Sector: **Impoundments for Water Storage and Supply**

Waterbody Information:

			Easting	Northing
Waterbody Name				
Waterbody ID		Downstream NGR Waterbody		
Waterbody Type		Upstream NGR Waterbody		

List the pressures identifed within the HMWB/AWB designation for this waterbody	
Record other water uses appearing to cause signficant pressure not identified within the HMWB/AWB designation	

	A		B			C	D	E	F	G	H	I
Pressure (physical modification)	**Is the pressure present? (Y/N) If Yes, proceed to column B.**	**Potential Impacts**	**Is there a significant adverse ecological impact or, in the absence of any mitigation already in place, could there be a significant adverse impact? (Y/N) If yes, proceed to column C, if no document and proceed to Column G.**	**Mitigation Measures**	**No.**	**Is the measure practicable given the characteristics of the water body? (Yes/No) If yes, proceed to Column D. If no, document and proceed to column G.**	**Is the mitigation measure in place and adequate? (Yes/No) If No, proceed to Column E. If Yes document the mitigation measure and proceed to Column G.**	**Can the measure be implemented without having a significant adverse impact on use? (Yes/No) If yes, proceed to column F, if no document and proceed to Column G.**	**Can the measure be implemented without having a significant adverse impact on the wider environment? (Yes/No) If yes, proceed to Column G, If no document and proceed to Column G.**	**Document: x : For measures not in place (proceed to Column H) ✓: For those already in place and adequate - : For those screened out**	**Will the mitigation measure provide more than a slight ecological benefit when considered alone or in combination with other measures? If yes, proceed to Column I; if no, document**	**Document any reasons which could affect the inclusion of the measure in the RBMP (e.g. prioritisation in combination with other measures, disproportionate cost, other reasons why an extended deadline or less stringent target might be justified)**
Impoundment		Adverse impact on the movement of salmon and sea trout between habitats important in their life cycles.		Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	1							
				Where structures or other mechanisms are in place to enable fish to access waters upstream of the impounding works, the volume and timing of flow releases is sufficient to enable and, where relevant, trigger fish migration.	2							
				Management of the risk of fish entrainment in turbines or intakes to enable downstream fish passage.	3							
				Enable access to relevant feeder-streams draining into the reservoir at appropriate times for spawning and migration.	4							
		Adverse impacts on the downstream river flows necessary to maintain river habitats and their associated aquatic plants or animals		Establish an appropriate baseline flow regime.	5							
				Re-engineering of the river where the flow regime cannot be modified.	6							
		Adverse impacts on the morphological characteristics of the downstream river		Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	7							
				Provide flows to move sediment downstream (freshets and/ or spills).	8							
		Adverse impacts on the water quality of the downstream river		Ensure that good status of dissolved oxygen levels is being achieved downstream of the impounding works	9							
				Ensure that the thermal regime in waters downstream of the impounding works is consistent with good status conditions.	10							
		Adverse impacts on the level regime necessary to maintain loch habitats and their associated aquatic plants and animals in the impounded water body		Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of impoundments with gently shelving shore zones.	11							
				Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	12							

Hydromorphological assessment for classification	

Sector: **Inland Navigation**

Waterbody Information:

			Easting	Northing
Waterbody Name				
Waterbody ID		Downstream NGR Waterbody		
Waterbody Type		Upstream NGR Waterbody		

List the pressures identifed within the HMWB/AWB designation for this waterbody	
Record other water uses appearing to cause signficant pressure not identified within the HMWB/AWB designation	

	A		B			C	D	E	F	G	H	I
Pressure (physical modification)	**Is the pressure present? (Y/N) If Yes, proceed to column B.**		**Is there a significant adverse ecological impact or, in the absence of any mitigation already in place, could there be a significant adverse impact? (Y/N) If yes, proceed to column C, if no document and proceed to Column G.**	**Mitigation Measures**	**No.**	**Is the measure practicable given the characteristics of the water body? (Yes/No) If yes, proceed to Column D. If no, document and proceed to column G.**	**Is the mitigation measure in place and adequate? (Yes/No) If No, proceed to Column E. If Yes document the mitigation measure and proceed to Column G.**	**Can the measure be implemented without having a significant adverse impact on use? (Yes/No) If yes, proceed to column F, if no document and proceed to Column G.**	**Can the measure be implemented without having a significant adverse impact on the wider environment? (Yes/No) If yes, proceed to Column G, if no document and proceed to Column G.**	**Document: x : For measures not in place (proceed to Column H) ✔: For those already in place and adequate - : For those screened out**	**Will the mitigation measure provide more than a slight ecological benefit when considered alone or in combination with other measures? If yes, proceed to Column I; if no, document**	**Document any reasons which could affect the inclusion of the measure in the RBMP (e.g. prioritisation in combination with other measures, disproportionate cost, other reasons why an extended deadline or less stringent target might be justified)**
Hard bank protection E.g. Steel piling, vertical walls. Includes hard bank protection in a state of disrepair.		Loss of riparian zone / marginal habitat / loss of connectivity / loss of sediment input / loss of wave energy absorption		Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	1*							
				Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	2							
				Preserve and, where possible, restore historic aquatic habitats	3*							
Measures 4, 5 and 6 are referred to in the AINA report and are for NEW MODIFICATIONS ONLY					4-6							
Locks and weirs All types of locks, including locks in a state of disrepair, and weirs associated with locks *(Also consider impacts associated with hard bank protection and sediment management)*		Loss of sediment continuity - build up of sediment upstream, reduced bedload downstream		Operational and structural changes to locks and weirs	7*							
		Loss of biological continuity - interference with fish population movements										
				Install fish passes	8*							
Other navigation structures Maintenance areas / docks / dry docks / marinas / slipways / rowing steps *(Also consider impacts associated with*		Invasive species transfer		Awareness raising / information boards (invasive species)	9							
		Source of fine sediment / deposition of fine sediment		Awareness raising / information boards (boat wash / sources of fine sediment)	10							
Measure 11 is referred to in the AINA report and is for NEW MODIFICATIONS ONLY					11							
Realignment / Re-profiling / Re-grading for navigation		Loss of morphological diversity and habitat		Increase in-channel morphological diversity	12*							
Sediment management		Direct loss of / impact to aquatic habitats / hydromorphology		Sediment management strategies (develop and revise)	13							
		Transfer of fine sediment downstream										
		Bankside erosion and impacts to riparian habitats										
		Source of fine sediment (disposal of dredgings on banks)										
De-watering (for maintenance of navigable channel)		Loss / impact to aquatic flora and fauna		Phased de-watering and other techniques	14							
Vegetation control		Physical disturbance of bed and or bank- increased sediment input; sediment mobilisation and loss of marginal / riparian vegetation		Selective vegetation control regime	15							
				Appropriate vegetation control technique	16							
				Appropriate timing	17							
		Transfer and establishment of alien invasive species		Appropriate techniques (invasive species)	18							
Boat Movement Surface water disturbance and turbulence created by passage of hull *(Also consider impacts associated with on-line moorings and sediment management)*		Bank Erosion / loss of marginal, riparian vegetation (boat wash)		Encourage reduction of boat wash impacts through traffic management in sensitive areas	19							
				Encourage use of environmentally friendly vessel design	20							
				Bank rehabilitation	21							
				Awareness raising / information boards (boat wash / sources of fine sediment)	*10*							
		Bed scour / Sediment mobilisation / macrophyte disturbance (propeller action)		Lateral zoning to concentrate boats within a central track	22*							
				Encourage use of environmentally friendly vessel design	*20*							
		Transfer and establishment of alien invasive species		*Awareness raising / information boards (invasive species)*	*9*							

Hydromorphological assessment for classification	

* Measures that are not applicable to AWBs (i.e. canals). These measures should be screened out at Column C when assessing an AWB

Italics denote measures that are applicable to more than one impact.It may not be necessary to re-assess the measure, please see Guidance.

Sector:

Waterbody Information:

FRM River and Drainage Watercourses

			Easting	Northing
Waterbody Name				
Waterbody ID		Downstream NGR Waterbody		
Waterbody Type		Upstream NGR Waterbody		

List the pressures identifed within the HMWB/AWB designation for this waterbody	
Record other water uses appearing to cause signficant pressure not identified within the HMWB/AWB designation	

		A		B			C	D	E	F	G	H	I
Pressure (physical modification)	**Sub-pressure**	**Is the pressure present? (Y/N) If Yes, proceed to column B.**	**Potential Impacts**	**Is there a significant adverse ecological impact or, in the absence of any mitigation already in place, could there be a significant adverse impact? (Y/N) If yes, proceed to column C, if no document and proceed to Column G.**	**Mitigation Measures**	**No.**	**Is the measure practicable given the characteristics of the water body? (Yes/No) If yes, proceed to Column D. If no, document and proceed to column G.**	**Is the mitigation measure in place and adequate? (Yes/No) If No, proceed to Column E. If Yes document the mitigation measure and proceed to Column G.**	**Can the measure be implemented without having a significant adverse impact on use? (Yes/No) If yes, proceed to column F, if no document and proceed to Column G.**	**Can the measure be implemented without having a significant adverse impact on the wider environment? (Yes/No) If yes, proceed to Column G, If no document and proceed to Column G.**	**Document: x : For measures not in place (proceed to Column H) ✔: For those already in place and adequate - : For those screened out**	**Will the mitigation measure provide more than a slight ecological benefit when considered alone or in combination with other measures? If yes, proceed to Column I; if no, document**	**Document any reasons which could affect the inclusion of the measure in the RBMP (e.g. prioritisation in combination with other measures, disproportionate cost, other reasons why an extended deadline or less stringent target might be justified)**
Bank and bed reinforcement and in-channel structures	Hard protection e.g. Steel piling, vertical walls and gabion baskets. Includes hard bank protection in a state of disrepair.		Loss of riparian zone / marginal habitat / loss of lateral connectivity / loss of sediment input		Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	1							
					Protect and enhance ecological value of marginal aquatic habitat, banks and riparian zone	2							
					Protect and restore historic aquatic habitats	3							
			Loss of sediment continuity (lateral) - build up of sediment in the channel		Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	4							
					Protect and enhance ecological value of marginal aquatic habitat, banks and riparian zone	5							
					Protect and restore historic aquatic habitats	6							
	Dams, sluices, weirs and gravel traps		Loss of biological continuity - interference with fish population movements		Operational and structural changes to sluices and weirs	7							
					Install fish passes	8							
			Loss of sediment continuity (longitudinal) - build up of sediment upstream, reduced bedload downstream		Removal of structure	9							
Channel alteration	Realignment / re-profiling / regrading		Loss of morphological diversity and habitat		Retain marginal aquatic and riparian habitats	10							
					Increase in-channel morphological diversity, e.g. install instream features; 2 stage channels	11							
	Culverts		Loss of morphological diversity and habitat		Re-opening existing culverts	12							
					Alteration of channel bed	13							
			Continuity		Re-opening existing culverts	14							
					Alteration of channel bed	15							
Floodplain modification	Flood banks and flood walls		Loss of riparian zone / marginal habitat / loss of lateral connectivity / loss of sediment input		Flood bunds (earth banks)	16							
					Set-back embankments (a type of managed retreat)	17							
					Improve floodplain connectivity	18							
Operations and maintenance	Sediment management (including dredging)		Direct loss of / impact on aquatic habitats / hydromorphology		Sediment management strategies (develop and revise) which could include a) substrate reinstatement, b) sediment traps, c) allow natural recovery minimising maintenance, d) riffle construction, e) reduce all bar necessary management in flood risk areas	19							
			Transfer of fine sediment downstream										
			Bankside erosion and impacts on riparian habitats										
			Source of fine sediment (disposal of dredgings on banks)										
	Removal/clearance of urban trash and woody debris		Loss of aquatic habitats		Appropriate channel maintenance strategies and techniques e.g. minimise disturbance to channel bed and margins	20							
			Transfer of fine sediment downstream		Appropriate channel maintenance strategies and techniques e.g. remove woody debris only upstream of, or within, areas of urban flood risk	21							
	Vegetation control		Physical disturbance of bed and or bank - increased sediment input; sediment mobilisation and loss of marginal / riparian vegetation		Appropriate vegetation control regime e.g. a) minimise disturbance to channel bed and margins, b) selective vegetation management for example only cutting from one side of the channel, c) providing/reducing shade, d) seasonal maintenance	22							
			Transfer and establishment of alien invasive species		Appropriate techniques to prevent transfer of invasive species e.g. appropriate training of operational staff	23							
	Pipes, inlets, outlets and off-takes		Hydromorphological alterations of water and sediment inputs through artificial means		Appropriate techniques to align and attenuate flow to limit detrimental effects of these features	24							
Land use *(Not in itself a sustainable flood management pressure)*	Intensive land use		Changes to vegetation, hydrology and sediment supply		Land management strategies (develop and revise), including SUDS and changes in farming practices and forest management	25							

Hydromorphological assessment for classification	

Sector:

Waterbody Information:

Wider Environment

			Easting	Northing
Waterbody Name				
Waterbody ID		Downstream NGR Waterbody		
Waterbody Type		Upstream NGR Waterbody		

List the pressures identifed within the HMWB/AWB designation for this waterbody	
Record other water uses appearing to cause signficant pressure not identified within the HMWB/AWB designation	

		A		B			C	D	E	F	G	H	I
Pressure (physical modification)	**Sub-pressure**	**Is the pressure present? (Y/N) If Yes, proceed to column B.**	**Potential Impacts**	**Is there a significant adverse ecological impact or, in the absence of any mitigation already in place, could there be a significant adverse impact? (Y/N) If yes, proceed to column C, if no document and proceed to Column G.**	**Mitigation Measures**	**No.**	**Is the measure practicable given the characteristics of the water body? (Yes/No) If yes, proceed to Column D. If no, document and proceed to column G.**	**Is the mitigation measure in place and adequate? (Yes/No) If No, proceed to Column E. If Yes document the mitigation measure and proceed to Column G.**	**Can the measure be implemented without having a significant adverse impact on use? (Yes/No) If yes, proceed to column F, if no document and proceed to Column G.**	**Can the measure be implemented without having a significant adverse impact on the wider environment? (Yes/No) If yes, proceed to Column G, If no document and proceed to Column G.**	**Document: x : For measures not in place (proceed to Column H) ✔: For those already in place and adequate - : For those screened out**	**Will the mitigation measure provide more than a slight ecological benefit when considered alone or in combination with other measures? If yes, proceed to Column I; if no, document**	**Document any reasons which could affect the inclusion of the measure in the RBMP (e.g. prioritisation in combination with other measures, disproportionate cost, other reasons why an extended deadline or less stringent target might be justified)**
Bank and bed reinforcement and in-channel structures	Hard protection e.g. Steel piling, vertical walls and gabion baskets. Includes hard bank protection in a state of disrepair.		Loss of riparian zone / marginal habitat / loss of lateral connectivity / loss of sediment input		Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	1							
					Protect and enhance ecological value of marginal aquatic habitat, banks and riparian zone	2							
					Protect and restore historic aquatic habitats	3							
			Loss of sediment continuity (lateral) - build up of sediment in the channel		Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	4							
					Protect and enhance ecological value of marginal aquatic habitat, banks and riparian zone	5							
					Protect and restore historic aquatic habitats	6							
	Dams, sluices, weirs and gravel traps		Loss of biological continuity - interference with fish population movements		Operational and structural changes to sluices and weirs	7							
					Install fish passes	8							
			Loss of sediment continuity (longitudinal) - build up of sediment upstream, reduced bedload downstream		Removal of structure	9							
Channel alteration	Realignment / re-profiling / regrading		Loss of morphological diversity and habitat		Retain marginal aquatic and riparian habitats	10							
					Increase in-channel morphological diversity, e.g. install instream features; 2 stage channels	11							
	Culverts		Loss of morphological diversity and habitat		Re-opening existing culverts	12							
					Alteration of channel bed	13							
			Continuity		Re-opening existing culverts	14							
					Alteration of channel bed	15							
Floodplain modification	Flood banks and flood walls		Loss of riparian zone / marginal habitat / loss of lateral connectivity / loss of sediment input		Flood bunds (earth banks)	16							
					Set-back embankments (a type of managed retreat)	17							
					Improve floodplain connectivity	18							
Operations and maintenance	Sediment management (including dredging)		Direct loss of / impact on aquatic habitats / hydromorphology		Sediment management strategies (develop and revise) which could include a) substrate reinstatement, b) sediment traps, c) allow natural recovery minimising maintenance, d) riffle construction, e) reduce all bar necessary management in flood risk areas	19							
			Transfer of fine sediment downstream										
			Bankside erosion and impacts on riparian habitats										
			Source of fine sediment (disposal of dredgings on banks)										
	Removal/clearance of urban trash and woody debris		Loss of aquatic habitats		Appropriate channel maintenance strategies and techniques e.g. minimise disturbance to channel bed and margins	20							
			Transfer of fine sediment downstream		Appropriate channel maintenance strategies and techniques e.g. remove woody debris only upstream of, or within, areas of urban flood risk	21							
	Vegetation control		Physical disturbance of bed and or bank - increased sediment input; sediment mobilisation and loss of marginal / riparian vegetation		Appropriate vegetation control regime e.g. a) minimise disturbance to channel bed and margins, b) selective vegetation management for example only cutting from one side of the channel, c) providing/reducing shade, d) seasonal maintenance	22							
			Transfer and establishment of alien invasive species		Appropriate techniques to prevent transfer of invasive species e.g. appropriate training of operational staff	23							
	Pipes, inlets, outlets and off-takes		Hydromorphological alterations of water and sediment inputs through artificial means		Appropriate techniques to align and attenuate flow to limit detrimental effects of these features	24							
Land use *(Not in itself a sustainable flood management pressure)*	Intensive land use		Changes to vegetation, hydrology and sediment supply		Land management strategies (develop and revise), including SUDS and changes in farming practices and forest management	25							

Hydromorphological assessment for classification	