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ESW Drought Plan 2027 Strategic Environmental Assessment (SEA) Environmental Report: Appendix F – Assessment of Drought Plan Actions

April 2026

ESW DROUGHT PLAN 2027
SEA ENVIRONMENTAL REPORT: APPENDIX F – ASSESSMENT OF DROUGHT PLAN ACTIONS

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1 ASSESSMENT OF DROUGHT PLAN ACTIONS

1.1 Leakage Detection and Repair

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Construction activities may result in disturbance to local habitats and species during the works. Assuming best practice construction methods and that works are mainly within urban settings, impacts will be negligible.	Local	Moderate	Short-term	Temporary	Low	Medium	▪ Application of reasonable and best practice measures/methods; all actions in compliance with all regulatory standards and WFD no deterioration requirements. ▪ Avoid introducing or spreading INNS by following the INNS risk assessment. ▪ Application of Environmental Monitoring Plan (EMP) to support designated sites and sensitive habitats, to ensure no deterioration of WFD water bodies and support RBMP objectives. ▪ Standard operational best practice for short-term works to minimise temporary disturbance (traffic, noise, soils) in predominantly urban locations. ▪ Promote efficient use of existing infrastructure to reduce resource and waste impacts.	▪ Use of renewable or 'clean' energy sources where practicable. ▪ Application of archaeological watching briefs where excavation takes place in areas of archaeological potential.	0	Neutral	0	Neutral
	To provide opportunities for habitat creation or restoration.		Action does not provide opportunities for habitat creation or restoration.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage Invasive Non-Native Species (INNS).		Construction activities may result in some spreading of INNS. Assuming best practice construction methods, impacts are anticipated to be negligible.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		The reduction in water lost through leakage will result in reduced requirement for abstraction at source and therefore, potential for beneficial impacts on flow and sensitive habitats/species. Therefore, aligning with no-deterioration and supporting good ecological status/potential.	Regional	Moderate	Long-term	Permanent	Low	Medium			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Action does not affect the quality of water	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain surface water and groundwater flows and quantity.		The reduction in water lost through leakage will result in reduced requirement for abstraction at source and therefore, potential for beneficial impacts on flow.	Regional	Moderate	Long-term	Permanent	Low	Medium			0	Neutral	+	Minor beneficial
	To meet Water Framework Directive (WFD) objectives and support the achievement of environmental objectives set out in River Basin Management Plans (RBMPs).		Action does not directly support WFD nor RBMP objectives. However, potential in increased flow due to lower abstraction at source may have a beneficial effect on water environment.	Regional	Moderate	Long-term	Permanent	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Action does not increase the environmental resilience of the water environment to drought.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including Sites of Special Scientific Interest (SSSIs) of geological importance?	Construction activities may result in localised disturbance to soils. However, repair activity will be on pipelines which are already in use.	Local	High	Short-term	Temporary	Low	Medium			-	Minor adverse	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an Air Quality Management Area (AQMA)? ▪ Will the action affect local air quality?	Emissions related to vehicle trips will affect air quality, some within AQMAs in ESW's supply area.	Local	High	Short-term	Temporary	Low	High			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Leakage detection and repair require vehicle trips that generate greenhouse gas emissions. However, reducing leakage lowers water losses, which in turn cuts the energy needed for treatment and pumping, delivering long-term emissions savings.	Regional	High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Action does not introduce climate mitigation and resilience of assets.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	The drought action helps maintain service levels by providing water that would otherwise be lost through leakage.	Local	Moderate	Long-term	Permanent	Medium	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Action helps maintain supply reliability during droughts, ensuring a dependable supply for customers and supporting economic activity.	Local	Moderate	Long-term	Permanent	Medium	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Action does not have an effect on providing education or information resources.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		Construction work for leakage detection and repairs may cause temporary noise and traffic disruption. These impacts will be short-lived at each (likely urban) location, and with best-practice construction methods, any disturbance should be minimal. Recreational areas are not expected to be affected.	Local	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent	Leakage reduction will occur on existing pipelines, so no archaeological or cultural heritage sites are expected to be affected. Any short-term impacts on nearby heritage settings are expected to be negligible.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
		heritage assets, including organic remains?													
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Most works will occur in urban areas. With best-practice construction methods, construction impacts are expected to be negligible.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	Action will cut the amount of treated water lost from the network, reducing the energy and chemicals needed for treatment. Use of existing infrastructure, though repairs may require some raw materials, which are assumed to be sourced locally.	Regional	Moderate	Long-term	Permanent	Low	Low			0	Neutral	+	Minor beneficial
	Avoid adverse effects on built assets and infrastructure		Leakage repair activities help avoid adverse effects on built assets and infrastructure. They reduce physical damage, prevent costly failures, and support more resilient urban systems.	Regional	Moderate	Long-term	Permanent	Low	Low			0	Neutral	+	Minor beneficial

1.2 Customer Communications

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Action will not have any adverse effects on biodiversity or designated nature conservation sites. By reducing consumer demand for water, it will lessen the need for abstraction sources, which could benefit flow-sensitive habitats and species.	Local	Low	Short-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing operational controls for drought actions. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection.	▪ Use of renewable or 'clean' energy sources where practicable.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		Action does not provide opportunities for habitat creation or restoration.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		Customer communication will have no impact on avoiding the introduction or spreading of INNS.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		The reduction in water usage will result in reduced requirement for abstraction at source and therefore, potential for beneficial impacts on flow and sensitive habitats/species. Therefore, aligning with no-deterioration and supporting good ecological status/potential.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Action may reduce the need for abstraction from sources, lessening associated impacts on surface and groundwater quality during drought conditions.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		Customer communications are expected to benefit the water environment by lowering consumer demand, which in turn reduces the need for water abstraction, benefitting water flows.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Action does not directly support WFD nor RBMP objectives. However, potential in increased flow due to lower abstraction at source may have a beneficial effect on water environment.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Action does not increase the environmental resilience of the water environment to drought.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	Action will have no impact on geology, geomorphology and quality of soils.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Action will have no impact on air quality.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	There is some carbon usage associated with increased customer communications associated with digital communications however these are negligible.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Increased customer communications although temporary encourage efficient water used and change in behaviours contributing to climate mitigation and resilience although these might be negligible.	Local	Low	Long-term	Permanent	Low	Low			0	Neutral	0	Neutral
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Customer communications promote water efficiency and encourage a reduction in water consumption. Action also helps raise awareness of the importance and value of water environment for health and well-being. There may be some customer concerns relating to the challenging of illegal abstraction or misuse, the receipt of unwanted communications, or resistance to adopting water-saving behaviours.	Regional (beneficial) Local (adverse)	High (beneficial) Moderate (adverse)	Long-term (beneficial) Short-term (adverse)	Permanent (beneficial) Temporary (adverse)	Medium	Medium			-	Minor adverse	+ +	Moderate beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The action will lead to water savings that help strengthen the region's water supply security, thereby supporting and protecting the health and wellbeing of the community.	Local	Moderate	Long-term	Permanent	Low	Medium			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Customer communications focus on promoting water savings and efficiency in the home and therefore do not provide education or information about the natural environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		No impacts on recreation, tourism or navigation are anticipated as a result of this action.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	Action has no direct impact on the historic environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Action has no direct impact on the landscape.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	Action will not reduce or make more efficient use of resources.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		No adverse impacts on built assets.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

1.3 Reduction in Pressure

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Lower pressure reduces leakage volumes, meaning less abstraction is required to meet demand. Reduced abstraction helps maintain river flows, groundwater levels and wetland hydrology, benefiting priority habitats and species.	Local	Low	Short-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing operational controls for drought actions. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection.	▪ Use of renewable or 'clean' energy sources where practicable.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		Action does not provide opportunities for habitat creation or restoration.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		Action will have no impact on avoiding the introduction or spreading of INNS.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		Lower abstraction supports ecological status and helps avoid deterioration during dry periods. Reduced bursts also lower the risk of sediment mobilisation or pollution incidents. Alignment with no deterioration objectives and supporting achievement of good status.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Fewer bursts reduce the risk of mains contamination events and surface water pollution from treated water discharges. Lower leakage reduces groundwater ingress in some areas.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		Pressure reduction is one of the most effective ways to reduce leakage. Lower leakage reduces the need for abstraction, supporting environmental flows.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Supports flow related elements of WFD. Helps water companies stay within abstraction limits, especially in sensitive catchments.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Lower pressure reduces both leakage and consumption (especially for older fittings). Improves system resilience by reducing peak demand and stabilising supply zones.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	Reduced bursts mean fewer incidents of soil saturation, erosion, or undermining of embankments and roadbeds but these are anticipated to be negligible.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Lower pressure reduces pumping energy demand, leading to small reductions in air pollutant emissions from electricity generation however this effect is anticipated to be negligible.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Lower pressure means lower pumping energy and therefore reduced operational carbon emissions.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Action is a temporary measure and therefore does not have an effect on climate mitigation and resilience.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Action ensures supply to customers during drought and fewer bursts may reduce service interruptions, road closures and local flooding. If pressure is reduced too far, some customers (especially in high rise buildings or remote ends of the network) may experience low pressure.	Regional	Moderate	Short-term	Temporary	Low	Medium			-	Minor adverse	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Action is a temporary measure and therefore does not have an effect on long term water supply resilience.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To connect customers to the natural environment, provide education or information resources for the public.		Action does not have an effect on providing education or information resources.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		No impacts on recreation, tourism or navigation are anticipated as a result of this action.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	Action has no direct impact on the historic environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Action has no direct impact on the landscape.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of	▪ Will the action reuse existing infrastructure?	Reduced bursts lower repair waste and replacement materials and lower energy use reduces resource consumption.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	resources, and minimise the generation of waste.	▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?													
	Avoid adverse effects on built assets and infrastructure		Lower pressure reduces burst frequency, protecting roads, utilities, buildings and transport infrastructure. Reduced ground saturation prevents subsidence and pavement failure.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

1.4 Water Saving Devices

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Action will not have any adverse effects on biodiversity or designated nature conservation sites. By reducing consumer demand for water, it will lessen the need for abstraction sources, which could benefit flow-sensitive habitats and species.	Local	Low	Short-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions. ▪ Use of standard operational best practice.	▪ Appropriate specification and installation of devices. ▪ Monitoring of uptake and water savings to confirm effectiveness. ▪ Customer guidance on correct use and maintenance.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		Action does not provide opportunities for habitat creation or restoration.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		No impact on avoiding the introduction or spreading of INNS.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		The reduction in water usage will result in reduced requirement for abstraction at source and therefore, potential for beneficial impacts on flow and sensitive habitats/species. Alignment with no deterioration objectives and supporting achievement of good status.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Action may reduce the need for abstraction from sources, lessening associated impacts on surface and groundwater quality during drought conditions.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		Use of water saving devices by customers is expected to benefit the water environment by lowering consumer demand, which in turn reduces the need for water abstraction, benefitting water flows.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Action does not directly support WFD nor RBMP objectives. However, potential in increased flow due to lower abstraction at source may have a beneficial effect on water environment.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Water saving devices provide are aimed at providing a long-term water efficiency usage at home and therefore action may increase the environmental resilience of the water environment to drought.	Local	Moderate	Long-term	Permanent	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	Action will have no impact on geology, geomorphology and quality of soils.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Action will have no impact on air quality.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	There is some carbon usage associated with increased customer communications associated with digital communications however these are negligible.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Increased customer communications although temporary encourage efficient water used and change in behaviours contributing to climate mitigation and resilience although these might be negligible.	Local	Low	Long-term	Permanent	Low	Low			0	Neutral	0	Neutral
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Action results in efficient water usage resulting in reduction in water consumption.	Regional	High	Long-term	Permanent	Medium	Medium			0	Neutral	++	Moderate beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The action will lead to water savings that help strengthen the region's water supply security, thereby supporting and protecting the health and wellbeing of the community.	Local	Moderate	Long-term	Permanent	Low	Medium			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Action does not have an effect on providing education or information about the natural environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		No impacts on recreation, tourism or navigation are anticipated as a result of this action.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	Action has no direct impact on the historic environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views?	Action has no direct impact on the landscape.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
		▪ Will the action protect and enhance designated landscapes and features?													
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	Action will not reduce or make more efficient use of resources.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		Action would offer some protection to existing water supply infrastructure; however, this is anticipated to be negligible.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral

1.5 Community Education

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Action will not have any adverse effects on biodiversity or designated nature conservation sites. By reducing consumer demand for water, it will lessen the need for abstraction sources, which could benefit flow-sensitive habitats and species.	Local	Low	Short-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection.	▪ Targeted and inclusive communication to avoid disproportionate impacts on vulnerable groups. ▪ Monitoring of demand response to assess effectiveness. ▪ Periodic review of education outcomes to refine messaging.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		Action does not provide opportunities for habitat creation or restoration.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		Educational audits and workshops will have no impact on avoiding the introduction or spreading of INNS.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		The reduction in water usage will result in reduced requirement for abstraction at source and therefore, potential for beneficial impacts on flow and sensitive habitats/species. Therefore, aligning with no-deterioration and supporting good ecological status/potential.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Action may reduce the need for abstraction from sources, lessening associated impacts on surface and groundwater quality during drought conditions.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		Educational audits and workshops are expected to benefit the water environment by lowering consumer demand, which in turn reduces the need for water abstraction, benefitting water flows.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Action does not directly support WFD nor RBMP objectives. However, potential in increased flow due to lower abstraction at source may have a beneficial effect on water environment.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Action does not increase the environmental resilience of the water environment to drought.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	Action will have no impact on geology, geomorphology and quality of soils.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Emissions related to vehicle trips will affect air quality, some within AQMAs in ESW's supply area.	Local	Low	Short-term	Temporary	Low	Medium			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	There is some carbon usage associated with increased customer communications however these are negligible. Action will require vehicle trips that generate greenhouse gas emissions having minor adverse effects.	Local	Low	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Educational audits and workshops although temporary encourage efficient water usage and change in behaviours contributing to climate mitigation and resilience although these might be negligible.	Local	Low	Long-term	Permanent	Low	Low			0	Neutral	0	Neutral
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Educational audits and workshops promote water efficiency and encourage a reduction in water consumption. Action also helps raise awareness of the importance and value of water environment for health and well-being.	Regional	High	Long-term	Permanent	Medium	Medium			0	Neutral	++	Moderate beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The action will lead to water savings that help strengthen the region's water supply security, thereby supporting and protecting the health and wellbeing of the community.	Local	Moderate	Long-term	Permanent	Low	Medium			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Workshops promote water savings and efficiency in the home/businesses and therefore do not provide education or information about the natural environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		No impacts on recreation, tourism or navigation are anticipated as a result of this action.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	Action has no direct impact on the historic environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Action has no direct impact on the landscape.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	Action will not reduce or make more efficient use of resources.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		Acton would offer some protection to existing water supply infrastructure; however, this is anticipated to be negligible.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral

1.6 Governmental Led Interventions

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	UK government-led drought interventions, such as directions to limit abstraction, conditions attached to Drought Orders, and regulatory oversight by bodies like the Environment Agency, Natural Resources Wales, SEPA and NIEA, are often explicitly designed to protect sensitive habitats, SSSIs, Natura 2000/European sites (now retained in UK law), Ramsar sites and priority habitats. By constraining damaging abstraction and prioritising environmental flow needs, these measures can have a beneficial effect on biodiversity, helping to maintain ecological functions and reduce stress on designated and non-designated habitats during drought.	Regional	High	Medium term	Temporary	Low	High	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Consultation with affected water users (particularly in relation to other abstractors) to determine how licences are used, associated conditions and potential impacts of specific drought options. ▪ Extensive consultation in relation to the implementation of water restrictions and bans on use. ▪ Modifications to operating regimes of water level management or flood risk management structures, where appropriate, to help ensure that river flows are maintained. ▪ Provision of adequate treatment of any water which is to be transferred between catchments. ▪ Provision of adequate treatment of effluent prior to its reintroduction to any surface water bodies. ▪ Use of renewable or 'clean' energy sources where practicable. ▪ Where archaeological remains are at risk due to water level changes measures set out in the Historic England 'Preserving Archaeological Remains' guidance (2016)[1] should be implemented as appropriate.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		The interventions are primarily legal, regulatory and policy tools and therefore do not directly create or restore habitats. However, by preventing severe ecological degradation during drought, particularly in rivers, wetlands and lakes, they help safeguard the baseline condition needed for ongoing or future habitat restoration schemes promoted through UK conservation programmes and agri-environment schemes, providing indirect support to restoration objectives.	Local	Moderate	Medium term	Temporary	Low	High			0	Neutral	+	Minor beneficial
	To avoid introducing or spreading and, where feasible, manage INNS.		Government-led drought measures do not typically involve physical works or water transfers and therefore do not themselves create a direct pathway for INNS spread. Where UK or devolved administrations and regulators issue guidance or conditions on emergency measures (such as inter-catchment transfers), they can require adherence to national INNS and biosecurity protocols, thereby helping to manage rather than increase INNS risks.	Local	High	Short-term	Temporary	Low	Medium			0	Neutral	+	Minor beneficial
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		Government-led drought interventions, including Drought Orders and regulatory decisions, are taken within this framework and must have regard to environmental objectives and designated site conservation targets. As such, they can play a key role in preventing deterioration in ecological status and supporting the achievement of conservation objectives during drought.	Regional	High	Medium term	Temporary	Medium	High			0	Neutral	+ +	Moderate beneficial

[1] Historic England (2016) Preserving Archaeological Remains: Decision-taking for Sites under Development. Swindon: Historic England. Available at: https://historicengland.org.uk/images-books/publications/preserving-archaeological-remains/ [Accessed February 2026]

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Government-led drought interventions focus mainly on regulating abstraction and water use rather than discharges, so their direct influence on water quality is limited. However, by helping to maintain minimum flows and water levels in rivers, lakes and groundwater-fed systems, they can indirectly support water quality by reducing the risk of pollutant concentration and ecological stress that can arise when flows are severely depleted during drought.	Regional	High	Medium term	Temporary	Medium	High			0	Neutral	+ +	Moderate beneficial
	To maintain surface water and groundwater flows and quantity.		A central purpose of UK government-led drought measures—such as Drought Orders, abstraction restrictions and sectoral prioritisation—is to manage water resources strategically to protect both public supply and the environment. By constraining abstraction from sensitive sources and coordinating responses across sectors, these interventions help maintain environmental flows and groundwater levels, reducing the risk of over-abstraction and long-term damage to water bodies.	Regional	High	Medium term	Temporary	Medium	High			0	Neutral	+ +	Moderate beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		By guiding and constraining drought responses, the action supports compliance with WFD and RBMP plans and help ensure that short-term drought management does not undermine long-term environmental objectives.	Regional	High	Medium term	Temporary	Medium	High			0	Neutral	+ +	Moderate beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Government-led measures such as TUBs, NEUBs, and national or regional drought communications can drive significant reductions in demand across domestic, commercial and industrial users. These interventions improve water efficiency at scale and enhance the resilience of both public water supplies and natural systems by reducing overall pressure on water resources during drought.	Regional	High	Medium term	Temporary	Low	High			0	Neutral	+ +	Moderate beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	Government-led drought interventions are regulatory and policy-based and do not involve construction, excavation or land-take, so they have no direct effects on soils, geological features or the quality of agricultural land.	Local	High	Short-term	Temporary	Low	Medium			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	These interventions do not involve physical works or significant operational activities and therefore do not directly generate air emissions. Any indirect effects on air quality—for example, changes in industrial or agricultural activity due to water restrictions—are diffuse, context-specific and not generally significant at the scale of the intervention itself. Overall, the impact on air emissions is negligible.	Local	High	Short-term	Temporary	Low	Medium			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	By encouraging reduced water use and more efficient operation of water systems, government-led drought interventions can indirectly reduce energy use associated with abstraction, treatment and distribution. This contributes to lower operational carbon emissions, even though the interventions themselves have a very small direct carbon footprint.	Local	Moderate	Medium term	Temporary	Low	Medium			0	Neutral	+	Minor beneficial
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		The interventions form part of a wider climate adaptation framework, recognising that droughts are becoming more frequent and severe. By providing a structured, legally backed approach to managing water scarcity, they enhance the climate resilience of both water supply systems and natural ecosystems.	Local	High	Long term	Temporary	Medium	High			0	Neutral	+ +	Moderate beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Government-led drought measures aim to safeguard essential water supplies for households, health services and key sectors, which is fundamental to public health and wellbeing. While restrictions on non-essential water use may cause inconvenience or localised economic impacts, these are outweighed by the benefits of maintaining secure supplies and avoiding more severe disruptions.	Regional	High	Medium term	Temporary	Medium	High			0	Neutral	+ +	Moderate beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		These interventions support long-term resilience by ensuring that drought management is planned, regulated and coordinated between regulators, water companies and other abstractors. They help maintain high-quality, reliable and sustainable water supplies, which is critical for community wellbeing.	Regional	High	Long-term	Temporary	Medium	High			0	Neutral	+ +	Moderate beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Government-led drought responses often include public information campaigns and guidance on water saving and environmental protection. These communications help raise awareness of water scarcity and the value of the water environment, contributing positively to public understanding and engagement.	Local	Moderate	Medium-term	Temporary	Low	Medium			0	Neutral	+	Minor beneficial
	To maintain the water environment for other users including recreation, tourism and navigation.		By protecting environmental flows and preventing severe degradation of rivers, lakes and canals, these interventions help maintain conditions for recreation, tourism and navigation as far as practicable during drought. Although some restrictions may limit certain activities, the overall aim is to preserve the underlying water environment for long-term use.	Regional	Moderate	Medium-term	Temporary	Low	Medium			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets?	Government-led drought interventions do not involve physical works and therefore do not directly affect archaeological remains or built heritage assets. Indirectly, by helping maintain water levels in water bodies, wetlands or peatlands, they may contribute to the protection of heritage features sensitive to drying	Local	Moderate	Medium-term	Temporary	Low	High			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
		▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	or hydrological change, though these effects are modest and site-specific.												
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	As policy and regulatory measures, these interventions do not alter landscape or townscape character and have no direct visual impacts. Any landscape changes observed during drought—such as exposed reservoir margins—result from hydrological conditions and operational decisions rather than the interventions themselves.	Local	High	Short-term	Temporary	Low	Medium			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	By promoting water efficiency and constraining non-essential use, government-led drought interventions encourage more efficient use of water resources. This can reduce the need for resource-intensive emergency measures and help optimise the use of existing infrastructure, although the interventions themselves do not directly influence waste generation.	Local	Moderate	Medium term	Temporary	Low	Medium			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		The measures do not involve construction and do not directly impact built assets or infrastructure. By supporting orderly, planned drought management and avoiding uncoordinated emergency responses, they help protect the integrity and performance of existing water supply infrastructure.	Local	High	Medium term	Temporary	Low	Medium			0	Neutral	0	Neutral

1.7 Stop Proactive Flushing

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Stopping proactive flushing can result in water-quality failures leading to unplanned discharges or pollution incidents, causing downstream ecological impacts on aquatic habitats and sensitive species. However, given that this action would be temporary, the effects are anticipated to be negligible.	Regional	High	Short-term	Temporary	Low	Medium	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing operational controls. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, including monitoring of system water quality during drought.	▪ Precautionary contingency water quality monitoring and targeted flushing to be implemented if deterioration in water quality, regulatory non-compliance, or customer health impacts are detected during the temporary suspension of proactive flushing. ▪ Extensive consultation in relation to the implementation of water restrictions and bans on use	0	Neutral	0	Neutral
	To provide opportunities for habitat creation or restoration.		Action does not contribute to habitat creation or restoration.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		No impact on avoiding the introduction or spreading of INNS.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		No impact on meeting WFD objectives as this measure is temporary and doesn't have a long-term alignment with objective of achieving good status.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Proactive flushing helps maintain water quality within pipes. Stopping it raises the likelihood of compliance failures and water-quality events. Emergency flushing could result in uncontrolled discharges affecting water bodies. However, given that this action would be temporary, the effects are anticipated to be negligible.	Local	Low	Short-term	Temporary	Low	Medium			0	Neutral	0	Neutral
	To maintain surface water and groundwater flows and quantity.		Stopping flushing would save water otherwise released during routine maintenance reducing need for abstraction at source.	Local	Low	Short-term	Temporary	Low	Medium			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		No impact on meeting WFD objectives.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		This action is temporary and so water savings from reduced flushing will not contribute to long term objective of increasing water efficiency and resilience to drought.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	Action will have no impact on geology, geomorphology and quality of soils.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Action will have no impact on air quality.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Stopping routine flushing may slightly reduce operational emissions (vehicle movements, equipment use).	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		No effect on climate mitigation or resilience	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Stopping proactive flushing increases risk of taste, odour, discolouration and potential bacteriological issues, affecting customer satisfaction and public health confidence.	Regional	High	Short-term	Temporary	Low	Medium			-	Minor adverse	0	Neutral
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Given this action is temporary it will not have long term adverse effects on resilience of supplies.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To connect customers to the natural environment, provide education or information resources for the public.		This action does not provide education or environmental engagement.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		No impacts on recreation, tourism or navigation are anticipated as a result of this action.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	Stopping proactive flushing has no direct interaction with heritage assets, as the activity takes place within existing infrastructure.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Proactive flushing has minimal visual impact and stopping it will not alter landscape character.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	Stagnation and deposits increase pipe stress, possibly leading to more bursts and material use for repairs. Given this action is temporary adverse effects would be negligible.	Local	Moderate	Short-term	Temporary	Low	Medium			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		Deposit buildup increases corrosion risk, and biofilm growth may reduce system performance, increasing likelihood of asset failure. Given this action is temporary adverse effects would be negligible.	Local	Moderate	Short-term	Temporary	Low	Medium			0	Neutral	0	Neutral

1.8 Optimising Water Supply

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Optimising the water supply system and network will be delivered within existing infrastructure and operational boundaries. No direct land-take or habitat disturbance is expected. By improving system efficiency and reducing the need for additional abstraction, the measure has the potential to support flow-sensitive habitats and species. Overall, effects are assessed as minor beneficial.	Regional	Moderate	Long-term	Temporary	Medium	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ None required.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		This measure does not create or restore habitat, as it is an operational change within existing assets.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		No pathway exists for INNS introduction because optimisation does not involve physical water transfers between catchments or new construction.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By reducing abstraction from sensitive sources and improving system efficiency, optimisation can support WFD objectives by helping avoid deterioration in ecological status during drought.	Regional	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Optimisation does not involve direct discharges or physical disturbance, so no direct water quality impacts are expected.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain surface water and groundwater flows and quantity.		This measure can have a beneficial effect on water quantity by shifting abstraction away from sensitive sources and balancing demand across the network. By improving the efficiency of supply operations, optimisation helps maintain environmental flows and reduces the risk of over-abstraction during drought.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Optimisation supports compliance with abstraction licences and environmental flow requirements, helping prevent deterioration in WFD status. By reducing pressure on vulnerable water bodies, it aligns with the environmental objectives set out in RBMPs.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		This measure directly enhances water efficiency by ensuring that available resources are used in the most effective way. It also strengthens system resilience during drought by improving operational flexibility and	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
			reducing the need for more environmentally intrusive measures such as emergency abstraction or tankering.												
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	Optimising water supply does not involve ground disturbance, excavation or land-take, and therefore has no effect on soils, geological features or agricultural land. The measure is operational in nature and does not introduce risks to soil quality or function.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	As an operational measure, optimisation does not generate significant air emissions. Any minor increases in vehicle movements for operational monitoring or adjustments are negligible and do not materially affect local air quality. Overall, the measure has no meaningful impact on air emissions.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Optimising supply can reduce operational carbon emissions by improving pumping efficiency and reducing the need for carbon-intensive emergency measures such as tankering. By making better use of existing assets, the measure contributes to lower energy consumption and reduced greenhouse gas emissions.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		This measure enhances climate resilience by improving the flexibility and robustness of the supply system during drought. By enabling more efficient use of available resources, optimisation helps maintain supply during climate-driven periods of low water availability and reduces pressure on natural systems.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Optimising supply supports the continuity of water services during drought, which is essential for public health and wellbeing. By reducing the likelihood of supply interruptions, the measure provides a beneficial contribution to community resilience.	Regional	Moderate	Long-term	Temporary	Medium	Medium			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		This measure has a beneficial effect on supply resilience. By improving operational efficiency and reducing reliance on stressed sources, optimisation helps maintain high-quality and reliable water supplies without requiring costly or environmentally intrusive interventions.	Regional	Moderate	Long-term	Temporary	Medium	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Optimising supply does not directly involve public engagement or environmental education. It is an internal operational measure and therefore does not contribute to this objective.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	To maintain the water environment for other users including recreation, tourism and navigation.		By reducing abstraction pressure on sensitive water bodies, optimisation can help maintain conditions for recreational users, navigation, tourism and other water-dependent activities. This indirect benefit supports wider community use of the water environment.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	Optimising supply does not involve construction or ground disturbance and therefore poses no risk to archaeological remains or built heritage assets. As the measure is operational and uses existing infrastructure, it also does not affect the setting of heritage features.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	There are no landscape or visual impacts associated with this measure, as it does not involve new structures, construction activity or changes to land use. All activities occur within existing operational sites and systems.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	Optimising supply improves the efficiency of existing assets and reduces energy use, contributing positively to resource efficiency. The measure does not generate waste and does not require new materials or construction inputs.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	Avoid adverse effects on built assets and infrastructure		The measure has no adverse effects on built assets or infrastructure. In fact, by improving operational performance, optimisation may help extend asset life and reduce wear on pumps and network components.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

1.9 Minimise Minimum Flows at Water Treatment Works (WTW)

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Lowering minimum WTW throughput during drought operation reduces abstraction pressure at low flows, helping sustain environmental flows/levels in source waters, thereby reducing ecological stress on aquatic and riparian receptors during drought. Given that this action has a more substantial water saving the effect is minor beneficial rather than negligible.	Local	Moderate	Short-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ None required.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		Action does not provide opportunities for habitat creation pr restoration.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		Action has no effect on spreading INNS.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		Helps meet no-deterioration objectives by reducing hydrological pressure; supports RBMP ecological objectives linked to flow regime.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Environmentally, flow support can improve dilution/temperature resilience. Operationally, lower throughput can challenge some processes (e.g., filter ripening, residence times, chlorination CT control) if not well managed.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		Direct reduction of abstraction at drought sensitive times.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Aligned with quantitative status protection and no deterioration.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Demand matching and minimising flows to waste (e.g., backwash, clarifier blowdown) improves system efficiency and resilience.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	No effect on soils.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Lower pumping/processing energy at reduced throughput can slightly reduce energy use and associated emissions; effect size site-specific.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Less throughput often equates to lower kWh/Ml and less chemical consumption (dose dependent), howevereefficiency non-linearities can occur at very low rates.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Improves drought adaptability via flexible production and demand management without new infrastructure.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Protects source waters and helps avoid stringent restrictions later; customer impact minimal if supply meets demand.	Regional	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Avoids over-production; reduces risk of emergency measures; preserves storages/groundwater heads.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Action does not provide education or information resources for connecting customers to the natural environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		Flow support aids navigation depths and recreational quality during drought.	Regional	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	No effect on historic environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	No effect on landscape.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	Lower abstraction, reduced process water to waste, potential chemical savings; no additional waste streams.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	Avoid adverse effects on built assets and infrastructure		Running at low turndown can challenge some legacy plants (e.g., clarifier hydraulics, filter backwash regimes).	Local	Low	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral

1.10 Reduce Ship Watering

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Reducing ship watering decreases non-essential abstraction during drought, supporting environmental flows.	Moderate	Short-term	Temporary	Low	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ None required.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		Action does not directly create habitat.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		The action itself does not introduce INNS. A possible indirect risk is if ships source water elsewhere (different ports) and bring it in via tanks/ballast with suboptimal biosecurity. However, this is negligible.	Low	Short-term	Temporary	Low	Low	Low			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		Temporary reduction in abstraction reduces pressure on status elements (hydrology dependent). Aligns with no-deterioration and supporting good ecological status/potential.	Low	Short-term	Temporary	Low	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Supporting baseflows can reduce stagnation/thermal stress and pollutant concentration.	Moderate	Short-term	Temporary	Low	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		Direct reduction in non-essential abstraction at times of hydrological stress.	Moderate	Short-term	Temporary	Low	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		The measure is consistent with WFD and RBMP principles by avoiding additional abstraction pressure during drought. It aligns with good practice in drought management and supports no deterioration.	Moderate	Short-term	Temporary	Low	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		The action contributes to water efficiency by reducing discretionary demand, but the small scale of saving means it does not materially improve system-wide drought resilience.	Low	Short-term	Temporary	Low	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	No ground works; no physical land take or runoff changes.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Action will have no impact on air quality.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	No effect on carbon emissions.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		The measure aligns with responsible drought management but does not materially enhance climate resilience due to the small scale of saving.	Moderate	Short-term	Temporary	Low	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Protecting river levels/quality can benefit amenity and reduce odour/blue-green algae risks. Temporary inconvenience to some port users is manageable.	Moderate	Short-term	Temporary	Low	Low	Low			-	Minor adverse	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Action is a temporary measure and therefore does not have an effect on long term water supply resilience.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To connect customers to the natural environment, provide education or information resources for the public.		Action does not provide education or information resources for connecting customers to the natural environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		Maintaining flows/levels supports navigation depth margins and recreational quality during drought.	Low	Short-term	Temporary	Low	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	No effect on historic environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	No effect on landscape.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	No effect on material assets.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		Acton would offer some protection to existing water supply infrastructure; however, this is anticipated to be negligible.	Low	Short-term	Temporary	Low	Low	Low			0	Neutral	0	Neutral

1.11 Removal of Temporary Use Bans (TUBs) and Non-Essential Use Bans (NEUBs) Exceptions

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Removal of TUBs and NEUBs exceptions may reduce water abstraction during environmentally sensitive periods, relieving pressure on aquatic ecosystems. Lower abstraction supports habitats of priority species, restores ecological functions, and reduces disturbance to designated sites with flow-dependent features.	Regional	Low	Short term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Consultation with affected water users (particularly in relation to other abstractors) to determine how licences are used, associated conditions and potential impacts of specific drought options. ▪ Extensive consultation in relation to the implementation of water restrictions and bans on use.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		Removal of TUBs and NEUBs exception does not provide opportunities for habitat creation or restoration.	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To avoid introducing or spreading and, where feasible, manage INNS.		No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By reducing abstraction during critical periods, the action can support WFD ecological status improvements, particularly for waterbodies failing flow-dependent indicators.	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Reduced water use can indirectly reduce treatment loads and stormwater-related pressures, but effects are negligible	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		This action is expected to have benefits maintaining surface water flows, as it decreases water consumption during periods when rivers and aquifers are most vulnerable.	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Lower water consumption during high-stress seasons aligns with RBMP measures aimed at improving flow regimes and alleviating abstraction pressure.	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Action will have no impact on air quality.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Lower water consumption reduces operational energy use and on short time is reducing the carbon or other greenhouse gas emissions, but the effect is negligible.	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Removal of TUBs and NEUBs exceptions is a demand-management tool that directly strengthens system resilience during climate-driven drought periods.	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Biggest risks are customers not adhering to the ban alongside customer complaints.	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Improved resilience and reduced peak demand but possible health and safety issues as a result of the ban.	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	0	Neutral
	To connect customers to the natural environment, provide education or information resources for the public.		No effect.	NA	NA	NA	NA	NA	NA			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		More sustainable flows help support recreation, tourism, fisheries, and navigation, especially during drought-risk periods.	Regional	Low	Short term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

1.12 Management of Standard Operating Policy (SOP) Storage

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	SOP storage management may reduce water abstraction during environmentally sensitive periods, relieving pressure on aquatic ecosystems. Lower abstraction supports habitats of priority species, restores ecological functions, and reduces disturbance to designated sites with flow-dependent features.	Local	Low	Short - term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ None required.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		SOP storage management does not provide opportunities for habitat creation or restoration.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By reducing abstraction during critical periods, SOP storage management can support WFD ecological status improvements, particularly for waterbodies failing flow-dependent indicators.	Local	Low	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Reduced demand can indirectly reduce treatment loads and stormwater-related pressures, but effects are negligible	Local	Low	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		SOP storage management is expected to have benefit to maintaining surface water flows, as it reduces pressure on rivers and aquifers during periods when they are most vulnerable.	Local	Low	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Lower distraction during high-stress seasons aligns with RBMP measures aimed at improving flow regimes and alleviating abstraction pressure.	Local	Low	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Action will have no impact on air quality.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	No effect	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		SOP storage management is tool that directly strengthens system resilience during climate-driven drought periods.	Local	Low	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	No effect	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The action maintains system resilience during extreme events for short time but is sensitive to spikes in demand and increase turbidity.	Local	Low	Short - term	Temporary	Low	Low			0	Neutral	0	Neutral
	To connect customers to the natural environment, provide education or information resources for the public.		No effect	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		More sustainable flows help support recreation, tourism, fisheries, and navigation, especially during drought-risk periods.	Local	Low	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	No direct impact, as the measure does not involve physical development.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Since SOP storage management is a management measure with no new visible infrastructure, there is no effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

1.13 Seasonal Tariffs

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Seasonal tariffs may reduce water abstraction during environmentally sensitive periods (e.g., summer low flows), relieving pressure on aquatic ecosystems. Lower abstraction supports habitats of priority species, restores ecological functions, and reduces disturbance to designated sites with flow-dependent features.	Regional	Moderate	Short-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Consultation with affected water users (particularly in relation to other abstractors) to determine how licences are used, associated conditions and potential impacts of specific drought options. ▪ Extensive consultation in relation to the implementation of water restrictions and bans on use.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		Tariff-based demand reduction does not provide opportunities for habitat creation or restoration.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By reducing abstraction during critical periods, seasonal tariffs can support WFD ecological status improvements, particularly for waterbodies failing flow-dependent indicators.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Reduced demand can indirectly reduce treatment loads and stormwater-related pressures, but effects are negligible	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain surface water and groundwater flows and quantity.		Seasonal tariffs are expected to have benefit to maintaining surface water flows, as they encourage water savings during periods when rivers and aquifers are most vulnerable.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Lower demand during high-stress seasons aligns with RBMP measures aimed at improving flow regimes and alleviating abstraction pressure.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Seasonal tariffs encourage sustained behavioural change, improving customer efficiency and natural system resilience.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	No effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Action will have no impact on air quality.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Lower water consumption reduces operational energy use and, over time, may reduce or delay the need for carbon-intensive new infrastructure.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Seasonal tariffs are a demand-management tool that directly strengthens system resilience during climate-driven drought periods.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Impacts depend on tariff design: affordability concerns for vulnerable groups if not mitigated.	Regional	Low	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Improved resilience and reduced peak demand help maintain long-term availability and reduce future bill shocks associated with new infrastructure.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		No effect	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		More sustainable flows help support recreation, tourism, fisheries, and navigation, especially during drought-risk periods.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	No direct impact, as seasonal tariffs do not involve physical development.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Since tariffs are a demand-management measure with no new visible infrastructure, there is no effect.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	Seasonal tariffs encourage reduced water consumption, effectively decreasing the use of water, chemicals, and treatment energy.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	Avoid adverse effects on built assets and infrastructure		Lower peak demand reduces stress on network assets and may reduce the frequency of drought-related operational impacts.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

1.14 Network Management

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	The measure is internal to the potable water network and does not alter abstraction or discharge patterns. As such, it has no pathway to influence ecological flows, habitat conditions, or designated sites.	N/A	N/A	N/A	N/A	N/A	N/A	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ None required.	0	Neutral	0	Neutral
	To provide opportunities for habitat creation or restoration.		No physical works or land-based interventions occur.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		The action does not involve water transfers, construction, or material movement that could introduce INNS.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		As the measure does not affect hydrology or water quality, it does not influence WFD ecological status or conservation objectives. Effects are neutral.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	The measure does not change abstraction or discharge and therefore has no direct effect on water quality.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain surface water and groundwater flows and quantity.		Operating storage at low levels does not alter total abstraction volumes and therefore has no hydrological effect on surface or groundwater flows.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		The measure does not influence environmental pressures relevant to WFD or RBMP objectives.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Using stored potable water to buffer short-term demand variability provides some operational flexibility; however, maintaining storage at low levels increases the risk of supply failure during peak demand or unexpected outages. The net effect is mixed, with a minor beneficial contribution to short-term operational responsiveness but a minor adverse effect on overall system resilience.	Regional	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of	▪ Will the action affect high grade agricultural land?	No ground disturbance or land-use change occurs.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	soils, including the protection of high-grade agricultural land.	▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?													
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	The measure does not influence energy use or emissions.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	The action does not significantly affect energy consumption or carbon emissions.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		While the measure provides some operational flexibility to manage short-term demand fluctuations, operating storage at low levels reduces the system's buffer capacity during climate-driven drought events. This introduces a minor adverse effect on climate resilience.	Regional	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	The increased risk of supply interruption associated with low storage levels presents a minor adverse effect on community wellbeing, particularly during drought when supply reliability is critical.	Regional	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Operating storage at low levels reduces the system's ability to absorb shocks, increasing the likelihood of supply disruption. This represents a minor adverse effect on supply resilience.	Regional	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To connect customers to the natural environment, provide education or information resources for the public.		The measure does not involve public engagement or educational components.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		The action does not influence river levels or water quality.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	No physical works or environmental changes occur.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	No visual or landscape changes occur.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	The measure does not materially influence resource consumption or waste generation.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		Operating storage at low levels increases operational stress and reduces the system's ability to maintain supply during outages or peak demand, representing a minor adverse effect on infrastructure resilience.	Regional	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral

1.15 Raw Water WTW Optimisation

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Raw water and WTW optimisation help protect biodiversity by ensuring that abstraction is redistributed and timed to reduce pressure on sensitive rivers during drought, allowing flows to be maintained within licence limits and environmental constraints. Because the action relies on adjusting existing operations rather than increasing total abstraction, and because it is governed by hands-off flows, environmental monitoring and regulatory controls, it supports ecological function and avoids adverse effects on designated sites.	Regional	Moderate	Long-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ None required.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		This drought action does not create or restore habitat directly, but by optimising abstraction patterns and maintaining flows in vulnerable rivers during drought, it helps prevent habitat degradation and supports the continued functioning of existing aquatic and riparian habitats.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To avoid introducing or spreading and, where feasible, manage INNS.		The action involves operational adjustments within existing raw-water networks and treatment works, without creating new pathways for water movement between unconnected catchments, and because all activities follow standard Environment Agency biosecurity procedures, it does not increase the risk of introducing or spreading INNS.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By reducing the severity of low-flow conditions and ensuring abstraction remains within sustainable limits, raw water and WTW optimisation supports compliance with WFD ecological objectives and helps maintain conditions required to meet conservation objectives for designated sites.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand?	Optimising raw-water sources and treatment operations helps maintain water quality by enabling the company to select the best available raw-water sources during drought and avoid over-reliance on stressed rivers. Because all changes occur within existing treatment processes and regulatory consents, the action does not adversely affect surface or groundwater quality.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		The action helps maintain flows by shifting abstraction away from vulnerable rivers during drought and making greater use of more resilient sources or stored water, while remaining within licence limits. This ensures that both surface water and groundwater quantities remain within sustainable thresholds under current operating rules.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.	▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	By reducing abstraction pressure on sensitive water bodies and supporting more sustainable use of available resources, the action aligns with RBMP measures and helps avoid deterioration in ecological status during drought.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Raw water and WTW optimisation increase drought resilience by maximising the efficiency of existing assets, improving deployable output without new infrastructure, and delaying the need for more severe drought actions such TUBs or drought permits.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	The action involves operational adjustments within existing infrastructure and does not require ground disturbance, meaning soils, geomorphological features and agricultural land are unaffected by its implementation.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Air emissions arise only from changes in pumping patterns or treatment throughput, and because these adjustments occur within existing operational ranges and do not require additional construction or transport activity, the action has minor impact on air quality.	Local	Moderate	Long-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	The action does not involve new construction and therefore has no embodied carbon impact, and although optimised pumping or treatment may slightly alter operational energy use, these changes remain within normal operational variability and do not materially increase greenhouse gas emissions.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		By improving the efficiency and flexibility of the water supply system during drought, the action directly enhances climate resilience, helping the system cope with more frequent and severe droughts without requiring additional abstraction or emergency measures.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	By supporting reliable water supplies and reducing the likelihood of severe drought restrictions, the action contributes to public wellbeing and reduces the risk of supply interruptions, without causing adverse effects on local communities.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Raw water and WTW optimisation help maintain treated water output during drought, supporting long-term supply reliability and affordability by maximising the use of existing assets rather than relying on costly emergency measures.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Although not a public-facing action, maintaining flows and water quality indirectly supports public enjoyment of rivers and reservoirs, contributing to informal environmental awareness.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
			However, this is considered negligible.												
	To maintain the water environment for other users including recreation, tourism and navigation.		By reducing pressure on sensitive rivers and helping maintain flows during drought, the action supports conditions suitable for recreation such as angling, boating and riverside walking.	Local	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	The action involves no new construction or physical works and therefore has no effect on heritage assets or their settings; routine operational adjustments do not interact with archaeological or historic features.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Because the action is entirely operational and does not involve new structures or landscape changes, it has no effect on landscape character or visual amenity.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	The action improves the efficiency of existing water supply assets and generates no additional waste, as it relies solely on operational adjustments within current infrastructure. Potential for increased hydraulic loading, and changes in operational conditions that may elevate wear on existing infrastructure or require additional maintenance; however, this is anticipated as negligible.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		All optimisation occurs within existing systems and does not alter flood risk, structural stability or the operation of built assets, ensuring no adverse effects on infrastructure. Action would offer some protection to existing water supply infrastructure; however, this is anticipated to be negligible.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral

1.16 Coordination Planning

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems?	Coordination planning to minimise planned outage helps protect biodiversity indirectly by ensuring that key raw water sources, transfers and treatment works remain available when needed, reducing the need for sudden, reactive operational changes that could increase pressure on sensitive rivers. Because all abstractions and transfers remain within existing licence and environmental constraints, and the action is purely about scheduling and coordination, it supports stable environmental operation without introducing new ecological risks to designated sites or priority habitats and considered negligible.	N/A	N/A	N/A	N/A	N/A	N/A	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ None required.	0	Neutral	0	Neutral
	To provide opportunities for habitat creation or restoration.	▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	This action is an operational planning measure and does not involve physical works or habitat interventions, so it does not create or restore habitats; however, by reducing the likelihood that unplanned outages will force higher abstraction from environmentally sensitive sources, it helps avoid deterioration of existing habitats during critical periods.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To avoid introducing or spreading and, where feasible, manage INNS.		Because the action is limited to planning and coordination of outages within the existing asset base and does not create new transfer routes or physical connections, it does not alter pathways for INNS, and with standard biosecurity procedures in place at existing assets, it does not increase INNS risk.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By keeping more of the system reliably available and reducing the need for emergency operational changes that might otherwise concentrate abstraction on stressed water bodies, the action supports the stable, planned operation assumed in the WRMP and helps maintain conditions consistent with WFD and conservation objectives.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems?	Better coordination of planned outages allows ESW to choose outage timings and configurations that maintain optimal use of sources and treatment works, avoiding situations where unplanned outages force reliance on poorer-quality sources or suboptimal blending; as a result, the action supports consistent water quality in both raw and treated water without introducing new pressures on surface or groundwater quality. However, this is considered negligible.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain surface water and groundwater flows and quantity.	▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand?	By minimising the overlap of planned outages at key sources and works, the company can maintain a more balanced abstraction pattern across its portfolio, reducing the risk that outages at some assets will push higher abstraction onto more sensitive rivers or aquifers; this supports the sustainable abstraction regime set out in the WRMP and helps	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
		▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	keep flows and groundwater levels within planned limits.												
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		The WRMP assumes a certain level of deployable output and environmental performance based on coordinated operation of assets; by reducing unavailability due to overlapping outages, this action helps the company deliver that planned operation in practice, thereby supporting WFD and RBMP objectives that rely on sustainable, well-distributed abstraction.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Minimising planned outage through coordination planning increases effective deployable output and operational flexibility, particularly in dry years, allowing the company to make better use of existing assets before resorting to more severe drought actions; this directly improves water efficiency and system resilience to drought without increasing licensed abstraction.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	The action is purely organisational and does not involve construction, excavation or changes to land use, so it has no effect on soils, geomorphological features or agricultural land.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Coordination planning may marginally improve operational efficiency by reducing the need for reactive pumping or emergency tanker movements, but overall, it does not significantly change the pattern of energy use or vehicle activity; any effect on air emissions is negligible and remains within normal operational variability.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Because the action does not involve new infrastructure, there is no embodied carbon impact, and while improved coordination may slightly reduce inefficient operational responses to outages, any change in operational carbon is small; overall, the action maintains emissions within the existing WRMP24 operational carbon envelope.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		By ensuring that planned maintenance is scheduled and coordinated so that critical assets remain available during periods of higher risk (e.g. summer, drought), the action strengthens the resilience of the supply system to climate-driven extremes, reducing the likelihood that outages will coincide with peak demand or low flows and thereby supporting both supply security and environmental protection.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption?	Minimising planned outage reduces the risk of supply interruptions or pressure problems, particularly during high-demand or drought periods, supporting public health and wellbeing by maintaining reliable water services	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
		▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	without introducing new adverse effects on communities.												
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The action directly supports the WRMP's objective of maintaining deployable output and level of service by keeping more assets available when needed, which helps sustain high-quality, reliable and cost-effective supplies without resorting prematurely to more extreme or costly drought measures.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		This is an internal operational measure and does not directly engage customers or provide educational content; its contribution is indirect, through maintaining a stable supply system that supports wider environmental and recreational benefits.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		By reducing the need for reactive, potentially environmentally suboptimal abstraction patterns during outages, the action helps maintain the planned balance of abstraction and flows that underpins recreational use, navigation and tourism on affected water bodies.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	The action involves no physical works or changes to asset locations, so it has no effect on heritage assets or their settings and does not alter any archaeological risk profile.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Because coordination planning is entirely operational and does not involve new structures or visual changes, it has no effect on landscape or townscape character or visual amenity.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	By improving the scheduling and coordination of planned outages, the action makes more efficient use of existing assets, reducing the risk of redundant downtime and helping to avoid inefficient emergency responses; it does not generate additional waste and can marginally improve resource efficiency within the existing system.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	Avoid adverse effects on built assets and infrastructure		The action is specifically about managing existing built assets more effectively, reducing the risk that poorly timed outages will compromise system performance or place undue stress on parts of the network; it therefore supports the reliable functioning of infrastructure without introducing new risks to built assets.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

1.17 Ely Ouse to Essex Transfer Scheme (EOETS)

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	The EOETS can support biodiversity in receiving catchments by supplementing flows during dry periods, helping maintain wetted habitat, ecological connectivity and the functioning of aquatic ecosystems, while any risks to donor reaches—such as reduced flows—are typically controlled through abstraction licensing, hands-off flow conditions and operational rules that prevent ecological deterioration, meaning that with proper management the scheme can operate without adverse effects on designated sites or priority habitats.	Regional	High	Long-term	Permanent	Medium	Medium	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Avoid introducing or spreading INNS following the INNS risk assessment and biosecurity procedures for transfers. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Further consultation and liaison with the Environment Agency. ▪ Modifications to operating regimes of water level management or flood risk management structures, where appropriate, to help ensure that river flows are maintained. ▪ Provision of adequate treatment of any water which is to be transferred between catchments. ▪ Use of renewable or 'clean' energy sources where practicable.	0	Neutral	+ +	Moderate beneficial
	To provide opportunities for habitat creation or restoration.		EOETS is an operational and regulatory coordination mechanism used during drought and does not involve physical works or land-based interventions. As a result, it does not directly create or restore habitats. Its influence is indirect, helping prevent ecological deterioration during drought so that existing habitats remain viable for future restoration efforts.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		Inter-basin transfers inherently carry a risk of moving INNS between catchments, but this can be effectively managed through biosecurity protocols, screening, monitoring and operational controls, meaning that with appropriate measures in place the scheme does not need to result in the introduction or spread of invasive species.	Local	High	Long-term	Permanent	Low	Medium			-	Minor adverse	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By supporting environmental flows in receiving water bodies, the EOETS can help maintain or improve ecological status and avoid low-flow deterioration, and provided that abstraction from the donor system remains within sustainable limits and water quality differences are monitored and managed, the scheme can operate in a way that is fully compatible with WFD and conservation objectives.	Local	High	Long-term	Temporary	Low	Medium			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	The transfer of water can help dilute pollutants and improve water quality in receiving rivers during dry periods, and although differences in water chemistry or temperature require monitoring, standard operational controls and construction best practice ensure that the scheme can maintain or enhance water quality without causing deterioration in either donor or receiving systems.	Regional	High	Long-term	Temporary	Low	Medium			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		The scheme directly supports flows in Essex rivers and reservoirs, improving water availability and reducing pressure on local sources, while abstraction limits and environmental flow safeguards in the Ely Ouse system ensure that donor catchments retain sufficient water to protect ecological and hydrological function, enabling the scheme to maintain flows sustainably in both systems.	Regional	High	Long-term	Temporary	Medium	Medium			0	Neutral	+ +	Moderate beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		By helping to prevent low-flow conditions and supporting sustainable water resource management, the EOETS can contribute to achieving WFD objectives and implementing RBMP measures, and with appropriate licensing and monitoring it can do so without causing deterioration in any water body.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		The scheme significantly enhances regional water efficiency by transferring surplus water from a relatively water-rich area to a water-stressed region, and because it provides a flexible, responsive supply during droughts, it strengthens the resilience of both public water supply and the natural environment to climate-driven low-flow events.	Regional	Moderate	Long-term	Temporary	Medium	Medium			0	Neutral	+ +	Moderate beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	As an established scheme, EOETS has minimal ongoing interaction with soils, and any maintenance or upgrade works can be managed through standard construction controls.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Operational air emissions from the scheme are limited primarily to vehicle movements and energy use at pumping stations.	Local	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Pumping requires energy, so some minor associated greenhouse gas emissions are expected.	Local	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		The EOETS plays a valuable role in climate adaptation by providing a resilient water source during hotter, drier summers and more variable rainfall patterns, and because operational emissions can be mitigated through energy efficiency and low-carbon power, the scheme can contribute to climate resilience while aligning with wider mitigation goals.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	By supporting reliable water supplies and maintaining river flows that benefit recreation and amenity, the scheme contributes positively to community wellbeing.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The EOETS is a key component of long-term water security for Essex (it is demand driven rather than drought driven), helping ensure that communities have access to sustainable and affordable water supplies even during droughts, thereby supporting public health and economic stability.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		EOETS is not a public-facing scheme and does not include customer engagement or educational components. Any public communication associated with drought management is delivered through broader drought messaging rather than through EOETS itself, meaning it has minimal direct contribution to public environmental awareness.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		By supporting flows in receiving rivers, the scheme helps maintain conditions suitable for angling, boating, walking and other recreational uses, and because donor flows are protected through licensing, the scheme can support recreation and tourism without compromising the water environment elsewhere.	Local	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of	The operational scheme has no impact on heritage assets.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	archaeologically important sites.	equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?												
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	The scheme sits within a landscape already characterised by engineered water management features, and with careful design, screening and integration of any new structures, it can continue to operate without detracting from landscape character or visual amenity.	Regional	Moderate	Long-term	Permanent	Low	Low			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	The scheme improves the efficiency of regional water resource use by enabling the movement of surplus water to areas of need, and any construction or maintenance activities can incorporate waste minimisation and material reuse, ensuring that resource consumption remains efficient.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	Avoid adverse effects on built assets and infrastructure		With appropriate hydraulic modelling, flood risk assessment and coordination with utilities and highways authorities, the scheme can operate and be maintained without adverse effects on built assets or infrastructure, ensuring that it integrates safely with the wider built environment.	Regional	Moderate	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

1.18 Langford Recycling Plant

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	The Langford Recycling Plant supports biodiversity indirectly by maintaining flows in the River Chelmer during drought, reducing ecological stress on aquatic habitats that would otherwise experience prolonged low-flow conditions. Because the scheme operates under strict regulatory controls, including discharge quality standards and abstraction licences at Langford Pumping Station, it protects designated sites and sensitive habitats by ensuring that augmentation does not cause deterioration in ecological function.	Regional	Low	Long-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Further consultation and liaison with the Environment Agency. ▪ Modifications to operating regimes of water level management or flood risk management structures, where appropriate, to help ensure that river flows are maintained. ▪ Provision of adequate treatment of effluent prior to its reintroduction to any surface water bodies. ▪ Use of renewable or 'clean' energy sources where practicable.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		The scheme does not create or restore habitat directly, but by maintaining river flows during drought, it prevents habitat contraction, desiccation and water-quality deterioration that would otherwise harm existing aquatic and riparian habitats, thereby supporting the continued functioning of the river ecosystem.	Regional	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To avoid introducing or spreading and, where feasible, manage INNS.		The scheme recycles treated effluent from Chelmsford STW back into the River Chelmer within the same catchment, and because it does not create new inter-catchment pathways and operates under standard Environment Agency biosecurity expectations, it does not increase the risk of introducing or spreading INNS.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By supporting flows and improving dilution during drought, the scheme helps maintain ecological status and avoid low-flow deterioration, operating in a manner consistent with WFD objectives and the conservation requirements of downstream designated sites.	Local	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	The Langford scheme improves water quality during drought by adding high-quality, tertiary-treated effluent to the River Chelmer, increasing dilution and stabilising dissolved oxygen and temperature. Because the recycled water meets strict discharge standards and is subject to continuous monitoring, the scheme does not adversely affect surface water or groundwater quality.	Regional	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		The scheme directly increases flows in the River Chelmer during drought, supporting both environmental flows and raw-water availability for Langford Pumping Station. It does not increase groundwater abstraction and therefore does not affect groundwater levels or baseflow contributions.	Regional	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		By reducing the severity of low-flow conditions and improving water quality during drought, the scheme supports WFD ecological objectives and aligns with RBMP measures for sustainable water management and flow protection.	Regional	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		The scheme is a key drought-resilience measure, enabling indirect potable reuse to supplement river flows and maintain deployable output during dry periods. It increases the efficiency of the water cycle by reusing treated effluent rather than relying solely on freshwater abstraction.	Regional	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	The scheme operates entirely within existing infrastructure and does not involve soil disturbance during normal operation; therefore, it has no effect on soils, geomorphological features or agricultural land.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Air emissions arise only from pumping and treatment processes already in place at Chelmsford STW and Langford WTW. Because the scheme operates intermittently during drought and uses existing assets, its air-quality impacts are minimal and within normal operational variability.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	The scheme uses existing infrastructure and therefore has no new embodied carbon. Operational carbon emissions arise from pumping and advanced treatment processes but are modest relative to the wider supply system and occur only during drought periods.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		The scheme directly enhances climate resilience by providing a reliable drought-support mechanism that maintains river flows and raw-water availability during increasingly frequent dry periods, helping both the environment and water users adapt to climate change.	Regional	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	By supporting reliable water supplies and maintaining river conditions during drought, the scheme contributes to public wellbeing and reduces the risk of supply restrictions without causing adverse effects on local communities.	Regional	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The scheme increases deployable output during drought by supplementing the raw-water supply at Langford Pumping Station, supporting long-term supply reliability and affordability.	Regional	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Although not a public-facing asset, the scheme indirectly supports public enjoyment of the River Chelmer by maintaining flows and water quality during drought.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		By sustaining flows in the River Chelmer during dry periods, the scheme helps maintain conditions suitable for angling, walking and riverside recreation.	Local	Low	Long-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic	▪ Will the action affect designated, non-designated heritage assets of	The scheme operates within existing treatment and pumping infrastructure	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	environment and heritage assets, and their settings, including archaeologically important sites.	archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	and does not involve new construction or land disturbance, so it has no effect on heritage assets or their settings.												
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	All infrastructure associated with the scheme is already established within existing treatment works and pumping stations, and its operation does not alter landscape character or visual amenity.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	The scheme improves resource efficiency by reusing treated effluent to support potable supply, reducing reliance on freshwater abstraction and generating no additional waste beyond normal treatment operations.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	Avoid adverse effects on built assets and infrastructure		The scheme operates within existing facilities and does not alter flood risk, structural stability or the operation of built assets, ensuring no adverse effects on infrastructure.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

1.19 Waveney Augmentation Groundwater Scheme (WAGS)

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	By providing additional flow to the River Waveney during dry periods, WAGS can help maintain wetted habitat, reduce the severity and duration of low-flow stress on aquatic species, and support ecological connectivity along the river, and because groundwater abstraction is controlled through licence conditions and environmental monitoring to avoid significant drawdown impacts on dependent wetlands or designated sites, the scheme can operate in a way that protects biodiversity and ecological functions.	Local	Moderate	Short - term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Avoid introducing or spreading INNS following the INNS risk assessment and biosecurity procedures for transfers. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Further consultation and liaison with the Environment Agency. ▪ Modifications to operating regimes of water level management or flood risk management structures, where appropriate, to help ensure that river flows are maintained. ▪ Ensuring discharged groundwater meets applicable water quality standards prior to release to the river. ▪ Use of renewable or 'clean' energy sources where practicable.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		WAGS is primarily a functional groundwater–river support scheme and so it does not provide opportunities for habitat creation. Its contribution is indirect: by maintaining flows and preventing habitat degradation, it helps preserve the ecological conditions necessary for future restoration or enhancement projects.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To avoid introducing or spreading and, where feasible, manage INNS.		Because WAGS moves water from groundwater to the river within the same catchment rather than transferring between distant basins, the risk of spreading INNS is relatively low, and with appropriate biosecurity measures for equipment, vehicles and any construction activities, the scheme can be operated and maintained without materially increasing the risk of INNS introduction or spread.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By supporting river flows during droughts, WAGS can help maintain ecological status and avoid low-flow driven deterioration under the WFD, and provided that groundwater abstraction remains within sustainable limits that protect baseflow contributions and groundwater-dependent ecosystems, the scheme can be fully compatible with WFD objectives and the conservation objectives of any nearby designated sites.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Augmenting river flows with groundwater can improve water quality during low-flow periods by diluting pollutants and stabilising temperature and oxygen conditions, and because the chemistry of the abstracted groundwater and its interaction with the river are monitored and managed, and construction or maintenance activities follow standard pollution prevention measures, the scheme can maintain or enhance water quality in both surface and groundwater bodies.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		The scheme directly supports surface water flows in the River Waveney at times when natural flows are low, helping to maintain ecological function and downstream abstractions, while abstraction limits, trigger levels and hands-off conditions ensure that groundwater levels remain within acceptable bounds and that long-term aquifer storage and baseflow contributions are protected, allowing the scheme to balance surface and groundwater quantity sustainably.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		By reducing the frequency and severity of very low flows, WAGS can help avoid deterioration in ecological status and support the implementation of RBMP measures for water resources and drought management, and with appropriate licensing, monitoring and adaptive operation, it can do so in a way that remains consistent with	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
			WFD requirements for both surface water and groundwater bodies.												
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		WAGS increases the resilience of the River Waveney system and its users to drought by making strategic use of stored groundwater to support flows when they are most needed, thereby improving the overall efficiency of water resource use in the catchment and reducing the need for more severe restrictions or emergency measures during prolonged dry periods.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	The operational phase of WAGS has very limited interaction with soils and any construction works associated with maintenance would have negligible adverse effects.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Air emissions associated with WAGS arise mainly from energy use at pumps and occasional vehicle movements for inspection and maintenance, and by using efficient pumping equipment, optimising operating regimes and employing low-emission vehicles where possible, these emissions can be kept low and localised, resulting in only minor and well-controlled air quality impacts.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Pumping requires energy and any new construction carries embodied carbon, so some minor associated greenhouse gas emissions are expected.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		WAGS contributes directly to climate resilience by providing a flexible tool to support river flows during hotter, drier summers and more variable rainfall patterns, helping both the environment and water users adapt to climate change. Any associated emissions can be mitigated through energy efficiency and low-carbon power, the scheme can support adaptation while remaining compatible with climate mitigation goals.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	By helping to maintain river flows and support reliable water supplies for downstream abstractors, WAGS underpins public health, local livelihoods and amenity. Any temporary disturbance from construction or maintenance activities can be managed through timing, communication and standard controls but might have a minor adverse impact.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The scheme supports the reliability of water supplies that depend on the River Waveney system, particularly during droughts, thereby contributing to long-term, sustainable and affordable water provision for communities and businesses that rely on these sources.	Local	Moderate	Long - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information		WAGS is a technical drought support measure and does not include public education or outreach. While the environmental benefits of flow support may be referenced in wider drought communications, the scheme itself does not	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	resources for the public.		provide information resources or actively connect customers with the natural environment.												
	To maintain the water environment for other users including recreation, tourism and navigation.		By supporting flows in the River Waveney during dry periods, the scheme helps maintain conditions suitable for recreation such as angling, boating and riverside walking, and because groundwater abstraction is managed to protect the wider water environment, these benefits can be delivered without compromising other users or the long-term recreational value of the river.	Local	Moderate	Long - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	The operational scheme has limited direct interaction with heritage assets, and any new or upgraded infrastructure—such as borehole compounds, pipelines or discharge structures—can be sited and designed following early heritage screening and, where necessary, archaeological assessment, ensuring that known heritage assets and their settings are conserved and that any potential archaeological interest is appropriately managed.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	WAGS infrastructure is generally small-scale and can be integrated into the rural landscape with appropriate design, materials and screening, and by following good landscape design principles for any new or refurbished structures, the scheme can continue to operate without significant effects on landscape or townscape character or visual amenity.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	The scheme improves the efficiency of water resource use in the Waveney catchment by making strategic use of groundwater to support surface water flows, and any construction or maintenance activities can incorporate waste minimisation, reuse and recycling of materials, ensuring that resource consumption and waste generation are kept to a practical minimum.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	Avoid adverse effects on built assets and infrastructure		With appropriate hydrogeological assessment, monitoring and design, the scheme can be operated so that groundwater abstraction and river augmentation do not adversely affect built assets or infrastructure—for example through subsidence or altered flood risk—and any construction works can be coordinated with local highways and utilities to avoid damage or disruption, ensuring that built assets are protected.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

1.20 Stour Augmentation Groundwater Scheme (SAGS)

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	By providing additional flow to the River Stour during low-flow periods, SAGS can help maintain wetted habitat, reduce ecological stress on fish and invertebrates, and support longitudinal connectivity along the river, and because groundwater abstraction is controlled through licence conditions, trigger levels and environmental monitoring to avoid significant drawdown impacts on wetlands, headwaters or designated sites, the scheme can operate in a way that protects biodiversity and ecological functions.	Local	Moderate	Short - term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Avoid introducing or spreading INNS following the INNS risk assessment and biosecurity procedures. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Further consultation and liaison with the Environment Agency. ▪ Modifications to operating regimes of water level management or flood risk management structures, where appropriate, to help ensure that river flows are maintained. ▪ Ensuring discharged groundwater meets applicable water quality standards prior to release to the river. ▪ Use of renewable or 'clean' energy sources where practicable.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		SAGS is primarily a functional groundwater–river support scheme and so it does not provide opportunities for habitat creation.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		Because SAGS moves water from groundwater to the river within the same catchment rather than transferring between distant basins, the inherent risk of spreading INNS is relatively low, and with appropriate biosecurity measures for equipment, vehicles and any in-river works, the scheme can be operated and maintained without materially increasing the risk of INNS introduction or spread.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By supporting river flows during droughts, SAGS can help maintain ecological status and avoid low-flow driven deterioration under the WFD, and provided that groundwater abstraction remains within sustainable limits that protect baseflow and groundwater-dependent ecosystems, the scheme can be fully compatible with WFD objectives and the conservation objectives of any nearby designated sites.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental	Augmenting river flows with groundwater can improve water quality during low-flow periods by diluting pollutants and stabilising temperature and dissolved oxygen conditions, and because the chemistry of the abstracted groundwater and its interaction with the river are monitored and managed, while construction and maintenance activities follow standard pollution prevention measures, the scheme can maintain or enhance water quality in both surface and groundwater bodies.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		The scheme directly supports surface water flows in the River Stour when natural flows are low, helping to maintain ecological function and downstream abstractions, while abstraction limits, trigger levels and hands-off conditions ensure that groundwater levels remain within acceptable bounds and that long-term aquifer storage and baseflow contributions are protected, allowing the scheme to balance surface and groundwater quantity sustainably.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.	resilience of the water environment to drought?	By reducing the frequency and severity of very low flows, SAGS can help avoid deterioration in ecological status and support the implementation of RBMP measures for water resources and drought management, and with appropriate licensing, monitoring and adaptive operation, it can do so in a way that remains consistent with WFD requirements for both surface water and groundwater bodies.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		SAGS increases the resilience of the Stour system and its users to drought by making strategic use of stored groundwater to support flows when they are most needed, thereby improving the overall efficiency of water resource use in the catchment and reducing the need for more severe restrictions or emergency measures during prolonged dry periods.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	The operational phase of SAGS has very limited interaction with soils, as the main assets are boreholes, small compounds and discharge structures, and any construction or maintenance works can be managed using standard good practice to prevent soil erosion, compaction or contamination and to avoid adverse effects on geomorphological features or high-grade agricultural land, so soil and geological interests can be effectively protected.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Air emissions associated with SAGS arise mainly from energy use at pumps and occasional vehicle movements for inspection and maintenance, and by using efficient pumping equipment, optimising operating regimes and employing low-emission vehicles where possible, these emissions can be kept low and localised, resulting in only minor and well-controlled air quality impacts.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	While the scheme requires energy to pump groundwater to the river and any new or replacement infrastructure has embodied carbon, the use of high-efficiency pumps, careful design to minimise unnecessary construction, and the progressive decarbonisation of electricity supply mean that operational and embodied greenhouse gas emissions can be kept modest and managed in line with wider carbon reduction objectives.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		SAGS contributes directly to climate resilience by providing a flexible tool to support river flows during hotter, drier summers and more variable rainfall patterns, helping both the environment and water users adapt to climate change, and because any associated emissions can be mitigated through energy efficiency and low-carbon power, the scheme can support adaptation while remaining compatible with climate mitigation goals.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption?	By helping to maintain river flows and support reliable water supplies for downstream abstractors, SAGS underpins public health, local livelihoods and amenity, and any temporary disturbance	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
		▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	from construction or maintenance activities can be managed through timing, communication and standard controls so that there are no lasting adverse effects on community wellbeing.												
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The scheme supports the reliability of water supplies that depend on the River Stour system, particularly during droughts, thereby contributing to long-term, sustainable and affordable water provision for communities and businesses that rely on these sources.	Local	Moderate	Long - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		SAGS is an operational intervention and does not include public-facing educational elements. Any public awareness-raising about drought or environmental protection is delivered through separate communication channels, so the scheme itself has little direct influence on customer engagement with the natural environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		By supporting flows in the River Stour during dry periods, the scheme helps maintain conditions suitable for recreation such as angling, boating and riverside walking, and because groundwater abstraction is managed to protect the wider water environment, these benefits can be delivered without compromising other users or the long-term recreational value of the river.	Local	Moderate	Long - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	The operational scheme has limited direct interaction with heritage assets, and any new or upgraded infrastructure—such as borehole compounds, pipelines or discharge structures—can be sited and designed following early heritage screening and, where necessary, archaeological assessment, ensuring that known heritage assets and their settings are conserved and that any potential archaeological interest is appropriately managed.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	SAGS infrastructure is generally small-scale and can be integrated into the rural landscape with appropriate design, materials and screening, and by following good landscape design principles for any new or refurbished structures, the scheme can continue to operate without significant effects on landscape or townscape character or visual amenity.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	The scheme improves the efficiency of water resource use in the Stour catchment by making strategic use of groundwater to support surface water flows, and any construction or maintenance activities can incorporate waste minimisation, reuse and recycling of materials, ensuring that resource	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
			consumption and waste generation are kept to a practical minimum.												
	Avoid adverse effects on built assets and infrastructure		With appropriate hydrogeological assessment, monitoring and design, the scheme can be operated so that groundwater abstraction and river augmentation do not adversely affect built assets or infrastructure—for example through subsidence or altered flood risk—and any construction works can be coordinated with local highways and utilities to avoid damage or disruption, ensuring that built assets are protected.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

1.21 Great Ouse Groundwater Scheme (GOGS)

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	By supplementing flows in the River Great Ouse during dry periods, GOGS helps maintain wetted habitat, reduce ecological stress and support the functioning of aquatic ecosystems, and because groundwater abstraction is governed by strict licence conditions and environmental monitoring to avoid significant drawdown impacts on wetlands, headwaters or designated sites, the scheme can operate in a way that protects biodiversity and ecological integrity.	Local	Moderate	Short - term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Avoid introducing or spreading INNS following the INNS risk assessment and biosecurity procedures. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Further consultation and liaison with the Environment Agency. ▪ Modifications to operating regimes of water level management or flood risk management structures, where appropriate, to help ensure that river flows are maintained. ▪ Ensuring abstracted groundwater meets applicable water quality requirements prior to discharge to the river. ▪ Use of renewable or 'clean' energy sources where practicable.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		GOGS is primarily an operational drought-support scheme and so it does not provide opportunities for habitat creation.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		Because the scheme transfers water from groundwater to the river within the same catchment, the inherent risk of spreading INNS is low, and with appropriate biosecurity measures for equipment, vehicles and any in-river work, GOGS can be operated and maintained without materially increasing the risk of INNS introduction or spread.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By supporting river flows during droughts, GOGS can help maintain ecological status and avoid low-flow-driven deterioration under the WFD, and provided that groundwater abstraction remains within sustainable limits that protect baseflow and groundwater-dependent ecosystems, the scheme can operate in full compatibility with WFD and designated site conservation objectives.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Augmenting river flows with groundwater can improve water quality during low-flow periods by diluting pollutants and stabilising temperature and dissolved oxygen conditions, and because groundwater chemistry and discharge effects are monitored and managed, while construction and maintenance activities follow standard pollution prevention measures, the scheme can maintain or enhance water quality in both surface and groundwater bodies.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To maintain surface water and groundwater flows and quantity.		The scheme directly supports surface water flows in the Great Ouse when natural flows are low, helping to maintain ecological function and downstream abstractions, while abstraction limits, trigger levels and hands-off conditions ensure that groundwater levels remain within acceptable bounds and that long-term aquifer storage and baseflow contributions are protected, allowing the scheme to balance surface and groundwater quantity sustainably.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		By reducing the frequency and severity of very low flows, GOGS can help avoid deterioration in ecological status and support the implementation of RBMP measures for water resources and drought management, and with appropriate licensing, monitoring and adaptive operation, it can do so in a way that remains consistent with WFD requirements	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
			for both surface water and groundwater bodies.												
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		GOGS increases the resilience of the Great Ouse system and its users to drought by making strategic use of stored groundwater to support flows when they are most needed, thereby improving the overall efficiency of water resource use in the catchment and reducing the need for more severe restrictions or emergency measures during prolonged dry periods.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	The operational phase of GOGS has very limited interaction with soils, as the main assets are boreholes, small compounds and discharge structures, and any construction or maintenance works can be managed using standard good practice to prevent soil erosion, compaction or contamination and to avoid adverse effects on geomorphological features or high-grade agricultural land, ensuring that soil and geological interests are effectively protected.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Air emissions associated with GOGS arise mainly from energy use at pumps and occasional vehicle movements for inspection and maintenance, and by using efficient pumping equipment, optimising operating regimes and employing low-emission vehicles where possible, these emissions can be kept low and localised, resulting in only minor and well-controlled air quality impacts.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	While the scheme requires energy to pump groundwater to the river and any new or replacement infrastructure has embodied carbon, the use of high-efficiency pumps, careful design to minimise unnecessary construction, and the progressive decarbonisation of electricity supply mean that operational and embodied greenhouse gas emissions can be kept modest and managed in line with wider carbon reduction objectives.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		GOGS contributes directly to climate resilience by providing a flexible tool to support river flows during hotter, drier summers and more variable rainfall patterns, helping both the environment and water users adapt to climate change, and because any associated emissions can be mitigated through energy efficiency and low-carbon power, the scheme can support adaptation while remaining compatible with climate mitigation goals.	Local	Moderate	Short - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	By helping to maintain river flows and support reliable water supplies for downstream abstractors, GOGS underpins public health, local livelihoods and amenity, and any temporary disturbance from construction or maintenance activities can be managed through timing, communication and standard controls so that there are no lasting adverse effects on community wellbeing.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The scheme supports the reliability of water supplies that depend on the Great Ouse system, particularly during droughts, thereby contributing to long-term, sustainable and affordable water provision for communities and businesses that rely on these sources.	Local	Moderate	Long - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		GOGS is a technical groundwater management measure and does not include customer engagement or educational activity. Although its environmental role may be referenced in broader drought communications, the scheme itself does not provide information resources or connect customers with the natural environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		By supporting flows in the Great Ouse during dry periods, the scheme helps maintain conditions suitable for recreation such as angling, boating and riverside walking, and because groundwater abstraction is managed to protect the wider water environment, these benefits can be delivered without compromising other users or the long-term recreational value of the river.	Local	Moderate	Long - term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	The operational scheme has limited direct interaction with heritage assets, and any new or upgraded infrastructure—such as borehole compounds, pipelines or discharge structures—can be sited and designed following early heritage screening and, where necessary, archaeological assessment, ensuring that known heritage assets and their settings are conserved and that any potential archaeological interest is appropriately managed.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	GOGS infrastructure is generally small-scale and can be integrated into the rural landscape with appropriate design, materials and screening, and by following good landscape design principles for any new or refurbished structures, the scheme can continue to operate without significant effects on landscape or townscape character or visual amenity.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	The scheme improves the efficiency of water resource use in the Great Ouse catchment by making strategic use of groundwater to support surface water flows, and any construction or maintenance activities can incorporate waste minimisation, reuse and recycling of materials, ensuring that resource consumption and waste generation are kept to a practical minimum.	Local	Moderate	Short - term	Temporary	Low	Low			-	Minor adverse	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	Avoid adverse effects on built assets and infrastructure		With appropriate hydrogeological assessment, monitoring and design, the scheme can be operated so that groundwater abstraction and river augmentation do not adversely affect built assets or infrastructure—for example through subsidence or altered flood risk—and any construction works can be coordinated with local highways and utilities to avoid damage or disruption, ensuring that built assets are protected.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

1.22 Tankering Potable Water from Carlton Colville Pumping Station to Bedingfield and Eye

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Tankering does not involve construction or in-river works, so direct effects on habitats and designated sites are unlikely. However, increased vehicle movements may cause localised disturbance (noise, vibration) near sensitive ecological areas if tanker routes pass close to them. These effects are temporary and reversible.	Local	Low	Short-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Avoid introducing or spreading INNS following the INNS risk assessment and biosecurity procedures. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Use of renewable or 'clean' energy sources where practicable.	-	Minor adverse	0	Neutral
	To provide opportunities for habitat creation or restoration.		Tankering does not create or restore habitat, as it is an operational, short-term drought response measure.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		There is no direct pathway for spreading invasive species, as tankering uses sealed vehicles and does not involve movement of raw water between catchments unless specifically planned. If water is transferred between catchments, biosecurity protocols would be required to avoid INNS risks.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		Tankering does not directly affect water bodies, so no direct WFD ecological status impacts are expected. Indirectly, by supporting supply and reducing pressure on abstraction, tankering may help avoid deterioration of WFD water bodies during drought.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	Tankering has no direct interaction with water bodies. Minor risks relate to fuel spills or accidental discharge during loading/unloading, but these are low with standard operational controls.	Local	Low	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To maintain surface water and groundwater flows and quantity.		Tankering can reduce pressure on stressed sources by supplementing supply, helping maintain environmental flows during drought. Effects are beneficial where tankering avoids or reduces abstraction from sensitive sources.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		By reducing reliance on drought-stressed sources, tankering can support WFD objectives by preventing deterioration in status.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Tankering improves short-term resilience but does not increase efficiency. It is a temporary measure that helps maintain supply during drought without long-term environmental benefits.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	Tankering does not involve ground disturbance, excavation or land-take. The only potential effect is localised soil contamination risk from accidental fuel or oil spills at tanker filling points, which is low with standard controls.	Local	Low	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Tankering requires frequent HGV movements, leading to increased vehicle emissions and localised air quality impacts near depots, roads and delivery points. These effects are temporary but adverse, particularly in urban or AQMA areas.	Local	High	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Tankering is carbon-intensive due to fuel use by heavy vehicles. This represents an adverse effect, though limited to the drought period.	Local	High	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Tankering supports operational resilience during extreme drought, helping maintain supply when other sources are constrained. This is a beneficial effect for climate adaptation.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	Tankering helps maintain water supply during drought, supporting public health and wellbeing. Temporary traffic increases may cause minor nuisance (noise, congestion) for local communities.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Action is a reactive temporary solution targeting drought when linked to peak demand and so does not provide long term resilience solutions. However, its continuity of supply during drought.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		Tankering does not provide environmental education or engagement opportunities.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		By reducing abstraction pressure, tankering can help protect water bodies used for recreation and navigation.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-	Tankering does not involve ground disturbance, so direct impacts on heritage assets are unlikely. Temporary traffic increases may cause minor setting impacts for heritage sites located near tanker routes, but these are short-term and reversible.	Local	Low	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
		dependent heritage assets, including organic remains?													
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Tankering has no permanent landscape effects. Temporary visual impacts may occur from increased tanker presence at depots or on rural roads, but these are minor and temporary.	Local	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	Tankering requires fuel and vehicle use, so it does not reduce resource consumption. No significant waste is generated.	Local	Low	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	Avoid adverse effects on built assets and infrastructure		Increased HGV movements may contribute to road wear, but impacts are minor and within normal operational tolerances.	Local	Low	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral

1.23 Transfer from Thames Water to Chigwell WTW

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	The bulk raw water transfer from Thames Water to Chigwell WTW supports biodiversity indirectly by providing an alternative raw water source during drought, reducing the need to increase abstraction from environmentally sensitive local rivers or groundwater bodies in the Essex water resource zone (WRZ). Because the transfer uses existing, regulated infrastructure and does not involve new abstractions from additional water bodies beyond those already managed by Thames Water, it does not introduce new ecological pressures on designated sites or priority habitats.	Local	Moderate	Short-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Avoid introducing or spreading INNS following the INNS risk assessment and biosecurity procedures. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Further consultation and liaison with the Environment Agency. ▪ Modifications to operating regimes of water level management or flood risk management structures, where appropriate, to help ensure that river flows are maintained. ▪ Use of renewable or 'clean' energy sources where practicable.	0	Neutral	+	Minor beneficial
	To provide opportunities for habitat creation or restoration.		This action is purely an operational transfer between supply systems and does not involve physical works or habitat interventions, so it does not create or restore habitats; its contribution is limited to helping avoid additional abstraction pressure on local watercourses, thereby indirectly supporting the condition of existing habitats during drought.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		The transfer operates through existing, controlled raw water infrastructure between two regulated water company systems, and does not create new open-water pathways; with standard biosecurity and asset management practices in place, it does not materially increase the risk of introducing or spreading INNS.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		By providing an alternative drought source and reducing the need to intensify abstraction from sensitive local rivers or aquifers, the action supports the sustainable abstraction regime assumed in the WRMP and helps maintain conditions consistent with WFD ecological objectives and conservation requirements for designated sites.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand?	The bulk transfer allows Essex & Suffolk Water to maintain raw water availability at Chigwell WTW without increasing pressure on local sources that might be more vulnerable to quality deterioration during drought; because the transferred water is managed within existing raw water quality controls and treatment processes at Chigwell, the action does not adversely affect surface or groundwater quality.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To maintain surface water and groundwater flows and quantity.		By supplementing raw water at Chigwell from Thames Water's system, the action reduces the need to increase abstraction from local rivers or groundwater in the Essex WRZ during drought, helping to keep flows and groundwater levels within planned sustainable limits and supporting the flow regimes assumed in the WRMP.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.	▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	The transfer supports WFD and RBMP objectives by enabling Essex & Suffolk Water to meet demand without exceeding sustainable abstraction limits on local water bodies, thereby helping to avoid deterioration in ecological status during drought.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		The action increases drought resilience by making use of an inter-company bulk supply to bolster raw water availability at Chigwell WTW, improving the flexibility and efficiency of the regional water resource system before more intrusive drought measures are required.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	The bulk transfer uses existing buried and above-ground infrastructure and does not involve new construction or ground disturbance, so it has no effect on soils, geomorphological features or agricultural land.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Air emissions associated with the transfer are limited to any additional pumping energy within existing networks; these changes are small and occur within the normal operational range of both companies, so the action has negligible impact on air quality.	Local	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	The action relies on existing infrastructure and therefore has no new embodied carbon; any additional operational carbon from pumping is modest and confined to drought periods, remaining within the overall operational carbon profile of the WRMP.	Local	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		By providing an additional drought source that can be called upon when local resources are stressed, the transfer strengthens the resilience of the Essex WRZ to climate-driven droughts, reducing the likelihood that extreme conditions will force environmentally damaging abstraction patterns or severe customer restrictions.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	The bulk transfer helps maintain reliable water supplies to communities served by Chigwell WTW during drought, supporting public health and wellbeing by reducing the risk of supply interruptions or stringent restrictions, without introducing new adverse effects on local communities.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		By increasing the flexibility and reliability of raw water supply to Chigwell WTW, the action supports the WRMP objective of delivering resilient, high-quality and sustainable water supplies, using an existing inter-company agreement rather than more costly emergency measures.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or		This is an internal operational measure and does not directly engage customers or provide educational content; its contribution is indirect, through	Local	High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	information resources for the public.		maintaining a stable supply system that supports wider environmental and recreational benefits.												
	To maintain the water environment for other users including recreation, tourism and navigation.		By reducing the need to intensify abstraction from local rivers and aquifers during drought, the action helps maintain the planned flow regimes that underpin recreational use, navigation and other water-dependent activities in the Essex WRZ.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	The action uses existing infrastructure and does not involve new construction or land-take, so it has no effect on heritage assets or their settings and does not alter any archaeological risk.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	Because the bulk transfer is entirely operational within existing assets and does not require new visible structures, it has no impact on landscape or townscape character or visual amenity.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	The action improves the efficiency of existing water resource assets by enabling better use of inter-company connectivity during drought, without generating additional waste or requiring new materials.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	Avoid adverse effects on built assets and infrastructure		The transfer operates within existing networks and does not alter flood risk, structural stability or the performance of other infrastructure; instead, it supports the reliable functioning of the wider water supply system by reducing stress on local assets during drought. Small increase in energy use does not shorten the life of infrastructure or meaningfully affect maintenance cycles, so the action has negligible impact.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

1.24 Emergency treated water transfer from Anglian Water

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	The transfer uses treated water and is constrained by Anglian Water Services's (AWS) critical period headroom, meaning abstraction impacts are managed within AWS's existing environmental and regulatory framework. No additional abstraction beyond permitted levels is anticipated, and no direct changes occur within the Hartismere catchments.	N/A	N/A	N/A	N/A	N/A	N/A	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Avoid introducing or spreading INNS following the INNS risk assessment and biosecurity procedures. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Further consultation and liaison with the Environment Agency ▪ Use of renewable or 'clean' energy sources where practicable.	0	Neutral	0	Neutral
	To provide opportunities for habitat creation or restoration.		No physical works or habitat interventions are involved.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		The transfer involves treated potable water, with very low likelihood of viable INNS transfer. No new raw-water pathways are created.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		Abstraction to support the transfer is governed by AWS licences and WFD/RBMP obligations and only occurs where headroom exists. No additional pressure is introduced in Hartismere water bodies.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity? ▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	The transfer is of treated potable water within closed systems and does not introduce pollutants to surface or groundwater bodies.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain surface water and groundwater flows and quantity.		Any abstraction associated with the transfer is managed within AWS's existing licensed regime and only when headroom exists, so no additional hydrological stress is expected. No change occurs in Hartismere catchment flows.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		Because the transfer is conditional on AWS headroom and within existing regulatory controls, it is not expected to compromise WFD or RBMP objectives in the donor area and has no direct effect in Hartismere.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		The emergency transfer provides an additional supply option for Hartismere during critical periods, improving system resilience and reducing the risk of emergency measures that could have greater environmental impact.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	No ground disturbance, land take or change in drainage occurs as part of the emergency operation (assuming infrastructure is already in place or separately assessed).	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Pumping energy may be required, but at the scale of an emergency, intermittent transfer, any change in emissions is negligible.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	Operational carbon associated with pumping is likely to be small and intermittent.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		The emergency transfer provides an additional adaptive pathway to manage climate-driven drought risk in Hartismere, reducing the likelihood of severe restrictions or environmentally damaging emergency abstractions.	Regional	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	By providing an emergency supply route, the transfer reduces the risk of supply interruptions and severe restrictions in Hartismere, supporting public health and wellbeing during drought.	Regional	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		The measure directly enhances supply resilience in Hartismere during critical periods, though it is an emergency, conditional option rather than a routine source.	Regional	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To connect customers to the natural environment, provide education or information resources for the public.		The measure is operational and not designed as an engagement or educational intervention.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		By reducing the need for more extreme local drought measures, the transfer may indirectly support the maintenance of environmental flows in Hartismere, but this pathway is indirect and small.	Regional	Low	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	No physical works or environmental changes affecting heritage assets or their settings are anticipated as part of the emergency operation.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	No new visible infrastructure or landscape change is associated with the emergency operation itself.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste? ▪ Will the action affect other services or assets?	The measure optimises use of existing regional water resources by sharing surplus capacity in emergencies but does not significantly change overall resource consumption.	Regional	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	Avoid adverse effects on built assets and infrastructure		By providing an emergency supply route, the transfer reduces stress on Hartismere's own assets during critical periods and lowers the risk of system failure.	Regional	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial

1.25 Denver Hands-Off Flow

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	The Wash Special Protection Area (SPA)/ Ramsar/SSSI/ National Nature Reserve (NNR) - Designated for its extensive intertidal habitats and internationally important bird populations. Indirect impacts associated with water quality and food sources. The Wash and Norfolk Coast SAC - No direct impact on designated features, but otters are a qualifying feature which may be indirectly impacted. River Nar SSSI - Separated by a Tidal sluice that prevents seawater from mixing with freshwater in high tide, preventing direct impact pathway. Norfolk Coast Area of Outstanding Natural Beauty (AONB) - Designated for its natural beauty and not specifically for any (freshwater) habitat. Lynn Point County Wildlife Site - Saltmarsh at the Babingley River and the Great Ouse confluence. Priority Habitats: Coastal Saltmarsh - The habitat is within the Wash estuarine system. River flow changes could influence salinity regimes, nutrients and sediment but is primarily tide-dominated; Mudflats - The habitat is within the Wash estuarine system. River flow changes could influence salinity regimes, nutrients and sediment but is primarily tide-dominated; and Coastal and Floodplain Grazing Marsh (5 ha) - The habitat is within proximity to the watercourse, however it will not be impact through the watercourse flow regime. This habitat is fed by various brackish and freshwater waterbodies, so it is not solely reliant on fluvial inputs. Harbour seals may experience short-term, indirect effects from reduced river flows where prey distribution or estuary foraging conditions change. Kingfishers may benefit locally from fish concentrating in pools during	Local	Low to High	Short-term	Temporary	Low	Low	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Further consultation and liaison with the Environment Agency ▪ Modifications to operating regimes of water level management or flood risk management structures, where appropriate, to help ensure that river flows are maintained. ▪ Where archaeological remains are at risk due to water level changes measures set out in the Historic England 'Preserving Archaeological Remains' guidance (2016)[2] should be implemented as appropriate.	0	Neutral	0	Neutral

[2] Historic England (2016) Preserving Archaeological Remains: Decision-taking for Sites under Development. Swindon: Historic England. Available at: https://historicengland.org.uk/images-books/publications/preserving-archaeological-remains/ [Accessed February 2026]

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
			drought, though overall reductions in fish abundance could limit prey; nesting burrows remain unaffected and recovery is expected once fish populations rebound. Otters, although not recorded, may experience temporary reductions in prey but can adjust foraging over their large home ranges, with no expected impacts on holt sites and full recovery predicted as fish populations recover. Wading birds may experience reduced foraging efficiency from temporary declines in macroinvertebrates and potential short-term breeding impacts if drought actions occur in April–July, but mobility allows relocation and medium-term recovery is anticipated as prey communities re-establish. Phytoplankton are primarily influenced by water quality rather than flow, so low flows are not expected to alter bloom risk; the receptor is assessed as Not Sensitive (Low confidence) with a Minor impact. Any effects on migratory indicator fish species during low-tide flows would be short-term and buffered by increased flows at high tide. Freshwater-to-marine migratory fish are tolerant of environmental variation and are not expected to be impacted. Estuarine resident fish are similarly tolerant of changing conditions, and no impact is anticipated.											
	To provide opportunities for habitat creation or restoration.		Action does not create or restore habitat; it is an operational drought support scheme and so it does not provide opportunities for habitat creation.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		Reduced flows may less frequently disperse seeds and rhizome fragments, but exposed banks could offer new establishment sites. Any changes are likely small and temporary given the short-term nature of the drought action	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		Any indirect ecological impacts are short-term and reversible, and the action does not hinder WFD objectives or designated site conservation targets.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	▪ Will the action affect surface water quality or quantity? ▪ Will the action affect ground water quality or quantity?	Alternation in dilution downstream of Great Ouse water body affecting ammonia, Biological Oxygen Demand (BOD), dissolved oxygen and phosphate concentrations but with no	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
		▪ Is the action likely to contribute to or conflict with the achievement of WFD objectives? ▪ Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? ▪ Will the action affect raw water quality? ▪ Will the action comply with flow targets? ▪ Does the action provide a reliable and sustainable water supply which meets changing demand? ▪ Will the action protect and enhance the environmental resilience of the water environment to drought?	change in overall riverine WFD classification.												
	To maintain surface water and groundwater flows and quantity.		Alternation in dilution Wash Inner and the Wash Outer water bodies affecting ammonia, BOD, dissolved oxygen and phosphate concentrations but not significantly changing concentration from Great Ouse water body.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		The drought action is assessed to have a negligible magnitude of impact on River Great Ouse hydraulics (velocities, water depths, wetted perimeters and stream power), with high confidence.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		The drought action is assessed to have a negligible magnitude of impact on River Great Ouse geomorphology (Sediment Transport, Channel Form, Habitat Structure)	Local	High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	▪ Will the action affect high grade agricultural land? ▪ Will the action prevent soil erosion and retain soil stocks as a natural resource? ▪ Is the action likely to affect geodiversity, including SSSIs of geological importance?	Does not involve new construction; no land-take/groundworks; no pathway to soils/geodiversity impacts.	Local	High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Air	To reduce and minimise air emissions during operation.	▪ Is the action in an AQMA? ▪ Will the action affect local air quality?	Air emissions associated with the action are limited to any additional energy within existing networks; these changes are small and occur within the normal operational range, so the action has minor impact on air quality.	Local	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	▪ Will the action affect carbon or other greenhouse gas emissions? ▪ Does the action include measures to improve resilience to climate change and drought? ▪ Will the action create catchment resilience to drought?	The action relies on existing infrastructure and therefore has no new embodied carbon; any additional operational carbon from additional pumping is modest and confined to drought periods.	Local	High	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Better storage going into summer; reduces need for more severe measures later	Local	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	▪ Does the action promote water efficiency and encourage a reduction in water consumption? ▪ Will the action secure resilient water supplies for the health and wellbeing of customers?	By supporting reliable water supplies and reducing the likelihood of severe drought restrictions, the action contributes to public wellbeing and reduces the risk of supply interruptions, without causing adverse effects on local communities.	Regional	High	Short-term	Temporary	Low	Low			-	Minor adverse	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Protected Rights - Abstraction licences held by agricultural businesses, estates, industrial / commercial users and Environment Agency. Drought action constrained to prevent	Local	Moderate	Short-term	Temporary	Low	Medium			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
			breach of protected rights. No measurable impact anticipated.												
	To connect customers to the natural environment, provide education or information resources for the public.		An operational intervention and does not include public-facing educational elements. Any public awareness-raising about drought or environmental protection is delivered through separate communication channels, so the action itself has little direct influence on customer engagement with the natural environment.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
	To maintain the water environment for other users including recreation, tourism and navigation.		Water-based recreation may experience temporary low-tide effects that are buffered at high tide, while land-based recreation is largely unaffected with negligible visual impacts, and agriculture remains stable with no deterioration in drainage or abstraction reliability beyond existing drought conditions.	Local	Moderate	Short-term	Temporary	Low	Medium			-	Minor adverse	+	Minor beneficial
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	▪ Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? ▪ Will the action affect the setting and/or significance of a historic asset? ▪ Will the action affect archaeology (including unknown archaeology)? ▪ Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	Heritage: Denver Sluice (Grade II Listed) - Negligible water level changes. No alteration to setting or views. No structural risk to listed fabric. Temporary and reversible.	Local	Moderate /High	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	▪ Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? ▪ Will the action protect and enhance designated landscapes and features?	No impact on the character of the landscape, townscape, seascape or designated landscapes and features. The AONB is designated for its high scenic quality, distinctive coastal and rural landscapes, and the interaction between natural features, historic estates, settlements and working countryside. The absence of any direct hydrological dependency on River Great Ouse flows within the affected zone mean that no discernible change to landscape character, natural beauty or visual amenity is anticipated.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	▪ Will the action reuse existing infrastructure? ▪ Will the action minimise the use of resources and generation of waste?	Does not involve construction, new infrastructure, or material use, and it does not generate waste. It simply alters a flow threshold for a short duration. Therefore, it has no impact on	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
		▪ Will the action affect other services or assets?	resource consumption or waste generation												
	Avoid adverse effects on built assets and infrastructure		Operates within existing networks and does not alter flood risk, structural stability or the performance of other infrastructure	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

1.26 Coldfair Green

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
Biodiversity, Flora and Fauna	To protect and enhance biodiversity, ecological functions, capacity and habitat connectivity, including protecting designated sites and their qualifying features, priority species and priority habitats.	▪ Is the action likely to affect the conservation status of any internationally, nationally or locally designated sites? ▪ Is the action likely to contribute to or conflict with the targets and conservation objectives for designated sites? ▪ Will the action protect and enhance aquatic habitats and species, including freshwater fisheries? ▪ Will the action enhance aquatic, transitional and terrestrial ecosystems? ▪ Does the action provide opportunities for habitat creation or restoration? ▪ Is the action likely to affect ancient woodland, Section 41 of the NERC act habitats and species of principal importance for the purpose of conserving biodiversity? ▪ Will the action affect any habitats that support legally protected species or species of conservation concern? ▪ Is there a possibility for INNS to be spread/introduced or for algal blooms to occur?	Sandlings SPA - not functionally dependent on river; no measurable effect on qualifying features anticipated. Leiston - Aldeburgh SSSI - localised, temporary changes in water levels, wetted perimeter and marginal habitats during drought action; recovery expected post-action; no predicted deterioration in WFD class. The Haven, Aldeburgh Local Nature Reserve - short-term, reversible, localised hydraulic changes affecting reedbed and lagoon margins. Priority habitats including Coastal and Floodplain Grazing Marsh and Reedbeds may experience temporary marginal drying and reduced inundation during the drought action, with effects expected to be reversible and recovery occurring once conditions normalise. Lowland Fens are less sensitive as they are supplemented by inputs from the Hundred River through groundwater and nutrient-rich overflow following rainfall, reducing reliance on river flow and limiting any drought-related impacts. Otters may experience temporary local reductions in foraging habitat but no population-level effects, while water voles may be exposed to short-term burrow exposure and marginal vegetation loss that is reversible once conditions recover. Bats may have minor temporary reductions in foraging efficiency along the channel, and kingfishers may experience short-term effects on foraging habitat and marginal banks, though nest sites remain unaffected. Priority bird species such as curlew, snipe, golden plover, lapwing and reed bunting may experience minor short-term changes in wetland foraging resources but are highly mobile and adaptable. Macroinvertebrate assemblages, already adapted to low-energy, fine-sediment environments, are not expected to shift in community type, although short-term changes in diversity and sensitivity metrics may occur.	Local to Regional	Low to High	Short-term	Temporary	Low	Medium	▪ Application of reasonable and best-practice mitigation measures/methods. ▪ Compliance with regulatory standards and existing licence conditions and with WFD no-deterioration requirements. ▪ Use of standard operational best practice. ▪ Application of monitoring proposals, where relevant, to ensure environmental protection (e.g., flow, water quality, ecological indicators).	▪ Further consultation and liaison with the Environment Agency. ▪ Modifications to operating regimes of water level management or flood risk management structures, where appropriate, to help ensure that river flows are maintained. ▪ Provision of adequate treatment of any water which is to be transferred between catchments. ▪ Provision of adequate treatment of effluent prior to its reintroduction to any surface water bodies. ▪ Use of renewable or 'clean' energy sources where practicable. ▪ Where archaeological remains are at risk due to water level changes measures set out in the Historic England 'Preserving Archaeological Remains' guidance (2016)[3] should be implemented as appropriate. Specific measures ▪ Fish (all sp.) - Fish rescue/relocation to upstream refuges; temporary aeration if feasible. ▪ Water quality (DO, Phosphate) - Early withdrawal (reduce abstraction to baseline); notify Environment Agency for discharge review. ▪ Designated Sites/Reedbeds (SSSI/Royal Society for the Protection of Birds) - Partial restoration of compensation; Pause or modify operation subject to Environment Agency/ Natural England advice. ▪ INNS - Check/clean/dry protocols; notify Environment Agency.	-	Minor adverse	0	Neutral

[3] Historic England (2016) Preserving Archaeological Remains: Decision-taking for Sites under Development. Swindon: Historic England. Available at: https://historicengland.org.uk/images-books/publications/preserving-archaeological-remains/ [Accessed February 2026]

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
			Increased low-flow and low-DO stress under drought action may elevate risk of localised fish mortality; recovery depends on flow restoration and limited recolonisation.	Regional	Low	Short-term	Temporary	Medium	Medium			-	Minor adverse	0	Neutral
	To provide opportunities for habitat creation or restoration.		Action does not create or restore habitat; it is an operational drought support scheme and so it does not provide opportunities for habitat creation.	N/A	N/A	N/A	N/A	N/A	N/A			-	Minor adverse	0	Neutral
	To avoid introducing or spreading and, where feasible, manage INNS.		Increased bank exposure may marginally favour existing plant INNS; effects are short-term, localised and reversible, with no new pathways created.	Local	High	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To meet WFD objectives relating to biodiversity and targets and conservation objectives of designated sites.		Action may influence biodiversity through temporary changes in water quality, reduced dilution, and significant flow reductions in the Hundred River, alongside local groundwater drawdown within the Waveney and East Suffolk Chalk & Crag groundwater body. These effects, including reduced depths, velocities and increased fine sediment deposition, may temporarily alter habitats that support WFD ecological status objectives and the conservation targets of sensitive or designated sites.	Regional	Moderate	Short-term	Temporary	Medium	Low			-	Minor adverse	0	Neutral
Water	To maintain the quality of surface water and groundwater bodies, including meeting WFD objectives for water chemistry and supporting the objectives of groundwater-dependent sites.	Will the action affect surface water quality or quantity? Will the action affect ground water quality or quantity? Is the action likely to contribute to or conflict with the achievement of WFD objectives? Will the action affect wetlands and Groundwater Dependent Terrestrial Ecosystems? Will the action affect raw water quality? Will the action comply with flow targets? Does the action provide a reliable and sustainable water supply which meets changing demand? Will the action protect and enhance the environmental resilience of the water environment to drought?	Alteration in dilution of water quality parameters in the Waveney and East Suffolk Chalk & Crag groundwater waterbody is not expected to affect the overall groundwater WFD classification. Within the Hundred River, changes in dilution may influence ammonia, BOD and dissolved oxygen concentrations; however, these changes are not anticipated to alter the river's overall WFD class. In contrast, changes in dilution affecting phosphate concentrations in the Hundred River may result in a possible shift in WFD status. The drought action is also expected to lead to temporary geomorphological adjustments, including reduced sediment transport and an increase in fine sediment deposition.	Regional	Moderate	Short-term	Temporary	Medium	Low			-	Minor adverse	0	Neutral
	To maintain surface water and groundwater flows and quantity.		Groundwater level drawdown within the Waveney and East Suffolk Chalk & Crag groundwater body is predicted to extend approximately 615 m from the Coldfair Green abstraction point. The drought action is also expected to cause a reduction in flows at Q95 of around 60% in the Hundred River.	Local	Moderate	Short-term	Temporary	Medium	Low			-	Minor adverse	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
	To meet WFD objectives and support the achievement of environmental objectives set out in RBMPs.		The Hundred River at Coldfair Green is particularly sensitive to changes in upstream flow as a result of the proposed drought action. The intervention is considered to have a medium impact on flow-related characteristics including river depth, velocity and wetted perimeter, with several reaches experiencing reductions greater than 10%.	Regional	High	Short-term	Temporary	Medium	Low			-	Minor adverse	0	Neutral
	To increase water efficiency and increase resilience of water supplies and natural systems to droughts.		Action is important to support the efficient use of water resources and to protect natural flow regimes, sediment continuity and ecological sensitivity under drought conditions.	Regional	Moderate	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Soil	To protect geological and geomorphological features, and the functionality and quality of soils, including the protection of high-grade agricultural land.	Will the action affect high grade agricultural land? Will the action prevent soil erosion and retain soil stocks as a natural resource? Is the action likely to affect geodiversity, including SSSIs of geological importance?	Slight short-term pressure on resources; controlled by licensing groundwater-based spray irrigation of agricultural and rural landholding enterprises.	Local	High	Short-term	Temporary	Low	Medium			-	Minor adverse	0	Neutral
Air	To reduce and minimise air emissions during operation.	Is the action in an AQMA? Will the action affect local air quality?	Air emissions associated with the action are limited to any additional pumping energy within existing networks; these changes are small and occur within the normal operational range, so the action has negligible impact on air quality.	Local	High	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Climatic factors	To minimise or reduce embodied and operational carbon and greenhouse gas emissions.	Will the action affect carbon or other greenhouse gas emissions? Does the action include measures to improve resilience to climate change and drought? Will the action create catchment resilience to drought?	The action relies on existing infrastructure and therefore has no new embodied carbon; any additional operational carbon from additional pumping is modest and confined to drought periods.	Local	High	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
	To introduce climate mitigation where required and improve the climate resilience of assets and natural systems to the threats of climate change.		Maintaining flexibility in abstraction and compensation regimes so that hands-off triggers and drought action thresholds can be revisited as evidence accumulates from future monitoring.	Regional	High	Short-term	Temporary	Low	Low			-	Minor adverse	0	Neutral
Population and human health	To maintain the health and wellbeing of the local community, including economic and social wellbeing.	Does the action promote water efficiency and encourage a reduction in water consumption? Will the action secure resilient water supplies for the health and wellbeing of customers?	By supporting reliable water supplies and reducing the likelihood of severe drought restrictions, the action contributes to public wellbeing and reduces the risk of supply interruptions, without causing adverse effects on local communities.	Regional	High	Short-term	Temporary	Low	Low			0	Neutral	+	Minor beneficial
	To secure resilient, high quality, sustainable and affordable water supplies over the long term for the health and wellbeing of the community.		Short-term marginal reduction in downstream availability of ground-water possible if uncontrolled; monitored and regulated.	Local	High	Short-term	Temporary	Low	Medium			-	Minor adverse	0	Neutral
	To connect customers to the natural environment, provide education or information resources for the public.		An operational intervention and does not include public-facing educational elements. Any public awareness-raising about drought or environmental protection is delivered through separate communication channels, so the action itself has little direct	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral

SEA topic	Proposed SEA objectives	Indicator questions	Potential residual effect on sensitive receptors commentary	Scale of effect	Certainty of effect	Duration of effect	Permanence of effect	Magnitude of effect	Value/ Sensitivity of receptor	Embedded mitigation measures	Additional mitigation measures	Residual adverse effect significance		Residual Beneficial effect significance	
			influence on customer engagement with the natural environment.												
	To maintain the water environment for other users including recreation, tourism and navigation.		There are no navigable reaches within ZoI/affected river.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Historic environment	To conserve and protect the historic environment and heritage assets, and their settings, including archaeologically important sites.	Will the action affect designated, non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments or other non-designated historic assets? Will the action affect the setting and/or significance of a historic asset? Will the action affect archaeology (including unknown archaeology)? Will the action alter the hydrological conditions of water-dependent heritage assets, including organic remains?	No physical impact pathways: minor temporary setting change only.	Local	Low	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral
Landscape	To conserve and protect landscape and townscape character and visual amenity.	Will the action have an effect on the character of the landscape, townscape or seascape, including tranquillity and views? Will the action protect and enhance designated landscapes and features?	No impact on the character of the landscape, townscape, seascape or designated landscapes and features.	N/A	N/A	N/A	N/A	N/A	N/A			0	Neutral	0	Neutral
Material assets	To reduce, and make more efficient, the consumption of resources, and minimise the generation of waste.	Will the action reuse existing infrastructure? Will the action minimise the use of resources and generation of waste? Will the action affect other services or assets?	Use existing network capacity avoids new construction and materials, reducing resource use and preventing additional waste.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	+	Minor Beneficial
	Avoid adverse effects on built assets and infrastructure		Operating within established infrastructure helps relieve pressure during drought and avoids introducing new risks to built assets.	Local	Moderate	Short-term	Temporary	Low	Low			0	Neutral	0	Neutral