environment Agency to help planning authorities and regional planning bodies in preparing plans and strategies under the new planning system	Overarching.
Conserving Biodiversity - The UK Approach	This statement has been prepared by the UK Biodiversity Standing Committee on behalf of the UK Biodiversity Partnership. Its purpose is to set out the vision and approach to conserving biodiversity within the UK's devolved framework for anyone with a policy interest in biodiversity conservation.	Biodiversity, flora & fauna.
The Transport Act 1968 (as amended)	 The network of canals offers significant potential in terms of regeneration, sustainable development and leisure. There is substantial scope for increasing tourism, providing further maritime links and development of freight traffic. The Transport Act, 1968 (as amended) requires British Waterways to classify canals into three types: Commercial canals – those principally available for the commercial carriage of freight; Cruising waterways – those principally available for cruising, fishing and other recreational purposes; and Remainder canals – those which are not commercial or cruising canals. 	Cultural Heritage, Material Assets
Meeting the Energy Challenge – UK White Paper on Energy (2007)	 This White Paper, published on 23 May 2007, sets out the Government's international and domestic energy strategy to respond to changing circumstances and addresses the long term energy challenges we face. Four energy policy goals are specified: To cut CO₂ emissions by some 60% by about 2050, with real progress by 2020; To maintain the reliability of energy supplies; To promote competitive markets in the UK and beyond; and To ensure that every home is adequately and affordably heated. 	Climatic Factors.

Plan name	Key policy coverage	Main SEA topics
National (Scotland)		
Choosing Our Future: Scotland's Sustainable Development Strategy	Sets out action to be taken in Scotland to turn shared priorities outlined in the UK Framework for Sustainable Development into action.	Overarching.
National Planning Policy Guideline 13 – Coastal Planning	 Sets out how planning can contribute to achieving sustainable development and also maintaining and enhancing biodiversity on the coast. Highlights the need to distinguish between policies for developed, undeveloped and isolated coasts. Indicates how planning authorities should respond to the risk of erosion and flooding in the coastal zone. Outlines policy guidance for developments which may require a coastal location. Identifies the action to be taken by planning authorities in their development plans and in development control decisions. 	Overarching.
National Planning Policy Guideline 14 – Planning and Natural Heritage	 Sets out national planning policy considerations in relation to Scotland's natural heritage. Summarises the main statutory obligations in relation to the conservation of natural heritage. Explains, as part of a wider framework for conservation and development, how natural heritage objectives should be reflected in development plans. Describes the role of the planning system in safeguarding sites of national and international importance. Provides guidance on the approach to be adopted in relation to local and non-statutory designations. Draws attention to the importance of safeguarding and enhancing natural heritage beyond the confines of designated areas. 	Overarching.
National Planning Policy Guideline 18 – Planning and the Historic Environment	 Outlines national policy on the historic environment which local authorities should consider in formulating and assessing development proposals. Explains how the protection of the historic environment and the promotion of opportunities for change can contribute to sustainable development. Identifies a range of planning actions designed to achieve conservation objectives, including implications for development plans and development control. 	Cultural Heritage.
National Planning Framework	 Guidance for the spatial development of Scotland to 2025, updated every 4 years. Regarded as a key element in modernising and reforming the planning system, and a material consideration in framing planning policy and making decisions on planning applications and appeals. Analyses the underlying trends in Scotland's territorial development, the key drivers of change and the challenges faced. 	Overarching.

Plan name	Key policy coverage	Main SEA topics
	 Describes Scotland in 2004, identifies key issues and drivers of change, sets out a vision to 2025, and identifies priorities and opportunities for different parts of the country. The importance of place is highlighted and priorities for investment in strategic infrastructure are identified. 	
Scottish Planning Policy 7 – Planning and Flooding	Scottish planning guidance to prevent further development which would have a significant probability of being affected by flooding or which would increase the probability of flooding elsewhere.	Water, Climate Factors, Material Assets.
Scottish Planning Policy 15 – Rural Development	Sets out the approach, key messages and objectives that should underpin planning policies and decisions affecting rural areas.	Landscape.
Scottish Rural Development Programme	 The three themes proposed are: <u>Theme 1</u> Underpinning performance and quality in the agriculture, food processing and forestry sectors. <u>Theme 2</u> Enhancing rural landscapes and natural heritage. <u>Theme 3</u> Promoting a more diverse rural economy and thriving rural communities. The following cross-cutting principles guide the approach to the strategy and the Programme itself: an integrated approach to policy delivery that combines economic, social and environmental actions; flexibility to meet diversity and local distinctiveness across rural Scotland; and promotion of sustainability, resilience and vigour in the rural economy, communities and natural heritage. 	Overarching.
A Forward Strategy for Scottish Agriculture – Next Steps	 The aim is a prosperous and sustainable farming industry which benefits all the people of Scotland. It should be: focused on producing food and other products for the market; a major driver in sustaining rural development, helping rural communities prosper; a leading player in the protection and enhancement of the environment; a major contributor to key objectives on animal health and welfare and human health and well-being; keen to embrace change and market opportunities; and Rural Scotland is not a single entity and the type of farming varies from place to place. The role of agriculture and the range of economic, social and environmental benefits expected from it will differ from one part of Scotland to another 	Biodiversity, Flora & Fauna, Soil.

Plan name	Key policy coverage	Main SEA topics
Scottish Forestry Strategy	 The Scottish Forestry Strategy is the Scottish Executive's framework for taking forestry forward. It sets out a vision of a forestry sector that is: diverse and strong; in tune with the environment; employing many people in a wide range of enterprises; and providing the many other services and benefits that people need, now and for the future. The strategy focuses on the following key themes: climate change; timber; biodiversity; community development; environmental quality; access and health; and business development 	Biodiversity, flora & fauna, Population & Human Health, Water, Climatic Factors, Soil.
Scottish Water - Strategic Asset Capacity and Development Plan	Scottish Water has published a Strategic Asset Capacity and Development Plan which aims to let local authorities and developers see "at a glance" what capacity currently exists at a particular location in Scotland. It is intended to use this information to decide whether work will have to be carried out by Scottish Water to increase capacity at treatment works to enable a particular development to go ahead.	Biodiversity, Flora & Fauna, Population & Human Health, Water, Material Assets.

Plan name	Key policy coverage	Main SEA topics
Scottish Water - Quality and Standards 3	 Scottish Water is required to deliver specified outcomes which will improve drinking water quality, clean up the environment, provide for new development, and improve customer service. These requirements, which Scottish Water must deliver within the funds determined by the Water Industry Commission for Scotland, are set out in a Ministerial Direction to Scottish Water. In the period 2006 to 2010 these objectives will deliver the following outcomes through a combination of improved operating practices and £2.45bn of investment: improve the quality of drinking water for 1.5 million people and provide better disinfection control for 4 million people; contribute to improving water quality for over 200 km of water bodies; provide new strategic capacity to enable new development and allow our communities to grow; address odour nuisance at 14 waste water treatment works; remove 456 properties currently as risk from internal sewer flooding; remove 2,250 properties currently subject to low water pressure (less than 1 bar pressure); deliver a net reduction of 425 properties affected by unplanned interruptions in water supply (non trunk mains); Improved customer services from 177 (2006) to 250 (2010) as measured by the Overall Performance Assessment (OPA) methodology; and 	Biodiversity, Flora & Fauna, Population & Human Health, Water, Material Assets.
Scottish Water - Water Resource Plan	Scottish Water is committed to producing a water resource plan in liaison with SEPA to ensure protection of water resources. Includes supply-demand appraisal.	Biodiversity, Flora & Fauna, Population & Human Health, Water, Material Assets.
Scottish Water – Sewage Sludge Strategy	Strategy for safe disposal of sewage sludge following ban on burning over half of Scotland's sludge in dried pellet form at Longannet Power Station.	Biodiversity, Flora & Fauna, Population & Human Health, Climate Factors, Water, Material Assets.

Plan name	Key policy coverage	Main SEA topics
	To conserve biodiversity for the health, enjoyment and well- being of the people of Scotland now and in the future.	•
	Objectives:	
	 Species & Habitats: To halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats. 	
Scottish Biodiversity Strategy	 People: To increase awareness, understanding and enjoyment of biodiversity, and engage many more people in conservation and enhancement. 	Biodiversity, flora & fauna,
"Scotland's Biodiversity: It's in Your Hands"	 Landscapes & Ecosystems: To restore and enhance biodiversity in all our urban, rural and marine environments through better planning, design and practice. 	Water, Landscape, Soil.
	 Integration & Co-ordination: To develop an effective management framework that ensures biodiversity is taken into account in all decision making. 	
	 Knowledge: To ensure that the best new and existing knowledge on biodiversity is available to all policy makers and practitioners. 	
	Updates Scottish Climate Change Programme published in 2000. Sets out steps being taken in Scotland now and in the near future to tackle climate change. Key elements are:	
Changing Our Ways: Scotland's Climate Change Programme	 presenting longer term view; quantifying Scotland's equitable contribution in carbon terms; setting a Scottish target; demonstrating achievements so far; setting out new actions and future directions across main sectors; and responding to the inevitable consequences of climate change. 	Overarching.
Passed to the Future – Historic Scotland's policy for the Sustainable Management of the Historic Environment	This statement outlines Historic Scotland's commitment to ensuring that the historic environment is used and managed in a sustainable way. This means managing the impact of both natural processes and human activity in such a way that our environment retains its historic character. This is a continuous and dynamic process, requiring a delicate balance between conservation and change. Inevitably there will also be loss through natural erosion and through planned actions. The aim is to ensure that the characteristics of the historic environment are understood and taken account of so that its overall quality is enhanced rather	Cultural Heritage.
Scottish Historic Environment Policy series	than diminished. Scottish Historic Environment Policy (SHEP) is a new series of policy documents that both sets out Scottish Ministers' vision and strategic policies for the wider historic environment and provides greater policy direction for Historic Scotland.	Cultural Heritage.

Plan name	Key policy coverage	Main SEA topics
	The series includes: SHEP 1 - Scotland's Historic Environment; SHEP 2 - Scheduling;	
	 SHEP 3 - Gardens and Designed Landscapes; 	
	SHEP 4 - Scheduled Monument Consent; and	
	SHEP 5 - Properties in the Care of Scottish Ministers. The Act places duties on public bodies in relation to the	
Nature Conservation Act (Scotland) 2004	conservation of biodiversity, increases protection for Sites of Special Scientific Interest (SSSI), amends legislation on Nature Conservation Orders, provides for Land Management Orders for SSSIs and associated land, strengthens wildlife enforcement legislation, and requires the preparation of a Scottish Fossil Code. The Act is compliant with the provisions of the European Convention on Human Rights, requiring consultation where the rights of the individual may be affected by these measures.	Biodiversity, flora & fauna, Water.
	This act is the enabling legislation for the Water Framework Directive. It identifies SEPA as the competent authority.	
The Water Environment and Water Services (Scotland) Act 2003	The Directive requires Member States to put in place systems for managing their water environments, based on natural river basin districts and underpinned by extensive environmental monitoring and scientific investigation, called 'river basin management'. It further requires Member States to take account of the need to recover the costs of water services as a way of encouraging the sustainable use of water resources.	Overarching.
Scottish Planning Policy (SPP) 11: Physical Activity and Open Space	Sets out national planning policy for sports and recreation in urban and rural settings and for provision and protection of open space within and on the edges of settlements. It introduces national minimum standards for open space in new developments.	Population & Human Health.
Land Reform (Scotland) Act 2003	The Land Reform (Scotland) Act 2003 establishes statutory rights of access to land and inland water for outdoor recreation.	Population & Human Health, Landscape.
Scottish Natural Heritage policy statement on Landscape	This guidance provides updated advice on Landscape Character Assessment, an important tool for all those involved in influencing the landscape. The guidance reflects how methods and techniques for Landscape Character Assessment have developed in recent years and builds upon interim guidance which was the subject of consultation in 1999. This new guidance has been prepared for England and Scotland, although aspects may have relevance to other parts of the British Isles.	Landscape.
	This document sets out the full scope of activity potentially involved in a Landscape Character Assessment, but it may well be possible to undertake a more modest exercise that will still inform decision-making.	

Plan name	Key policy coverage	Main SEA topics
National Planning Policy Guidance (NPPG) 5: Archaeology and Planning	This National Planning Policy Guideline (NPPG) sets out the Government's planning policy on how archaeological remains and discoveries should be handled under the development plan and development control systems, including the weight to be given to them in planning decisions and the use of planning conditions. The guidance is aimed at planning authorities in Scotland, and is also of direct relevance to developers, owners, statutory undertakers, government departments, conservation organisations and others whose actions have a direct physical impact upon the natural or built environment.	Cultural Heritage.
National Planning Policy Guidance (NPPG) 18: Planning and the Historic Environment.	This National Planning Policy Guideline (NPPG) deals primarily with listed buildings, conservation areas, world heritage sites, historic gardens, designed landscapes and their settings. It complements NPPG 5 Archaeology and Planning, which sets out the role of the planning system in protecting ancient monuments and archaeological sites and landscapes.	Cultural Heritage.
Scottish Planning Policy SPP 23: Planning and Historic Environment: Consultative Draft	SPP 23 supersedes and consolidates NPPG 18 and NPPG 5. It sets out the national planning policy for the historic environment with a view to its protection, conservation and enhancement and indicates how the planning system will contribute to the delivery of the SHEP series.	Cultural Heritage.
Scottish Historic Environment Policy: Consultation: The Marine Historic Environment	Sets out proposals for the marine historic environment building on many of the principles defined in Historic Scotland Operational Policy Paper HP6 Conserving the Underwater Heritage [1999].	Cultural Heritage.
Scottish Government: Scottish Government Economic Strategy, 2007	 This Government Economic Strategy sets out how the Scottish Government will support businesses and individuals. The strategy aims to: focus the Government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth; and build a dynamic and growing economy that will provide prosperity and opportunities for all, while ensuring that future generations can enjoy a better quality of life. 	Overarching.
Scottish Climate Change Bill (Draft), 2008	 There are four key reasons why the Scottish Government is bringing forward legislation to create mandatory climate change targets: to drive decisions in government and business; to create and enable new means of reducing emissions and adapting to climate change; to play our part in global action on climate change; and to provide a strong example to other countries showing what can be done. 	Overarching.
Scottish Executive: A Strategic Framework for Scottish	Scotland aims to have a sustainable, diverse, competitive and economically viable aquaculture industry, of which its people can be justifiably proud. It will deliver high quality, healthy food to consumers at home and abroad, and social and economic benefits to communities, particularly in rural and remote areas.	Biodiversity, flora & fauna, Water.

Plan name	Key policy coverage	Main SEA topics
Aquaculture, 2003	It will operate responsibly, working within the carrying capacity of the environment, both locally and nationally and throughout its supply chain.	
Scottish Planning Policy (SPP) 6 - Renewable Energy, 2007	Scottish Ministers have set a target of generating 40% (since quantified as 6 GW) of Scotland's electricity from renewable sources by 2020 and confirmed that this target should not be regarded as a cap. The importance of using clean and sustainable energy from renewable sources will continue to increase as a result of global imperatives to tackle climate change and the need to ensure secure and diverse energy supplies.	
	The Scottish Ministers will continue to support the full range of renewable generation technologies, including micro- renewables, to enable Scotland to realise its considerable renewable energy potential.	Climatic Factors.
	The planning framework set out in this SPP will help ensure the delivery of renewable energy targets as well as supporting the development of a viable renewables industry in Scotland. The development of existing and new technologies has the potential to provide significant opportunities for Scotland to enhance its manufacturing capacity with associated economic and employment benefits. Such benefits, which may accrue locally or nationally, should be fully taken into account when considering planning applications.	
Scottish Water Delivery Plan 2006 to 2010	 Scottish Water is committed to delivering the Ministerial Directions and other regulatory targets for the 2006 to 2010 period within the financial limits set out in the Final Determination. This delivery plan shows how they plan to do this and to out-perform the determination. The Ministerial Directions are reproduced at Appendix X4 and include: addressing development constraints; improving service by making; abatements to malodour from waste water treatment works reductions in the number of properties at risk of internal flooding from overloaded sewers reductions in the number of properties that suffer unplanned interruptions to their water supply reductions in the number of properties that receive water at inadequate pressure; improving drinking water quality; reducing the effects of discharges to the water 	Overarching.
	environment; andmaintaining service standards for customers.	

Plan name	Key policy coverage	Main SEA topics
Scottish Government's Strategic Framework for Scottish Freshwater Fisheries Consultation, 2007	This document sets out a shared vision for freshwater fisheries in Scotland – 'Scotland will have sustainably managed freshwater fish and fisheries resources that provide significant economic and social benefits for its people.' It also explains how the Freshwater Fisheries Forum Steering Group worked together to create this Strategic Framework, taking into account the interests and needs of all stakeholders, and having regard to the four pillars of sustainability: environmental, economic, social and stewardship.	Biodiversity, flora & fauna, Water.
Scotland's National Transport Strategy	This strategy maps out the long-term future for transport in Scotland for the first time. It seeks a transport system fit for the 21st century, one that meets the needs of everyone in Scotland, providing them with integrated, modern, reliable and environmentally efficient transport choices. Alongside that vision, the strategy outlines the long-term objectives, priorities and plans to make it a reality.	Overarching.
England Regional	/Local	
The North West Plan: Submitted Draft Regional Spatial Strategy for the North West of England (Jan. 2006)	The Planning and Compulsory Purchase Act 2004 strengthened the importance of regional planning by introducing Regional Spatial Strategies which bring together economic, social and environmental issues linked to planning in a coherent framework. The Regional Spatial Strategy (RSS) for North West England provides a framework for the physical development of the region over the next fifteen to twenty years. Incorporating the Regional Transport Strategy (RTS), it addresses the scale and distribution of future housing development and sets priorities for dealing with environmental issues, transport, infrastructure, economic, development, agriculture, minerals and the treatment and disposal of waste.	Overarching.
VIEW: Shaping the North East. Regional Spatial Strategy for the North East Submission Draft	Currently in draft form, the Regional Spatial Strategy (RSS) for the North East sets out the broad spatial development strategy for the North East region for the period of 2004 to 2021. When adopted, the RSS will set out the region's housing provision and the priorities in economic development, retail growth, transport investment, the environment, minerals and waste treatment and disposal. Some policies have an end date of 2021, but the overall vision, strategy, and general policies will guide development over a longer timescale.	Overarching.

Plan name	Key policy coverage	Main SEA topics
North West Regional Housing Strategy (2005)	 The aims of the North West Regional Housing Strategy are to: set out a comprehensive view of the strategic housing issues facing the North West; establish foundations for the forthcoming Regional Spatial and Regional Economic Strategies to build upon, and which responds to the Northern Way Growth Strategy; develop and make more explicit spatial and thematic priorities for the region to better direct investment decision making; gain growing understanding of the housing markets in the North West and their relationship with both economic drivers and social and environmental sustainability; set long-term objectives for the region against which shorter term priorities for action can be established; and identify where the Board and its partners can make a demonstrable positive difference. 	Population & Human Health, Material Assets.
North West Regional Waste Strategy	The Regional Waste Strategy will contribute to the sustainable development of the North West by encouraging waste management systems that will reduce waste generation, lessen the environmental impacts of waste production, and improve resource efficiency, while at the same time stimulating investment and maximising associated economic opportunities. The link between waste growth and economic development can only be broken through more efficient use of resources and improved waste management.	Biodiversity, flora & fauna, Population & Human Health, Material Assets, Water, Climate Factors, Soil.
North West Regional Transport Strategy (2003)	This strategy supports the vision and objectives of the North West Regional Spatial Strategy by concentrating on the development of better transport links within the region, and between the North West and other parts of the UK, Ireland, mainland Europe and beyond. It aims to do this by significantly improving the quality and provision of public transport and by promoting a more structured approach to managing and selectively improving the region's highway network.	Climate Factors, Population & Human Health, Material Assets.

Plan name	Key policy coverage	Main SEA topics
St Bees Head to River Sark Shoreline Management Plan	 The aim of this Shoreline Management Plan (SMP) is to provide a framework for the development of sustainable coastal defence policies for the coastline between St Bees Head and the River Sark on the Scottish Border and to set objectives for the future management of the shoreline. The main objectives of this SMP are to: agree a preferred approach based on an assessment of the range of Strategic Coastal Defence Options; outline future requirements for monitoring, management of data and research related to the shoreline; inform the statutory planning process and related coastal zone planning; identify opportunities for maintaining and enhancing the natural coastal environment, taking account of any specific targets set by legislation or any locally set targets; and set out arrangements for continued consultation with interested parties. The key issues addressed in the preparation of this SMP are: coastal processes; coastal defences; land use and the human and built environment; and 	Overarching.
Eden Catchment Flood Management Plan	A Catchment Flood Management Plan (CFMP) is a high level strategic planning tool through which the Environment Agency hopes to work with other key decision makers to explore and define long term sustainable policies for flood risk management. It is an essential plan to enable a strategic, proactive and risk-based approach to flood risk management in the Eden Catchment.	Biodiversity, flora & fauna, Population & Human Health, Water, Climatic Factors, Material Assets.
Vision for the Lake District National Park 2006 to 2030	Working together for a prosperous economy, vibrant communities and world class visitor experiences - and all sustaining the spectacular landscape.	Overarching.
Northumberland National Park Management Plan: 'A Secure Future for the Land of the Far Horizons'	Northumberland National Park Authority will be proactive, innovative and forward-looking, and will work towards a National Park with thriving communities and a sustainable local economy grounded in its special qualities, including a richness of cultural heritage and biodiversity, a true sense of tranquillity and a distinct character associated with a living, working landscape, in which everyone has an opportunity to understand, enjoy and contribute to those special qualities.	Overarching.
Solway Coast Area of Outstanding Natural Beauty (AONB) Management Plan 2004 to 2009	 A vision for how the area will look in 2030 is set out that covers the following aspects: landscape; natural heritage; cultural heritage; communities; tourism and recreation; 	Overarching.

Plan name	Key policy coverage	Main SEA topics
	transport and access; andeducation and information.	
The North Pennines AONB Management Plan 2004 to 2009	 The primary aim of the Management Plan is to provide a framework for action for the conservation and enhancement of the North Pennines AONB. The following themes are considered key in achieving this: landscape and biodiversity; historic environment; economic development/rural regeneration; and land use/development planning. 	Overarching.
North West Rural Delivery Framework	 Six headline rural priorities for the region have been agreed and are listed below: Maximising the economic potential of the region's rural areas. Supporting sustainable farming and food. Improving access to affordable rural housing. Ensuring fair access to services for rural communities. Empowering rural communities and addressing rural social exclusion. Enhancing the value of our rural environmental inheritance. 	Overarching.
The North East Rural Action Plan	 The Rural Action Plan is about looking to the future. It sets out a shared vision for the Region's rural areas. It identifies the 10 priority areas for action that will make the most difference over the next 3 to 5 years, and so bring about a lasting revival of the Region's rural economy. 1. The future for land-based businesses. 2. Influencing National and European rural policy. 3. The development of tourism and culture. 4. Building a diversified rural economy. 5. An enabling planning system. 6. Investing in market towns and local service centres. 7. Making the most of information and communication technology. 8. The empowerment of rural communities. 9. Integrated rural transport. 10. New ways of working. 	Overarching.
Northumbrian Water - What customers can expect in 2005 to 2010 our delivery plan	 A) Investing in improvements, including: quality improvements; service improvements; meeting growing demand; and finance costs. B) Operating expenditure. C) Maintaining our assets. 	Biodiversity, flora and fauna, Population & Human Health, Water, Climate Factors, Material Assets.

Plan name	Key policy coverage	Main SEA topics
United Utilities Draft Statutory Drought Plan	This plan provides a comprehensive statement of the actions that United Utilities will consider implementing during drought conditions to safeguard essential water supplies to its customers and minimise environmental impact. The security and integrity of water supplies is of the utmost importance to its customers.	Biodiversity, flora & fauna, Population & Human Health, Water, Climatic Factors, Material Assets.
United Utilities Water Resources Plan – Planning for the Future	Information not publicly available yet.	Overarching
Eden and Esk Catchment Abstraction Management Plan	This strategy sets out how we will manage water in the Eden and Esk catchments to balance the various demands on the water resource. The water environment in the Eden and Esk catchments has a high ecological value, recognised by the numerous designations found here. It is critical to maintain this high status whilst also supporting other needs in the catchment, such as the strategically important supply of water to Cumbria and other parts of the North West region.	Biodiversity, flora & fauna, Population & Human Health, Water, Climate Factors, Material Assets.
United Utilities Biodiversity Strategy Working for Wildlife	The United Utilities strategy and the accompanying plans set out how the regulated part of United Utilities (Service Delivery), supplying water and electricity services in the northwest of England, will manage and promote the variety of life that occurs on its land or is affected by its operations. This strategy gives an overview of biodiversity in the northwest and how United Utilities affects it. The individual species and habitat plans set out specific actions to help protect biodiversity. The strategy covers the period 2004 to 2006. It will then be reviewed and the targets in the individual plans updated. Progress in implementing the strategy will be reported through the company's Corporate Responsibility Report.	Biodiversity, flora & fauna, Water.
North West Climate Change Action Plan "Rising to the Challenge"	This Action Plan sets out a Vision for the region and outlines the associated outcomes to be achieved by 2020. In order for the region to achieve these outcomes, it must focus on the twin objectives of reducing regional greenhouse gas emissions and adapting to those effects of climate change which are now unavoidable.	Climatic Factors.
United Utilities/RSPB Sustainable Catchment Management Programme	The Sustainable Catchment Management Programme (SCaMP), which has been developed in association with the Royal Society for the Protection of Birds (RSPB), aims to apply an integrated approach to catchment management within two key areas of United Utilities land; Bowland and the Peak District area. This will help to deliver government targets for SSSIs, enhance biodiversity, ensure a sustainable future for the company's agricultural tenants and protect and improve water quality.	Biodiversity, flora & fauna, Water.

Plan name	Key policy coverage	Main SEA topics	
Restoring Eden	 The Eden Rivers Trust is a Company limited by guarantee (no. 06460807), registered in England and Wales, and is a Registered Charity (no. 11123588) set up in 1996 with two main aims: to conserve, protect and improve the River Eden, its 	Biodiversity,	
Project – Eden Rivers Trust	 tributaries and the flora and fauna in and adjacent to them; and increase public awareness of the importance of the River Eden and its catchment through education. These aims are met through research, conservation and 	flora & fauna, Water.	
	education projects.		
Hadrian's Wall World Heritage Site Management Plan	The management plan sets out the policy framework needed to ensure the appropriate management of the World Heritage Site in the form of overarching principles covering planning and conservation issues access and interpretation and marketing.	Cultural Heritage.	
Eden Local Development Framework (Eden	The Local Development Framework will give developers and local people a clear indication of what is likely to be acceptable development and will be the basis for assessing planning applications.	Overarching.	
District Council)	The Eden Local Development Framework will be a portfolio of documents that together will form the spatial plan for Eden District outside of the Lake District National Park.		
Lake District National Park Local Development Framework (LDNPA)	The Local Development Framework (LDF) is the equivalent of a 'folder' containing different documents. Collectively these documents deliver the spatial planning strategy for the Lake District National Park. Each document will contain policies to guide where development can take place. These will be used to make decisions about applications for planning permission. Documents will cover different subjects from the overall strategy for the National Park to specific proposals about where housing should be developed. The documents will form the building blocks for the future of the Lake District National Park.	Overarching.	
United Utilities Strategic Direction Document	This document is not yet available in the public domain.	N/A	
Scotland Regional/Local			
Dee/Ken Catchment Management Plan	The objective of this project is to develop an agreed plan for catchment management to encourage the protection, promotion and enhancement of biodiversity and water resources while balancing economic and social concerns in the Dee/Ken Catchment. The plan should be an evolving document, taking into consideration past practices and future changes.	Overarching.	

Plan name	Key policy coverage	Main SEA topics	
Nith Catchment Management Plan	 The main aim of catchment management planning is to encourage the partnership of key individuals and organisations to work together for the benefit of whole catchments. In order to do this Catchment Management Plans attempt to: record the state of the catchments including: water quality; the status and extent of habitats and species within the catchment; and key land management activities; review the main impacts on the water quality of the river; identify where issues may need to be addressed in different areas of the catchment; and identify appropriate long-term objectives for the catchment from which beneficial short-, medium- and long-term actions can be developed through partnership working. 	Overarching.	
Annan Catchment Management Plan	To ensure the sustainable use of resources. Maintain and enhance biodiversity and water quality. The Catchment Management Plan has been written and objectives for the future identified and are being monitored.	Overarching.	
Dumfries and Galloway Structure Plan	Provides a strategic framework for land use planning on a regional council wide basis.	Overarching.	
Scottish Borders Structure Plan	Provides a strategic framework for land use planning on a regional council wide basis.	Overarching.	
Cross Border Regional/Local			
Solway Tweed Regulations	When the Water Framework Directive was transposed into UK legislation, separate provision was made for the Solway Tweed River Basin District because it straddles the English–Scottish border. Under the Solway Tweed Regulations the Environment Agency and SEPA were given a number of new duties and responsibilities around working together to deliver river basin planning in the Solway Tweed River Basin District.	Overarching.	
Tweed Catchment Management Plan	 Aims and goals of the Tweed Catchment Management Plan are to conserve, enhance and where appropriate restore the total river environment through effective land and resources planning across the Tweed catchment. In achieving this, it will:- enable actions on the ground, which benefit both the water environment and its users; engage a wide range of parties from government organisations to local communities, interest groups and landowners; build a self generating consensus for action; and harmonise land and water uses within the catchment to an agreed set of common objectives. 	Overarching.	

APPENDIX D NATIONAL AND REGIONAL ASSESSMENT TABLES
Reference/Baseline

Diffuse Pollution

	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	All sectors	Option 1: Baseline - 'do nothing'	Reduce diffuse pollution inputs	1
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Existence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the VFD? Provide effective protection of designated die5? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies? Datative immed the alias exartise?	Positive short-term effect through removal of pollution to water bodies	pas.S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parket Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Positive short-term effect	pos.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source politicion, diffuse source politicion, abstraction and frow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse polition? Prevent the physical deterioration of water bodies ?	Positive short-term effect	pos.S	
		Prevent the physical detenoration of water bodies ?	No significant effect		
Cimate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload management? Contribute to the imfiguition of floads and <u>deoughes?</u> Reduce witheability of communities and the enrorment to the effects of climate <u>change?</u> Reduce witheability of communities <u>change?</u> Addess the peternial impacts of climate <u>change</u> on biodirensity? <u>Constitute to reducing generhouse gas</u> emissions foom water management	No significant effect Positive short-term effect Negative short-term effect	neg./pos.	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural hentage in the RBD	activities? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape area? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Negative short-term effect	neg S	Negative short-term effect on the landscape aesthetics, positive short-term effect on the quality of the water body (if considered part of the landscape)
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WW/TW/s & drainage)?	No significant effect	NS	
Seil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Peduce erosion? Improve degraded site? Protect agricultural land? Safeguard soil quality, quartity and function? Contribute to reducing lavels of brownfield, derelict and contaminated land in plan ares?	Positive short-lerm effect	poe S	

	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Agriculture (regulatory)	Option 1: Baseline - 'do nothing'	Regulations, guidelines and standards to reduce pollutant loads to water bodies	2
SEA topic	A. SEA Objective - to what extent will the R0MP	R. Assessment Criteria - to what extent with the PBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of 'protected areas' (e.g. SACs, SACs, SSGIs) defined under the VMO' Provide effective protection of designated abes? Contribute to UK Biodiversity Action Plan objectives? Bupport delivery of biodiversity strategies?	Positive short-term effect	por S	
Population & human health	 Protect human health in undertaking water management activities 	Average of the second s	Positive short-term effect	pos.S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffue source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point ocurce and diffue pollution? Promote efficient and sustainable use of water?	Positive short-term effect	pos. S	
		Prevent the physical deterioration of water bodies 2	No significant effect		
Climate	4. Contribute to mitigation of, and eductation to. Climate chance	Promote sustainable food management? Centribute to the mitigation of floods and foughts? Reduce vulnerability of communities and the environment to the effects of climste change? Reduce vulnerability of communities and the environment to the effects of climste change?	No significant affect	per S	
		Address the potential impacts of climate change on biodiversity? Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management activities?	Positive short-term effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance mational designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	Perhaps a minor positive effect
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWS & drainage)?	No significant effect	NS	
12		Reduce erosion? Improve degraded sites?	No significant effect		
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfield,	Small positive short-term effect	pos.S	
		derenct and contaminated land in plan area?	No significant effect		<i>8</i>
	Summary: Generally, this measure	is positive for biodiversity, water, climate	e and soils,a positive and negative for p	population and human health	and not significant for the other SEA topics.

2 C	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Agriculture (non-regulatory)	Option 1: Baseline - 'do nothing'	Education, advice & campaign awareness	3
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, mediam, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of broacted areas (e.g. SACs, SPAs, BSSIs) defined using the WTOP Provide effective protection of designated obs? Contribute to UK Biodiversity Action Plan blockmes? Support delivery of biodiversity strategies? Reduce impacts by alian species?	Insufficient information to make a judgement	•	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase burns and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Insufficient information to make a judgement	•	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the ecological condition of water bodies from for example point source polition, diffue source pallution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse polition? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgement	•	
Climate factors	 Contribute to megation of, and adaptation to, climate change 	Promote sustainable fload management? Contribute to the mitigation of floads and <u>increases</u> ? Contribute to the docking generationse gas amissions from water management the enrormment to the effects of climate change? Encourage improved energy efficiency? Address the potential impacts of climate change an biodimently? Address the potential impacts of climate change on biodimently?	Insufficient information to make a judgement	•	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement	2 . •3	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape area? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	Insufficient information to make a judgement		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Insufficient information to make a judgement	•	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect apricultural land? Safeguard soil quality, quartity and function? Contribute to reducing lavels of brownfield, derelict and contaminated land in plan area?	Insufficient information to make a judgement	•	
	Summary: It is unlikely that there	will be direct effects of the campaign, a	though there may be significant secon	dary effects depending on the	scale and targeting of awareness raising.

<i>i</i>	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Agriculture (non-regulatory)	Option 1: Baseline - 'do nothing'	Economic incentives for agriculture to reduce diffuse pollution	4
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the FBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protection areas' (e.g. SACs, SPAs, SSBs) defined under the WED' Provide effective protection of designated abes? Contribute to UK Elodiversth Action Plan objectives? Budgeot delivers of biodwarsth strategies?	Positive short-term effect	por S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water enconnent? Increase tourism and/or improve National Protect dinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pos S	
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interesentions? Prevent the deterioration of water bodies from port source and diffuse pollution? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	
		Prevent the physical deterioration of water	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable field monagement? Contribute to the milippline of floods and decepter's Reduce vulnerability of communities and the enrooment to the effects of climate changs? Reduce vulnerability of communities changs? Advess the protectual impact to climate changs? Advess the protectual impact to climate changs on biodirectly? Contribute to reducing generability emissions forour water management	No significant effect Postive short-term effect	por.5	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	May be a minor positive effect, but probably not strategically significant
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve degraded site? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfaild.	Positive short-term effect	pos.S	
		derelict and contaminated land in plan area?	No significant effect		
Summary	; Generally, the effects of this measure '	will be positive for biodiversity.water, cl	imate and soil, negative and positive fo	r population and human heal	th and not significant for the remainder of the SEA topics.

2	Pressure	Sector	Option	Measure	Measure No.			
	Diffuse pollution	Forestry (regulatory)	Option 1: Baseline - 'do nothing'	Regulations to reduce diffuse	5			
SEA topic	A. SEA Objective - to what extent will the RDMP	D, Asssessment Criteria - to what extent with the FBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainly			
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of "protected areas" (e.g. SACs, SPAR, SSSII) defined under the VMDO" Provide effective protection of designated asses? Combibute to VK Biodhversity Action Plan objectives? Busport delivery of biodwersity strategies? Produce invancts bus alian societies?	Positive short-term effect	pos.S				
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pos.5				
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to god status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source polition, diffuse source polition, abstraction and flow regidation, and morphological interventions? Prevent the detenoration of water bodies from point source and diffuse politision? Promote efficient and sustainable use of water? Prevent the house and framework of water and the second se	Positive short-term effect	poe.S				
0		bodies ?	No significant effect					
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable flood management? Contribute to the mingation of floods and docugets? Contribute to the document of the document environment of the document floods with the document environment of the document environment envi	No significant effect	NS				
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS				
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance mational designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	Perhaps a minor positive effect			
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWS & drainage)?	No significant effect	NS				
19 - 19 - 19 - 19 - 19 - 19 - 19 - 19 -		Reduce erosion?	No significant effect					
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan	Small positive short-term effect	pos.S				
2		area?						
	Summary: Generally, this measure is positive for biodiversity, water, and soils, positive and negative for population and human health and not significant for the other SEA topics.							

	Flessure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Forestry (non-regulatory)	Option 1: Baseline - 'do nothing'	Economic incentives for forestry to reduce diffuse pollution	6
SEA topic	A. SEA Objective . to what extent will the RBMP	B. Asssessment Criteria - to what extent with the PDMP	C. Nature of the effect discluding positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-cutling where known)	D. Significance of the effect?	E, Evidence, mitigation, uncertaintly
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. 400,6; 8PAs, 68B) obtained under the VMFD? Provide effective protection of designated <u>obtained</u> Contribute to UK Riodhersth Action Plan objectives? Buggoot delivery of biodhersthy stategies? Reduce emprasts by alian paperces?	Positive short-term effect	por S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase bourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pot.S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse sample, point source pollution, diffuse sample, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Promet deficient and sustainable use of water? Prevent the physical deterioration of water bodies ?	Positive short-term effect	pos.S	
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable flood management?: Contribute to the moligization of books and droughts? Reduce vulnerability of communities and the environment to the effects of climate change? Reduce vulnerability of communities and the environment to the effects of climate change?	No significant effect	pot.S	
		change on biodiversity? Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management activities?	Positive short-term effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance mational designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NŠ	May be a minor positive effect, but probably not strategically significant
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	 Protect and, where appropriate, enhance the function and quality of the soil 	Reduce erosion? Improve degraded sites? Safeguard soil quality, quantity and function?	Positive short-term effect	000 S	
	resource in the RBD	Protect agricultural land? Contribute to reducing levels of brownfield, derelist and contaminated land in plan area?	No significant effect		

2	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Forestry (non-regulatory)	Option 1: Baseline - 'do nothing'	Education, advice and campaign awareness	7
SEA topic	A. SEA Objective - to what extent will the FBMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or fong-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of brotected areas' (e.g. SAAC, SIAAE, SISD) is defined under the WFD? Provide effective protection of designated able? Combibule to UK Biochershift Action Plan Dobtchershift Busport delivery of biodivershift strategies? Reduce Impacts by alian paperiols?	Insufficient information to make a judgement		
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abatraction? Protect balking and shellfsh protected waters?	Insufficient information to make a judgement	-	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example point source publichon, offine e rource pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgement	۵.	
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable fload menagement? Contribute to the minipation of floads and decogites? Contribute to the docking generhouse gas emissions from water management a chickles? Reduce vulnerability of communities and change? Encourage improved energy effciency? Address the potential impacts of climate change on homan is used water (or, weter Address the potential impacts of climate change on homan use of water (or, or, weter	Insufficient information to make a judgement		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the DRN	yields, abstraction, recreational uses)? Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement		
Landscape	5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	Insufficient information to make a judgement	1. C	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Insufficient information to make a judgement	843	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce recision? Improve degraded sites? Protect agricultural land? Safeguard soll quality, quarity and function? Contribute to reducing levels of brownfield, derelist and contaminated land in plan area?	Insufficient information to make a judgement		
	Summary: It is unlikely that there	will be direct effects of the campaign, a	though there may be significant secon	dary effects depending on the	e scale and targeting of awareness raising.

	Pressure	Sector	Option	Measure	Measure No.			
	Diffuse pollution	Acidification (regulatory)	Option 1: Baseline - 'do nothing'	Controls to reduce the effects of air pollution	8			
SEA topic	A. SEA Objective - to what extent will the RUMP	D. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty			
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas's (eg. SACs, BPAE, SSGI) defined under the WED? Protete effective protection of designated abs/2 Contribute to UK Biodiversity Action Plan biotichers? Support delivery of biodiversity strategies? Reduce impacts by alian gatesica?						
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect balking and shellfah protected waters?						
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate	Reduce the impacts on the acological condition of water bodges from for example, point source publichon, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodges from point source and diffuse publicitor? Prevent the dystical deterioration of water bodges? Promote efficient and sustainable use of water?						
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable food management? Centrolive to the mitigation of Roods and Controlive to the mitigation of Roods and complexity entrolive to the second second second activities and the second second second charage? Address the potential impacts of circuite charage in budnership? Address the potential impacts of circuite charage on budnership? Address the potential impacts of circuite charage on budnership?						
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?						
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?						
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infractructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?						
Soil	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erstian? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfield, derelict and contaminated land in plan area?						
	Summary: Not assessed.							

2 C	Pressure	Sector	Option	Measure	Measure No.			
	Diffuse pollution	Acidification (regulatory)	Option 1: Baseline - 'do nothing'	Regulations to reduce the	9			
SEA topic	A. SEA Objective - to what extent will the RDMP	D, Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainly			
Biodiversity, flora & fauna	1 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of "protected areas" (e.g. SACs, SPAR, SSSII) defined under the VMDO" Provide effective protection of designated sites? Contribute to UK Diodnersity Action Plan objectives? Estiport delivery of biodnersity strategies?	Positive short-term effect	pos.S				
Population & human health	2. Protect human health in underfailing water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parities Protect dinking water protected areas and water abstraction? Protect bathing and shellfash protected waters?	Positive short-term effect	pos.S				
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Promote efficient and sustainable use of water?	Positive short-term effect	poe.S				
		bodies ?	No significant effect					
Climate factors	 Contribute to metgation of, and adaptation to, climate change 	Promote sustainable fload management? Contribute to the minigation of floads and descepts? Contribute to the docking generhouse gas emissions from water management Preduce velopeability of communities and the enrorment to the offects of climate change? Encourage improved energy efficiency? Address the potential impacts of climate change on biodirently?	No significant effect Positive short-term effect	pos.S				
		change on human use of water (e.g. water						
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	yields, abstraction, recreational uses)? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS				
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	Perhaps a minor positive effect			
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWS & drainago)?	No significant effect	NS				
		Reduce erosion?	No significant effect					
Soil	8 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfield, detailst and contempated land in size	Small positive short-term effect	pos.S				
		area?	ivo significant enect					
	Summary: Generally, this measure is positive for biodiversity, water and soils, positive and negative for population and human health and not significant for the other SEA topics.							

	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Agriculture (non-regulatory)	Option 1: Baseline - 'do nothing'	Emission Trading Scheme	10
SEA topic	A. SEA Objective - to what extent will the REMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, milligation, uncertainly
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species 	Provide effective podection of bootested arrays (e.g. 5405, 5476, 5553) oddreid under the v4507 Provide effective protection of designated 50557 Contribute to UK Biodressty Action Plan objectives? Reduce investis y ation percess?	Insufficient information to make a judgement		
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinning water protected areas and water abstraction? Protect bahing and shellfsh protected waters?	Insufficient information to make a judgement	•	
Water	 Prevent detencration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Produce the impacts in the ecological condition of water bodies than for a sample point source polition, diffuse source polition, estraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse polition? Prevent the physical deterioration of water bodies ? Promote efficient and sutainable use of water?	Insufficient information to make a judgement		
		Promote sustainable flood management? Contribute to the mitigation of floods and droughts? Contribute to redisting greenhouse gas emissions from water management activities? Encourses emproved energy efficiency?	No significant offect Postive short-term effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, recreational uses)? Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, recreational uses)?	No significant effect	pot S	Assuming that the ETS will be targeted at reducing greenhouse gas emissions and energy efficiency
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape values and local disticctiveness?	Insufficient information to make a judgement		
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Sufeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	
Summary: 1	There is insufficient information to make	a judgement on the effects of the ETS o material assets and soil, while it	n biodiversity, population and human h is likely that this measure will have pos	health,water and landscape. I sitive effects on climate factor	No significant effect would be expected on cultural heritage, 15.

0	Pressure	Sector	Option	Measure	Measure No.		
	Diffuse pollution	Acidification (non-regulatory)	Option 1: Baseline - 'do nothing'	Forests and Water Guidance	11		
SEA topic	A. SEA Objective - to what extent will the REMP	B. Asssessment Criteria - to what extent with the REMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty		
Biodwersity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective postection of protected arras' (e.g. AcG., giPAe, SEG3) defined under the WDD? Provide effective protection of designated sbits? Contribute to UK Biodressity Action Prian Outblude to UK Biodressity Action Prian Support delivery of biodressity stategies? Reduce impacts by alian species?	Insufficient information to make a judgement				
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase bourism and/or improve National Parks Protect trinking water protected areas and water abstraction? Protect bahing and shellfah protected waters?	Insufficient information to make a judgement				
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts in the acological condition of water bolicos from for example, point source publicos, diffuer is source politicos, astraction and flow regulations? and morphological interventions? Prevent the deterioration of water bodies from point source and diffuer politicion? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgement				
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable flood management? Contribute to the minjation of floods and <u>diouglits?</u> Contribute to the acoting generatorize gas emissions from water management achtotist? Reduce vulneability of communities and the environment to the effects of climate change? Address the potential impacts of climate change on human use of water (og, water change on human use of water (og suter change on human use of water (og suter pields, distraticne, nerenational useit)?	Insufficient information to make a judgement	•			
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement				
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Insufficient information to make a judgament	•			
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Insufficient information to make a judgement	•			
Soil	8. Protect and, where appropriate, enhance the function and quality of the sol resource in the RBD	Reduce ension? Improve departed sites? Protect agricultural land? Safeguard sol quality, quantity and <u>duction</u> ? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	Insufficient information to make a judgement	•			
	Summary: It is unlikely that there will be direct effects of the campaign, although there may be significant secondary effects depending on the scale and targeting of awareness raising						

21 - O	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Urban development (regulatory)	Option 1: Baseline - 'do nothing'	GBRs to reduce urban diffuse pollution	12
SEA topic	A. SEA Objective - to what extent will the RBMP	B, Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodwersity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species 	Provide effective protection of protected areas' (e.g. SACS, BPAE, SGSI) defined under bis WID? Provide effective protection of designated obs/? Contribute to UK Biodiversity Action Plan Discrete 7 de biodiversity strategies? Reduce invocatis for alian processor.	Postive short-term effect	por S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effects	pos.S	Effects are generally positive for biodiversity & recreation, but there may be costs for other sectors. The costs & benefits will need to be assessed in the IA. Mitigation could be achieved through stargeted study to assess distinction of costs and benefits and effective disposal of waste
Water	3. Prevent deterioration of the status of water budies. Enhance, water budy status (including groundwater) to good status, as appropriate	Reduce the impacts on the ecological condition of water bodies from for example point source pollubion, diffuse source pollution, abstraction and flow regulation, and morphological interventiono? Prevent the deterioration of water bodies from point source and diffuse pollution? Premote efficient and sustainable use of water?	Positive short-term effects	pos.S	
		Prevent the physical deterioration of water bodies ?	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload management? Contribute to the minipation of floads and <u>insugates?</u> Reduce vulneability of communities and the environment to the effects of climate the environment to the effects of climate the environment to the effects of climate and the environment on the effects of climate charge on bioinferent?? Contribute to resource generhouse gas misisticions from water management	No significant effect Positive short term effect	por S	
Cultural	 Protect and, where appropriate, enhance the character, diversity and 	activities? Encourage improved energy efficiency? Protect and, where appropriate, enhance	No significant effect	NS	
heritage	special qualities of cultural heritage in the RBD	or restore historic environment features?			
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	Perhaps a minor positive effect but probably not significant and difficult to measure
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded stars? Protect agricultural land? Contribute to reducing levels of brownfeld, deteilst and contaminated land in plan area? Contribute to reducing levels of brownfeld, derelict and contaminated land in plan	No significant effect Positive short-term effects through treatment in SUDS	pon.S	
Summary:	Generally this measures will have positi	ve effects for biodiversity, water, climat	e and soil, negative and positive effects	on population and human h	ealth and no significant effect on cultural heritage, material

1	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Urban development (non-regulatory)	Option 1: Baseline - 'do nothing'	Campaign awareness and best practice to reduce diffuse pollution from urban development	13
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect discluding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, miligation, uncertainly
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. 8405, 8104, 8501) defined under the WDD? Provide effective protection of designated sites? Contribute to UxF Boudershift Action Plan Dotothews? Buscont delivery of boodwraths datalogies? Reduce Impacts by alian species?	Insufficient information to make a judgement		
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abatraction? Protect bathing and shellfish protected waters?	Insufficient information to make a judgement		
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example joint source pollution, diffure rource pollution, abstraction and flow regulation, and morphological interventiona? Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgement		
Climate factors	 Contribute to mitigation of and adaptation to, climate change 	Promote sustainable fload menagement? Contribute to the mitigation of floads and <u>droughts?</u> Contribute to the docking generationuse gas emissions storn water management activities? Reduce submenbility of communities and the environment to the docking of climate <u>encourage</u> improved energy efficiency? <u>Address the potential impacts of climate</u> change on biodirectly? Address the potential impacts of climate change on buomanu use of water (e.g. water change on humanu use divater (e.g. water change on humanu use divater (e.g. water	Insufficient information to make a judgement		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement	242	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and outling? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	Insufficient information to make a judgement	3	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Insufficient information to make a judgement	120	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce encition? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelist and contaminated land in plan area?	Insufficient information to make a judgement		
	Summary: It is unlikely that there	will be direct effects of the campaign, a	though there may be significant second	dary effects depending on the	scale and targetting of awareness raising.

0	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Sea and Coastal transport (not a SWMI	Option 1: Baseline - 'do nothing'	Reduce diffuse pollution from	14
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative abort, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of "protected areas" (e.g. SACs, GPAs, SSDIs) defined under the WEO" Provide effective protection of designated obs/? Controlude to UK Biodiversity Action Plan Discretes? Support delivery of biodiversity strategies? Reduce empects by alen species?	Not assessed for the Solway Tweed, as not a SWMI issue	•	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Not assessed for the Solway Tweed, as not a SWMI issue		
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the acological condition of water bodies from for example point source publichon, diffuse source pallution, astartaction and flow regulations, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publichor? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Not assessed for the Solway Tweed, as not a SWMI issue		
Climate factors	 Centribute to metgation of, and adaptation to, climate change 	Promote sustainable fload management? Contribute to the minipation of floads and <u>increases</u> ? Contribute to the docking generationse gas emissions from water management preduce valuement (bit of contrasting) the eminoment to the offects of climate <u>change</u> ? <u>Encourage</u> improved energy efficiency? Address the potential impacts of climate change on budmently? Address the potential impacts of climate change on budmently?	Not assessed for the Solway Tweed, as not a SWMI issue	.	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Not assessed for the Solway Tweed, as not a SWMI issue		
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtivenees?	Not assessed for the Solway Tweed, as not a SWMI issue		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Not assessed for the Solway Tweed, as not a SWMI issue	•	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erstian? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Not assessed for the Solway Tweed, as not a SVMI insue		
		Summary: Not a	issessed for the Solway Tweed as not a	SWMI issue.	

Point Source Pollution

1 C	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	All sectors	Option 1: Baseline - 'do nothing'	Measures to reduce pollution	1
SEA topic	A. SEA Objective - to what extent will the	B. Assessment Criteria - to what extent	C. Nature of the effect (including positive or negative short, medium, or long-term	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
2211/12/02	RDMP	with the RBMP	effect, permanency of effect, scale of effect and cross-cutting where known)		
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of 'protected areas' (e.g. SACs, GPAs, SSSIs) defined under the WEO' Provide effective protection of designated <u>ables?</u> Contribute to UK Biodhwenth Action Plan objectives? Buppont definier of biodhwenth schangies?	Positive short-term effect	pos.S	
		Maintain and anhance access to and use	No significant effect		
Population & human health	2. Protect human health in undertaking water management activities	of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pos.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source polition, drives source polition, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and drituse politism? Promote efficient and source politism?	Positive short-term effect	pog S	
		Prevent the physical deterioration of water	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Premete sustainable fixed management? Contribute to immigration of floods and droughts? Reduce vulnerability of communities and the environment to the effects of climate change on human use of vultor (c.g., water change on human use of vultor (c.g., water	No significant effect	neg./pos.	Effects are generally positive for biodiversity & recreation, but there may be costs for other sectors. The costs & benefits will need to be assessed in the VA. Mitigation could be achieved through a targeted study to assess distribution of costs and
		Address the potential impacts of climate	Positive short-term effect		benefits and effective disposal of waste
		change on biodiversity? Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	Positive or negative effect for different sectors depending on externalities		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	Perhaps minor local improvements to landscapes
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce encsion? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing lavels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	
Summa	y: Generally the measures have short-te	rm positive effects on biodiversity and v	vater, negative and positive effects for p	population & human health a	nd are not significant for the remainder of the SEA topics

2	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	All sectors	Option 1: Baseline - 'do nothing'	Remediation of sediment and water	2
SEA topic	A. SEA Objective . to what extent will the RDMP	B. Assessment Criteria . to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-culturg where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of 'publiched areas' (e.g. SACS, SPAR, SSB) (defined under the WED?) Provide effective protection of designated sbbs? Contributis to UK Biodherstly Action Plan objectives? Bugoot delivery of biodherstly stategies? Reduce investite values aceizes?	Positive short-term effect at the site where the sediment or water is treated, potentially negative short-term effect depending on how the spoil or water is disposed of No significant effect	neg./pos.	Mbgation to ensure that waste/water is properly disposed of
N. 24		Maintain and enhance access to and use			
Population & human health	 Protect human health in undertaking water management activities 	of the water emiconment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pos.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies, from point source and diffuse pollution? Prevent the physical deterioration of water bodies?	Positive short-term effect at the site where the sedament or water is treated, potentially negative short-term effect depending on how the spoil or water is disposed of	neg./pos.	
		Promote efficient and sustainable use of water?	No significant effect		
	 Contribute to mitigation of, and adaptation to, climate change 	Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, recreational uses)? Reduce vulnerability of communities and the environment to the effects of climate change?	No significant effect	neg./pos.	The effects of this measure will be positive for biodiversity and may help improve conveyance thereby mitigating the impacts of droughs and floating and substantiable fload management. Nowwer, there are potential negative effects in terms of genehouse gas messions and accessed energy use depending on the mechanisms used to triad the sediment/water. Mitigation will therefore require a cost binetic maryless and consideration of how to deal with waste
Climate factors		Address the potential impacts of climate change on biodressity? Contribute to the mitigation of floods and droughts? Promote sustainable flood management?	Positive short-term effect		
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	Positive or negative effects depending on the mechanisms used		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NŜ	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erestion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Generally this measure will have positiv	e short-term effects on water, positive a	nd negative effects for biodiversity, pop remainder of the SEA topics	ulation and human health an	d climate change, but will have no significant effects on the

1	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	All sectors	Option 1: Baseline - 'do nothing'	Measures to regulate flow to 'naturalise' the flow regime	3
SEA topic	A. SEA Objective - to what extent will the REMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutling where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected sense's (eg. 3540, SPAs, SEOS) defined under the VMDP Provide effective protection of designated DBSP Contribute to UK Biodiversity Action Plan objectives Support delivery of biodiversity strategies? Reduce impacts by a lain species?	Positive short-term effect at site where existing discharge is naturalised, potentially a negative short-term effect if as a result of the naturalisation a new source/existing source has to be found to meet the demand	neg./pos.	Mitigation would require study of impact on where discharge is transferred
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect balking and shellfah protected waters?	Positive short-term effect at site where existing discharge is naturalised, potentially a negative short-term effect if as a result of the naturalisation a new source/existing source has to be found to meet the demand	neg./pos.	Mitigation would require study of impact on where discharge is transferred
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts in the acological condition of water bodies from for example, point source publiclion, diffuse source pallution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publiclion? Promote afficient and suitability use of water? Prevent the physical deterination of water bodies 2.	Positive short-term effect at site where existing discharge in naturalised, beertailty a negative short-term effect if as a result of the naturalisation a new source/existing source has to be found to meet the demand	neg./pos.	Mitigation would require study of impact on where discharge is transferred
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Permote sustainable food management? Contribute to the migration of Bools and <u>monphas2</u> Reduce vulneability of communities and the environment to the effects of climate change on human use of water (e.g. water valeds, obstraction, necessitional uses)? Address the potential impacts of climate change on human use of water (e.g. water valeds, obstraction, necessitional uses)? Address the potential impacts of climate change on builderssity? Contribute to reducing generhouse gas emissions form water management activities?	Positive short term effect at site where existing discharge is naturalised, beetkally a negative short-term effect if as a result of the haturalisation a new source/existing source has to be found to meet the demand	neg./pos.	Mitigation would require study of impact on where the discharge is relocated
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distictiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Suffigurad soli quality, quartity and function? Contribute to reducing levels of brownfold, derelict and contaminated land in plan area?	No significant effect	NS	
Summary: @	Senerally this measure will have positive	short-term effects on climate factors, a	nd positive and negative effects on bior remainder of the SEA topics	liversity, population & humar	a health and water, but will have no significant effects on the

1	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Sewage disposal (regulatory)	Option 1: Baseline - 'do nothing'	Measures to reduce impacts from point pollution associated with domestic sewage and industrial effluent	ł
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Cilleria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of brotected areas' (e.g. SACS, SIPAs, SSS3) ordened under the VMD'? Provide effective protection of designated sites? Controlute to LK Biodiversity Action Plan Objectives? Respond tellever of biodiversity stategies? Darkture investite for slam carried?	Positive short-term effects	pos S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water encomment? Increase tourism and/or improve National Parks Protect balting and shellfah protected waters? Protect dinking water protected areas and water abstraction?	Positive short-term effects	pos.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of varies holdes from for example, pollution, abatraction, afflow equilation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Promote efficient and sustainable use of water?	Positive short-term effects	pos.S	Messures to deal with the disposal of waste will need to be undertaken
		Prevent the physical deterioration of water	No significant effect		
Climate factors	4. Centribute to mitigation of and adaptation to, climate change	Pomote sustainable food menagement? Contribute to the mitigation of floods and droughts? Reduce vulneability of communities and the enrirorment to the effects of cirrate change? Address the potential impacts of cirrate change on human use of water (e.g. water yields, abstraction, recreational uses)? Address the potential impacts of cirrate change on budnerstly? Contribute to recording generohouse gas emissions from water management achieties?	No significant affect Positive short-term effects Positive or negative short-term effects on different sectors depending on exact nature of massure	neg./pos.	The effects of this measure will be positive for biodiversity. However, there are potential negative effects in terms of genometry of the second second second second second second on the mechanism/strammetrs agained. Mitigation will therefore require a cost benefit analysis and consideration of how to deal with waste
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WW/TWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded arker? Protect agricultural land? Safeguard soit quality, quantity and function? Contribute to reducing levels of brownfeld, detelict and contaminated land in plan area?	No significant effect	NS	
Summary	: Generally this measure will have short	term positive effects on biodiversity, wa	ater and material assets and negative a effect on the other SEA topics	nd positive effects on populat	ion & human health and climate factors and no significant

10 - E	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Sewage disposal (non-regulatory)	Option 1: Baseline - 'do nothing'	Compaign awareness and best practice to reduce diffuse pollution from sewage disposal	5
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas's (e.g. SACS, EPAS, SSB) defined under the VB'D? Provide officience protection of designated SR65? Contribute to UK Bodiversity Action Plan Discusses? Eupport delivery of bloddwriity strategies? Reduce impacts by allen species?	Insufficient information to make a judgement	•	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Insufficient information to make a judgement		
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example point source pollution, diffue source pollution, battraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicion? Prevent the physical deterioration of water bodies ? Promote stificant and sustainable use of water?	Insufficient information to make a judgement		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable field management? Controlate to the mitigation of floods and dioughts? Controlute to the acoding generhouse gas emissions from water management activities? Reduce vulnerability of communities and the enronment to the effects of climate change? Enclosuse pinproved energy efficiency? Address the potential impacts of climate change in biodiversity?	Insufficient information to make a judgement		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the poper 	yields, abstraction, recreational uses)? Protect and, where appropriate, enhance or restore historic environment features?	insufficient information to make a judgement		
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance mational designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guility? Protect and, where appropriate, enhance or restore landscape value and local districtweress?	Insufficient information to make a judgement		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Insufficient information to make a judgement		
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce encion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Insufficient information to make a judgement	•	
	Summary: It is unlikely that there	will be direct effects of the campaign, a	dthough there may be significant secon	dary effects depending on the	e scale and targeting of awareness raising

2	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Aquaculture/fish farming (regulatory)	Option 1: Baseline - 'do nothing'	CAR aimed at regulating the effects of aquaculture	6
SEA topic	A. SEA Objective , to what extent will the RBMP	B. Assessment Criteria - to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or fong term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainly
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversite, particulary protected areas and protected species	Provide effective protection of protection areas' (e.g. SACs, SPAs, SSSIs) defined under the WEO? Provide effective protection of designated 3653? Contribude UVK Biodherstly Action Plan Describes? Buscot delivery of biodherstly stategies? Reduce impacts by alian spaces(e)?	Positive short-term effect	pos.S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shallish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the detroination of water bodies from point source and diffuse pollution? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	
		Prevent the physical deterioration of water bodies 2	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable flood management? Combuble to the implastion of floods and <u>monphas2</u> Reduce vulneability of communities and the environment to the effects of climate change on human use of water (e.g. water yields, abstraction, necessitioni uses)? Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, necessitioni uses)? Address the potential impacts of climate change on human water of the state of the state change on human state.	No significant effect Positive short-term effects	neg./pos.	The effects of this measure will be positive for biodiversity. However, there are potential negative effects in terms of greenhouse gas emissions and increased energy use depending on the mechanism/treatment applied. Mtsgation will therefore require a cost benefit analysis and consideration of how to deal with waste
		Contribute to reducing greenhouse gas emissions from water management activities?	Positive or negative short-term effects on different sectors depending on exact nature of measure		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NŜ	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arcsion? Improve deparaded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Summa	v: Generally the effects of this measure	are positive for biodiversity and water,	positive & negative for population & hu	man health and climate facto	rs and not significant for the remainder of the SEA topics

10 - E	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Aquaculture/fish farming (non-regulatory)	Option 1: Baseline - 'do nothing'	Strategic planning and other measures to reduce point source pollution from aquaculture	7
SEA topic	A, SEA Objective - to what extent will the REMP	B. Assessment Citteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, miligation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. 844c, 8164c, 8164), 6164 under the WID? Provide effective protection of designated ates? Controlute to VK Boothersity Action Plan Doubletwe? Esuport delivery of biodiversity strategies? Reduce impacts by alian species?	Insufficient information to make a judgement	•	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect timiking water protected areas and water abstraction? Protect bathing and shellfsh protected waters?	Insufficient information to make a judgement		
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water badies from for example point source pollution, diffure evouce pollution, abstraction and flow regulation, and morphological interventiona? Prevent the deterioration of water badies from point source and diffuse pollution? Prevent the physical deterioration of water badies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgement		
Climate factors	 Contribute to mitigation of and adaptation to, climate change 	Promote sustainable flood menagement? Comhede to be mingiation of floods and <u>droughts?</u> Contribute to the docking greenhouse gas emissions from water management ecitories? Reduce submeabuity of communities and be environment to the diffect to floads <u>encourage improved energy efficiency?</u> Address the potential impacts of climate change on biodressity?	Insufficient information to make a judgement		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement	242	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landccape sees? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	Insufficient information to make a judgament		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Insufficient information to make a judgement	12	
Sail	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Peduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Insufficient information to make a judgement		
	Summary: It is unlikely that there	will be direct effects of the campaign, a	dthough there may be significant secon	dary effects depending on the	e scale and targeting of awareness raising

2	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Manufacturing (regulatory)	Option 1: Baseline - 'do nothing'	Regulations and standards to reduce point source pollution from manufacturing	8
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Citeria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flors & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protection areas' (e.g. SACs, SPAe, SBSt); defined under the VFDO Provide effective protection of designated SBST Contribute to LK Biodiversity Action Plan objectives? Subport delivery of biodiversity stategies? Rodruge environ?	Positive short-term effect	pot S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Partes Protect bathing and shellfah protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point acures and diffuse pollution? Prevent the physical deterioration of water bodies ?	Positive short-term effect	pes.S	
		Prevent the physical deterioration of water	No significant effect		
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainabile field management? Combute to the minipation of floods and <u>orophiss</u> ? Pedicare valueshability of communities and the environment to the effects of climate change on homan vis of wheth (6.g. with change on homan vis of wheth (6.g. with yields, abstraction, recessional uses)? Address the potential impacts of climate change on holdments?	No significant effect Positive short-term effect	neg./pos.	The effects of this measure will be positive for biodiversity. However, there are potential negative effects in terms of generhouse gas emissions and necrosed energy use depending on the mechanismStraturents applied. Mitagation will therefore require a cost benefit analysis and consideration of how to deal with woste
		Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management activities?	Positive or negative effect depending on the nature of the measure/treatment		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. food defences, ports & harbours, WWTW/s & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve deparaded sites? Protect agricultural land? Safeguard soli quality, quantity and Auction? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	Perhaps a minor positive effect on soils through removal of polluting substances from treatment studge
Summa	ry: Generally the effects of this measure	are positive for biodiversity and water,	positive & negative for population & hu	man health and climate facto	rs and not significant for the remainder of the SEA topics

	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Manufacturing (non-regulatory)	Option 1: Baseline - 'do nothing'	Campaign awareness raising to reduce point source pollution from manufacturing	9
SEA topic	A. SEA Objective - to what extent will the Rithip	B. Assessment Citteria . to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species 	Provide effective protection of protected areas' (og 8.40x, 8PAs, 68Bs) oddened under the VMDP Provide effective protection of designated <u>obs</u> ? Contribute to UK Riodhersth Action Plan Distertive 8? Bugoot delivery of biodhersthy strategies? Reduce impacts by alian generois?	Insufficient information to make a judgement		
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect darking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Insufficient information to make a judgement		
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the ecological condition of water bodies from for example point source publichon, diffuse source pallution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicion? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgement		
Climate factors	 Contribute to metgation of, and adaptation to, climate change 	Promote sustainable field menagement? Contribute to the miligation of floods and droughts? Contribute to the docking generationuse gas emissions from water management declara valentesis? References and the second second second entry of the second second second entry of the second second second entry of the second second second charge on businessity? Address the potential impacts of climate charge on human use of water (og water charge on human use of water (og second charge on human use of water (og second charge) of the other (of the other (of the other charge) on human use of water (og second charge) of the other (of the other charge) of the other (of the other) of the other charge) of the other (of the other) of the other) of the other charge) of the other (of the other) of the other)	Insufficient information to make a judgement	•	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RRD	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement	•	
Landscape	 Protect and, where appropriate, enhance the character, directly and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Insufficient information to make a judgement		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Insufficient information to make a judgement	•	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce exolon? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Insufficient information to make a judgement	÷	
	Summary: It is unlikely that there	will be direct effects of the campaign, a	Ithough there may be significant secon	adary effects depending on the	scale and targeting of awareness raising

2	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Refuse disposal activities (regulatory)	Option 1: Baseline - 'do nothing'	Measures to reduce point source pollution from landfills	10
SEA topic	A. SEA Objective - to what extent will the FBMP	B. Assessment Criteria . to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E, Evidence, miligation, uncertainly
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of "protected areas" (e.g. SACs, SPAs, SSNs) defined under the WFD? Provide effective protection of designated abs? Contribute to UK Biodiversity Action Plan objectives? Biogeont delivery of biodiversity stategies? Reduce instants the alexa service?	Positive short-term effect	pos S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shellfish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source politicin, diffuse source politicin, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse politicion? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	
		Prevent the physical detenoration of water bodies ?	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote outsianable food munagement? Contribute to the mingation of floods and <u>Annuples5</u> Address the potential impacts of climite change of Numa use of water (e.g. water yields, adstraction, recreational desp)? Address the potential impact of climite change on Numa use of water (e.g. water yields, adstraction, recreational desp)? Catholises to reacting generationses gas emissions flow water management forum and inclines?	No significant effect Positive short-term effect Positive or negative short-term effects depending on the nature of the measure/instancent	neg./pos.	There could be a potential increase in energy consumption and increased green house gas emissions if pumping of teachate is required, but this could be minigated by using the gas to generate electricity to run the pumps
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve departed size? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Generally the effects of this measure ar	e positive for biodiversity and water, po	sitive and negative for population and I	ruman health and climate fa-	ctors and not significant for the remainder of the SEA topics

2	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Mining and quarrying (regulatory)	Option 1: Baseline - 'do nothing'	Measures to reduce point source pollution from mining and quarrying	11
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Citeria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of protection areas' (e.g. SAPa, SPAe, SBSt); defined under the VKEO Provide effective protection of designated effective protection of designated effective status of the status of the Support delivery of biodiversity stategies? Reduce invokatis by alian coacciet?	Positive short-term effect	pos S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Partes Protect bathing and shellfah protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source publiclon, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Promote efficient and sustainable use of <u>water</u> ? Prevent the physical deterioration of water bodies ?	Positive short-term effect	pos.S	
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable fload management? Contribute to the minipation of floads and droughts? Reduce vulneshabitly of communities and the wincomment to the effects of climate change? Address the potential impacts of climate change on human use of water (e.g., weter yields, abstraction, recreational uses)? Address the potential impacts of climate change on human to individe to a change on human water management	No significant effect Positive short term effect Positive ar negative short-term effects despending on the nature of the	neg./pos.	There could be a potential increase in energy consumption and increased green house gas emissions if energy required for the measure. Minigation measures will need to be considered
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the population	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	measure/treatment	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distictemenss?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW/s & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arcsion? Improve deparaded stee? Protect agricultural land? Safeguard soil quality, quantity and <u>function</u> ? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Generally the effects of this measure ar	e positive for biodiversity and water, po	sitive and negative for population and I	human health and climate fac	ctors and not significant for the remainder of the SEA topics

Abstraction and Flow Regulation

	Pressure	Sector	Option	Measure	Measure No.		
	Abstraction and flow regulation	All sectors	Option 1: Baseline - 'do nothing'	Measures to improve efficiency of water use	1		
SEA topic	A, SEA Objective - to what extent will the FBMP	D. Assessment Criteria - to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, rolligation, uncertainty		
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of brotected areas' (e.g. SACs, SDAe, SISIe), defined under the VMEO Provide effective protection of designated obs/? Contribude to UK Biodiversity Action Plan Discrete 7 d Diodiversity Action Plan Biotective 30 Discrete 30 Reduce impacts by a lain species?	Postive short-term effect - great quantity and quality (potentially) of water available for ecosystem	por S			
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase bourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect balking and shellfah protected waters?	Small postive short-term effect	pot.S			
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the ecological condition of water bodies from for example, point source publichon, diffure is worce pallution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicion? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of well?	Postive short-term effect - great quantity and quality (potentially) of water available for ecosystem	pos.S			
Climate factors	4. Contribute to metgation of, and adaptation to, climate change	Promote sustainable fload management? Contribute to the minipation of floads and incorpter? Reduce vulneability of communities and the enrormment to the effects of climate change on bioinformatics? Address the potential incorptes of climate change on bioinformatics? Address the potential incorptes of climate change on bioinformatics? Contribute to reducing generohouse gas emissions from water management activities?	Small posters short-term effect because improvements in vacer efficiency are likely to be reflected in improved energy efficiency	por S			
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS			
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NŜ			
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Positive short-term effect and would potentially delay the requirement for new infrastructure	pos S			
Soil	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arcsion? Improve degraded sites? Protect annoutural land? Sufeguard soil quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminuted land in plan area?	No significant effect	NS			
	Summary: Generally the effects of this measure are positive for all measures other than cultural heritage, landscape and soils where no significant effect is expected.						

2	Pressure	Sector	Option	Measure	Measure No.			
	Abstraction and flow regulation	All sectors	Option 1: Baseline - 'do nothing"	CAR regulations to minimise	2			
SEA topic	A. SEA Objective - to what extent will the RBMP	B, Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty			
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of 'protected arease' (e.g. SACs, SPAR, SSSII) defined under the WTOO' Provide effective protection of designated obed? Contribude to UK Biodiversity Action Plan Distribute to UK Biodiversity stategies? Reduce empetials by alen species?	Positive short-term effect	por S				
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Positive short-term effect	pok.S				
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffure is ource pollution, astartaction and flow regulation; and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and estatumable use of water?	No significant effect	NS				
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload management? Contribute to the imfiguitor of floads and decoupter? Address the protection of control change on biodherostry? Address the protectial impacts of a climate change on biodherostry? Address the protectial impacts of a climate change on biodherostry? Address the protectial impacts of a climate change on hoursan use of water (or g, unever yields, abstraction, recreational use)? Contribute to reducing genechause gas emissions from water management Denomenae and inference?	No significant effect	NS				
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS				
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS				
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS				
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arcsion? Improve degraded sites? Protect agricultural land? Sufeguard sol quality, quantity and <u>function</u> ? Contribute to reducing lovels of brownfeld, derelict and cotaminuted land in plan area?	No significant effect	NS				
	Summary: Genera	Summary: Generally the effects of this measure are positive for biodiversity and population & human health and not significant for the other SEA topics.						

	Pressure	Sector	Option	Measure	Measure No.			
	Abstraction and flow regulation	Electricity generation (regulatory)	Option 1: Baseline - do nothing	Planning regulations to control abstraction	3			
SEA topic	A. SEA Objective - to what extent will the RDMP	D. Asssessment Criteria - to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty			
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of brotected areas' (e.g. SACe, SDAe, SSSIt) edened under the WED? Provide effective protection of designated obe? Contribute to UK Biodiversity Action Plan objectives? Support delivere of biodiversity strategies?	Short-term positive effect	por S				
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Positive short-term effect	pok.S				
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the ecological condition of water bodies from for example point source publich, diffue source publich, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicion? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pot.5				
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable flood management? Contribute to the minipation of floods and <u>nonspirat?</u> Reduce vulneability of communities and the environment to the effects of climate <u>change?</u> Address the potential impacts of climate <u>change on biodiversity?</u> Address the potential impacts of climate change on biodiversity?	Posèlie shorterm effect	por S				
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect					
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS				
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NŜ				
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Short-term negative impact, as may reduce reservoir yield and energy generation	neg S	Operate reservoir to optimise releases and storage			
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quarity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS				
	Summary Generally the effects of this measure will be notifive for biodiversity, nonpulation & human health, climate factors and water, and not significant for all other SEA tenics.							

21 - O	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Electricity generation (non-regulatory)	Option 1: Baseline - 'do nothing'	Compaign awareness to reduce the impact of abstraction for the electricity generation sector	4
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Citteria - to what extent with the RBMP	C. Nature of the effect discluding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodwersity, flora & fauna	 Protect and, where appropriate, enhance biodirersity, particularly protected areas and protected species 	Provide effective protection of protected arras's (e.g. 8405, BPAs, 5501) defined under the VMD? Provide offactive protection of designated 8652? Contribute to UK Biodensity Action Plan objectives? Support delivery of biodexersity strategies? Reduce impacts by alian species?	Insufficient information to make a judgement	•	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Insufficient information to make a judgement		
Water	 Prevent detenoration of the status of water bedies. Enhance, water budy status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Prawnit the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgement		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable field management? Contribute to the minipation of floods and droughts? Reduce vulneshiptility of communities and the annowment to the effects of climate change in biodiversatly? Address the potential impacts of climate change on human used widel (e.g. water yields, abstraction, recreasional users)? Contribute to reducing generhouse gas emissions form water management forman autoHttlers?	Insufficient information to make a judgement	•	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement		
Landscape	6. Protect and, where appropriate, enhance the character, dreesity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Insufficient information to make a judgement		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Insufficient information to make a judgement	14 1	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect apricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Insufficient information to make a judgement		
		Summary	Insufficient information to make a judy	jement.	

1 S	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Water supply activities (regulatory)	Option 1: Baseline - 'do nothing'	CAR to manage levels of abstraction and use of water	5
SEA topic	A. SEA Objective - to what extent will the RBMP	D. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. SACs, BPAR, SSGN) self-red under the VID? Provide effective protection of designated abs/ Contribuble to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies? Reduce investity self-reactive self-reactive Reduce investity self-reactive Redu	Postive short-term effect	pos S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demand balance and writing entitlements to use water. This will need to be checked at the local level.
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shallfsh protected waters? Protect drinking water spottected areas and water abstraction?	Positive short-term effect	pot.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the acological condition of water bodies from for exception point source publiching, diffuer source publiching, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicion? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short term effect	pos. S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable flood management? Contribute to the mitigation of floods and <u>nonsignes2</u> Reduce vulneability of communities and the environment to the effects of climate <u>change</u> ? Address the potential impacts of climate <u>change</u> on biodiversity? Address the potential impacts of climate change on biodiversity?	Postive short-term effect	por.5	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	distinctiveness? Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WW/TW's & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect apricultural land? Sufeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	

Summary: Generally the effects of this measure will be positive on biodiversity, population & human health, water and climate factors, and not significant on the remainder of the SEA topics. However, it is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will

1	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Water supply activities (non-regulatory)	Option 1: Baseline - 'do nothing'	Economic incentive to encourage efficient use of water by industry	6
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short-, medium-, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected opecies	Provide effective protection of protection areas' (e.g. SACs, SPAe, SBSt); defined under the WED? Provide effective protection of designated effective areas and the second second objectives? Busport delivery of biodwestly stategies? Reduce encider build an excited?	Postive short-term effect - great quantity and quality (potentially) of water available for ecosystem No significant offset	pos S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dimining water protected areas and water abstraction? Protect dimining water protected areas and water abstraction?	Small postive short-term effect	pos.S	
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water budies timo for example, joint source publichon, diffue source publichon, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffue publichor? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Postive short-term effect - great quartity and quality (potentially) of water available for ecceysterm	pos.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sutsinable field mmaganem? Contribute to the minipation of floods and droughts? Reduce vulneshiptify of communities and the enrowment to the directs of climate charge on biodiversity? Address the potential impacts of climate charge on biodiversity? Address the potential impacts of climate charge on biodiversity? Contribute or exoluting generobuses are enrisions from water management activities?	Small postive short-term effect because improvements in water efficiency are likely to be reflected in improved energy efficiency	pon S	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Positive short-term effect and would potentially delay the requirement for new infrastructure	pos.S	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arcsion? Improve deparated size? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS.	
Sum	many: Generally the effects of this measu	area? are will be positive for biodiversity.popu	lation & human health, water, climate f	actors and material assets, no	ot significant for cultural heritage, landscape and soil.

1	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Water supply activities (non-regulatory)	Option 1: Baseline - 'do nothing'	Campaign awareness to improve efficiency of domestic water use	7
SEA topic	A. SEA Objective - to what extent will the REMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protection areas' (e.g. 2405, SPAPE, 8950); self-end under the VBD? Provide effective protection of designated official and areas and and areas Contribute to UK Biodvensh Action Plan oblicities 3 Bugood oblicities 3 Bedgoot emposite by alian papelide?	Insufficient information to make a judgement		
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Insufficient information to make a judgement		
Water	 Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts in the ecological condision of water bolies from for example- point cource pollution, diffuse acure pollution, abitration and diare regulation, and morphological interventions? Prevent the deterioration of water bolies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and satishable use of water?	Insufficient information to make a judgement		
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable food management? Combute to the miligation of floods and droughts? Afface vulneability of communities and the uniformment to the yests of climate change on biodhereable monitor of climate change on biodhereable (or uniform yields, abstraction, recreational uses) controlled and and and and and and emissions flow water management percentage.	Insufficient information to make a judgement	•	
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement	•	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape area? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Insufficient information to make a judgament		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, VAVTWs & drainage)?	Insufficient information to make a judgement		
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Insufficient information to make a judgement		
		Summary	: Insufficient information to make a judy	gement.	

1 C	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Agriculture irrigation (non-regulatory)	Option 1: Baseline - 'do nothing'	Economic incentive to encourage efficient use of water by irrigation	8
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected opecies	Provide effective protection of protection areas' (e.g. SACs, SPAc, SBSt); defined under the VED? Provide effective protection of designated effective areas and the second second objectives? Busport delivery of biodwestly stategies? Reduce encider build an excited?	Postive short-term effect - great quantity and quality (potentially) of water available for ecosystems No significant offset	pos S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect diniking water protected areas and water abstraction? Protect diniking water protected areas and water abstraction?	Small postive short-term effect	pos.S	
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water budies timo for example, joint source publichon, diffue source publichon, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffue publichor? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Postive short-term effect - great quartity and quality (potentially) of water available for ecceysterm	pos.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sutsinable field mmaganem? Contribute to the minipation of floods and droughts? Reduce vulneshiptify of communities and the enrowment to the directs of climate change on biodiversity? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity? Contribute or exoting generhouses are activities?	Small postive short-term effect because improvements in water efficiency are likely to be reflected in improved energy efficiency	pon S	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated bandscape areas? Protect and, where appropriate, enhance or restore bandscape character and outliny? Protect and, where appropriate, enhance or restore landscape value and local distructiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. food defences, ports & harbours, WWTWs & drainage)?	Positive short-term effect and would potentially delay the requirement for new infrastructure	pos.S	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arcsion? Improve degraded size? Protect apricultural land? Safegard soil qualify, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Sum	nary: Generally the effects of this measu	re will be positive for biodiversity, popu	lation & human health, water, climate t	factors and material assets, n	ot significant for cultural heritage, landscape and soil.

2	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Agriculture imigation (non-regulatory)	Option 1: Baseline - 'do nothing'	Campaign awareness to	9
SEA topic	A. SEA Objective - to what extent will the RBMP	D, Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of 'protected areas' (e.g. SAC's, SPAe, SSSing defined of the WEO's and the WEO's Provide effective protection of designated obs/? Contribute to UK Biodiversity Action Plan Support delivery of biodiversity strategies? Reduce impects by a lain species?	Insufficient information to make a judgement	•	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water enronment? Increase tourism and/or improve National Parts Protect dimiting water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Insufficient information to make a judgement		
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuer is source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgement		
Climate factors	4. Contribute to metgation of, and adaptation to, climate change	Promote sustainable fload management? Contribute to the mingation of floads and <u>incounters</u> ? Reduce vulneability of communities and the enrormment to the effects of climate change on bioinformatics? Address the patential incounters? Address the patential incounters? Address the patential incounters? Address the patential incounters? Valids, abstraction, receivable (e.g. water yakis, abstraction, receivable) (e.g. water yakis, abstraction, receivable) (e.g. water yakis, abstraction, receivable) (e.g. water yakis, abstraction, receivable) (e.g. water incounters) (e.g. water enrormation (enrormation)) (e.g. water incounters)) (e.g. water)) (e.g. water enrormation)) (e.g. water)) (e.g. water)) (e.g. water)) (e.g. water)) (e.g. water)) (e.g. water)) (e.g. water)) (e.g. water)) (e.g. water)) (e.g. water)) (e	Insufficient information to make a judgement		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement		
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distictiveness?	Insufficient information to make a judgement		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Insufficient information to make a judgement	•	
Soil	8. Protect and, where appropriate, enhance the Sunction and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfold, derelict and contaminated land in plan area?	Insufficient information to make a judgement		
		Summary	Insufficient information to make a judy	jement.	

Changes to Morphology

	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	Historical engineering activities & urban development (regulatory)	Option 1: Baseline - 'do nothing'	Planning and development controls to reduce flood risk	1
SEA topic	A. SEA Objective - to what extent will the REMP	B. Asssessment Criteria - to what extent with the FBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protecting areas' (e.g. SACs, SPAs, SSGIt), defined under the VMC2 Provide effective protection of designated obe? Controlute to UK Biodreenth Action Plan objectives? Support delivery of biodreenthy Action Plan Deduce immedia for Jalan section?	Positive short-term effect	por S	Regulations and control will have a positive effect only in so much that they are talgered to contribute towards 'haturalising' the flooding regime or contain features of a naturalised flooding regime
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water enronment? Increase tourism and/or improve National Parks Protect dimking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pet.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the ecological condition of water bolicios from for example, joint source pollution, diffuse source pollution, astartaction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote officient and sustainable use of water?	Positive short-term effect.	pot.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable flood management? Contribute to the mingation of floods and <u>neuropers</u> ? Reduce valuesability of communities and the environment to the effects of climate <u>change</u> on biodiversity? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity?	Positive short term effect	pot.5	Negative effects may occur if controls require increased energy consumption & emission of greenhouse gases
Cultural	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the 	Commute to reacting greenouse gas emissions from water management activities? Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect No significant effect	NS	Assumes that the controls will not significantly impact on cultural hentage sites, or that mitigation measures will be put in place
Landscape	RBD 6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guility? Protect and, where appropriate, enhance or restore landscape value and local distinctureness?	No significant effect	NS	Perhaps a minor positive effect here, but difficult to say that this effect is significant
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce ression? Improve degraded sites? Protect agricultural land? Safeguard soli quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Senerally the effects of this measure are	positive for biodiversity, water and clim	ate factors, and have no significant eff pative for population and human health	ects on cultural heritage, Ian	dscape,material assets and soil. The effects are positive and

1	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	Agriculture (regulatory)	Option 1: Baseline - 'do nothing'	Planning regulations to reduce the morphological impacts of the agricultural sector	2
SEA topic	A. SEA Objective - to what extent will the REMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect ünchiding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Eddence, miligation, uncertainty
Biodwersity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. BACs; BPAs; SSSIs) defined under the WED? Provide effective protection of designated sRsS? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	pos.S	
Population & human health	2. Protect human health in undertaking water management activities	Reduce impacts by alten species? Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect brinking and shellfash contected	No significant effect Positive short-term effect	pos.S	
Water	3. Prevent deterioration of the status of water budies. Enhance, water body status (including groundwater) to good status, as appropriate.	waters? Reduce the impacts on the ecological condition of water bodies 5 from for example, point source pollution, diffuse source pollution, batteration and flow regulation, and morphological interventions? Prevent the physical deterioration of water bodies?	Positive short-lerm effect	pos.S	
		Prevent the deterioration of water bodies from point source and diffuse pollution? Promote efficient and sustainable use of water?	No significant effect		
Climate factors	 Contribute to mitigation of and adaptation to, climate change 	Promote sustainable field management? Committee the windpation of floods and depolyte? Pedices vulneshiptify of communities and the envolves to the effects of climate change? Address the potential impacts of climate change on human use of water (e.g. witter change on human use of water (e.g. witter vields, abstraction, necesational uses)?	Small postive short-term effect	pos S	May be minor negative short-term effect on energy consumption & emission of greenhouse gases, but not considered significant as long as best practice is applied
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	Assumption being that regulations will ensure that cultural heritage sites are protected
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctionness?	No significant effect	NS	May be minor positive short-term effects, but not considered significant
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWVs & drainage)?	No significant effect	NS	
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce arctitor? Improve degraded stos? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	May be minor positive short-term effects, but not considered significant
Summary:	Generally the effects of this measure are	positive for biodiversity, water and clin ne	nate factors, and have no significant off gative for population and human healt	ects on cultural heritage, lan 1.	dscape,material assets and soil. The effects are positive and
	Pressure	Sector	Option	Measure	Measure No.
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	Changes to morphology	Agriculture (non-regulatory)	Option 1: Baseline - 'do nothing'	Economic incentives to reduce morphological impacts of agricultural sector	3
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species 	Provide effective protection of protection areas' (e.g. SACs, SPAe, SBSt); defined under the WED? Provide effective protection of designated effective areas and the second second objectives? Busport delivery of biodwestly stategies? Reduce encider build an excited?	Positive short-term effect	pos S	
Population & human health	2. Protect human health in underfaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinning water protected areas and water abstraction? Protect bathing and shallfah protected waters?	Positive short-term effect	pos.S	
Water	 Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water budgets time for example joint source publichon, diffue source publichon, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodgets from point source and diffues publichor? Prevent the physical deterioration of water bodgets? Promote efficient and sustainable use of water?	Positive short term effect	pos.8	
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sutstanable fload mmaganemet? Comhote to the minipation of floads and <u>droughts?</u> Reduce vulneability of communities and the enrolment to the effects of climate <u>change</u> ? Address the potential impacts of climate <u>change</u> on homan use of Wale' (og. wilder change on homan use of wale' (og. wilder change on homan use of wale' (og. wilder (balage on homan use of wale' (og. wilder)	Positive short term effect	pos S	May be minor negative short-term effect on energy consumption & emission of greenhouse gases, but not considered significant as long as best practice is applied
Cultural	5. Protect and, where appropriate, enhance the character, diversity and	Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency? Protect and, where appropriate, enhance	No significant effect	NS	
heritage	special qualities of cultural heritage in the RBD	or restore historic environment features?	teo significant effect	CM	
Landscape	5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape values and local distinctivences?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and <u>sanction</u> ? Contribute to reducing levels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	May be minor positive short-terms effects
Summary:	Generally the effects of this measure are	e positive for biodiversity, water and clim ne-	nate factors, and have no significant eff gative for population and human health	ects on cultural heritage, lan I.	dscape,material assets and soil. The effects are positive and

1 ()	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	Agriculture (non-regulatory)	Option 1: Baseline - 'do nothing'	Campaign/awareness to reduce morphological impacts	4
SEA topic	A. SEA Objective - to what extent will the RiskiP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainly
Biodiversity, flora & fauna	1 Protect and, where appropriate, enhance biodiversity, purticularly protected areas and protected species	Provide effective protection of protected areas' (e.g. 2405, SPAE, 8590); selected under the VMED? Provide effective protection of designated affective protection of designated affective and and affective Contribute to UK Biodrivensh stategies? Boupont delineir of biodrivensh stategies?	Insufficient information to make a judgement		
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Insufficient information to make a judgement		
Water	 Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condision of water bodies from for example, point corres polition, diffue ecoure polition, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffue polition? Prevent the physical deterioration of water bodies ? Promote efficient and estatinable use of water?	Insufficient information to make a judgement	÷	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable field menagement? Contribute to the minipation of floods and doughts? Reduce withenability of communities and the enrironment to the effects of climate change? Address the potential impacts of climate change on homan use of wader (og avaiter yalds), adataction, neceraidomal use)? Contribute to reducing genehouse gene amissions forouwater management achieties?	Insufficient information to make a judgement	·	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement	•	
Landscape	5. Protect and, where appropriate, enhance the character, directly and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distictiveness?	Insufficient information to make a judgament		
Matenal Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW/s & drainage)?	Insufficient information to make a judgement		
Sol	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce enstion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfield, derelict and contaminated land in plan area?	Insufficient information to make a judgement		
		Summary	Insufficient information to make a judy	jement.	

1	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	Forestry (regulatory)	Option 1: Baseline - 'do nothing'	Regulations to reduce the impacts of Forestry on morphology	5
SEA topic	A. SEA Objective . to what extent will the RiMP	R. Asssessment Criteria - to what extent with the FBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SBSIs) defined under the VFDO? Provide effective protection of designated sites'? Contribute to LK: Biodiversity Action Plan objectives? Busport delivery of biodiversity stategies? Reduce invacit by alian securics?	Positive short-term effect	pos.S	Regulations and control will have a positive effect only in so much that they are takined to contribute towards 'naturalising' the fooding regme or contain features of a naturalised flooding regime and reduce sediment delivery to the channel
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pos.S	
Water	3. Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to godo status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abottaction and flow regulation, and morphological interventions? Prevent the detornation of water bodies? Prevent the detornation of water bodies	Positive short term effect	pos.S	
		from point source and diffuse pollution? Promote efficient and sustainable use of water?	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Premote sustainable food management? Contribute to the minipation of Boods and droughts? Reduce vulnerability of communities and the environment to the effects of climate change? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity?	Positive short-term effect	pos S	May be minor negative short-term effect on energy consumption & emission of greenhouse gases, but not considered significant as ling as best practice is applied
n		yields, abstraction, recreational uses)? Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	Assumption being that regulations will ensure that cultural heritage sites are protected
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	Perhaps a minor positive effect here, but difficult to say that this effect is significant
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WW/WWs & trainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	May be minor positive short term effects, but not considered significant
Summary:	Generally the effects of this measure ar	e positive for biodiversity, water and cli	mate factors, not significant for cultural and human health.	heritage, landscape, materia	al assets and soils, and negative and positive for population

1 C	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	Forestry (non-regulatory)	Option 1: Baseline - 'do nothing'	Economic incentives to reduce the impacts of Forestry on morphology	6
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAc, SBSt); defined under the VFEO Provide effective protection of designated effective protection of designated bits? Contribute to LVK Electivestry Action Plan objectives? Subport delivery of biodiversity stategies? Reduce encider?	Positive short-term effect	pos S	Effects are probably positive, but there is no unambiguous evidence to demonstrate the direct causal ink between morphology and impreved biodivensity - the link probably exists but is difficult to prove
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shallfah protected waters?	Positive short-term effect	pos.S	
Water	 Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condation of water bodies. Show the example, point source politicion, diffuse source politicion, abstraction and flow regulation, and morphological interventiona? Promote efficient and sustainable use of water? Prevent the physical deterioration of water bodies?	Positive short-term effect	pos.S	
		Prevent the deterioration of water bodies from point source and diffuse pollution?	No significant effect		
Climate factors	 Contribute to metgation of, and adaptation to, climate change 	Peronote sustainable field annagement? Combate to the migation of floods and decepted? Reduce vulneability of communities and the environment to the effects of climate change? Address the potential impacts of climate change on human use of water (e.g. water change on human use of duate (e.g. water yields, abstraction, nerevalional uses)?	Positive short-term effect	por S	May be minor negative short-term effect on energy consumption & emission of greenhouse gases, but not considered significant as long as best practice is applied
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	5. Protect and, where appropriate, enhancic the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctivences?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WMTW's & drainage)?	No significant effect	NS	Perhaps a minor positive effect in that reduced sediment loads may improve the operation of material assets - e.g. reduced sediment input to reservoirs and abstraction points
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	No significant effect on solis (as defined scientifically), but may improve sedment problems within a water body
Summary	Generally the effects of this measure a	e positive biodiversity, water and clima	te, not significant for soils, material ass population and human health.	ets, landscape character and	cultural heritage. The effects are positive and negative for

1	Pressure	Sector	Option	Measure	Measure No.			
	Changes to morphology	Forestry (non-regulatory)	Option 1: Baseline - 'do nothing'	Campaign awarenessAroluntary measures to reduce the impact of Forestry on morphology	z			
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Criteria - to what extent with the RBMP	C, Nature of the effect (including positive or negative shorts, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty			
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected specied	Provide effective protection of protected areas' (e.g. SACS, SPAR, SSDI) defined under the VMDD? Provide effective protection of designated obs:? Contribute to UK Biodensth Action Plan objectives? Support delivery of biodexestily strategies? Reduce impusts by alian pacies?	Insufficient information to make a judgement					
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Insufficient information to make a judgement					
Water	3. Prevent deterioration of the status of Vester body: Echance, writer body talatus (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source, pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgement					
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable flood mmagement? Contribute to the mingstein or floods and doughts? Reduce withreability of communities and the enronment to the effects of climate change on biodiversity? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity? Contribute to reducing seenhouse gas emissions forum water management	Insufficient information to make a judgement					
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement					
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtivenees?	Insufficient information to make a judgement					
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Insufficient information to make a judgement					
Soil	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arcsion? Improve deparaded sites? Protect agricultural land? Safeguard soli quality, quantity and function? Contribute to reducing levels of brownfold, detelist and contaminated land in plan area?	Insufficient information to make a judgement	•				
	Summary: Insufficient information to make a judgement.							

. (Pressure	Sector	Option	Measure	Measure No.			
	Changes to morphology	Land reclamation (regulatory)	Option 1: Baseline - 'do nothing'	Planning regulations to reduce the morphological impacts of land reclamation	8			
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, mitigation, uncertainty			
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, 3PAe, SBIs) defined under the WED? Provide effective protection of designated sBis? Contribute to UK Eliodiversity Action Plan objectives? Bupport delivery of biodiversity strategies? Reduce month/the alleget needed?	Positive short-term effect	pos S				
Population & human health	 Protect human health in undertaking water management activities 	Mantain and enhance access to and use of the vater environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shaffish protected waters?	Positive short-term effect	pos.S				
Water	 Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of wate bodies. Som for example, point source polition, office source polition, abstraction and flow regulation, and morphological interventiona? Promote efficient and sustainable use of water? Prevent the deterioration of water bodies from port source and diffuse polition?	Posive short-term effect	pos.S				
		Prevent the physical deterioration of water	No significant effect					
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sutainable field menagement? Contribute to the miligation of floods and droughts? Reduce vulneability of communities and the enromment to the effects of cirrate change? Address the potential impacts of cirrate change on biodiments? Address the potential impacts of cirrate change on biodiments? Control of the source of water (e.g. water yields, austraction, recreational uses) Control of the source of the source of the source provide a source of the source of the source of the source yields, austraction, recreational uses) to Control of the source on source boxes of the source	Positive short term effect	por S	May be minor negative short-term effect on energy consumption & emission of greenhouse gases, but not considered significant as long as best practice is applied			
		emissions from water management activities?	No significant effect					
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	Assumption being that regulations will ensure that cultural heritage sites are protected			
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS				
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS				
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS				
Summ	Summary: Generally the effects of this measure are positive for biodiversity, water, climate factors, negative and positive for population and human health and not significant for the remainder of the SEA topics.							

1	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	Land reclamation (non-regulatory)	Option 1: Baseline - 'do nothing'	Campaign awareness/voluntary measures to reduce the impact of land reclamation on morphology	9,
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Cifferia - to what extent with the (BMP	C, Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected specied 	Provide effective protection of protected areas' (e.g. SACS, SPAR, SCSI) softmed under the VMD21 Provide effective protection of designated stats? Contribute to UK Biodensth Action Plan Dolicities? Support delivery of biodensity stategies? Reduce impacts by alian paceica?	Insufficient information to make a judgement		
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinniking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Insufficient information to make a judgement		
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, adstraction and flow regulation, and morphological interventions? Prevent the disterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of Promote efficient and sustainable use of	Insufficient information to make a judgement		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable field management? Contribute 1a bha mingation et ficiods and doughts? Reduce vulnerability of communities and the enronment to the effects of climate change on thiodimesis? Address the potential impacts of climate change on thiodimesis? Address the potential impacts of climate change on thiodie use's of climate change on thiodic signation and use? Mathematical agent and a signation and south and the signature of the signature yields, abstraction, recreational uses? Contribute to reaching generalized activities?	Insufficient information to make a judgement		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement		
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtivenees?	Insufficient information to make a judgement		
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Insufficient information to make a judgement		
Soil	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ensuin? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and Aunction? Contribute to reducing levels of brownfeld, derelist and contaminated land in plan area?	Insufficient information to make a judgement	.*.:	
		Summary	Insufficient information to make a jud	gement.	

Invasive non-native species

	Pressure	Sector	Option	Measure	Measure No.
	Alien species	Recreation, sporting and cultural activities (regulatory)	Option 1: Baseline - 'do nothing'	Planning regulations to reduce the impacts of alien species	1
SEA topic	A. SEA Objective - to what extent will the REMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect discluding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutling where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (eg. 840-8, 840-8, 863) oddened under the VBD? Provide effective protection of designated <u>ates?</u> Contribute to UK Biodiversity Action Plan objectives? Buoport delivery of biodiversity strategies? Reduce emects by allen generels?	Postive and negative short-term effect	neg./pos.	Positive short-term effect on biodiversity where impact of aliens removed, bit potentially negative short-term impact if during transpotalion/nemoval of alients new areas get infected
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect driving water protected areas and water abstraction? Protect bathing and shallfah protected waters?	Positive short-term effect	pes.S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the physical deterioration of water bodies? Promote efficient and sustainable use of water?	Positive and negative short-term effect	neg./pos.	Positive short-term effect on biodiversity where impact of aliens removed, bit potentially negative short-term impact if during transpotation/removal of alients new areas get infected
		Prevent the deterioration of water bodies	No significant effect		
		If on pole, source and onuse porneous Promote subtinable flood management? Contribute to the mitigation of floods and droughts? Reduce vulnerability of communities and the environment to the effects of climate change? Address the notestial impacts of climate	No significant effect		
Climate	4. Contribute to mitigation of, and	change on biodiversity?	Positive short-term effect	008.S	
factors	adaptation to, climate change	Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, recreational uses)? Contribute to reducing greenhouse gas emissions from water management	No significant effect	pos.s	
23 24		activities? Encourage improved energy efficiency?			
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Positive short-term effect	pot S	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. food defences, ports & harbours, WWTWS & drainage)?	No significant effect	NS	Perhaps minor benefits for infrastructure, but not strategically significant
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ansion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfeld, derelict and contaminated land in plan area?	Positive short-term effect	pos.S	
Summary: 1	fhe effects of this measure are positive f	for population & human health,landscap	e and soil, not significant for cultural he	eritage and material assets ar	id positive and negative for biodiversity, climate factors and

2	Pressure	Sector	Option	Measure	Measure No.
	Alien species	Recreation, sporting and cultural activities (non-regulatory)	Option 1: Baseline - 'do nothing'	Campaign awareness to reduce the impact of alien species	2
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria . to what extent with the PDMP	C. Nature of the effect discluding positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of brotected amas' (e.g. 8405, 8406, 8601) defined under the VMED? Provide effective protection of designated <u>abs?</u> Contribute to UK Biodhersth Action Plan blachters? Bupport delivery of biodhersthy stategies? Reduce imposite by alian garcelers?	Insufficient information to make a judgement		
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect thinking water potected areas and water abstraction? Protect bathing and shellfah protected waters?	Insufficient information to make a judgement	•	
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions from point source and diffuse pollution? Prevent the deterioration of water bodies ? Promote efficient and estatinable use of water?	Insufficient information to make a judgement	a.	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable food management? Contribute to the imigation of floods and droughts? Address the petitional of commandiants and the environment to the priorities of climate change on biodherostal impacts of climate change on biodherostal of climate change on biodherostal environment and the priorities of climate change on human use of water (or g. wetter yields, adhitaction, recreational uses)? Contribute to reducing greenhouse gas emissions form water management Encourase emissioned interest efficience?	Insufficient information to make a judgement		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement	•	
Landscape	5. Protect and, where appropriate, enhance the character, directly and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distictiveness?	Insufficient information to make a judgament		
Matenal Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Insufficient information to make a judgement		
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce enstion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfield, derelict and contaminated land in plan area?	Insufficient information to make a judgement		
		Summary	Insufficient information to make a judy	jement.	

2	Pressure	Sector	Option	Measure	Measure No.
	Alien species	All sectors	Option 1. Baseline - 'do nothing'	Measures to control the exploitation of salmon and sea trout	3
SEA topic	A. SEA Objective . to what extent will the RIMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SBSIs) defined under the VHEO? Provide effective protection of designated definition of UK Biodhersthy Action Plan Contribute to UK Biodhersthy Action Plan Bugsont delivery of biodhersthy stategies? Reduce impacts by alian spacercias?	Short-term posible effect	pos.5	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect driving water potected areas and water abstraction? Protect bathing and shellfah potected waters?	No significant effect	NS	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the distribution of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?.	No significant effect	NS	
Climate factors	 Contribute to mitigation of and adaptation to, climate change 	Promote sustainable field menagement? Contribute to the miligation of floods and droughts? Address the potential impacts of climate charge? Address the potential impacts of climate charge on buildings? Address the potential impacts of climate charge on buildings and climate and charge on buildings and climate and charge on buildings and climate yields, austraction, recreational uses? Contribute to recours greenhouses are emissions from water management achieties?	No significant effect	NS	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. food defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arosion? Improve degraded sites? Protect agricolutural land? Safeguard soil quality: quantity and <u>function</u> ? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
1		Summary: The effect of this measured	ire is positive for biodiversity and not s	ignifcant for all other SEA top	ics

Draft RBMP

Diffuse Pollution

	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	All sectors	Option 2: RBMP measures	Reduce diffuse source inputs: non-urban land management issues	1
SEA topic	A. SEA Objective . to what extent will the RDMP	B. Assessment Criteria - to what extent with the PDMP	C, Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protection areas' (e.g. SACs, SPAs, SSSs) defined under the VMO'' Provide effective protection of designated sites'? Contribute to UK Biodiversity Action Plan objectives'? Despond televery of biodiversity strategee?	Postive short-term effect	pos.S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellish protected waters?	Positive short-term effect	pos S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source pullation, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution?	Positive short-term effect	pei S	
		Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable flood management? Crannibute to the minipation of floods and doughts? Reduce vulnerability of communities and the environment to the effects of climate change? Reduce vulnerability of communities and the environment to the effects of climate change?	No significant effect	neg./pos.	Effects are generally postive for biodiversity. However, depending on the nature of the messarue(s) required to deal with the issues, may result messared energy consumption, increased GRIG
		Address the potential impacts of climate change on bodiversity? Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management activities?	Positive short-term effect		emissions and increased waste. Mitigation required
Cuttural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape sevar? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	Possible improvements or return of landscape character through retention of hedges etc
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	Possible minor positive effect through reducing eutrophication and problems that presents to water infrastructure
Seil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect apprvutural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfield, derolict and contaminated land in plan area?	Postive short-term effect	pos.S	
Su	ummary: The effects of this measure are	positive for biodiversity, water and soil,	positive and negative for population &	human health and climate fa	ctors and not significant for the other SEA topics.

1	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	All sectors	Option 2: RBMP measures	Reduce diffuse source inputs: provide first time sewerage	2
SEA topic	A. SEA Objective - to what extent will the FBMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodwersity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of brotected areas' (e.g. SAAc, SAAc, SSG) defined under the WID'? Provide effective protection of designated obst? Contribute to UK Biodiversity Action Plan oblicities? Support delivery of biodiversity strategies? Reduce impedia by alian gaperica?	Positive short-term effect	pos.S	This effect will be positive provided that the waste that is generated is dealt with in an appropriate manner.
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase bourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pet.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the acological condition of water bodies from for example point source politicion, diffuse source politicion, abstraction and flow regulation, and morphological interventions? Prevent the direterioration of water bodies from point source and diffuse politicion? Prevent the physical determination of water bodies ? Promote difficient and sustainable use of water?	Pozëre short term effect	pos.S	This effect will be positive provided that the waste that is generated is dealt with in an appropriate manner.
Climate factors	 Contribute to mitigation of, and adaptition to, climate change 	Promote sustainable food management? Contribute to the milipation of floods and droughts? Reduce vulnerability of communities and the enriconneut to the effects of climate change? Address the plotential impacts of climate change an biodirests? Encourage enroyed anergy officiency? Contribute to reducing genehouse gas amissions forum water management	No significant effect Positive short term effect Negative short term effect	neg./pos.	Effects are generally positive for biodiversity. However, depending on the nature of the massure(s) required to deal with the issues, may result in receased energy consumption, increased GHO emissions and increased waste. Mitigation required.
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated tandscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	Negative short-term effect	neg S	Impact can be miligated by appropriate choice and design of works
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant offect	NS	
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD Constant of the solution 	Reduce erosion? Improve departed stee? Protect apricultural land? Safeguard sol quality, quantity and tanction? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	er not slaniff-ant for cultural backasis exstants

Diffuse pollution A. SE& Objective - to what extent will the PERMP I. Protect and, where appropriate, enhance biodiversity, particularly onteleted areas and protected species 2. Protect human health in undertaking water management activities	All sectors R. Assessmeet Criteria - to what extent with the RRMP Provide effective protection of protected amas' (e.g. GACs, GPAs, GBAs) defined under the VFC0? Provide effective protection of seignated Controls to Lead-amay Action Pranet Support definer of the VFC0? Reduce models by alen spaces? Reduce model and/or improve National Parks Protect dinning and shallfab protected waters?	Option 2: RBMP measures C. Nature of the effect discluding possible regarders allow measures effect and cross-cutting where based Positive short term effect No segnificant effect Positive short term effect	Reduce of these source inputs: reduce sources from buil <i>environment</i> D. Significance of the effect? pox. 5	3 E. Eddence, millipation, uncertainty This effect will be positive provided that the waste that is generated is dealt with in an appropriate manner.
A.SEA Objective - to what extent will the prime	B. Accessment Citeria - to what extent with the RRMP Proids effecting protection of the related analor (n.g. 80-6, 19-66, 20-66,	C. Nature of the effect dischaling positive or negative slinot, modum, or dising stem effect, paramatomic of effect, scale of effect and cross-cutiling where harown) Positive short term effect No significant effect Positive short term effect	D. Significance of the effect? pos. 5	E.Evidence, millipation, uncertainty This effect will be positive provided that the waste that is generated is dealt with in an appropriate manner.
Protect and, where appropriate, enhance indiversity, particularly protected areas and protected species Protect human health in undertaking water management activities	Prode effective protection of protected mara/ (r.g. 8Ac, 8PAc, 8Ba); oddnind under the VMD? Prode effective protection of designated ables? Controlute to UK Bodiversity Action Plan objectives? Reduce impacts by alien spaces? Maritalia and effinitione access to and use of the water environment? Increase toutime and/or improve National Parks Increase for and/or protected areas and water abstraction? Protect abling water protected areas and waters? Drates tables protected areas and waters?	Positive short term effect No significant effect Positive short term effect	pos.S pos.S	This effect will be positive provided that the waste that is generated is dealt with in an appropriate manner.
 Protect human health in undertaking water management activities 	Menton and enhance access to ad use of the water enrorment? Increase Tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect banking and shallish protected waters? Dudice the importance the accidenced	Positive short-term effect	pos.S	
	Deduce the impacts on the application			
 Prevent deterioration of the status of vater bodies. Enhance, water body status including groundwate() to good status, as appropriate. 	condition of water bodies from for ecological point source pollution, diffuse source pollution, abstraction and done regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Promote efficient and soutcanable use of water?	Positive short-term effects	pos.S	
	Prevent the physical detenoration of water bodies ?	No significant effect		
 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable floid munagement? Contribute to the minipation of floods and <u>doughts?</u> Reduce vulneability of communities and the envoronment to the effects of climate <u>change?</u> Reduce vulneability of communities and the envoronment to the effects of climate <u>change</u> to be effects of climate <u>change</u> to biolevesity?	No significant effect Positive short-term effect	neg./pos.	Effects are generally positive for biodiversity. However, depending on the nature of the measure(s) required to deal with the issues, may result in increased energy consumption, increased CHG emissions and increased weate. Mitigation required.
	Contribute to reducing greenhouse gas emissions from water management activities?	Negative short-term effect		
5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
 Protect and, where appropriate, enhance the character, dirersity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	Minor positive short-term effects
7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
8. Protect and, where appropriate, nhance the function and quality of the soil resource in the RBD	Reduce ension? Improve degraded sites? Protect agricultural land? Sufeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Posi Inve short-lerm effect	pos.S	
54 54	A. Controlute to mitigation of, and adaptation to, climate change S. Protect and, where appropriate, enhance the character, dwaresty and locial qualities of all indicates in the RBD Section 11 and 20	Clobing groundwater) to good status, as proven the deterioration of water bodes appropriate. Proven the deterioration of water bodes from good source and difuse publicor. Provide efficiency and difuse publicor. Provide and source and difuse publicor. Provide and source and difuse publicor. A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to metagetion of, and adaptation to, climate change A. Contribute to the addict of climate change? Adates the protect and, where appropriate, anhance or restore hindicape value activities? Protect and, where appropriate, adates C. Protect and, where appropriate, anhance or restore hindicape value and adaptate indicape value and adaptation diverse appropriate, anhance the change of Protect and, where appropriate, anhance or restore hindicape value and climate appropriate, anhance the function of the section? Protect and, where appropriate, adates adaptation and quality of the source in the RBD Protect and, where appropriate, anhance the function of the appropriate, adates adaptation and quality of the source in the RBD Protect and, where appropriate, anhance the function of the appropriate, adates ad	Claiming groundwatery to good status, as Prevent the deterioration of water bodies appropriate. any propriate and diffuse patients and diffuse patients Provent the physical deterioration of water improve automate and diffuse patients Provent the physical deterioration of water No significant effect Prevent the physical deterioration of water No significant effect Prevent the physical deterioration of water No significant effect Prevent the physical deterioration of water No significant effect Prevent the physical deterioration of water No significant effect Prevent the physical deterioration of water No significant effect Prevent to physical deterioration of water No significant effect Contributes to the effects of clamate Change? Reduce vulnerability of communities and the environment to the effects of clamate Change? Reduce vulnerability of communities and the environment to the deficts of clamate Change? Reduce vulnerability of communities and the environment to the deficts of clamate Change? Reduce vulnerability of communities and the environment to the deficts of clamate Change? Reduce vulnerability of communities and the environment to the deficts of clamate Change? Reduce vulnerability of communities and the environment to the deficts of clamate Change? Reduce vulnerability of clamate Reduce vulnerability of clamate Reduce vulnerability of clamate Reduce vulnerability of clamate Reduce vulnerability of	Contribute to minipation of , and appropriate. Prevent the determination of water bodies for and statisticable use of Prevent the prevent and de anonymeter anonymeter charage? No significant effect Postate and, where appropriate, encisions for moder antional descriptions, encisions for moder antional descriptions, encisions for moder declarge and anonymeter anonymeter setholds and protect and, where appropriate, encisions for moder restore historic enformance fortunes? No significant effect NS Protect and, where appropriate, encisions fortune heating where appropriate, encisions fortune heating where approprise, arestore historic enformance fortunes

	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	All sectors	Option 2: RBMP measures	Reduce diffuse source inputs: retroft/improve existing SuDs	4
SEA topic	A: SEA Objective : to what extent will the RUMP	B. Assessment Criteria - to what extent with the RDMP	C. Nature of the effect discluding positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of porticited areas' (e.g. SACs, SPAs, SSSIs) defined under the VKD? Provide effective protection of designated sites? Contribute to UK Biochressly Action Plan objectives? Bupport delivery of biochversity strategies?	Positive short-term effect	pos.S	
Population & human health	2. Protect human health in undertaking water management activities	Produce impacts by alient species? Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect diniking water protected areas and water? Protect bathing and shellfash protected water?	vo somment whet	pos S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, affittre source pollution, abstraction and flow regulation, and morphological interventions? Prevent the diterioration of water bodies from point source and diffuse pollution? Prevent the physical deteination of water bodies ? Promote efficient and sustainable use of water?	Postive short-term effect	pox.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable field management? Controllate to the imligation of floods and discipite? Address the potential impacts of climate charge on biodiversity? Reduce vulneability of communities and the environment to the effects of climate charge? Address the potential impacts of climate charge on biodiversity?	Positive short-term effects	por.S	Mitigation required during construction to reduce impact on climate change
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the	Contribute to reducing greenhouse gas emissions from water management activities? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	Ensure construction avoids impact on cultural heritage sites
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	No significant effect	NS	Minor positive short-term effects
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Positive short-term effects	pos.S	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve degraded sites? Protect agricultural land? Safeguard soit quality, quaritity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Positive short-term effects	pos.S	Minor positive affects on soil quality through reduced pollutant loads. Secondary benefits of SUDS on erosion through flow attenuation.
Summary: G	enerally this measure will have a positi	ve short-term effect on biodiversity,wate	r, climate factors, material assets and so on cultural heritage and landscape.	oil, negative and positive effe	cts on population and human health and no significant effect

- C	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Agriculture (regulatory)	Option 2: RBMP measures	Silage, Slurry and Fuel Oil (SSAFO) Regulation (SSAFO amendments)	6
SEA topic	A. SEA Objective - to what extent will the R054P	R. Asssessment Criteria - to what extent with the PDMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the VKD Provide effective protection of designated sites? Contribute to UK Biodriversith Action Plan objectives? Evapord delivery of biodiversity strategies?	Positive short term effect	pos S	
Population & human health	2. Protect human health in undertaking water management activities	Mantain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shallish protected waters?	Positive short-term effect	por S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pulktion, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	
		Prevent the physical deterioration of water	No significant effect		
Climate factors	4. Contribute to mitigation of, and indeptation to, climate change	Promote sustainable field management? Contribute to the mitigation of Roots and description? Reduce valueshalls of communities and the environment to the directs of climate change? Address the potential impacts of climate change in biodimetary? Address the potential impacts of climate change in biodimetary?	No significant effect Positive short term effect	neg./pos.	Effects are generally positive for biodiversity. However, depending on the nature of the measure(s) required to deal with the issues, may result in increased energy consumption, increased GHO emissions and increased wasts. Mitigation required
		Contribute to reducing greenhouse gas emissions from water management	Negative short-term effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effects	NS	Minor positive effects likely, but probably not strategically significant
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effects	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the sol resource in the RBD	Reduce excision? Improve degraded stee? Protect apricultural land? Safeguard soil quality, quantity and <u>function</u> ? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect Positive short-term effect	pos.S	

2 S	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Agriculture (non-regulatory)	Option 2: RBMP measures	Economic Incentive: Scottish Rural Development Programmes: 2008-2014 (covers agriculture, forestry, land management)	7
SEA topic	A. SEA Objective - to what extent will the REMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flors & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of 'protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WTO? Provide effective protection of designated stes? Contribute to UK (Indiversity Action Plan objectives? Support delivery of biodiversity stategies?	Positive short-term effect	pot.S -	
2		Reduce impacts by alien species?	No significant effect		
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pot S	
Water	 Prevent deterioration of the status of variet bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Produce the impacts on the acological condition of water bodies from for example, joint source publicher, diffuse source publicher, abstraction and flow regulation, and morphological interventions? Premert the deterioration of water bodies from point source and diffuse publicion? Promote efficient and suitanable use of water? Prevent the physical deterioration of water bodies 2.	Posève shon term effect	908.S	
Climate factors	 Contribute to metgation of, and adaptation to, climate change 	Promote sustainable field management? Contribute the imdigation of floods and decoghts? Reduce vulneability of communities and the enroimment to the effects of climate Change? Reduce vulneability of communities and the enroimment to the effects of climate and the second stange? Address the potential impacts of climate change on biodiversity? Encourage empowed enregy efficiency?	No significant effect Positive short-term effect Positive or negative effect for different sectors decending on nature of the	neg /pos.	Effects are generally positive for biodiversity. However, depending on the nature of the measure(s) required to deal with the issues, may result in increased energy consumption, increased GHS emissions and increased waste. Mitigatien required.
		emissions from water management	measures		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape values and local distinctiveness?	No significant effect	NS	May be a minor positive effect, but probably not strategically significant
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Sol	8 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arosion? Improve degraded size? Sufeguard soil quility, quantity and function? Protect aprodutural land? Contribute to reducing levels of brownfeld, derelict and contaminated land in plan area?	Positive short-term effect	pos S	
Summary:	Generally, the effects of this measure w	ill be positive for biodiversity, water and	I soil, negative and positive for climate topics.	factors and population & hu	man health and not significant for the remainder of the SEA

2 S	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Agriculture (non-regulatory)	Option 2: RBMP measures	Economic Incentive: Scottish Rural Development Programmes: 2008-2014 (covers agriculture, forestry, land management)	7
SEA topic	A. SEA Objective - to what extent will the REMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flors & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of 'protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WTO? Provide effective protection of designated stes? Contribute to UK (Indiversity Action Plan objectives? Support delivery of biodiversity stategies?	Positive short-term effect	pot.S -	
2		Reduce impacts by alien species?	No significant effect		
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pot S	
Water	 Prevent deterioration of the status of variet bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Produce the impacts on the acological condition of water bodies from for example, joint source publicher, diffuse source publicher, abstraction and flow regulation, and morphological interventions? Premert the deterioration of water bodies from point source and diffuse publicion? Promote efficient and suitanable use of water? Prevent the physical deterioration of water bodies 2.	Posève shon term effect	908.S	
Climate factors	 Contribute to metgation of, and adaptation to, climate change 	Promote sustainable field management? Contribute the imdigation of floods and decoghts? Reduce vulneability of communities and the enroimment to the effects of climate Change? Reduce vulneability of communities and the enroimment to the effects of climate and the second states of climate change on biodiversity? Encourage emproved energy efficiency? Contribute to reacting generationse gas	No significant effect Positive short-term effect Positive or negative effect for different sectors decending on nature of the	neg /pos.	Effects are generally positive for biodiversity. However, depending on the nature of the measure(s) required to deal with the issues, may result in increased energy consumption, increased GHS emissions and increased waste. Mitigatien required.
		emissions from water management	measures		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape values and local distinctiveness?	No significant effect	NS	May be a minor positive effect, but probably not strategically significant
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Sol	8 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arosion? Improve degraded size? Sufeguard soil quility, quantity and function? Protect agnicultural land? Contribute to reducing levels of brownfeld, derelict and contaminated land in plan area?	Positive short-term effect	pos S	
Summary:	Generally, the effects of this measure w	ill be positive for biodiversity, water and	I soil, negative and positive for climate topics.	factors and population & hu	man health and not significant for the remainder of the SEA

1	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Forestry (non-regulatory)	Option 2: RBMP measures	Economic Incentive: Scottish Rural Development Programmes: 2008-2014 (covers agriculture, forestry, land management)	8,
SEA topic	A. SEA Objective - to what extent will the REMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective pontection of protected area's (e.g. 84x, 584x, 585); defined under the WED? Provide effective pontection of designated 0862? Contribute to UK 0862? Support detivers of brodwestily stategies? Reduce empacts by allen species?	Positive short-term effect	por. S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parke Protect domking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	poe.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Pactice the impacts in the acological condition of water bodies from for example, point source pollution, diffuse source pollution, labelaration and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Premet the physical deterioration of water bodies ? Prevent the physical deterioration of water bodies ?	Posève shortern effect	pos.S	
Climate factors	 Contribute to miligation of, and adaptation to, climate change 	Premote sustainable food management? Contribute to the mitigation of floods and doughts? Reduce vulnerability of communities and the environment to the effects of climate change? Reduce vulnerability of communities and the environment to the effects of climate change? Address the potential impacts of climate	No significant effect	neg /pos.	Effects are generally positive for biodiversity & recreation, but there may be costs for other sectors. The costs & benefits will need to be associed in the I/A. Mitigation could be achieved through a targeted study to assess distribution of costs and benefits and effective disposal of water
		change on biodiversity? Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management actimities?	Positive or negative effect for different sectors depending on externalities		26
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	May be a minor positive effect, but probably not strategically significant
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Sol	8. Protect and, where appropriate, enhance the function and quality of the soil	Reduce ension? Improve degraded sites? Safeguard soil quality, quantity and function? Protect agricultural land?	Positive short-term effect	pos.S	
	resource in the RBU	Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect		
Summary: G	enerally, the effects of this measure wil	I be positive for biodiversity, water and s	soils, negative and positive for climate	and population and human h	ealth and not significant for the remainder of the SEA topics.

1 S	Pressure	Sector	Option	Measure	Measure No.			
	Diffuse pollution	Urban development (regulatory)	Option 2: RBMP measures	CAR 2005: GBRs require SuDs for new surface water discharges - Q&S investment programme, Q&S retrofitimf of SuDs to industrial areas	10			
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short , medium , or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty			
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance, biodiversity, particulary protected areas and protected species 	Provide effective protection of brotected areas' (e.g. RAGS, SDAR, SSDI) defined under the WDD' Provide effective protection of designated stas? Contribute to UK Biochersth Action Plan Dolctive? Biopoord delivery of biodxerstity strategies? Reduce impacts by alian garcial?	Positive short-term effect	pos.5				
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect diniking water protected areas and water abstraction? Protect baihing and shellfah protected waters?	Positive short-term effect	por S				
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example point source publication, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicitor? Prevent the physical deterioration of water bodies ? Promote efficient and sustanable use of water?	Posive shot-term effect	gos. S				
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable food management? Contribute to the milipation of floods and droughts? Address the potential impacts of climate change on holdwessly? Reduce vulnerability of communities and the environment to the effects of climate change? Address the potential impacts of climate change on biodwessly?	Positive short-term effects	neg./pos.	Effects are generally positive for biodversity & recreation, but there may be costs for other sectors. The costs & benefits will need to be assessed in the IA. Mitigation could be achieved through a targeted study to assess distinktion of costs and benefits and effective disposal of waste			
<u>.</u>	5. Protect and, where appropriate,	Contribute to reducing greenhouse gas emissions from water management activities?	Positive or negative effect for different sectors depending on externalities					
Cultural heritage	enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	Ensure construction avoids impact on cultural heritage sites			
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance mational designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctivences?	No significant effect	NS	Ensure construction avoids impact on designated landscapes			
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Positive short-term effects	pos.S				
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce anosion? Improve degraded sites? Protect apricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelist and confaminated land in plan area?	Minor positive short-term effects	pos.S	Minor positive effects on soil quality through reduced pollutant loads. Secondary benefits of SUOS on erosion through flow attenuation.			
Summa	awar Summary: Generally, the effects of this measure will be positive for biodiversity, water, soil and material assets, negative and positive for climate factors and population & human health and not significant for the remainder of the SEA topics.							

	Pressure	Sector	Option	Measure	Measure No.		
	Diffuse pollution	Agriculture (non-regulatory)	Option 2: RBMP measures	SEPA catchment-related activities, CMPs and regional roll-out in areas at risk of not meeting WFD and protected area standards	12		
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty		
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance, biodiversity, particulary protected areas and protected species 	Provide effective protection of protected areas' (e.g. 840c, SPAE, SSDI) defined under bas WDD' Provide effective protection of designated sites? Contribute to UK Biochersth Action Plan bolicities? Bupcort delivery of biodxersitis strategies? Reduce impacts by alian species?	Positive short-term effect	pos.S			
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect balhing and shellfish protected waters?	Positive short-term effect	por S			
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts in the ecological condition of water bodies from for example point source publiclion, diffuse source politicies, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicion? Premote efficient and sustainable use of water? Prevent the hypiccal decompany.	Postive short-term effect	pos.S			
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable flood management? Contribute to the mogation of flood and droughts? Address the potential impacts of climate change on biodiversity? Reduce vulnerability of communities and the environment to the effects of climate change on biodiversity? Endouse improved neare veficiesc?	Postive shortterm effect	neg./pos.	Effects are generally positive for biodiversity & recreation, but there may be coats for other sectors. The coats & benefits will need to be assumed in the M Mitigation coads be achieved through a targeted study to assess distribution of coats and bene		
		Contribute to reducing greenhouse gas emissions from water management activities?	Positive or negative effect for different sectors depending on measures taken				
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS			
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Positive short-term effect	pos.S			
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWS & drainage!?	Positive short-term effect	pos.S			
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce erosion? Improve degraded arkes? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfeld, derelict and contaminated land in plan area?	Positive short-term effect	pos.S	Minor positive effects on soil quality through reduced pollutant loads. Secondary benefits of SUDS on ension through flow attenuation.		
Summary:	Summary: Generally, the effects of this measure will be positive for biodiversity, population & human health, water, soil, landscape and material assets, negative and positive for climate factors and not significant for the remainder of the SEA topics.						

21 - O	Pressure	Sector	Option	Measure	Measure No.
	Diffuse pollution	Agriculture (regulatory)	Option 2: RBMP measures	CAR 2005: GBR - diffuse pollution other relevant CAR requirements	11
SEA topic	A. SEA Objective - to what extent will the RifiMP	B. Asssessment Criteria - to what extent with the RDMP	C. Nature of the effect discluding positive or negative short, medium, or long-term effect, permatency of effect, scale of effect and cross-cutling where known)	D. Significance of the effect?	E. Exidence, milligation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protection amas' (og 340c, 8PAs, 683b) defined under the VMDP? Provide effective protection of designated sites? Contribute to LVK Biodiversity Action Plan Outprotectives? Buscont delivers of biodiversity stategies? Reduce impacts by alian species?	Positive short-term effect	pos.S	
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect inniking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	potS	
Water	 Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffue source pollution, abstraction and flow regolation? Prevent the deterioration of water bodies from point source and diffue pollution? Promote efficient and sustainable use of water?	Postive short-term effect	pos S	
- 20		bodies ?	No significant effect		
Climate factors	4. Centribute to mitigation of and adaptation to, climate change	Promote sustainable field mmagaement? Controlete to the mingation of floots and droughts? Address the plotential impacts of climate change on biodretaty? Reduce submeabling of communities and the encounce impacts of climate change on biodretaty? Address the plotential impacts of climate change on biodretaty? Controllete to reducing deficiency? Controllete to reducing generators gas emissions form were management	No significant effect Postive or negative effect for different sectors depending on measures taken	neg./pos.	Effects are generally positive for biodiversity & recreation, but there may be costs for other sectors. The costs & bonefits will need to be assessed in the IA. Mitigation could be achieved through a targeted study to assess distribution of costs and bene
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Positive short-term effects	pos S	
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce enosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Minor positive short-term effects	pos.S	Minor positive effects on soil quality through reduced pollutant loads. Decondary benefits of SUDS on ension through flow attenuation.
Summary: G	enerally, the effects of this measure will	be positive for biodiversity, population	& human health, water, soil and materi the SEA topics.	al assets, negative and posit	ive for climate factors and not significant for the remainder of

Point Source Pollution

Point source polition All sectors Option 2. RBMP messures PPC/CAR, reduce at source (where new standards) 1 SEA topic A. SEA Objective - to what extent will be RAMS G. Names of the effect daschalling polition D. Significance of the effect? E. Exidence, mailpation, uncertainty SEA topic Provide effective protection of protecting assess of the effect acchallence polition D. Significance of the effect? E. Exidence, mailpation, uncertainty Biodiversity, information, protecting assess of the effective protecting assess of the effect acchallence polition in the topic of the effect acchallence politice in the standard in	ocure 1 ffect? E. Evidence, miligation, uncertainty	IPP(
SEA topic A.SEA Objective - to what estent will the PRMP B. Assessment Citien is to what estent with the PRMP C. Nature of the effect including permanency effect and citien is to what estent or negative short, seeming of the effect is a citien in the effect including effect and cities called of effect and citie	ffect? E.Exidence, miligation, uncertainty							
Biodiversity, form & Source Provide first/me contection of provide field marks (g. 3.G.S.P.S.S.SSI) definition profected aperiodic and even and sproversities and services and provide field provide field marks and provide field provide field marks and provide field provide field marks and sproversities and services and provide field provide field marks and provide field provide field marks and subscription of any provide field provide field marks and provide field provide field marks and subscription of any provide field provide field marks and provide field provide field marks and subscription of any provide field provide field marks and subscription of any provide field marks and provide field marks and provide field marks and provide field marks and provide field marks provide field		term e of swm)						
Papulation & American beach in understaines Maintain and embance access to and use of the water emonement? Positive short term effect pass 3 Image: health in understaines Protect diving water protected wates and water protected wates and water protected water and water protection of water bodies: Enforce and water protection of water bodies: Enforce and water protection of water bodies and water protected water and water a								
3. Prevent deterioration of the status of point source policion, diffue source point source policion, diffue source policion, address policion, manor policional interventions, percent the optystical deterioration of water Prevent the physical deterioration of water Positive short term effect								
Prevent the physical determination of water No significant effect								
UVVIG 1								
Climate A. Contribute to mitingation of floads factors 4. Contribute to mitingation of control the effects of climate change on human use effects of climate change on buman use of water (e.g. water winds, abstraction, recreational consol)? Address the potential impacts of climate change on buman use of water (e.g. water winds, abstraction, recreational consol)? Address the potential impacts of climate change on buman use of water (e.g. water winds, abstraction, recreational consol)? Address the potential impacts of climate change on buman use readermaner No significant effect neg./pos. Impact can be mitigated by appropriate choice and measures and appropriate choice and measures and appropriate handling of wate Change on bumar management Negative short term effect	Impact can be mitigated by appropriate choice and design of measures and appropriate handling of weste	fect						
actricities? depending on the nature of the measure		95670						
Cultural 6. Prestat and where appropriate. Exceeding requestion to the second sec								
Landucape 6. Protect and, where appropriate, endoarce 7. Andread Segurated Indicace areases? 7. Andread Segurated Indicace Areases Andread I								
Material Assets 7. Protect and make most effective use of water management infrastructure (e.g. flood delences, port & Austrours, VWTVPs & darlabage) Make most effective use of Protect existing economic effective (e.g. flood delences, port & Austrours, VWTVPs & darlabage) No significant effect NS								
Sol enhance the function and where appropriate enhance the function and appropriate and the solution of the so								
Summary: Generally this measure will have a positive short term effect on biodiversity and water, positive and negative effects on population & human health and climate factors and no significant effect on the	Summary: Generally this measure will have a positive short term effect on biodiversity and water, positive and negative effects on population & human health and climate factors and no significant effect on the remaining							

2	Pressure	Sector	Option	Measure	Measure No.		
	Point source pollution	All sectors	Option 2: RBMP measures	IPPC/CAR: increase treatment (where new standards)	2		
SEA topic	A. SEA Objective - to what extent will the R084P	B. Assessment Criteria - to what extent with the PDMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty		
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. SAAs, SPAs, SBAs) defined under the VMFD? Provide effective protection of designated <u>obs</u> ? Contribute to UK Riodhersth Action Plan objectives? Bugood tellwirey of biodhersth stategies? Reduce impacts by alian papercis?	Positive short-term effect	pos.S			
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase bourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Positive short-term effect	pes.S			
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (moluding groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the detorioration of water bodies from point ource and diffuse pollution? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S			
		Prevent the physical deterioration of water	No significant effect		0		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable field management? Contribute to the mitigation of floods and Reduce students? Reduce students? the environment to the offects of climate change? Address the potential impacts of climate change on human use of water (sg. wider yields, abstraction, recreational uses)?	No significant effect	neg./pos.	Impact can be miligated by appropriate choice and design of measures and appropriate handling of waste		
		change on biodiversity? Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	Negative or positive short-term effect depending on the nature of the measure				
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	Negative short-term effect	neg S			
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctivenees?	No significant effect	NS			
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW/s & drainage)?	No significant effect	NS			
Soil	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve departed sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS			
Summary: 6	Summary: Generally this measure will have a positive short term effect on biodiversity and water, positive and negative effects on population & human health and climate factors and no significant effect on the remaining SEA topics.						

10	Pressure	Sector	Option	Measure	Measure No.		
	Point source pollution	All sectors	Option 2: RBMP measures	IPPC/CAR: transfer all or part of discharge (where new standards)	3		
SEA topic	A: SEA Objective - to what extent will the REMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty		
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protection areas' (e.g. 840c, 894bc, 8954) self-eff under the VMDP Provide effective protection of designated aster? Contribute to UK Biodiversity Action Plan objectives? Busport delivery of biodiversity stategies? Reduce impacts by alien species?	Postive short-term effect at site where existing discharge is transferred, but potentially an equative short-term effect at site where discharge is received	neg./pcs.	Mitigation would require study of impact on where discharge is transferred		
Population & human health	 Protect human health in undertaking water management activities 	Msintain and enhance access to and use of the water environment? Increase tourism and/or improve Mational Parks Protect diminism water protected areas and water abstraction? Protect bahing and shellish protected waters?	Postive short-term effect at site where existing discharge is transferred, but potentially an equative short-term effect at site where discharge is received	neg./pos.	Mitigation would require study of impact on where discharge is transferred		
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological contains of whete hosis a film of re-sample pollution, abstraction and film re-goldation, and morphological interventions? Prevent the deterioration of water bodies from point cource and diffuse pollution? Promote efficient and sustainable use of water?	Postive short-term effect at site where existing discharge is transferred, but potentially a negative short-term effect at site where discharge is received	neg./pos.	Mitigation would require study of impact on where discharge is transferred		
		Prevent the physical deterioration of water bodies 2	No significant effect				
Climate	4. Contribute to mitigation of, and	Premote sustainable food management? Contribute to the minigation of floods and droughts? Partice subarabity of communities and the environment to the effects of climate change? Address the potential impacts of climate change on human use of writer (e.g. weter yields, abstration, recreational uses)?	No significant effect	neg./pos.	Mitigation would require study of impact on where the discharge is		
		Address the potential impacts of climate change on biodiversity? Contribute to reducing greenhouse gas emissions from water management activities?	Postive short-term effects for the site from whence the discharge is transferred, but potentially negative short-term effects for the (new) receiving water body Potentially negative short-term effects because of increased energy				
Cultural heritage	 Frotect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the 	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS			
Landscape	RBD 5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	No significant effect	NŠ.			
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Minor negative short-term effect as some existing infrastructure may be redundant as a result of change	nog.3	Mitigation would require defailed optioneering to optimise existing water infrastructure		
Soil	0. Protect and, where appropriate, enhance the function and qualty of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminiated land in plan area?	No significant effect	NS			
	Summary: Generally the effects of this measure are negative for material assets, not significant for soils and positive and negative for the remainder of the SEA topics.						

1 0	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	All sectors	Option 2: RBMP measures	IPPC/CAR: remediation of sediments and/or water (either by removal or by treating in situ) (where new standards)	å
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. GACes, SPAs, SSSIs) defined under the WFD? Provide effective protection of designated cohers' Contribute to UK Biodiversity Action Plan Objectives' Dispond delivery of biodiversity strategies? Restruct protects to adjust service?	Positive short-term effect at the site where the sediment or water is treated, potentially negative short-term effect depending on how the spoil or water is disposed of No simulificant effect	neg./pos.	Mögstion to ensure that waste/water is properley disposed of
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water enricomment? Increase tourism and/or improve National Partice Protect danking water protected areas and water abstraction? Protect bathing and shallfah protected waters?	Positive short-term effect	pos 8	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollubin, diffue source pollution, abstraction and flow regulation, and merphological interventional? Prevent the deterioration of water bodies from point source and diffue pollution? Prevent the physical deterioration of water bodies ?	Positive short-term effect at the site where the sediment or water is treated, potentially negative short-term effect depending on how the spoil or water is disposed of	neg./pos.	
		Promote efficient and sustainable use of water?	No significant effect		
		Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, recreational uses)? Reduce vulnerability of communities and the environment to the effects of climate abave?	No significant effect		The effects of this measure will be positive for biodiversity and may help improve conveyance thereby mitigating the impacts of workshir and flowed and mornitor and unitashable food meanagement
Climate factors	 Contribute to mérgation of, and adaptation to, climate change 	Address the potential impacts of climate change on biodreesty? Contribute to the mitigation of floods and droughts? Promote sustainable flood management? Contribute to reducing greenhouse gas emissions from water management schedule?	Positive short-term effect Positive or negative effects depending on	neg./pos. green on tr will th	Howver, there are potential negative effects in terms of genehouse gas emissions and increased energy use depending on the nechanisms used to treat the sediment/water. Mitigation will therefore require a cost benefic analysis and consideration of how to deal with waste
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Sol	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded artes? Protect apricultural land? Safeguard soll quality, quantity and function? Contribute to reducing levels of thrownfield, detelict and contaminated land in plan artea?	No significant effect	NS	
Summary: 4	Senerally this measure will have positiv	e short-term effects on water, positive ar	ad negative effects for biodiversity, pop remainder of the SEA topics.	ulation and human health an	d climate change, but will have no significant effects on the

1	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	All sectors	Option 2: RBMP measures	IPPC/CAR: change timing or frequency of discharge (where new standards)	5
SEA topic	A. SEA Objective - to what extent will the FilmP	R. Asssessment Criteria - to what extent with the FBMP	C. Nature of the effect discluding positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SBSIs) defined under the VFDO? Provide effective protection of designated <u>class</u> ? Contribute to LK Biodherstrip Action Plan objectives? Reduce encodes the alien someries?	Positive short-term effects	pos.S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shellfish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effects	por S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (mchuding groundwater) to good status, as appropriate	Reduce the impacts on the ecological condition of water bodies from for example point source pollution, diffues source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from port source and diffues pollution? Promote efficient and sustainable use of water?	Positive short-term effects	pos.S	
		Prevent the physical deterioration of water hordies 2	No significant effect		
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable field management? Contribute to the miligation of floods and droughts? Reduce vulneability of communities and the enronment to the effects of climate change? Address the potential impacts of climate change on humans use of water (e.g. water yields, abstraction, recreational uses)? Address the potential impacts of climate change on bioidershi?	No significant effect Positive short-term effects	neg /pos.	
		emissions from water management	Positive or negative short-term effects on different sectors depending on exact		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	nature of measure	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard tool quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS.	
Summary	: Generally this measure will have short	term positive effects on biodiversity, wa	iter and material assets and negative a effect on the other SEA topics.	nd positive effects on populat	ion & human health and climate factors and no significant

2	Pressure	Sector	Option	Measure	Measure No.		
	Point source pollution	Sewage disposal (regulatory)	Option 2: RBMP measures	CAR 2005: waste water discharge to rivers, lochs etc.	6		
SEA topic	A. SEA Objective - to what extent will the FBMP	B. Assessment Cilleria - to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, miligation, uncertainty		
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of brotection areas' (e.g. SACs, SPAs, SSSI); defined under the VKEO Provide effective protection of designated sBes? Contribute to VK: Bootherstly Action Plan objectives? Database investite balance service?	Positive short-term effect	pos S			
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shallfash protected waters? Protect dimking water protected areas and water shortscript?	Positive short-term effect	pos.S			
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies, from point source and diffuse pollution? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S			
		Prevent the physical detenoration of water bodies ?	No significant effect				
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote outsinable food mmagement? Contribute to the imfiguing of floods and descupter2 (and the environment to the effects of climate echange). Address the potential impacts of climate echange on bioindership? Address the potential impacts of climate echange on bioindership? Address the potential impacts of climate echange on bioindership? (Environment and ease). effective provides a statement of the statement provides a statement of the statement provides a statement of the statement for the statement of the statement provides a statement of the statement for the statement of the statement for the statement of the statement for the statement of the statement of the statement for the statement of the statement of the statement of the statement of the statement of the statement for the statement of the statemen	No significant effect	neg./pos.	The effects of this measure will be positive for biodiversity. However, there are potential negative effects in terms of genehouse gas emissions and necessed energy use depending on the mechanicam/bioatments applied. Mitgason will therefore require a cost benefit analysis and consideration of how to deal with watte		
		Contribute to reducing greenhouse gas emissions from water management activities?	Positive or negative short-term effects on different sectors depending on exact nature of measure				
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS			
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape values and local distinctiveness?	No significant effect	NS			
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS			
Soil	8. Protect and, where appropriate, enhance the function and quality of the soi resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and Auction? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS			
Summary:	ummary: Generally the effects of this measure will be positive for biodiversity and water, positive and negative for population & human health and climate factors and net significant for the remainder of the SEA topics.						

	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Sewage disposal (regulatory)	Option 2: RBMP measures	Scottish Water Charging schemes: provides incentives for industry to reduce the amount of trade effluent they discharge to sewer	9
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Citteria - to what extent with the RBMP	C, Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WDP Provide effective protection of designated sbss? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	per S	
Population & human health	 Protect human health in undertaking water management activities 	Reduce impacts by alim species? Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shellish protected waters? Protect dinking water protected areas and water abstraction?	No significant effect Positive short-term effect	pos.S	Negative effects can be identified in the IA
Water	 Prevent deterioration of the status of water budies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source publich, diffuse source pollution, abstraction and flow regulation, and metphological interventions? Prevent the deterioration of water bodies from port source and diffuse pollution? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	
		Prevent the physical deterioration of water	No significant effect		
Climate factors	4. Centribute to mitigation of, and adaptation to, climate change	Promote sustailed food management? Controlled to the mdigition of food and Roduce volume/balls food management? Roduce volume/balls food formate change on building for director of climate change on buildings of climate (e.g. weter change on buildings of climate change on buildings of climate climate climate climate climate climate clim	No significant effect	neg./pos.	Here assumed an overall positive impact despite potential negative impact due to energy consumption (e.g. increased pumping and operational requirements) and potential waste streams
		Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management activities?	Positive or negative short-term effects on different sectors depending on exact nature of measure		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NŜ	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW/s & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, detelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Generally the effects of this measure wil	I be positive for biodiversity and water,	positive and negative for population &	human health and climate fa	ctors and not significant for the remainder of the SEA topics.

	Pressure	Sector	Option	Measure	Measure No.		
	Point source pollution	Sewage disposal (regulatory)	Option 2: RBMP measures	Habitats Directive review of consents	10		
SEA topic	A. SEA Objective - to what extent will the RBMP	D. Assessment Criteria - to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty		
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective porticiction of brotected areas' (e.g. SAAc, SDAe, SSSI), defined ander the WED? Provide effective protection of designated obe? Contribute to UK Biodiversity Action Plan blochwes? Support delivery of biodiversity strategies? Reduce investity attanges	Positive short-term effects	por S			
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water enriconment? Increase tourism and/or improve National Parks Protect bathing and shellfish protected waters? Protect drinking water protected areas and	Positive short-term effects	pot.S			
Water	 Prevent deterioration of the status of water bodies. Enhance, were body status (including groundward) to good status, as appropriate 	water abstraction? Reduce the mysels on the acological condition of water bodies from for a simple point accore publiclion, diffuse is source poliation, abstraction and draw regulation, and morphological interventions? Prevent the detenoration of water bodies from point source and diffuse poliation? Prevent the provide the bodies ? Promote efficient and sustainable use of water?	Positive short-term effects	pot.S			
Climate factors	 Contribute to mitigation of and adaptation to, climate change 	Promote sustainable flood management? Contribute to the imfiguitor of floods and <u>incoughts?</u> Contribute to the solding greenhouse gas emissions from water management for the solding of the solding? Refuse submitted by the solding of the incought of the solding of the incought of the solding of the incought of the solding of the solding of the solding of the solding of the solding of the solding of the solding of the product of the solding of the soldi	No significant effect Positive short.term effect	pos.S			
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the PRD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS			
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distancements?	No significant effect	NS	May be a minor positive short-term effect here		
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS			
Soil	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce eresion? Improve degraded sites? Protect apricultural land? Safeguard sol quality, quantity and <u>kunctor</u> ? Contribute to reducing lavels of brownfeld, derelict and contaminuted land in plan area?	No significant effect	NS			
Sum	Summary: Generally the effects of this measure will be positive for biodiversity, water and climate factors, positive and negative for population & human health and not significant for all the other SEA topics.						

1 C	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Sewage disposal (regulatory)	Option 2: RBMP measures	Water company AMPs/Quality & Standards	11
SEA topic	A. SEA Objective - to what extent will the RBMP	D. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of protected areas' (e.g. SAC, BPAE, SGSI) defined under the WFD? Provide effective protection of designated obs? Contribute to UK Biodiversity Action Plan bloches Support delivery of biodiversity strategies? Reduce investity attanges	Postive short-term effect	pos S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water encionment? Increase tourism and/or improve National Parks Protect bathing and shellfsh protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pet.S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate	Reduce the impacts on the ecological condition of water bodies from for example, point source politoin, diffuse source politicin, abstraction and floor regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse politoins? Promote sifticient and sustainable use of water?	Positive short-term effect	pos.S	
		Prevent the physical deterioration of water bodies ?	No significant effect		
Climate factors	4. Contribute to mbigation of, and adaptation to, climate change	Promote sustainable food management? Contribute to the mingation of floods and droughts? Reduce vulneability of communities and the environment to the effects of climate change? Address the potential impacts of climate change on bioinversity? Address the potential impacts of climate change on bioinversity?	No significant effect	neg./pos.	Mitigation would require study of impact on where the discharge is relocated. Have assumed an overall positie impact despite potential negative impact data the nergy consumption (e.g. increased pumping and operational requirements) and potential waste streams
		Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management activities?	Positive or negative short-term effects on different sectors depending on exact nature of measure		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape values and local disticctiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ersion? Improve departed sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Senerally the effects of this measure wi	I be positive for biodiversity and water,	positive and negative for population &	human health and climate fa	ctors and not significant for the remainder of the SEA topics.

2	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Sewage disposal (regulatory)	Option 2: RBMP measures	CAR: First time rural sewerage programmes	12
SEA topic	A. SEA Objective - to what extent will the RBMP	B, Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainly
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of 'protected areas' (e.g. SACs, SPAe, SSSII) defined under the VMDO' Provide effective protection of designated obey? Contribute to UK Biodiversity Action Plan Objectives? Support delivery of biodiversity strategies? Reduce invocatis by alian paceical?	Positive short-term effect	por S	
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abatraction? Protect bathing and shellish protected waters?	Positive short-term effect	pol.S	It is recognised that there will be costs in providing first time severage, and that this will be borne initially by the water companies? These may be passed on to customers.
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water budges from for example, point source positions, diffure source polition, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodges from point source and diffuse polition? Prevent the physical deterioration of water bodges? Promote efficient and sustainable use of water?	Positive short-term effect	рок.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload menagement? Contribute to the milipation of floods and droughts? Reduce valuesability of communities and the enronment to the effects of climate change? Reduce valuesability of communities change? Address the potential impacts of climate change an budfressly? Encourage improved entrary efficiency? Contribute to reducing enclines/	No significant effect Positive short-term affect Negative short-term affect	neg./pos.	Effects are generally positive for biodivenity & recreation, but there may be costs for other sectors. The provision of first time severage will require additional energy and, as a consequence, there will be increased OHG emissions.
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the DRN	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, dressly and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distactiveness?	Negative short-term effect	neg S	Negative short-term effect on the landscape aesthetics, positive short-term effect on the quality of the water body (if considered part of the landscape)
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded oftee? Protect agricultural land? Safeguard soli quality, quartity and Auction? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Generally the effects of this measure an	e positive for biodiversity and water , ne	gative and positive for population & hu soils and negative for landscane.	man health and climate facts	rs , not significant for cultural heritage,material assets and

<i>i</i>	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Aquaculture/fish farming (regulatory)	Option 2: RBMP measures	CAR 2005: rate or scale of discharges arising from fish farms	13
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protection areas' (e.g. SAVG, SPAE, SBSI) sedence under the VMED? Provide effective protection of designated stars? Contribute to UK fieldweisity Action Plan objectives? Buggoot delivery of biodweisity stategies? Reduce impacts by alian pacieta?	Pos≷ive shortterm effect.	pos.S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shellfah protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	
Water	3. Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffue source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point ocurce and diffue pollution? Promote efficient and sustainable use of water?	Posäve short-term effect	pos.S	Reducing rate or scale of discharges arising from 5th farms may require treatment and therefore potential costs which may need to be considered
		Prevent the physical deterioration of water	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Permote sustainable field amnagement? Contribute to the milipation of floods and droughts? Reduce vulneability of communities and the enricontent to the effects of climate change? Address the potential impacts of climate change on human use of water (o, g, water change on human use of water (o, g, water change on human use of water (o, g).	No significant effect	neg /pos.	There may be additional energy usage from additional storage and treatment requirements. Could be mitigated through appropriate selection of treatment methods
		Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management activaties?	Positive or negative short-term effects depending on the nature of the treatment/measure		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	Possible minor postive effects on water management infrastructure, but not strategic
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS.	
Summary:	Generally the effects of this measure wi	I be positive for biodiversity and water.	positive and negative for population &	human health and climate fa	ctors and not significant for the remainder of the SEA topic

2 C	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Manufacturing (regulatory)	Option 2: RBMP measures	CAR 2005: Priority substances (2008)	14
SEA topic	A. SEA Objective - to what extent will the RBMP	D. Assessment Criteria - to what extent with the FBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. SACe, SPAe, SSSH) defined under the WED? Provide effective protection of designated about? Contribute to UK Biodiversity Action Plan biotchws? Support delivery of biodiversity strategies?	Postive short-term effect	pos S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shelffish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate	Reduce the impacts on the ecological condition of water bodies from for example, point source politoin, diffuse source politicin, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse politoins? Promote efficient and wutannable use of water?	Positive short-term effect	pos.S	
		Prevent the physical deterioration of water bodies ?	No significant effect		
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable food mmagement? Contribute to the imfiguitor of floods and <u>moniphers</u> ? Reduce vulneability of communities and the environment to the effects of climate <u>change</u> ? Address the potential impacts of climate <u>change</u> on biodiversity? Address the potential impacts of climate change on biodiversity?	No significant effect	neg./pos.	Have assumed an overall positive impact despite potential negative impact due to energy consumption and potential waste streams
		Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management activities?	Positive or negative short-term effects on different sectors depending on exact nature of measure		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve deparaded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Generally the effects of this measure wil	I be positive for biodiversity and water.	positive and negative for population &	human health and climate fa	ctors and not significant for the remainder of the SEA topics.

Abstraction and Flow Regulation

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: use alternative source/relocate abstraction	1
SEA topic	A. SEA Objective - to what extent will the RBMP	8. Asssessment Citeria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodwersity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species 	Provide effective protection of protected areas' (e.g. SACA, SPAe, SSGs) defined under the VHEO' Provide effective protection of designated stats? Contribute ULX (indexestin Action Plan Objectives? Eugeod delivery of biodwarshr stategies? Reduce impacts by alian papeloid?	Postive short-term effect at site where existing abstraction is moved/reduced, but potentially a negative short-term effect at site where abstraction is relocated	neg./pos.	Mēgation would require study of impact on where abstraction is relocated
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Small postive short-term effect at site where existing abstraction is mored/reduced, but also potentially negative short-term effect at site where abstraction is relocated	neg./pcs.	Meigstion would require study of impact on where abstraction is relocated
Water	3. Prevent detenoration of the status of weter bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, joint source pollution, diffue securce pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffue pollution? Prevent the physical deterioration of water bodies? Promote efficient and sustainable use of water?	Small positive short-term effect at site where existing abstraction is more/direduced, but also potentially negative short-term effect at site where abstraction is relocated	neg./pos.	Mitigation would require study of impact on where abstraction is relocated
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustituisable food menagement? Contribute to the mitigation of floods and december 2000 and the environment of the effects of circuits change? Address the potential impacts of circuits change on biointersity? Address the potential impacts of circuits change on homan use of water (e.g. water change on homan use of water (e.g. water prieties, abirtaction, recreational user)?	Small postive short-term effect at site where existing abstraction is more/direduced, but also potentially negative short-term effect at alse where abstraction is relocated	neg /pos.	Miligation would require study of impact on where abstraction is relocated. Have may have an overall negative impact due to energy consumption (e.g. increased pumping and operational requirements)
15 X.	5: Protect and, where appropriate,	Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	Small negative short-term effect		
Cultural heritage	enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctivences?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WAVTW's & drainage)?	Minor negative short-term effect as some existing infrastructure may be redundant as a result of change	neg S	Mitigation would require defailed optioneering to optimise existing water infrastructure
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arosion? Improve degraded sites? Protect agricultural land? Safeguard soil qualify, quarify and function? Contribute to reducing levels of brownfold, derelict and contaminated land in plan area?	No significant effect	NS	
Summary: (Senerally the effects of this measure are	negative on material assets, not signific the water body benefit	cant on cultural heritage, landscape an s from the measure (current) or is the ro	d soils, but potentially positiv sceiving water body.	e or negative on all other SEA topics depending on whether

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: improve water efficiency (e.g. abstraction matches need) or reduce need	2
SEA topic	A, SEA Objective - to what extent will the REMP $_{\rm tot}$	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodwersity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WED? Provide effective protection of designated sRss? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level.
		Reduce impacts by alien species?	No significant effect		
Population & human health	2. Protect human health in undertaking water management activities	Maintain and emance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken whole impacting on the current uppy/demand balance and existing entitlements to use water. This will need to be checked at the local level.
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, joint source publicin, diffure source, publicin, abitrartion and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicin? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without importing on the corrent supply/demand balance and exiting entitiments to use water. This will need to be checked at the local level.
Climate factors	 Contribute to mitigation of and adaptation to, climate change 	Promote sustainable field management? Controllate the minipation of floods and droughts? Reduce vulneships of communities and the anotoment to the effects of climate charge in humans of the drought Address the potential impacts of climate charge on humans use of wake (e.g. waker yields, abstraction, recreational uses)? Contribute to reducing generohuses gas emissions from water management accheries?	Positive short term effect	pos S	
Cultural	5. Protect and, where appropriate, enhance the character, diversity and encode qualities of cultural bettage in the	Encourage improved energy efficiency? Protect and, where appropriate, enhance or materia biotoxic aminometer feature?	No significant effect	NS	
Landscape	RBD 6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance mational desired landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or entore landscape value and local intertextures.	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infractructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWS & drainage)?	Positive short-term effect and would potentially delay the requirement for new infrastructure	p06;S	
Sol	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arcsion? Improve degraded stea? Protect apricultural land? Safeguard sod quality, quantity and function? Contribute to reducing lavels of brownfeld, derebict and contaminated land in plan area?	No significant offect	NS	

1 S	Pressure	Sector	Option	Measure	Measure No.		
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: reduce leakage	3		
SEA topic	A. SEA Objective . to what extent will the RDMP	B. Assessment Criteria - to what extent with the RDMP	C. Nature of the effect discluding positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milipation, uncertainty		
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversite, particulary protected areas and protected species	Provide effective protection of brotected areas' (e.g. SACs, SPAs, SSR); defined under the VKEO Provide effective protection of designated sBes? Contribute to UK Biodhwestly Action Plan Objectives? Buspoot delivery of biodwestly strategies? Reduce invacits by alian securics?	Positive short-term effect	pos S			
S. 8		Maintain and enhance access to and use					
Population & human health	2. Protect human health in undertaking water management activities	of the water emiconment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pos.S	Cost to companies		
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological continent of water bodies term for example, point source pollution, diffure source pollution, abstraction and flow regulation, and morphological interventions? Prevent the determination of water bodies from point source and diffuse pollution? Prevent the physical determination of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S			
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload mmagement? Contribute to the mingaion of floads and dougsts? Address the performance in the second charge? Address the performal impacts of climate charge on biodness(s)? Address the performal impacts of climate charge on biodness(s)? Address the performal impacts of climate charge on biodness(s)? Address the performal impacts of climate charge on biodness(s)? Contribute to reducing genecharge emissions from water management societies?	Positive short-term effect No significant effect	neg./pos.	Mitigation may be required during construction activities to reduce leaking reduction - greenhouse gas emissions and higher energy consumption. These are not however considered to be significant.		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RRD	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS			
Landscape	5. Protect and, where appropriate, enhance the character, directly and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and outliny? Protect and, where appropriate, enhance or restore landscape value and local distructiveness?	No significant effect	NS			
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Positive short-term effect	pos.S			
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sitee? Protect agricultural land? Safeguard sol quality, quantity and <u>konction</u> ? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS			
Sun	Summary: Generally the effects of this measure will be positive on biodiversity, population & human health, water,climate factors and material assets, and not significant on the remainder of the SEA topics.						
	Pressure	Sector	Option	Measure	Measure No.		
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	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: control pattern/bining of abstraction (hands off flow/utilisation of storage(new/existing))	4		
SEA topic	A. SEA Objective - to what extent will the REMP	B. Asssessment Criteria - to what extent with the RDMP	C. Nature of the effect (including positive or negative shorts, mediums, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty		
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of printected areas' (e.g. SACs, SPAs, SSSIs) defined under the WDP Provide effective protection of designated stbs? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity stategies?	Positive short-term effect	pos.S :	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level.		
Population & human health	2. Protect human health in undertaking water management activities	Reduke impacts by alien species? Maritain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water asbitraction? Protect dinking water protected areas and water abstraction?	No significant effect Positive short-term effect	por.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level.		
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source publicher, diffuse source polition, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicien? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S			
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload mmagement? Comhote to the immigation of thoods and droughts? Reduce vulneability of communities and the encomment to the effects of climate change? Address the potential impacts of climate change on biodimentary? Address the potential impacts of climate change on biomatic of climate climate of climate	Postive short term effect	neg./pos.	Migation may be required during construction activities to reduce leakge reduction - greenhouse gas emissions and higher energy consumption. These are not however considered to be significant.		
		emissions from water management activities? Encourage improved energy efficiency?	No significant effect				
Cultural heritage	 Frotect and, where appropriate, enhance the character, diversity and spocial qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS			
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS			
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Minor short-term negative impact, as may require new water supply and flood defence infrastructure	neg S	Design pattern and tirring of abstraction to mitigate impacts on water management infrastructure		
Soil	8 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce encision? Improve degraded sites? Protect agricultural land? Safeguard soli quality, quantity and function? Contribute to reducing levels of brownfield, derelist and confaminated land in plan area?	No significant effect	NS			

1 () ()	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: reduce risk of fish mortality in intakes or screens	5
SEA topic	& SEA Objective - to what extent will the RiskIP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protection areas' (e.g. SAPA, SBPA, SBSt) defined under the VMED? Provide effective protection of designated effective protection of designated effective status of the same busyon delivery of biodiversity stategies? Reduce encider	Positive short-term effect	pos.S	
Population & human health	2. Protect human health in underfaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shallfah protected waters?	No significant effect	NS	
Water	 Prevent detension of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies them for example, joint source patholon, diffuse source patholon, abstraction and flow regulation, and maphological interventions? Prevent the deterioration of water bodies from point source and diffuse patholino? Prevent the physical deterioration of water bodies ? Promote efficient and sutamable use of water?	No significant effect	NS	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable food management? Combute to the miligation of floods and droughts? Afface vulneability of communities and the unformment by the sustainability of communities of the sustainability change on biodirectly? Address the potential impacts of climate change on human use of vulne (o, sustainability change on human use of vulne (o, sustainability) Contribute to reducing gesenhouse gas emissions form water management Encourses emissions form water formangement Encourses emissions form water subalance incourses emissions form water management	No significant effect	NS	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	Minor effect would be the regular maintenance costs
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce exolon? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	
	Summar	y: Generally the effects of this measure	will be positive on biodiversity, but not	significant on the remainder	of the SEA topics.

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: provide appropriate baseline flow regime downstream of impoundment	6
SEA topic	A. SEA Objective - to what extent will the REMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. BACs; BPAs; SSSIs) defined under the WI D? Provide effective protection of designated stass? Contribute to UK Elodiversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without mysciring on the current supply/demand balance and exiting entitlements to use water. This will need to be checked at the local level.
	()	Reduce impacts by alien species?	No significant effect		
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shellish protected waters? Protect drinking water protected areas and water abstraction?	Positive short term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level.
Water	3. Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water budies from for example point source publicline, diffuse source pollution, betriarction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicin? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Posible short-term effect	pos.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Premote sustainable field mena-general? Contribute the meingation of floods and doughts? Reduce vulnerability of communities and the annonement to the effects of climate change? Address the potential impacts of climate change on human use of walks (e.g. vulne change on human use diwalks (e.g. vulne change on human use diwalks (e.g. vulne change on human use diwalks (e.g. vulne priedis, abstraction, necesational uses)?	Postive short-term effect	pos S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Minor short-term negative impact, as may reduce reservoir yield	neg S	Operate reservoir to optimise releases and storage
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce encion? Improve degraded site? Protect agricultural land? Safeguard soll quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminatel land in plan area?	No significant effect	NS	

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: provide higher flows as appropriate to enable fish migration downstream of impoundment	7
SEA topic	A. SEA Objective - to what extent will the PBMP	B. Asssessment Criteria - to what extent with the RDMP	C. Nature of the effect (including positive or negative shorts, mediums, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WTD? Provide effective protection of designated sites? Contribute to LHK Biodiversity Action Plan objectives?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entillements to use water. This will need to be checked at the local level.
Population & human health	2. Protect human health in undertaking water management activities	Reduce impacts by alim species? Maritain and enhance access to and use of the water environment? Increase tourism and/or improve National Packs Protect bathing and shallfish protected waters? Protect dinking water protected areas and water abstraction?	No significant effect Positive short-term effect	por.S	It is important to note that the positive effects are based on the assumption that the CAR centrols on abstraction can be undertaken wholen impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level.
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source publicher, diffuse source polition, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicien? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable flood menagement? Contribute to the mingiation of floods and doughts? Reduce vulneability of communities and the enroament to the effects of climate change? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, receasitional uses)?	Postive short-term effect	por S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Mnor short-term negative impact, as may reduce reservoir yield	neg S	Operate reservoir to optimise releases and storage
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce ension? Improve degraded sites? Protect agricultural land? Safeguard soli quality, quantity and function? Contribute to reducing levels of brownfield, deteilst and contaminated land in plan area?	No significant effect	NS	

·	r i trossarte	Sector	(Option ·	nteasure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: provide higher flows as appropriate to maintain/improve habitat downstream of impoundment	8
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RDMP	C. Nature of the effect (including positive or negative shorts, mediums, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of printected areas' (e.g. SACs, SPAs, SSSIs) defined under the WDP Provide effective protection of designated stbs? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity stategies?	Positive short-term effect	pos.S.:	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entillements to use water. This will need to be checked at the local level.
Population & human health	2. Protect human health in undertaking water management activities	Reduke impacts by alien species? Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Protect tashing and shattish protected waters? Protect dinking water protected areas and water abstraction?	No significant effect Positive short-term effect	por S	It is important to note that the positive effects are based on the assumption that the CAR centrols on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level.
Water	3. Prevent deterioration of the status of water bodys. Enhance, water body takus (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source publicher, diffuse source polition, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicien? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pos S	
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable food menagement? Controlled to the minipation of filosof and <u>doughts3</u> Reduce vulnerability of communities and the encountent to the effects of climate <u>change</u> ? Address the potential impacts of climate <u>change</u> on hiominarus of wide (e.g. wider yields, abstraction, necessidional use)?	Positive short-term effect	por S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW/s & drainage)?	Mnor short-term negative impact, as may reduce reservoir yield	neg S	Operate reservoir to optimise releases and storage
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce encision? Improve degraded sites? Protect agricultural land? Safeguard soli quality, quantity and <u>Sanction</u> ? Contribute to reducing levels of brownfield, derelist and contaminated land in plan area?	No significant effect	NS	

21	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: provide for fish access between reservoir and tributaries	9
SEA topic	A, SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSS3) defined under the WFO? Provide effective protection of designated 5055° Contribute to UK Eloidversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	pos.S -	
-		Reduce impacts by alien species?	No significant effect		-
Population & human health	2. Protect human health in undertaking water management activities	Mantain and embine access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shattlish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	
Water	 Prevent detenoration of the status of water bedies. Enhance, water budy status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water blocks from for example, point accrea publish, diffuse source publicion, abitration and diver regulation, and morphological interventions? Prevent the disterioration of water bodies from point source and diffuse publish? Prevent the physical deterioration of water bodies ? Promote diffuent and sustainable use of water?	No significant effect	NŜ	
Climate factors	 Contribute to mitigation of, and adaptation to, climite change 	Promote sustainable fload management? Contribute to the immigration of floads and douglets? Address the persisting of commonlies and the androment. Image to the soft balance of the soft of control change on buildness of the soft change on buildness()? Address the persisting impacts of climate change on human use of water (or under change of the soft (or under change).	No significant effect	NS	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance mational designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guility? Protect and, where appropriate, enhance or restore landscape value and local distructiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quartity and function? Contribute to reducing lavels of brownfield, derelist and contaminated land in plan area?	No significant effect	NS	
	Summary: Generally th	e effects of this measure will be positiv	e on biodiversity, population & human l	realth and not significant on t	he remainder of the SEA topics

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: reduce impact on DO levels downsteam of impoundment	10
SEA topic	A: SEA Objective - to what extent will the RitidP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protection areas' (e.g. 8x0c, 89k8, 8854) self-ind under the VKDP Provide effective protection of designated st#82° Contributie to UK Biodiversity Action Plan objectives? Busport delivery of biodiversity stategies?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken wholin impacting on the current uppylyfdemaid balance and existing entitlements to use water. This will need to be checked at the local level, Further, midgalion may be required to ensure that no significant environmental effects occur in the reservoir if designated.
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shellfish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken whole importing on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level, Further, mitigation may be required to ensure that no significant environmental effects occur in the reservoir if designated.
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffue source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	
Climate factore	 Contribute to metgation of, and adaptation to, climate change 	Promote sustainable field management? Controlute to the milipation of floods and <u>discuptes</u> ? Reduce vulneability of communities and the environment to the effects of climate <u>change</u> ? Address the potential impacts of climate change on human use of water (e.g., water yields, abatecton, recreational uses)?	Posive shot-term effect	por S	
13 Y		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Minor short-term negative impact, as may reduce reservoir yield	neg S	Operate reservoir to optimise releases and storage
Sol	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve degraded sites? Protect agricoltural land? Safeguard tool quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: reduce impact on temperature conditions downstream of impoundment	11
SEA topic	A. SEA Objective - to what extent will the REMP $_{\rm ext}$	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of "protected areas" (e.g. SACs, SPAs, SESIs) defined under the WED? Provide effective protection of designated state? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies? Reverse Immarks to allem species?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken whole impacting on the current uppy/domand balance and exacting entitlements to use weller. This will need to be checked at the local level, "further, mitigation may be required to ensure that no significant environmental effects occur in the meaning the second
Population & human health	2. Protect human health in undertaking water management activities	Mantain and enhance access to and use of the water environment? Increase tourism and/or improve National Partset bathing and shallish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pon.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken wholen importing on the current uppy/domind balance and assiding entitlements to use welter. This will need to be checked at the local likelit, Further, midpation may be required to ensure that no significant environmental effects occur in the reservoir if designated.
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as oppropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source publiche, diffue source pollution, bottraction and flow regulation, and morphological interventions? Prevent the deterimination of water bodies from point source and diffuse publicion? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pes.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Dremsgeneral methylation of the set of	Postive short-term effect	pos S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood delences, ports & harbours, WWTWs & drainage)?	Minor short-term negative impact, as may reduce reservoir yield	neg S	Operate reservoir to optimise releases and storage
Soil	8 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ensuion? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: appropriate management of rate and range of artificial drawdown	12
SEA topic	A, SEA Objective - to what extent will the REMP +++	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of "protected areas" (e.g. BACs, BPAs, Stollay defined under the WED? Provide effective protection of designated able? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies? Provide strates to adjust strategies?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken whole impacting on the corrent supply/demand balance and existing entitlements to use welter. This will need to be checked at the local level, Further, mitigation may be required to ensure that no significant environmental effects occur in the meaning interaction of the significant environmental effects occur in the meaning interaction.
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Protect bathing and shellfish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertiken wholen impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level, Further, mitigation may be required to ensure that no significant environmental effects occur in the reservoir if designated.
Water	3. Prevent deterioration of the status of water bodys. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source publiche, diffuse source pollution, abstraction and thor regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse publicion? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	poi.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Permote an utrainable field immegament? To admitta to the immigration of fields and <u>divolute?</u> Pedice vulnerability of communities and the anivornanet to the effects of climate <u>changen</u> Address the potential impacts of climate <u>change</u> on human use of livelar (e.g., wills- change on human use divolar (e.g., wills- ties), abstraction, necessitional use§7	Postive short-term effect	pos S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood delences, ports & harbours, WWTWs & drainage)?	Minor short-term negative impact, as may reduce reservoir yield	neg S	Operate reservoir to optimise releases and storage
Soil	8 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	

	Fressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: appropriate management of seasonal variation of water level changes behind the impoundment	13
SEA topic	A, SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RDMP	C, Nature of the effect (including positive or negative shorts, medium, or long-term effect, permanency of effect, scale of effect and cross-cutling where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of printected areas' (e.g. GACs, SPAE, SSIs) defined under the WFD? Provide effective protection of designated obs? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies? Biological agencies	Positive short-term effect	pos S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken wholen impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level, Further, mitigation may be required to ensure that no significant environmental effects occur in the reservoir designated.
Population & human health	2. Protect human health in underfailing water management activities	Maintain naid enhance access to and use of the water encontrent? Increase tourism and/or improve National Parks Protect bahing and shallfaith protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken whole importing on the coment copylofemand balance and exacting entitlements to use welfer. The will need to be checked at the local level, "three, mitigation may be required to ensure that no significant environment effects occur in the reservoil of designated.
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water budges from for example, point source publichon, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodges from point source and diffuse publicin?. Prevent the physical deterioration of water bodges? Promote efficient and sustainable use of water?	Posible short-term effect	905.Š	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable flood menagement? Contribute to the mingiation of floods and doughts? Reduce valuebablity of communities and the enroament to the effects of climate change? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity?	Posive short-term effect	pot.S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Mnor short-term negative impact, as may reduce reservoir yield	neg S	Operate reservoir to optimise releases and storage
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce encision? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelist and contaminated land in plan area?	No significant effect	NS	

(Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	CAR control abstraction: appropriate baseline flow regime downstream of impoundment	14
SEA topic	A. SEA Objective - to what extent will the REMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, miligation, uncertainly
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. BACs, GPAs, Stability GPA Provide effective protection of designated above Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies? Provide unsuch to alien species?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current uppy/demaid balance and existing entitlements to use wider. This will need to be checked at the local level. Further, mitigation may be required to ensure that no significant environmental effects occur in the maximum level.
Population & human health	2. Protect human health in undertaking water management activities	Mantain and enhance access to and use of the waler environment? Increase tourism and/or improve National Parks Protect bathing and shellfsh protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertiken without impacting on the current cupyly/demaid balance and existing entitlements to use welter. This will need to be checked at the local level: Further, mitigation may be required to ensure that no significant environmental effects occur in the reservoir if designated.
Water	3. Prevent deterioration of the status of water budies. Enhance, water budy status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies form for example, point source publich, office source pollution, abstraction and thor regulation, and morphological interventions? Prevent the detoristant of water bodies from point surve and diffuse publicion? Prement the physical deteoration of water bodies ? Promet efficient and sustainable use of water?	Positive short-term effect	pos.S	
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Permote autainable field management? Candinate ta the initiation of fields and disciple? Reduce vulnerability of communities and the aniversment to the effects of climate change? Address the potential impacts of climate change on bundressity? Address the potential impacts of climate change on bundressity?	Postive short-term effect	pos S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance mational designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Minor short-term negative impact, as may reduce reservoir yield	neg S	Operate reservoir to optimise releases and storage
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan	No significant effect	NS	

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Electricity generation (regulatory)	Option 2: RBMP measures	CAR 2005: SEPA controls on licensed hydropower schemes	15
SEA topic	A. SEA Objective - to what extent will the RitiMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flors & fauna	 Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species 	Provide effective protection of protection areas' (e.g. SAPA, SBPA, SBPA; under the WED?) Provide effective protection of designated after 27 Contribute to UK Biodreventy Action Plan Objectives? Busport delivery of biodreventy strategies? Reduce investite values accise?	Positive short-term effect	pot S	
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parket Protect bathing and shallfish protected waters? Protect dinking water protected areas and water abstraction?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the SEPA controls on it.censed hydropower schemes can be undertaken without impacting on the corrent supply/demand baince and existing entitlements to use water. This will need to be checked at the local level.
Water	 Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water budges from for example, point source pollution, diffue ecource pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodges from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sutatinable use of water?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the SEPA controls on licenced hydrogower schemes can be underskiew hydrou impacting on the current supply/demand balance, existing entitlements to use water and good ecological status. This will need to be checked at the local level.
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable food monagement? Contribute to the miligation of floods and doughts? Heade a withenability of communities and the enronment to the officies of climate change on biothereally repeats of address the potential impacts of climate change on biothereally? Address the potential impacts of climate change on homan use of house fog weekey yields, abstraction, recreational uses? Contribute to reducing generhouse gas emissions form water management former anothereal and the second	Positive short-term effect	por S	Assumes that the controls are targeted to contribute to mitigation and adapation to climate change
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated handscape area? Protect and, where appropriate, enhance or restore landscape character and guility? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Short-term negative effect	neg S	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve degraded sites? Protect agricoltural land? Safeguard sol quality, quantity and succion? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS.	
Summary: note that the	Generally the effects of this measure w positive effects are based on the assure	ill be positive on biodiversity, population option that controls can be undertaken v	n & human health, water and climate fa vithout impacting on the current supply	ctors, and not significant on t demand balance, existing er	the remainder of the SEA topics. However, it is important to utilements to use water and good ecological status/potential

1 S	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Electricity generation (regulatory)	Option 2: RBMP measures	CAR 2005: Fishery (Electricity) Committee advice- fisheries protection via SEPA licences	16
SEA topic	A. SEA Objective - to what extent will the REMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Eddence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SAO; SPAs, SISS) defined under the WPD? Provide effective protection of designated attes? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies? Reinger immadia by allem species?	Positive short-term effect	pox S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use out the water environment? Increase tourism and/or improve National Period bathing and shallfulh protected waters? Protect divising water protected areas and water waterschaft. Protect water waterschaft water waterschaft access and water waterschaft access and water water decoded.	Positive short-term effect Positive and negative short-term effects depending on sector	por S	Misgate potential impacts through the IA
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	URBIT TREAS operations URBIT TREAS on the ecological condition of weler bodies from for example point source politicino, diffuse source politicino, abstraction and flow regulation, and mapphological interventions? Prevent the determination of water bodies 7 Prevent the physical determination of water Defers 7 Promote efficient and sutrainable use of water?	No significant effect	NS	
Climate factors	 Contribute to mitigation of, and adsptation to, climate change 	<u>Bornota sustainable finod menagement?</u> <u>Contribute to the mellipation of finods and discopitas?</u> <u>Beduce vulnerablety of communities and the environment to the effects of climate change?</u> <u>Address the potential impacts of climate change on biodiversity?</u> <u>Address the optential impacts of climate change on biodiversity?</u> <u>Address the optential impacts of climate change on biodiversity?</u> <u>Contribute to reducing generitous gaseministics for water management activities?</u> <u>Encourspin impacts de instruct activities?</u> <u>Encourspin impacts de instruct activities?</u> <u>Encourspin impacts de instruct activities?</u>	No significant effect	NS	
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and <u>quality?</u> Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW9 & drainage)?	No significant effect	NS	
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce enciton? Improve degraded sites? Protect agricultural land? Safeguard son quality, quantity and function? Controbute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
	Summary: Generally the	effects of this measure will be positive e	in biodiversity and population & humar	1 health, and not significant or	n the remainder of the SEA topics.

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Water supply activities (regulatory)	Option 2: RBMP measures	CAR 2005: levels of abstraction, management of dams and efficient use of water	17
SEA topic	A. SEA Objective - to what extent will the REMP+++	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas* (e.g. SACs, SPAs, SSSIs) defined under the WED? Provide effective protection of designated #865° Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demaid balance and exiting entitlements to use water. This will need to be checked at the local level.
		Reduce impacts by alien species7	No significant effect		
Population & human health	2. Protect human health in undertaking water management activities	Multifaith and enhance access to and see of the water enhomement? Increase tourism and/or improve National Protect bathing and shallish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR control on abstraction can be undertaken which impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level.
Water	3. Prevent detenioration of the status of water budies. Enhance, water budy status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source publiche, diffue source polition, battraction and flow regulation, and morphological interventions? Prevent the deterimination of water bodies from point source and diffuse publicin? Prevent the physical deterimination of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote an ustainable field management? To a construct the meningsion of foots and <u>divoy0452</u> Construct the test of communities and the advectory of communities and change on bundenessly? Address the potential impacts of climate change on human use of water (e.g., water yelds, abstraction, necreational uses)?	Postive short-term effect	pos S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Minor short-term negative impact, as may reduce reservoir yield	neg S	Operate reservoir to optimise releases and storage
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ecosion? Improve degraded inte? Protect agricultural land? Safeguard soli quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	Agriculture imigation (regulatory)	Option 2: RBMP measures	CAR 2005: SEPA imposes controls on volume of water that can be abstracted and the time over which it can be abstracted, through CAR	19
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Citteria - to what extent with the RBMP	C, Nature of the effect (including positive or negative shorts, mediums, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WD? Provide effective protection of designated ubs? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked at the local level.
Population & human health	2. Protect human health in undertaking water management activities	Reduce impacts by alim species? Maintain and enhance access to and use of the water enriconment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction?	No significant effect Positive short-term effect	por S	It is important to note that the positive effects are based on the assumption that the CAR controls on abstruction can be undertaken without impacting on the current supply/demand balance and exiting entitlements to use water. This will need to be checked at the local level.
Water	 Prevent deterioration of the status of where bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source polition, offices economic and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse polition? Prevent the physical deterioration of water bodies? Promote efficient and subtainable use of water?	Positive short-term effect	pos S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable food mmagement? Controbute to the mingation of thoods and doughts? Reduce vulneability of communities and the encourse in to the effects of climate change? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity?	Positive shon-term effect	por S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Minor short-term negative impact, as may require now water supply and flood defence infrastructure	neg S	Design pattern and tirring of abstraction to mitigate impacts on water management infrastructure
Soli	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural lind? Safeguard soli quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Summary: Howeve	Generally the effects of this measure wil a, it is important to note that the positive	I be positive on biodiversity, population effects are based on the assumption th	& human health, climate factors and v at the CAR controls on abstraction can	vater, negative on material as be undertaken without impac	sets and not significant on the remainder of the SEA topics. ting on the current supply/demand balance and existing

	Pressure	Sector	Option	Measure	Measure No.
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	Revision of Catchment Abstraction Management Strategies	20
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, mitigation, uncertainty
Biodiversity, flors & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of protection areas' (e.g. sACs, SPAs, SSSs) defined under the WEO' Provide effective protection of designated <u>SBss</u> ? Contribute to UK Biodiversity Action Plan objectives? Eduport delivers of biodiversity stategies?	Positive short-term effect	por S	It is important to note that the positive effects are based on the assumption that controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked
Population & human health	2. Protect human health in undertaking water management activities	Mantain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water asbitraction?	Positive short-term effect	pos.S	It is important to note that the positive effects are based on the assumption that controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffue cource pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short term effect	pos.S	
Climate factore	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable field mnanagement? Controllet to the milipation of floods and <u>discipital</u> ? Address the polocital of polocita of climate change? Address the polocital impacts of climate change on biodiversity? Address the polocital impacts of climate change on homan use of water (og, water vields, abintaction, nerendinal use)?	Postive chort term effect	por.S	
		Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect		
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Minor short-term negative impact, as may require new water supply and flood defence infrastructure	neg S	Design pattern and tirming of abstraction to mitigate impacts on water management infrastructure
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricoltural land? Safeguard tool quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	
Summary: 0	Senerally the effects of this measure will nt to note that the positive effects are ba	be positive on biodiversity, population sed on the assumption that controls on a	å human health, climate factors and wa abstraction can be undertaken without i	iter, negative on material ass mpacting on the current supp	sets and not significant on the remainder of the SEA topics. It dy/demand balance and existing entitlements to use water.

1 S	Pressure	Sector	Option	Measure	Measure No.		
	Abstraction and flow regulation	All sectors	Option 2: RBMP measures	Restoring Sustainable Abstraction Programme	21		
SEA topic	A. SEA Objective - to what extent will the RBMP	D. Assessment Criteria - to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty		
Biodwersity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species 	Provide effective protection of brotected areas' (e.g. SACs, SPAR, SSG1) defined under the WTD? Provide effective protection of designated obs? Contribute to UK Biodiversity Action Plan Discretes? Support delivery of biodiversity strategies? Reduce investity attangescies?	Postive short-term effect	pos S	It is important to note that the positive effects are based on the assumption that controls on abstraction can be undertaken without importing on the current supply/demand balance and existing entitlements to use water. This will need to be checked		
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect drinking water protected areas and water abstraction?	Positive short-term effect	por S	It is important to note that the positive effects are based on the assumption that controls on abstraction can be undertaken without impacting on the current supply/demand balance and existing entitlements to use water. This will need to be checked		
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate	Reduce the impacts on the ecological condition of water bodies from for example, point source position, affitte source pallution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and affittes pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	por S			
Climate factors	4. Contribute to metgation of, and adaptation to, climate change	Permote sustainable food management? Controlled to the migration of Boods and <u>monophr3</u> Reduce vulneability of communities and the environment to the effects of climate <u>change</u> ? Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, nereakitania use)?	Positive short-term effect	pos.S			
Cultural	5. Protect and, where appropriate, enhance the character, diversity and	Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency? Protect and, where appropriate, enhance	No significant effect				
heritage	special qualities of cultural heritage in the RBD	or restore historic environment features?	No significant effect	NS			
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS			
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Minor short-term negative impact, as may require new water supply and flood defence infrastructure	nog S	Design pattern and timing of abstraction to mitigate impacts on water management infrastructure		
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce erosion? Improve degraded sites? Protect aprovultural land? Safeguard sol quality, quantity and sunction? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS			
Summary: G	Summary: Generally the effects of this measure will be positive on blodiversity, population & human health, climate factors and water, negative on material assets and not significant on the remainder of the SEA topics. It is innertant to note that the eas						

Changes to Morphology

	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	All sectors	Option 2: RBMP measures	Improve modified habitat: removal of barriers or provision of mechanisms to enable fish migration	8
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodwersity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WFO Provide effective protection of designated sRes? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	pos.S	
Population & human health	2. Protect human health in undertaking water management activities	Reduce impacts by alien species? Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parts Protect dinking water protected areas and water adstruction? Protect bathing and shellfish protected waters?	No significant effect Positive short-term effect	per S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, offices escore pollution, abstraction and flow regulation, and morphological interventions? Prevent the disterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and subtainable use of water?	Positive short-term effect	por S	
Climate	4. Contribute to mitigation of, and	Promote sustainable flood management? Controlute to the mitigation of floods and droughts? Reduce submerability of communities and the environment to the effects of climate change? Address the potential impacts of climate change on biodressity?	No significant effect Positive short-term effect		
factora	adaptation to, climate change	Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, recreational uses)? Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved energy efficiency?	No significant effect	jus a	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Negative short-term effect if measure reduces cultural hentage value of structure providing barrier	neg S	Impact can be mitigated by appropriate choice and design of measure to overcome barrier
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Small positive short-term effect from certain measures (e.g. removal of weir and restoration of natural flow regime) but change to landscape may be considered a short-term negative effect by other groups	neg./pos.	Mbgation would require study of site specific impacts
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Negative short-term effect if barrier removal adversely effects water infrastructure (e.g. weir for water supply abstraction)	neg.S	Mitigation would require study of site specific impacts
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce arcsion? Improve degraded stee? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing lavels of brownfold, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Generally the effects of this measure are	e positive for biodiversity, population & I	ruman health, water and climate factor	s, negative for cultural herita	ge and material assets, positive and negative for landscape

1	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	All sectors	Option 2: RBMP measures	Improve modified habitat: removal of engineering structures	2
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of protection areas' (e.g. SACs, SPAe, SSSIs) defined under the WEO' Provide effective protection of designated SB&2' Contribute to LK BiodressTA action Plan objectives? Europort delivery of biodxensity stategies? Rodrug encoder to a blan service?	Positive short-term effect	por S	
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parket Protect bathing and shellfish protected waters? Protect dinking water protected areas and water abstraction?	Postive short-term effect	pos.S	
Water	 Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water budies timo for example, point source pollution, diffue ecouce pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffue pollution? Prevent the physical deterioration of water bodies ? Promote difficient and sustainable use of water?	Positive short-term effect	pos.3	
Climate factors	 Contribute to mitigation of, and adaptision to, climate change 	Promote sustainable food management? Contribute to the imigation of floods and doughts? Header withreability of communities and the universe in the summarial state of the header with exclusion of the summarial change on biodremstry? Address the potential impacts of climate change on human use of wurder (e.g. wufer yields, abstraction, recentiformi use)? Contribute to reducing generations entrologies and an exclusion entrologies and an exclusion Encourse memory disperse discence?	Negative abort-term effect on flood nisk depanding on the nature of the etructure No significant effect Positive short-term effect No significant effect	neg /pos.	Impact can be mitigated by appropriate choice and design of measure
Cultural heritage	5: Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Negative short-term effect if structure is of cultural heritage value	neg B	Impact can be mitigated by appropriate choice and design of measure to overcome barrier
Landscape	5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and outliny? Protect and, where appropriate, enhance or restore landscape value and local distructiveness?	Positive short-term effect from certain measures (e.g. removal of weir and restoration of natural flow regime) but change to landscape may be considered a short-term negative effect by other groups	neg./pos.	Mtigation would require study of site specific impacts
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Negative short-term effect of structure removal may adversely effects water infrastructure	neg S	Mitigation would require study of site specific impacts
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Summa	ry: Generally the effects of this measure	are positive for biodiversity and water, I	negative for cultural heritage and mate andscape and not significant for soils.	vial assets, positive and nega	itive for population & human health, climate factors and

1 C	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	All sectors	Option 2: RBMP measures	Improve modified habitat: improvements to condition of channel/bed and/or banks/shoreline	3
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect discluding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Eddence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of "protected arras' (e.g. 5405, 51476, 5553) odefined under the VMD? Provide effective protection of designated obs? Contribute to LK Riodhevsth Action Plan objectives? Busport delivery of Diodhevsth stategies? Revise emories?	Postre short-term effect	por S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water enrocoment? Increase tourism and/or improve National Parks Increase coursers and/or improve National Increase coursers and/or and/or Protect durking water protected areas and water adstruction? Protect bathing and shellish protected waters?	Positive short-term effect	pon S	
		Prevent the deterioration of water bodies.	No significant effect		
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	from point source and difuse pollution? Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, difuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of	Positive short-term effect	por S	
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Demote sustainable food management? Contribute to the minipation of floods and disophts9 Redices vulnerability of communities and the environment to the effects of climate change on human sus of weats of climate change on human sus of weats (e.g. suster change on human suster) Contribute to reducing generatous genera- activities?	No significant effect	NS	Mnor positive effects for flooding, but this will depend on the design of the measure
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, detectly and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated tandscape seas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	Positive short-term effect	pos S	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	Measure should not impact on existing infrastructure
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve degraded sites? Protect agricultural land? Safeguard soli quality, quantity and function? Contribute to reducing levels of brownfield,	Positive short-term effect	pos.S	
		deretict and contaminated land in plan area?	No significant effect		
	Summary: Generally the effe	cts of this measure are positive for all n	easures but climate factors, cultural he	ritage and material assets wi	here no significant effect is expected.

11 C	Pressure	Sector	Option	Measure	Measure No.			
	Changes to morphology	All sectors	Option 2: RBMP measures	Improve modified habitat: improvements to condition of niparian zone and/or wetland habitats	å			
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect ünchiding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, milligation, uncertainty			
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. 84-05, 1974, 8501) defined under the VBO? Provide officiency protection of designated 98:52 Contribute to UK Boothersth Action Plan Discusses? Eupport delivery of biodxersity strategies? Reduce impacts by alian species?	Positive short-term effect	pot.S				
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Positive short-term effect	pos.S				
Water	 Prevent detenoration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, drive source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and drivase pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Posible short-term effect	pen.S				
Climate factors	 Contribute to mitigation of and adaptation to, climate change 	Promote sustainable field management? Contribute to the minipation of floods and droughts? Address valueshalls of communities and the envolves the potential impacts of climate charge in buddenssb? Address the potential impacts of climate charge in buddenssb? Address the potential impacts of climate charge in buddenssb? Address the potential impacts of climate charge on buddenssb? Contributes to reacting seconduces gas emissions from water management exclinets?	Positive chort term effect	pos S				
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Encourage improved energy eticlency/ Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS				
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	Positive short-term effect	pos.S				
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS				
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded ottes? Protect agricultural land? Safeguard soit quality, quantity and function? Contribute to reducing levels of brownfield,	Positive short-term effect	pos S				
		derelict and contaminated land in plan area?	No significant effect					
	Summary: Generally the effects of this measure are positive for all SEA topics other than cultural heritage and material assets where no significant effects are expected.							

1	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	All sectors	Option 2: RBMP measures	Improve modified habitat: changes to sediment management maintenance regime	5
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Criteria - to what extent with the RBMP	C. Noture of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, millipation, uncertainty
Biodwersity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WTD? Provide effective protection of designated effective protection of designated effective protection of designated believes? Support delivery of biodiversity strategies?	Positive short-term effects	por S	This assumes that change to sediment management regime is designed to improve morphological conditions. Disposal of sediment (# required) will need to be in accordance with best practice
Population & human health	2. Protect human health in undertaking water management activities	Neodoce impacts by altern species? Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect diriking water protected areas and water abstraction? Protect bathing and shellfsh protected	No significant effects Positive short-term effects for water body where maintenance regime is managed, potentially negative short term effect because of disposal of dredged material	neg./pos.	Mitigation would include appropriate disposal of removed sediment, including contaminated sediments
Water	 Prevent distanceation of the status of water bodies. Enhance, water budy status (including groundwater) to good status, as appropriate. 	waters? Reduce the impacts on the ecological condition of water bodies from for example point source publich, offstas source publiche, abstraction and flow regulation, and morphological interventions? Prevent the abstraination of water bodies ? Promote waters and subsamplications of water bodies ?	Positive short-term effect	por S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable food management? Controlsta to the immigution of floods and droughts? Redices vulneshifts of communities and the envolvement to the effects of climate change of homas of histoperatory Address the potential impacts of climate change on homas use of water (e.g. water yields, abstraction, recreational uses)? Contribute to reducing greenhouse gas emissions form water and emissions form water and	No significant effect	NS	May be minor positive effects on flooding, but as these activities Bkaly to be in a harboar, effects are not regarded as significant. May be minor negative effects on energy and greenboule gas emissions from the energy required to undertake the maritenance
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the DRN	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Positive short-term effect	pos S	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the R8D	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard soll quality, quarifity and function? Contribute to reducing levels of brownfield, derelict and confarminated land in plan area?	No significant effect if disposal of sediment/contaminated sediment is not in accordance with best practice	neg S	Mitigation would include appropriate disposal of removed sediment, including contaminated sediments
Summary:	Generally the effects of this measure ar	e positive for biodiverity, water and mat	erial assets, positive and negative for p SEA topics.	opulation & human health, n	egative for soils and not significant for the remainder of the

2 D	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	Historical engineering activities & urban development (regulatory)	Option 2: RBMP measures	CAR 2005: CAR prevent new damage to the water environment from engineering works on rivers (including maintenance regimes)	6
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Citteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainly
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WD'? Provide effective protection of designated stes? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	pos.S	
Population & human health	2. Protect human health in undertaking water management activities	Reduce impacts by alien species? Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parke Protect danking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	No significant effect	poe.S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate	Reduce the impacts on the ecological condition of water bodies to mit for example joint source polition, diffue ecological index of the second second and morphological interventions? Prevent the deterioration of water bodies from point source and diffue politicino? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?.	Positive short-term effect	pos S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable field management? Combuste to the migration of floods and disciplina? Reduca vinembility of communities and the environment to the decis of climate change? Address the patiential impacts of climate change on biodimensity? Address the patiential impacts of climate change on biodimensity? Contribute to reducing greenhouse gas Contribute to reducing greenhouse gas	No significant effect	NS	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the DDD	activities? Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distanctwereas?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Sol	8. Protect and, where appropriate, enhance the function and qualty of the sol resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard soli quality, quantity and function? Contribute to reducing levels of brownfald, detelict and contaminated land in plan area?	No significant effect	NS	
1	Summary: The effects	of this measure are positive for biodive	rity, population & human health and w	ater and not significant for the	e remainder of the SEA topics.

1	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	Agriculture (regulatory)	Option 2: RBMP measures	CAR 2005: CAR prevent new damage to the water environment by engineering works on rivers	9
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, millipation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. SACe, SPAe, SSBs) defined under the WEO? Provide effective protection of designated e865? Contribute to UK Biodhersh Action Plan objectives? Excluse encodes of biodexemity strategies?	Positive short-term effect	pos.S	
Population & human health	2. Protect human health in undertaking water management activities	Protect enhance of alm species to and use of the water enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect diniking water protected areas and water? Protect bathing and shellfah protected water?	Positive short-term effect	pon.S	
Water	 Prevent deterioration of the status of values badies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Peduce the impacts on the ecological condition of water bodies form for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterimination of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	pos.S	
Climate factors	 Contribute to metgation of, and adaptation to, climate change 	Promote sustainable food management? Controlute to the immigiation of floods and droughts? Redice submeships of communities and the encomment to the effects of climate change on biodiversity? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity? Controlute to reading exercisions generations from water management Encourse activities?	No significant effect	NS	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distributiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the sol resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sof quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	No significant effect	NS	
	Summary: The effect	s of this measure are positive for biodive	crity, population & human health and w	ater and not significant for the	e remainder of the SEA topics.

2 D	Pressure	Sector	Option	Measure	Measure No.			
	Changes to morphology	Forestry (regulatory)	Option 2: RBMP measures	CAR 2005: CAR prevent new damage to the water environment from engineering works on rivers (including maintenance regimes)	10			
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Citteria - to what extent with the RBMP	C, Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty			
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of "protected areas" (e.g. SACs, SPAs, SSSIs) defined under the VWD? Provide effective protection of designated 5859? Contribute to UK Biodiversity Action Plan obbject/twes? Support deliversity strategies?	Positive short-term effect	pos.S				
Population & human health	2. Protect human health in undertaking water management activities	Reduce impacts by alien species? Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parke Protect danking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	No significant effect	poe.S				
Water	 Prevent deterioration of the status of variable bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water budies time in the example, point source pollution, diffuse economic and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?.	Positive short-term effect	pos S				
Climate factors	 Contribute to metgation of, and adaptation to, climate change 	Promote sustainable field management? Commission for mingation of floots and <u>disophats</u> ? Redice valueshafty of communities and the environment to the effects of climate <u>change?</u> Address the potential impacts of climate <u>change on human use of water (og water</u> change on human use of water (og water change on human use of water (og water change on human use of water (og water smissions forum water management	No significant effect	NS				
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the DDD	activities? Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS				
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distanctwareas?	No significant effect	NS				
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS				
Sol	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard soli quality, quantity and function? Contribute to reducing levels of brownfald, detelict and contaminated land in plan area?	No significant effect	NS				
1	Summary: The effects of this measure are positive for biodiverity, population & human health and water and not significant for the remainder of the SEA topics.							

Invasive non-native species

1	Pressure	Sector	Option	Measure	Measure No.	
	Alien species	All sectors	Option 2: RBMP measures	Control alien species: contain to prevent spread	1	
SEA topic	A, SEA Objective - to what extent will the FBMP	D. Asssessment Criteria - to what extent with the FBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, notigation, uncertainty	
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of protected areas' (e.g. SAAC, SPAE, SSSI) defined under the WFD? Provide effective protection of designated ates? Combibilis to VC Biodhyrestly Action Plan objectives? Bosport delivery of biodhyruity strategies? Reduce impacts by alian specifies?	Positive short-term effect	pos.S		
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect	pos.S		
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of male bodies kinn for example polition, abstraction and flow regulation, and morphological interventions? Promote efficient and austainable use of water? Prevent the physical deterioration of water bodies ?	Positive short-term effect	por S		
		Prevent the detenoration of water bodies from point source and diffuse pollution?	No significant effect			
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote suttainable field menagement? Contribute to the mingation of floods and drooghts? Address the potential impacts of cimmate change? Address the potential impacts of cimite change in humans use of water (e.g. water yields, abstraction, recreational uses)? Contribute to reducing generologies gas emissions from water management activities?	No significant effect	NS		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS		
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance mitimal designited landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Positive short-term effect	pos. S		
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS		
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce ension? Improve degraded sites? Protect apricultural land? Safeguard sing quality, quantity and <u>Sinction?</u> Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	Positive short-term effect	por S		
	Summary: The effects of this measure are positive for biodiversity, population & human health, water, landscape, and soils, and not significant on the other SEA topics.					

2	Pressure	Sector	Option	Measure	Measure No.
	Alien species	All sectors	Option 2: RBMP measures	Control alien species: eradicate in situ	2
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-culturg where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (eg. 3540, SPAS, SESI) defined under the VBD? Provide effective protection of designated Biese? Combibute to UK Biochenstly Action Plan objectives? Bioport deliver of biodiventity strategies? Reduce impacts by alian papericies?	Postive and negative short term effect	neg./pos.	It is assumed that eradication programmes are specifically targeted at alien species (e.g. extercise herbicide use), and will have no consequences for indiguous species. Mitigation: consideration will need to be green to the transport and disposal of bota to mixminise any adverse impacts (e.g. avoidance of re- colonisation of species).
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect diniking water protected areas and water abstraction? Protect bathing and shellfish protected water?	Positive short-term effect	pos.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological contains of water bodies from for example, point source politicio, affinise source politicio, abstraction and flow regulation, and morphological interventions? Promote efficient and sustainable use of water? Prevent the physical deterioration of water bodies ?	Postive and negative short-term effect	neg./pos.	It is assumed that enadication programmes are specifically targeted at alien species (e.g. selection behicide use), and will have no consequences for indipations species. Mitigation consideration will need to be given to the transport and disposal of blota to minimize any adhresi impacts (e.g. avoidance of ne- colonisation of species).
		Prevent the detenoration of water bodies from point source and diffuse pollution?	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload menagement? Contribute to the minipation of floads and decogets? Reduce vulnersholds of communities and the enronment to the effects of climate change on biodiversity? Address the potential inspects of climate change on biodiversity? Address the potential inspects of climate change on biodiversity? Contribute to reducing generhouse pos- emissions from water management activities?	No significant effect	NŞ	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance mitional designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Positive short-term effect	pos.S	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW/s & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ensuin? Improve departed stee? Protect apricultural land? Safeguard soil quality, quantity and <u>function</u> ? Contribute to reducing lavels of brownfield, derelict and contaminated land in plan area?	Positive short-term effect	pos.S	
	Summary: The effects of this measure a	re positive for population & human heal	th, landscape and soils, negative and p	ositive for biodiversity and w	ater, and not significant on the other SEA topics.

1 C	Pressure	Sector	Option	Measure	Measure No.
	Alien species	All sectors	Option 2: RBMP measures	Control alien species: capture & remove	3
SEA topic	A. SEA Objective - to what extent will the RBMP	D. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective postection of protected streak (og. 34x6, SIPAs, SISSI) defined under bie WED? Provide effective protection of designated September 2016 (Singer Singer Singer Combibule to VK Biodhersith Action Plan objectives? Biogeon delivery of biodhersith schategies? Reduce Impacts by alian paperios?	Postive and negative short-term effect	neg./pos.	It is assumed that eradication programmes are specifically targeted at alien species (e.g. electrine heticide use), and will have no consequences for indeprove species. Mitigation: consideration will need to be given to the transport and disposal of bota to mimmines any adverse impacts (e.g. avoidance of re- colonisation of species).
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect balling and shellfsh protected waters?	Positive short-term effect	pos.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological confident of water bodies. Sion for example, point source politicio, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from port source and diffuse pollution? Prevent the physical deterioration of water bodies ?	Postive and negative short-term effect	neg./pos.	It is assumed that eradication programmes are specifically fargeted at alien species (e.g. selective herbicide use), and will have no consequences for indeposed species. Mingation consideration will need to be given to the transport and disposal of blota to minimize any adhrese impacts (e.g. wordance of ne- colonisation of species).
0 13		Prevent the detenoration of water bodies from point source and diffuse pollution?	No significant effect		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload management? Contribute to the miligation of floads and deceptes? Address the potential impact of climite change on bundance of climite change on bundance of climite change on human use of water (e.g. water change on human use of water (e.g. water change) of the climite change of the climite of the climite climite of the climite of the climite activities of the climite of the climite climite of the climite of the climite activities of the climite of the climite of the climite of the climite of the climite activities of the climite of the climite of the climite of the climite of the climite activities of the climite of the climite of the climite of the climite of the climite activities of the climite of the climite activities of the climite of the climite of the climite of the climite of the climite of the climite of the climite of the climite of the climite of the climite of the climite activities of the climite of the climite of the climite of the climite of the climite activities of the climite of the climite activities of the climite of the climite of the climite of the climite of the climite activities of the climite of the climite activi	No significant effect	NS	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance mitional designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Positive short-term effect	poi S	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW9 & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce enciton? Improve degraded sites? Protect agricultural lind? Safeguard soli quality, quantity and Acciden? Contribute to reducing lavels of berownfeld, derelist and contaminated land in plan area?	Positive short-term effect	pos.S	
	Summary: The effects of this measure a	area? re positive for population & human heal	th, landscape and soils, negative and p	ositive for biodiversity and w	ater, and not significant on the other SEA topics.

2	Pressure	Sector	Option	Measure	Measure No.			
	Alien species	All sectors	Option 2: RBMP measures	Control alien species: prevent	4			
SEA topic	A. SEA Objective - to what extent will the RBMP	D, Assessment Criteria - to what extent with the RDMP	C. Nature of the offect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milijation, uncertainty			
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of brotected areas (e.g. SACs, SPAs, BSSIs) defined under the VMDO Provide effective protection of designated effective and the SACS of the SACS Combibule to UK Biochershify Action Plan Desite the SACS Biogeont delivery of biodivershify strategies? Reduce Impacts by alian genetics?	Positive short-term effect	pos.S				
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinning water protected areas and water abstruction? Protect bathing and shellfish protected waters?	Positive short-term effect	pos.S				
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to god status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source polition, diffuse source polition, abottaction and flow regidation, and morphological interventions? Promote efficient and sustainable use of water? Prevent the physical deterioration of water bodies ?	Positive short-term effect	poe.S				
· · · · ·		from point source and diffuse pollution?	No significant effect					
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload menagement? Contribute to the minipation of floads and decogets? Reduce vulnerability of communities and the enrormment to the effects of climate Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity? Address the potential impacts of climate change on biodiversity? Contribute to concern a second on a second general second on the second on a second procession for water management formation and the second on a second formation and the second on a second on a second formation and the second on a second on a second formation and the second on a second on a second formation and the second on a second on a second on a second formation and the second on a second on a second on a second formation and the second on a second on a second on a second on a second formation and the second on a	No significant effect	NS				
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS				
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distictiveness?	Positive short-term effect	per S				
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS				
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce arcsion? Improve deparaded stee? Protect agricultural land? Safeguard sol quality, quartity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	Positive short-term effect	pos.S				
	Summary: The effects of this measure are positive for biodiversity, population & human health, water, Landscape, and soils, and not significant on the other SEA topics.							

1 0	Pressure	Sector	Option	Measure	Measure No.			
	Alien species	All sectors	Option 2: RBMP measures	Fish Health Directive - limit fish disease & non-native species introductions, audit high risk movements, enforce against illegal activity	5			
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to whot extent with the REMP	C. Nature of the effect including positive or negative shorts, mediums, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty			
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. BACe, GPAe, BSBI) defined under the W/D'? Provide effective protection of designated able? Control with the Contensity Action Plan Design of the Contensity Action Plan Buscot desivery of biodiversity strategies? Reduce Impacts by alian species?	Positive short-term effect	pos.S				
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	Positive short-term effect No significant effect	pos.S				
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source publichon, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Promote efficient and sostainable use of wer? Prevent the physical deterioration of water bodies? Prevent the deterioration of water bodies and notice and diffuse solution?	No significant effect	NS				
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable fload menagement? Contribute to the mingstein of thoods and droughts? Reduce vulneshiptify of communities and the enronment to the effects of climate change on biodiments? Address the potential impacts of climate change on hismain use of water (e.g. water yields, abstraction, recreational uses) Gonthout to reading genehouses gas emissions from water management activities?	No significant effect	NS				
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RRh	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS				
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	No significant effect	NS				
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS				
Soil	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded stee? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfold, derelict and contaminated land in plan area?	No significant effect	NS				
1	Summary: The effects of this measure are positive for biodiversity and population & human health and not significant on the other SEA topics.							

1 S	Pressure	Sector	Option	Measure	Measure No.		
	Alien species	All sectors	Option 2: RBMP measures	Alien species regulations to control non-native fish in aquaculture	6		
SEA topic	A. SEA Objective . to what extent will the REMP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-cutling where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty		
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected amas' (eg. 8406, 8614), 6840) defined under the VMD? Provide effective protection of designated abs? Contribute to UK Biodrewsth Action Plan objectives? Reduce invests by alian space(es)?	Positive short-term effect	por S			
Population & human	2. Protect human health in undertaking	Maintain and enhance access to and use of the water emironment? Increase tourism and/or improve National Parks	Positive short-term effect	pos.S			
health	water management activities	Protect driving water protected areas and water abstraction? Protect bathing and shellfish protected waters?	No significant effect				
Water	 Prevent deterioration of the status of voter bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water budies from for example point source publichon, diffue source pollution, abstraction and flow regulation, and morphological interventions? Promote efficient and sustainable use of water? Prevent the physical deterioration of water budies ? Prevent the deterioration of water budies from noirs source and diffuse notablesion?	No significant effect	NS			
Climate factors	 Contribute to mitigation of and adaptation to, climate change 	Promote sustainable field management? Contribute to the milipation of floods and droughts? Reduce vulneability of communities and the enromment to the effects of circate change? Address the potential impacts of circate change to subdiversity? Address the potential impacts of circate change on human use of water (e.g., water yields, abstraction, recreational uses)? Contribute to recurring generatives gas emissions from water management activities?	No significant effect	NS			
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS			
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape values and local distinctiveness?	No significant effect	NS			
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. food defences, ports & harbours, WWTWS & drainage)?	No significant effect	NS			
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce accion? Improve degraded size? Protect agricolutural land? Safeguard soil qualify, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS			
1	Summary: The effects of this measure are positive for biodiversity, population & human health, water, landscape, and soils, and not significant on the other SEA topics.						

Closing the Gap

Diffuse Pollution

		AV			
	Diffuse pollution	Sector Agriculture (non-regulatory)	Option 3: Closing the gap	Additional investment in catchment related activities and CMPs over successive planning cycles	Measure No. 1
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect discluding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exdence, miligation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protected areas' (e.g. 360-5; SPAs, 5053) oddined under the VMCD? Provide effective protection of designated <u>sbs5</u> ? Contribute ULK Biodivensity Action Plan Dischetive? Bupport objective? Reduce impacts by a kin species?	Positive short-term effect	pes.S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase touries mad/or improve National Parks Protect diniking water protected areas and water abstraction? Protect balting and shelfish protected waters?	Positive short-term effect	pos.Š	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source position, offense source polition, abstraction and flow regulation, and morphological interventions? Prevent the deterration of water bodies from point source and diffuse politician. Promote difficient and source bodies water? Prevent the physical deterritation of water bodies ?	Postive short-term effect	por.S	
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Promote sustainable food management? Contribute to the miligation of floods and droughts? Address the potential impacts of climate change on biodiversity? Reduce vulnerability of communities and the environment to the effects of climate change? Address the potential impacts of climate change on biodiversity?	Positive short-term effect	neg./pos.	Effects are generally positive for biodiversity & recreation, but there may be costs for other sectors. The costs & benefits will need to be assessed in the A, Mogation could be achieved through a targeted study to assess distribution of costs and bene
	5 Protect and where anomoriate	Encourage improved energy efficiency? Contribute to reducing greenhouse gas emissions from water management activities?	Positive or negative effect for different sectors depending on measures taken		
Cultural heritage	enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Positive short-term effect	pos.S	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Positive short-term effect	pos S	
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce arcsion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfield, derelist and contaminated land in plan area?	Positive short-term effect	900.S	Minor positive effects on soal quality through reduced pollutant loads. Secondary benefits of SUOS on erosion through flow attenuation.
Summary:	Senerally, the effects of this measure wi	ll be positive for biodiversity, population	& human health, water, soil, landscap remainder of the SEA topics.	e and material assets, negati	ve and positive for climate factors and not significant for the

Point Source Pollution

1 0	Pressure	Sector	Option	Measure	Measure No.
	Point source pollution	Sewage disposal (regulatory)	Option 3: Closing the gap	Scattish Government: Iow P	1
				detergents	
SEA topic	A. SEA Objective - to what extent will the RBMP	D, Assessment Cifleria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, mitigation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species 	Provide effective protection of brotected areas' (e.g. SAG), SIPAE, (SSGIt) defined under the VMEO? Provide effective protection of designated oblight? Contribute to UK Biodirent/th Action Plan Support delivery of biodiversity stategies? Reduce immedia by alian section?	Positive short-term effects	pos S	
4. A		Maintain and enhance access to and use	10401		
Population & human	2. Protect human health in undertaking water management activities	of the water environment? Increase tourism and/or improve National Parks Protect drinking water protected areas and	No significant effect	poe.S	
neadh		water abstraction? Protect bathing and shellfish protected waters?	Postive short-term effect		
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, point source polyboh, diffue source polyboh, abstraction and flow regulation, and merphological interventional? Prevent the deterioration of water bodies from point source and diffue polyboh? Promote efficient and sustainable use of water?	Positive short-term effect	pos S	
		Prevent the physical deterioration of water	No significant effect		
		bodies ? Promote usufanable flood management? Contribute to the mitigation of floods and droughts? Address the potential impacts of cirmate change on human use divater (s.g. water yields, abstraction, recreational uses)? Reduce vulnerability of communities and	No significant effect		Milination may be remained to assess the impacts of the measure
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	the emisonment to the effects of climate change? Address the potential impacts of climate change on biodiversely? Contribute to reducing greenhouse gas emissions from water management emissions from water management	Positive or negative short-term effect depending on the nature of treatment/measure	neg./pos.	on energy consumption, gisenhouse gas amissions and possibly the disposal of waste streams
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Not relevant	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance mitional designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	0. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce encition? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing levels of brownfold, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Senerally this measure will have a posit population & humar	ive short-term effect on biodiversity and health where the impact will be either	water. Cultural heritage,landscape, ma positive or negative depending on the	nterial assets and soil where nature of the measure applic	there will be no significant effect and on climate factors and d and the handling of waste.

Changes to Morphology

	Bernard	Printer	0-8		Harrison Ha
	Pressure Changes to morphology	Sector All sectors	Option 3: Closing the gap	Improve modified habitat: removal of barriers or provision of mechanisms to enable fish migration	Мезице Ко. 1
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Citteria - to what extent with the RBMP	C. Nature of the effect discluding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, milligation, uncertainty
Biodwersity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective production of "protected areas" (e.g. SACs, SPAs, SSSIs) defined under the VWD Provide effective protection of designated sites? Contribute to UK Biodiversity Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effect	pot.S	
Population & human health	2. Protect human health in undertaking water management activities	Reduce impacts by alten species? Maintain and enhance access to and use of the walar environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	No significant effect Positive short-term effect	per.S	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduce the impacts on the ecological condition of water bodies from for example, port source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterisation of water bodies from point sauces and diffuse pollution? Prevent the physical deterision of water bodies? Promote efficient and submable use of	Positive short-term effect	pos.S	
Climate	4. Contribute to mitigation of, and	Promote sustainable flood management? Controlute to the mitigation of floods and discuptes? Reduce submerability of communities and the environment to the effects of climate change? Address the potential impacts of climate change on biodressity?	No significant effect Positive short-term effect		
factors	adaptation to, climate change	Address the potential impacts of climate change on human use of water (e.g. water yields, abstraction, recreational uses)? Contribute to reducing greenhouse gas emissions from water management activities? Encourage improved nearcy #diciency?	No significant effect	jus a	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Negative short-term effect if measure reduces cultural hentage value of structure providing barrier	neg S	Impact can be mitigated by appropriate choice and design of measure to overcome barrier
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Small positive short-term effect from certain measures (e.g. removal of weir and restoration of natural flow regime) but change to landscape may be considered a short-term negative effect by other groups	neg./pos.	Mbgation would require study of site specific impacts
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Negative short-term effect if barrier removal adversely effects water infrastructure (e.g. weir for water supply abstraction)	neg.S	Mitigation would require study of site specific impacts
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce encition? Improve degraded stee? Protect agricultural land? Safeguard soli quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Summary:	Generally the effects of this measure are	e positive for biodiversity, population & I	ruman health, water and climate factor	s, negative for cultural herita	ge and material assets, positive and negative for landscape

	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	All sectors	Option 3: Closing the gap	Improve modified habitat: removal of engineering structures	2
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of protection areas' (e.g. SACs, SPAc, SBSt); defined under the WED? Provide effective protection of designated effective areas and the second second objectives? Busport delivery of biodwestly stategies? Reduce encider build an excited?	Positive short-term effect	por S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shellfish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	008.S	
Water	 Prevent detenioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water budies to mit for example, point source pollution, diffue ecouce pollution, abstraction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffues pollution? Prevent the physical deterioration of water bodies ? Promote efficient and extrahable use of water?	Positive short-term effect	pos.S	
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Promote sustainable field management? Contribute to the milipation of floods and doughts? Header withreability of communities and the unformment they have a sub- transport of the sub- charge on biotherestry? Address the poderatiol impacts of climate charge on human use of wuter (or wither charge of the sub- control of the sub- sub-	Negative short-term effect on flood nak depending on the nature of the entruture No significant effect Positive short-term effect No significant effect	neg /pos.	Impact can be mitigated by appropriate choice and design of measure
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Negative short-term effect if structure is of cultural heritage value	neg B	Impact can be mitigated by appropriate choice and design of measure to overcome barrier
Landscape	5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated bandscape areas? Protect and, where appropriate, enhance or restore bandscape character and outliny? Protect and, where appropriate, enhance or restore landscape value and local distructiveness?	Positive short-term effect from certain measures (e.g. removal of weir and restoration of natural flow regime) but change to landscape may be considered a short-term negative effect by other groups	neg./pos.	Mtigation would require study of site specific impacts
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Negative short-term effect of structure removal may adversely effects water infrastructure	neg S	Mitigation would require study of site specific impacts
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
Summa	ry: Generally the effects of this measure	are positive for biodiversity and water, I	negative for cultural heritage and mate andscape and not significant for soils.	vial assets, positive and nega	itive for population & human health, climate factors and

4	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	All sectors	Option 3: Closing the gap	Improve modified habitat: improvements to condition of channel/bed and/or banks/shoreline	3
SEA topic	A, SEA Objective - to what extent will the RBMP+++	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Eddence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of brotection areas' (e. g. SACS, SPAs, SSS3) ordened under the VMED? Provide offoctive protection of designated <u>obs5</u> ? Contribute to LKK Biodhersthy Action Plan objectives? Brupper for Jondersthy Action provide Revise emories for all monomice?	Postre short-term effect	pos S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water enroximent? Increase tourism and/or improve National Parks Increase commercial activities that are directly water dependent Protect dinking water protected areas and water abstraction? Protect bathing and shallfish protected waters?	Positive short-term effect	pos.S	
		Prevent the deterioration of water bodies	No significant effect		
Water	3. Prevent detensation of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Tempore source and under pointeent. Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the physical deterioration of water bodies ?	Positive short term effect	por S	
		Promote efficient and sustainable use of water?			
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Demote auxistance Acet management? Combute to the minipation of floods and disophth3? Redices withenblifty of communities and the environment to the effects of climate change? Address the potential impacts of climate change on hisman use of water (e.g. water change on hisman use of water) Comhistes to reducing generhouse gaser activities?	No significant effect	NS	Mnor positive effects for flooding, but this will depend on the design of the measure
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Positive short-term effect	poe S	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	Measure should not impact on existing infrastructure
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce ension? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and function?	Positive short-term effect	pod.S	
		deretict and contaminated land in plan area?	No significant effect		
	Summary: Generally the effe	cts of this measure are positive for all n	neasures but climate factors, cultural he	ritage and material assets wi	here no significant effect is expected.
1	Pressure	Sector	Option	Measure	Measure No.
---------------------------------	---	--	--	--	--------------------------------------
	Changes to morphology	All sectors	Option 3: Closing the gap	Improve modified habitat: improvements to condition of nparian zone and/or wetland habitats	ä
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exidence, miligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. 84-05, 1974, 8501) defined under the VBO? Provide officiency protection of designated 98:52 Contribute to UK Boothersth Action Plan Discusses? Eupport delivery of biodxersity strategies? Reduce impacts by alian species?	Positive short-term effect	pot.S	
Population & human health	 Protect human health in undertaking water management activities 	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect dinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Positive short-term effect	pos.S	
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the daterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Positive shon-term effect	pen.S	
Climate factors	 Centribute to molgation of, and adaptation to, climate change 	Promote sustainable field management? Contribute to the minipation of floods and droughts? Address valueshalls of communities and the environment to the effects of climate charge on businessity? Address the potential impacts of climate charge on businessity? Address the potential impacts of climate charge on businessity? Address the potential impacts of climate charge on businessity? Contribute to reacting generations as gas emissions from water management activities?	Positive short-term effect	pos S	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtiveness?	Positive short-term effect	pos.S	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard sol quality, quartity and function? Contribute to reducing levels of brownfield,	Positive short-term effect	pos S	
		derelict and contaminated land in plan area?	No significant effect		
	Summary: Generally the o	effects of this measure are positive for al	I SEA topics other than cultural heritag	e and material assets where r	io significant effects are expected.

1 S	Pressure	Sector	Option	Measure	Measure No.	
	Changes to morphology	All sectors	Option 3: Closing the gap	Improve modified habitat: changes to sediment management maintenance regime	5	
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RBMP	C. Noture of the effect discluding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Exdence, miligation, uncertainty	
Biodwersity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. SACs, SPAs, SSSIs) defined under the WID of Designated sRsS ² Contribute to UK Elocitient Action Plan objectives? Support delivery of biodiversity strategies?	Positive short-term effects	pos S	This assumes that change to sediment management regime is designed to improve morphological conditions. Disposal of sediment (if required) will need to be in accordance with best practice	
		Reduce impacts by allen species?	No significant effect			
Population & human health	2. Protect human health in undertaking water management activities	e of the water encourse access to and use of the water encoursement? Increase tourism and/or improve National Parks Protect drinking water protected areas and water abstraction? Protect bathing and shellfah protected waters?	Positive short-term effects for water body where maintenance regime is managed, potentially negative short term effect because of disposal of dredged material	neg./pos.	Mitigation would include appropriate disposal of removed sediment, including contaminated sediments	
Water	 Prevent detenoration of the status of water bodies. Enhance, water budy status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example politation, where bodies from for example politation, wherein the internetions of the regulation, wherein the other bodies from point source and diffuse polition? Prevent the object all diffuse polition? Prevent the physical determination of water bodies ? Promote efficient and sustainable use of water?	Positive short-term effect	por S		
Climate factors	 Contribute to metgation of, and adaptation to, climate change 	Promote sustainable food management? Controllate to the immigiation of floots and doughts? Address the proteinal project of discuss change on biodiversity? Address the proteinal impacts of climate change on biodiversity? Address the proteinal amount of discuss specific and the second second second yields, abstraction, recreational uses) yields abstractions, recommissional second yields, abstraction, recommissional second second second second second second second activities?	No significant effect	NS	May be minor positive effects on flooding, but as these activities likely to be in a harbour, effects are not regarded as significant. May be minor negative effects on energy and generouse gas emissions from the energy required to undertake the maintenan	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS		
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Positive short-term effect	pus.S		
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing levels of brownfield, derelict and contaminated land in plan area?	teo significant entect Negative short-term effect if disposal of sediment/contaminated sediment is not in accordance with best practice	neg S	Mitigation would include appropriate disposal of removed sediment, including contaminated sediments	
Summary:	Generally the effects of this measure ar	e positive for biodiverity, water and mat	erial assets, positive and negative for p SEA topics.	opulation & human health, n	egative for soils and not significant for the remainder of the	

0	Pressure Sector Option		Option	Measure	Measure No.
	Changes to morphology	Historical engineering activities & urban	Option 3: Closing the gap	Restoration policy for taking	6
SEA topic	A. SEA Objective - to what extent will the RDMP	B, Assessment Criteria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide effective protection of 'protected arease' (e.g. SACs, SPAE, SSSI) defined under the WTOO' Provide effective protection of designated obed? Contribude to UK Biodiversity Action Plan Distribute to UK Biodiversity stategies? Reduce empetials by alen species?	Insufficient information to make a judgement	•	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase busins and/or improve National Parks Protect bathing and shellfsh protected waters? Protect drinking water protected areas and water sportaction?	Insufficient information to make a judgement	1.43	
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate	Reduce the impacts on the acological condition of water bodies from for example, point source publichon, diffuse source pallution, astartaction and flow regulation, and morphological interventions? Prevent the deterioration of water bodies from point source and diffuse polition? Pravent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	Insufficient information to make a judgament		
Climate factors	 Centribute to metgation of, and adaptation to, climate change 	Promote sustainable fload management? Contribute to the immigration of floads and incorports? Reduce vulneability of communities and the enrormment to the effects of climate change on bioidiversity? Address the potential impacts of climate change on bioidiversity? Address the potential impacts of climate change on bioidiversity? Contribute to reducing generhouse and activity and activity of the sub- generations from water management activities?	Insufficient information to make a judgement	.	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement		
Landscape	5. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated andscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local districtivenees?	Insufficient information to make a judgement	50°	
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWs & drainage)?	Insufficient information to make a judgement	•	
Soil	B Protect and, where appropriate, enhance the function and quality of the solution of quality quality and resource in the RBD Control of quality quality and function? ControlLet or reducing lavels of a bonning and ControlLet or reducing lavels of a bonning and areas		Insufficient information to make a judgement	•	
-		Summary	Insufficient information to make a judg	jement.	

<i>i</i>	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	Agriculture (regulatory)	Option 3: Closing the gap	Restoration investment to remove abandoned structures such as old embankments	7
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Assessment Citeria - to what extent with the RBMP	C. Nature of the effect (including positive or negative short-, medium-, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particulary protected areas and protected species	Provide officitive protection of protection areas' (e.g. SACs, SPAe, BSSIs) defined under the WED' Provide effective protection of designated SB&2" Contribute ID LK Biodiversity Action Plan objectives? Bupport delivery of biodiversity stategies? Rodius environ?	Positive short-term effect	pot S	Mitigation required to deal with waste and removal damage
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shellfish protected waters? Protect drinking water protected areas and water abstraction?	Positive short-term effect	pos.S	Negative effects can be identified in the IA
Water	3. Prevent deterioration of the status of water bodies. Enhance, water body status	Reduce the impacts on the ecological condition of water bodies from for example, point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions?	Positive short-term effect	80% S	
	(including groundwater) to good status, as appropriate	Prevent the deterioration of water bodies from point source and diffuse pollution? Prevent the physical deterioration of water bodies ? Promote efficient and sustainable use of water?	No significant effect Positive short-term effect		
	Promote sustainable faced manage Combate to the mitigation of floor Reduce valuesability of communits the environment to the effects of c channed?		Positive or negative effect on flood risk depending on the structure		
Climate	4. Contribute to mitigation of and	Address the potential impacts of climate change on biodiversity?	Positive short-term effect	1. (2.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	
factors	adaptation to, climate change	Address the potential impacts of climate change on human use of voter (e.g. water yields, abstraction, recreational uses)? Contribute to reducing greenhouse gas emissions from water management activities?	No significant effect	neg./pos.	Impact can be mitigated by local study of the effects
Cuttural heritage	5: Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance mational designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctivences?	No significant offect	NS	Removal of engineering structure may produce local positive or negative impacts on landscape value depending on nature of structure, but not considered significant
Material Assets	7. Protect and make most effective use of water management infrastructure	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing lavels of brownfield, derelist and contaminated land in plan area?	No significant effect	NS.	
Sum	mary: Generally the effects of this meas	rre are positive for biodiversity.population	on and human and water, positive and	negative for climate factors a	nd not significant for the remainder of the SEA topics.

Invasive non-native species

2 D	Pressure	Sector	Option	Measure	Measure No.
	Changes to morphology	All sectors	Option 3: Closing the gap	Possible policy mechanisms: additional programme of work (prevention, control, surveillance)	8
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Cifleria - to what extent with the RBMP	C. Nature of the effect discluding positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, milligation, uncertainty
Biodwersity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of protected areas' (e.g. BACs, SPAe, SSB) defined under the VMDD? Provide effective protection of designated contribute to UK Biodhersth Action Plan Contribute to UK Biodhersth Action Plan Distributes? Support objectives? Reduce emocils for alian sections?	Insufficient information to make a judgement	•	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase busins and/or improve National Parts Protect bathing and shellfsh protected waters? Protect drinking water protected areas and waters abstraction?	Insufficient information to make a judgement	(
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate. 	Reduce the impacts on the ecological condition of water bodies from for example point source pollution, diffuse source pollution, abstraction and flow regulation, and morphological interventions? Prevent the disterioration of water bodies from point source and diffuse publicity? Prevent the physical deterioration of water bodies ? Promote efficient and sourcements.	Insufficient information to make a judgement		
Climate factors	 Contribute to mitigation of, and adaptation to, climate change 	Permote sustainable field management? Contribute to the immigration of floods and doughts? Reduce vulneability of communities and the anonement to the effects of climate change of human buddenssity. Address the potential impacts of climate change on buddenssity. Address the potential impacts of climate change on buddenssity. Contribute to reducing genehouse gas emissions form water management activities?	Insufficient information to make a judgement		
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Protect and, where appropriate, enhance or restore historic environment features?	Insufficient information to make a judgement		
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance mitional designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	Insufficient information to make a judgement		
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTW's & drainage)?	Insufficient information to make a judgement		
Soil	B Protect and, where appropriate, enhance the function and quality of the sol resource in the RBD Contribute to reducing levels of the density of the sol Contribute to reducing levels of the density of the sol contribute to reducing levels of the area of the sol density of the sol		Insufficient information to make a judgement	•	
		Summary	Insufficient information to make a jud	gement.	

	Pressure	Sector	Option	Measure	Measure No.
	Alien species	All sectors	All sectors Option 3: Closing the gap		2
SEA topic	A. SEA Objective - to what extent will the RBMP	B. Asssessment Criteria - to what extent with the RDMP	C. Nature of the effect (including positive or negative short, medium, or long-term effect, permanency of effect, scale of effect and cross-cutting where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	 Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species 	Provide effective protection of protection area' (e.g. 840c, 840c, 850c) solid offend under the WED? Provide effective protection of designated ables? Contribute to UK Biodiversity Action Plan objective 30 objectives? Bupport desirer of biodiversity strategies? Reduce impacts by alien projectios?	Short-term positive effect	905 S	
Population & human health	2. Protect human health in undertaking water management activities	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks Protect bathing and shellfish protected	Short-term positive effect	pos S	
Transferrance		waters? Protect drinking water protected areas and water abstraction?	No significant effect		
Water	3 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate.	Reduct the impacts on the ecological condition of water budies from for example, point source polition, diffuse example, point source and diffuse politions? Prevent the detension of water bodies from point source and diffuse politions? Prevent the physical detension of water bodies? Promote efficient and sourcements	Insufficient information to make a judgement		
Climate factors	4. Contribute to mitigation of, and adaptation to, climate change	Dimonds existence and management? Contribute to the mitigation of ficods and <u>disorders</u> ? Reduce witherebility of communities and the environment to the effects of climate <u>change</u> ? Address the potential impacts of climate <u>change</u> on human use of welder (a g water <u>change</u> on human use of welder (a g water <u>change</u> on human use of welder (a g yields, a chartschen, necesilional uses)? Contribute to reducing greenhouse gas emissions forum water management <u>activities</u> ?	No significant effect	NS	
Cultural heritage	 Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD 	Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	6. Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and quality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. flood defences, ports & harbours, WWTWS & drainage)?	No significant effect	NS	
Soil	 Protect and, where appropriate, enhance the function and quality of the soil resource in the RBD 	Reduce erosion? Improve degraded sites? Protect agricultural land? Safeguard soil quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
	Summary: The effects of	this measures are likely to be positive t	for biodiversity & population and huma	n health and no significant for	the remainder of the SEA topics

	Pressure	Sector	Option	Measure	Measure No.
	Alien species	All sectors	Option 2: RBMP measures	Alien species regulations to control non-native fish in aquaculture	6
SEA topic	A. SEA Objective . to what extent will the RimAP	B. Assessment Criteria - to what extent with the RBMP	C. Nature of the effect including positive or negative short, medium, or long term effect, permanency of effect, scale of effect and cross-cutling where known)	D. Significance of the effect?	E. Evidence, millipation, uncertainty
Biodiversity, flora & fauna	1. Protect and, where appropriate, enhance biodiversity, particularly protected areas and protected species	Provide effective protection of twolection areas' (e.g. SACs, SPAs, SBSIs) defined under the VHEO? Provide effective protection of designated defs? Contribute to UK Biodhewsthy Action Plan objectives? Reduce impacts by a lain species?	Positive short-term effect	pox.S	
Population & human	2. Protect human health in undertaking	Maintain and enhance access to and use of the water environment? Increase tourism and/or improve National Parks	Positive short-term effect	pos.S	
health	water management activities	Protect dinking water protected areas and water abstraction? Protect bathing and shellfish protected waters?	No significant effect		
Water	 Prevent deterioration of the status of water bodies. Enhance, water body status (including groundwater) to good status, as appropriate 	Reduce the impacts on the ecological condition of water budges from for example, point source publichon, diffue source publich, abstraction and flow regulation, and morphological interventions? Promote efficient and sustainable use of water? Prevent the physical deterioration of water budges? Prevent the deterioration of water budges from point source and diffuse publicion?	No significant effect	NS	
Climate factore	4. Contribute to mitigation of and adaptation to, climate change	Promote sustainable field menagement? Contribute to the miligation of floods and droughts? Reduce vulneability of communities and the enromment to the offects of climate charge in buildness? Address the potential impacts of climate charge on buildness? Address the potential impacts of climate charge on buildness? Address the potential impacts of climate charge on buildness? Contribute to reducing generobuses gas emissions from water management achieties?	No significant effect	NS	
Cultural heritage	5. Protect and, where appropriate, enhance the character, diversity and special qualities of cultural heritage in the RBD	Encourage improved energy efficiency? Protect and, where appropriate, enhance or restore historic environment features?	No significant effect	NS	
Landscape	 Protect and, where appropriate, enhance the character, diversity and special qualities of all landscapes in the RBD 	Protect and, where appropriate, enhance national designated landscape areas? Protect and, where appropriate, enhance or restore landscape character and guality? Protect and, where appropriate, enhance or restore landscape value and local distinctiveness?	No significant effect	NS	
Material Assets	 Protect and make most effective use of water management infrastructure 	Make most efficient use of water management infrastructure? Protect existing economic infrastructure (e.g. food defences, ports & harbours, WWTWs & drainage)?	No significant effect	NS	
Soil	8. Protect and, where appropriate, enhance the function and quality of the sol resource in the RBD	Reduce arcsion? Improve degraded size? Protect agricultural land? Safeguard sol quality, quantity and function? Contribute to reducing lavels of brownfeld, derelict and contaminated land in plan area?	No significant effect	NS	
1	Summary: The effects of	this measure are positive for biodiversity	r, population & human health, water, la	ndscape, and soils, and not s	ignificant on the other SEA topics.

Summaries

Reference/Baseline

Pressure	Sector	Option	Measure No.	Measure	Biodiversity, flora & fauna	Population & human	Water	Climate fectors	Cultural heritage	Landscape	Material	Soil	Summary
	All sectors		1	Reduce diffuse pollution inputs	por.5	pos.S	900.S	neg (pos.	NS	/eq.0	NS SM	por S	Summary, Generally this measure will have a positive effect on biodivenity, writer, sol, and population & human heath and a positive and negative effect on climate facture, a negative for landscope and no significant effect on the other SEA topics.
	Agriculture (regulatory)		2	Regulations, guidelines and standards to reduce polutant loads to water bodies	po1.5	poe.5	poe.S	por S	NS	NS	NS	poe.S	Summary, Generally, this measure is positive for biodiversity, water, climate, pols and population and human heath and not startificant for the other SFA topics.
	Agriculture (non- regulatory)		3	Education, advice 8 campaign awareness	1								Summery it is unitely that there will be direct effects of the comparism, although there may be significant secondary effects depending on the scale and targeting of awareness raising.
	Agriculture (non- regulatory)		4	Economic incentives for agriculture to reduce diffuse pollution	µ01.5	pas.s	pos.S	pos.S	NS	NS	NS	pon S	Summary: Generally, the effects of this measure will be positive for biodiversity, writer, climate, soil and population 5 forman heath and not significant for the remainder of the SEA topics.
	Forestry (regulatory)		5	Regulations to reduce diffuse polution	pos.5	poe.S	poe.S	NS	NS	NS	NS	200.5	Summary: Cenerally, this measure is positive for biodiversity, water, soil and population and human health and not significant
													for the other SEA topics
	Forestry (non- regulatory)		6	Economic incentives for forestry to reduce diffuse pollution	por.S	poe.S	poe.S	pos.S	NS	NS	NS	909.5	for biodiversity, water, climate, soil and population and human health and not significant for the remainder of the SEA topics.
polition	Forestry (non- regulatory)	eBueline	. ₹	Education, advice and campaign oworeness				- 1 1	191				Summary. It is unlikely that there will be direct effects of the compaign, although there may be significant secondary effects depending on the scale and targeting of awareness raising.
iffuse	Acidification (regulatory)	terenc	8	Controls to reduce the effects of air polytion									Summary: Not assessed.
0	Acidification (regulatory)	86	9	Regulations to reduce the effects of acidification	pos.S	poe.S	poo.S	NS	NS	NS	NŞ	pos.S	Summary: Generally, this measure is positive for biodiversity, water, soils and population and human health and not significant for the other SEA topics.
	Agriculture (non- regulatory)		10	Enissions Trading Scheme				pos.S	NS	•	NS	NS	Summery: There is insufficient information to make a juggerierd on the effects of the EFS on biodhersity, population and human health, water and landscope. No significant effect would be expected on cutural inertage, material assets and sol, while it is likely that this measure will have positive effects on climate factors.
	Acidification (non- regulatory)		11	Forests and Wilder Guidance		•	•	•	•	•	÷.	· ·	Summary: It is unlikely that there will be direct effects of the campaign, although there may be significant secondary effects depending on the scale and targeting of awareness raising
	Urban development (regulatory)		12	GBRs to reduce urban diffuse pollution	pos.S	pos.S	pos.S	pos.S	NS	NS	NS	pos S	Summary: Centerally this measures will have positive effects for biodiversity, water, climate, soil and population and human health and no significant effect on cubural heritage, material
	Urban development (non- regulatory)		13	Campaign awareness and best practice to reduce diffuse poliution from	•	•					•	•	Summary: It is unlikely that there will be direct effects of the campaign, although there may be significant secondary effects dependence on the scale and the attribute of expressed raising
	Sea and Coastal transport (not a SVMI		14	Reduce diffuse polution from sea and coastal transport	•		•	•			•	•	Summary: Not assessed for the Solway Tweed as not a SVMI libsue.
	4,047)												
Pressure	Sector	Ontion	Measure	Measure	Biodiversity,	Population &	Water	Climate	Culturel	Landscape	Material	Soil	Summary
Pressure	Sector	Option	Measure No.	Measure	Biodiversity, flora & fauna	Population & human	Water	Climate factors	Culturel heritage	Landscape	Material Assets	Soil	Stimmery Summery, Generally this measure will have short-term positive
Pressure	Sector Al sectors	Option	Measure No.	Messatice Measures to reduce polytion load and increase treatment	Biodiversity, flora & fauna possis	Pepulation & human	Water poz.5	telmale factors neg.lpos.	Cultural heritage NS	Landscope NS	Material Assets NS	NS	Summary Summery, Generally this measure with twee short-term positive effects on biodiversity, population it human health and water and negative and positive effection on population it. Ruman health and clenete fectors and no significant effect on the other SEA block.
Pressure	All sectors All sectors	Option	Meanure Ho. 1	Measures to reduce polyton load and increase beatment .	tilodiversity, flora & fauna posiS negubos.	Pepulation & human pos.5	Water position negupos.	Climite Tactors neg.lpos. neg.lpos.	Guitteret heritage NS	NS NS	Material Assets NS	NS NS	Summary, Sammary, Sam
Pressure	All sectors All sectors All sectors	Option	Meanure No. 1 2 3	Measures to reduce polyticn load and increase beatment in the second sec	Biodiversity, flora & found pos:S reguloos. reguloos.	pos.5 pos.5 pos.5	Widter goz.S negubos, negubos,	neg.bos. neg.bos.	Culturat heritage NS NS	NS NS NS	Mitorial Assects NS NS	NS NS NS	Summary, Sammary, Sam
Pressure	All sectors All sectors All sectors All sectors Sewage disposal (regulatory)	Option	Measure No. 1 2 3 4	Measures to reduce polytical load and increase beatment and water Measures to regulate flow to "Measures to regulate flow to "Measures to regulate flow to Measures to reduce inspects from point polytics associated with informitic stronge and insubitive filters?	Biodiversity, filera & Faces pos:5 neg.box. neg.box. pos:5	Pepulation 5 human 5 pec.5 pec.5 pec.5	W2ter pos:5 neg.bos. neg.bos. pos.9	Climate Factors neg.box. neg.box. neg.box.	Cultural heritago NS NS NS	NS NS NS	NS NS NS	NS NS NS NS	Summary, Generally the nessure will have short-tem politive effects on look-writely, population is human health and water and registive angroubse effects on population. It human health and clinete factors and no significant effects on where the Statemary Overwalphate messace will have posite that Lines effects on where and population. Sharman health, positive and new no significant effects on the remarked of the SEA basics. Summary, concernity the messace will have positive statu-tiene infects on where and population. Sharman health, positive and have no significant effects on the remarked of the SEA basics. Summary, concernity the measure will have positive internation. Supermary, concernity the measure will have both them positive and registive and positive internation will be that them positive and register and positive internation will be done them positive and register and positive internation and endowed with the and register and positive internation and the measure and register and positive internation and the one them both one and register and positive internation and the status have them can be appressing that the status on the status of the and register and positive internation and the status have them and the status on the status.
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Pressure unapple aproximity	All rectors All rectors All sectors All sectors Sewage disposal (regulatory) Sewage disposal (regulatory) Aqueculture/film Teering (regulatory)	Option execute the second s	Measure No. 1 2 3 4 5 6	Accesses Measures to reduce polytion load and noteable themhost Remediation of sediment and weater Measures to regulate flow to Tuturalise the tour regime Measures to regulate flow to Tuturalise the tour regime Accesses and the sediment polytic to reduce time of the sediment compared to reduce time of the set newsy and installing effects on service accesses and best prefetce to reduce times polytic to effects of aqueothure	Disdiversity Port & Team post 5 negulos post 5 post 5 post 5	Pagaation & human por:5 por:5 por:5 por:5	Water gen:3 neg.lpos. neg.lpos. gen:3	Climite Tectors neg.4os. neg.4os. neg.4os. neg.4os.	NS NS NS NS NS	Landacapa NS NS NS NS NS	NS NS NS NS NS	SGI NS NS NS NS	Summary: Design of the second with the short ten short ten postere effects on looker sitz, possible disk is human health and water and short lectors and or significant fallen on the offers SEA Social Second Second Second Second Second Second Second Effects on water and population 8 human health, poster and napative effects to bodiversity and claims charge, but with the ne na significant effects and the results of the SEA Social Second Second Second Second Second Second Second Internet on Control of the result of the SEA Species. Second Second
Processories logities and a source logities of the source logities o	All sectors All sectors All sectors All sectors Servage disposal (regulatory) Servage disposal (ron- regulatory) Aquecuture/tiuh terming (regulatory)	Option estremeters Hold	Measure No. 1 2 3 4 6 6 7	Accesses Measures to reduce polytion load and increase treatment increase treatment Measures to regulate flow to haturative the flow regime Measures to regulate flow to haturative the flow regime polytion accounted with direct servings and industrial effluent Compage neuroness and best predicts to reduce and the polytic servings discossi CAR aimed at regulating the effects of separature explanations CAR aimed at regulating the effects of separature explanations	Biodiversity Rece & Faces pres_S reg.dos. reg.dos. pres_S pres_S pres_S	Population 4 post5 post5 post5 post5 post5 post5	Widny pos:S regisos, pos:B gos:B	Climite Tectors neg.bos. neg.bos. neg.bos.	NS NS NS NS	Landscape NS NS NS NS NS NS NS	NS NS NS NS NS NS NS NS NS	501 NS NS NS NS	Summary: Summary: Contentify the measure will have short-lenn problem effects on lockimary, population & human health and water and regidere anglement of the state of the state of the source of the state of the state of the state of the state and clinese factors and no significant effects on the effect of the state of the state of the state of the state of the regider effects on bodiewerk will clinese change, but will have no significant effects on the remarket of the SEA basics. Summary: Orientally this measure will have positive state of the regider effects on observer will clinese positive state of the regider effects on observer will have positive state of the regider effects on observer will have positive state of the regider effects on positive and have bodies on have positive indicates on waters of positive and have bodies on the state. The state of the state of the state of the state of the regider effects on the remarket will have bodies on the state indicates on the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the state of the clinese of the state of the state of the clinese of the clinese of the state of the state of the state of the clinese of the state of the state of the clinese of the clinese of the state of the state of the state of the clinese of the state of the state of the clinese of the clinese of the state of the state of the clinese of the clinese of the state of the state of the clinese of the clinese of the state of the clines
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Processive register of the state of the stat	All sectors All sectors All sectors All sectors Servage disposal (regulatory) Servage disposal (regulatory) Servage disposal (regulatory) Aqueculture(fich terming (ron-regulatory) Manufacturing (regulatory) Manufacturing (regulatory)	Option.	Messure 1 2 3 4 6 7 7 8 9 9	Accesses Measures to reduce polytion load and increase thermost models the sector of the sector of the sector of the sector of the sector sector of the sect	Biodiversety Pare & Faunt Pare & Page Aose Page Aose Pag	Presidentian & Rummer & Pres 5 (0005 5 (0005 5 (0005 5) (0005 5) (0005 5)	Water 1001:5 1003-500 10005 10005 10005	Cherror neg dos. neg dos. neg dos. neg dos. neg dos. neg dos.	NS NS NS NS NS	Landacape NS NS NS NS NS	Radoran NS NS NS NS NS NS NS NS NS	Kel NS NS NS NS	Summary: Dennersy: Generative the measure will have short-term positive effects on look-reity, positivities it have a host-term positive and shorter lectors and on significant effect on the other SEA <u>looks</u> . Summary: Conversite the measure will have positive end registre effects to bodiversity and claims charge, but will have no significant effects and the remainder of the SEA looks. Summary: Conversite the measure will have no soletter end registre effects to bodiversity and claims charge, but will have no significant effects on the remainder of the SEA looks. Summary: Conversite the measure will have no soletter end registre effects to bodiversity and claims charge, but will have no significant effects on the remainder of the SEA looks. Summary: Conversite the measure will have no soletter end registre and positive the measure will have bodies the policy effects on look-reity, positive AM and were response to the conversite that claims in the first on the same transmitter and the significant effects on the solet have bodies and registre and positive the text will be detect torition to the same transmitter and the significant exceeding with the non-solet have been and bygetting or were research and registre and positive the bodies to bodies the same transmitter and the significant exceeding with and claims behavior, possible of the lock to bodies of the same share and the significant exceeding with same and the solet the solet on positive and the same and the solet the solet on positive and the same and the solet the solet on positive and the same and the solet the solet on positive and the same and the solet the solet on positive and the same and the solet the solet on positive and the solet the same solet the solet the solet on positive and the same solet the solet the solet on positive and the solet the solet the solet the solet the solet on the solet solet solet the solet the solet on positive and the solet the solet solet solet the solet the solet on positive and the solet the solet solet solet the table
weesure wante and	All sectors All sectors All sectors All sectors Servage disposal (regulatory) Carage disposal (ron- regulatory) Aquacuturetitin terming (regulatory) Aquacuturetitin terming (ron-regulatory) Manufactureg (ron- regulatory) Manufactureg (ron- regulatory) Refue disposal	Option Plane	Machine 1 1 2 3 3 4 5 6 7 9 9 10 10	Accesses Measures to reduce polyticm load and increase thermost increase thermost measures to regulate flow to thermost measures to regulate flow to thermost measures to regulate flow to thermost measures to regulate flow to polyticm associated with observa- tion associated with observa- tion associated with observa- tion associated with observa- nerways and installing effects of apparticits are standards for each care sign and other measures to reduce attribute affaulter to reduce provide one polyticm to polyticm and standards to reduce port socies polyticm to port socies polyticm to reduce port socies addition tho measure standards to reduce polyticm and standards to reduce polyticm and the source to reduce polyticm and the source polyticm and standards to reduce polyticm and the source polyticm and	Biodiversety Part & Faunt Part & Const Part	Pendalin 5 per 5	Weber pen:S. neg.box. pon:S. pon:S. pon:S. pon:S.	Chemide reg docs. reg docs. reg docs. reg docs. reg docs. reg docs. reg docs. reg docs. reg docs.	Contract InterCape INS INS INS INS INS INS INS	Landacape NS NS NS NS NS	National Association (Control of the control of the	5.4 NS NS NS NS NS	Summary Barnings, Generative the messare will have short-term positive effects on block-restric, possibility and summary and shorted factors and no significant effect on the other SEA Summary Comments the messare will have positive etral index of the state of the second second second second effects on valence and population 8 human health, possible end negative effects to todoversity and classic charge, but have no significant effects and the emandative of the SEA Summary Comments the messare will have to the second second effects on valence and population 8 human health, possible end negative effects to todoversity and classic charge, but have no significant effects on the remarked rule possible end negative effects to todoversity and classic charge, but have no significant effects on the remarked rule possible end negative effects to todoversity and classic charge, but the second second second second second and the second effects on look-restric, possible 8 human health, possible end negative effects on look-restric, possible 8 human health, possible effects on look-restric, possible 8 human health and valence end classic that carls is springer affect to compare the possible of the second between the second between to effect to on the second between the end by the second between the second end end effects on look-restric, possible 8 human health and valence end classic that the second between the second second to the second between the second between the second effects on look-restric, possible 8 human health end valence end end end the second second between the second second to the second between the second between the second effects on look-restric, possible 8 human health end valence effects on look-restric
weesure weight careat and	All sectors All sectors All sectors All sectors Servage disposal (regulatory) Servage disposal (regulatory) Aquacuture(tion terring (conceptatory) Manufactures (con- regulatory) Manufactures (con- regulatory) Refuse disposal activets (regulatory) Manufactures (con-	Option equipment	Machur Mo. 1 2 3 4 6 6 7 0 9 10 11	Accesses Messures to reduce polyticm load and increase therement increase therement Remediation of sediment and weter Messures to regulate flow to totanziase the flow regime Messures to reduce inposite flows polytic polyticm associated with dispersion and the polyticm associated with dispersion and the polyticm associated with dispersion and the polyticm associated with dispersion associated with dispersion associated with dispersion associated with dispersion associated with dispersion association and standards to reduce port associa polyticm interac- port associa polyticm interac- polyticm association and menuterump Measures for reduce polytic sociate polyticm interaction Measures for reduce polytic societ polyticm interaction quarrying polyticm interaction quarrying polyticm interaction polyticm interaction poly	Biodiversety Part & Faunt Part & Faunt Pa	Perdation 4 pers5 pers5 pers5 pers5 pers5 pers5 pers5 pers5 pers5	Weber 1933.5 1933.5 1933.5 1933.5 1933.5	Catalon neg pos. neg pos. neg pos. neg pos. neg pos. neg pos.	Collocation Reflage NS NS NS NS NS NS NS NS	Landecape NS NS NS NS NS NS	Materiu NS NS NS NS NS NS NS NS	145 145 145 145 145 145 145 145 145	Summary: Controlly the messare will have short-term public- effects on lockiversity, population & human health and value and regular anglesise and not specific and the short of the SDA Demonstration of the short of the short of the SDA Demonstration of the short of the SDA Demonstration of the short of the SDA Demonstration of the short of the SDA Depict regular effects to toder short and clinics (charge, but will have no suprised effects on population & human health, position and means the status and no specific short of the SDA Depict. Summary: Controlly the messare with have position information fields to invite and population. Names health, position and means on suprised effects on the remarket of the SDA Depict. Summary: Controlly the messare with have position information and cande tactors and no specific short of the SDA Depict. Summary: Controlly the messare with have position information of registration and the specific short of the SDA Depict. Summary: Lin utility the there will be detect effects on the denset tactors and no specificat short of the SDA Depict. Summary: Lin utility the there will be detect the SDA Depiction of the short of the SDA Depict. Summary: Lin utility the there will be detect the SDA Depiction of the short of the SDA Depiction of the short on the short on policities of the Summary: Lin utility the there will be detect the SDA Depiction of the short on the short on policities of the Summary: Controlly the short on the short on policities of the Summary: Controlly the short will be and the short on short of depiction and no specific of the on-SDA Depiction of the short on the short on the short of depiction and the short on the short on policities of the short on boldwerthy, population & human health on utility and regulation and the short on the short on the short SDA Depiction of the short on the short SDA Depiction on t

Pressure	Sector	Option	Measure No	Measure	Biodiversity, flora & fauna	Population & human	Water	Climate	Culturel	Landscape	Material Assets	Soil	Summery
	All sectors		3	Measures to improve efficiency of water use	902.S	pos.S	pos:S	pos.S	NS	NS	pos.S	NS	Summary. Generally the effects of this measure are positive for all measures other than cultural heritage, landscape and sols where no significant effect is expected.
	Al sectors		2	CAR regulations to minimise impacts on fish nigration	pot-S	pos.S	NS	145	NS	NS	NS	NS	Summary: Generally the effects of this measure are positive for biodiversity and population 8 human health and not significant for the other SEA topics.
	Electricity generation (regulatory)		3	Planning regulations to control abstraction	gos.S	por S	poe.5	2.00	NS	NS	NS	NS	Summary: Generally the effects of this measure will be positive for biodiversity, population & human health, climate factors and water, and not significant for all other SEA topics.
s	Electricity generation (hon-regulatory)		4	Cartpaign awareness to reduce the impact of abstraction for the electricity generation sector	• ·	382	12		•	•		•	Summary: Insufficient information to make a judgement.
todion and forwrepuele	Weter supply activities (regulatory)	Retence@aseine	5	CAR to manage levels of abstraction and use of water	por 5	pos-5	por.S	por 5	NS	NS	115	NS	Summary Clearesh the status of this measure will be positive on bodiversely, population & Juman healty, water and climite factors, will not significant on the researcher of the SRA tipos. However, it is important for deflet the positive reflects are based on the assumption that the CAR contrist on electricon can be underlinent without proceeding on the current tace/homeant basece and existing entitlements to use water. This will need to be characted of the local level.
- Abs	Water supply activities (non-regulatory)		6	Economic incentive to encourage efficient use of water by industry	pos.5	pos.5	pos-S	por.5	NS	NS	\$05.5	NS	Summary: Generally the effects of this measure will be positive for biodiversity population & human health, water, climate factors and insterial assets, not significant for cultural heritage, landscare and not
	Water supply activities (non-regulatory)		7	Campsign awareness to improve efficiency of donestic water use	10	0.00	714.1	64				(4)	Summary, insufficient information to make a judgement.
	Agriculture imigation (non-regulatory)		0	Economic incentive to encourage efficient use of water by impation	pos-S	pos.S	pos S	pee.S	NS	NS	pos.S	NS	Summary: Cenerally the effects of this measure will be positive for biodiversity, population & numen health, water, climate factors and material assets, not significant for cutural heritage, landscase and sol.
	Agriculture irrigation (non-regulatory)		9	Campaign awareness to promote efficient water use		-996	3801	- 22			1.87		Summary: Insufficient information to make a judgement.

Pressure	Sector	Option	Measure No.	Measure	Biodiversity, flora & fauna	Population & human health	Water	Climate fectors	Cultural heritage	Landscape	Material Assets	Sail	Summary
	Historical engineering activities 8 urban development (regulatory)		1	Planning and development controls to reduce flood risk	por S	001.5	por S	pos.S	NS	NS	NS	NS	Summary: Generally the effects of this measure are positive for biodiversity, weter, population a furamenhealth and climate factors, and have no significant effects on output heritage, landscape, material assets and soll.
	Agriculture (regulatory)		2	Planning regulations to reduce the morphological inpacts of the agricultural sector	pot S	por S	por 5	por.S	NS	NS	NS	NS	Summary: Generally the effects of this measure are positive for biodiversity, water, population & human health and climate factors, and have no significant effects on outwal hertage, landscope, material assets and sol.
	Agriculture (non- regulatory)		3	Economic incentives to reduce morphological impacts of agricultural sector	por S	por.5	por.S	por S	NS	NS	NS	NG	Summary: Generally the effects of this measure are positive for biodiversity, water, population & numan health and climate factors, and have no significant effects on cutural heritage, landscase, material avests and soil.
100	Agriculture (non-		4	Campaign/awareness to reduce					1 10-		1988		Summary: Insufficient Information to make a judgement.
of to marging	Forestry (regulatory)	terce Casele	5	Regulations to reduce the impacts of Forestry on morphology	pox.5	por.5	pm.5	pop.S	NS	NS	NŞ	NS	Summery: Generally the effects of this measure are positive to biodiversity, water, population & human health and climate factors, and have no significant effects on outural hertage, between under antended exacts and soil.
Change	Forestry (non- regulatory)	Reto	6	Economic incentives to reduce the impacts of Forestry on morphology	.101.S	p01.5	100-S	pos.S	NS	NS	NS	NS	Summery: Generally the effects of this measure are positive to biodiversity, water, population & human health and climate factors, and have no significant effects on outural heritage, bendiscare, metry a match and coll.
	Forestry (non- regulatory)		7	Campaign awareness/voluntary measures to reduce the impact of Forestry on morphology	- 4		4				102		Summary: Insufficient information to make a judgement.
	Land reclamation (regulatory)		0	Planning regulations to reduce the norphological impacts of land reclamation	poe S	por S	000.S	pos.S	NS	NS	NS	NS	Summary: Generally the effects of this measure are positive for biodiversity, water, population & numan health and climate factors, and have no significant effects on outruil heritage, landscape, moterial assets and soll.
	Land reclamation (hon- regulatory)		9	Campaign awareness/voluitary measures to reduce the impact of land reclamation on morphology	18		- 25	<u>8</u>			302	19	Summary: Insufficient Information to make a judgement.

Pressure	Sector	Option	Measure No.	Measure	Diodiversity, flora & fauna	Population & human health	Water	Climate factors	Cultural heritage	Landscape	Material Assets	Sell	Summary
e species	Recreation, sporting and cultural activities (regulatory)	telere	1	Planning regulations to reduce the impacts of livinsive non-eative species	neg.lpos.	pors	neg.pos.	neg./pos.	NS	pos.S	NS	908.S	Summary: The effects of this measure are positive for population & human health jandscape and soit, not significant too cubural heritage and anaterial assets and positive and medium for biodiversity, clenter factors and water.
ron-rativ	Recreation, sporting and cultural activities (non- regulatory)	renceña	2	Comparing awareness to reduce the impact of invasive non-native species	1.12		1	199					Summery, Insufficient information to make a judgement.
Investive	All sectors	Reg	3	Measures to control the exploitation of salmon and sea trout	.pos:5	NS	NS	NS	NS	NS	NS	NS	Summary: The effect of this measure is positive for biodiversity and not significant for all other SEA topics

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Pressure	Sector	Option	Measure No.	Measure	Biodiversity, flora & fauna	Population & human health	Water	Climate fectors	Cultural heritage	Landscape	Material Assets	Soli	Summary
	Al sectors		1	Reduce diffuse source inputs: non- urban land management issues	201.5	po1.5	por.5	neg./pos.	NS	NS	NS	pos S	Summery. The effects of this measure are positive for biodiversity, voter, soil and population & human health, positive and negative for clawle factors and not significant for the other SEM topics.
	All sectors		2	Reduce diffuse source inputs: provide first line sowerage	p01.5	pat.51	por S	neg (pos.	NS	ngt	NS	NS	Summery. Generally the effects of this neasure are positive for biodiversity and water, negative and positive for climate factor not significant for cultural herbage, material assests and solis and negative for landscape.
	All sectors		3	Reduce diffuse source inputs: reduce sources from built environment	201-3	801.5	pos.5	neg.toos.	NS	NS	NS	pos S	Summary: The effects of this measure are positive for bodiversity, water, soil and population 8 human health, positive and negative for climate factors and not significant for the other SEA toxics.
	All sectors		4	Reduce diffuse source inputs: retroft/improve existing SuDs	201.5	201.5	pon.5	pas.5	NS	NS	pop.5	p05.5	Summary. The effects of this measure are positive for biodiversity, writer, sol, climate fractors, material assets, population 8 human heath and climate factors and not significant for the other SEA topics.
e polition	Agriculture (regulatory)	E REMP	6	Slage, Skirry and Fuel OI (SSAFO) Regulation (SSAFO amendments)	por.5	901.S	por.5	neg./pos.	NS	NS	NS	909.S	Summery. The effects of this measure are positive for biodiversity, water, soil and population 8 human health, positive and regative for climate factors and not significant for the othe SEA topics.
Diffusion	Forestry (non-	Ora	9	Economic Incentive: Scotlish Paral Development Programmes: 2008-2014 (covers agriculture, forestry, land menosement)	544.S	801.5	por 5	neg.lpos.	NS	NS	15	ave 5	Summary. The effects of this measure are positive for bootversity, water, soil and population 8 human health, positive and negative for climate factors and not significant for the other SEA toxics.
	regulatory)		10	CAR 2005 OBRs require Subs for new surface water discharges - 08.5 investment programme, 085 retrofiting of Subs to industrial areas	por S	po1.5	por S	neg (pos.	NS	NS	pot-S	por S	Summery. The othests of this measure are positive for biodivenity, water, soil, neterial assets and population & human health, positive and negative for climate factors and not significant for the other SEA topics.
	Agriculture (regulatory)		11	CAR 2005: GBR - diffuse pollution other relevant CAR requirements	por.S	por.9	poe-S	neg (pos	NS	NG	pos.S	pee S	Summary. Generally, the effects of this measure will be positive for biodiversity, population 5 human health, water, soil and material assets, negative and positive for climate factors and not significant for the remainder of the SEA topics.
	Agriculture (non- regulatory)		12	SEPA catchment-related activities, CMPs and regional roll out in areas at risk of not meeting WFD and protected area standards	pos.S	p01.5	pos.S	neg.lpos.	NS	pos S	p08.5	jies.S	Summary: Generally, the effects of this measure will be positive for tocknersity, population 3 human health, water, sol, landscape and insterial assets, negative and positive for climat factors and not significant for the remainder of the SEA topics

Pressure	Sector	Option	Measure No.	Measure	Biodiversity, flore & feune	Population & human health	Water	Climate factors	Gultural heritage	Landscape	Material Assets	Seil	Summary
	All sectors		3	FPC/CAR: reduce at source (where new standards)	906.S	pos S	gos.S	neg./pos.	NS	NS	NS	NS	Summary: Generally this measure will have a positive short-term effect on biodiversity, water and population & human health, positive and negative effects on climate factors and no significant effect on the remaining SA topics.
	All sectors		2	PPC/CAR: increase treatment (where new standards)	pos-S	pos S	pos.S	neg./pos.	NS	NS	NS	NS	Summary: Generally this measure will have a positive short-term effect on biodiversity, water and population & human health, positive and negative effects on climate factors and no significant effect on the remaining SEA books.
	All sectors		з	IFFCICAR: transfer all or part of discharge (where new standards)	rieg.txios.	neg (pos.	neg (pos.	neg (pos.	NS	NS	NS	NS	Summary: Generally the effects of this measure positive and negative for backverity, flore 5 fearne, population 6 human health, water and climate factors and not significant for the remainder of the SLA topics.
	All sectors		.4	FPCICAR remediation of sediments and/or water (ether by removal or by treating in stu) (where new standards)	reg.(pos.	por S	neg./pos.	neg./pos.	NS	NS	NS	NS	Summary: Generally the effects of this measure positive and negative for biodiverity, fore & tsuna, water and climate factors, positive for population & human health and not significant for the remainder of the SEA topics.
und and a	All sectors		5	PECCAR: change bring or frequency of discharge (where new standards)	pos.5	por S	pos.5	neg.pos.	NS	NS	NS	NS	Summary: Generally this measure will have a positive short-term effect on bodiversity, water and population & furman health, positive and negative effects on climate factors and no pignificant effect on the remaining SEA topics.
	Sewage disposal (regulatory)	6Wb	6	CAR 2005: waste water discharge to rivers, lochs etc.	pos.S	pos S	pos.S	neg./pos.	NS	NS	NS	NS	Summary: Generally this measure will have a positive short-term effect on biodiversity, water and population 8 human health, positive and negative effects on climate factors and no significant effect on the remaining SFA broks.
Poet source	Serwage disposal (regulatory)	Drott	9	Scottish Water Charging schemes: provides incentives for industry to reduce the amount of trade effluent they discharge to server	pos.S	pos.S	pos.S	neg./pos.	NS	NS	NS	NS	Summary: Generally this measure will have a positive short-term effect on biodiversity, water and population 8 human health, positive and negative effects on climate factors and no significant effect on the remaining SEA topics.
	Serwage disposal (regulatory)		10	Habitats Directive review of consents	pos.S	por.S	pos.S	por S	NS	NŠ	NS	NŠ	Summary. Cenerally the effects of this measure will be positive for blockversity, water and climate factors, positive and negative for population 8 human heath and not significant for all the other SEA topics.
	Serwage disposal (regulatory)		11	Water company AMPs/Guality & Standards	pos.S	pos.S	pos.S	neguipos.	NS	NS	NS	NS	Summary: Generally this measure will have a positive short-term effect on blockversity, water and population & human health and climate factors and no significant effect on the remaining SEA toolics.
	Serwage disposal (regulatory)		12	CAR: First time rural serverage programmes	pos.S	pos.S	pos.S	neg.lpos.	NS	neg S	NS	NS	Summary: Generally the effects of this measure are positive for biodiversity and water, negative and positive for climate factors not significant for outural heritage, material assets and solis and negative for landscape.
	Aquacuture/fish farming (regulatory)	1	13	CAR 2005: rate or scale of discharges arising from fish farms	pos.S	pos.S	pos.S	neg./pos.	NS	NS	NS	NS	Summary, Cenerally this measure will have a positive short-term effect on blockversity, water and population & human health, positive and negative effects on climate factors and no sourcements SEA broken.
	Manufacturing (regulatory)	1	14	CAR 2005: Priority substances (2008)	pos.S	pos.S	pos.S	neguipos.	NS	NS	NS	NS	Summary: Generally this measure will have a positive short-tern effect on biodiversity, water and population & human health, positive and negative effects on climate factors and no significant effect on the remaining SIA topics.

Pressure	Sector	Option	Measure	Measure	Biodiversity, Deca & faster	Population &	Water	Circule	Cultural	Landscape	Material	Soil	Summary
	Al sectors		,	CAR control abstraction: use alternative source/telocate abstraction	neg.trot.	neg.gos.	neg.goo.	nog.pos.	NS	NS	out	NS	Summary: Generally the effects of this measure are negative material assets, not significant on cubural heritage, landscase and oots, but soterfolly positive or negative on all other 55 topics depending on whether the water today benefits from measure (current) or is the receiving water body.
	Al sectors		2	CAR control abstraction: inprove water efficiency (e.g. abstraction metches need) or reduce need	poi 5	poo 5	pon.5	poi.5	NS	NS	pos 5	NS	Summary: Generally the effects of this measure will be post on biodiversity, population 8 munan healty, writer, climate of the SRA biologic However, at limit is important to note that the posther effects are based on the assungtion that the CAR control on anti-action on the underlation without important to control on anti-action on the underlation without the CAR user with the SRA based on the assungtion that the CAR control on anti-action on the underlation without important to control on anti-action on the underlatent without predements user water. This with mend to be checked at the local level.
	All sectors		3	CAR control abstraction: reduce leakage	pos.S	pea S	por.S	pos.S	NS	NS	per S	NS	Summary. Generally the effects of this measure will be posit on blodiversity, population 5 human health, water, climate factors and national assets, and not significant on the remain of the S&A togots.
	All sectors		4	CAR control abstraction, control pattern/timing of abstraction (hands off flow/ddliastion of storage(new/existing))	2.66g	pos.S	pos.S	por S	125	NS	1495	NS	Summary Generally the effects of this measure wile by post on blockwerky, orgalized a summary leading the factors a water, orgalize on material aparts. However, it is reported note to the post-biologic effects are based on the assumption II the CAR controls on abstraction can be understainer without impacting on the current supply. Will need to be checked at the efficiencies to use water. This will need to be checked at
	All sectors		5	CAR control abstraction: reduce risk of fish mortality in intakes or screens	pou S	NS	NS	NS	NS	NS	NS	NS	Summary. Concretly the effects of this measure will be post on biodiversity, but not significant on the remainder of the Sil
	Al sectors	3	6	CAR control abstraction: provide appropriate baseline flow regime downstream of inpoundment	pon S	p06.5	108.S	por.5	125	NS	1463	NS	Summary: Controlly the effects of this measure will be post on loadiversity, population it Aurian health, water and clinis flattors, negative on material association and to tagnification to remarked of the ISEA logics. However, it is important to not flat the poster effects are based on the assurption that CAR controls on addition can be understained write- mediate methods with the second base and evalua- ent them and the second base and evaluation to logical and the second base and evaluation local level.
	All soctors		7	CAR control abstraction: provide higher flows as appropriate to enable fish nigration downstream of impoundment	pos Š	pos S	pos.S	pos Ŝ	NŞ	NŜ	reg S	145	Summary: Coverably the effects of this measure will be post on stockversity, postation & human humans, water and class factors, negative on material assets and not significant on the remarked or the SEX factors. However, it is imported to not but the posteve effects are based on the assurations that impacting on the current supply/itemand balance and exist entitlements to use write. The will meat to be checked at its local lawer.
	Al sectors		8	CAR control distraction: provide higher flows as appropriate to maintain/improve habitat downstream of impoundment	pos S	pos S	pos.S	pos S	NS	NS	neg S	NS	Summery: Generally the effects of this nessure will be post on look-net by postdon's Alwane health, where and clear factors, registries on meterial assets and not significant on the treananter of the SEA topics. However, it is reported to not that the postby effects are based on the assuregion that but impacting on the current supply-tensional balance and exist efficiencies of the current supply-tensional balance and exist efficiencies of the current supply-tensional balance and exist efficiencies of the current supply-tension balance and exist local lives.
	All sectors		9	CAR control abstraction: provide for fish access between reservoir and tributories	p00.S	pos S	NS	NS	NS	NS	NS	NS	Summary, Generally the effects of this measure will be posit on biodiversity, population & human health and not significant the remainder of the SEA topics
	All sectors		10	CAR control abstraction: reduce impact on DO levels downsteam of inpoundment	poo S	pos.S	pos.S	poe S	NS	NS	neg S	NS	Summary Generally the stretch of this measure will be post on biodiversity, population & human healty, where and clima factors, negative on meterial assets and not significant on the nemander of the SLA topica. However, it is important to not that the postive effects are based on the assurption that the CAR context on subtraction can be undertaken without impacting on the current supplystemend taking and to be entitient to use water. This infeed to be checked at the
and flowroguidation	All sectors	rad RB4P	11	CAR control abstraction: reduce inpact on temperature conditions downstream of impoundment	pos S	pos S	poo.S	poo S	NS	NS	neg S	NS	Summary: Operating the effects of this measure will be post on isoderstrip, population & human heath, water and clina factors, negative on intervisi assets and on to syndroter to the remander of the SEA togac, however, it is important to not that the poster effects are based on the assurgation that CAR controls on addressention can be undertainen without employing on the corrects suggestrement bottine; with course and the start to use water. This will need to be checked at the local level.
Activation	Al sectors	9	12	CAR control abstraction: appropriate management of rate and range of artificial drawdown	pon S	pos S	pos.S	pos.S	NŠ	NS	neg S	NS	Dummery: Overeally the effects of this necessare will be post on biodiversity, possibility is human health, where and class factors, negative on material assets and not significant on the nemaniand of the SEA biosci. Abover, it is important to not that the nostive effects are based on the assurgation that built CAR controls on saturation can be underlaken, without importing on the current supply/Alemend balance and satisfi- ettement to use local without to be checked at
	Al soctore		13	CAR control abstraction: appropriate management of seasonal variation of water level changes behind the impoundment	pos S	pos S	pos-S	pos S	NS	NS	neg S	NS	Currency: Coverably the effects of this nessus will be post on biodiversity, cogative on material senses and not significant on the remarked or the SEA logics. However, it is important to not both the posted effects are toxed on the astrongeouthable CAR orderists on admitscion can be underkelaw without reparating on the current supply/demot balance and estima- entements to use writer. The will need to be checked at the local laws.
	All sectors		14	CAR control abstraction: appropriate baseline flow regime downstream of impoundment	pos S	pos S	pos.S	pos S	NS	NS	neg S	NS	Summary: Generally the effects of this nearus will be post on lisolwershy, payables on national health, where and clean factors payables on national assets and net symplicant on the health be posted effects are beaution in the strangehealth the LAR controls on addression can be understand without impacting on the current supplyinghead beautions and exist entitienests to use water. This will need to be checked at the local ways.
	Electricity generation (regulatory)		15	CAR 2005: SBPA controls on licensed hydropower schenes	pos S	pos S	por.S	pos S	NS	NS	neg S	NS	Summary. Concerding the effects of this measure will be post on tool/versity, population. A human heads, water and class factors, and not significant on the remainder of the SEA togother However, it is important to note that the positive effects an based on the assumption that controls control undertaken without impacting on the current supplykelement balance, existing entitiements to use water and pood ecological discussionersites. The water ends to checkel at the local hu-
	Electricity generation (regulatory)		16	CAR 2005: Fishery (Electricity) Committee advice - fisheries protection via SEPA licences	pos.S	por S	NS	NS	NS	NS	NS	NS	Summary: Cenerally the effects of this measure will be posit on biodiversity and population 8 human health, and not significant on the remainder of the SEA topics.
	Water supply activities (regulatory)		17	CAR 2005: levels of abstraction, management of dams and efficient use of water	pos S	p04 S	pos.S	pot S	NS	NS	neg S	NS	Euroney: Concerdig the effects of this nessure wile post on isodversity, population 3 Annuen healty, where and client factor, registree in netwis assets and not significant on it remarkers of the SEA basic. Network: It is important to not that the postive effects are based on the assurghism that the CAR control on antitration can be undertaken without impacting on the current supply/strend biamics and suita- retitienests to use water. This inmedia to enclosed at the
	Al sectors		19	CAR 2005: SEPA imposes controls on volume of volter find can be addracted and the time over which it can be abstracted, through CAR	poo S	p00 S	pos.S	pos S	NS	NS	neg S	NS	<u>Dominery Concerning</u> the effects of this measure will be pos- borniary Concerning the effects of this measure will be pos- where, negative native material setting and the setting as weller, negative contential assets and not displicated on the researchest of the SEA topics. However, it is important to not that the positive effects are based on the saturation that CAR contrain on addression can be understainer without inguinding on the understained basines and assist entitiement to sure water. This will need to be checked at the localitive.
	All sectors		20	Revision of Catchment Abstraction Management Strategies	peo S	poo S	poo.S	pos S	NS	NS	neg S	NS	Summary: Generally the effects of this measure will be post on biodynersty, population & Tuman health, cliented factors a water, negative combarrial assets and and significated on remained of the SEA topics. It is important to note that the popular effects are based on the sourceing on the ourn supplyidematibation can be underkisten without insecting on the ourn supplyidematibation can be underkisten and based on the ourn supplyidematibation. This will need to be checked
	Agriculture impation (regulatory)		21	Restoring Sustainable Abstraction Programme	pce.5	p00.5	poe.S	poe S	NS	NS	neg S	NŞ	Summiny: Connexity the effects of this measure will be post on biodiversity, spoulition is truncal health, clanate factors a writer, registry on omderial assess and not significant on the remainer of the SEA basics. It is imported to note that the positive effects are based on the assumption that control ald/matchin can be undertaken without importing on the cours upply/demand basince and assisting efficient to use well

Pressure	Sector	Option	Measure No.	Mexaure	lliodiversity, flore & fauna	Population & human health	Water	Climate fectors	Cultural heritage	Landscape	Material Assets	Soil	Summery
	All sectors		,	Inprove modified habitat, removal of barriers or provision of mechanisms to enable fish migration	por S	por.S	por.S	potS	140.5	reg.tost.	1993	NS	Summary: Generally the effects of this measure are positive for biodiversally, population S human health, writer and climate factors, negative for cultural heritage and insterial assets, positive and negative for landscape and not significant for solis
	All sectors		2	inprove modified habitat: removal of engineering structures	gos.S	pos.S	pos.S	neg.lpos.	. NO 5	neg.(pos.	. mg d	NS	Summary: Cenerally the effects of this measure are positive to biodiversity, population & human health and water, negative to outural heritage and midenial assists, positive and negative for cliented factors and landicage and not significant for color.
Abooutue u	All sectors		3	Improve modified habbit improvements to condition of channel/bed and/or banks/shoreline	pos.S	pos.8	pot-S	NS	NS	200.5	NS	poe.S	Summary. Operably the effects of this measure are positive to all measures but climate factors, cutural heritage and materia assets where no significant effect is expected.
	All sectors	RBMP	4	Improve modified habitat, improvements to condition of riparian zone and/or wetland habitato	por S	pert.S	pot.5	pot.5	NS	pos.S	NS	por.5	Summary: Generally the effects of this measure are positive for all SEA topics other than cultural heritage and insterial assets where no significant effects are expected.
Changes to	All sectors	Draf	s	Improve modified habitat, changes to sediment management maintenance regime	pee.S	neg.lpos.	001.5	NS	NS	NS	por.5	1001.5	Summary. Generally the effects of this measure are positive to biodiverty, water and material assets, positive and negative to population & human heathr, negative for soils and not significan for the retrander of the SEA forcid.
	Historical engineering activities & urban development	1	6	CAR 2005: CAR prevent new damage to the water environment from engineering works on rivers (including	pos.8	pos.8	pos 5	NS	NS	NS	NS	NS	Summary: The effects of this measure are positive for biodiverity, population 5 human heath and water and not significant for the remainder of the SEA topics.
	Agriculture (regulatory)	1	9	CAR 2005: CAR prevent new damage to the water environment by management a works on rowers	pos.S	pos S	por S	NS	NS	NS	NS	NS	Summary: The effects of this measure are positive for biodiverity, population 8 human health and water and not southcard for the remainder of the SEA toxics.
	Forestry (regulatory)		10	CAR 2005: CAR prevent new damage to the water environment from engineering works on rivers (including matteriance regenes)	pos S	pee S	por 5	NS	NS	NS	NS	NS	Summery: The effects of this measure are positive for biodiverity, population 8 human heath and water and not significant for the remainder of the SEA topics.

Pressure	Sector	Option	Measure No.	Measure	Biodiversity, flera & fauna	Population & human health	Water	Climate factors	Cultural heritage	Landscape	Material Assets	Sell	Summary
	All sectors		1	Control invasive non-native species: contain to prevent spread	pot.S	por.S	poz.≤	NS	NS	pos.S	NS	pos S	Summary: The effects of this measure are positive for biodiversity, population & human health, water, landscape, and sols, and not significant on the other SEA topics.
	All sectors		2	Control investive non-native species: eradicate in stu	neg /pos	pes.S	neg./pos.	NS	NS	pere S	NS	pop.5	Summary: The effects of this measure are positive for population & human health, landscape and soils, negative and positive for biodiversity and water, and not significant on the dher S&A toace.
re species	All sectors	9	3	Control investive non-mative species: capture & remove	neg./bos.	pos.S	neg Axos.	NS	NS	pos.5	NS	1015	Summary. The effects of this measure are positive for population & human health, landscape and axis, negative and positive for biodiversity and water, and not significant on the other SEA toolcs.
den-note	Al sectors	Dunt RB		Control invasive non-native species: prevent introduction	por S	por S	pos.S	NS.	NS	por S	NS	por S	Summary: The effects of this measure are positive for biodiversity, population & human health, water, landscape, and soils, and not significant on the other SEA topics.
Invasive	All sectors		6	Fish Health Directive - limit fish disease & non-native species introductions, audt high risk movements, enforce against illegal activity	pot S	801.5	NS	NS	NG	NS	NS	NS	Summary. The effects of this measure are positive for biodivenity and population 8 human health and not significant on the other SEA topics.
	All sectors		6	Fish Heath Directive - limit fish disease & non-native species introductions, audit high risk movements, enforce against illegal activity	pos S	2015	NS	NS	NS	NS	NS	NS	Summary. The effects of this measure are positive for biodiversity and population & human heath and not significant on the other SEA topics.

Closing the Gap

All sectors

10

Eel Limitation Orders to control legal exploitation of eels/elver

Pressure	Sector	Option	Messu	re No. Messure	lliodivers flora & fa	Population una health	& Water	Climate factors	Culture heritage	/ Landscape	Material Assets	Sol	Summary
Diffuse Polition	Agriculture (non- regulatory)	Closing the Gap	,	Additional investment in catchment related activities CMPs over successive plan cycles	and posts	2015	000 S	neg.(pos.	NS	2015	pos.5	p64.5	Summary, Generally, the effects of this measure will be positive for biodiversity, population 8 human health, water, sol, landscape and intervial assets, negative and positive for climat factors and not significant for the remainder of the SEA topics
Pressure	Sector	Option	Measure No.	Measure	Biodiversity, flore & faune	Population &	Water	Climate	Cultural	Landscape	Material	Soil	Summary
Point source polation	Sewage disposal (regulatory)	Cosing the gap	1	Scottish Government: low P detergents	pas S	pos.S	por.S	neg.lpos.	NG	NS	NS	NŞ	Summary: Generally this measure will have a positive short-let effect on blockwersty, population å human heath and water, negative and positive effect on climate factors and no significant effect on the remainder of the SEA topics.
Pressure	Sector	Oction	Measure	Measure	Biodiversity,	Population &	Water	Climate	Cultural	Landscape	Material	Sol	Summury
	All sectors		No.	Inprove modified habitat: removal of barriers or provision of mechanisms to enable fish migration	por 5	pop.5	per S	pon.5	neritage	neg (bos.	ma.S	NS	Summary: Generally the effects of this measure are positive to biodiversity, population 8 human health, water and climate factors, negative for cultural heratoge and not significant for solar positive and negative for landscape and not significant for solar
	All sectors		2	Improve modified habitat: removal of engineering structures	266 S	pos.S.	por S	neg.ipos.	1995 See	neg./poe.	1405	NS	Summary: Generally the effects of this measure are positive to biodriversity, population & human health and woter, negative for cultural heritage and neterial assets, positive and negative for clineal extors and Indexicospe and not significant for sols.
Alapha	All sectors	8	э	Inprove modified habitat inprovements to condition of channelibed and/or banks/shoreline	2005	900.S	2.000	NS	NS	pos.5	NS	por.5	Summary: Generally the effects of this measure are positive to all measures but climate factors, cultural heritage and material assets where no significant effect is expected.
per to mo	All sectors	long the	4	Improve modified habitat Improvements to condition of riperian zone and/or wetland habitats	pos S	por S	por S	pos.S	NS	p06.5	NS	p58.5	Summary: Generally the effects of this measure are positive fo all SEA topics other than cultural heritage and material assets where no significant effects are expected.
Chan	All sectors	U	5	Inprove modified habitat: changes to sediment management maintenance regime	por S	neg.lpos.	pos S	NS	NS	NS	pos.5	roop S	Summary: Generally the effects of this measure are positive for biodiverity, welfer and indexial assets, positive and negative to population 8 human health, negative for solis and not significan for the remainder of the SEA topics.
	Historical engineering activities 8 urban development		6	Restoration policy for taking forward restoration work			00						Summary Insufficient information to make a judgement.
	Agriculture (regulatory)		7	Restoration investment to remove ablandoned structures such as old embaniments	poz. 5	pot.S	pos.S	neg.(poz.	NS	NS	NS	NS	Summary: Generally the effects of this measure are positive for biodiversity population and human and water, positive and negative for clinate factors and not significant for the remainde of the SEA topics.
Pressure	Sector	Option	Measure No.	Measure	Biodiversity, flora & fauna	Population & human	Water	Climate	Cultural heritage	Landscape	Material Assets	Soil	Summary
species	All sectors	8	1	Possible policy mechanisms: additional programme of work (prevention, control, surveillance)						2		3	Summary: Insufficient information to make a judgement.
non-rative	All sectors	sing the g	2	Marine Protected Areas (MPA) national commitment to achieving a coherent network of MPAs to	\$01.5	pot.5	NS	NS	NS	NS	NS	NS	Summary: The effects of this measures are likely to be positive for biodiversity 8 population and human heath and no significan for the remainder of the SEA topics
		1 42 1											

Summary: Insufficient information to make a judgement

APPENDIX E HABITATS DIRECTIVE ASSESSMENT

HABITATS REGULATIONS ASSESSMENT Screening Assessment

Scotland and Solway Tweed River Basin Management Plans National Measures

October 2008



HABITATS REGULATIONS ASSESSMENT Screening Assessment

Scotland and Solway Tweed River Basin Management Plans National Measures

date:	14 October 2008						
prepared for:	Scottish Environment Protection Agency (SEPA) and the Environment Agency (EA)						
prepared by:	Toney Hallahan (Enfusion) Ruth Thomas (Enfusion)						
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- 1 INTRODUCTION
- 2. SCOTLAND AND SOLWAY TWEED RBDS & EUROPEAN SITES
- 3. METHOD
- 4. KEY FINDINGS
- 5. CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER WORK

REFERENCES/ BIBLIOGRAPHY

TABLES:

 Table 1: Excerpt from HRA Screening Assessment Table (National measures-Scotland & Solway Tweed)

ANNEXES:

Annex 1: HRA Screening of National RBMP measures (Scotland & Solway Tweed)

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1. INTRODUCTION

- 1.1 This report has been prepared by Enfusion for SEPA/EA to inform the preparation of the Scotland and Solway Tweed (ST) River Basin Management Plans (RBMPs), and to assist in meeting the requirements of the European Habitats Directive and Habitats Regulations (England and Wales) and Habitats Regulations (Scotland). This Habitats Regulations Assessment (HRA) Screening report addresses the likely significant effect on designated European Sites of implementing the policies and proposals of the National measures contained in the RBMPs.
- 1.2 The purpose of the RBMPs is to set the framework for protecting and enhancing the water environment from 2009 to 2015, with the aim of achieving 'good status' for surface and ground water bodies by 2015, in accordance with the European Water Framework Directive. Specific overarching objectives of the RBMPs are to:
 - prevent deterioration and enhance the condition (status) of aquatic ecosystems, including wetlands and groundwater;
 - promote sustainable water use;
 - reduce pollution;
 - contribute to the mitigation of floods and droughts.
- 1.3 National, regional and local measures are being prepared for the Scotland and Solway Tweed River Basins. This report provides a high level screening assessment of the national Draft RBMP and Closing the Gap measures contained in the two RBMPs, highlighting where further work may be required. This will help to guide the HRA screening of more specific regional and local measures, when further detailed information is available as to the application of those measures.
- 1.4 Habitats Regulations Assessment is also commonly referred to as Appropriate Assessment (AA) although any requirement for AA is first determined by an initial 'screening' stage.

Requirement for HRA:

- 1.5 The European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna (the Habitats Directive) protects habitats and species of European nature conservation importance. The Habitats Directive establishes a network of internationally important sites designated for their ecological status. These are referred to as Natura 2000 sites or European Sites, and comprise Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) [which are classified under the Council Directive 79/409/EEC on the conservation of wild birds, the 'Birds Directive'].
- 1.6 Article 6 (3) of the Habitats Directive require AA to be undertaken on proposed plans or projects which are not directly connected with or necessary for the management of the site but which are likely to have

a significant effect on one or more Natura 2000 sites either individually, or in combination with other plans and projects.¹¹ This requirement is transposed into law through Regulation 48 of the Habitats Regulations (The Conservation (Natural Habitats, & c.) (England and Wales) Regulations 2004) (as amended) and Regulation 48 of the Conservation (Natural Habitats, & c.) (Scotland) Regulations 1994 (as amended). Government guidance requires that Ramsar sites (which support internationally important wetland habitats) and are listed under the Convention on Wetlands of International Importance (Ramsar Convention 1971) are included within HRA/AA. The regulations require that candidate European sites also be considered.

- 1.7 In accordance with Article 6 (3) the competent national authorities must agree to the plan or project only after having ascertained that it will not adversely affect the integrity of European sites. The RBMPs for Scotland and the Solway Tweed must therefore be subject to a screening process in order to determine if the plans are likely to have a significant effect on one or more European sites.
- 1.8 The purpose of HRA/AA is to assess the impacts of a plan or project, in combination with the effects of other plans and projects, against the conservation objectives of a European Site to see if it can be ascertained that it would not adversely affect the integrity¹² of that site. Where this can not be ascertained, alternative options or mitigation measures should be examined to avoid any potential damaging effects. The scope of the HRA/AA is dependent on the location, size and significance of the proposed plan or project and the sensitivities and nature of the interest features of the European sites under consideration.
- 1.9 The purpose of this report is to determine whether an Appropriate Assessment is required and to guide further assessment of regional and local measures. Broader environmental/ habitats issues that are related to but are not directly implicated in HRA requirements, are referred to in the Strategic Environmental Assessment reports produced alongside the River Basin Management Plans. Where possible, the findings of the SEAs have been considered in undertaking this screening report. [Even if, at the River Basin management stage it can be ascertained that the plan will not adversely affect the integrity of the site further consideration under regulation 48 will be required at each step of the process.]

Deleted: the

¹¹ Determining whether an effect is 'significant' is undertaken in relation to the designated interest features and conservation objectives of the Natura 2000 sites. If an impact on any conservation objective is assessed as being adverse then it should be treated as significant. Where information is limited the precautionary principle applies and significant effects should be assumed until evidence exists to the contrary. [This reflects the SG guidance – Assessing Development plans ...2006 – which states at paragraph 12 "As a guide, any element of a plan which has the potential to affect the interests of the site should initially be considered significant and an appropriate assessment undertaken."]

¹² In England, Integrity is described as the sites' coherence, ecological structure and function across the whole area that enables it to sustain the habitat, complex of habitats and/or levels of populations of species for which it was classified, (ODPM, 2005).

2. SCOTLAND AND SOLWAY TWEED RBDS & EUROPEAN SITES

2.1 With a total of 483 European sites in the two Districts, and given the strategic nature of this exercise, it is not practicable to provide detailed information about individual sites; a summary is provided below and further detailed information is available at the Scottish Natural Heritage website: <u>www.snh.org.uk</u>.

Scotland:	Solway Tweed:
240 SACs	27 SACs
152 SPAs	10 SPAs
46 Ramsar sites	8 Ramsar sites

2.2 Following is a description of the 2 River Basin Districts, including general information about the European sites within the RBDs.

Scotland RBD

- 2.3 The Scotland RBD covers around 113,920 km2 of land and water from Shetland in the north to Glasgow, Ayr and Edinburgh in the south. Around 4.8 million people live in the District, mostly in the central belt between Glasgow and Edinburgh. The landscape is varied – from the mountainous Highlands and the extensive coastline to the urban and industrial areas around Glasgow and Edinburgh. The Highlands are mountain ranges of sandstone and granite, rising to Britain's highest mountain, Ben Nevis. Much of the Scottish uplands are characterised by large tracts of blanket bog which are more extensive in Scotland and Ireland than elsewhere in Europe. The oceanic climate and varied topography of the western Highlands and Islands give rise to a diverse and rich botany. The district supports important habitats and wildlife including 235 water dependent Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).¹³
- 2.4 Overall, the District has fewer environmental problems than the rest of the UK. However, there are significant environmental problems in parts of the District in particular around the larger population centres of Glasgow and Edinburgh. Although many large rivers and estuaries, such as the Clyde in the west and the Forth in the east have seen marked improvements over the last 20 years, water quality problems remain. Land use in the north eastern part of the District is largely agricultural, which can give rise to a range of environmental problems including diffuse pollution. The Scotland RBD has a relatively high rainfall in relation to the rest of the UK, particularly in the west. About 90% of drinking water supplies come from surface waters, the remainder from groundwater.

¹³ MWH/, Sistech, Enfusion for SEPA/EA (July 2008) Scotland River Basin Management Plan Environmental Report

Solway Tweed RBD

- 2.5 The Solway Tweed RBD crosses the border between Scotland and England. It covers an area of around 17,500 km2 (3,800 km2 of which falls in England) and has approximately 450,000 people living within its borders. The landscape varies from rolling hills in the Southern Uplands to rocky shorelines and sandy beaches along the west coast. The Southern Uplands are drained by rivers in the west (the Nith, Annan and Esk) which discharge to the Solway Firth estuary. The River Eden rises in the northern Pennines and eastern Lake District fells and flows north to the Solway estuary. The River Tweed drains the eastern part of the District into the Tweed estuary. Land use in the district is mainly agriculture, forestry and woodlands. The rural nature of the District means that it supports important habitats and wildlife, including 36 water-dependent Special Areas of Conservation (SAC) and Special Protection Areas (SPA), notably the River Eden and tributaries and the Solway estuary. The District has a moderately high rainfall relative to the rest of the UK, with rainfall being higher in the west than in the east. Around 90% of the water supply for the District comes from surface waters, the remainder from groundwater.14
- 2.6 HRA requires consideration of all European sites that have the potential to be impacted by the plan, it is not confined to those sites lying within the plan boundary. When undertaking the screening, consideration has been given to whether there are further impact pathways that may result in impacts outside of the plan boundaries. It was considered that this was unlikely, particularly given that plan boundaries are based on river catchments- any downstream impacts would be captured within consideration of the plan.

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¹⁴ MWH, Sistech, Enfusion for SEPA/EA (July 2008) Solway Tweed River Basin Management Plan Environmental Report

3. METHOD

Introduction

- 3.1 The undertaking of HRA of River Basin Management Plans is a new process, and there is no precedent available to inform this work. Likewise, there are few examples of HRA being carried out on highlevel strategic plans of this nature. Therefore the development of a method has required an iterative process, informed by the continued development of the RBMPs themselves and discussion with the project team and with SEPAs Conservation Policy team. Experience in undertaking HRA of land use plans across England and Wales, and in undertaking the SEA of the RBMPS in England has helped to inform the process, as have discussions with the Scottish Executive Team undertaking HRA of the Scotland National Planning Framework. Alongside good practice, we have referred to a range of guidance throughout the process; however it was considered that a bespoke method would be required. A list of documents consulted is provided in the reference list at the end of this document.
- 3.2 Habitats Regulations require the plan making/competent authority to consult the appropriate nature conservation statutory body. Scottish Natural Heritage (SNH) has been informed through contact with the SEPA/ EA Project team and has provided comment on this report. SNH will be consulted on the scope of any additional work required.

Scoping/initial consideration of potential effects

- 3.3 In developing the method, an initial stage involved considering the likely effects of a plan of this nature. The main intention of the measures in the RBMPs is to prevent deterioration and enhance the condition of aquatic ecosystems, in line with the Water Framework Directive, whose objectives are closely aligned with the Habitats Directive. Due to these synergies, it was considered that the overall effect of the national RBMP measures on European sites would be positive.
- 3.4 However, it was considered that there may be instances whereby the measures, or a combination of measures (either alone or in-combination with other plans and programmes) could have potentially significant effects at sites as an unintended consequence of the plan. For example in allowing the natural retreat of a coastline, the result could be inundation or saline flooding of an estuarine site which could adversely affect the conservation objectives of the site. Likewise, physical modifications may lead to changes in water flow which can impact on sites that are sensitive to water-levels. These effects may not only be confined to water-sensitive sites. For example, the fencing of areas and removal of cattle may affect grassland sites dependent on particular grazing regimes.

3.5 This is consistent with the findings of the Strategic Environmental Assessment of the RBMPs, which found that there were likely to be positive and negative effects on biodiversity:

'There are a number of measures that have both positive and negative effects on biodiversity, flora & fauna. They include the remediation of water and sediment, regulating the flow regime and reducing the impacts of invasive non-native species. These measures provide benefits in a targeted water body, but could have negative effects in another. For example, while the remediation of sediment and water is generally positive for the water body undergoing remediation (e.g. improves biodiversity, amenity value, ecological condition), there are potential negative effects associated with the disposal of contaminated sediment, while the disturbance of contaminated sediment may release toxic metals into the water body to be carried downstream. Further, while measures to regulate flow in a water body are generally positive for the water body concerned (e.g. improves biodiversity, amenity value and ecological condition), it may require the identification of new sources of supply or an alternative supply source to meet the current demand. The effect of the measure may be to simply shift the locus of the problem to a new area/water body. The negative effects of both of these measures can be largely mitigated by finding an appropriate local/regional solution that considers the entire water cycle such as a Water Cycle Strategy (WCS).

The national regulatory measures to deal with invasive non-native species in the Solway Tweed RBD are the GB Framework Strategy and Implementation Plans to reduce the impacts of invasive non-native species. The environmental effects of this measure are positive for biodiversity, flora & fauna where the invasive non-native species infestation is being controlled. However, there are risks that areas of new infestation may be created in transporting the invasive non-native species to disposal points, while the use of herbicides to eradicate invasive non-native species may also eradicate native plants if used injudiciously(although this is subject to regulation to avoid such impacts).¹⁵

- 3.6 It was therefore considered that it wasn't possible to state uniformly that all effects of RBMP measures will be positive for all European sites. It was considered that the HRA should instead focus on identifying those measures that have the potential to cause unintended effects and cumulative effects.
- 3.7 Given the strategic and non-location specific nature of the national measures, it was not considered possible to assess the impact of the measures on specific European sites at this stage. Rather, professional judgement, alongside the findings of the SEA of the measures was used in the assessment to rule out measures that could not have a possible effect on any European sites across both the RBDs, regardless of the site's location. The process adopted is described below.

Initial Screening exercise

3.8 A number of the proposed measures are subject to separate licensing activities, for example under CAR (Controlled Activities Regulations). These measures were all screened-in to the assessment. Where such

¹⁵ MWH, Sistech, Enfusion for SEPA/EA (July 2008) Solway Tweed River Basin Management Plan Environmental Report

activities are subject to individual plan or project level HRA this was noted in the final column of the assessment table in Appendix 1.

3.9 The national measures were subject to an initial screen. The aim of this exercise was to identify those measures that will not have an effect on European Sites, leaving a reduced list of measures that may require further assessment. This approach was informed by emerging practice in the AA/HRA of land use plans in the UK.¹⁶ Measures were screened out of the process if they were considered to meet the following criteria:

Criteria A: No-effect measures

- 3.10 Measures that are considered to have no likely effect, as they will not lead directly to action. These measures may relate to:
 - Campaign/awareness raising
 - Partnerships/publicity/forums
 - Monitoring
 - 'Review and assess' measures

Criteria B: Positive measures

- 3.11 Measures that will lead to an improvement of European sites, with no predicted adverse effects. A range of activities were identified that would result in improved water quality, and would be highly unlikely to yield unintended negative effects. Often these measures related to a reduction of pollutants or sediments at-source. These measures included:
 - Measures to reduce point-source or diffuse pollution through controls on supply/use of polluting substances
 - Measures that promote sustainable drainage systems
 - Measures to reduce sedimentation and other pollution from development/construction impacts
 - Measures to reduce pollution from aquaculture
 - Measures to reduce source pollution from mining
 - Measures that reduce stress on the water environment
- 3.12 The findings of the Screening for both River Basin Districts are recorded in matrices, listed by sector. A column records whether each measure requires further consideration for HRA, and a further column records a justification for the screening. Where the impacts are unknown, this is also recorded.

¹⁶ The Assessment of Regional Spatial Strategies and Sub-regional strategies under the Provisions of the Habitats Regulations: Draft (David Tyldesley Associate, for English Nature, 2006).

Option 2: RBMP measures	Option 3: Closing the gap	HRA Screen in? Yes , no, or ?	Reason	Is measure already subject to HRA (screened-in measures)?
CAR 2005: CAR prevent new damage to the water environment from engineering works on rivers (including maintenance regimes)		YES	Licensing activity	Yes-Project level HRA required
FEPA (Food and Environmental Protection Act)		?	unclear measure	
Floods Directive: Development of FRMPs		YES	FRMPs may affect European sites, however these would be subject to HRA	Yes-Plan level HRA required of FRMPs
	Restoration regulations: new funding frameworks for taking forward restoration work	NO	Funding only- no direct effect	
CAR 2005: CAR prevent new damage to the water environment by engineering works on rivers		YES	Licensing activity	Yes-Project level HRA required

KEY:	
NO	Screened-out- no further screening or assessment required
YES	Screened-in- further screening or assessment may be required
?	Uncertain- dependent on further detail re: application of measure

Table 1: Excerpt from HRA Screening Assessment Table

Plans and Programs- in-combination effects

3.14 It is a requirement of Article 6(3) of the Habitats Directive that HRA examines the potential for plans and projects to have a significant effect either individually or 'in combination' with other plans, programmes & projects (PPPs). A pragmatic approach to this task is required given the extensive range of PPPs that may affect the European sites within the plan areas. At this screening stage, the key types of plans/projects that have the potential for in-combination

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effects have been considered and are listed below. Generally HRA is required of these plans, and the results of available HRAs would help to inform the Appropriate Assessment.

The types of PPPs to be considered in the Appropriate Assessment may include:

Plan, programme or project	Is HRA required?
 National Planning Framework (Scotland) 	Yes, currently underway
 Regional Spatial Strategies (England) (North East RSS and North West RSS) 	Yes, completed
 Energy strategies and projects, for example wind farm proposals 	Yes, including project- level HRA
 Transport, Minerals and Waste Local Development Frameworks. 	Yes
 Local Development Frameworks (England) Regional Structure Plans(Scotland) Local plans (Scotland) 	Yes
 Catchment Abstraction Management Plans Shoreline Management Plans 	Yes

4. KEY FINDINGS

4.1 On the whole, the effects of the two River Basin Management Plans on European sites would be overwhelmingly positive, resulting in improved conditions for aquatic ecosystems. The majority of measures for both RBMPs met either Criteria A (would have no effect) or B (were likely to have a positive effect only), therefore no further HRA assessment of these measures is considered necessary. These are listed below:

National RBMP Measures: Screened-out of assessment process.

National Measures assessed as having no potential effects/ no further assessment required:

- Reduce diffuse source inputs: non-urban land management issues
- Reduce diffuse source inputs: reduce sources from built environment
- Reduce diffuse source inputs: retrofit/improve existing SuDs
- CAR 2005: GBR diffuse pollution
- CAR 2005: GBRs for diffuse pollution
- CAR 2005: GBRs require SuDs for new surface water discharges Q&S investment programme, Q&S retrofitting of SuDs to industrial areas
- PPC/CAR: reduce at source (where new standards)
- Scottish Water Controls (Water Industry Scotland Act): trade effluent discharges to sewer
- Scottish Government: use of polluting substances in products
- Scottish Government: low P detergents
- Scottish Water Charging schemes: provides incentives for industry to reduce the amount of trade effluent they discharge to sewer
- Habitats Directive review of consents
- Water company AMPs/Quality & Standards
- CAR 2005: rate or scale of discharges arising from fish farms
- CAR 2005: Priority substances (2008)
- Campaign awareness raising and promotion of best practice: HAZREFD - reduce use of hazardous raw materials
- Campaign awareness raising and promotion of best practice: SEPA minimising water pollution
- Non-coal Restoration Regulations: The SG is considering restoration regulations to give SEPA powers to intervene to treat discharge from non-coal mines
- Economic incentive: additional funding for coal authority to treat polluting discharges from coal mines
- Investment programmes: additional funding for SEPA to initiate work to provide treatment for polluting non-coal mines
- CAR control abstraction: reduce leakage
- CAR control abstraction: reduce risk of fish mortality in intakes or screens
- CAR control abstraction: provide higher flows as appropriate to enable fish migration downstream of impoundment
- CAR control abstraction: provide higher flows as appropriate to maintain/improve habitat downstream of impoundment
- CAR control abstraction: reduce impact on DO levels downstream of

impoundment

- CAR control abstraction: reduce impact on temperature conditions downstream of impoundment
- CAR control abstraction: appropriate management of rate and range of artificial drawdown
- CAR control abstraction: appropriate baseline flow regime downstream of impoundment
- CAR 2005 Charging schemes: incentives for efficient water use by industry
- CAR 2005: SEPA imposes controls on volume of water that can be abstracted and the time over which it can be abstracted, through CAR
- Restoration regulations: new funding frameworks for taking forward restoration work
- EIA
- Control alien species: capture & remove
- Control alien species: prevent introduction

Additional national measures applied to Solway Tweed

- CAR 2005: GBR diffuse pollution, other relevant CAR requirements
- Fish Health Directive limit fish disease & non-native species introductions, audit high risk movements, enforce against illegal activity
- Alien Species Regulations to control non-native fish in aquaculture
- Promote / encourage uptake of agri-environment schemes in catchments most at risk
- Co-ordination of partnerships and regulatory activities that give advice to / inspect the agricultural sector to ensure activities it is targeted at WFD priority areas
- Review and improve Environmental Flow Indicators
- Investigations to determine cost effective measures to manage abstraction to support Good Ecological Status
- Investigations to determine cost effective measures to manage abstraction to support Good Quantitative Status
- Investigations to determine cost effective measures to manage abstraction to support Good Ecological Status
- Investigations to determine cost effective measures to manage abstraction to support Good Quantitative Status
- Investigations to determine cost effective measures to support Good Ecological Potential
- Revoke unused licences on the Caldew and Lower Eden.
- Retro fitting of rainwater harvesting systems in homes.
- Retro fitting of grey water recycling systems in homes.
- Measures to prevent unacceptable impact on local water environment caused by licenced abstraction
- Modification of abstraction licences to support Good Status (groundwater or surface water)
- Marine Protected Areas (MPAs) (exclusion of specific activities) National commitment to achieving a coherent network of MPAs.
- Eel Limitation Orders will be a means of controlling the legal

exploitation of eel / elver exploitation.

- Removal byelaws for coarse fish create the ability to set minimum and maximum sizes for fish that can be <u>removed</u>. The marine bill includes a proposal to allow maximum sizes of fish to be taken to be set by byelaws.
- Increase in sites requiring fish screening (fish farm intakes & discharge points)
- Increase awareness / education on fish stocking hazards & regulations (IFM Accreditation scheme; fund training etc)
- Audit high risk movements and enforce against illegal activity. From 2010, under new Marine Bill powers Defra plans to introduce a new scheme to regulate fish movements to and from the wild
- Removal of undesirable fish species in partnership with owners/tenants, for example topmouth gudgeon
- Re-stock elvers to catchments subject to stock status assessment / recommendations in Eel Management Plan
- 4.2 For some measures, potential negative effects on European sites were identified, or could not be ruled out (often due to uncertainty in the application of the measure). These are listed in the following table:

National RBMP Measures: Screened-in to assessment process.

Measures having potential effects:

- Reduce diffuse source inputs: provide first time sewerage
- Silage, Slurry and Fuel Oil (SSAFO) Regulation (SSAFO amendments)
- PPC/CAR: increase treatment (where new standards)
- PPC/CAR: transfer all or part of discharge (where new standards)
- PPC/CAR: remediation of sediments and/or water (either by removal
- or by treating in situ) (where new standards)
- PPC/CAR: change timing or frequency of discharge (where new standards)
- CAR 2005: waste water discharge to rivers, lochs etc.
- CAR: First time rural sewerage programmes
- CAR control abstraction: use alternative source/relocate abstraction
- CAR control abstraction: improve water efficiency (e.g. abstraction matches need) or reduce need
- CAR control abstraction: control pattern/timing of abstraction (hands off flow/utilisation of storage (new/existing))
- CAR control abstraction: provide appropriate baseline flow regime downstream of impoundment
- CAR control abstraction: provide for fish access between reservoir and tributaries
- CAR control abstraction: appropriate management of seasonal variation of water level changes behind the impoundment
- Improve modified habitat: removal of barriers or provision of mechanisms to enable fish migration

Deleted: removed.The

- Improve modified habitat: removal of engineering structures
- Improve modified habitat: improvements to condition of channel/bed and/or banks/shoreline
- Improve modified habitat: improvements to condition of riparian zone and/or wetland habitats
- Improve modified habitat: changes to sediment management maintenance regime
- CAR 2005: CAR prevent new damage to the water environment from engineering works on rivers (including maintenance regimes)
- Floods Directive: Development of FRMPs
- CAR 2005: CAR prevent new damage to the water environment by engineering works on rivers
- CAR 2005: CAR prevent new damage to the water environment by engineering works on rivers

Additional national measures applied to Solway Tweed

- SEPA catchment-related activities: CMPs and regional roll-out in areas at risk of not meeting WFD and protected areas standards
- Additional investment in catchment-related activities and CMPs over successive planning cycles
- Revision of Catchment Abstraction Management Strategies Restoring Sustainable Abstraction Programme
- Future Catchment Sensitive Farming measures includes fencing of buffer strips in capital grants scheme
- Water Protection Zones unlikely
- Improved flow estimates for surface water bodies and water balances for groundwater bodies
- Removing or adapting barriers to fish passage/migration which fall outside the Restoring Sustainable Abstraction programme

Measures that could not be screened-out due to uncertainty:

- Economic Incentive: Scottish Rural Development Programmes: 2008-2014 (covers agriculture, forestry, land management)
- Economic incentive: SRDP 2008 to 2014
- CAR 2005: SEPA controls on licensed hydropower schemes
- CAR 2005: Fishery (Electricity) Committee advice fisheries protection via SEPA licences
- CAR 2005: levels of abstraction, management of dams and efficient use of water
- FEPA (Food and Environmental Protection Act)
- Restoration regulations: new restoration regulations would allow investment to remove abandoned structures such as old embankments
- Control alien species: contain to prevent spread
- Control alien species: eradicate in situ

- 4.2 The detailed screening findings for each measure are provided in Annex 1; a precautionary approach has been adopted, and the list may be refined prior to undertaking further Appropriate Assessment, and once further details are available on some of the measures.
- 4.3 Whilst many of the measures were screened-out, 30 of the national measures were considered likely to have potential effects, and a further 9 could not be ruled out due to uncertainty. Many of the measures that could not be screened out related to abstraction and flow regulation or changes to morphology. However it is noted that any such measures, when applied on the ground, would require further detailed environmental assessment and likely project-level HRA to address the effects.
- 4.4 The types of possible effects identified included:
 - Potential construction impacts (e.g. for sewerage schemes)- dependent on location/proximity to European sites
 - Changes to water levels may negatively affect water-dependent sites
 - Potential increase in spread of alien species
 - Potential release of sediment into water bodies to be carried downstream with effects on water-dependent sites
 - Potential disturbances to habitat structure
 - Disturbances of contaminated sediment may release toxic metals into the water body to be carried downstream
 - Flood risk measures may affect European sites

5. CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER WORK

- 5.1 At this strategic level it is not possible to predict or assess with any degree of certainty (particularly where no geographic location is specified) the impacts of the national measures. It has been possible to screen-out measures where there was a high level of certainty that they would have no likely significant effect, either because they would not lead directly to action/s or that any likely significant effects on European sites would certainly be positive. This has allowed the removal of a large number of national measures from further assessment.
- 5.2 On the whole, the likely effects of the two River Basin Management Plans on European sites were found to be overwhelmingly positive, resulting in improved conditions for aquatic ecosystems. In undertaking the screening assessment of National RBMP measures, 23 measures were considered to have the potential for negative effects, and a further 9 could not be ruled out due to uncertainty. Many of the measures that could not be screened out related to abstraction and flow regulation or changes to morphology. However it is noted that any such measures, when applied on the ground, would require further detailed environmental assessment and likely project-level HRA to address the effects.
- 5.3 Full AA is only really effective when specific geographic locations are known and the nature of the impact can be tied down in relation to a European site. At higher/ strategic levels the emphasis must be on appropriate [policy] mitigation that avoids the likelihood of effects arising from implementation. Following consultation on the results of this screening report, it is recommended the following further work be undertaken.

National measures

- 5.4 An Appropriate Assessment of the screened -in National Measures should be undertaken. However due to the strategic and non-location specific nature of the national measures, and the dependency of a number of measures on lower-tier plans and development approval processes, this work may be focused on the provision of mitigation measures and specific recommendations for further HRA work. In particular:
 - recommendations to be incorporated when undertaking HRA of lower tier plans, for example Catchment Abstraction Management Plans, Flood Risk Management Plans.
 - Recommendations to be incorporated when undertaking project level HRA (for example when implementing measures to improve modified habitat, such as the removal of engineering structures)

5.5 The Appropriate Assessment should use the information contained in the screening table as a starting point for considering potential impacts in further detail.

Regional/local measures

5.6 An HRA screening assessment of the regional and local measures will be required to determine if Appropriate Assessment is required of those measures. However to undertake this work, further detail regarding the application and geographical location and scale of these measures is required.

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		Annex 1: HRA Screening of National RBMP Measures (Scotland & Solway Tweed)									
		National n	neasures	HRA							
Pressure	Sector	Option 2: RBMP measures	Option 3: Closing the gap	Screen- in? Yes or no? or ?	Reason	Is measure already subject to HRA (screened- in measures)?					
		Reduce diffuse source inputs: non-urban land management issues		NO	Positive measure-reduces pollution at source						
	All sectors	Reduce diffuse source inputs: provide first time sewerage		YES	May have construction impacts- dependent on location/proximity to European sites. Potential increase of nutrients/pollutants at discharge points.	Yes, for CAR and Town and Country Planning Regimes					
		Reduce diffuse source inputs: reduce sources from built environment		NO	Positive measure-reduces pollution at source						
		Reduce diffuse source inputs: retrofit/improve existing SuDs		NO	Positive measure-reduces pollution at source						
Diffuse pollution	lture (regulatory)	CAR 2005: GBR - diffuse pollution		. <u>NO</u>	Positive measure- reduces pollution at source. GBRs are low level activity with regards environmental impact.						
	Agricul	Silage, Slurry and Fuel Oil (SSAFO) Regulation (SSAFO amendments)		YES	Licensing activity						
	Forestry (regulatory)	CAR 2005: GBRs for diffuse pollution		NO	Positive measure- reduces pollution at source. GBRs are low level activity with regards environmental impact.						

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	Urban development (regulatory)	CAR 2005: GBRs require SuDs for new surface water discharges - Q&S investment programme, Q&S retrofitting of SuDs to industrial areas		NO	No effect measure- provided actions are undertaken in accordance with the terms of the GBR. GBRs are low level activity with regards environmental impact.	
		PPC/CAR: reduce at source (where new standards)		NO	Positive measure- reduces pollution at source (harm reduction measure).	
		PPC/CAR: increase treatment (where new standards)		YES	Licensing activity	Yes- may require project-level HRA
	tors	PPC/CAR: transfer all or part of discharge (where new standards)		YES	May impact on water-dependent sites	
	All sec	PPC/CAR: remediation of sediments and/or water (either by removal or by treating <i>in situ</i>) (where new standards)		YES	May impact on water-dependent sites	
e pollution		PPC/CAR: change timing or frequency of discharge (where new standards)		YES	Licensing activity	?
Point sourc		CAR 2005: waste water discharge to rivers, lochs etc.		YES	Licensing activity	Yes- requires project-level HRA
	ewage disposal (regulatory)	Scottish Water Controls (Water Industry Scotland Act): trade effluent discharges to sewer		NO	Positive measures-reduces pollution at source	No, although subsequent discharge from treatment works may require HRA
	Š	Scottish Government: use of polluting substances in products		NO	Positive measure-reduces pollution at source	
			Scottish Government: low P detergents	NO	Positive measure-reduces pollution at source	

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	Scottish Water Charging schemes: provides incentives for industry to reduce the amount of trade effluent they discharge to sewer		NO	Positive measure-reduces pollution at source	
	Habitats Directive review of consents		NO	Positive measure- review of existing consents to ensure compliance	
	Water company AMPs/Quality & Standards		NO	Positive measure-will improve water quality	
	CAR: First time rural sewerage programmes		YES	May have construction impacts- dependent on location/proximity to European sites. Potential increase of nutrients /pollutants at discharge points.	Yes- requires project-level HRA
Aquaculture/fish farming (regulatory)	CAR 2005: rate or scale of discharges arising from fish farms		NO	Positive measure-reduces pollution at source	
Manufacturi ng (regulatory)	CAR 2005: Priority substances (2008)		NO	Positive measure-reduces pollution at source	
turing (non- ılatory)	Campaign awareness raising and promotion of best practice: HAZREFD - reduce use of hazardous raw materials		NO	No-effect measure- (campaign/awareness raising)	
Manufac regu	Campaign awareness raising and promotion of best practice: SEPA minimising water pollution		NO	No effect measure- (campaign/awareness raising)	
Mining and quarrying (regulatory)		Non-coal Restoration Regulations: The SG is considering restoration regulations to give SEPA powers to intervene to treat discharge from non- coal mines	NO	Positive measure-reduces pollution at source	

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	rying (non- ry)		Economic incentive: additional funding for coal authority to treat polluting discharges from coal mines	NO	Positive measure-reduces pollution at source	
	Mining and quar regulato		Investment programmes: additional funding for SEPA to initiate work to provide treatment for polluting non-coal mines	NO	Positive measure-reduces pollution at source	
		CAR control abstraction: use alternative source/relocate abstraction		YES	Licensing activity	?
	All sectors	CAR control abstraction: improve water efficiency (e.g. abstraction matches need) or reduce need		YES	Licensing activity	?
		CAR control abstraction: reduce leakage		NO	Positive measure-will reduce stress on the water environment	
gulation		CAR control abstraction: control pattern/timing of abstraction (hands off flow/utilisation of storage (new/existing))		YES	Licensing activity	?
Abstraction and flow regu		CAR control abstraction: reduce risk of fish mortality in intakes or screens		NO	Positive measure-reducing fish mortality	
		CAR control abstraction: provide appropriate baseline flow regime downstream of impoundment		YES	Licensing activity	
		CAR control abstraction: provide higher flows as appropriate to enable fish migration downstream of impoundment		<u>NO</u>	Positive measure-will reduce stress on the water environment	
		CAR control abstraction: provide higher flows as appropriate to maintain/improve habitat downstream of impoundment		NO	Positive measure-will reduce stress on the water environment	

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	CAR control abstraction: provide for fish access between reservoir and tributaries	YES	Yes- may involve physical works with potential consequences for European sites	Yes
	CAR control abstraction: reduce impact on DO levels downsteam of impoundment	NO	Positive measure-will reduce stress on the water environment	
	CAR control abstraction: reduce impact on temperature conditions downstream of impoundment	NO	Positive measure-will reduce stress on the water environment	
	CAR control abstraction: appropriate management of rate and range of artificial drawdown	NO	Positive measure-will reduce stress on the water environment	
	CAR control abstraction: appropriate management of seasonal variation of water level changes behind the impoundment	YES	May have some implications for European sites, eg. on nesting water birds	
	CAR control abstraction: appropriate baseline flow regime downstream of impoundment	NO	Positive measure-will reduce stress on the water environment	
eration ry)	CAR 2005: SEPA controls on licensed hydropower schemes	?	Dependent on further detail	
Electricity gen (regulato	CAR 2005: Fishery (Electricity) Committee advice - fisheries protection via SEPA licences	?	Dependent on further detail	
supply activities (regulatory)	CAR 2005: levels of abstraction, management of dams and efficient use of water	?	Dependent on further detail	
Water :	CAR 2005 Charging schemes: incentives for efficient water use by industry	NO	Positive measure-will reduce stress on the water environment	

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	Agriculture irrigation (regulatory)	CAR 2005: SEPA imposes controls on volume of water that can be abstracted and the time over which it can be abstracted, through CAR		NO	Positive measure-will reduce stress on the water environment		
		Improve modified habitat: removal of barriers or provision of mechanisms to enable fish migration		YES	May increase spread of alien species; potential impacts from associated engineering	Yes	
		Improve modified habitat: removal of engineering structures		YES	Potential impacts from associated engineering	Yes	
	All sectors	Improve modified habitat: improvements to condition of channel/bed and/or banks/shoreline		YES	<u>Improvements</u> to condition of channel/bed may release sediment into the water body to be carried downstream with potential effects on water- dependent sites	(Deleted: Improvmeents
		Improve modified habitat: improvements to condition of riparian zone and/or wetland habitats		YES	May result in disturbance to habitat structure- potential for unintended effects	?	
		Improve modified habitat: changes to sediment management maintenance regime		YES	Disturbance of contaminated sediment may release toxic metals into the water body to be carried downstream	?	
iges to morphology	urban development	CAR 2005: CAR prevent new damage to the water environment from engineering works on rivers (including maintenance regimes)		YES	Licensing activity	Yes-Project level HRA required	
Char	vities & I latory)	FEPA (Food and Environmental Protection Act)		?	unclear measure		
	engineering acti (regu	Floods Directive: Development of FRMPs		YES	FRMPs may affect European sites, however these would be subject to HRA	Yes-Plan level HRA required of FRMPs	
	Historical		Restoration regulations: new funding frameworks for taking forward restoration work	NO	Funding only- no direct effect		
	egulatory)	CAR 2005: CAR prevent new damage to the water environment by engineering works on rivers		YES	Licensing activity	Yes-Project level HRA required	
Agriculture (reç		Restoration regulations: new restoration regulations would allow investment to remove abandoned structures such as old embankments	?	Dependent on further detail			

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	Forestry (regulatory)	CAR 2005: CAR prevent new damage to the water environment by engineering works on rivers		YES	Licensing activity	Yes-Project level HRA required
			EIA	NO	Application of existing process.	
	All sectors	Control alien species: contain to prevent spread		?	Dependent on containment measures	
pecies		Control alien species: eradicate in situ		?	Dependent on eradication measure adopted	
Alien sp		Control alien species: capture & remove		NO	Positive measure- control of alien species (through physical means)	
		Control alien species: prevent introduction		NO	Positive measure- Controlling alien species at source	

	Additional national measures applied to Solway Tweed						
Pressure	Sector	Option 2: RBMP measures	Option 3: Closing the gap	Screen- in? Yes or no? or ?	Reason	Is measure already subject to HRA (screened- in measures)?	
		CAR 2005: GBR - diffuse pollution, other relevant CAR requirements		NO	Positive measure- reduced pollution at source		
		SEPA catchment- related activities: CMPs and regional roll-out in areas at risk of not meeting WFD and protected areas standards	Additional investment in catchment-related activities and CMPs over successive planning cycles	YES	Potential unintended/indirect impacts from range of catchment management activities	Yes, CMPS subject to HRA	
		Revision of Catchment Abstraction Management Strategies Restoring Sustainable Abstraction Programme		YES	Potential unintended/indirect impacts on water-related sites through changes to flow regimes	Yes, CAMS subject to HRA	
		Fish Health Directive - limit fish disease & non-native species introductions, audit high risk movements, enforce against illegal activity		<u></u>	Positive measure- will reduce pressure on water environment		
		Alien Species Regulations to control non-native fish in aquaculture		NO	Positive measure- will reduce pressure on water environment		
	Till- National measures		Future Catchment Sensitive Farming measures includes fencing of buffer strips in capital grants scheme	YES	May impacts on sites dependent on grazing regimes		

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			Promote / encourage uptake of agri- environment schemes in catchments most at risk	NO	Positive measure- will reduce stress on water environment	
			Water Protection Zones - unlikely	YES	May have unintended impacts on sites dependent on grazing regimes	
-			Co-ordination of partnerships and regulatory activities that give advice to / inspect the agricultural sector to ensure activities it is targeted at WFD priority areas	<u>NO</u>	No-effect measure (coordination/partnerships)	
		Improved flow estimates for surface water bodies and water balances for groundwater bodies		YES	May have unintended effects	
		Review and improve Environmental Flow Indicators		NO	No-effect measure (unlikely to lead to physical works)	
		Investigations to determine cost effective measures to manage abstraction to support Good Ecological Status		NO	No-effect measure (unlikely to lead to physical works)	
	ures	Investigations to determine cost effective measures to manage abstraction to support Good Quantitative Status		NO	No-effect measure (unlikely to lead to physical works)	
	esources meas	Investigations to determine cost effective measures to support Good Ecological Potential		<u>NO</u>	No-effect measure (unlikely to lead to physical works)	
	Water r	Revoke unused licences on the Caldew and Lower Eden.		NO	Positive measure- will reduce stress on water environment	
			Retro fitting of rainwater harvesting systems in homes.	NO	Positive measure- will reduce stress on water environment	
			Retro fitting of grey water recycling systems in homes.	NO	Positive measure- will reduce stress on water environment	
			Measures to prevent unacceptable impact on local water environment caused by licenced abstraction	<u>NO</u>	Positive measure- will reduce stress on water environment	
			Modification of abstraction licences to support Good Status (groundwater or surface water)	NO	Positive measure- will reduce stress on water environment	

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		Marine Protected Areas (MPAs) (exclusion of specific activities) National commitment to achieving a coherent network of MPAs.	<u>NO</u>	Positive measure- will reduce stress on water environment		
		Eel Limitation Orders will be a means of controlling the legal exploitation of eel / elver exploitation	NO	Positive measure- will reduce stress on water environment		
		Removal byelaws for coarse fish create the ability to set minimum and maximum sizes for fish that can be <u>removed. The marine</u> bill includes a proposal to allow maximum sizes of fish to be taken to be set by byelaws.	NO	Positive measure- will reduce stress on water environment	(Deleted: removed.The
As	Increase in sites requiring fish screening (fish farm intakes & discharge points)		NO	Positive measure- will reduce stress on water environment		
Fisheries PON	Increase awareness / education on fish stocking hazards & regulations (IFM Accreditation scheme; fund training etc)		<u> </u>	No effect measure- (campaign/awareness raising)		
	Audit high risk movements and enforce against illegal activity. From 2010, under new Marine Bill powers Defra plans to introduce a new scheme to regulate fish movements to and from the wild		NO	Positive measure- will reduce stress on water environment		
		Removal of undesirable fish species in partnership with owners/tenants, for example topmouth gudgeon	<u>NO</u>	Positive measure- will reduce stress on water environment		
		Re-stock elvers to catchments – subject to stock status assessment / recommendations in Eel Management Plan	<u>NO</u>	Positive measure- will reduce stress on water environment		

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		Removing adapting fish passage/r which fall Restoring Sustainab Abstractio programm	or barriers to nigration outside the YES e n e	Potential for construction impacts and unintended impacts through increase passage of invasive species	
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KEY:	
NO	Screened-out- no further screening or assessment required
YES	Screened-in- further screening or assessment may be required
?	Uncertain- dependent on further detail on measure.

Colour	code	
RBMP mechanisms:	Related policy/mechanism:	
Contribute to the 1st RBMP delivery and have been introduced to support meeting WFD objectives (M)	Required under another driver/government policy other than the WFD and viewed as providing significant benefits of co-delivery (note - also likely to be considered as a part of the future baseline) (FB)	
Potentially contributes to RBMP delivery, if approved by government. This has been identified by which cycle it may influence (i.e. RBMP 1, 2, 3) - RBMP GAP (AM)		

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APPENDIX F MEASURES ASSESSMENT BY PRESSURE AND BY SECTOR

1.1. Description of significant environmental effects of measures within the draft RBMP set out by Option and then by pressure and sector

The structure of the draft RBMP (addressing issues through describing pressures and sectors) combined with the SEA framework (considering a range of environmental topics) allows for a number of approaches to interpreting environmental effects.

The assessment by SEA topic is described within Section 5 of the main report. This section, however, is intended to consider the assessment based on how the Plan, and the resulting environmental effects, can be considered within the framework of pressures and sectors which form the framework of the Plan. This is intended to assist plan makers in identifying and responding to issues which may affect a particular sector or geographical area disproportionately.

The figure below shows a conceptual illustration of the ways these considerations can be made.



The vertical arrows illustrate the assessment based on SEA topic. This examines the cumulative effect on each SEA topic (biodiversity, population, cultural heritage etc.) of all the measures within the Baseline/Reference, draft RBMP and Closing the Gap options, and is summarised in Section 5.

It is also possible to consider the cumulative effects on a particular pressure (e.g. point source pollution) when aggregated across the three options (i.e. illustrated by reading horizontally across the figure on page F-1).

Additionally it is possible to consider those measures which are aimed at particular sectors. For example, there are measures aimed at the forestry sector dealing with both morphology and diffuse pollution. It is of use to examine the cumulative effects of all measures which are relevant to forestry (and likewise on other sectors).

The following sections describe the results of the assessment of the national measures for the two options set out by pressure and, where appropriate, by sector. Particular attention is paid to those measures that have a significant negative effect, or have (both) a significant positive *and* negative effect. Positive effects are also identified and summarised where appropriate. The description of the effects is made with reference to the environmental issues outlined in Section 5 and other plans, programmes, strategies and environmental objectives (Appendix C) that they may influence or be influenced by the measure(s). The assessment matrices for Reference/Baseline are presented in Appendix A.

1.1.1. Reference/Baseline

Diffuse pollution

Existing national measures that tackle diffuse pollution from agriculture, forestry, acidification and urban development are key measures for Scotland. Regulations, standards, guidelines and GBR designed to reduce diffuse pollutant inputs (i.e. at source) continue to have a significant positive effect on the District's water body status and biodiversity. Reduced inputs of pollution help control eutrophication in rivers, lakes and estuaries and ameliorate water quality problems during droughts. Riparian fencing and the construction of wetland filtration schemes will contribute to this (positive) effect. The measures also have a significant positive effect on the District's soils by reducing contamination and safeguarding soil quality and function for agriculture and biodiversity. The application and retrofitting of Sustainable Urban Drainage Systems (SuDs) which is a requirement currently in place in Scotland under the WEWS Act¹⁷ helps to reduce runoff and soil erosion has significant benefits for the status of water bodies, and limits long term water infrastructure operating costs.

Non-regulatory measures such as campaigns to improve awareness and to provide guidance and advice on best practice to reduce diffuse pollution inputs also benefit the water environment. However, the effects are likely to be secondary as there is uncertainty as to how these translate into behavioural changes to reduce pollutant inputs. The effects of these non-regulatory measures have been assessed as uncertain and are not considered further in this assessment. The non-regulatory economic incentive measures for the agricultural and forestry sectors to reduce their pollution inputs are likely to have a significant positive effect on the water environment given that there is an incentive to change behaviour. However, the extent of uptake is uncertain and can only be considered retrospectively. The Emissions Trading Scheme which is designed to

¹⁷ http://www.opsi.gov.uk/legislation/scotland/acts2003/asp_20030003_en_1

reduce emissions will contribute to mitigating the effects of climate change; it therefore has a positive significant effect.

The measures to reduce diffuse pollution across sectors are also likely to benefit and protect human health through reducing pollutant loads to protected waters (e.g. drinking water areas, water abstraction areas, bathing and shellfish protected waters), thereby improving biodiversity, increasing amenity value, and improving human access to the water environment. These measures are also likely to contribute to adaptation to climate change based on the assumption that the water environment will be best able to deal with the effects of climate change when pollutant loads are low.

The provision of first time sewerage may, however, have a significant negative on landscapes if the design is not sympathetic to landscape aesthetics, and may also require additional energy consumption and therefore contribute to increased greenhouse gas (GHG) emissions.

Point source pollution

Existing national and regional measures to tackle point source pollution from sewage disposal, aquaculture/fish farming, manufacturing, refuse disposal activities and mining and quarrying are likely to continue the trend in the Scotland RBD of reducing nutrient, chemical and organic material loads entering water bodies from urban and non-urban sources. This has a significant positive effect on biodiversity and the ecological condition of water bodies by limiting eutrophication of rivers, lochs and estuaries, ameliorating water quality problems during droughts, limiting the incidence of metal poisoning of fish, reducing the acidification of sensitive upland water bodies (e.g. wetlands), and mitigating against pollutant transfer and light penetration issues.

The measures to reduce point source pollution across sectors are also likely to benefit and protect human health through reducing pollutant loads to protected waters (e.g. drinking water areas, water abstraction areas, bathing and shellfish protected waters), thereby improving biodiversity, increasing their amenity value, and improving human access to the water environment. These measures are also likely to contribute to the adaptation to climate change based on the assumption that the water environment will be best able to deal with the effects of climate change when pollutant loads are low.

The measures to tackle point source pollution may also have a significant negative effect on climate change through increased GHG emissions (e.g. new sewage treatment works, through treatment processes required to deal with domestic sewage, industrial effluent, manufacturing effluent, mining and quarrying spoil and effluent). The measures may also increase energy consumption; the provision of first time rural sewerage will, for example, require energy for pumping and treatment.

There are two measures that have a range of positive and negative effects in tacking point source pollution. These are the measures to remediate sediment and water, and to regulate flow and 'naturalise' the flow regime. Both sets of measures are positive for water bodies they are targeted at. However, they may have potentially negative effects elsewhere. For example, while the remediation of sediment and water is generally positive for the water body undergoing remediation (e.g. improves biodiversity, amenity value, ecological condition), there are potential negative effects associated with the

disposal of contaminated sediment, while the disturbance of contaminated sediment may release toxic metals into the water body to be carried downstream. Further, while measures to regulate flow in a water body are generally positive for the water body concerned (e.g. improves biodiversity, amenity value, ecological condition), it may require the identification of new sources of supply or an alternative supply source to meet the current demand. The effect of the measure may be to simply shift the locus of the problem to a new area/water body. The negative effects of both of these measures can be largely mitigated by finding an appropriate local/regional solution that considers the entire water cycle such as a Water Cycle Strategy (WCS).

Abstraction and flow regulation

Existing national measures to deal with abstraction and flow regulation pressures in the Scotland RBD focus on the electricity generation, water supply and agricultural irrigation sectors. The economic incentive non-regulatory measures targeted at the water supply and agricultural irrigation sectors are focus on improving water use efficiency. These measures have significant positive effects as less water is required for abstraction which means lower pumping and energy costs (and hence contributes to reducing the impact on climate change), while more water is available for aquatic ecosystems. This has significant positive effects for biodiversity, water quality (through dilution), water body status, amenity value, protected water bodies, tourism and so on. The measures are also positive for water supply infrastructure as efficiency savings may delay the requirement for new infrastructure. Existing regulatory measures to control and manage the levels of abstraction and use of water (CAR and planning regulations defined in licences) generally have a positive effect on aquatic ecosystems, water bodies and water quality for the reasons mentioned earlier. However, this assessment is based on the assumption that the controls on abstraction can be undertaken without impacting the supply/demand balance (SDB) and existing entitlements to use water. Where this occurs, water supplies will need to be sourced from elsewhere (or savings made through efficiencies or leakage reductions) which may create negative environmental effects in the new source area.

Changes to morphology

The existing national measures to tackle morphological pressures from historical engineering activities, agriculture, forestry and land reclamation are likely to have similar environmental effects. The regulatory instruments are planning and regulation controls to reduce morphological impacts. While these regulations are likely to have positive effects on morphology, and while it is assumed that these morphological improvements will contribute to improved biodiversity, the links between morphological improvements and enhanced aquatic ecosystem functioning are difficult to prove conclusively. It is likely, however, that morphological improvements will contribute to improving the status of water bodies and, in certain cases, reduce flood risk.

The non-regulatory economic incentive measures for the agricultural and forestry sectors to reduce their morphological impacts are also likely to have significant positive effects on the water environment given that there is an incentive to change behaviour, however the extent of uptake is uncertain.

Invasive non-native species

The national regulatory measures to deal with invasive non-native species in the Scotland RBD is the GB Framework Strategy and Implementation Plans to reduce the impacts of invasive non-native species. The environmental effects of this measure are positive for biodiversity, riparian zones, landscapes and water body status where the invasive non-native species infestation is being controlled. However, there are risks that areas of new infestation may be created in transporting the invasive non-native species to disposal points, while the use of herbicides to eradicate invasive non-native species may also eradicate native plants if used injudiciously. The effects of the non-regulatory awareness campaigns to reduce the impact of invasive non-native species are probably positive, but have been categorised as uncertain for the reasons described earlier.

1.1.2. Draft RBMP

Diffuse pollution

The draft RBMP national and regional measures to tackle diffuse pollution focus on the agriculture, forestry¹⁸ and urban development sectors. The All sector measures to reduce diffuse pollution such as providing first time rural sewerage and retrofitting or improving existing SuDs¹⁹ are all expected to have significant positive effects for aquatic ecosystems, water body status and soils for the reasons mentioned earlier. The continued provision of first time rural sewerage does, however, have a potential negative effect on landscapes if the design of treatment works is not sympathetic to landscape aesthetics. The continued effects of regulatory measures targeting agriculture, forestry and urban development such as GBRs and SSAFO regulations and the fencing of buffer strips in capital grant schemes will have a similar positive effect. Those measures that include the retrofitting and improvement of SuDs have the additional positive benefits of reducing flood risk and potentially extending the design life of other water supply infrastructure.

While the aforementioned measures are expected to benefit and protect human health for the reasons mentioned earlier, they may also have a significant negative effect because of the increased energy use associated with improved treatment and the construction of new treatment works. This is likely to contribute to increased GHG emissions and consequently climate change.

The non-regulatory economic incentive measures (Scottish Rural Development Programmes – SRDP) are likely to have a significant positive effect on the water environment given that there is an incentive to change behaviour. However, there is no way of predicting how it will be taken up, and hence there is uncertainty in this assessment.

Point source pollution

The draft RBMP national regulatory measures to tackle point source pollution from sewage disposal, aquaculture/fish farming and manufacturing are essentially the same

¹⁸ The UK Forestry Guidelines are already in place.

¹⁹ The WEWS Act requires Scottish Water to deliver SuDs as part of its investment programme.

as the Reference/Baseline point source measures, except that new (WFD) standards²⁰ will be applied. This means that the while the environmental effects of the measures will be similar, or greater (there will be an additional benefit to the water environment and biodiversity because of the tighter standards) additional energy will be required, more GHG will be emitted and potentially more concentrated waste streams generated. It is worth noting that the measure to transfer all or part of a discharge to improve the status of a water body has significant benefits for the said water body, but may have the effect of creating a problem(s) in a different water body (i.e. shift the problem). For this reason the effects of this measure has been categorised as both positive and negative for aquatic ecosystems, water body status and the water environment; positive for the water body from which the problem has been moved, potentially negative for the (new) receiving water body. Further, this measure may make existing water supply infrastructure redundant, and in that sense, have a negative effect.

Abstraction and flow regulation

The national regulatory draft RBMP measures are targeted at the electricity generation, water supply and agricultural irrigation sectors. These draft RBMP measures are designed to control abstraction in the District, manage the releases of water from reservoirs and hydropower schemes and to create efficiency savings. For rivers and estuaries, the measures are designed to increase the volume of water available for aquatic ecosystems, but also to ensure that the provision is at appropriate times during the year. The underlying assumption is that as the flows in rivers move towards a more 'naturalised' state, there will be biodiversity, water quality and amenity benefits which will also contribute to climate change adaptation. Measures that reduce leakage and result in water use efficiency savings will add to this benefit, potentially delaying the requirement for new infrastructure. The effects of these national regulatory measures are therefore mainly positive for aquatic ecosystems, human health, the water environment and climate.

It is important to note, however, that this assessment is based on the assumption that the measures can be undertaken without impacting on the current SDB or hydro generating capacity and existing entitlements to use water. Where the effects of these regulations impinge on existing supply or generating capacity additional sources will need to be found (with the associated environmental risks and additional costs).

It is possible, however, that these measures may have a significant negative effect on existing water supply infrastructure. For example, measures to control the pattern and timing of flows and provide downstream flows for a particular function (e.g. migration, habitat improvement, temperature) may require new reservoir operating rules, potentially reduce the deployable output from reservoirs, reduce power supply and limit downstream abstractions. These may have unintended social and economic consequences. Similarly, measures to manage the rate and range of artificial drawdown and manage the seasonal variation of water levels in impoundments have significant positive effects for lentic (still water) ecosystems, but may have negative effects on deployable output if an appropriate operating solution cannot be found.

²⁰ Priority Substances and Specific Pollutants. There are no new sediment standards for the WFD.

The measure to use an alternate source or relocate an abstraction point has a variety of positive and negative environmental effects. As with moving an abstraction point to deal with pollution, using an alternate source or relocating the abstraction point to improve the status of a water body has significant benefits for the said water body, but may have the effect of creating a problem in a different water body (i.e. shift the problem). For this reason the effects of this measure has been categorised as both positive and negative for aquatic ecosystems and water bodies; positive for the water body from which the problem has been moved, but potentially negative for the (new) receiving water body. Further, while the measure may contribute to climate change adaptation in one water body, it may exacerbate the effects of climate change in another. There are also potential negative effects if in relocating the abstraction additional infrastructure costs are incurred, energy consumption is increased (e.g. increased pumping and operational requirements) and GHG emissions are greater than before. Further, this measure may make existing water supply infrastructure redundant.

Changes to morphology

The national and regional regulatory draft RBMP measures designed to tackle morphological pressures do not overlap with the Reference/Baseline measures. The first set of measures are to improve modified habitat through the removal of barriers to fish migration (or providing appropriate passages), the removal of engineering structures, improving the condition of the river channel and its riparian strip, and managing the transfer and storage of sediment within channels. It is assumed that in improving the channel boundary conditions there will be concomitant improvements in biodiversity. It can therefore be reasonably assumed that these measures will produce biodiversity benefits, improve the condition of water bodies, soils and the broader landscape, and in so doing increase amenity value, help with climate change adaptation and increase access to the water environment. There are, however, potential negative effects in managing contaminated sediment as mentioned previously; mitigation measures will need to be put in place to manage these effects.

The measures to remove barriers or engineering structures may also have significant negative effects. For example, the removal of barriers may result in the loss of historic water-related features such as weirs, mills, fish traps, artificial ponds, dams and canals, or even potential wetland archaeological sites. This may be perceived by some as a loss to the broader landscape, while others may consider this a benefit that will enhance landscape quality and character, and in so doing improve nationally designated landscape areas. The loss of engineering structures may also negatively impact existing water supply infrastructure, and in some cases increase flood risk. Where the structures provide amenity benefits through creating recreational opportunities for boating or angling, the effects of removing these barriers may be negative for some sectors of the local economy.

Other than the measure that seeks to block moorland grips, the regional Draft RBMP measures are focussed on identifying opportunities to improve morphology, and to establish prevention measures, partnerships and targets for morphological improvement. Again, while these measures are likely to produce environmental benefits, the effects will be secondary and hence the effects have been assessed as uncertain.

Invasive non-native species

The national draft RBMP measures to deal with invasive non-native species in the Scotland RBD are all targeted at controlling invasive non-native species by preventing their spread, eradicating them *in situ*, capture and removal and preventing their introduction. Consequently the environmental effects of these measures are similar to the effects of the regulatory measures in Reference/Baseline.

1.1.3. Closing the Gap

Diffuse pollution

There are no national or regional measures to tackle diffuse pollution for Closing the Gap.

Point source pollution

There is one national regulatory measure to tackle point source pollution for Closing the Gap; a regulatory measure requiring low concentrations of Phosphorus (P) in detergents in Scotland. This measure is in the early stages of development, and hence while it has been assessed as providing significant environmental benefits for biodiversity and water bodies, there is some uncertainty as to its effects. The measure may, however, require additional treatment which may increase energy consumption and GHG emissions.

Abstraction and flow regulation

There are no national or regional measures to tackle abstraction and flow regulation pressures for Closing the Gap.

Changes to morphology

There are a number of national and regional regulatory Closing the Gap measures that are targeted at improving morphological conditions in the Scotland RBD. One set of these measures (aimed at improving modified habitat) are a repeat of Draft RBMP regional measures for morphology, and hence the significant environmental effects will be the same. Similarly, the measure to block moorland grips is a repeat of a Draft RBMP measure, and again, the effects will be the same. There are, however, two additional national regulatory measures. One of them, restoration policy for taking forward restoration work, is likely to have a positive environmental effect, but as this will depend on the measures applied as a result of the funding, the direct strategic effects of this measure have been categorised as uncertain. However, where the regulations provide funding to remove abandoned structures such as old embankments, the effects are likely to be positive for water bodies and biodiversity. However, it may be advisable to assess whether removal of the abandoned structures may increase flood risk.

Invasive non-native species

There is only one Closing the Gap measure for invasive non-native species. The measure is an investment programme that will target key species that may downgrade water body status at 2015. Although it is anticipated that this measure will be targeted at reducing the impact of invasive non-native species in the Scotland RDB, the effects of the measure are uncertain.