



Water Resource Management Plan 2029 SEA Scoping Appendix D - WRSE Objectives and Scoring Criteria

Thames Water

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Appendix D. WRSE Objectives and Scoring Criteria

We note that the WRSE Objectives and Scoring Criteria shown in this appendix may still be adjusted as part of the wider WRSE SEA scoping work and that we will overlay local considerations to these at the appropriate time as part of the preparation for the options assessments.

D.1. Biodiversity

Table 13: Biodiversity

SEA Objectives	Datasets / Key Themes	Effect	Score	Description
Objective 1.1: To protect all environmental sites (including designated sites and their qualifying features, habitats and species of principal importance, and non-designated sites). Objective 1.2: To provide opportunities for habitat creation or restoration and deliver a net benefit/gain for biodiversity.	HRA findings SSSIs Marine Protected Area (MPA) Marine Conservation Zone (MCZ) National Nature Reserves (NNR) Local Nature Reserve (LNR) Priority habitats and species Non-designated sites BNG results INNS assessment	+++	Major Positive	The option or plan would result in a major enhancement on the quality of designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat quality and availability. The option or plan would result in a major increase in the population of a priority species. Effects could be caused by beneficial changes in water flows/water quality, or large amounts of creation or enhancement of habitat, promoting a major increase in ecosystem structure and function.
				The option or plan would result in a major reduction or management of INNS.
Objective 1.3: To avoid and minimise the spread of, and, where required, manage invasive and non-native species (INNS).		++	Moderate Positive	The option or plan would result in a moderate enhancement on the quality of designated and/or non-designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat creation and enhancement measures. The option or plan would result in a moderate increase in the population of a priority species. Effects could be caused by beneficial changes in water flows/water quality, or moderate amounts of creation or enhancement of habitat, promoting a moderate increase in ecosystem structure and function.
				The option or plan would result in a moderate reduction or management of INNS.

	+	Minor Positive	The option or plan would result in a minor enhancement of the quality of designated and/or non-designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat creation and enhancement measures. The option or plan would result in a minor increase in the population of a priority species. Effects could be caused by beneficial changes in water flows/water quality, or small amounts of creation or enhancement of habitat, promoting a minor increase in ecosystem structure and function. The option or plan would result in a minor reduction or management of INNS.
	0	Neutral	The option or plan would not result in any effects on designated or non-designated sites including habitats and/or species). It will not have an effect on INNS.
	-	Minor Negative	The option or plan would result in a minor negative effect on the quality of designated and/or non-designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat loss or degradation. The option or plan would result in a minor decrease in the population of a priority species. Effects could be caused by detrimental changes in flows / water quality, or small losses or degradation of habitat leading to a minor loss of ecosystem structure and function.

			The option or plan would result in a minor increase or spread of INNS.
	--	Moderate Negative	The option or plan would result in a moderate negative effect on the quality of designated and/or non-designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat loss or degradation. The option or plan would result in a moderate decrease in the population of a priority species. Effects could be caused by detrimental changes in flows/water quality, or moderate loss or degradation of habitat leading to a moderate loss of ecosystem structure and function. The option or plan would result in a moderate increase or spread of INNS.
	---	Major Negative	The option or plan would result in a major negative effect on the quality of designated and/or non-designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat loss or degradation. The option or plan would result in a major decrease in the population of a priority species. Effects could be caused by detrimental changes in flows/water quality, or large losses or degradation of habitat leading to a major loss of ecosystem structure and function. The option or plan would result in a major increase or spread of INNS.

	?	Uncertain	From the level of information available the effect that the option or plan would have on this objective is uncertain
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D.2. Water

Table 14: Water

SEA Objectives	Datasets / Key Themes	Effect	Score	Description
Objective 2.1: To promote and enhance the sustainable and efficient use of resilient water resources. Objective 2.2: To reduce and manage flood risk, taking climate change into account. Objective 2.3: To protect and enhance the quality and quantity of surface and groundwater resources.	Deployable Output change Leakage reduction Flood Risk Zones WFD assessment output Shellfish Waters Source Protection Zones	+++	Major Positive	The option or plan results in addressing failure of WFD Good Ecological Status / Good Ecological Potential. The option or plan would result in a major improvement to flood risk. The option or plan would result in a major improvement in water efficiency, reduces demand and improves resilience.
		++	Moderate Positive	The option or plan achieves savings through demand management and does not require abstraction to achieve yield. The option or plan contributes to addressing failure of WFD Good Ecological Status / Good Ecological Potential. The option would result in a moderate improvement to flood risk. The option or plan would result in a moderate improvement in water efficiency, reduces demand and improves resilience.
		+	Minor Positive	The option or plan achieves savings through demand management and does not require abstraction to achieve yield. The option or plan would result in a minor improvement to flood risk. The option or plan would result in a minor improvement in water efficiency, reduces demand and improves resilience.

	0	Neutral	The option or plan would have no discernible effect on river flows or surface/coastal water quality or on groundwater quality or levels. The option would not have an effect on or be affected by flood risk.
	-	Minor Negative	The option or plan would result in minor decreases in river flows. River and/or coastal water quality may be affected and lead to short term or intermittent effects on receptors (e.g. designated habitats, protected species or recreational users of rivers and the coastline) that could not be avoided but could be mitigated. The option or plan would result in minor decreases in groundwater quality or levels. The option or plan is located in Flood Zone 2. The option or plan would result in minor decreases in water efficiency, increases demand and reduces resilience.
	--	Moderate Negative	The option or plan would result in moderate decreases in river flows. River and/or coastal water quality may be affected and lead to long term or continuous effects on receptors (e.g. designated habitats, protected species or recreational users of rivers and the coastline) that could not reasonably be mitigated. The option or plan results in the likely deterioration of WFD classification. The option or plan would result in moderate decreases in groundwater quality or levels. The option or plan is located in Flood Zone 3.

			The option or plan would result in moderate decreases in water efficiency, increases demand and reduces resilience
	---	Major Negative	The option or plan would result in major decreases in river flows. River and/or coastal water quality may be affected and lead to long term or continuous effects on receptors (e.g. designated habitats, protected species or recreational users of rivers and the coastline) that could not reasonably be mitigated. The option or plan results in the deterioration of WFD classification. The option or plan would result in major decreases in groundwater quality or levels. The option or plan is located in Flood Zone 2 or 3 and further contributes to flood risk. The option or plan would result in major decreases in water efficiency, increases demand and reduces resilience
	?	Uncertain	From the level of information available the effect that the option or plan would have on this objective is uncertain.

D.3. Soil

Table 15: Soil

SEA Objectives	Datasets / Key Themes	Effect	Score	Description
Objective 3.1: To protect and enhance the functionality and quality of soils, including the protection of high-grade agricultural land, and geodiversity.	Agricultural Land Classification Landfill Sites – Authorised and Historic Mineral and Waste allocations Geological SSSIs Brownfield sites	+++	Major Positive	The option or plan would result in a major enhancement on the quality of soils through the implementation of catchment approaches, remediation or other measures.
		++	Moderate Positive	The option or plan would result in a moderate enhancement on the quality of soils through the implementation of catchment approaches, remediation or other measures.
		+	Minor Positive	The option or plan is located on a brownfield site and has no effect on soils or existing land use. The option results in the remediation of contaminated land.
		0	Neutral	The option or plan would not result in any effects on soils as national resource or land use.
		-	Minor Negative	The option or plan is not located on a brownfield site and/or is in conflict with existing land use. Option is within 250m of a geologically designated SSSI.
		--	Moderate Negative	The option or plan will result in a moderate loss of best and most versatile agricultural land or is in substantial conflict with existing land use. Disturbance of geological SSSI. The option or plan is partially overlying a mineral safe-guarding area.
		---	Major Negative	The option or plan will result in a major loss of best and most versatile agricultural land or is in substantial conflict with existing land use. The option or plan is overlying a mineral safe-guarding area.

			The option or plan is directly overlying a geological SSSI.
	?	Uncertain	From the level of information available the effect that the option or plan would have on this objective is uncertain.

D.4. Air Quality

Table 16: Air Quality

SEA Objectives	Datasets / Key Themes	Effect	Score	Description
Objective 4.1: To maintain and improve air quality.	Air Quality Management Areas (AQMA)	+++	Major Positive	The option or plan would result in a major enhancement of the air quality within one or more AQMAs.
		++	Moderate Positive	The option or plan would result in a moderate enhancement of the air quality within one or more AQMAs.
		+	Minor Positive	The option or plan would result in an enhancement of the air quality.
		0	Neutral	The option or plan would not result in any effects on Air Quality and AQMAs.
		-	Minor Negative	The option or plan would result in a decrease of the air quality for ecological receptors or within 500m of an AQMA.
		--	Moderate Negative	The option or plan would result in a decrease of the air quality within one or more AQMAs.
		---	Major Negative	The option or plan would result in a major decrease in the air quality within one or more AQMAs.
		?	Uncertain	From the level of information available the effect that the option or plan would have on this objective is uncertain.

D.5. Climatic Factors

Table 17: Climatic Factors

SEA Objectives	Datasets / Key Themes	Effect	Score	Description
Objective 5.1: To reduce greenhouse gas emissions and operational and embodied carbon. Objective 5.2: To adapt and improve resilience to the threats of climate change through mitigation, where required, and reducing vulnerability of built assets.	Embodied carbon and operational carbon emissions Climate Risk Indicator baseline data for Annual Average Temperature Change – 2100, 4 degrees scenario, and Summer rainfall percentage decrease – 2100, 4 degree scenario for the WRSE area.	+++	Major Positive	The option or plan will majorly improve catchment resilience to drought.
		++	Moderate Positive	The option or plan will moderately improve catchment resilience to drought.
		+	Minor Positive	The option or plan will minorly improve catchment resilience to drought.
		0	Neutral	The option or plan would have no discernible effect on greenhouse gas emissions, nor would the option increase resilience/decrease vulnerability to climate change effects.
		-	Minor Negative	The option or plan will have a minor impact on resilience/decrease vulnerability to climate change effects. The option or plan will generate minor operational carbon emissions.
		--	Moderate Negative	The option or plan will have a moderate impact on resilience/significantly decrease vulnerability to climate change effects. The option or plan will generate moderate operational carbon emissions.
		---	Major Negative	The option or plan will have a major impact on resilience/significantly decrease vulnerability to climate change effects. The option or plan will generate major operational carbon emissions.
		?	Uncertain	From the level of information available the effect that the option or plan would have on this objective is uncertain.

D.6. Landscape and Visual Amenity

Table 18: Landscape and Visual Amenity

SEA Objectives	Datasets / Key Themes	Effect	Score	Description
Objective 6.1: To conserve, protect and enhance designated and undesignated landscape, seascape and townscape character and visual amenity.	National Landscapes (National Parks and Areas of Outstanding National Beauty) National Character Areas Green Belt land	+++	Major Positive	The option or plan would have a major positive contribution to designated landscape (AONB or National Park) management plan objectives or would deliver significant enhancement to the local landscape/seascape/townscape (e.g., removal of intrusive features, high-quality restoration).
		++	Moderate Positive	The option or plan would have a moderate positive contribution to designated landscape management plan objectives or moderately enhance landscape/seascape/townscape character and visual amenity.
		+	Minor Positive	The option or plan results in new or modified above-ground infrastructure with a minor positive effect on the local landscape, townscape or seascape (e.g., sympathetic design/materials, small-scale public realm improvements).
		0	Neutral	The option or plan would not result in any effects on the local landscape, townscape or seascape.
		-	Minor Negative	The option or plan results in new, above-ground infrastructure that has a minor negative effect on the local landscape, townscape or seascape (limited magnitude, largely localised, likely mitigable).
		--	Moderate Negative	The option or plan would have a moderate negative effect on a designated landscape or feature (e.g., visually intrusive elements) whose effects may not be fully mitigated; or a noticeable adverse effect on local character/visual amenity.
		---	Major Negative	The option or plan would have a major negative effect on a designated landscape or feature (e.g., significant visually intrusive infrastructure) whose effects could not

			be reasonably mitigated; or a major adverse effect on local character/visual amenity.
	?	Uncertain	From the level of information available the effect that the option or plan would have on this objective is uncertain.

D.7. Cultural Heritage and Historic Environment

Table 19: Cultural Heritage and Historic Environment

SEA Objectives	Datasets / Key Themes	Effect	Score	Description
Objective 7.1: To conserve and enhance cultural and historic environment including the significance of designated and non-designated heritage assets and their settings and archaeological important sites.	Listed Buildings Scheduled Monuments Registered Parks and Gardens Registered Battlefields Protected Wrecks World Heritage Sites Conservation Areas	+++	Major Positive	The option or plan will result in enhancements to designated heritage assets and/or their setting, fully realising the significance and value of the asset, such as: Securing repairs or improvements to heritage assets, especially those identified in the Historic England Buildings/Monuments at Risk Register; Improving interpretation and public access to important heritage assets
		++	Moderate Positive	The option or plan will result in enhancements to designated heritage assets and/or their setting. Improving interpretation and public access to important heritage assets
		+	Minor Positive	The option or plan will result in enhancements to non-designated heritage assets and/or their setting
		0	Neutral	The option or plan will have no effect on cultural heritage assets or archaeology.
		-	Minor Negative	The option or plan will result in the loss of significance of undesignated heritage assets and/or their setting, notwithstanding remedial recording of any elements affected. There will be limited damage to known, undesignated archaeology important sites with a consequent loss of significance only partly mitigated by archaeological investigation.
		--	Moderate Negative	The option or plan will result in the loss of significance of undesignated heritage assets and/or their setting, notwithstanding remedial recording of any elements affected.

			The option or plan will diminish of significance of designated heritage assets and/or their setting, notwithstanding remedial recording of any elements affected
	---	Major Negative	The option or plan will diminish the significance of designated heritage assets and/or their setting such as: Demolition or further deterioration in the condition of designated heritage assets especially those identified in the Historic England Buildings/Monuments at Risk Register. Loss of public access to important heritage assets and lack of appropriate interpretation. There will be major damage to known, designated archaeology important sites with a consequent loss of significance only partly mitigated by archaeological investigation
	?	Uncertain	From the level of information available the effect that the option or plan would have on this objective is uncertain.

D.8. Population and Human Health

Table 20: Population and Human Health

SEA Objectives	Datasets / Key Themes	Effect	Score	Description
Objective 8.1: To maintain and enhance the wellbeing of the local community, including social, physical and mental wellbeing. Objective 8.2: To maintain and enhance the water environment for other users including recreation, tourism and navigation. Objective 8.3: To promote a sustainable economy.	IMD – Deprived Areas Noise Action Areas OS Important Building OS Greenspaces Employment opportunities and economic diversity	+++	Major Positive	The option or plan leads to major positive effect on the health of local communities and will ensure that surface water and bathing water quality is maintained within statutory limits. The option or plan creates new, and significantly enhances existing, recreational facilities, publicly accessible greenspace and/or tourism within the operational area.
		++	Moderate Positive	The option or plan leads to positive effect on the health of local communities and will ensure that surface water and bathing water quality is maintained within statutory limits. The option or plan enhances existing, recreational facilities, publicly accessible greenspace and/or tourism within the operational area
		+	Minor Positive	The option or plan has a temporary positive effect on the health of local communities and will ensure that surface water and bathing water quality is maintained within statutory limits
		0	Neutral	The option or plan would not result in any effects on human health and existing recreational facilities and/or tourism.
		-	Minor Negative	The option or plan has a temporary effect on human health (e.g. noise or air quality). The option reduces the availability and quality of existing recreational facilities and/or tourism within the operational area
		--	Moderate Negative	The option or plan results in the permanent removal of existing recreational facilities, publicly accessible greenspace and/or tourism within the operational area

D.9. Material Assets

Table 21: Material Assets

SEA Objectives	Datasets / Key Themes	Effect	Score	Description
Objective 9.1: To avoid negative effects on built assets and infrastructure (including green infrastructure). Objective 9.2: To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	Motorways & A roads B & minor roads Railways National Trails National cycle routes Canals Material use Waste generation Energy use	+++	Major Positive	The option or plan will result in a major decrease in the consumption of materials and energy. The option will result in no new energy consumption or energy will be from 100% renewable sources. The option or plan will promote the reuse and recycling of substantial quantities of waste materials. No waste sent to landfill The option or plan will incorporate substantial sustainable design ideas and the use of sustainable materials. The option or plan will support circular economy principles. The option or plan will use only existing infrastructure
		++	Moderate Positive	The option or plan will result in a moderate decrease in the consumption of materials and energy. The option or plan will result in no new energy consumption or energy will be predominantly sourced from renewable sources. The option or plan will promote the reuse and recycling of substantial quantities of waste materials, with only minor quantities of waste sent to landfill The option or plan will incorporate moderate sustainable design ideas and the use of sustainable materials.

			The option or plan will support circular economy principles. The option or plan will predominantly use existing infrastructure
	+	Minor Positive	The option or plan will result in a minor decrease in the consumption of materials and energy. The option or plan will result in no new energy consumption or energy will include a minor contribution from renewable sources. The option or plan will promote the reuse and recycling of substantial quantities of waste materials, with only minor quantities of waste sent to landfill The option or plan will incorporate minimal sustainable design ideas and the use of sustainable materials. The option or plan will support circular economy principles.
	0	Neutral	The option or plan will use some existing infrastructure The option or plan will result in no change to existing infrastructure or assets.
	-	Minor Negative	The option or plan would require minimal new infrastructure and / or resource use. The option or plan offers limited opportunities for the re-use or recycling of waste material. The option or plan offers limited opportunities for the use of sustainable design and materials.

			The option or plan would result in a minor increase in fossil-fuel based energy consumption, with no renewable energy options.
--	Moderate Negative		The option or plan would require moderate new infrastructure and / or resource use. The option or plan offers limited opportunities for the re-use or recycling of waste material. The option or plan offers limited opportunities for the use of sustainable design and materials. The option or plan would result in a moderate increase in fossil-fuel based energy consumption, with no renewable energy options.
---	Major Negative		The option or plan requires substantial new infrastructure and / or resource use. The option or plan offers no opportunities for the re-use or recycling of waste material. The option or plan offers no opportunities for the use of sustainable design and materials. The option or plan would result in a major increase in fossil-fuel based energy consumption, with no renewable energy options.
?	Uncertain		From the level of information available, uncertainty around material use and material assets across the option or plan.

