

Southern Water Services

Final Draft Water Resource Management Plan 24

Annex 17 Strategic Environmental Assessment Environmental Report

Appendix K: Preferred Options Assessments

May 2025
Version 5

1.

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1.2. SUSSEX NORTH (SNZ)

Drought option - supply side (SNZ): Pulborough surface water phases 1-3 (23MI/d)											
Southern Water											
Pulborough Surface water (Phases 1 to 3) Drought permit/order (2025 onwards).											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	0		<p>The option is within 10km of the Arun Valley Ramsar, SPA and SAC (1.5km south east), The Mens SAC (4km to the north), the Duncton to Bignor Escarpment SAC (5.9km south west) and the Ebernoe Common SAC (9.4km north east). The following SSSI is located within 1km of the option: Upper Arun SSSI (0.63km, 100% of area in unfavourable – recovering condition). The option is also within the SSSI Impact Risk Zones associated with Pulborough Brooks SSSI, Waltham Brooks SSSI, Amberley Wild Brooks SSSI, Parham Park SSSI, Arundel Park SSSI and Arun Banks SSSI.</p> <p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The option for Minimum Residual Flow (MRF) reduction on the River Rother at the weir near Pulborough would be phased according to environmental impact, with the 10MI/d MRF reduction scenario set against the Drought stage trigger and the other two scenarios (20MI/d and 30 MI/d) set against the Severe Drought stage trigger, as assessed in the Drought Plan SEA. The EAR for the drought permit option identified that implementation of the Pulborough drought order with a 30 MI/d MRF reduction would result in a moderate adverse impact on ecology, notably with respect to migratory fish and the Least Water Snipe Fly. For the 20MI/d MRF scenario a minor adverse impact on ecology is identified and for the 10MI/d MRF scenario a negligible adverse impact is identified for ecology. For each phase a minor adverse impact is identified for INNS due to increased exposure of banks to potential propagation by invasive species; however, INNS spread would be localised and it is considered unlikely that the option would increase the spread of INNS downstream. There may be potential for impacts on GWDTEs in proximity to the abstraction points, it is not known how far the effects an increase in abstraction will be seen therefore minor operational effects have been identified. These measures are to be implemented during extreme drought and therefore ecosystems may already be under severe stress. On balance, operation of the option is considered to have the potential for moderate negative effects on biodiversity (taking into account impacts at the highest 30MI/d MRF scenario) assessed in the SEA of the Drought Plan.</p> <p>The HRA report of the Southern Water Revised Draft Drought Plan 2022 (2025) screened in the Arun Valley SPA/SAC/Ramsar, Ebernoe Common SAC, Singleton and Cocking Tunnels SAC, and The Mens SAC for Appropriate Assessment.</p> <p>The EAR and HRA for the Pulborough drought option are currently being updated, hence any revised outcomes are not available for inclusion here. The</p>	Monitor abstraction during operation.	0	0	0	--

						<p>Drought Plan 2022 HRA assessment (2025) highlights that the HRA of this option is subject to ongoing discussions with regulators and the conclusions of the Appropriate Assessment may be subject to change, and hence the findings are not presented in the 2025 Drought Plan HRA report and the report will be updated accordingly at this time.</p> <p>Notwithstanding this, the most recently completed HRA AA of this option was completed in 2023, and concluded that with appropriate mitigation and monitoring including to ensure that all sluices, valves and other similar structures between the River Arun and Arun floodplain are repaired and operating correctly, no adverse effect on integrity could be concluded for Avon Valley SAC, Avon Valley SPA, Avon Valley Ramsar Site, The Mens SAC, Ebernoe Common SAC, and Singleton and Cocking Tunnels SAC.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	Increased abstraction may impact local soil quality; however, effects are not anticipated to be significant.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to affect flood risk or be affected by flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	0	---	<p>Given this option is only to be implemented under drought conditions when groundwater resources are vulnerable, the option may have negative impacts on resilience of the water environment.</p> <p>The WFD assessment (2025) of the Southern Water Drought Plan 2022 highlights that with regard to the Wester Rother river waterbody, there is a high risk of temporary deterioration in status due to impacts on some fish species and there is a high risk of impacting downstream water body (Arun). Whilst for the Arun transitional waterbody, there is a medium risk of temporary deterioration in status due to impacts on fish, invertebrate and macroalgal communities.</p> <p>The SEA assessment (2025) of the Southern Water Drought Plan 2022 highlights that the implementation of the Drought Permit (reduction in MRF by 30MI/d) would result in a major adverse effect on flows in the River Rother in summer and moderate adverse effects in winter. There would be associated moderate adverse impact on water quality and ecology, notably migratory fish and the Least Water Snipe Fly.</p> <p>As such, and in line with the conclusions of the SEA of the Drought Plan a significant negative effect has been identified during operation.</p>	Further assessments required.	0	0	0	---
	Deliver reliable and resilient water supplies	0	0	++	0	Option will increase water supply under a drought order with an assumed drought action duration. Abstraction capacity increase will provide an additional 23MI/d therefore moderate beneficial effects identified.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	0	0	0	There may be some negative effects from an increase in emissions associated with water supply / treatment, however this is not anticipated to be significant.	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	There is no carbon data available for this option. Neutral effects have been estimated at this stage. There may be some negative effects from an increase in carbon emissions associated with water supply / treatment, however this is not anticipated to be significant.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	Drought permits are a key component of Southern Water's Drought Plan. The option will support resilience of water supplies to drought which may become more prevalent due to climate change. Capacity requirements are not yet certain therefore minor positive effects are identified. Increased abstraction during period of drought will reduce the water environment's ability to recover and may increase ground water resources vulnerability to drought in the future.	Monitor ground water flows.	0	0	+	-
Landscap e	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	-	The option is located within the South Downs National Park. There is potential that a reduction in flow levels for impacted reaches would result in a minor negative effect on the visual amenity of the National Park.	Monitor downstream water levels during operation.	0	0	0	-
Historic Environm ent	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option unlikely to have effect on the historic environment.	N/A	0	0	0	0
Populatio n and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	0	The option will contribute towards improving security of water supplies, which will therefore help to maintain public health and well-being of the population served by Southern Water. Abstraction capacity is not yet certain, therefore minor beneficial effects are identified. The option is unlikely to have any significant adverse effects on the local community.	N/A	0	0	+	0
	Maintain and enhance tourism and recreation	0	0	0	-	There is potential that a reduction in flow levels for the option would result in a minor but temporary change to the recreational and amenity value of downstream reaches. This is identified to be a potential minor negative impact on tourism and recreation.	Monitor downstream water levels during operation.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	-	Potential for increased resources required and waste produced from increased water treatment.	N/A	0	0	0	-
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (SNZ): NEUBs											
Southern Water											
Non-essential use ban - SNZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water's sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Minor adverse effect on soils management in dry weather.</p>	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Operation of the option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water's sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water will result in reduced requirement for abstraction (3.64MI/d) from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the ban.</p>	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.</p>	N/A	0	0	+	0

	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0

	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0
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Drought option - demand side (SNZ): Reduce transfer to other commercial customers											
Southern Water											
Drought option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA Screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (by 0.11Ml/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects identified at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought	N/A	0	0	+	0

						conditions, it is not resulting in the long-term resilience of the local environment.					
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Drought option - demand side (SNZ): TUBs											
Southern Water											
Temporary use bans - SNZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water's sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought.</p> <p>The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for demand for water (2.27Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 MI/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--

	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism, and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Groundwater (SNZ): New borehole at Petworth (4MI/d)											
Southern Water											
This scheme would return an existing WSW (Haslingbourne) to service. The site has been out of supply due to poor water quality. The scheme would be to drill a new borehole in the Hythe Formation approximately 700m south of the existing WSW. Borehole to be minimum c. 300mm dia ID, and c. 80m depth. Connection to the treatment works and refurbishment of the treatment works would be required.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	-	<p>There are 21 SSSI's within 10km of the option. The nearest of these is Burton Park (approx. 1.4km), followed by Coates Castle (approx. 2.1km), Lavington Common (approx. 2.8km), Bognor Common Quarry (approx. 3.1km), Duncton to Bignor Escarpment SSSI and SAC (approx. 3.6km) and The Mens SSSI and SAC (approx. 4.2km). The remaining 15 SSSI's are over 5km from the option, with Ebernoe Common (approx. 5.7km) also being an SAC. The option would cross the SSSI Impact Risk Zones associated with Burton Park SSSI and Coates Castle SSSI, including an area where pipeline development is highlighted as being a risk to the sensitive features for which the SSSIs are notified. Construction activities have the potential to cause adverse effects to the designated sites through dust, vibration and noise pollution. The Arun Valley SAC and Ramsar site lies approx. 6km from the option. There are several areas of Ancient Woodland within 1km of the option, with the nearest being 0.25km to the south. There are no NNR's or LNR's within 1km of the option.</p> <p>The HRA screening (2025) identified no pathways for construction effects at Duncton to Bignor Escarpments SAC. Arun Valley Ramsar, SPA and SAC were screened in for both construction and operational effects, and The Mens SAC and Ebernoe Common SAC were both screened in for construction only. Construction will involve works in rural areas close to the River Rother (pathways for site-derived pollutants); operation will be within the terms of the existing licence but abstraction will be greater than recent actuals, which may affect flows within the River Rother. As noted under the water quality objective below, the WFD assessment highlights that changes to the hydrological regime, river continuity and morphological conditions due to change in baseflow could impact fish, invertebrate and macrophyte/phytobenthos populations.</p> <p>The HRA AA (2025) has identified no adverse effects during construction or operation at any of the European sites screened in. It is considered that there is sufficient confidence to enable a conclusion of no adverse effect on the integrity</p>	<p>The HRA (2025) AA concludes that LSE for the Arun Valley Ramsar, SPA and SAC, Ebernoe Common SAC and The Mens SAC sites are considered by the AA to be mitigatable through use of best practice measures, and utilisation of appropriate species-specific mitigation.</p>	0	-	0	-

						of the Arun Valley SPA, Arun Valley Ramsar and Arun Valley SAC to be drawn for the WRMP HRA in relation to this option, alone and in combination. Construction effects can be reliably avoided with established measures. For the Ebernoe Common SAC and The Mens SAC, adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.						
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	The option is within Grade 2 or 3 agricultural land, there may be disturbance to the soil during the construction phase and there may also be a permanent loss as a result of the option	Reinstate land where possible, however potential for the option to lead to the permanent loss of soil due to the new boreholes. Best practice techniques to prevent potential disturbance of contaminated material during construction.	0	-	0	0	
Water	Increase resilience and reduce flood risk	0	0	0	0	The option would not have an effect on or be affected by flood risk.	N/A	0	0	0	0	
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>There is potential for impacts of the construction phase on the water environment, including groundwater as the option involves drilling new borehole. Increased abstraction may impact groundwater levels.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concluded potential WFD non-compliance (with low confidence) for the Haslingbourne Stream, Western Rother and the Lower Greensand Arun & Western Streams waterbodies.</p> <p>With regard to the Haslingbourne Stream and Western Rother waterbodies, the WFD assessment highlights that increasing abstraction may affect flow, with the ALS showing there is no water available at Q95 and Q70 and restricted water available at Q50. The WFD notes that there is likely high degree of continuity between groundwater and surface water. The WFD assessment highlights that changes to the hydrological regime, river continuity and morphological conditions due to change in baseflow could impact fish, invertebrate and macrophyte/phytobenthos populations and that reductions in flow, particularly during times of low flow, could result in changes to physico-chemical quality elements</p>	<p>Best practice construction measures to be implemented to mitigate effects therefore residual effects are unlikely for construction phase. Residual effects for operational have the potential to remain.</p> <p>This option is within the scope of ongoing WINEP investigations, the outcome of which will inform appropriate mitigation/monitoring requirements.</p>	0	0	0	--	

						(e.g. BOD, DO, pH, temperature), potentially causing a deterioration in status, noting that phosphate contributions and poor DO are a key RNAG and that flow reductions could exacerbate these issues. The WFD assessment also highlights that reductions in flow could also result in a reduction in dilution of chemicals already present in the River Rother, and potentially further deterioration in status. With regard to the Lower Greensand Arun & Western Streams waterbody, the WFD highlights that connectivity between the aquifer and overlying surface waters is likely to be high and there is no water available in the overlying surface water body below Q50, meaning flows are already lower than the requirement to support GES and the GWMU has restricted water availability. The WFD also highlights that increased abstraction will reduce the surplus in the water balance potentially leading to deterioration. It also highlights that changed groundwater flow patterns due to the increased abstraction could potentially result in migration of pollutants, noting that the source previously experienced rising nitrate levels and elevated iron, and it is possible that this could contribute to the poor status.					
	Deliver reliable and resilient water supplies	0	0	+	0	The option will increase abstraction with a default benefit of 4Ml/d and therefore may lead to more resilient supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	There are no AQMAs within 2000m. Construction likely to have minor and temporary impact on air quality.	Best practice mitigation measures likely to be implemented during construction phase, such as the use of low emission vehicles and switch off policies, however minor and temporary impacts on air quality are likely to still occur.	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	0	No carbon data available for the option. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is	0	-	0	0

							decarbonised, greener energy will be available.				
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	Increased abstraction may reduce the water sources resilience to potential drought scenarios. However, there may be positive effects due to reduced demand on surface water.	Monitor ground water levels.	0	0	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	---	0	--	The proposed site lies within the South Downs National Park. Construction of the option would have a negative effect on this designated landscape, and will introduce new, above ground infrastructure that will have a major negative effect on the local landscape. Some residual impacts will remain in the operational phase.	Best practice will be implemented to avoid negative effects, ground will be reinstated, however likely to be some disturbance to landscape during works. Implement screening and other best practice techniques to minimise operational impacts.	0	--	0	--
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	There are listed buildings and scheduled monuments within 800m. However, the option is unlikely to have effect on the historic environment. The option is not anticipated to impact archaeology.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	0	0	There are no community facilities within 500m. The option is not anticipated to affect the local community	N/A	0	0	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	Increase in congestion on roads during construction and effects on visual amenity may have an effect on recreation and tourism in the local area. There is also a public footpath that runs along the farm access track and borders the proposed site, construction may result in restricted access.	Best practice mitigation techniques to reduce impacts.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste, including excavation materials.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0

	Avoid negative effects on built assets and infrastructure	0	-	0	0	The construction site is approximately 0.65km from the A285. Increased vehicle movements during the construction period may result in increased congestion. There is a public footpath that runs along the farm access track and borders the proposed site, construction may result in restricted access to this.	Can be mitigated by strategic timing of vehicle movements e.g. avoiding significant activity during rush hour. Although minor, temporary effects are still likely.	0	-	0	0
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Recycling (SNZ): Littlehampton with direct river discharge (15MI/d)											
Southern Water											
This scheme proposes the transfer of treated effluent from Littlehampton WwTW to a new discharge point on the western River Rother upstream of the Pulborough Surface Water abstraction. This would support flows over the weir as the MRF is approached, therefore prolong production at Pulborough during a drought. 20MI/d represents the upper end of the reliable flow that could be expected from Ford WwTW. Once abstracted at Pulborough WSW this water would be used to meet demand in the Sussex North WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity , flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	--	<p>Option is adjacent to Fairmile Bottom Local Nature Reserve. The following SSSIs are located within 1km of the option: Fairmile Bottom SSSI (adjacent to option, 33.33% of features in favourable condition, 33.33% unfavourable – recovering, 33.33% not recorded); Arundel Park SSSI (0.1km, 14.29 % of features in favourable condition, 14.29% unfavourable – recovering, 14.29% unfavourable – declining, 14.29% partially destroyed, 42.86% not recorded); Waltham Brooks SSSI (1km, 85.71% of features in unfavourable – recovering condition, 14.29% unfavourable – declining); Amberley Wild Brooks SSSI (1km, 15.38% of features in favourable condition, 23.08% unfavourable – recovering, 7.69% unfavourable – no change, 53.85% not recorded); all of which are biological SSSI. Construction activities have the potential to cause adverse effects to the designated sites through dust, air and noise pollution and vibration. Construction of the pipeline is likely to have direct impacts on the Fairmile Bottom SSSI and Arundel Park SSSI, through disturbance of invertebrate and bird species, and pollution of habitats, and may impact the Waltham Brooks SSSI and Amberley Wild Brooks SSSI through noise and disturbance of invertebrate and bird species.</p> <p>The northern section of the option would also cross the SSSI Impact Risk Zone associated with the Upper Arun SSSI, including an area where discharge of water > 5m3day into becks and streams and pipeline development is highlighted as being a risk to the sensitive features for which the SSSI is notified. The route of the option would also cross the SSSI Impact Risk Zones associated with the Coates Castle SSSI, Amberley Wild Brooks SSSI, Amberley Wild Brooks SSSI, Arundel Park SSSI and Fairmile Bottom SSSI, including areas where pipeline development is highlighted as being a risk to the sensitive features for which the SSSIs are notified. The option would also cross the SSSI Impact Risk Zones for other SSSIs, however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified.</p>	<p>Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys.</p> <p>HRA screening (2025) identified that significant effects are avoidable with established measures/normal best practice at Arun Valley SPA, SAC and Ramsar, The Mens SAC and Ebernoe Common SAC, although these must be accounted for at AA.</p> <p>The 2025 HRA AA concluded for these designated sites that potential effects can be reliably avoided with established project-level measures</p>	0	-	0	--

						<p>Option within 2km of Arun Valley Ramsar, SAC and SPA (which includes the areas associated with Amberley Wild Brooks SSSI and Pulborough Brooks SSSI) and the Duncton to Bignor Escarpment SAC. The option is within 10km of the Kingmere MCZ (8.7km to the south east). However, effects are not anticipated given the distances to this site. The Duncton to Bignor Escarpment SAC, Arundel Park SSSI, and Waltham Brooks SSSI are water dependent. Option crosses areas of woodland, including ancient woodland, deciduous woodland, coastal and floodplain grazing marsh, good quality semi-improved grassland, lowland meadows and mudflats. Low risk of transfer of INNS as the water will be treated after abstraction and is likely to be entirely free of INNS. Construction phase risk of INNS is considered to be low.</p> <p>The HRA (2025) screened in Arun Valley Ramsar, SPA and SAC (which include the areas associated with Amberley Wild Brooks SSSI and Pulborough Brooks SSSI), the Mens SAC and Ebernoe Common SAC for AA. Pipeline construction would be required close (<2km) to the Arun Valley European sites (environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA)). Operation of the scheme would involve highly-treated effluent being used to augment river flows in the Western Rother upstream of the Pulborough abstraction (effectively on a put and take basis); this may affect water quality in the Rother hence the Arun.</p> <p>The HRA AA (2025) found that for each of these designated sites adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	Option crosses Woodlands Farm, Bank East of Hanger 2 and Days historic landfill sites and within 500m of 5 other historic landfill sites. There is potential to disturb contaminated material during construction. Option predominately located on grade 3 agricultural land and non-agricultural land, whilst also passing through areas of grade 1, grade 2 and grade 4 agricultural land. Likely disturbance to these soils during construction.	Land reinstated upon completion. Best practice construction measures to be implemented, however residual construction effects likely.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	--	0	0	Approximately 1/2 of option located within Flood Zones 2 and 3, remainder located within Flood Zone 1. This is likely to have an effect on construction.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	--	0	0

	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>Option crosses watercourses, including main rivers, at multiple locations. Option crosses SPZ Zones II and III.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concluded potential WFD non-compliance (with low confidence) for the Western Rother waterbody.</p> <p>Installation of new discharge infrastructure and increase in flows in the river could potentially alter the hydromorphology of the water body and change aquatic habitats. However, conversely, increased river flows could also potentially benefit the downstream Arun Valley Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar.</p> <p>The new discharge of treated effluent could potentially result in physico-chemical effects that could impact on biological status elements.</p> <p>The WFD assessment highlights that a new discharge into the river could potentially change the physico-chemistry of the water body (e.g. by increasing nutrient concentrations, changing dissolved oxygen concentrations, and changing water temperature. The water body is currently failing to achieve status targets due to phosphate, and any increases could result in further deterioration or make future improvements more challenging. Further assessment is therefore required to consider the final characteristics of the new discharge and ensure that water quality is not compromised, particularly given the likely connectivity between the river and the Arun Valley SAC, SPA and Ramsar.</p> <p>The WFD assessment also highlights that in theory the discharge could introduce new chemicals to this waterbody, or increase loading of chemicals already present. This would need further assessment.</p>	Best practice mitigation measures likely to be implemented during construction.	0	0	0	--
	Deliver reliable and resilient water supplies	0	0	+	0	<p>Option will facilitate water supply once operational, as follows: option proposes the transfer of treated effluent from Ford WwTW to a new discharge point to the western River Rother upstream of the Pulborough WSW abstraction. This would support flows over the Pulborough weir as the MRF is approached, therefore prolong production at Pulborough during a drought. 20 MI/d represents the upper end of the reliable flow that could be expected from Ford WwTW. Once abstracted at Pulborough WSW this water would be used to meet demand in the Sussex North WRZ. Capacity of 15MI/d.</p>	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within 2000m. However, construction is likely to have minor and temporary impact on air quality.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	--	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has moderate construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	Option will support flows over the Pulborough weir as the MRF is approached, therefore prolong production at Pulborough during a drought. This has the potential to increase the resilience of the local environment to climate change (droughts).	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	Approximately 3/4 of option located within South Downs National Park. Option located within Wealden Greensand, South Downs and South Coast Plain National Character Areas. Potential for impacts on landscape character and visual amenity during construction.	Best practice measures will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Land reinstated upon completion.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	---	0	0	Option crosses three Scheduled Monuments. Option within 500m of multiple listed buildings and Scheduled Monuments. Option crosses Bury and Fittleworth Conservation Areas and within 500m of nine other conservation areas. Construction may affect the setting of the historic assets; however, this will be temporary. Potential impact on buried archaeology, if present.	Pipeline routing should be considered to avoid crossing Scheduled Monuments and is considered achievable. Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	--	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	---	0	0	Option crosses one school, and within 500m of multiple other schools, Important Buildings and places of worship. Option crosses playing fields, one play space and one golf course. Option within 500m of religious grounds, sport facilities, playing fields, play spaces, allotments and tennis courts. Option crosses one Noise Action Planning Important Area. Option crosses areas of IMD deciles 9, 8, 7, 6 and 5. Disturbance to the local community will be major without mitigation.	Pipeline routing should be considered to avoid crossing school and greenspace sites. Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	--	0	0	Option crosses playing fields, one play space and one golf course. Option within 500m of religious grounds, sport facilities, playing fields, play spaces, allotments and tennis courts. Option crosses South Downs National Park and South Downs Way National Trail. Therefore, there may be some moderate and temporary effects on recreation during construction.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste during construction.	Opportunity to implement sustainable design measures and reuse excavated material on site, to reduce impact. Minor negative construction effects will likely remain.	0	-	0	0
Material Assets	Avoid negative effects on built assets and infrastructure	0	--	0	0	Option crosses one rail track, multiple major roads and one National Trail (South Downs Way). Likely to be moderate and temporary impacts during the construction.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Recycling (SNZ): Horsham with storage at Pulborough (6.8MI/d)											
Southern Water											
New resource. This option is a new 9.5MI/d water recycling plant producing a DO of 6.8MI/d near Horsham WwTW and a transfer of the treated effluent to Church Farm reservoir, which feeds into Pulborough WSW. Process losses have been included.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	-	<p>The pipeline for the option is within 500m of the Arun Valley SAC / SPA / RAMSAR. No direct impacts are anticipated but there may be disturbance effects during construction. The Pulborough Brooks SSSI is located within 1km (0.32km, 90% of features in favourable condition, 10% not recorded). Construction activities have the potential to cause indirect adverse effects to the designated site through noise, vibration, and disturbance of breeding and overwintering bird species. The option would cross the SSSI Impact Risk Zones associated with the Pulborough Brooks SSSI and the Upper Arun SSSI, including areas where discharge of water > 5m3day into becks and streams and pipeline development is highlighted as being a risk to the sensitive features for which the SSSIs are notified. The option would also cross the SSSI Impact Risk Zones for other SSSIs, however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified.</p> <p>The pipeline intersects woodland including Ancient Woodland and deciduous woodland Priority Habitat, as well as coastal and floodplain grazing marsh Priority Habitat. Construction of pipeline is likely to have direct impacts on these habitats and protected species.</p> <p>The risk of the transfer / spread of INNS is likely to be very low as the option involves the physical transfer of treated water (between two locations assumed currently unconnected) (no INNS risk as treated water will be free from INNS).</p> <p>The HRA screening (2025) screened in Arun Valley SAC/Ramsar/SPA and The Mens SAC, during both construction and operation, for AA. No adverse effects. Construction will involve works within the Arun catchment; operation will reduce discharges of treated water to the River Arun (so reducing flows marginally within the river).</p> <p>The HRA AA (2025) concludes that operation of the scheme will potentially reduce flows in the Arun by 9.5MI/d, which be around 8% of the Q95 flow (lowest flows) in the Arun based on gauging flow</p>	<p>Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual effects to remain. Future design will need to undertake ecology surveys and Ancient Woodland should be avoided during construction.</p> <p>The 2025 HRA AA concluded for the Arun Valley SAC/Ramsar/SPA that, adverse operational effects would not be anticipated. Construction effects are all minor and avoidable with normal measures. For The Mens SAC, adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects. No adverse effects i/c.</p>	0	-	0	-

						<div>data from the Rother at Hardham, Station No. 41009; and Arun at Pallingham, Station No. 41014 (note this is conservative). However, the impact on low flows within the river is not considered critical to the designated site integrity for the reasons noted above; at high (flood) flows (e.g. Q10) the maximum impact is around 0.4%, which is not considered likely to adversely affect the site habitats given the understood hydrological functioning of the site. It should also be noted that the qualifying features of the SAC are understood to be located in reedbeds some distance from the river. On this basis, adverse operational effects would not be anticipated. Construction effects are all minor and avoidable with normal measures.</div> <div>Overall, the HRA AA (2025) has identified no adverse effects during construction or operation at any of the European sites screened in.</div>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	The pipeline is within 500m of Coneyhurst Cutting SSSI (100% unfavourable- declining) although no impacts are anticipated. Option intersects predominantly grade 3 and grade 4 agricultural land, there is likely to be direct impacts on soil during construction phase as excavation will be required for laying of pipeline. The pipeline is within 500m of four historic landfill sites with potential to disturb contaminated material during construction.	Ground will be reinstated therefore residual effects unlikely. Best practice techniques to prevent potential disturbance of contaminated material during construction.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	The option passes through Flood Zone 2 and 3 and flood defences, which may impact construction. It is not anticipated that this option will have any impacts on flooding during operation.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	-	<div>The option transfer pipeline crosses watercourses therefore potential for impacts on water quality during the construction phase which could impact WFD status. The option is located within a number of SPZs with potential for impacts on water quality during the construction phase.</div> <div>The WFD assessment (2025) concludes that this option would be compliant (with low confidence) reflecting that the Arun Horsham waterbody was screened in at Stage 1 and that the Stage 2 assessment subsequently concluded compliance (with low confidence) for this waterbody.</div> <div>The WFD assessment highlights that a reduction in discharges from the WwTW will reduce the total flow in the River Arun, and will reduce the input of nutrients from effluent in to the river and that the Arun is discharge rich, which supports flows above natural at low flows. Therefore, it may be assumed that a reduction in discharge would not be detrimental to the Arun, and may provide a</div>	Best practice construction measures will likely be implemented, however possibility for impacts to remain.	0	-	0	-

						beneficial change to water quality, particularly since sewage discharge is identified as an RNAG for invertebrates and macrophytes/ phytobenthos and as an RNAG for phosphate. Furthermore, the WFD assessment highlights that It is not predicted that the discharge would contain any chemicals supporting chemical status.					
	Deliver reliable and resilient water supplies	0	0	+	0	This option is a new 9.5MI/d water recycling plant producing a DO of 6.8MI/d near Horsham WwTW and a transfer of the treated effluent to Church Farm reservoir, which feeds into Pulborough WSW.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	The option does not pass through any AQMAs nor are there any within 2km. Construction likely to have minor and temporary impact on air quality.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	It is not anticipated that the option will have significant effects on vulnerability or resilience to climate change.	N/A	0	0	0	0
Landscap e	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The option is within the Wealden Greensand and Low Weald NCAs, and the southern end of the pipeline and Church Farm reservoir are within South Downs National Park. The following National Landscape is within 5km of the option: High Weald (4km). Negative effects during construction likely as excavation will be required for the transfer pipeline. New above ground infrastructure could have visual effects.	Ground will be reinstated following pipeline construction therefore residual effects unlikely. Measures to reduce the visual impact during construction and operation e.g. screening could be implemented, however residual effects remain.	0	-	0	-
Historic Environm ent	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	Pipeline passes through Pulborough, Church Place Conservation Area and is directly adjacent to four listed buildings, although it is aligned along a main road in this section therefore direct impacts are unlikely to occur. The pipeline also potentially impacts the Old Swan Bridge, Pulborough Scheduled Monument / Grade II Listed Building. There are further conservation areas, listed buildings and a scheduled monument within 500m. Construction may also affect the setting of historic assets; however, this is likely to be temporary and minimal. There are few historic assets within proximity to Horsham WTW so impacts of new above	Best practice measures to be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0

						infrastructure on setting are likely to be minimal. There is potential for the excavation of the pipeline to impact buried archaeology.					
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	0	0	The pipeline is immediately adjacent to Christ's Hospital, Chichester College, and St. Mary's Church, Pulborough as well as allotments. There is likely to be temporary disturbance effects on the local community and users of these facilities during construction. IMD deciles along the pipeline route primarily 5, 8 and 9.	Pipeline route to be aligned to avoid direct impacts on community assets such as the allotments and land to be reinstated. Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option is within the South Downs National Park. There is a bowling green, a sports facility and several green spaces that may be used for recreation within 500m of option. There is likely to be temporary disturbance effects on the users of these facilities during construction.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
						The option crosses watercourses and habitat areas/woodland that could be used for recreation, therefore there may be temporary effects including on angling and other water-based recreation during the construction phase. There may be temporary disturbance to users of a National Cycle Route, footpaths and other public rights of way during the construction phase.					
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline crosses A roads and a national cycle route. There is likely to be moderate and temporary impacts during the construction phase from disruption for users (e.g. road closures, diversions).	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur. Directional drilling under the A272 is likely to be required.	0	-	0	0

Storage (SNZ): River Adur Offline Reservoir (19.5MI/d)											
Southern Water											
The option involves the construction of an earth embankment reservoir near Blackstone with a proposed storage capacity of up to 4,600 MI. The option will allow treated water to enter the distribution network to supply either the Sussex coastal block or the Pulborough area. The reservoir will be filled with water pumped from the eastern branch of the River Adur. The abstraction of raw water from the river to the reservoir would have a maximum flow of 30MI/d.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	+	--	<p>The option is not within 1km of any SSSIs. The option would cross the SSSI Impact Risk Zone associated with the Chanctonbury Hill SSSI, including areas where pipeline development is highlighted as being a risk to the sensitive features for which the SSSI is notified. The option would also cross the SSSI Impact Risk Zones for other SSSIs, however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified.</p> <p>The site proposed for construction of the reservoir intersects with one area of Ancient Woodland and the pipeline route for the option would be situated immediately adjacent to four areas of Ancient Woodland. The option will lead to the permanent loss of priority habitat and woodland. The new reservoir may result in habitat creation, as highlighted by the results of the BNG Assessment carried out by WRSE (summarised in Appendix M) which shows that this option would result in an overall increase of 73.53 biodiversity units.</p> <p>The 2025 HRA screening confirmed no likely significant effects. No adverse effect i/c.</p> <p>High INNS operational risk, as overflows, sludge deposits and recreational use could transfer INNS to sensitive habitats downstream. Moderate INNS construction risk.</p>	<p>Consider alignment of option to reduce intersection with ancient woodland and priority habitats. Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensation measures to replace damaged or lost habitat. Future design will need to undertake ecology surveys.</p>	0	-	+	--
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	<p>There are historic landfill sites within 2000m therefore no direct impacts anticipated. Option predominately located on grade 3 and grade 4 agricultural land but it does impact grade 2 agricultural land. There is anticipated to be a permanent loss to this land due to the creation of the new reservoir.</p>	<p>Land reinstated upon completion where possible, however permanent loss of Grade 2, 3 and 4 agricultural land.</p>	0	--	0	0
Water	Increase resilience and reduce flood risk	0	-	0	-	<p>The reservoir is located within Flood Zone 1 but is adjacent to Flood Zones 2 and 3. This may have an impact on construction and may lead to flooding at the reservoir during operation.</p>	<p>Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.</p>	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	--	0	--	<p>Option is within proximity to existing water bodies, including a main river therefore potential for contamination during construction. Option is not located within any SPZs. Option involves abstraction of raw water from the River Adur to reservoir which may affect water quality, flows and levels.</p>	<p>Best practice mitigation measures likely to be implemented during construction. However minor and temporary impacts may remain.</p>	0	-	0	--

						<p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Adur East (Sakeham) waterbody.</p> <p>The WFD assessment highlights that an increase in abstraction may affect flow in nearby River Adur, noting that the abstraction could be a substantial proportion of flow. The ALS shows there is water available at Q95, Q70, Q50, Q30 and streams are discharge rich. However, the flow reductions could potentially result in changes to the hydrological regime, river continuity and morphological conditions that could impact fish and invertebrate populations. Impacts on water quality could also have an impact on biology.</p> <p>The WFD assessment also highlights that a reduction in flow, particularly during times of low flow, could result in changes to physico-chemical quality elements (e.g. BOD, DO, pH, temperature), potentially causing a deterioration in status. The CDE indicate that Phosphate contributions and poor DO are a key RNAG, associated with point source discharges. Flow reductions could exacerbate this issue by reducing dilution.</p> <p>The WFD assessment notes that while lower flows could result in a reduction in dilution of chemicals from point source discharges, this is relatively unlikely to result in a change to status, particularly for ubiquitous pollutants.</p>					
	Deliver reliable and resilient water supplies	0	0	+	0	Option will facilitate water supply once operational - treated water to enter the distribution network to supply either the Sussex coastal block or the Pulborough area. Maximum flow of 30MI/d and an overall yield of 19.5MI/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	Option does not pass through any AQMAs, nor any within 500m or 2000m. However, construction is likely to have minor and temporary impact on air quality.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	-	Carbon will be generated from operation. The relative carbon scale identified that the option has minor operation carbon emissions (relative to other WRSE Regional Plan options). No embodied carbon data available.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	0	0	-

	Reduce vulnerability to climate change risks and hazards	0	0	0	-	The option involves the abstraction of water from the River Adur which may affect the resilience of the local environment to climate change.	N/A	0	0	0	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	--	Option located in Wealden Greensand and Low Weald National Character Areas. The following National Landscapes/National Parks are within 5km of the option: the South Downs National Park (0.3km), although reservoir around 1.5km from the National Park, and the High Weald National Landscape (3.7km). Option may have large area of permanent land take, with moderate operation effects. Potential for impacts on landscape character and visual amenity during construction. The new reservoir will lead to a permanent change in the landscape.	Best practice measures will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Land reinstated upon completion where possible. Option includes earth embankment reservoir which will help with blending into landscape, and there is also an opportunity to include screening, to help reduce operational effects.	0	-	0	--
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	Option within 500m of multiple listed buildings and Blackstone Conservation Area. There is potential that the setting of these assets could be affected during the construction phase. Potential impact on buried archaeology, if present.	Best practice measures will likely be implemented to minimise setting effects during construction. Archaeological Watching Brief may be required during the construction phase. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are no community facilities within 500m. Option within 2000m of schools and Important Buildings, tennis courts, play spaces, allotments, and churches and religious grounds. Disturbance to the local community and users of these community facilities will likely be minor and temporary in nature. Option within 500m of South Downs National Park. Option is within IMD decile 8.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	+	0	Option within 2000m of tennis courts, play spaces, allotment and religious grounds. Option within 2000m of South Downs National Park. There may be diversions and loss of public rights of way as a result of the reservoir. Therefore, there may be some minor and temporary effects on recreation during construction. The reservoir may also result in new recreational opportunities if it is open to the public.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	+	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste, including excavated materials.	Opportunity to implement sustainable design measures and reuse excavated material on site (where possible), to reduce impact. Minor negative construction effects will likely remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	There is potential for minor and temporary disruption to the local transport network during construction. The option does not impact directly on major roads, railways, national trails or national cycle routes.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor	0	-	0	0

						and temporary effects are likely to still occur.				
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Interzonal transfer (SNZ-SWZ): Pulborough to Worthing											
Southern Water											
Additional pipeline to provide extra capacity along the existing transfer route between Sussex North and Sussex Worthing											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	--	<p>The option is immediately adjacent to Parham Park SSSI (33.33% of features in unfavourable-recovering condition and 66.67% not recorded), GWDTE. Therefore, there is potential for direct effects through disturbance, dust and noise.</p> <p>The following SSSIs are located within 1km of the option: Pulborough Brooks SSSI at 0.36km from the option (90.00% in favourable condition, 10% not recorded) / GWDTE. Waltham Brooks SSSI at 0.86km from the option (85.71% in unfavourable – recovering condition and 14.29% in unfavourable declining condition). Amberley Wild Brooks SSSI at 0.25km from the option (15.38% in favourable condition, 23.08% in unfavourable – recovering condition, 7.69% in unfavourable -no change and 53.85% not recorded). Amberley Mount to Sullington Hill SSSI at 0.13km from the option (14.29% in favourable condition, 42.86% in unfavourable – recovering condition, 42.86% not recorded)/ GWDTE. Chantry Mill SSSI at 0.68km from the option (100% in favourable condition). Cissbury Ring SSSI at 0.48km from the option (100% unfavourable - recovering).</p> <p>The option would also be situated in the SSSI Impact Risk Zone associated with the Upper Arun SSSI and Chanctonbury Hill SSSI, including an area(s) where infrastructure development is highlighted as being a risk to the sensitive features for which the SSSI are notified.</p> <p>The option also intersects coastal and floodplain grazing marsh, deciduous woodland and lowland calcareous grassland priority habitat amongst others. Ancient woodland within 500m but no direct effects anticipated.</p> <p>Physical transfer of treated water between two locations (assumed currently unconnected). No INNS risk as treated water will be free from INNS). Construction is considered to be a low risk.</p> <p>The 2025 HRA screened in Arun Valley Ramsar, SPA and SAC and The Mens SAC for AA, as there are</p>	<p>Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys.</p> <p>HRA screening (2025) identified LSE for Arun Valley Ramsar, SPA and SAC which are considered partially mitigatable through use of construction best practice such as use of a robust CEMP. However, there is still a possibility of noise and visual disturbance for species which may use habitats near the pipeline’s construction. Undertake HRA AA to address residual effects for Arun Valley Ramsar, SPA and SAC.</p> <p>The 2025 HRA AA included Arun Valley Ramsar, SPA and SAC and The Mens SAC. For these designated sites adverse effects can be reliably avoided with established project level measures.</p>	0	--	0	0

						environmental changes associated with construction only, and screened out Duncton to Bignor Escarpment SAC and Ebernoe Common SAC. The HRA AA (2025) concludes no adverse effects.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	Pipeline passes through predominately Grade 3 and Grade 4 agricultural land, however there is a small section of Grade 2 along the route. These soils are likely to be disturbed during construction. There are historic landfill sites within 500m, however no direct impacts anticipated.	Reinstate soil following construction.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	Pipeline predominately within FZ1, however it does pass through FZ2 and FZ3 which may impact construction. Operational effects not anticipated given the pipeline is buried.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The option lies within SPZ1/2 and intersects two WFD groundwater bodies. The option also intersects one WFD river waterbody and intersects nitrate vulnerable zones. There is potential for the construction phase to impact water quality. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Implement pollution prevention and control measures and ongoing water monitoring. Use of appropriate bedding material and directional drilling where possible to minimise disturbance.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	++	0	The option will increase transfer capacity (34.91Ml/d), therefore improving resilience of supplies.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	0	Construction will likely produce dust and other air pollution. The option does not pass through any AQMAs, but there are a number of AQMAs within 2000m (Horsham AQMA No1 and Worthing AQMA).	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-

	Reduce vulnerability to climate change risks and hazards	0	0	0	0	There is not anticipated to be any effects on the resilience of the natural environment as water levels are not likely to be significantly affected as a result of this option.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The option is located wholly within the South Downs National Park. The option is located within the Wealden Greensand National Landscape Character Area. Construction of the pipeline will likely cause some visual disturbance. The pipeline will be buried once operational.	Implement screening to minimise visual impact and reinstate to original landscape once pipeline is buried.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The option intersects one conservation area and the Parham Grade II Registered Park and Garden. There are also listed buildings and scheduled monuments within 500m. There is potential for the construction phase to impact the setting of the historic assets. The pipeline excavation as the potential to impact archaeology, if present.	Re-route the pipeline or utilise trenchless techniques to prevent direct impacts on the Registered Park and Garden. Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are churches and religious grounds and a school within 500m of the pipeline route. The option intersects a public park or garden, and a golf course. There is potential that the construction phase will disrupt the local community and users of these community facilities, however this is likely to be minor and temporary. IMD deciles range from 4 to 10 along the pipeline route.	Implement traffic management measures and best construction measures. Use directional drilling to minimise disturbance.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option intersects a public park or garden, a golf course, national trails, national cycle ways, and is also within the South Downs National Park. There is also potential that the construction phase will lead to the diversion of public rights of way. Minor negative effects have been identified.	Implement screening and provide appropriate trail diversions or space to pass the construction area safely.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Construction will require materials and resources. Waste will likely be generated, including excavated materials.	Source materials locally and reinstate dug materials where possible.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline intersects major roads, railways, national cycle route and national trails. There is likely to be moderate and temporary disruption during the construction phase.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary	0	-	0	0

						effects are likely to still occur.				
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Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)											
Southern Water											
This is a pipeline to represent reverse flow from Havant Thicket Reservoir to Pulborough through a bidirectional raw water transfer from Pulborough to Havant Thicket. INNS treatment will be provided at Hardham.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	-	<p>Kingley Vale SAC and Duncton to Bignor Escarpment SAC are within 500m of the pipeline route. There are also additional designated sites within 2000m of the pipeline route including, Arun SAC, SPA and Ramsar sites.</p> <p>The following SSSIs and NNRs are located within 1km of the option: the Kingley Vale SSSI/NNR (0.06km, 14.29% of features in favourable condition, 28.57% unfavourable – recovering, 14.29% unfavourable – declining, 42.86% not recorded), the Duncton to Bignor Escarpment SSSI (0.05km, 20% of features in unfavourable – recovering condition, 30% unfavourable – declining, 50% not recorded), the Upper Arun SSSI (0.57km, 100% of features in unfavourable – recovering condition), and the Halnaker Chalk Pit SSSI (0.65km, 100% of features in favourable condition). Construction of the pipeline may have direct impacts on the Kingley Vale SSSI/NNR (yew woodland habitat) and Duncton to Bignor Escarpment SSSI (beech woodland habitat) due to dust and other airborne pollution settling on the habitats (including scrub/chalkland grassland) for which these sites are notified. Construction of the option may also have indirect impacts on the Upper Arun SSSI through disturbance of dragonfly species, and also the Halnaker Chalk Pit SSSI due to airborne pollution effecting nationally rare plant species for which the site is notified. The Waltham Brooks SSSI, Pulborough Brooks SSSI, which are all GWDTE. Coates Castle SSSI, and East Dean Park Wood SSSI are also within 2000m. The pipeline crosses chalk rivers therefore construction phase has the potential to impact sensitive habitats.</p> <p>The option would cross the SSSI Impact Risk Zones associated with Kingley Vale SSSI, Duncton to Bignor Escarpment SSSI, Upper Arun SSSI, and Waltham Brooks SSSI, including areas where pipeline development, development that could cause air/dust pollution during construction or operation, and any discharge of water into becks and streams, are highlighted as being a risk to the sensitive features for which the SSSIs are notified. The option would also cross the SSSI Impact Risk Zone(s) for other SSSIs, however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified.</p> <p>The pipeline passes through priority habitat, woodland and ancient woodland therefore potential for direct effects. The option would cross three areas of Ancient Woodland and would be situated immediately adjacent to over 20 areas of Ancient Woodland.</p> <p>The HRA screening (2025) screened in Duncton to Bignor Escarpment SAC, Kingley Vale SAC, Arun Valley Ramsar/SPA/SAC, Solent Maritime SAC, Chichester and Langstone Harbours Ramsar/SPA, The Mens SAC, Solent and Dorset Coast SPA, Singleton and Cocking Tunnels SAC. Transfer of raw water from is Havant Thicket Reservoir direct to Pulborough through a new bidirectional pipeline. INNS treatment will be provided at Hardham. Environmental changes associated with construction only but can be reliably avoided with project-level mitigation (applied at AA); no pathways for operational effects (water treated on arrival at Pulborough).</p>	<p>Best practice methods to be implemented to minimise disturbance effects and habitat loss. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys, and Ancient Woodland should be avoided during construction.</p> <p>The likely significant and uncertain effects are identified to be mitigable, but a HRA AA is required. A robust CEMP, that includes measures to reduce creation of dust and other vehicle/plant emissions, will be important in removing likely significant effects. It should also seek to eliminate risk from there forms of pollution (e.g. fuel spills etc.) that could direct or indirectly affect the habitats. Minimisation of the removal of habitat, and the careful timing of works to coincide with the hibernation period, would also remove the scope for likely significant effects.</p> <p>HRA screening (2025) identified that significant effects on European sites are avoidable with established measures/normal best practice at Duncton to Bignor Escarpment SAC, Kingley Vale SAC, Arun Valley Ramsar, SPA and SAC, Solent Maritime SAC, Chichester and Langstone Harbours Ramsar and SPA, The Mens SAC, Singleton and Cocking Tunnels SAC and the Solent and Dorset Coast SPA, although these must be accounted for at AA.</p> <p>The HRA 2025 AA found that for Duncton to Bignor Escarpment SAC, Kingley Vale SAC, Arun Valley Ramsar/SPA/SAC, Solent Maritime SAC,</p>	0	-	0	-

						<p>The HRA AA (2025) identified that environmental changes are associated with construction only and are reliably avoidable, and there are no pathways for operational effects.</p> <p>Due to the potential for adverse effects on SSSIs and sensitive habitats a moderate negative effect is concluded during construction of the option prior to mitigation. There is also a moderate risk of transfer of INNS during construction and a minor risk during operation with appropriate mitigation.</p>	<p>Chichester and Langstone Harbours Ramsar/SPA, The Mens SAC, Solent and Dorset Coast SPA, Singleton and Cocking Tunnels SAC that adverse effects alone can be reliably avoided with established project-level measures.</p>				
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	<p>The pipeline passes through Grade 2, 3 and 4 agricultural land as well as non-agricultural land. There is likely to be disturbance to these soils during the construction phase. There are historic landfill sites within 500m, and there are also additional historic and authorised landfill sites within 2000m. There is potential for disturbance to contaminants during the construction phase.</p>	<p>Ground will be reinstated upon completion of construction works. Best practice methods for working within, or within close proximity, to landfill sites to be implemented during the construction phase.</p>	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	<p>The option is predominately within Flood Zone 1 but does pass through areas of Flood Zones 2 and 3 which may have an impact on construction. Impacts on operation unlikely given the pipeline is buried. The pipeline is unlikely to increase the risk of flooding.</p>	<p>Measures to reduce the impact on flooding during the construction phase are likely to be implemented, however potential residual flood risk likely to remain.</p>	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	<p>No likely impacts on water quality, levels / flows anticipated given no abstraction. There is potential for water quality impacts as a result of construction which could impact WFD status. Pipeline crosses chalk rivers and main rivers. The pipeline is within SPZs.</p> <p>The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).</p>	<p>Best practice construction measures will likely be implemented to mitigate effects therefore residual effects are unlikely.</p>	0	0	0	0

	Deliver reliable and resilient water supplies	0	0	++	0	Option will increase transfer capacity by an additional 50MI/d, with an overall yield of 40MI/d, therefore improving resilience for supply and having a moderate beneficial effect.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within 2000m. The construction phase is likely to have temporary impacts on air quality.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	--	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and moderate operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Water levels not predicted to be significantly affected therefore, unlikely to affect resilience of the local environment to climate changes.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	---	0	0	<p>The pipeline is within the South Downs National Park. There is likely to be impacts on the landscape during construction likely as excavation will be required for the transfer pipeline. Given the length of the pipeline, this could be a major effect.</p> <p>The Chichester Harbour National Landscape is located 3km south of the option. Due to distance and intervening built development the potential for impacts from the option on the National Landscape are expected to be limited and temporary.</p>	Ground will be reinstated following pipeline construction and measures to reduce the visual impact during construction could be implemented, however potential for residual effects to remain.	0	--	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The pipeline passes through a conservation area, the Goodwood House Registered Park and Garden, and the Leigh House Registered Park and Garden. There is potential for the construction phase to have direct effects on these assets. There are listed buildings, scheduled monuments, registered parks and gardens, and conservation areas within 500m of the pipeline route, some of which are within close proximity. There is potential for the construction phase to affect the setting of these historic assets. There is potential for the excavation of the pipeline to impact buried archaeology if present.	Re-route the pipeline, or utilise direction drilling, to avoid direct impacts on the registered parks and gardens. Best practice mitigation measures will likely be implemented to minimise setting effects during construction. Archaeological Watching Brief may be required during the construction phase.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	0	0	The pipeline passes through public park or gardens, a country park, a golf course. There are also schools, churches and religious grounds, allotments, public parks and gardens, playing fields and play spaces within 500m. There is potential for the local community and users of these community facilities to be disrupted during the construction phase. IMD deciles range from 6 to 10 along the route.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	--	0	0	The pipeline passes through public park or gardens, a country park and a golf course. It also intersects a national trail and national cycle routes. The construction phase may lead to the diversion of public rights of way. Minor negative effects have been identified for the construction phase.		0	-	0	0

Material Assets	Minimise resource use and waste production	0	-	0	0	New pipeline infrastructure required for option which will use materials and generate waste, including excavated materials.	Opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain. Reuse excavated material on site.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The pipeline crosses major roads, railway tracks, a national trail and national cycle routes. There is potential for moderate and temporary impacts during the construction phase from disruption for users (e.g. road closures, diversions).	Best practice mitigation measures will likely be implemented to minimise effects during construction and roads and cycle routes will be reinstated above the pipeline. However, minor and temporary effects are likely to still occur. Directional drilling under the railway is likely.	0	-	0	0

Bulk import (SNZ): SES to SNZ (10MI/d)											
Southern Water											
Proposed new bi-directional transfer from SES Outwood To SWS Buchen Hill, Crawley. 10MI/d transfer flow rate.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>The proposed pipeline intersects with two areas of ancient woodland, it is directly adjacent to four other areas of ancient woodland and intersects with several areas of priority habitat including deciduous woodland and good quality semi-improved grassland. This option is likely to result in a of loss of habitat and priority species during construction. Pipeline will be buried so it is unlikely that there will be any operational effects. Transferred water is treated so unlikely to transfer INNS.</p> <p>There are no SSSIs within 1km of the option. The option would cross the SSSI Impact Risk Zones associated with Wakehurst & Chiddingly Woods SSSI and Hedgecourt SSSI, including areas where pipeline development is highlighted as being a risk to the sensitive features for which the SSSIs are notified. The option would also cross the SSSI Impact Risk Zones for other SSSIs, however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified.</p> <p>The 2025 HRA concludes that no European sites are screened in. The option involves transfer of treated water to/from SES Outwood To SWS Buchen Hill, Crawley via new pipeline; environmental changes associated with construction only, but will not affect any sites (distance, no pathways); no pathways for operational effects.</p> <p>Although the HRA screening (2025) identifies no likely significant effects for European sites, due to the potential for adverse effects on ancient woodland, grassland habitats and priority species a moderate negative effect is concluded during construction of the option prior to mitigation.</p>	<p>Consider alignment options that reduce intersection with ancient woodland and priority habitats.</p> <p>Best practice mitigation to minimise impacts and reinstatement/compensation of habitats, but potential for residual effects to remain as removal of priority species likely. Best practice mitigation for pollution prevention and sediment disturbance should be used along with other measures set out in a robust CEMP.</p>	0	-	0	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	Option in located on grade 3, grade 4 and non-agricultural land, soil is likely to be temporarily affected during construction as excavation is necessary for construction of pipeline. There are four historic landfill sites within close proximity to pipeline, there is a possible risk of contamination during construction.	Ground will be reinstated therefore residual effects unlikely. Best practice techniques likely to be implemented for construction work in landfill.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	There are small areas of flood zone 2 and flood zone 3 within 500m of the option pipeline. The pipeline will be buried so it is unlikely that there will be an increased risk of flooding.	N/A	0	0	0	0

	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The option passes through two WFD river catchment areas. The pipeline intersects with WFD GW and Surface water. Quality of ground water and surface water may be affected during construction. Pipeline to transfer treated water. Potential for sediment disturbance to occur in the waterbody which would result in an impact on the WFD status. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice mitigation measure will likely be implemented during construction to ensure minimal impact on water environment, however there is potential for effects on water quality to occur. Best practice mitigation to be followed with regards to sediment disturbance.	0	-	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	Option will provide a new transfer of water from Outwood to Buchen Hill, Crawley (10MLD transfer flow rate)	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	Option does not pass through any AQMAs. Construction likely to have minor and temporary impact on air quality.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	0	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon). The relative carbon scale identified that the option has minor construction carbon emissions (relative to other WRSE Regional Plan options). The option description does not include information on operational phase pumps or assets requiring energy input, therefore no operational phase emissions assumed.	Investigate use of renewables during construction for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Unlikely to impact climate change risks and hazards.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	Part of the pipeline is located on Greenbelt area. Option does not require above ground infrastructure and ground will be reinstated. The following National Landscape is located within 5km of the option: High Weald National Landscape (0.6km). No direct effects but there may be temporary negative effects on visual amenity during construction. It is assumed that the pipeline would be installed using directional drilling below areas of woodland, resulting in no change to existing once ground is reinstated following works	Best practice mitigation measures likely to be implemented during construction phase. Possibility for landscaping to restore/enhance visual amenity. However minor and temporary impacts are likely to occur.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	Outwood Conservation Area is within 200m of pipeline as well as a small number of listed buildings. No direct effects but there may be potential disturbance effects. Potential for buried heritage assets to be impacted due to likelihood of ground not having been previously excavated and proximity to conservation area.	Best practice mitigation measures likely to be implemented during construction phase, however minor impacts may occur. Desk based assessment recommended to dictate potential requirement for archaeological watching brief during the works.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There is a school immediately adjacent to the pipeline and one playing field and two open access areas 500m of pipeline. No direct land take but there may be temporary disturbance during construction.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts are likely to still occur.	0	-	0	0

	Maintain and enhance tourism and recreation	0	-	0	0	Option intersects with a cycle route and a greenspace site, there will be direct effects during construction, but pipeline will be buried and excavated land will be reinstated. There is a golf course and two open access areas within 500m of pipeline, no direct effects on these areas but there may be disturbance effects during construction.	Best practice mitigation measures likely to be implemented during construction phase. Possibility for landscaping to restore/enhance cycle path and excavated greenspace site. However minor and temporary impacts are likely to occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Due to the requirement for machinery and plant during the construction phase, energy requirements will be high. Excavated material will be generated.	Opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain. Reuse of excavated material on-site.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	Pipeline intersects with one cycle route that will need to be closed/diverted for a short period during construction. Cycle path will be reinstated.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts are likely to occur.	0	-	0	0

Bulk import (SNZ): SES re-zoning (4MI/d)											
Southern Water											
Extension of current re-zoning of supplies to SES water in SNZ beyond 2025 for up to 4MI/d.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	0	<p>There are no SSSIs within 1km of the option. The option is within the Impact Risk Zone associated with Hedgecourt SSSI. However, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSI is notified in the area of the SSSI Impact Risk Zone. The option is adjacent to one area of ancient woodland. However, the option would see resizing of existing pipeline which is under the public highway. Direct effects are unlikely. However, there may be some disturbance, vibration and dust. There no National Nature Reserves within 1km. Impacts are mitigatable through best practice construction techniques.</p> <p>The 2025 HRA screens out all designated European sites from further assessment. No LSE.</p>	Ecological surveys prior to construction.	0	-	0	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	The works would be located on existing highways and would not impact any ALC grade 1-3 land. Historic landfill sites within proximity (0.4km) but not anticipated to be affected.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	Pipeline predominately within FZ1, however it does pass through FZ2 and FZ3 which may impact construction. Operational effects not anticipated given the pipeline is buried.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	<p>Two WFD river waterbodies are intersected. There is potential for contamination during the construction phase.</p> <p>The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).</p>	Implement pollution prevention and control measures. Use appropriate bedding materials and directional drilling where possible to minimise disturbance.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	The option will increase transfers within the region therefore increasing resilience (additional 4MI/d).	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	The option is within 2km of Reigate and Banstead Borough Council AQMA No 3 and Crawley Borough Council Hazelwick AQMA. There is potential for the construction phase to have an effect on air quality, however this is likely to be minor and temporary.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study	0	-	0	-

							could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.				
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	The option is not anticipated to result in a change in water levels so no likely effect on water environment with respect to climate change.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The following National Landscape is within 5km of the option: High Weald (3.6km) although there is intervening built development. The option is within the Low Weald National Landscape Character Area. Visual disturbance is likely to occur during construction, however this will be minor and temporary.	Implement temporary screening during construction. Reinstate landscape to original state once pipeline is buried.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	There are multiple listed buildings and one conservation area within 1km including several adjacent to the site. There is also scheduled monument Medieval settlement remains 100m south east and 150m south west of Oldlands Farm, Tinsley Green adjacent to the site. There is potential for the setting of these assets to be affected during the construction phase, however this is likely to be minor (with mitigation) and temporary. There is also potential that the pipeline excavation will impact archaeology if present, although the land is previously developed.	Implement temporary screening during construction. Reinstate landscape to original state once pipeline is buried. Archaeological Watching Brief may be required during the construction phase depending on the presence / absence of archaeology.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option is partly within an urban setting, adjacent to homes and businesses. There is potential for temporary impacts on residents and the local community during the construction phase, particularly in relation to vehicles accessing the road network. Impacts may include noise, dust and vibration but no effects anticipated once operational as pipeline will be buried.	Implement best practice during construction to minimise effects, however residual effects are likely to remain.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option is within 500m of play spaces, playing fields and public parks and gardens. As such, there is potential to impact recreation, however this is likely to be minimal and temporary.	Implement best practice during construction to minimise effects, however residual effects are likely to remain.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Construction is likely to require material resources and will generate waste, including excavated materials.	Source materials locally and reinstate dug materials where possible.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The option is likely to disrupt transport infrastructure as it intersects major roads and a railway. Temporary impacts are likely to occur during the construction phase.	Use of directional drilling where possible to minimise disruption. Traffic management plan to minimise disruption.	0	-	0	0

Bulk import (SNZ): SEW RZ5 to Pulborough											
Southern Water											
A transfer between Tilmore and Hardham (possible gravity transfer from Tilmore to Hardham).											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	0	<p>The following SSSI's are within 1km of the option: Fyning Moor (0.52km, 100% favourable), Iping Common (0.52km, 40% favourable, 60% unfavourable - recovering), Woolbeding and Pound Commons (0.64km, 60% unfavourable – recovering, 40% not recorded) and Upper Arun (0.42km, 100% unfavourable – recovering). The Option would also cross SSSI Impact Risk Zones associated with the Wealden Edge Hangers, Rake Hanger, Fyning Moor, Woolbeding and Pound Commons, Iping Common, Northpark Copse to Snapelands Copse, Ambersham Common, Lavington Common, Burton Park, Coates Castle, and Upper Arun SSSI's, including areas where all planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures, and pipeline development, have been highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>There are no National Nature Reserves within 1km of the option.</p> <p>No adverse effects are expected on MCZ's due to a lack of pathways during operation, and where pathways are present during construction effects are almost certainly avoidable with established measure / normal best practice.</p> <p>The option would cross 2 areas of Ancient Woodland and would be situated immediately adjacent to a further 15.</p> <p>Iping Common and Rotherlands LNRs are within 500m of the proposed pipeline. Arun Valley SAC and East Hampshire Hangers SAC are within 2km of pipeline. No direct impacts but there may be significant disturbance effects on important species during construction.</p> <p>The pipeline intersects areas of priority habitat including coastal and floodplain grazing marsh, deciduous woodland and good quality semi-improved grassland. There will be direct impacts on these areas during construction of pipeline with potential to affect priority species.</p> <p>The HRA screening (2025) screened in Arun Valley Ramsar/ SAC/SPA, The Mens SAC, Ebernoe Common SAC, and Singleton and Cocking Tunnels SAC for construction. The HRA screening concludes environmental changes associated with construction only but can be reliably</p>	<p>Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual effects to remain as removal of priority species likely. Future design will need to undertake ecological surveys. HRA ToLS LSE for Arun Valley Ramsar (1.9km east of proposed option), the Arun Valley SPA (1.9km east of proposed option) and the Arun Valley SAC (1.9km east of proposed option) sites are considered to be mitigatable through use of best practice measures such as a robust CEMP, wet cutting/crushing and vacuum drilling and minimisation of NOX emissions.</p> <p>HRA screening identified that significant effects are avoidable with established measures/normal best practice at Arun Valley SPA, SAC and Ramsar, The Mens SAC, Ebernoe Common SAC and Singleton and Cocking Tunnels SAC, although these must be accounted for at AA.</p> <p>The 2025 HRA undertook AA for the above sites. It found that potential effects can be reliably avoided with established project-level measures</p>	0	--	0	0

	Reduce vulnerability to climate change risks and hazards	0	0	0	0	No effect anticipated. The option is not anticipated to have a significant effect on water levels as such is not likely to affect the resilience to climate change.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	---	0	0	The option is in the Wealden Greensand NCA and South Downs National Park. There will be significant negative effects during construction likely as excavation will be required for the transfer pipeline.	Best practice measures to be implemented to minimise effects during construction although temporary effects during construction may remain. Land reinstated upon completion so no residual effects likely to remain during operation.	0	--	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	Pipeline intersects Cowdray House Grade II* Registered Park and Garden), two conservation areas and a Grade II listed building (Ambersham Bridge). The pipeline is aligned along the A272 for much of its route through Cowdray House RPG. There are numerous listed buildings and scheduled monuments within 500m of the proposed pipeline. Construction may affect the setting of these historic assets; however, this is likely to be temporary as the pipeline will be buried. Excavation will be required during construction, which may impact buried archaeology.	Pipeline route alignment or use of trenchless techniques to avoid direct impacts on historic assets. Best practice mitigation measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	A golf course would be directly impacted during construction. Within 500m of proposed pipeline there are six allotments, four cemeteries, a nursing home, four sports facilities and seven schools. No direct land take but there is likely to be disturbance effects during construction of pipeline. Option is with in areas of IMD decile 6 and 7.	Pipeline alignment to avoid golf course where possible. Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction and land will be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	--	0	0	The option lies within South Downs National Park. The option crosses watercourses and habitat areas/woodland that could be used for recreation, therefore there may be temporary effects on recreation, angling and other water-based recreation during the construction phase. There may be minimal and temporary disturbance on users of footpaths and other public rights of way during the construction phase. Pipeline will be buried so operational effects unlikely.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. Direct land take of recreational sites to be avoided where possible and land to be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials. Waste will be produced during excavation for pipeline.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0

	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option intersects a railway line and major roads and is aligned along major roads for part of its length. It is likely that there will be disturbance effects during construction.	Best practice mitigation measures including a Traffic Management Plan will likely be implemented to minimise effects during construction and roads and cycle routes will be reinstated above the pipeline. However, minor and temporary effects are likely to still occur. Directional drilling under the railway and major roads is likely to be required.	0	-	0	0
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Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)											
Southern Water											
The proposed scheme involves both borehole rehab and work to improve the network.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					<p>The Wealden Heaths SPA and Woolmer Forest SAC are approx. 5 – 7km (respectively) from the boreholes, and support some GWDTEs; however, these designated sites are separated from the boreholes by the River Rother, and are at a significantly greater elevation. The GWDTEs are also not typically supported by deep groundwater from aquifers. Modelling currently being undertaken for this option (following from WRMP19) excludes these designated sites for these reasons (i.e. there is no reasonable pathway).</p>					
						<p>There is potential for in combination effects with other WRMP24 options including Groundwater (SNZ): Reinstatement West Chiltington (3.1Ml/d), Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d) and Groundwater (SNZ): New borehole at Petworth (4Ml/d) as these will cumulatively have a potentially notable effect on the lowest flows within the River Arun. Adverse effects are not considered unavoidable as mitigation measures are likely available for any flow impacts, and the largest abstraction will not be required until 2058, with Petworth not required until 2031, during which time to identify alternative options is available.</p> <p>There are no SSSI's situated within 1km of the option. However, the option would be situated within the SSSI Impact Risk Zones associated with the Fyning Moor and Rake Hanger SSSI's, where any discharge of water or liquid waste of more than 5m³/day to ground (i.e. to seep away) or to surface water, such as a beck or stream, has been highlighted as being a risk to the sensitive features for which the SSSI's are notified.</p> <p>There are no National Nature Reserves within 1km of the option. No adverse effects on Marine Conservation Zones are expected. The option would not cross, or be situated immediately adjacent to, any Ancient Woodlands.</p> <p>Construction phase involves minor works to an existing borehole and the installation of new pumps on a distribution main. As such, there is a negligible risk of introducing or spreading terrestrial INNS. During operation, water abstracted from the recommissioned borehole would be treated prior to distribution so there would be no risk of spreading aquatic INNS.</p> <p>The HRA screening (2025) screens in the Arun Valley SAC/Ramsar/SPA for operation only. No European sites or features are expected to be exposed to the environmental changes associated with construction irrespective of any</p>	<p>Any flow impacts in combination with other WRMP24 options can likely be mitigated.</p>				

					<p>mitigation, based on the distance to the sites and effect pathways. Operation will be within the terms of the existing licence, but will increase abstraction over recent actuals. The wetland features of the Arun Valley SAC, Arun Valley SPA and Arun Valley Ramsar may be affected if the abstraction affects flows in the River Rother (hence the River Arun as it passes the European sites) although the small scale of the increase in abstraction, the distance downstream, and the characteristics of the relationship between the River Arun and the European sites are likely to moderate any effects (albeit that it is reasonable to consider this through appropriate assessment, alone and in combination).</p> <p>The Wealden Heaths SPA and Woolmer Forest SAC are approx. 5 – 7km (respectively) from the boreholes, and support some groundwater dependent terrestrial ecosystems (GWDTEs); however, these designated sites are separated from the boreholes by the River Rother, and are at a significantly greater elevation. The GWDTEs (essentially, habitats associated with peatlands and impeded drainage) are also not typically supported by deep groundwater from aquifers. Modelling currently being undertaken for this option (following from WRMP19) excludes these designated sites for these reasons (i.e. there is no reasonable pathway). Note that the 2019 HRA concluded that this option would have no significant effects on any European sites, alone or in combination.</p> <p>The HRA AA (2025) indicated that the effects of the abstraction in these sites ‘alone’ will be very limited, and not adversely affect the integrity of the site; this is principally because:</p> <ul style="list-style-type: none">• the effect of the abstraction on flows in the River Arun would be nominal (less than 1% at all except the lowest flows), and only if it is assumed that the entirety of the abstraction is expressed in river flows; and• although water from the River Arun enters the Arun valley sites, they are not understood to be fundamentally reliant on flooding (etc.) from the River Arun for maintenance of favourable condition for a range of reasons, including the role played by active water level management within the site and inputs of freshwater water from other sources (this is consistent with the position from the Pulborough Environmental WINEP investigations). <p>There is potential for in combination effects with other WRMP24 options including Groundwater (SNZ): Reinstatement West Chiltington (3.1Ml/d), Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d) and Groundwater (SNZ): New borehole at Petworth (4Ml/d) as these will cumulatively have a potentially notable effect on the lowest flows within the River Arun. Adverse effects are not considered unavoidable as mitigation measures are likely available for any flow impacts, and the largest abstraction will not be required until 2058, with</p>				
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						Petworth not required until 2031, during which time to identify alternative options is available.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>The borehole is situated within Grade 3 agricultural land, however within an existing site, therefore no land take would be required and negative impacts on soil are not expected.</p> <p>There are no historic landfill sites within 500m of the site.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>The option is not situated within Flood Zone 2 or 3.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>The potential for adverse construction related effects on water quality will be managed by good practice construction methods.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Western Rother Durford, Hammer Stream (W. Sussex), Western Rother and Lower Greensand Arun & Western Streams waterbodies.</p> <p>The WFD assessment highlights that the Arun and Western Streams ALS has water available at AP3 (Upper Rother) and AP1 (Lower Rother) at Q30, restricted water available at Q50, and no water available at Q70 or Q95. Downstream, AP11 (Arun Total (Tidal)) may have water available because the upstream catchment is discharge rich (including the Stor). There is restricted water available in the Arun & Western Streams Greensand.</p> <p>The WFD assessment highlights that SWS are currently undertaking a WINEP investigation to develop the Hardham groundwater model (which covers the Western Rother catchment including Rogate) and assess potential impacts of abstraction on rivers and designated sites. The scope of the investigation includes potential impacts from Rogate on flows in the Western Rother and Hammer Stream, and potential impacts on Fyning Moor SSSI.</p> <p>Until the WINEP investigation concludes, it must be assumed that impacts on dependent surface waters or GWDTEs are possible. This is also in line with the ALS current conclusion that there is restricted water available in the Upper Rother and Lower Rother.</p>	N/A	0	0	0	--

	Deliver reliable and resilient water supplies	0	0	+	0	The option would provide an additional 1.96 Ml/d through additional abstraction, resulting in a minor positive impact on water supply.	Monitor groundwater levels.	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	The option is not within an AQMA nor are there any within 2km. Construction would be small scale is unlikely to have any impact on air quality. Emissions during operation, e.g. from maintenance vehicles, are also unlikely to be of sufficient magnitude to have a negative impact.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Construction of this option would result in 1179 tCO2e embodied carbon, causing a minor negative effect on carbon emissions. Operation of this option would result in emission of approximately 0.338 tCO2e per annum, resulting in a very minor negative effect on this objective.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	No effect anticipated. The option is not anticipated to have a significant effect on water levels and as such is not likely to affect resilience to climate change.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The option is situated within the South Downs National Park. As construction would largely take place on an existing site, involving recommissioning of an existing borehole and construction of minor infrastructure, minor adverse impacts are expected during construction. No impacts are expected during operation.	Ground will be reinstated where possible, Measures to reduce the visual impact during construction e.g. screening could be implemented, however residual effects remain.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The option does not intersect any designated heritage assets. There are however, three listed buildings to the east of the option, within approximately 500m, whose setting may be impacted during construction, for example by vehicles accessing the site and noise disturbance.	Best practice mitigation measures to be implemented to minimise setting effects during construction. Access routes to the site could be planned so as to minimise disruption to historic assets. Measures to reduce the visual impact during construction e.g. screening could be implemented, however residual effects remain.	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	+	0	<p>The construction phase would generate HGV movements, noise, dust, and vibration. There are no significant nearby residential receptors, however there are several businesses nearby who may be disturbed during the construction phase. Considering the scale of the construction activities, effects after mitigation would be negligible.</p> <p>In operation, the scheme would have a minor beneficial effect on human health and well-being through delivering additional deployable output of 1.6 MI/d.</p>	Access routes to the site could be planned so as to minimise disruption to local businesses and residents.	0	0	+	0
	Maintain and enhance tourism and recreation	0	0	0	0	<p>The majority of construction activity would be within an existing site and would generate a negligible increase in vehicle movements. However, construction of the new pumps on the distribution mains may cause short-term adverse effects on recreation by disrupting PROWs. Overall, no adverse or beneficial impacts are assessed during construction or operation.</p>	N/A	0	0	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	<p>Minor new infrastructure is required for the option which will use materials and generate waste, as will recommissioning of the borehole. A small amount of energy will be required for pumping during operation, though this is not expected to lead to any adverse impacts.</p>	<p>Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.</p>	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	<p>The option is likely to disrupt transport infrastructure during construction, though effects are expected to be minor and temporary as only minor roads could be blocked, however it could cause access issues to local businesses and residents.</p>	<p>Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.</p>	0	-	0	0

Groundwater (SNZ): Reinstate West Chiltonington (3.1MI/d)											
Southern Water											
The proposed scheme is to return an existing SWS groundwater site into supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	-	<p>The HRA screening suggested that theoretical effect pathways exist for the Arun Valley SAC / SPA / Ramsar if abstraction from the boreholes impacts flows in the River Stor (hence the River Arun where it is hydrologically connected to the designated sites), and that this pathway should be examined through ‘appropriate assessment’.</p> <p>The appropriate assessment indicated that the effects of the abstraction in these sites ‘alone’ will be negligible, and not adversely affect the integrity of the site; this is principally because:</p> <ul style="list-style-type: none">it is not considered possible for the abstraction to directly influence spring flows within the European sites and hence GWDTEs.the effect of the abstraction on flows in the River Arun would be nominal (less than 1% at all except the lowest flows), and only if it is assumed that the entirety of the abstraction is expressed in river flows;although water from the River Arun enters the Arun valley sites, they are not understood to be fundamentally reliant on flooding (etc.) from the River Arun for maintenance of favourable condition for a range of reasons, including the role played by active water level management within the site and inputs of freshwater water from other sources (this is consistent with the position from the Hardham Basin WINEP investigations); and there does not appear to be substantive connectivity between the River Stor and the designated sites (no sluices are noted in this section of the site based on the Hardham Basin investigations). <p>There is potential for in combination effects with other WRMP24 options including Groundwater (SNZ): Petersfield Refurbishment (1.6MI/D), Recycling (SNZ): Horsham with storage at Pulborough (6.8MI/d) and Groundwater (SNZ): New borehole at Petworth (4MI/d) as these will cumulatively have a potentially notable effect on the lowest flows within the River Arun. Adverse effects are not considered unavoidable as mitigation measures are likely available for any flow impacts,</p>	Any flow impacts in combination with other WRMP24 options can likely be mitigated.	0	0	0	-

						<p>and the largest abstraction will not be required until 2058, with Petworth not required until 2031, during which time to identify alternative options is available.</p> <p>There are no SSSI's situated within 1km of the option. However, the option would be situated within the SSSI Impact Risk Zones associated with the Hurston Warren SSSI, where any discharge of water or liquid waste of more than 5m³/day to ground (i.e. to seep away) or to surface water, such as a beck or stream, has been highlighted as being a risk to the sensitive features for which the SSSI's are notified.</p> <p>There are no National Nature Reserves within 1km of the option.</p> <p>No adverse effects on marine conservation zones are expected.</p> <p>The option would not cross, or be situated adjacent to, any areas of Ancient Woodland.</p> <p>Scheme construction would take place within an existing Southern Water existing site and with the standard best practice and mitigation measures negligible adverse effects on non-designated habitats is anticipated.</p> <p>Construction phase involves the installation of a borehole, a new pressure filtration plant and the decommissioning of an RGF plant. This construction works would be constrained to an existing site and given appropriate mitigation measures, there would be a negligible risk of introducing or spreading terrestrial INNS.</p> <p>During operation, water abstracted from the recommissioned borehole would be treated prior to distribution so there would be no risk of spreading aquatic INNS.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>The borehole is situated within Grade 2/3 agricultural land, however within an existing site, therefore no land take would be required and negative impacts on soil are not expected.</p> <p>There are no historic landfill sites within 500m of the site.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>The option is not situated within Flood Zone 2 or 3.</p>	N/A	0	0	0	0

Protect and enhance the quality of the water environment and water resources						<p>The potential for adverse construction related effects on water quality will be managed by good practice construction methods.</p>					
						<p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Stor, Adur (Lancing Brook) and Lower Greensand Arun & Western Streams waterbodies.</p>					
						<p>The WFD assessment highlights that the Arun and Western Streams ALS (June 2022) has restricted water available in the Chilt water body. Downstream, AP11 (Arun Total (Tidal)) may have water available because the upstream catchment is discharge rich (including the Stor). There is restricted water available in the Arun & Western Streams Greensand, and within that, no water available within the Hardham GWMU. The lack of water availability in the Hardham GWMU is because of potential impacts on designated sites including Arun Valley SAC and constituent SSSIs including Pulborough Brooks.</p>					
						<p>SWS are currently undertaking a WINEP investigation to develop the Hardham groundwater model and assess potential impacts of abstraction on rivers and designated sites. The scope of the investigation includes potential impacts of Smock Alley on flows in the Chilt and downstream and potential impacts on springs at the head of the Lancing Brook.</p>	Best practice construction measures will likely be implemented, however possibility for impacts to remain.				
						<p>As the Stor catchment is identified as being discharge rich in the ALS, it is assumed that any abstraction impact would have only a minor impact on flows, and is unlikely to result in deterioration of any biological elements. However, it is possible that a reduction in flows could impede improvements to water quality. This is a precautionary conclusion until the Hardham WINEP investigations conclude and can provide quantified impacts on river flows.</p>					
						<p>The Adur and Ouse ALS (2019) shows the Lancing Brook and downstream reaches of the Adur as being discharge rich: this is driven predominantly by the Eastern branch of the Adur, with the Western Adur (including Lancing Brook) having "limited abstraction and natural river flows are enough to ensure there is an excess of water above the minimum required by the environment". However, this is assumed not to include the conceptualisation being considered as part of the Hardham project, as described above.</p>					
	0	-	0	--				0	0	0	--

						Until the WINEP investigation concludes, it must be assumed that impacts on dependent surface waters are possible. This is also in line with the ALS current conclusion that there is restricted water available in the Lower Rother. Until the investigation has concluded it is assumed on a precautionary basis, that some impact on flows in Lancing Brook could also be possible, and that those flow impacts could potentially impact on biological and/or phys-chem elements.					
	Deliver reliable and resilient water supplies	0	0	+	0	The option would provide 3.12 Ml/d through additional abstraction, having a minor positive effect on the reliability and resilience of water supply during operation.	Monitor groundwater levels and river flows.	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	Scheme construction would be small scale, on an existing site, and the increase in vehicle movements would have little effect on local air quality. There are no AQMAs in proximity to the site. Adverse effects during operation, such as those caused by emissions from maintenance vehicles, are anticipated to be negligible.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	During construction the scheme will generate a minor increase in GHG emissions from construction equipment and the assumed medium magnitude of vehicles. The power requirement for the scheme to pump 3.1Ml/d would be associated with a minor increase in GHG emissions. Carbon dioxide emissions during operation of the proposed scheme is estimated to be approximately 512 t CO2e/year.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	No effect anticipated. The option is not anticipated to have a significant effect on water levels and as such is not likely to affect resilience to climate change.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	-	The following National Park is located within 5km of the option: South Downs (1.2km). During construction, there may be visual impacts to the setting of this designated landscape. The option involves the installation of a borehole, a new pressure filtration plant and the decommissioning of an RGF plant on an existing site. New elements would be suitably housed and in keeping with the existing structures so would have little effect on the landscape setting of the surrounding area. In operation, due to the uncertainty regarding effects to flows and levels to the River Chilt there is a	Ground will be reinstated where possible, Measures to reduce the visual impact during construction e.g. screening could be implemented, however residual effects remain.	0	-	0	-

						low risk of adverse effects to visual amenity in non-designated landscapes.					
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There is one listed building within 500m of the option, the Grade II listed Old Haglands. The setting of this may be impacted during construction, for example by vehicles accessing the site and noise disturbance.	Best practice mitigation measures to be implemented to minimise setting effects during construction. Access routes to the site could be planned so as to minimise disruption to historic assets. Measures to reduce the visual impact during construction e.g. screening could be implemented, however residual effects remain.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	+	0	The construction phase would generate HGV movements, noise, dust, and vibration. This may have minor negative impacts on residents of nearby West Chiltington Common and Abingworth. In operation, the scheme would have a minor beneficial effect on human health and well-being through delivering additional deployable output of 3.1 MI/d.	Access routes to the site could be planned so as to minimise disruption to local businesses and residents.	0	-	+	0
	Maintain and enhance tourism and recreation	0	-	0	0	Construction activity may cause access issues to some recreational facilities in West Chiltington Common, such as West Chiltington Tennis Club, Skatepark and Golf Course. Overall, no adverse or beneficial impacts are assessed during construction or operation.	Implement best practice during construction to minimise effects, however residual effects are likely to remain.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Minor new infrastructure is required for the option which will use materials and generate waste, as will recommissioning of the borehole. A small amount of energy will be required for pumping during operation, though this is not expected to lead to any adverse impacts.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The option is likely to disrupt transport infrastructure during construction, though effects are expected to be minor and temporary as only minor roads could be blocked, however it could cause access issues to local businesses and residents.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

1.3. SUSSEX WORTHING (SWZ)

Desalination (SWZ): Tidal River Arun (10MI/d)
Southern Water
This option proposes a desalination plant to treat seawater abstracted off the coast near Littlehampton to supply treated water to the Sussex Worthing WRZ. It is assumed that the water could be used during drought conditions to meet demand in Sussex Worthing WRZ. There is bi-directional transfer between Sussex Worthing WRZ and Sussex North WRZ which means this option could have result in additional benefit to Sussex North WRZ. This transfer would likely require additional connectivity between Perry Hill WSR and Tennants Hills WSR. An investigation in AMP4 indicated that land adjacent to Ford WwTW showed the greatest potential for a new desalination site because of the existing land use, the availability of services (access roads, power, etc.). Development in this area is progressing rapidly and land allocation for the site would need to be secured within the local plan to ensure its available when the scheme is needed.

SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	--	<p>The following SSSIs are located within 1km of the option: Arundel Park SSSI at 0.98km from the option (14.29% in favourable condition, 14.29% in unfavourable – recovering condition, 14.29% in unfavourable – declining condition, 14.29% partially destroyed, 42.86% not recorded).</p> <p>The option would also cross the Arun Banks SSSI and Climping Beach SSSI impact risk zone where infrastructure (pipeline) development is highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>The option is located adjacent to one area of ancient woodland. There may be potential for effects from dust, noise in the construction phase.</p> <p>Brine discharge from the desalination plant during operation may negatively impact the immediate marine environment.</p> <p>The Kingsmere MCZ lies 2.9km to the south east of the option (outfall). The MCZ has a complex mosaic of habitats that are particularly important to Black seabream, a fish species that is also protected by this site. Desalination discharges have the potential for saline plumes, dependent on water mixing/tides and flows etc. It is considered that there is likely to be suitable mitigation available to ensure that any residual negative effects are not major.</p> <p>The HRA screening (2025) screened in the Solent and Dorset Coast SPA for both construction and operation and Arun Valley SPA/Ramsar for construction effects only. The screening concludes that environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake (no European sites / features likely to be exposed here) and the outfall which will be located offshore in the English Channel (where brine from the desalination process will be discharged).</p>	<p>Best practicable means during construction, ensure no impacts on woodland where possible. HRA screening identified uncertain impacts on the Solent and Dorset Coast SPA. Due to the scope for a saline plume, or alterations to salinity which will affect the designated features of the proposed SPA, uncertain effects cannot be mitigated at this stage, HRA AA required.</p> <p>HRA screening (2025) identified that significant effects can be avoided with established measures at Arun Valley SPA and Ramsar, although these must be accounted for at AA.</p> <p>The 2025 HRA AA found that for Arun Valley SPA/Ramsar adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects. For the Solent and Dorset Coast SPA the AA found that construction effects are avoidable with normal measures.</p> <p>The outfall and discharge should be designed to reduce the potential for likely significant effects and incorporate suitable technology where relevant. This could include relocating the outfall location or seeking to dilute the brine before discharge.</p>	0	--	0	--

						<p>The HRA AA (2025) concluded no adverse effects for these sites during operation. For the Arun Valley SPA/Ramsar, adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects. For the Solent and Dorset Coast SPA, the likely location of the discharge is located in the English Channel in a high-dispersion environment, over 4km from the boundary of the site; as the site was recently designated to cover those foraging areas critical for breeding terns associated with the Solent harbour sites, it is reasonable to conclude that (a) the boundary of the site accurately reflects the core areas of functional habitat associated with the breeding sites and (b) that areas outside this boundary do not provide core areas of feeding habitat. As a result, adverse effects from operation would not be expected. Construction effects are avoidable with normal measures.</p> <p>Low INNS construction phase risk. Moderate operational phase risk via potential INNS transfers through pipe leakage.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The desalination plant is to be located on primarily ALC grade 1, permanent loss of soil and potential impacts on soil quality from construction. Historic landfill site immediately adjacent to plant therefore potential for contamination.	Best practice techniques likely to be implemented for construction work in landfill.	0	--	0	0
Water	Increase resilience and reduce flood risk	0	-	0	-	The option is located in Flood Zone 1 but there are areas of Flood Zones 2 and 3 adjacent to the site which may have an impact on construction and operation of the plant.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>The option will require abstraction of brackish sea water during operation with potential to deteriorate water quality/flow. Option located on WFD Ground water; Littlehampton Anticline West and within close proximity to Surface water.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Sussex coastal waterbody.</p> <p>The WFD assessment highlights that the discharge of hypersaline water could impact on water quality and affect habitats for biological parameters. It is noted that updates to this option have moved the proposed discharge so that it would be located outside of this WFD water body. However, until modelling is complete, compliance cannot be confirmed with certainty. Water quality modelling will be required.</p>	Best practicable means to prevent potential impacts on surface water receptors during construction. Ensure no deterioration of water quality associated with abstraction through monitoring during operation.	0	-	0	--
	Deliver reliable and resilient water supplies	0	0	+	0	Option will provide a positive impact on water supply resilience through desalination plant on operation, particularly during drought conditions. Bi-directional transfer between Sussex Worthing WRZ and Sussex North WRZ which means this option could have result in additional benefit (10MI/d) to Sussex North WRZ.	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	-	0	-	There will be an increase in emissions during construction of plant. Desalination plant likely to produce a significant amount of emissions during operation.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	-
Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	--	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has moderate construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The option may have a positive effect on the resilience of the local environment to climate change as it will reduce the amount of water required from the freshwater environment by utilising brackish waters.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	<p>The option includes construction of an underground pipeline within the South Downs National Park. There are likely to be impacts on the landscape during construction likely as excavation will be required for the transfer pipeline. However, operational impacts likely to be minimal.</p> <p>The option area intersects South Coast Plain NLCA, there will be impact on visual amenity, due the construction phase and the permanent above ground infrastructure (linked to Ford WwTw) will result in operational effects. The site was determined to be appropriate given current land-uses.</p>	Landscape screening and best practice mitigation measures will likely be implemented to minimise effects during construction and operation. Opportunity for enhancement of visual amenity. However, minor and temporary effects are likely to still occur.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are several listed buildings within 500m of proposed pipeline and two conservation area within 2km. Excavation will be required during construction, there may be impacts on archaeological artifacts.	Best practice construction methods to minimise impacts on the setting of historic assets. Archaeological watching brief may be required.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option is located within IMD decile 5. There are two playing fields and a church located within 500m of option There may be minor and temporary disturbances to the community and users of these community facilities during construction.	Best practicable means to minimise disturbance to sensitive receptors i.e. noise management, however some disruption likely to remain.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	Due to the location this, option is unlikely to have negative or positive effects on tourism. However, there is potential for minor impacts on playing fields and there may be diversions to public rights of way during the construction phase.	N/A	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option which will use materials and generate waste, however, there may be a possibility for the plant to use Ford's existing long-sea outfall reducing materials required. Brine waste will be produced during desalination.	Seek opportunity to implement sustainable design measures, such as reuse and recycling of materials to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The desalination Plant is to be located within 2km of one major road (A 259) potential for increased risk of congestion during construction of plant.	Best practicable means to manage traffic through TMP.	0	-	0	0

Desalination (SWZ): Tidal River Arun (20MI/d)
Southern Water
This option proposes a desalination plant to treat seawater abstracted off the coast near Littlehampton to supply treated water to the Sussex Worthing WRZ; however, is for a higher yield.

SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	--	<p>The following SSSIs are located within 1km of the option: Arundel Park SSSI at 0.98km from the option (14.29% in favourable condition, 14.29% in unfavourable – recovering condition, 14.29% in unfavourable – declining condition, 14.29% partially destroyed, 42.86% not recorded).</p> <p>The option would also cross the Arun Banks SSSI and Climping Beach SSSI impact risk zone where infrastructure (pipeline) development is highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>Brine discharge from the desalination plant during operation may negatively impact the immediate marine environment.</p> <p>The Kingmere MCZ lies 2.9km to the south east of the option (outfall). The MCZ has a complex mosaic of habitats that are particularly important to Black seabream, a fish species that is also protected by this site. Desalination discharges have the potential for saline plumes, dependent on water mixing/tides and flows etc. It is considered that there is likely to be suitable mitigation available to ensure that any residual negative effects are not major.</p> <p>The HRA screening (2025) screened in the Solent and Dorset Coast SPA for both construction and operation and Arun Valley SPA/Ramsar for construction effects only. The screening concludes that environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake (no European sites / features likely to be exposed here) and the outfall which will be located offshore in the English Channel (where brine from the desalination process will be discharged).</p> <p>The HRA AA (2025) concluded no adverse effects for these sites during operation. For the Arun Valley SPA/Ramsar, adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects. For the Solent and Dorset Coast SPA, the likely location of the discharge is located in the English Channel in a high-dispersion environment, over 4km from the boundary of the site; as the site was recently designated to cover those foraging areas critical for breeding terns associated with the Solent harbour sites, it is reasonable to conclude that (a) the boundary of the site accurately reflects the core areas of functional habitat associated with the breeding sites and (b) that areas outside this boundary do</p>	<p>Best practicable means during construction, ensure no impacts on woodland where possible. HRA screening identified uncertain impacts on the Solent and Dorset Coast SPA. Due to the scope for a saline plume, or alterations to salinity which will affect the designated features of the proposed SPA, uncertain effects cannot be mitigated at this stage, HRA AA required.</p> <p>HRA screening (2025) identified that significant effects can be avoided with established measures at Arun Valley SPA and Ramsar, although these must be accounted for at AA.</p> <p>The 2025 HRA AA found that for Arun Valley SPA/Ramsar adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects. For the Solent and Dorset Coast SPA the AA found that construction effects are avoidable with normal measures.</p> <p>The outfall and discharge should be designed to reduce the potential for likely significant effects and incorporate suitable technology where relevant. This could include relocating the outfall location or seeking to dilute the brine before discharge.</p>	0	--	0	--

						not provide core areas of feeding habitat. As a result, adverse effects from operation would not be expected. Construction effects are avoidable with normal measures.					
						Low INNS construction phase risk. Moderate operational phase risk via potential INNS transfer through pipe bursts.					
						The option is located adjacent to one area of ancient woodland. There may be potential for effects from dust, noise in the construction phase.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The desalination plant is to be located on primarily ALC grade 1, permanent loss of soil and potential impacts on soil quality from construction. Historic landfill site immediately adjacent to plant therefore potential for contamination.	Best practice techniques likely to be implemented for construction work in landfill.	0	--	0	0
Water	Increase resilience and reduce flood risk	0	-	0	-	The option is located in Flood Zone 1 but there are areas of Flood Zones 2 and 3 adjacent to the site which may have an impact on construction and operation of the plant.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>The option will require abstraction of brackish sea water during operation with potential to deteriorate water quality/flow. Option located on WFD Ground water; Littlehampton Anticline West and within close proximity to Surface water.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Sussex coastal waterbody.</p> <p>The WFD assessment highlights that the discharge of hypersaline water could impact on water quality and affect habitats for biological parameters. It is noted that updates to this option have moved the proposed discharge so that it would be located outside of this WFD water body. However, until modelling is complete, compliance cannot be confirmed with certainty. Water quality modelling will be required.</p>	Best practicable means to prevent potential impacts on surface water receptors during construction. Ensure no deterioration of water quality associated with abstraction through monitoring during operation.	0	-	0	--
	Deliver reliable and resilient water supplies	0	0	++	0	Option will provide a positive impact on water supply resilience through desalination plant on operation, particularly during drought conditions. Bi-directional transfer between Sussex Worthing WRZ and Sussex North WRZ which means this option could have result in additional benefit (20MI/d) to Sussex North WRZ.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	-	There will be an increase in emissions during construction of plant. Desalination plant likely to produce a significant amount of emissions during operation.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	-

Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	--	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has moderate construction and moderate operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The option may have a positive effect on the resilience of the local environment to climate change as it will reduce the amount of water required from the freshwater environment by utilising brackish waters.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	<p>The option includes construction of an underground pipeline within the South Downs National Park. There are likely to be impacts on the landscape during construction likely as excavation will be required for the transfer pipeline. However, operational impacts likely to be minimal.</p> <p>The option area intersects with the South Coast Plain NLCA, there will be impact on visual amenity, due the construction phase and the permanent above ground infrastructure (linked to Ford WwTW) will result in operational effects. The site was determined to be appropriate given current land-uses.</p>	Landscape screening and best practice mitigation measures will likely be implemented to minimise effects during construction and operation. Opportunity for enhancement of visual amenity. However, minor and temporary effects are likely to still occur.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are several listed buildings within 500m of proposed pipeline and two conservation area within 2km. Excavation will be required during construction, there may be impacts on archaeological artifacts.	Best practice construction methods to minimise impacts on the setting of historic assets. Archaeological watching brief may be required.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option is located within IMD decile 5. There are two playing fields and a church located within 500m of option There may be minor and temporary disturbances to the community and users of these community facilities during construction.	Best practicable means to minimise disturbance to sensitive receptors i.e. noise management, however some disruption likely to remain.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	Due to the location this, option is unlikely to have negative or positive effects on tourism. However, there is potential for minor impacts on playing fields and there may be diversions to public rights of way during the construction phase.	N/A	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option which will use materials and generate waste, however, there may be a possibility for the plant to use Ford's existing long-sea outfall reducing materials required. Brine waste will be produced during desalination.	Seek opportunity to implement sustainable design measures, such as reuse and recycling of materials to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The desalination Plant is to be located within 2km of one major road (A 259) potential for increased risk of congestion during construction of plant.	Best practicable means to manage traffic through TMP.	0	-	0	0

Desalination (SWZ): Tidal River Arun (20MI/d) Phase 2
Southern Water
This option proposes a second phase development of an additional 20MI/d desalination capacity to treat estuarine water from the tidal River Arun to supply treated water to the Sussex Worthing WRZ. This option is contingent on the first phase 10MI/d or 20MI/d desalination plant options (Aru10 or Aru20).

SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	--	<p>The following SSSIs are located within 1km of the option: Arundel Park SSSI at 0.98km from the option (14.29% in favourable condition, 14.29% in unfavourable – recovering condition, 14.29% in unfavourable – declining condition, 14.29% partially destroyed, 42.86% not recorded).</p> <p>The option would also cross the Arun Banks SSSI and Climping Beach SSSI impact risk zone where infrastructure (pipeline) development is highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>Brine discharge from the desalination plant during operation may negatively impact the immediate marine environment.</p> <p>The Kingmere MCZ lies 2.9km to the south east of the option (outfall). The MCZ has a complex mosaic of habitats that are particularly important to Black seabream, a fish species that is also protected by this site. Desalination discharges have the potential for saline plumes, dependent on water mixing/tides and flows etc. It is considered that there is likely to be suitable mitigation available to ensure that any residual negative effects are not major.</p> <p>The HRA screening (2025) screened in the Solent and Dorset Coast SPA for both construction and operation and Arun Valley SPA/Ramsar for construction effects only. The screening concludes that environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake (no European sites / features likely to be exposed here) and the outfall which will be located offshore in the English Channel (where brine from the desalination process will be discharged).</p> <p>The HRA AA (2025) concluded no adverse effects for these sites during operation. For the Arun Valley SPA/Ramsar, adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects. For the Solent and Dorset Coast SPA, the likely location of the discharge is located in the English Channel in a high-dispersion environment, over 4km from the boundary of the site; as the site was recently designated to cover those foraging areas critical for breeding terns associated with the Solent harbour sites, it is reasonable to conclude that (a) the boundary of the site accurately reflects the core areas of functional habitat associated</p>	<p>Best practicable means during construction, ensure no impacts on woodland where possible. HRA screening identified uncertain impacts on the Solent and Dorset Coast SPA. Due to the scope for a saline plume, or alterations to salinity which will affect the designated features of the proposed SPA, uncertain effects cannot be mitigated at this stage, HRA AA required.</p> <p>HRA screening (2025) identified that significant effects can be avoided with established measures at Arun Valley SPA and Ramsar, although these must be accounted for at AA.</p> <p>The 2025 HRA AA found that for Arun Valley SPA/Ramsar adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects. For the Solent and Dorset Coast SPA the AA found that construction effects are avoidable with normal measures.</p> <p>The outfall and discharge should be designed to reduce the potential for likely significant effects and incorporate suitable technology where relevant. This could include relocating the outfall location or seeking to dilute the brine before discharge.</p>	0	--	0	--

						with the breeding sites and (b) that areas outside this boundary do not provide core areas of feeding habitat. As a result, adverse effects from operation would not be expected. Construction effects are avoidable with normal measures.					
						Low INNS construction phase risk. Moderate operational phase risk via potential INNS transfers through pipe bursts.					
						The option is located adjacent to one area of ancient woodland. There may be potential for effects from dust, noise in the construction phase.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The desalination plant is to be located on primarily ALC grade 1, permanent loss of soil and potential impacts on soil quality from construction. Historic landfill site immediately adjacent to plant therefore potential for contamination.	Best practice techniques likely to be implemented for construction work in landfill.	0	--	0	0
Water	Increase resilience and reduce flood risk	0	-	0	-	The option is located in Flood Zone 1 but there are areas of Flood Zones 2 and 3 adjacent to the site which may have an impact on construction and operation of the plant.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>The option will require abstraction of brackish sea water during operation with potential to deteriorate water quality/flow. Option located on WFD Ground water; Littlehampton Anticline West and within close proximity to Surface water.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Sussex coastal waterbody.</p> <p>The WFD assessment highlights that the discharge of hypersaline water could impact on water quality and affect habitats for biological parameters. It is noted that updates to this option have moved the proposed discharge so that it would be located outside of this WFD water body. However, until modelling is complete, compliance cannot be confirmed with certainty. Water quality modelling will be required.</p>	Best practicable means to prevent potential impacts on surface water receptors during construction. Ensure no deterioration of water quality associated with abstraction through monitoring during operation.	0	-	0	--
	Deliver reliable and resilient water supplies	0	0	++	0	Option will provide a positive impact on water supply resilience through desalination plant on operation, particularly during drought conditions. Bi-directional transfer between Sussex Worthing WRZ and Sussex North WRZ which means this option could have result in additional benefit (a further 20Ml/d) to Sussex North WRZ.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	-	There will be an increase in emissions during construction of plant. Desalination plant likely to produce a significant amount of emissions during operation.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	-

Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	--	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has moderate construction and moderate operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The option may have a positive effect on the resilience of the local environment to climate change as it will reduce the amount of water required from the freshwater environment by utilising brackish waters.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	<p>The option includes construction of an underground pipeline within the South Downs National Park. There are likely to be impacts on the landscape during construction likely as excavation will be required for the transfer pipeline. However, operational impacts likely to be minimal.</p> <p>The option area intersects with the South Coast Plain NLCA, there will be impact on visual amenity, due the construction phase and the permanent above ground infrastructure (linked to Ford WwTW) will result in operational effects. The site was determined to be appropriate given current land-uses.</p>	Landscape screening and best practice mitigation measures will likely be implemented to minimise effects during construction and operation. Opportunity for enhancement of visual amenity. However, minor and temporary effects are likely to still occur.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are several listed buildings within 500m of proposed pipeline and two conservation area within 2km. Excavation will be required during construction, there may be impacts on archaeological artifacts.	Best practice construction methods to minimise impacts on the setting of historic assets. Archaeological watching brief may be required.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option is located within IMD decile 5. There are two playing fields and a church located within 500m of option There may be minor and temporary disturbances to the community and users of these community facilities during construction.	Best practicable means to minimise disturbance to sensitive receptors i.e. noise management, however some disruption likely to remain.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	Due to the location this, option is unlikely to have negative or positive effects on tourism. However, there is potential for minor impacts on playing fields and there may be diversions to public rights of way during the construction phase.	N/A	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option which will use materials and generate waste, however, there may be a possibility for the plant to use Ford's existing long-sea outfall reducing materials required. Brine waste will be produced during desalination.	Seek opportunity to implement sustainable design measures, such as reuse and recycling of materials to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The desalination Plant is to be located within 2km of one major road (A 259) potential for increased risk of congestion during construction of plant.	Best practicable means to manage traffic through TMP.	0	-	0	0

Drought option - demand side (SWZ): NEUBs											
Southern Water											
Non-essential use ban - SWZ WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water's sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.</p>	N/A	0	0	+	0
	Soil	0	0	0	-	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Minor adverse effect on soils management in dry weather.</p>	N/A	0	0	0	-
	Water	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Operation of the option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
Water	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water's sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand (2.55Ml/d) for water will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (SWZ): Reduce transfer to other commercial customers											
Southern Water											
Drought option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (by 0.07Ml/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been estimated for construction and operation at this stage.	N/A	0	0	0	0

	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought conditions, it is not resulting in the long-term resilience of the local environment.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Drought option - demand side (SWZ): TUBs											
Southern Water											
Temporary use bans - SWZ WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water’s sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought. The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand (1.6Ml/d) for water will result in reduced requirement for abstraction from</p>	N/A	0	0	+	0

						Southern Water's sources, helping to deliver reliable and resilient water supplies.					
Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the temporary use ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement	N/A	0	0	+	-

						for abstraction at Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.					
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Treatment capacity (SWZ): Pulborough winter transfer stage 1 (2Ml/d)											
Southern Water											
During the winter there is surplus surface water within the River Rother. This scheme would allow the surplus to be used at Pulborough WSW (within licence constraints) which in turn would allow coastal groundwater sources to be rested. This increase in groundwater can be utilised through new transfer mains from Sussex Worthing WRZ to Sussex Brighton WRZ via Shoreham WSW, providing the additional 2Ml/d of water to Brighton WRZ during the summer and autumn of a drought year. This is Phase 1, which is to provide a permanent sludge treatment facility at Pulborough WSW.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>The pipeline for the option is located within 1km of the option: Adur Estuary SSSI (0.31km from the option), condition of SSSI features – 66.67% unfavourable – declining condition, 33.33% not recorded). The option is separated from the option by a substantial road junction. No direct impacts are likely but there may be noise, disturbance effects during construction. A small section of the option would also be situated in the SSSI Impact Risk Zone associated with the Beeding Hill to Newtimber Hill SSSI, in an area where infrastructure development (pipeline) is highlighted as being a risk to the sensitive features for which the SSSI are notified.</p> <p>The pipeline intersects Benfield Hill and Mill Hill LNRs and is within 500m of Withdean & Westdene Woods LNR. The pipeline intersects woodland and Priority Habitat including deciduous woodland, good quality semi-improved grassland and lowland calcareous grassland. Ancient woodland within 1km but no direct effects are anticipated.</p> <p>The HRA screening (2025) identified no likely significant effects.</p> <p>There is not anticipated to be additional risk for the transfer / spread of INNS as a result of this option.</p>	<p>Best practice methods to be implemented to minimise disturbance effects and habitat loss including refining pipeline alignment to avoid woodland habitat, in particular deciduous woodland Priority Habitat. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys, and Ancient Woodland should be avoided during construction.</p>	0	-	0	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	<p>The option intersects predominantly grade 3 and grade 4 agricultural land, there is likely to be direct impacts on soil during construction phase as excavation will be required for laying of the pipeline. Option intersects a historic landfill site- potential risk of contamination during construction. The pipeline follows existing roads which may limit the impact therefore minor effects identified.</p>	<p>Ground will be reinstated therefore residual effects unlikely. Best practice methods for working in historic landfill sites.</p>	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	<p>The majority of the option is within Flood Zone 1 with the exception of one section, which passes through Flood Zones 2 and 3, and may have an impact on construction. Impacts on operation unlikely given the pipeline is buried. The pipeline is unlikely to increase the risk of flooding.</p>	<p>Measures to reduce the impact on flooding during the construction phase are likely to be implemented, to minimise risk of flooding.</p>	0	0	0	0

	Protect and enhance the quality of the water environment and water resources	0	--	+	0	The option enables resting of groundwater sources in the Brighton Block during winter and increase groundwater resilience during the summer and autumn of a drought year. Pipeline intersects WFD groundwater and SPZ1,2 and 3, potential for impacts on water quality during construction. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1). This is based on the understanding that this option is Phase 1 of the Pulborough Winter Transfer scheme, and only involves works and pipeline installation, with no changes to abstraction proposed for Phase 1.	Best practice construction measures will likely be implemented, however possibility for impacts to remain.	0	-	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	The option will result in a 2Ml/d increase in water supply and helps to create resilience within the network during drought.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	The option does not pass through any AQMAs although there are three to the south within 2km (Shoreham AQMA, Southwick AQMA and Brighton and Hove AQMA 1). Construction likely to have minor and temporary impact on air quality.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The option may increase the resilience of the supply network in periods of drought.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The option is within the South Downs National Park and South Downs NCA. Minor negative effects during construction likely as excavation will be required for the transfer pipeline. However, pipeline will be buried and ground will be reinstated so no operational effects identified.	Ground will be reinstated following pipeline construction therefore residual effects unlikely. Measures to reduce the visual impact during construction e.g. screening could be implemented,	0	-	0	0

							however residual effects likely to remain.				
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The option is within 500m of two conservation areas, a scheduled monument and several listed buildings. Construction may affect the setting of these historic assets; however, this is likely to be temporary and minimal. There is potential for the excavation of the pipeline to impact buried archaeology.	Best practice measures to be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The pipeline intersects a golf course and is within 500m of a hospital, schools, sports facilities, play spaces and a public park. There is likely to be minimal and temporary disturbance effects on the local community and users of these facilities during construction. IMD deciles along the pipeline route include 1, 9 and 7.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction and land will be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option is within the South Downs National Park. The pipeline intersects a golf course and there are several green spaces that may be used for recreation within 500m of option. The option also crosses habitat areas/woodland that could be used for recreation, therefore there may be some temporary effects on recreation during the construction phase. There may be temporary disturbance to users of a national cycle route, footpaths and other public rights of way during the construction phase.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction and land will be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline is in close proximity to one major road (A27) along its length and crosses it in two locations. The option also crosses a national cycle route. There is likely to be moderate and temporary impacts during the construction phase from disruption for users (e.g. road closures, diversions).	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still	0	-	0	0

						occur. Directional drilling under the A27 is likely to be required.				
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Interzonal transfer (SWZ-SBZ): Pulborough winter transfer stage 2 (4Ml/d)											
Southern Water											
During the winter there is surplus surface water within the River Rother. This scheme would allow the surplus to be used at Hardham WSW (within licence constraints) which in turn would allow coastal groundwater sources to be rested. This increase in groundwater can be utilised through new transfer mains from Tenants Hill to Patcham WSR via Shoreham WSW, providing the additional 2Ml/d of water to Brighton WRZ during the summer and autumn of a drought year.											
This is Phase 2, which is to provide a transfer from Pulborough surface water abstraction to Sussex Brighton WRZ (Shoreham WSR) to allow groundwater sources in SBZ to be rested.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	0	<p>The pipeline for the option passes through the Adur Estuary SSSI, condition of SSSI features – 66.67% unfavourable – declining condition, 33.33% not recorded). The site is GWDTE and there is therefore potential for direct effects. Cissbury Ring SSSI is within 1km of the option (0.85km) (100.00% unfavourable - recovering). There may some indirect impacts from noise and disturbance as habitat important for wintering, breeding and migrant birds.</p> <p>The option would also be partly situated in the SSSI Impact Risk Zone associated with the Beeding Hill to Newtimber Hill SSSI. However, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSI is notified in the area of the SSSI Impact Risk Zone(s) which the option is located crosses.</p> <p>Mill Hill LNR and Lancing Ring LNR are within 500m. The option is within a SSSI risk zone. No impacts on chalk rivers anticipated. There will likely be direct impacts on priority habitats and woodland, no impacts on ancient woodland.</p> <p>The HRA screening (2025) identified no likely significant effects.</p> <p>Moderate risk of transfer of INNS as the source water is likely to be free of INNS. Construction phase risk of INNS is considered to be moderate due to intersecting a SSSI.</p>	<p>Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. However, likely residual effects on designated sites. Future design will need to undertake ecology surveys.</p>	0	--	0	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The pipeline passes through Grade 2, Grade 3, non-agricultural and urban land. There is likely to be disturbance to these soils during construction works. The pipeline also passes through a historic landfill and contaminants may be disturbed during the works.	Land reinstated upon completion. Best practice construction measures to be implemented, however residual construction effects likely.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	Option predominately located within Flood Zone 1, however there is a large area of Flood Zones 2 and 3 on the pipeline route. This may have an effect on construction.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0

	Protect and enhance the quality of the water environment and water resources	0	--	+	0	There is potential for impact on water quality during construction given the pipeline crosses waterbodies, including main rivers. The pipeline is within SPZs and within Worthing chalk and Brighton Chalk Block WFD groundwater bodies. The option aims to utilise excess surface water from the River Rother to allow coastal groundwater bodies to be rested during winter. Positive effects have therefore been identified for operation. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice mitigation measures likely to be implemented during construction. However minor and temporary impacts may remain.	0	-	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	The option will help to increase the resilience of groundwater supplies by allowing them to recharge during the winter months. This will contribute to increased resilience during summer and autumn of a drought year, through an additional yield of 3Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	--	0	0	The pipeline passes through Worthing AQMA. There is likely to be impacts on air quality during the construction phase.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The option may have a positive effect on the resilience of the local environment as it allowing for the recharge of groundwater resources by utilising excess surface water from the River Rother during winter periods.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The pipeline passes through South Downs National Park and South Downs NCS. There is potential for impacts on landscape character and visual amenity during construction. There may be some upgrades to above ground infrastructure required, however this is likely to be minimal and therefore effects are not anticipated to be significant. Some residual minor effects are likely in the construction and operational phase.	Best practice measures will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Land reinstated upon completion.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The pipeline is within 500m of listed buildings and there are two scheduled monuments within 2000m. The construction phase may impact the setting of these historic assets, however this is likely to be	Best practice measures will likely be implemented to minimise setting effects during construction. Further	0	-	0	0

						minimal and temporary. The pipeline excavation may impact buried archaeology.	work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.				
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The pipeline passes through a school and there are additional schools, golf courses, playing fields, sports facilities, play spaces, churches and religious grounds within 500m of the pipeline route. There is likely to be minor and temporary disruption to the community and users of these community facilities during the construction phase. IMD deciles range from 3 to 10 along the pipeline route.	Best practice measures will likely be implemented to minimise disturbance during construction. However, moderate yet temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The pipeline intersects a national cycle route and is within 500m of play spaces, playing fields, golf course, and may also lead to the diversion of public rights of way. Recreation therefore has the potential to be affected during the construction phase, however this will be minor and temporary.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste during construction, including excavated materials.	Opportunity to implement sustainable design measures and reuse excavated material on site, to reduce impact.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline is within close proximity to a major road and intersects a national cycle route. Brighton City Airport is within close proximity to the pipeline route. There is likely to be moderate and temporary impacts during construction.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still remain.	0	-	0	0

Interzonal transfer (SNZ-SWZ): Pulborough to Worthing											
Southern Water											
Additional pipeline to provide extra capacity along the existing transfer route between Sussex North and Sussex Worthing											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	--	<p>The option is immediately adjacent to Parham Park SSSI (33.33% of features in unfavourable-recovering condition and 66.67% not recorded), GWDTE. Therefore, there is potential for direct effects through disturbance, dust and noise.</p> <p>The following SSSIs are located within 1km of the option: Pulborough Brooks SSSI at 0.36km from the option (90.00% in favourable condition, 10% not recorded) / GWDTE. Waltham Brooks SSSI at 0.86km from the option (85.71% in unfavourable – recovering condition and 14.29% in unfavourable declining condition). Amberley Wild Brooks SSSI at 0.25km from the option (15.38% in favourable condition, 23.08% in unfavourable – recovering condition, 7.69% in unfavourable -no change and 53.85% not recorded). Amberley Mount to Sullington Hill SSSI at 0.13km from the option (14.29% in favourable condition, 42.86% in unfavourable – recovering condition, 42.86% not recorded)/ GWDTE. Chantry Mill SSSI at 0.68km from the option (100% in favourable condition). Cissbury Ring SSSI at 0.48km from the option (100% unfavourable - recovering).</p> <p>The option would also be situated in the SSSI Impact Risk Zone associated with the Upper Arun SSSI and Chanctonbury Hill SSSI, including an area(s) where infrastructure development is highlighted as being a risk to the sensitive features for which the SSSI are notified.</p> <p>The option also intersects coastal and floodplain grazing marsh, deciduous woodland and lowland calcareous grassland priority habitat amongst others. Ancient woodland within 500m but no direct effects anticipated.</p> <p>Physical transfer of treated water between two locations (assumed currently unconnected). No INNS risk as treated water will be free from INNS). Construction is considered to be a low risk.</p> <p>The 2025 HRA screened in Arun Valley Ramsar, SPA and SAC and The Mens SAC for AA, as there are</p>	<p>Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys.</p> <p>HRA screening (2025) identified LSE for Arun Valley Ramsar, SPA and SAC which are considered partially mitigatable through use of construction best practice such as use of a robust CEMP. However, there is still a possibility of noise and visual disturbance for species which may use habitats near the pipeline's construction. Undertake HRA AA to address residual effects for Arun Valley Ramsar, SPA and SAC.</p> <p>The 2025 HRA AA included Arun Valley Ramsar, SPA and SAC and The Mens SAC. For these designated sites adverse effects can be reliably avoided with established project level measures.</p>	0	--	0	0

						environmental changes associated with construction only, and screened out Duncton to Bignor Escarpment SAC and Ebernoe Common SAC. The HRA AA (2025) concludes no adverse effects.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	Pipeline passes through predominately Grade 3 and Grade 4 agricultural land, however there is a small section of Grade 2 along the route. These soils are likely to be disturbed during construction. There are historic landfill sites within 500m, however no direct impacts anticipated.	Reinstate soil following construction.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	Pipeline predominately within FZ1, however it does pass through FZ2 and FZ3 which may impact construction. Operational effects not anticipated given the pipeline is buried.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The option lies within SPZ1/2 and intersects two WFD groundwater bodies. The option also intersects one WFD river waterbody and intersects nitrate vulnerable zones. There is potential for the construction phase to impact water quality. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Implement pollution prevention and control measures and ongoing water monitoring. Use of appropriate bedding material and directional drilling where possible to minimise disturbance.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	++	0	The option will increase transfer capacity (34.91Ml/d), therefore improving resilience of supplies.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	0	Construction will likely produce dust and other air pollution. The option does not pass through any AQMAs, but there are a number of AQMAs within 2000m (Horsham AQMA No1 and Worthing AQMA).	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-

	Reduce vulnerability to climate change risks and hazards	0	0	0	0	There is not anticipated to be any effects on the resilience of the natural environment as water levels are not likely to be significantly affected as a result of this option.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The option is located wholly within the South Downs National Park. The option is located within the Wealden Greensand National Landscape Character Area. Construction of the pipeline will likely cause some visual disturbance. The pipeline will be buried once operational.	Implement screening to minimise visual impact and reinstate to original landscape once pipeline is buried.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The option intersects one conservation area and the Parham Grade II Registered Park and Garden. There are also listed buildings and scheduled monuments within 500m. There is potential for the construction phase to impact the setting of the historic assets. The pipeline excavation as the potential to impact archaeology, if present.	Re-route the pipeline or utilise trenchless techniques to prevent direct impacts on the Registered Park and Garden. Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are churches and religious grounds and a school within 500m of the pipeline route. The option intersects a public park or garden, and a golf course. There is potential that the construction phase will disrupt the local community and users of these community facilities, however this is likely to be minor and temporary. IMD deciles range from 4 to 10 along the pipeline route.	Implement traffic management measures and best construction measures. Use directional drilling to minimise disturbance.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option intersects a public park or garden, a golf course, national trails, national cycle ways, and is also within the South Downs National Park. There is also potential that the construction phase will lead to the diversion of public rights of way. Minor negative effects have been identified.	Implement screening and provide appropriate trail diversions or space to pass the construction area safely.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Construction will require materials and resources. Waste will likely be generated, including excavated materials.	Source materials locally and reinstate dug materials where possible.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline intersects major roads, railways, national cycle route and national trails. There is likely to be moderate and temporary disruption during the construction phase.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary	0	-	0	0

						effects are likely to still occur.				
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Interzonal transfer (SBZ-SWZ): Brighton to Worthing											
Southern Water											
New bi-directional transfer between Sussex Worthing and Sussex Brighton Water Resource Zones.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>The following SSSIs are located within 1km of the option: Adur Estuary SSSI (350m), condition of SSSI features – 66.67% unfavourable – declining condition, 33.33% not recorded, Cissbury Ring SSSI (140m), 100% unfavourable - recovering.</p> <p>The option would also cross/be situated within the SSSI Impact Risk Zone associated with Beeding Hill to Newtimber Hill SSSI, however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSI is notified in the area of the SSSI Impact Risk Zone which the option is located within/crosses.</p> <p>Castle Hill SAC is located 2km to the South East with no direct effects predicted.</p> <p>The route crosses through Stanmer Park/Coldean LNR, a semi ancient woodland with beech, bluebells, coppice, chalk grassland.</p> <p>The route would also be situated within 0.5km of the following LNRs Lancing Ring LNR (0.08km), Mill Hill LNR (0.06km) and Benfield Hill LNR (0.45km).</p> <p>The option would be situated immediately adjacent to two areas of Ancient Woodland.</p> <p>HRA screening (2025) confirms no likely significant effects.</p>	Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual effects to remain as removal of priority species possible. Best practice to be implemented during construction to prevent the spread of INNS.	0	--	0	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	Option located on mainly grade 3 and 4 agricultural soil. Short-term negative effects are expected resulting from loss of top soil during construction phase. There are 4 historic landfill sites within 500m of option, small risk of contamination during construction.	Ground will be reinstated for pipeline therefore residual effects unlikely. Best practice construction techniques will be used around historic landfill sites.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	--	0	0	Option passes through areas of Flood Zone 2 and 3 as it crosses the river Adur which may have an effect on construction. Pipeline crosses through flood defences so there will be an increased vulnerability to flooding during construction of pipeline in these	Best practice construction methods to be implemented to reduce the risk of flooding during construction.	0	-	0	0

						areas. Impacts on operation unlikely given the pipeline is buried.					
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	Option passes through the Adur river, one SPZ1, one SPZ 2 and two WFDGW areas, Brighton Chalk block and Worthing Chalk which could be affected during construction. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice mitigation measures will likely be implemented during construction to ensure minimal impact on water environment, however there is potential for effects on water quality to occur.	0	-	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	Option will provide bidirectional transfer of water from Tenants Hill to Brighton with a 16.71 Ml/d capacity	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	Option does not pass through any AQMAs. There is likely to be an increase in emissions during construction.	Best practice construction techniques can be utilised to reduce emissions. Low emission vehicles can be used during construction.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	-	+	0	Option may increase resilience to climate change by providing a bi-directional transfer facility of water between Tenants Hill and Brighton. Option will also generate green house gases from emissions during construction.	Best practice construction techniques can be implemented to reduce emissions. Low emission vehicles can be used during construction.	0	-	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The option is located wholly within the South Downs National Park. Infrastructure will be underground and ground will be reinstated however visual amenity will be disrupted during construction.	Best practice mitigation measures likely to be implemented during construction phase. Possibility for landscaping to restore/enhance visual amenity. However minor and temporary impacts are likely to occur.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are several listed buildings and scheduled monuments within 500m of pipeline. No direct effects are identified but there may be temporary disturbance effects during construction. Stanmer Park is a Registered Park and Garden.	Best practice mitigation measures likely to be implemented during construction phase.	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are several noise action planning areas within the option area which may be temporarily affected during construction. Lancing College, Stanmer Church and University of Sussex are within 500m of pipeline. No land take from these areas but there may be disturbances during construction.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	Option is located within a national park, pipeline crosses national trails and four cycle routes. There is likely to be temporary effects during construction.	Cycle paths will be reinstated. Best practice construction methods will be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Energy consumption is likely to increase in both construction and operational phases. Excavated material will be generated during construction	Opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain. Reuse of excavated material on-site.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The option crosses major roads and national cycle routes and a railway track. There is likely to be moderate and temporary impacts during the construction phase as a result of road/track closures and diversions.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

1.4. SUSSEX BRIGHTON (SBZ)

Drought option - demand side (SBZ): NEUBs											
Southern Water											
Non-essential use ban - SBZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water’s sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Minor adverse effect on soils management in dry weather.</p>	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Operation of the option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water’s sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0

	Deliver reliable and resilient water supplies	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reduction in demand (4.57Ml/d) for water will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement	N/A	0	0	+	-

						for abstraction at Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.					
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (SBZ): Reduce transfer to other commercial customers											
Southern Water											
Drought Option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (by 0.16Ml/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been identified at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought conditions, it is not resulting in the long-term resilience of the local environment.	N/A	0	0	+	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Drought option - demand side (SBZ): TUBs											
Southern Water											
Temporary use bans - SBZ WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water’s sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought. The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0

	Deliver reliable and resilient water supplies	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reduction in demand for water (2.85Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the temporary use ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer	N/A	0	0	+	-

						demand for water to result in reduced requirement for abstraction at Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.					
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Bulk import (SBZ): SEW to Rottingdean (20MI/d)											
Southern Water											
This option is for a pipeline to transfer flow from SEW Barcombe WSW to Rottingdean (20MI/d)											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	0	<p>The option crosses Lewes Brooks SSSI (100% unfavourable – declining), a groundwater dependent habitat. There is potential for direct effects on this SSSI.</p> <p>The following SSSIs are located within 1km of the option: Lewes Downs SSSI (150m), 25% favourable condition, 75% not recorded. Firle Escarpment SSSI (440m) 33% unfavourable recovering, 66% unfavourable declining. Asham Quarry SSSI (440m) 100%partially destroyed.</p> <p>The option would also cross the Kingston Escarpment & Iford Hill SSSI and Offham Marshes SSSI Impact Risk Zone(s). However, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSI(s) are notified in the area of the SSSI Impact Risk Zone(s) which the option is located within/crosses.</p> <p>The option is within 40m of Railway Land Lewes LNR.</p> <p>The HRA screening (2025) concludes no likely significant effects, with all sites being screened out. Environmental changes are associated with construction only (water provided by SEW, understood to be associated with the Peacehaven recycling scheme, which will not affect any European sites given its location).</p> <p>The INNS RAG risk assessment identifies that there is a very low risk of the transfer / movement of INNS. Physical transfer of treated water (between two locations assumed currently unconnected). No INNS risk as treated water will be free from INNS.</p>	<p>Realign pipeline or use trenchless techniques to avoid direct impacts on Lewes Brooks SSSI. Best practice methods to be implemented to minimise disturbance effects and habitat loss including refining pipeline alignment to avoid sensitive habitats. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys. Consider use of a robust CEMP detailing mitigation measures to minimise potential impacts with the use of DMPs, pollution prevention, coverage of construction stockpiles during adverse weather conditions to minimise potential effects of pollution and run-off. Construction dust could be mitigated through wet cutting/crushing and vacuum drilling. Upgrading plant to minimise particulate production e.g. use of particulate filters, catalytic converters to minimise NOx production and use of low sulphur fuels is likely to minimise impacts to qualifying species. Sensitive lighting with downward facing cowling would be used to reduce light pollution and insect draw.</p>	0	--	0	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	<p>The option is within 500m of Southerham Grey Pit (100% favourable), Southerham Machine Bottom Pit (100% favourable) and Southerham Works Pit (100% favourable) geological SSSIs, although no impacts are anticipated. The option crosses areas of grade 2, 3 and 4 agricultural land and areas of urban land. Likely disturbance to these soils during construction. Where the pipeline crosses Grade 2 land, it is aligned along</p>	<p>Ground will be reinstated therefore residual effects unlikely. Best practice techniques to prevent potential disturbance of contaminated material during construction.</p>	0	0	0	0

						existing roads so the impact is likely to be minimal. The option crosses three historic landfill sites although the pipeline is aligned along existing roads in these locations. There are multiple other historic landfill sites and two authorised landfill sites within 500m. There is potential to disturb contaminated material during construction.					
Water	Increase resilience and reduce flood risk	0	--	0	0	The option is predominately located within Flood Zone 1, however does cross Flood Zone 2 and Flood Zone 3 at multiple locations. This may have an impact on construction.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	0	The option crosses multiple watercourses, including main rivers in two locations. The option is within SPZs 1-3 in some locations. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice mitigation measures likely to be implemented during construction. However minor and temporary impacts may remain.	0	-	0	0
	Deliver reliable and resilient water supplies	0	0	++	0	The option will facilitate water supply once operational, from SEW Barcombe WSW to Rottingdean. Capacity of 20MI/d.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	0	The option does not pass through any AQMAs, nor any within 2km. However, construction is likely to have minor and temporary impact.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	There is no carbon data available for this option. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Water levels not predicted to be significantly affected therefore, unlikely to affect resilience of the local environment to climate change.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The proposed site lies within the South Downs National Park. Construction of the option would have a negative effect on this designated landscape, and will introduce new, above ground infrastructure that will have a moderate negative effect on the local landscape.	Best practice will be implemented to avoid negative effects, ground will be reinstated, however likely to be some disturbance to landscape during works. Implement screening and other best practice techniques to minimise operational impacts.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The option is in close proximity to eight Grade II listed buildings although is aligned along existing roads in these locations. The option is within 500m of multiple other listed buildings and two Scheduled Monuments. The option located within Lewes Conservation Area and within 500m of three other conservation areas. Construction may affect the setting of the historic assets, however this will be temporary. Potential impact on buried archaeology, if present.	Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	0	0	The option crosses one area of allotments and one playing field although is aligned along existing roads at these locations so direct impacts will be limited. Religious grounds, sports facilities, allotments, playing fields and play spaces within 500m. The option is adjacent to a school although aligned along an existing road at this location so direct impacts are unlikely. Other schools and Important Buildings within 500m. The option crosses South Downs Way National Trail in multiple locations and South Downs National Park. The option crosses Noise Action Important Planning Areas in multiple locations. The option crosses areas of IMD deciles ranging from 4 to 9. Disturbance to the local community may be moderate yet temporary in nature.	Consider option routing to avoid direct impacts on allotments and playing field. Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	--	0	0	The option crosses one area of allotments and one playing field. Religious grounds, sports facilities, allotments, playing fields and play spaces within 500m. The option crosses National Cycle Route in one location, South Downs Way National Trail in multiple locations and South Downs National Park. Therefore, there may be some moderate and temporary effects on recreation during construction. The option crosses watercourses and habitat areas/woodland that could be used for recreation, therefore there may be some temporary effects on recreation, angling and other water-based recreation during the construction phase. There may be temporary disturbance to users of footpaths and other public rights of way during the construction phase.	Consider option routing to avoid direct impacts on allotments and playing field. Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option crosses multiple major roads, rail track in one location and National Cycle Route in one location. Lewes Bus Station within 500m. Likely to be moderate and temporary impacts during the construction.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur. Directional drilling under the railway and major roads is likely to be required.	0	-	0	0

Groundwater (SBZ): Lewes Road (3.5MI/d)
Southern Water
Lewes Road is a is a well and audit system that has been out of supply for over 10 years due to poor water quality. The scheme would refurbish the water supply works and add additional water treatment. It would also increase pump capacity and WSR connectivity so that Lewes Road groundwater source works can pump to its Middle or High WSR (output to the Low WSR is currently constrained by the header tanks at Goldstone). The current demand constraint is approximately 2.3MI/d (PDO). If the scheme is introduced, the constraint becomes pump capacity; scheme output is approximately 3.9MI/d under severe drought conditions.

SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	-	<p>There are no designated sites or SSSIs within 2000m of the Lewes Road site. The site is within a SSSI Impact Risk Zone for the Castle Hill SSSI (located 4.2km east of the Lewes Road site); however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSI is notified. A Local Nature Reserve is located within 700m of the site but is separated from the site by intervening urban development. The option is within 10km of the Beachy Head West MCZ (3km to the south east); however, effects are not anticipated given the type of development proposed and distance to this site.</p> <p>Construction of the option could have local and temporary impacts on non-designated habitats and species through disturbance (e.g. noise, vibration, dust), although such effects could be reduced through appropriate mitigation and best practice construction measures. It is assumed that relining of the mains sewer would be carried out within the existing pipeline, with no disturbance to species or habitats.</p> <p>There is potential for minor negative effects from the groundwater abstraction.</p> <p>The risk of the transfer / spread of INNS is anticipated to be very low as groundwater will likely be entirely free from INNS.</p> <p>The Lewes Road option has been screened out from HRA (2025), as no implications for HRA are identified.</p>	<p>Implement established measures / normal best practice during the construction phase. Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. A robust CEMP for use during construction should remove the scope for excessive mobilisation of sediment etc.</p> <p>Monitor groundwater levels.</p>	0	0	0	-
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	<p>The option is within an urban area located on non-agricultural, previously developed land. It is assumed that relining of the mains sewer would not involve groundworks or disturbance to soils. There is potential for minor disturbance of soils during the construction phase for rebuild at the Lewes Road site.</p>	<p>Best practice construction measures to be implemented and land reinstated upon completion.</p>	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>The Lewes Road site is within Flood Zone 1 and therefore flood risk is low. It is assumed that relining of the mains sewer would be carried out within the existing pipeline, with tunnelling or excavation required.</p> <p>The option is unlikely to increase the risk of flooding. No effects on flood risk are anticipated as a result of this option.</p>	N/A	0	0	0	0

	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>The option lies within SPZ1 and the Brighton Chalk Block WFD groundwater body, which has restricted water availability.</p> <p>Although no new boreholes are expected to be constructed there is potential that rehabilitation of assets and rebuild of above ground infrastructure may cause local impacts on the water environment during the construction phase but that these would be avoided through good/best practice construction measures.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Brighton Chalk Block groundwater body.</p> <p>This is primarily due to the potential for increased abstraction to reduce the surplus in the water balance potentially leading to deterioration. The WFD assessment highlights that the Adur and Ouse ALS indicates that the Brighton Chalk Block has restricted water availability, therefore there is some risk that an increase in abstraction within licence may be considered non-compliant. The Brighton Chalk and associated abstractions are currently subject to a WINEP investigation, which may provide further evidence.</p> <p>The WFD assessment highlights that, whilst both Quantitative Saline Intrusion test and Chemical Saline intrusion test WFD statuses are good, the Adur and Ouse ALS (2019) states that one of the main abstraction issues for the Brighton Chalk is to prevent saline intrusion. The abstraction is currently licenced. It is not certain whether the risk of saline intrusion to the source has been previously assessed.</p>	Best practice construction measures to be implemented to mitigate effects therefore residual effects are unlikely for construction phase. Residual effects for the operational phase have the potential to remain.	0	0	0	--
	Deliver reliable and resilient water supplies	0	0	+	0	<p>The option is likely to increase the resilience of supplies by delivering 3.5Ml/d.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	<p>The site is not within an AQMA but is located within 50m of the Brighton and Hove AQMA 1. There is likely to be minor and temporary impacts on air quality during the construction phase. There may be operational impacts on air quality, however these are likely be negligible.</p>	Best practice mitigation measures implemented during construction, however minor impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	<p>Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).</p>	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-

	Reduce vulnerability to climate change risks and hazards	0	0	+	-	The option has the potential to increase the resilience of surface water and the local environment by utilising groundwater sources. There may be negative effects on the resilience of groundwater to climate change as a result.	Monitor groundwater levels.	0	0	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	The Lewes Road site is 0.95km south of the South Downs National Park and is within 500m of two Conservation Areas. However, there is intervening urban development between the Lewes Road site and these features and construction of the option would be restricted to the confines of existing assets. There is likely to be minimal impacts on landscape and townscape from construction and operation of the option.	Best practice will be implemented to avoid negative effects, including on-site screening where necessary.	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The Lewes Road site is located 200m from the Grade II listed Woodvale Cemetery Registered Park and Garden, 130m from the Round Hill Conservation Area, within 500m of the Preston Park Conservation Area, and within 500m of several listed buildings. There are two scheduled monuments within 2000m of the Lewes Road site. However, it is not anticipated that the construction or operational phases will impact these assets due to the localised nature of the works and the presence of intervening urban development. There is potential that any excavation for rebuild of the Lewes Road site will impact archaeology, if present.	Best practice will be implemented to avoid negative effects, including potential for an Archaeology Watching Brief during the construction phase if required. There is residual uncertainty regarding effects during construction, depending on the presence / absence of buried archaeology.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The Lewes Road site is within an urban setting, adjacent to homes and within 500m of several education facilities, medical facilities, recreational facilities, places of worship, shops and businesses. There is potential for temporary impacts on residents and the local community during the construction phase, particularly in relation to vehicles accessing the Lewes Road site from local roads.	Best practice mitigation measures, including a Traffic Management Plan and noise management to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	There are sports facilities, play spaces, playing fields and public parks or gardens within 500m. There is potential for minor and temporary impacts during the construction works. Given the nature of the option, it is unlikely to have any impact on tourism and recreation during operation.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste during construction, including excavated materials.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0

	Avoid negative effects on built assets and infrastructure	0	-	0	0	There are major roads, railways and national cycle routes within 2000m. There is likely to be minor impacts on the local road network during the construction works. No effects on built assets and infrastructure are anticipated during operation given the option is located at an existing site.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
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1.5. HANTS KINGSCLERE (HKZ)

Drought option - demand side (HKZ): NEUBs											
Southern Water											
Non-essential use ban - HKZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Construction Effects		Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water's sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Minor adverse effect on soils management in dry weather.</p>	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Operation of the option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water's sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (0.26Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the ban.</p>	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0

	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0
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Drought option - demand side (HKZ): TUBs											
Southern Water											
Temporary use bans - HKZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Construction Effects		Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water's sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc. This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought. The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. The operation of this option is not expected to cause or exacerbate flooding elsewhere.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions. The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reduction in demand for water (0.17Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the temporary use ban.	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-

Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Groundwater (HKZ): Remove constraints at Newbury to increase yield (1.2MI/d)											
Southern Water											
The scheme is located within the Hampshire Kingsclere resource group (which consists of and is served by Kingsclere and East Woodhay WSWs). The scheme will increase the yield of the East Woodhay source within the existing licence by removing the present constraint imposed by mains leaving the site. This option will involve the construction of a dedicated, 7.1 km 300mm DN300 pipe from East Woodhay water supply works (WSW) and additional pumps and treatment facilities to increase the supply to Beacon Hill WSR. Additional high-lift pumping capacity would be required at East Woodhay. East Woodhay WSW abstracts water from the underlying chalk aquifer. It is considered that the River Enbourne will not be affected by the increased abstractions due to its perched nature above the London Clay.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Construction Effects		Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>The following SSSI's are located within 1km of the option: Highclere Park (0.22km, 25% of features in favourable condition and 75% in unfavourable – recovering condition), Burghclere Beacon (0.05km, 33.33% of features in favourable condition and 66.67% of features in unfavourable – no change condition). The option is located within multiple overlapping SSSI risk zones associated with the Burghclere Beacon, Old Burghclere Lime Quarry and Ladle Hill SSSI's, Highclere Park SSSI, Greenham and Crookham Commons SSSI, and Redhill Wood and Avery's Pightle SSSI's, where pipeline development is highlighted as being a risk to the sensitive features for which the SSSI's are notified. The option is not expected to have adverse effects on any National Nature Reserves or Marine Conservation Zones. The option would cross two areas of Ancient Woodland and would be situated immediately adjacent to four areas of Ancient Woodland.</p> <p>Potential impacts on these sites due to construction including noise disturbance, dust emissions and habitat destruction.</p> <p>The 2025 HRA screening identified no likely significant effects.</p>	Impacts mitigatable through best practice construction techniques and pipe jacking methods to avoid tree roots as well as detailed routing of the pipeline.	0	--	0	0
	Soil	0	0	0	0	<p>The preferred pipeline route is located within a close proximity to a variety of grades of agricultural land, however the works do not cross any agricultural land. Any soil displaced by the works would be replaced after construction. Therefore, there is not expected to be any likely effects.</p>	Reinstate land following construction.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	<p>The option predominately lies within flood zone 1 but does pass through areas of flood zones 2 and 3 which may result in impacts for construction. The pipeline is not likely to influence flood risk.</p>	Implement best practice measures to reduce flood risk but potential for residual effects.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	0	-	<p>Assessments identify no deterioration risk to ground/surface water, as temporary impacts due to construction would not cause any deterioration. Option will operate within licence constraints.</p> <p>The WFD assessment (2025) concludes that this option would be compliant (with low confidence) reflecting that the Stage 2 assessment concluded WFD compliance (with</p>	N/A	0	0	0	-

						low confidence) for the Berkshire Downs Chalk groundwater body. As such a minor negative effect has been identified.					
	Deliver reliable and resilient water supplies	0	0	+	0	The option will improve water transfer within the region, increasing water resilience providing an additional 1.2Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	Construction is likely to cause an increase in air emissions.	Detailed routing of the pipeline and implementation of construction best practice	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	N/A	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	-	The option is not anticipated to effect water levels. Availability of water for abstraction may decrease as a result of climate change.	N/A	0	0	0	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The entire scheme lies within North Wessex Downs National Landscape and there is potential for aspects of the proposed scheme to impact on this, particularly during the construction phase. Potential impacts of the scheme will be during the construction phase and include excavation works, temporary lighting and the presence of a workforce with associated transport (HGVs). The scheme is also located within the Thames Basin Heaths National Character Area. There are no National Parks within 5km of the option.	Detailed routing of the pipeline and implementation of construction best practice	0	--	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The route is located within close proximity to a number of listed buildings. It is also located within approx. 900m of the registered battlefield of the Battle of Newbury 1643, and is located nearby to a number of scheduled monuments, namely 'A cross dyke and bowl barrow on the northern spur of Beacon Hill' (approx. 250m), Large univallate hillfort at Beacon Hill (approx. 500m), and A bowl barrow on the southern spur of Beacon Hill (approx. 950m). The scheme also passes within close proximity of Highclere Park register park and garden. Temporary noise and emission impacts may negatively effect these receptors during the construction period.	Detailed routing of the pipeline and implementation of construction best practice	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option passes nearby to a National Trust nature reserve, a National Trust church/chapel, and a series of schools. Disruption to the community and users of these community facilities is possible during construction.	Detailed routing of the pipeline and implementation of construction best practice	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option is located within a National Landscape. Recreational activities within the National Landscape are likely to be impacted, however, this is likely to be minor and temporary.	Implement best practice measures to minimise effects, however likely that residual effects will remain.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Construction is likely to require materials and resources, and will generate waste, including excavated materials.	Source materials locally and reinstate dug materials where possible.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The option crosses many roads and a major road (A34). There is likely to be temporary impacts during the construction phase as a result of road/track closures and diversions.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0



1.6. HANTS ANDOVER (HAZ)

Drought option - demand side (HAZ): NEUBs											
Southern Water											
Non-essential use ban - HAZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Construction Effects		Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water’s sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc. This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.	N/A	0	0	+	0
	Soil	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Minor adverse effect on soils management in dry weather.	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to cause or exacerbate flooding elsewhere.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water’s sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources. The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reduction in demand for water (0.9Ml/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---

	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (HAZ): Reduce transfer to other commercial customers											
Southern Water											
Drought option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Construction Effects		Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (by 0.03MI/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been estimated for construction and operation at this stage.	N/A	0	0	0	0

	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought conditions, it is not resulting in the long-term resilience of the local environment.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Drought option - demand side (HAZ): TUBs											
Southern Water											
Temporary use bans - HAZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Construction Effects		Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water’s sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought.</p> <p>The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
	Soil	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
	Water	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
Water	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (0.56Ml/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the temporary use ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban	N/A	0	0	+	--

						would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.					
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Groundwater (HAZ): Recommission Chilbolton (0.5MI/d)											
Southern											
Chilbolton WSW, a groundwater source, was decommissioned in 2011 due to high nitrate concerns. The boreholes and booster pumps to move water through the site are the only remaining assets on site. A catchment management solution is currently being progressed to allow the site to return to service by 2035.											
The site can be brought back into service earlier by installing nitrate treatment. There is no run to waste facility at the site and waste will need to be transferred to a suitable WwTW and discharged under existing consents. Nitrate waste stream to be disposed of by tankering.											
The site can provide up to 0.49MI/d with an expected delivery by 2029-30. It will also need a connection with HSW to offset the use of drought permits/orders in Hampshire. The option provides limited benefit but requires considerable infrastructure improvements.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	0	<p>The option is not within 10km of any SAC, SPA or Ramsar sites. The following SSSI's are within 1km of the option; the River Test SSSI (0.55km, 15.38% unfavourable – no change, 84.62% not recorded) and Chilbolton Common (0.57km, 66.67% unfavourable – recovering, 33.33% not recorded). Construction activities have the potential to cause adverse effects to the designated sites through dust, vibration and noise pollution.</p> <p>No impacts are expected on MPA's or MCZ's, and there are no LNR's or NNR's within 1km of the option.</p> <p>The option will not cross any Ancient Woodlands.</p> <p>The HRA screening (2025) screens in the following sites:</p> <ul style="list-style-type: none">• Solent and Southampton Water Ramsar• Solent and Southampton Water SPA• Solent Maritime SAC• Solent and Dorset Coast SPA• River Test SAC Compensatory Habitat (River Test) <p>The screening concludes that there are no European sites within 10km although the European sites associated with Southampton Water are potential downstream receptors. Environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA). Operation will be within the terms of the existing licence, but will increase abstraction over recent actuals, although the European sites associated with Southampton Water cannot be affected through this mechanism due to the presence of HOF constraints at Test surface water WSW.</p> <p>The HRA AA (2025) concluded that this option will have no adverse effect on the integrity of any European sites, alone or in combination, through construction-related environmental changes (operational effects being screened out, alone and in</p>	<p>Standard best-practice measures to prevent site-derived pollutants entering local watercourses and standard measures to avoid / minimise disturbance of bird interest features (e.g. pre-survey, timing of works, screening, etc.) are expected to be fully effective, such that 'no effects' on European sites would occur.</p> <p>The HRA 2025 AA found that for River Test SAC Compensatory Habitat (River Test), Solent and Southampton Water Ramsar, Solent and Southampton Water SPA, Solent Maritime SAC, and Solent and Dorset Coast SPA, that adverse effects can be reliably avoided with established project-level measures.</p>	0	0	0	0

						combination, due to the nature of the option operation).					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	<p>Standard best-practice measures to prevent site-derived pollutants entering local watercourses and standard measures to avoid / minimise disturbance of bird interest features (e.g. pre-survey, timing of works, screening, etc.) are expected to be fully effective, such that 'no effects' on the above sites would occur with mitigation.</p> <p>Construction of the nitrate treatment plant associated with this option will take place within 500m (approx. 0.16km) from a historical landfill site therefore there is potential for contaminated material to be disturbed during construction.</p> <p>The option is located on ALC Grade 3 land. Soil is likely to be temporarily affected during construction as excavation is necessary for construction of the treatment plant and cannot be reinstated.</p>	Best practice construction techniques to be implemented where construction passes close to historic landfill sites.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not situated in a high flood risk area or likely to lead to the exacerbation of flood risk during construction or operation.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	0	-	<p>The WFD assessment (2025) concludes that this option would be compliant (with low confidence) reflecting that the Stage 2 assessment concluded WFD compliance (with low confidence) for the River Test Chalk groundwater body and Test (conf Dever to conf Anton) waterbody. As such a minor negative effect has been identified.</p> <p>The WFD assessment highlights that an increase in recent actual abstraction within licence limits may affect the water balance of the River Test Chalk, and have an influence on flows in the River Test. The ALS shows there is restricted water available at Q95, with water available at Q70, Q50, Q30. Changes to the hydrological regime, water quality, river continuity and morphological conditions due to change in baseflow could impact fish and invertebrate populations. However, restricted water availability applies only further downstream, and is protected by a HOF. Therefore, local flow changes, within existing licence, should be acceptable and downstream impacts avoided by HOF (and potentially associated reduction in other sources)</p>	Best practice mitigation measures to be implemented during construction.	0	0	0	-

	Deliver reliable and resilient water supplies	0	0	+	0	The option could provide up to 0.5MI/d of deployable output, increasing the reliability and resilience of supply to a minor degree during operation.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	-	There are no AQMAs within the catchment. There may be some temporary, minor negative effects from an increase in emissions associated with both construction and operation, however this is not anticipated to be significant.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	-
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Construction of this option would result in 36.16 tCO2e capital carbon, causing a very minor negative effect on carbon emissions. Operation of this option would result in emission of approximately 12.53 tCO2e per annum, resulting in a very minor negative effect on this objective.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	The option has the potential to increase the resilience of the local population by utilising groundwater sources and providing 0.45MI/d of additional output, resulting in a minor positive impact. There may be negative effects on the resilience of groundwater to climate change as a result.	Monitor groundwater levels.	0	0	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	-	There are no National Landscape's or National Parks within 5km of the option, though there will likely be minor negative impacts on local landscape character and visual amenity during the construction phase. Some residual impacts will remain in the operational phase as the nitrate treatment facility will be constructed.	Best practice mitigation measures likely to be implemented during construction phase. Possibility for landscaping to restore/enhance visual amenity. However minor and temporary impacts are likely to occur.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	-	There are 3 listed buildings and 1 scheduled monument within 1km of the option site. There is a possibility for minor negative effects on the setting of these heritage assets during construction activity and during operation as new, permanent above ground infrastructure will be built.	Best practice measures to be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	+	-	The site lies adjacent to the West Down nature reserve, an area of open space that is accessible to the public. There is potential that the community and users of this facility will be disrupted during the construction phase, however this is anticipated to be minor and temporary. The option is within IMD decile 7. The option is expected to have minor positive impacts on the economy through potential provision of local employment that will lead to local spending,	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	+	-

						combined with supply chain benefits associated with construction related investment. The option would provide additional yield of 0.49 Ml/d, helping to maintain essential public water supplies, and will therefore help maintain public health and well being. Due to the volume of water involved, this has been assessed as having a minor positive effect.					
	Maintain and enhance tourism and recreation	0	-	0	0	The option is approximately 500m from a national cycle route, however, given the distance from the works, it is unlikely this will be impacted. Access to the West Down nature reserve may be negatively impacted during construction, though effects are likely to be temporary.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	--	0	0	New infrastructure required for option which will use materials and generate waste. Due to the scale of the option, this is likely to be a moderate negative effect.	Likely to be limited opportunity to implement sustainable design measures to reduce the impact therefore it is likely that a moderate negative effect will remain.	0	--	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Construction will not take place near to main roads or other built assets and is therefore not expected to have any impacts. There may be some disruption on the local road network, however this is likely to be negligible.	N/A	0	0	0	0



Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10MI/d) (includes consideration of Bulk import (HAZ): T2ST to Andover (20MI/d) and Bulk import (HKZ): T2ST to HKZ (5MI/d))											
Southern Water											
Transfer from Otterbourne to Andover to Kingsclere. This scheme is designed to support network improvements needed for UTMRD transfer to Hampshire and/or the strategic scheme from IoW/South Hampshire. This option includes consideration of Bulk import (HAZ): T2ST to Andover (20MI/d) and Bulk import (HKZ): T2ST to HKZ (5MI/d). Essentially, two pipelines will be required to deliver Bulk import (HAZ): T2ST to Andover (20MI/d) and Bulk import (HKZ): T2ST to HKZ (5MI/d), with Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10MI/d) (this option) then utilising both of these for bi-directional distribution.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Construction Effects		Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>There are no SSSI's located within 1km of the option, although the option would cross SSSI Impact Risk Zones associated with River Test, East Aston Common, Bere Hill, Bransbury Common and Chilbolton Common SSSI's, including where pipeline development and discharge of wate to ground or surface water is highlighted as being a risk to the sensitive features for which the SSSI's are notified. Potential impacts on SSSI's due to construction include noise disturbance, dust emissions and habitat destruction. Impacts mitigatable through best practice construction techniques.</p> <p>The option is not expected to have adverse effects on any National Nature Reserves.</p> <p>The option would not cross, however would be situated immediately adjacent to 3, areas of Ancient Woodland. Potential impacts on Ancient Woodlands due to construction include noise disturbance, dust emissions and habitat destruction. Impacts are mitigatable through best practice construction techniques and pipe jacking methods to avoid tree roots.</p> <p>The option also intersects priority habitat including coastal and floodplain grazing marsh, deciduous woodland and lowland calcareous grassland.</p> <p>HRA screening (2025) screens out all potentially effected sites for both construction and operation. Construction works are considered either outside the catchment of the nearest European sites, or considered sufficiently distant that construction effects would not be anticipated irrespective of any additional mitigation measures. No adverse effects are identified.</p> <p>High level construction phase INNS risk, as pipeline route passes through sensitive habitats. No INNS risk during operational phase as water is treated and free of INNS.</p>	Ecological surveys prior to construction. Provide habitat compensation and relocation where required.	0	-	0	0
		0	-	0	0	<p>Land is classed as Grade 3 and 4 therefore potential for disturbance during construction phase. Historic landfill within 500m and authorised within 2000m, however no direct impacts.</p>	Reinstate land following construction. Best practice construction measures to be implemented, however residual construction effects likely.	0	0	0	0

Water	Increase resilience and reduce flood risk	0	-	0	0	The option predominately lies within flood zone 1 but does pass through areas of flood zones 2 and 3 which may result in impacts for construction. The pipeline is not likely to influence flood risk.	Implement best practice measures to reduce flood risk but potential for residual effects.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The option intersects SPZ1 and 2 and two chalk WFD groundwater bodies, potential sensitive receptors. One WFD river waterbody, chalk rivers and several nitrate vulnerable zones are also intersected. Construction may result in potential leaching of contaminants to surface and groundwater. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Implement pollution prevention and control measures. Use appropriate bedding materials and directional drilling where possible to minimise disturbance.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	The option will improve water transfer within the region, increasing water resilience through an additional yield of 6.81Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	Construction is likely to cause an increase in air emissions.	Best construction practices and pollution prevention and control measures e.g. damping.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	The option is not anticipated to effect water levels. No change in resilience of the local water environment to climate change is therefore anticipated.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The option lies partially within the North Wessex Downs National Landscape and intersects Hampshire Downs and Thames Basin Heaths National Landscape Character Area. Visual disturbance is likely during construction but the pipeline will be buried once operational.	Implement temporary screening during construction. Reinstate landscape to original state once pipeline is buried.	0	--	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The option lies within the Hurstbourne Priors Conservation Area and Kingsclere conservation area is within 500m. The Hurstbourne Registered Park and Garden is within close proximity to the pipeline and there is listed buildings and scheduled monuments within 500m. Construction affect the setting of these historic assets but effects will be temporary. There is potential that excavation for the pipeline will impact buried archaeology.	Implement temporary screening during construction. Reinstate landscape to original state once pipeline is buried. Archaeological Watching Brief may be required during construction phase depending on the presence / absence of archaeology.	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are allotments, playing fields, golf courses and play spaces within 500m and the option also passes through a sports facilities. Disruption to the community and users of these community facilities is possible during construction. IMD deciles 4-9 along extent of pipeline.	Implement traffic management plan to minimise disruption. Best construction practices such as damping and use of plant silencers.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option intersects a sports facility and there may be diversions to public rights of way during the construction phase which may impact recreation. This is likely to be minor and temporary.	Implement best practice measures to minimise effects, however likely that residual effects will remain.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Construction is likely to require materials and resources, and will generate waste, including excavated materials.	Source materials locally and reinstate dug materials where possible.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option is likely to impact transport infrastructure as it intersects major roads and a railway. There is likely to be moderate and temporary impacts during the construction phase.	Use of directional drilling and other best practice construction methods where possible to minimise disruption.	0	-	0	0

1.7. ISLE OF WIGHT (IOW)

Drought option - supply side (IOW): Caul Bourne (1.5MI/d)											
Southern Water											
Caul Bourne reduce MRF											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The following SSSI is located within 1km of the option: Calbourne Down (<0.1km, 20% favourable, 60% unfavourable – recovering, 20% not recorded. The option would also be situated within the SSSI Impact Risk Zone associated with Calbourne Down SSSI, including areas where all planning applications, and any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream, are highlighted as being a risk to the sensitive features for which the SSSI is notified. The Isle Of Wight SAC is within 2000m of the option.					
						No adverse effects on National Nature Reserves are expected.					
						There is not anticipated to be any construction associated with this option. Removing a statutory Minimum Residual Flow to enable increased abstraction during extreme drought when water resources and riverine ecosystems may already be under severe stress may have irreversible impacts on local ecosystems.					
						The option would not cross or be situated immediately adjacent to any areas of Ancient woodland, although there are priority habitats and woodland within close proximity which may be affected by increased abstraction. There are no likely impacts on GWDTE or chalk rivers.					
		0	0	0	---	The HRA Appropriate Assessment, reported in the Drought Plan SEA, identified potential adverse impacts on the Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar. The Drought Permit has the potential to affect the Newtown estuary component of these European sites only, and specifically the Shalfleet Creek system of the estuary which receives freshwater flow inputs from the Caul Bourne river. Flows in the Caul Bourne may be reduced as a consequence of the Drought Permit, leading to a change in the freshwater flows to the Shalfleet Creek. Uncertainty in these conclusions will be addressed through a Monitoring and Mitigation Package being developed in consultation with Natural England and Environment Agency.	Further assessments required to establish potential impacts from reduction/removal of MRF. Monitor groundwater levels. Uncertainty will be addressed through a Monitoring and Mitigation Package.	0	0	0	---/?
						Minor impacts are considered likely to Yarmouth to Cowes Marine Conservation Zone.					
						The drought permit only involves an increase in groundwater abstraction and a reduction in flow in the Caul Bourne. The drought permit is therefore not anticipated to increase the spread of aquatic invasive non-native species.					

Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	Option located on Grade 3 and 4 agricultural land, however there is no construction and therefore disturbance to these soils is unlikely. There are historic and authorised landfill sites within 2000m, however no effects anticipated.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is located within FZ1, however part of the option is located within close proximity to FZ2 and FZ3 along the watercourse route. No effects identified. The option is not anticipated to increase the risk of flooding.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	0	---	<p>Option is within SPZs and is located within the IOW Solent Group and IOW Central Downs Chalk WFD groundwater bodies. Given this option is only to be implemented under drought conditions when water resources are vulnerable, the option may have further negative effects on levels, flows and quality of the water environment.</p> <p>The WFD assessment (2025) of the Southern Water Drought Plan 2022 highlights that with regard to the IOW Central Downs Chalk groundwater body, there is a medium risk of temporary deterioration in quantitative status and low risk for chemical status (within class) and that there are surface water bodies that will be potentially impacted (Caul Bourne waterbody and Newtown River transitional waterbody).</p> <p>The Drought Plan WFD highlights that with regard to the Caul Bourne waterbody and the Newtown River transitional waterbody, there is a high risk of temporary deterioration in status due to impacts on the fish community and there are potential risks to Solent and Southampton Water SPA Solent Maritime SAC.</p> <p>The SEA assessment (2025) of the Southern Water Drought Plan 2022, highlights that the implementation of the drought permit would result in a major adverse impact on groundwater levels and flows in the Caul Bourne and freshwater flow inputs to the Newtown Estuary. There would be an associated moderate adverse impact on water quality and ecology in the Caul Bourne.</p> <p>As such, and in line with the conclusions of the SEA of the Drought Plan a significant negative effect has been identified during operation.</p>	Further assessments required to establish potential impacts from reduction/removal of MRF. Monitor groundwater levels. Undertake further WFD assessment.	0	0	0	---
	Deliver reliable and resilient water supplies	0	0	+	0	Option will reduce/remove statutory Minimum Residual Flow (MRF) to enable abstraction during severe drought conditions. The default benefit is 1.5Ml/d therefore minor positive effects identified.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	There may be some negative effects from an increase in emissions associated with water supply / treatment, however this is anticipated to be negligible.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	-	There is no carbon data available for this option. The increase in abstraction volumes would be associated with a proportional increase in energy consumption with an associated increase in greenhouse gas emissions. Overall, the size of additional abstraction is considered to represent minor adverse effects during operation.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower	0	0	0	-

							embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.				
	Reduce vulnerability to climate change risks and hazards	0	0	0	-	Increased abstraction during period of drought will reduce the water environment's ability to recover and may increase ground water resources vulnerability to drought in the future.	Further assessments required to establish potential impacts from reduction/removal of MRF. Monitor groundwater levels.	0	0	0	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	-	The option is within the Isle Of Wight National Landscape. The visual amenity of the National Landscape could be adversely affected by low flows and levels. The severity of the impact is uncertain but is currently considered to be minor as the impact would be short-term and temporary.	N/A	0	0	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	There is a registered park and garden, scheduled monument and numerous listed buildings within 500. However, given there is no construction, the option unlikely to have effect on the historic environment. The option is not anticipated to impact archaeology.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	0	There are playing fields, churches and sports facilities within 500m. However, given there is no construction, there is not anticipated to be any effects on the local community or users of these community facilities. The option is within IMD decile 4. The drought permit would provide additional yield, helping to maintain essential public water supplies during drought conditions, and will therefore help maintain public health and well being to a minor degree.	N/A	0	0	+	0
	Maintain and enhance tourism and recreation	0	0	+	0	There are playing fields and sports facilities within 500m. However, given there is no construction, there is not anticipated to be any effects that will be an impact on tourism or recreation as a result of this option.	N/A	0	0	+	0
Material Assets	Minimise resource use and waste production	0	0	0	0	Provided no new infrastructure is required for this option, it is anticipated that there will be minimal resource use and minimal waste produced.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	It is not anticipated that there will be an impact on built assets and infrastructure as a result of this option given there is no construction.	N/A	0	0	0	0

Drought option - demand side (IOW): NEUBs											
Southern Water											
Non-essential use ban - IOW WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water's sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc. This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Minor adverse effect on soils management in dry weather.	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to cause or exacerbate flooding elsewhere.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water's sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources. The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reduction in demand for water (3.08MI/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the ban.	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water’s Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming	N/A	0	0	0	--

						pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.					
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (IOW): Reduce transfer to other commercial customers											
Southern Water											
Drought option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (0.07Ml/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been identified at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought	N/A	0	0	+	0

						conditions, it is not resulting in the long-term resilience of the local environment.					
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Drought option - demand side (IOW): TUBs											
Southern Water											
Temporary use bans - IOW WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option.	N/A	0	0	+	0
						A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water’s sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.					
						This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought.					
						The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. The operation of this option is not expected to cause or exacerbate flooding elsewhere.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions. The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reduction in demand for water (1.93MI/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the temporary use ban.	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water Supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 ML/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-

Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Groundwater (IOW): New boreholes at Newchurch (LGS) (1.9MI/d)											
Southern Water											
This option proposes replacing all 3 Lower Greensand boreholes on site so that the source can operate to its licenced capacity. Currently BH4 is non-operational, BH1 and BH2 are operational but at reduced capacity due to screen-dewatering. No additional treatment is proposed. Total Scheme output would be 4.5MI/d.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	--	<p>The following SSSI is located within 1km of the option: Alverstone Marshes (0.22km, 100% unfavourable – declining). The option would also be situated within the SSSI Risk Zone associated with the Alverstone Marshes SSSI, where all planning applications are highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>The option is not expected to have adverse effects on any National Nature Reserves or Marine Conservation Zones. Although the option is situated near to the Solent and Southampton Water and Solent and Dorset Coast SPA's, the South Wight Maritime SAC, and Solent and Southampton Water Ramsar, which all overlap with the Bembridge MCZ, the HRA has identified that due to the small-scale nature of the works no effects are expected during construction, and any exposure to environmental change associated with operation will be inconsequential.</p> <p>There may be some disturbance effect during construction from noise and dust pollution, minor effects identified. Depending on the hydrological links, there may be impacts during operation on the GWDTE as a result of increased abstraction. There is potential for direct effects on woodland and priority habitats. The option would be situated immediately adjacent to one area of Ancient Woodland.</p> <p>The HRA screening (2025) screened in Solent and Southampton Water Ramsar/ SPA and Solent and Isle of Wight Lagoons SAC for appropriate assessment for operation phase only.</p> <p>The risk of the transfer / movement of INNS is very low given the groundwater sources will likely be entirely free of INNS.</p> <p>The HRA AA (2025) concludes no adverse effects during operation. The abstraction is from the Knighton Lower Greensand boreholes and not from the existing Knighton Chalk Well and Adit. Effects on flows in Yar due to GW drawdown cannot be accurately stated due to absence of detailed groundwater modelling for the source, but are likely to be small as much of the baseflow in the Yar is from the chalk rather than the Lower Greensand; there is an Non-Deterioration investigation timetabled to complete in 2027 that is</p>	Best practice mitigation to minimise impacts and reinstatement /compensation of habitats however it is not possible to mitigate for the loss of habitat that the installation of this pipeline would require. Future design will need to undertake ecology surveys.	0	-	0	-

						likely to confirm this. Flows from the Yar into Bembridge harbour are managed by a sluice, and effects on the marine components of the SPA/Ramsar are expected to be nominal in relation to the dominance of tidal influence in the harbour. With regard to the Brading Marshes components of the SPA/Ramsar, these are below sea level so are protected from seawater inundation by the seawall and tidal gates at the end of the Yar; water levels in Brading Marshes are largely controlled through direct management (sluices etc.) with some inundation occurring when the river is tidally locked, and are so not directly dependent on flows etc. within the Yar. Any effects of the option on water-supply to Brading Marshes will therefore be very small, and substantially moderated in any case by the interventionist water level management of the marshes and by other surface water and rainfall inputs to the marshes. As noted, there is likely to be little / no exposure to operational effects due to location / relationship of the lagoon network adjacent to Brading Marshes and Bembridge Harbour relative to Yar (in summary, two of the lagoons are seawater-dominated, and essentially have salinities similar to seawater. The other two lagoons receive freshwater input from Brading Marshes and are hence brackish or low-salinity, but the water levels in Brading Marshes are largely controlled through direct management (sluices etc.) with some inundation occurring when the river is tidally locked, and so not directly dependent on flows etc. within the Yar. As a result, adverse effects are not anticipated as a result of operation.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	Option is located on grade 3 and 4 Agricultural Land. No affects on soil identified under the assumption that construction involves replacing pre-existing boreholes.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is within FZ1 therefore low risk of flooding.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>There may be short term effects on ground water quality during construction. Operational impacts are anticipated from increased abstraction which may have effects on groundwater levels. The option is within IOW Central Downs Chalk WFD groundwater body and is SPZs.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Eastern Yar (Lower) waterbody and the IOW Lower Greensand groundwater body.</p> <p>The WFD assessment highlights that the Isle of Wight ALS (2019) shows limited water available in the Eastern Yar catchment (Q30 only) and that Geology indicates</p>	Best practice construction measures will likely be implemented, however possibility for impacts to remain. Monitor groundwater levels.	0	0	0	--

						<p>likely connectivity between groundwater and surface water. Therefore, the increased rate of abstraction could result in changes to the hydrological regime in the Eastern Yar. DO of the scheme is 4.5 MI/d, and Q95 in the Eastern Yar at Burnt House is 0.05 m3/s (4.3 MI/d). Therefore, if all impact were felt on the river, at low flows this would constitute a significant impact on flows. Augmentation is used to support flows in the river. Therefore, it is possible that use of Lessland Lane may help to offset impact, but this would need further investigation.</p> <p>The WFD also highlights that potential for impact on Alverstone Marshes SSSI should also be given further consideration.</p> <p>As such, the WFD assessment concludes that the option should be concluded as non-compliant, subject to further investigation.</p> <p>The WFD assessment also notes that a reduction in flow in the Eastern Yar (Lower), particularly during times of low flow, could result in changes to physico-chemical quality elements (e.g. BOD, DO, pH, temperature), potentially causing a deterioration in status.</p> <p>With regard to the IOW Lower Greensand groundwater body, the WFD assessment also highlights that increased abstraction will reduce the surplus in the water balance potentially leading to deterioration.</p>					
	Deliver reliable and resilient water supplies	0	0	+	0	Option will provide increased water to enable the site to abstract up to licenced capacity. The default benefit is 1.95MI/d therefore minor positive effects have been identified.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within 2000m. There is potential for the construction phase to have an impact on air quality.	Best practice mitigation measures likely to be implemented during construction phase, such as the use of low emission vehicles and switch off policies, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	There is no carbon data for this option. This option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	The option has the potential to benefit the surface water environment by utilising groundwater sources. However, there may be negative effects on the resilience of groundwater sources.	Monitor groundwater levels.	0	0	+	-

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	Option is located within Isle of Wight National Landscape, and there are no National Parks within 5km of the option. There is likely to be temporary impacts on visual amenity during construction. The option involves replacing existing boreholes therefore no operational impacts anticipated.	Ground will be reinstated where possible, Measures to reduce the visual impact during construction e.g. screening could be implemented, however residual effects remain.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	There are numerous listed building within 500m and there are scheduled monuments within 2000m. Given the nature of these works, construction is not anticipated the setting of these assets. There is not anticipated to be effects on archaeology given it is a replacement of existing boreholes. However, if any further excavation is required and archaeology is present, there may be effects.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are no community facilities within 500m of the option. There may be some disturbance to the local community during the construction phase, however this will likely be minor and temporary. The option is within IMD decile 7.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	0	0	0	Option unlikely to have any impact on tourism and recreation.	N/A	0	0	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Materials will be required for replacement boreholes and waste is likely to be generated.	Opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	There may be some disturbance to the local road network, however this will be minor.	Best practice mitigation measures will likely be implemented to minimise effects during construction However, minor and temporary effects are likely to still occur.	0	-	0	0

Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)											
Southern Water											
The option is to drill a new replacement borehole, 100m deep, for Lessland Lane Augmentation well on the Isle of Wight. The existing borehole has experienced around a 90%+ loss in performance, and previous well rehabilitation and cleaning has not provided a notable improvement. A replacement well is required to regain resilience within the well field for the river augmentation scheme.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>There are no designated sites within 1km. The option would be situated within a SSSI Risk Zone associated with the America Wood SSSI, including an area where developments resulting in discharge of water or liquid waste that is discharged to ground (i.e. to seep away) or to surface water, such as a beck or stream are highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>The option is not expected to have adverse effects on any National Nature Reserves or Marine Conservation Zones. Although the option is situated near to the Solent and Dorset Coast SPA and the South Wight Maritime SAC which overlap with the Bembridge MCZ, the HRA has identified that due to the small-scale nature of the works no effects are expected during construction, and any exposure to environmental change associated with operation will be inconsequential.</p> <p>The option would be situated immediately adjacent to one area of Ancient Woodland and there is priority habitat within 500m of the option location and there is not anticipated to be any direct effects, however there may be disturbance effects construction. There are no GWDTE within 2000m.</p> <p>HRA screening (2025) screens out all sites, for both construction and operation. Construction works are very small scale (borehole replacements) located in open fields and so construction effects would not be anticipated irrespective of any additional mitigation measures. With regard to operation, the Lessland Lane borehole feeds into the existing IoW Augmentation Scheme and is therefore a resilience scheme to improve reliability of the Augmentation scheme, with abstraction in line with recent actuals and the licence; notably, the DO benefits of the existing augmentation scheme are already part of the baseline DO for Sandown (the SW source on the Eastern Yar) and so effectively accounted for. No adverse effects are identified.</p> <p>There is a very low risk for the transfer / spread of INNS as the source water is likely to be entirely free of INNS. It is assumed that groundwater is free of</p>	Best practice mitigation to minimise impacts. If applicable, ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys.	0	-	0	0

						INNS, and that accessing it will not permit any additional inputs of INNS.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	The option is within Grade 3 agricultural land, there may be disturbance to the soil during the construction phase and there may also be a permanent loss as a result of the option. There are historic landfills within 2000m, however there is not likely to be effects.	Reinstate land where possible, however potential for the option to lead to the permanent loss of soil due to the new boreholes.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is located within Flood Zone 1 therefore low risk of flooding at the construction and operational phase. Option is not likely to exacerbate flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	-	<p>There is potential for impacts on the construction phase on the water environment, including groundwater as the option involves drilling new borehole. Increased abstraction may impact groundwater levels. Option lies within SPZs and within IOW Lower Greensand WFD groundwater body.</p> <p>The WFD assessment (2025) concludes that this option would be compliant (with low confidence) reflecting that the Stage 2 assessment concluded WFD compliance (with low confidence) for the Wroxall Stream waterbody and IOW Lower Greensand groundwater body. As such a minor negative effect has been identified.</p> <p>The WFD assessment highlights that the IOW ALS shows there is no water available in Wroxall Stream at Q95, Q70, Q50, Q30. Geology indicates likely high degree of continuity between groundwater and surface water. However, the source is only used intermittently, and is used to augment the Yar, thereby offsetting any flow impacts. As a result of being used only intermittently, it is expected that this source will be excluded from ongoing No Deterioration investigations on the IOW. Taking these factors in to account, it is reasonable to include that reinstating the ability to use the augmentation source effectively will not result have an impact on WFD status of the surface or groundwater.</p>	Best practice construction measures to be implemented to mitigate effects therefore residual effects are unlikely for construction phase. Residual effects for operational have the potential to remain.	0	0	0	-

	Deliver reliable and resilient water supplies	0	0	+	0	Replacement borehole likely to increase reliability of supply through provision of an additional yield of 1.5Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within 2000m. Construction likely to have minor and temporary impact on air quality.	Best practice mitigation measures to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	No carbon data available for the option. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	It is uncertain as to whether there is increased abstraction related to this option. Under the assumption there will not be increased abstraction, this option is unlikely to have any effects on vulnerability to climate change risks and hazards.	Monitor groundwater levels.	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The following National Landscape is located within 5km of the option: Isle Of Wight (1.01km) and there are no National Parks within 5km of the option. There will likely to be minor negative impacts on landscape character and visual amenity during the construction phase.	Best practice will be implemented to avoid negative effects, ground will be reinstated, however likely to be some disturbance to landscape during works. Implement screening and other best practice techniques to minimise operational impacts.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are listed buildings within 500m. The construction phase may impact the setting of these assets. Excavation may impact archaeology, if present.	Best practice mitigation measures to be implemented to minimise setting effects during construction. Given there is potential to impact buried archaeology, an Archaeology Watching Brief may be required during the construction phase. Further work may be required to determine the significance	0	-	0	0

							of the effect depending on the presence / absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.				
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option is within 2km of play spaces and religious grounds. There is potential for the community and users of these community facilities to be impacted during the construction phase, however this is likely to be minor and temporary. The option is within IMD decile 5.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	There may be diversions to public rights of way during the construction phase. Minor impacts on recreation therefore identified for the construction phase.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste, including excavation materials.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	There are major roads and a national cycle trail within 2000m. There may be disruption to the local road network during the construction phase.	Best practice mitigation measures including a Traffic Management Plan to be implemented to minimise effects during construction.	0	-	0	0

Recycling (IOW): Sandown (8.5Ml/d)											
Southern Water											
This option proposes the transfer of treated effluent from Sandown WwTW (currently discharged to sea), to support flows in the Eastern River Yar upstream of the Sandown WSW abstraction at Burnt House. Treated water in excess of the local demand will be transferred through a new transfer pipeline to a service reservoir near Newport, for supply to much of the island. This option is reliant on the WSR enlargements carried out in IZT_CSM Cross-Solent upgrade. (2) Option 2 also includes upgrades to Sandown WSW to achieve the extra flow.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	--	<p>The following SSSI's are located within 1km of the option: America Wood (0.5km, 100% favourable) and Lake Allotments (0.19km, 100% favourable). The option would also cross SSSI Risk Zones associated with the Alverstone Marshes, America Wood, Bembridge Down and Brading Marshes to St. Helen's Ledges SSSI's including areas where pipeline development and discharges to ground or surface waters are highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>The option is not expected to have adverse effects on any National Nature Reserves, however Brading marshes Local Nature reserve, Solent and Southampton waters Ramsar site SPA and South Wight Maritime SAC are within 2000m of pipeline.</p> <p>No direct effects but there may be disturbance effects during the construction phase and potential effects on protected species. Pipeline intersects with areas of priority habitat; coastal and floodplain grazing marsh, deciduous woodland, good quality semi-improved grassland, lowlands dry acid grassland, lowlands fens, purple moor grass and rush pastures, reed beds and additional habitat, although it does not cross or run immediately adjacent to any areas of Ancient Woodland. While unlikely to have operational effects there is a high risk of direct impact on priority species during construction. Very low risk of transfer of INNS as the treated source water is likely to be entirely free of INNS. Construction phase risk of INNS is considered to be low.</p> <p>The option is situated near to the Solent & Southampton Water Ramsar, Solent and Dorset Coast SPA and the South Wight Maritime SAC which overlap with the Bembridge MCZ. The HRA has identified that significant adverse effects are almost certainly avoidable with established measures/normal best practice during construction. Discharge into the Eastern Yar during operation of the option carries a low risk of organic chemicals causing deterioration to fish status in the Solent and Southampton Water Ramsar, however exposure to environmental changes associated with the option will be low.</p>	<p>Best practice methods to be implemented to minimise disturbance effects and habitat loss including refining pipeline alignment. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys. Uncertain effects are considered to be mitigatable through use of best practice measures such as a robust CEMP. However, for Briddlesford Copses SAC, despite these best practice mitigation measures, likely significant effects on bechsteins bats could potentially still occur. The effects therefore remain uncertain. Undertake HRA AA to address uncertain effects identified for Briddlesford Copses SAC.</p> <p>The HRA 2025 undertakes AA of Solent and Dorset Coast SPA, South Wight Maritime SAC, Solent and Southampton Water SPA/Ramsar, Briddlesford Copses SAC, and Solent and Isle of Wight Lagoons SAC. The AA concludes that environmental changes associated with construction can be reliably avoided with project level mitigation.</p>	0	--	0	-

						<p>The HRA screening (2025) screened in Solent and Dorset Coast SPA, South Wight Maritime SAC, Solent and Southampton Water SPA/Ramsar, Briddlesford Copses SAC, and Solent and Isle of Wight Lagoons SAC.</p> <p>For Briddlesford Copses SAC, the HRA AA (2025) finds that adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.</p> <p>For Solent and Dorset Coast SPA, South Wight Maritime SAC, Solent and Southampton Water SPA/Ramsar, Briddlesford Copses SAC, and Solent and Isle of Wight Lagoons SAC, the HRA AA (2025) concludes no adverse effect.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	Option located on grade 2, 3 and 4 agricultural soil. Disturbance to this land is likely to occur during construction. Pipeline passes through Lower Knighton Landfill site, where there is a possible risk of contamination during construction.	Ground will be reinstated therefore residual effects unlikely. Best practice techniques likely to be implemented for construction work in landfill.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	Option passes through areas of flood zone 2 and 3 and areas of flood defences. While the pipeline itself is unlikely to increase risk of flooding flood defences will be compromised during construction.	Best practice mitigation measures likely to be implemented during construction phase, however an increased risk of flooding during construction likely to remain.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	+	--	<p>This option proposes the transfer of treated effluent from Sandown WwTW (currently discharged to sea), to support flows in the Eastern River Yar upstream of the Sandown WSW abstraction at Alverstone. Quality of treated effluent water likely to be of less favourable quality, however positive effects identified as it excess water is being used to support flows. Option passes through two areas of WFD ground water, there maybe a risk of impacting the quality of water at these sites during construction.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Eastern Yar (Lower) waterbody.</p> <p>The WFD assessment highlights that the new discharge to the Eastern Yar could affect physico-chemistry, potentially including concentrations of dissolved oxygen and nutrients, and water temperature. However, the increase in flow, conversely, may be beneficial, particularly considering the pressure on flows in the catchment (ALS has water available only at Q30). Further investigations are required to determine whether</p>	Best practice construction measures will likely be implemented to mitigate effects during construction.	0	0	+	--

						any changes to flow and physico-chemistry could result in impacts upon biological quality elements, and therefore a precautionary conclusion of potentially non-compliant has been drawn. The WFD assessment also highlights that it is possible that a new discharge of treated effluent could introduce new chemicals or increase the loading of chemicals currently present in the water body.					
	Deliver reliable and resilient water supplies	0	0	+	0	Treated water in excess of the local demand will be transferred through a new transfer pipeline to the Alvington High Level WSR, near Newport, for supply to much of the island. Providing an additional 8.5Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	Construction likely to cause temporary increase in emissions which could impact air quality.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts are likely to occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and minor operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	Option may reduce vulnerability to climate change by providing greater resilience of water supplies and supporting flows of the river Yar by reusing effluent water that is currently discharged to the sea.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The option is partially located within the Isle of Wight National Landscape, and there are no National Parks within 5km of the option. There are likely to be negative effects on visual amenity during construction and possible effects on landscape post construction of pipeline.	Best practice mitigation measures likely to be implemented during construction phase. Possibility for landscaping to restore/enhance visual amenity. However minor and temporary impacts are likely to occur.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	Option is located within a conservation area, minor negative effects during construction likely as excavation will be required for the transfer pipeline. There is potential that the pipeline excavation will impact archaeology. Pipeline immediately adjacent/ partly intersects Clatterford Roman Villa scheduled monument.	Re-route the pipeline or utilise directional drilling to minimise effects on the scheduled monument. Best practice construction likely to be implemented during construction phase. However minor and temporary impacts are likely to occur. Archaeological Watching Brief may be required during the construction phase if archaeology is present.	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are two schools, two cemeteries, five churches, two major roads and two cycle routes within 500m of option. There is no direct land take from these areas. There is likely to be minimal and temporary disturbance effects on users of these sites and the local community during construction. IMD deciles range from 3 to 7 along the pipeline route.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	Option crosses cycle path so diversions/closures likely during construction, excavated areas of path will be reinstated. There are several parks and green spaces that may be temporarily affected during construction by noise and dust pollution.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	+	0	Option reuses effluent water. Pipeline infrastructure required for option which will use materials and excavated material will be generated.	Opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	+	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option crosses major roads, and national cycle routes. There is likely to be moderate and temporary impacts during the construction phase from disruption for users (e.g. road closures, diversions).	Best practice mitigation measures will likely be implemented to minimise effects during construction and roads and cycle routes will be reinstated above the pipeline. However, minor and temporary effects are likely to still occur.	0	-	0	0

1.8. HANTS RURAL (HRZ)

Drought option - demand side (HRZ): NEUBs											
Southern Water											
Non-essential use ban - HRZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water’s sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Minor adverse effect on soils management in dry weather.</p>	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Operation of the option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water’s sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (0.37Ml/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the ban.</p>	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--

Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (HRZ): TUBs											
Southern Water											
Temporary use bans - HRZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water's sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought.</p> <p>The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (0.23Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and wellbeing of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--

	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Groundwater (HRZ): New boreholes at Romsey (4.8MI/d)											
Southern Water											
The existing boreholes and well/adits that supply Timsbury WSW are either out of service or operating below their full capacity due to water quality issues. This option proposes 3 replacement boreholes to increase and recover DO on site. Total source output on delivery of the scheme would be 13.7MI/d. No additional treatment is required. Replacement borehole locations are distant from existing borehole locations and require new pipelines to connect to the WSW.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	--	<p>The following SSSI is located within 1km of the option: River Test (0.88km, 15.38% unfavourable – no change, 84.62% not recorded). There is potential that the construction phase will have indirect effects on the River Test SSSI / GWDTE and potentially the operational phase from increased groundwater abstraction if hydrological links are present.</p> <p>There are no National Nature Reserves within 1km of the option.</p> <p>The option would not cross, or be situated immediately adjacent to, any areas of Ancient Woodland, although there is woodland and priority habitats within close proximity to the option and therefore may be impacts.</p> <p>The HRA screening 2025 screened out all likely significant effects except for Mottisfont Bats SAC which was screened in for construction effects only. This option proposes 3 replacement boreholes to increase and recover DO on site plus new pipelines to connect to the WSW. Environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA). Operation will be within the terms of the existing licence but will increase abstraction over recent actuals. Wetland habitats of Emer Bog SAC cannot be affected (SAC is located on the confining London Clay); European sites associated with Southampton Water cannot be affected due to the presence of HOF constraints at Testwood.</p> <p>The HRA AA (2025) concludes no adverse effects.</p> <p>There are potential adverse operational effects on The Needles, Yarmouth to Cowes and Bembridge Marine Conservation Zones associated with alterations to the flow regime of the River Test.</p> <p>Very low risk of spread / transfer of INNS as the source water is likely to be entirely free of INNS. It is assumed that groundwater is free of INNS, and that accessing it will not permit any additional inputs of INNS.</p>	<p>Best practice mitigation to minimise impacts, including preventing loss of habitat during construction, reinstatement of habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Potential for residual effects on SSSI / GWDTE to remain. Future design will need to undertake ecology surveys.</p> <p>The HRA AA (2025) for Mottisfont Bats SAC concluded that environmental changes associated with construction can be reliably avoided with project-level mitigation.</p>	0	-	0	-

Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	The option is within Grade 3 agricultural land, there may be disturbance to the soil during the construction phase and there may also be a permanent loss as a result of the option. There are historic and authorised landfill sites within 500m with potential to disturb contaminated material during construction.	Reinstate land where possible, however potential for the option to lead to the permanent loss of soil due to the new boreholes. Best practice techniques to prevent potential disturbance of contaminated material during construction.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is located within Flood Zone 1 therefore low risk of flooding at the construction and operational phase. Option is not likely to exacerbate flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	-	<p>There is potential for impacts on the construction phase on the water environment, including groundwater as the option involves drilling new boreholes. There is also potential for impacts on the quality and level of groundwater due to increased abstraction during operation. Water quality is already impacted by nearby activity at a quarry. The option is within the River Test Chalk and Central Hants Lambeth Group WFD ground waterbodies, and also lies within SPZs.</p> <p>The WFD assessment (2025) concludes that this option would be compliant (with low confidence) reflecting that the Stage 2 assessment concluded WFD compliance (with low confidence) for Test - conf Dun to Tadburn Lake waterbody and River Test Chalk groundwater body. As such a minor negative effect has been identified.</p> <p>The WFD assessment highlights that an increase in recent actual abstraction within licence limits may affect the water balance of the River Test Chalk, and have an influence on flows in the River Test. The ALS shows there is restricted water available at Q95, with water available at Q70, Q50, Q30. Changes to the hydrological regime, water quality, river continuity and morphological conditions due to change in baseflow could impact fish and invertebrate populations. However, restricted water availability applies only further downstream, and is protected by a HOF. Therefore, local flow changes, within existing licence, should be acceptable and downstream impacts avoided by HOF (and potentially associated reduction in other sources)</p>	Best practice construction measures to be implemented to mitigate effects therefore residual effects are unlikely for construction phase. Residual effects for operational have the potential to remain.	0	0	0	-
	Deliver reliable and resilient water supplies	0	0	+	0	The option will increase abstraction with a default benefit of 4.8MI/d and therefore may lead to more resilient supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within 2000m. Construction likely to have minor and temporary impact on air quality.	Best practice mitigation measures to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	No carbon data available for the option. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	There is potential for benefits for the surface water environment in relation to resilience to climate change may as it involves abstracting from groundwater resources. However, there is likely to be negative effects for the resilience of groundwater.	Monitor groundwater levels.	0	0	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	-	The option is within the South Hampshire Lowlands NCA. There are likely to be minor negative impacts on landscape character and visual amenity during the construction phase. There is potential for above ground infrastructure therefore operational impacts identified.	Best practice will be implemented to avoid negative effects, ground will be reinstated, however likely to be some disturbance to landscape during works. Implement screening and other best practice techniques to minimise operational impacts.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are listed buildings within 500m and there are conservation areas, listed buildings and a registered park and garden within 2000m. The construction phase may impact the setting of these assets. Excavation may impact archaeology, if present.	Best practice mitigation measures to be implemented to minimise setting effects during construction. Given there is potential to impact buried archaeology, an Archaeology Watching Brief may be required during the construction phase. Further work may be required to determine the significance of the effect depending on the presence / absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option is within 500m of play spaces, playing fields, sports facilities, and a church. There is potential for the community and users of these community facilities to be impacted during the construction phase, however this is likely to be minor and temporary. The option is within IMD decile 7.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	There are play spaces, playing fields, a national cycle route and sports facilities within 500m which may be disrupted during the construction phase. There is potential that the construction phase may lead to disruption to users of public rights of way. Minor impacts on recreation therefore identified for the construction phase.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste, including excavation materials.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	There are major roads and a national cycle trail within 500m. There is potential for these assets, as well as the local road network, to be impacted during the construction phase.	Best practice mitigation measures including a Traffic Management Plan to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Groundwater (HRZ): Remove constraints at Kings Sombourne (2.5MI/d)											
Southern											
This option involves recovering DO through the development of a new borehole and pump capacity to increase the yield from the current 1.5MI/d to the licenced capacity of 4MI/d providing a net benefit of 2.5MI/d. The network is also being reviewed to ensure there are no capacity constraints.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	-	The option is located immediately adjacent to/partially overlapping the River Test SSSI (15.38% unfavourable – no change, 84.62% not recorded There are no other SSSIs within 1km of the option, however, there are a further 14 within 10km (all over 2km from the site). The option would also be situated in a SSSI Impact Risk Zone associated with the River Test SSSI, including an area where all planning applications are highlighted as being a risk to the sensitive features for which the SSSI is notified.	<p>Best practice mitigation to minimise impacts, including preventing loss of habitat during construction, reinstatement of habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat.</p> <p>Standard best-practice measures to prevent site-derived pollutants entering local watercourses and standard measures to avoid / minimise disturbance of bird interest features (e.g. pre-survey, timing of works, screening, etc.) are expected to be fully effective, such that ‘no effects’ on European sites would occur.</p> <p>The HRA AA (2025) concludes that environmental changes affecting Mottisfont Bats SAC, River Test SAC Compensatory Habitat (River Test), Solent and Southampton Water Ramsar/SPA, Solent Maritime SAC, and Solent and Dorset Coast SPA associated with construction can be reliably avoided with project-level mitigation.</p>	0	-	0	-
						There are no Marine Conservation Zones or Marine Protected Areas within 5km of the option.					
						The option would not cross any Ancient Woodlands however there is one area of Ancient Woodland within 1km of the option (at approximately 0.8km).					
						There are no Local Nature Reserves or National Nature Reserves within 1km of the option.					
						Construction activities have the potential to cause adverse effects to the designated sites through dust, vibration and noise pollution. The HRA screening (2025) screens in the below sites: <ul style="list-style-type: none">Solent and Southampton Water RamsarSolent and Southampton Water SPASolent Maritime SACSolent and Dorset Coast SPAMottisfont Bats SAC					
The HRA (2025) concluded that environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA). Operation will be within the terms of the existing licence but will increase abstraction over recent actuals. Wetland habitats of Emer Bog SAC cannot be affected (distance from abstraction, plus the SAC is located on the confining London Clay); European sites associated with Southampton Water cannot be affected through operation due to the presence of HOF constraints at Test surface water WSW.											
The HRA AA (2025) concludes no adverse effects.											
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	-	The option is located on ALC Grade 4 land. There is potential for disturbance to these soils during the construction phase. The option will introduce new, permanent, above ground infrastructure associated with the new borehole and pumping station, having a minor negative effect during operation.	Ground will be reinstated where possible. Best practice techniques to prevent potential disturbance of contaminated material during construction.	0	-	0	-

						The site is not situated on or within 0.5km of any Historic Landfill sites.					
Water	Increase resilience and reduce flood risk	0	---	0	0	The whole site is located within Flood Zones 2 and 3 area, next to the River Test. Due to the this, construction works will be at high risk of flooding, depending on the timing of works, and therefore a major negative effect has been assessed.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	---	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	-	<p>There is potential for impacts on the construction phase on the water environment, including groundwater as the option involves drilling a new borehole.</p> <p>The WFD assessment (2025) concludes that this option would be compliant (with low confidence) reflecting that the Stage 2 assessment concluded WFD compliance (with low confidence) for the Test (conf Anton to conf Dun) waterbody, Sombourne Stream Water Body waterbody and the River Test Chalk groundwater body. As such a minor negative effect has been identified.</p> <p>The WFD assessment highlights that an increase in recent actual abstraction within licence limits may affect the water balance of the River Test Chalk, and have an influence on flows in the River Test. The ALS shows there is restricted water available at Q95, with water available at Q70, Q50, Q30. Changes to the hydrological regime, water quality, river continuity and morphological conditions due to change in baseflow could impact fish and invertebrate populations. However, restricted water availability applies only further downstream, and is protected by a HOF. Therefore, local flow changes, within existing licence, should be acceptable and downstream impacts avoided by HOF (and potentially associated reduction in other sources).</p>	Best practice mitigation measures to be implemented during construction.	0	-	0	-
	Deliver reliable and resilient water supplies	0	0	+	0	The option is likely to increase the resilience of supplies by delivering an additional 2.5Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within the catchment. There may be some negative effects from an increase in emissions associated with the construction phase, however this is not anticipated to be significant.	Best practice mitigation measures likely to be implemented during construction phase, such as the use of low emission vehicles and switch off policies, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	<p>Construction of this option would result in 54 tCO2e capital carbon, causing a minor negative effect on carbon emissions.</p> <p>Operation of this option would result in emission of approximately 33 tCO2e per annum, causing a very minor negative effect on carbon emissions.</p>	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-

	Reduce vulnerability to climate change risks and hazards	0	0	+	-	Increased abstraction may reduce the water sources resilience to potential drought scenarios. However, there may be positive effects due to reduced demand on surface water and provision of an additional yield of 2.5Ml/d, helping to increase the local populations resilience to the impacts of climate change.	Monitor ground water levels.	0	0	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	-	<p>There are no National Landscapes or National Parks within 5km of the option.</p> <p>The option is situated within the Hampshire Downs National Character Area. There are likely to be minor negative impacts on landscape character and visual amenity during the construction phase. There is potential for above ground infrastructure therefore operational impacts identified.</p>	Best practice will be implemented to avoid negative effects, ground will be reinstated, however likely to be some disturbance to landscape during works. Implement screening and other best practice techniques to minimise operational impacts.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	-	<p>There are no registered battlefields with in 1km of the site. There is one Conservation Area within 0.5km of the option (Houghton and Bossington at approximately 0.47km).</p> <p>There are two Scheduled Monuments within 0.5km of the option: Andover-Redbridge canal, Chalk Hill Lock, Horsebridge (at approx. 0.33km) and John of Gaunt's Deer Park Pale (at approx. 0.49km).</p> <p>There are four Listed Buildings within 0.5km of the option: Horsebridge Station (at approx. 0.06km), Horsebridge Mill and Mill House (at approx. 0.08km), Horsebridge House (at approx. 0.13km) Staddle Barn at Horsebridge Farm 75 metres south west of Farm Cottages (at approx. 0.15km).</p> <p>There are no Registered Parks and Gardens within 0.5km of the option.</p> <p>There are no World Heritage Sites within 10km of the option.</p> <p>There are 3 listed buildings and 1 scheduled monument within 1km of the option site.</p> <p>There is a possibility for minor effects on the setting of these heritage assets during construction activity and during operation as new, permanent above ground infrastructure will be built.</p>	Best practice measures to be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	0	<p>The option is expected to have minor positive impacts on the economy through potential provision of local employment that will lead to local spending, combined with supply chain benefits associated with construction related investment.</p> <p>The option would provide additional yield of 2.5 Ml/d, helping to maintain essential public water supplies, and will therefore help maintain public health and well being. Due to the volume of water involved, this has been assessed as having a minor positive effect.</p>	N/A	0	0	+	0

						The LSOA that the site of the option is located within is within the 40% least deprived neighbourhoods in the IMD 2019.					
	Maintain and enhance tourism and recreation	0	-	0	-	<p>The option does not cross/is not located in close proximity to any National Trails, though is situated adjacent to the National Cycle Network and open space.</p> <p>There are no Country Parks within 1km of the site.</p> <p>Construction works and could negatively impact access to the National Cycle Network, and therefore opportunities for tourism and recreation</p>	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. Direct land take of recreational sites to be avoided where possible and land to be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	-
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste, including excavation materials.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	There are no major roads within 500m, though the route runs adjacent the national cycle network. There is potential for this and the local road network, to be impacted during the construction phase.	Best practice mitigation measures including a Traffic Management Plan to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Interzonal transfer (HSW-HRZ): Romsey Town and Broadlands valve expansion (5MI/d)											
Southern Water											
Development and upgrade of existing transfer between Romsey Town & Broadlands valve (HSW-HRZ). This option involves installing a new booster station with 5MI/d flow capacity to an existing transfer to allow bi-directional flow.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	0	<p>The following SSSI is within 1km of the option: River Test (0.52km, 15.38% unfavourable – no change, 84.62% not recorded). The option would be situated within the SSSI Impact Risk Zone associated with the River Test SSSI, where all planning applications outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures and any discharge of water to ground or to surface water are highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>The option is not expected to have adverse effects on any National Nature Reserves. Broughton Down and Danebury Hillfort LNR are both within 2000m. However, given the localised nature of the works, effects are not likely.</p> <p>The option is near to the Solent and Dorset Coast SPA, which overlaps with the Yarmouth to Cowes Marine Conservation Zone. No adverse effects are expected to the MCZ during construction however, due to the distance downstream from the option. No operational effects are expected as there are no pathways for operational effects.</p> <p>There is woodland priority habitats within 500m and there may be minimal indirect impacts on these.</p> <p>The HRA screening (2025) screened in Solent and Dorset Coast SPA, Solent Maritime SAC, Solent and Southampton Water Ramsar and SPA, and River Test SAC Compensatory Habitat (River Test) for construction only with all other sites screened out. The screening noted that construction is required in parkland within 500m of the River Test though significant and/or significant adverse effects are certainly avoidable with established measures / normal best-practice, although these must necessarily be accounted for at AA (hence 'screened in').</p> <p>There is no additional risk for the transfer/ movement of INNS.</p>	<p>Best practice methods to be implemented to minimise disturbance effects. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys.</p> <p>HRA screening identified that significant effects are avoidable with established measures/normal best practice at Solent and Dorset Coast SPA, Solent Maritime SAC, Solent and Southampton Water Ramsar and SPA, and River Test SAC Compensatory Habitat (River Test), although these must be accounted for at AA.</p> <p>The HRA AA (2025) concluded that potential effects can be reliably avoided with established project-level measures.</p>	0	-	0	0
		0	-	0	0	<p>The option is located in Grade 3 and Grade 4 agricultural land. There is potential for minor disturbance during the works. There are no historic or authorised landfill sites within 500m.</p>	<p>Ground will be reinstated therefore residual effects unlikely.</p>	0	0	0	0

Water	Increase resilience and reduce flood risk	0	-	0	-	Part of the option is located within Flood Zone 2 and 3 therefore potential for flood risk to affect construction and operation.	Ensure best practice techniques during construction and operation to minimise flood risk.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The site is located within 500m of Wallop Brook, which is a main river, and is designated as a chalk river. There is likely to be minimal risk of impacting the quality of these rivers during the construction phase given works are localised. The option is not located within a SPZ. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Implement best practice to minimise any impacts on nearby water receptors.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	The option will increase the resilience of supplies by providing an additional 5Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	There are no AQMAs within 2000m. There is likely to be very minimal impacts on air quality during construction given the nature of the works therefore neutral effects have been identified.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Water levels are not anticipated to be significantly affected therefore neutral effects have been identified for climate resilience.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	There are no National Landscape's within 5km of the option, however the New Forest National Park is 4.63km from the option. The option is located in the Hampshire Downs NCA. There are likely to be minor impacts on the landscape as a result of the works. Operational impacts are not anticipated given the works are minor, part of the option is within an airfield and the other at an existing building.	Best practice measures to be implemented to minimise effects during construction although temporary effects during construction may remain.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	There are listed buildings and a conservation area within 500m of the part of the option. There is not anticipated to impacts on the setting of these historic assets given the localised nature of the works. No impacts on archaeology are anticipated.	N/A	0	0	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	0	0	Part of the option is within Middle Wallop Airfield and there is a school within 500m of the second part of the option. No impacts on the local community are anticipated given the nature of the works. The option is within IMD decile 7 and 8.	N/A	0	0	0	0
	Maintain and enhance tourism and recreation	0	0	0	0	No effects on recreation are anticipated as a result of the works given their localised nature.	N/A	0	0	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste.	Likely to be limited opportunity to implement sustainable design measures to reduce the impact, therefore it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	There are major roads within 2000m. No effects are anticipated given the nature of the works.	N/A	0	0	0	0

1.9. HANTS WINCHESTER (HWZ)

Drought option - demand side (HWZ): NEUBs											
Southern Water											
Non-essential use ban - HWZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water's sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc. This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.	N/A	0	0	+	0
	Soil	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Minor adverse effect on soils management in dry weather.	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to cause or exacerbate flooding elsewhere.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water's sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources. The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reduction in demand for water (0.99Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be	N/A	0	0	+	---

						no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.					
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (HWZ): Reduce transfer to other commercial customers											
Southern Water											
Drought option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (by 0.05Ml/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	This option is only to be to be implemented during severe drought conditions. There may be some positive effects from a reduction in emissions associated with water supply / treatment, however this is not anticipated to be significant.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been identified at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought	N/A	0	0	+	0

						conditions, it is not resulting in the long-term resilience of the local environment.					
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Drought option - demand side (HWZ): TUBs											
Southern Water											
Temporary use bans - HWZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water's sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought.</p> <p>The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
	Soil	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
	Water	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
Water	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (1.93Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the temporary use ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban	N/A	0	0	+	--

						would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.					
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Bulk import (HWZ): T2ST to Yew Hill (95MI/d)											
Southern Water											
This is the main pipeline for the bulk transfer of water from Thames Water (the Thames to Southern Transfer scheme (T2ST)), with volumes essentially derived through delivery of the South East Strategic Reservoir Option (SESRO) by Thames Water.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	0	<p>The option is part of a wider 56km transfer route: Thames to Southern Transfer (T2ST), connecting a new Water Treatment Works located to the west of A34, near Drayton, to the existing Yew Hill Water Supply Reservoir near Otterbourne. This option is for a pipeline between Sparsholt (Crabwood Reservoir) and Otterbourne (Yew Hill Reservoir) at the southern section of the T2ST scheme, which would be approximately 3km in length.</p> <p>HRA screening of the wider T2ST scheme identified that with appropriate mitigation, no likely significant effects are identified for Natura 2000 and National Site Network sites. The HRA screening for the wider T2ST scheme identified the potential for impacts on SSSIs, a Local Wildlife Site and ancient woodland sites and recommended that these sites are avoided. Construction of the pipeline between Sparsholt (Crabwood Reservoir) and Otterbourne (Yew Hill Reservoir) is not expected to intersect with designated biodiversity sites, ancient woodland sites or Local Nature Reserves (LNR). The River Itchen SAC and SSSI is located 2.2km east of the option at its nearest point, which is separated from the pipeline route by existing urban development and the M3 motorway. The Crabwood SSSI and LNR is located 0.7km west of the option at its nearest point. The nearest ancient woodland sites are located 0.7km west of the option. More generally, there could be habitat loss and disturbance for species during construction, however, land will be reinstated above the pipeline and adverse effects from construction are considered to be minor and temporary. Operation of the pipeline is unlikely to have effects on local biodiversity.</p> <p>HRA Screening (2025) screened in River Itchen SAC, River Lambourn SAC, River Test SAC Compensatory Habitat (River Test), Kennet Valley Alderwoods SAC, Solent and Dorset Coast SPA, Kennet and Lambourn Floodplain SAC, Solent Maritime SAC, Solent and Southampton Water SPA, and Solent and Southampton Water Ramsar for construction effects only.</p> <p>The HRA AA (2025) concludes no adverse effects.</p>	<p>Option routing should ensure designated sites are avoided. Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat.</p> <p>Construction phase effects are considered to be mitigatable through use of best practice guidelines such as use of a robust CEMP.</p> <p>The HRA AA (2025) concluded that potential effects can be reliably avoided with established project-level measures.</p>	0	0	0	0

						Low risk of transfer of INNS as potable water is likely to be entirely free of INNS once treated. Construction phase risk of INNS is considered to be low.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	Option route for pipeline between Sparsholt (Crabwood Reservoir) and Otterbourne (Yew Hill Reservoir) is predominately located on grade 3 agricultural land. Temporary disturbance to these soils during construction but the majority would be reinstated above the pipeline. Pollution of soils may be possible during construction	Land reinstated upon completion. Best practice construction measures to be implemented to avoid pollution of soils and groundwater.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	Option is located entirely within Flood Zone 1. Effects from flooding during construction and operation are considered unlikely.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	0	0	Indicative route of the option for pipeline between Sparsholt (Crabwood Reservoir) and Otterbourne (Yew Hill Reservoir) does not cross watercourses or Source Protection Zones. WFD Assessment for the wider T2ST scheme identified that there are potential construction and operation effects for one waterbody (River Test Chalk, not present for this option), however it was identified that these effects can be mitigated and further WFD assessment is therefore not required. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice mitigation measures likely to be implemented during construction. Pollution Prevention and control measures to reduce likelihood of contaminants leaching through soil and entering groundwater. Bedding material designed so as not to form preferential pathway for groundwater.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+++	0	The scheme will improve water transfer across regions, improving water resource management and resilience of supply. The option is likely to increase water supplies significantly with 94.83ML/d.	N/A	0	0	+++	0
Air	Reduce and minimise air emissions	0	-	0	0	Option does not pass through any AQMAs but depending on the route may pass within 2km of the Winchester Town Centre AQMA. Vehicle emissions and dust from construction activities will be generated but effects will be short-term.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation of the pipeline. There is no carbon data available for this option.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon	0	-	0	-

						The option is estimated to have minor construction and minor operational emissions.	footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.				
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The option contributes to efficient use of water resources, providing protection against future drought scenarios (and potentially avoids abstractions in more vulnerable areas).	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The indicative route for pipeline between Sparsholt (Crabwood Reservoir) and Otterbourne (Yew Hill Reservoir) is within 0.8km of the Farely Mount Country Park and 1.8km of the South Downs National Park. Potential for impacts on landscape character and visual amenity during construction.	Best practice measures i.e. landscape screening will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Land reinstated upon completion.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	Option is within 500m of multiple listed buildings and Scheduled Monuments. Construction may affect the setting of the historic assets, however this will be temporary. Potential impact on buried archaeology, if present.	Option routing should be considered to avoid designated heritage sites. Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	0	0	The indicative route for pipeline between Sparsholt (Crabwood Reservoir) and Otterbourne (Yew Hill Reservoir) crosses the South Winchester golf course. Construction may require the closure of the golf course, which is likely to cause noise and visual disruption for users of this asset. Land will be reinstated following construction. Potential for disturbance to the local community to be moderate yet temporary in nature.	Option routing should be considered to avoid crossing public opens space, if possible. Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	--	0	0	The indicative route for pipeline between Sparsholt (Crabwood Reservoir) and Otterbourne (Yew Hill Reservoir) crosses the South Winchester golf course and may cross public paths. Therefore, there may be some moderate and temporary effects on recreation during construction.	Option routing should be considered to avoid crossing the golf course and paths, if possible Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary	0	-	0	0

							effects are likely to still occur.				
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste. Excavated material is likely to be reused onsite.	Opportunity to implement sustainable design measures and reuse excavated material on site, to reduce impact. Minor negative construction effects will likely remain. Sourcing of materials locally where possible.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The indicative route for pipeline between Sparsholt (Crabwood Reservoir) and Otterbourne (Yew Hill Reservoir) crosses the A3090 road. Potential road closures may cause disruption. Operational effects are unlikely as the pipeline will be underground.	Best practice measures will likely be implemented to minimise disturbance during construction. Use of directional drilling where possible to minimise disruption. However, minor and temporary effects are likely to still occur.	0	-	0	0

Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15MI/d)											
Southern Water											
Transfer from Otterbourne to Andover to Kingsclere. This scheme is designed to support network improvements and/or the strategic scheme from IoW/South Hampshire.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Construction Effects		Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The option crosses the River Test (15.38% unfavourable – no change, 84.62% not recorded) and Bransbury Common (100% unfavourable – recovering) SSSI's. The following SSSI's are also located within 1km of the option: Chilbolton Common (0.91km, 66.67% unfavourable – recovering, 33.33% not recorded), Brockley Warren (0.71km, 66.67% unfavourable – declining, 33.33% not recorded), and Crab Wood (0.76km, 100% not recorded).	Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys. Undertake HRA AA to address likely significant effects identified for various N2K sites. HRA screening identified that significant effects are avoidable with established measures/normal best practice at River Itchen SAC, Solent and Dorset Coast SPA and Solent and Southampton Water Ramsar and SPA, although these must be accounted for at AA. The HRA AA (2025) for these sites finds that potential effects can be reliably avoided with established project-level measures.				
		0	--	0	0	The option would cross SSSI Impact Risk Zones associated with River Test, Bransbury Common and Chilbolton Common SSSI's, and the River Itchen SSSI, including where pipeline development and discharge of water to ground or surface water is highlighted as being a risk to the sensitive features for which the SSSI's are notified. The option would also cross Impact Risk Zones associated with other SSSI's, including the River Test, Brockley Warren, River Itchen, and Crab Wood SSSI's, where the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified in the area of the SSSI Impact Risk Zones which the option is located crosses. Potential impacts on SSSI's due to construction include noise disturbance, dust emissions and habitat destruction. Impacts mitigatable through best practice construction techniques. The option is not expected to have adverse effects on any National Nature Reserves. The option would not cross any, however would be situated immediately adjacent to, 2 areas of Ancient Woodland. Potential impacts on Ancient Woodlands due to construction include noise disturbance, dust emissions and habitat destruction. Impacts are mitigatable through best practice construction techniques and pipe jacking methods to avoid tree roots. The option also intersects priority habitat including coastal and floodplain grazing marsh, deciduous woodland and lowland calcareous grassland. The HRA screening (2025) screens in River Itchen SAC, Solent and Dorset Coast SPA, Solent and Southampton Water SPA/ Ramsar for		0	--	0	0

						appropriate assessment for construction only. There are no pathways for operational effects. The HRA AA (2025) concludes no adverse effects. High level construction phase INNS risk, as pipeline route passes through sensitive habitats. No INNS risk during operational phase as water is treated and free of INNS.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	Agricultural land classification ranges from Grade 3-4 and non-agricultural. There are historic landfill sites located within 500m, however given the distance from the route, no effects are anticipated.	Land reinstated upon completion. Best practice construction measures to be implemented, however residual construction effects likely.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	The option predominately lies within flood zone 1, but does pass through flood zones 2 and 3. There is potential for construction phase to impact flood risk. The option is not likely to effect flood risk.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The option lies within SPZ2 and intersects the River Itchen Chalk and River Test Chalk WFD groundwater bodies. Chalk groundwaters are a sensitive receptor. Groundwater and surface water pollution is possible during construction. The option also intersects several nitrate vulnerable zones and one WFD river waterbody. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice mitigation measures likely to be implemented during construction.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	The option will increase transfer capacity (10.62Ml/d), providing increased resilience.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within 2000m. There is likely to be impacts on air quality during the construction phase.	Best construction practices and pollution prevention and control measures e.g. damping.	0	-	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	There is not anticipated to be any effects on the climate resilience of the local environment as a result of this option as water levels are not likely to be significantly affected.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The option lies within the Hampshire Downs National Landscape Character Area. The following National Landscape is located within 5km of the option: North Wessex Downs (3.26km). The following National Park is located within 5km of the option: South Downs (3.18km). Construction is likely to cause visual disturbance, but the pipeline will be buried once operational.	Implement temporary screening during construction. Reinstate landscape to original state once pipeline is buried.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The option intersects a Grade II listed building and is within close proximity to Lainston House Registered Park and Garden. There are two further conservation areas and a number of listed buildings within 500m. There is potential for the construction phase to affect the setting of these historic assets. There is potential that the pipeline excavation will impact buried archaeology, if present.	Re-route the pipeline or utilise direction drilling to avoid direct effects on historic assets. Best practice methods likely to be implemented to minimise effects on the setting of historic assets. Archaeology Watching Brief may be required depending on the presence or absence of archaeology along the route.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are play spaces, churches and religious grounds, schools, playing fields, sports facilities, an airfield, and a golf club within 500m. The pipeline also passes through a golf course. There is potential that the community and users of these community facilities will be disrupted during the construction phase, however this is anticipated to be minor and temporary. IMD deciles range from 8 to 10 along the pipeline route.	Best practice measures will likely be implemented to minimise disturbance during construction. However, effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The pipeline passes through a golf course and there are also other recreational facilities including sports facilities, playing fields and play spaces within 500m. The pipeline may also lead to the diversion of public rights of way during the construction phase.	Best practice measures will likely be implemented to minimise disturbance during construction. However, effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Construction will require the use of materials and will generate waste, including excavated materials.	Source materials locally and reinstate dug materials where possible.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline intersects a major road. There is not anticipated to be any impacts on railways, national cycle routes or national trails. Moderate and temporary effects have been identified for the construction phase.	Use of directional drilling where possible to minimise disruption and other best practice methods, however minor residual effects likely to remain.	0	-	0	0

1.10. HANTS SOUTHAMPTON EAST (HSE)

Drought option - supply side (HSE): Candover (22MI/d)											
Southern Water											
To allow up to 27MI/d and 3750MI/year (average of 20.8MI/d over 6 months) to be abstracted from the Preston Candover boreholes. Abstraction would be increased over a period of several days up to the full required discharge rate so as to prevent a sudden increase in flow in the River Itchen. Abstraction and discharges will only be permitted when flows in the River Itchen at Allbrook and Highbridge are at or below a trigger flow of 220MI/d. 2MI/d environmental support (within the limits above) at the existing discharge to the Candover Stream. Operated during, and potentially after, discharges to the River Itchen.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	---	<p>The option crosses the River Itchen SSSI (5% favourable, 15% unfavourable - recovering, 10% unfavourable - no change, 10% unfavourable – declining, 15% partially destroyed, 45% not recorded) and River Itchen SAC, both are GWDTE. The River Itchen is also a chalk river. There is potential for construction of a temporary pipeline on these sites as well as operational effects due to abstraction and discharges into the River Itchen.</p> <p>The option would cross SSSI Impact Risk Zones associated with the River Itchen SSSI, including areas where pipeline development and discharges to ground or surface water are highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>The option is not expected to have any adverse effects on National Nature Reserves or Marine Conservation Zones.</p> <p>There are priority habitats and woodland within 500m and Ancient Woodland within 2000m, however they are not likely to be affected by the option. The temporary pipeline associated with the option passes through woodland including deciduous woodland Priority Habitat and other Priority Habitats including coastal and floodplain grazing marsh and lowland fens, therefore potential for direct effects during construction.</p> <p>The HRA Report of the Revised draft Drought Plan 2022 (2025) considers the results of HRA Appropriate Assessment for the Candover Augmentation Scheme Drought Order, which concluded that water-sensitive habitats/species that could be adversely affected by the Drought Order implementation were the chalkstream habitat, Southern damselfly and White-clawed crayfish. There is also a potential impact on the populations in Candover Brook, where breeding populations have</p>	<p>Best practice methods to be implemented to minimise disturbance effects and habitat loss including refining pipeline alignment to avoid direct impacts on designated sites and loss of woodland habitat, in particular Ancient Woodland. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys. Construction works will follow best practice guidelines, construction dust could be mitigated through wet cutting/crushing and vacuum drilling, upgrading plant to minimise particulate production could be implemented.</p> <p>The Environmental Assessment of the Candover Augmentation Scheme Drought Order (2025) reports that a programme of mitigation and monitoring has been agreed with the Environment Agency and Natural England for the Drought Order as part of the Section 20 Agreement. Appendix D of the Environmental Assessment identifies mitigation measures to improve the resilience of habitats and species that would potentially be impacted by operation of the drought order option. Potential generic mitigation measures are also proposed to address adverse effects of the drought order, including temporary reduction or cessation of the terms of the drought order; fish distress monitoring and response plan; and protection of ‘spate flows’ following periods of heavy rain to flush sediment/pollutants from the system or promote fish passage.</p>	0	-	0	---/?

						been recorded. Overall, it was considered that, based on available evidence, adverse effects cannot be ruled out on the conservation objectives of certain qualifying features of the River Itchen SAC and therefore on overall site integrity. The HRA Appropriate Assessment concluded that an adverse effect on the site integrity of the River Itchen SAC due to implementation of this option could not be ruled out. This conclusion, and the consequent need to provide compensation measures under the Habitats Directive, is therefore reflected in the assignment of a major adverse residual effect for this option. A programme of mitigation and monitoring has been agreed with the Environment Agency and Natural England for the Drought Order as part of the Section 20 Agreement The drought order is not considered to favour the propagation or dispersal of any known non-native invasive species (INNS) present within the hydrological zone of influence.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	The option is predominately within Grade 3 agricultural land and minor area of Grade 4 although the pipeline is aligned along existing roads for much of its length. There is potential for disturbance to these soils during the construction phase of the pipeline associated with the option. The pipeline also passes through a historic landfill site (although it is aligned along an existing road in this section) and as such, there is potential for the construction phase to disturb contaminants.	Land reinstated upon completion. Best practice construction measures to be implemented for working within or within close proximity to landfill sites.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	The option is predominately within Flood Zone 1, however there are areas of Flood Zones 2 and 3. The construction phase may therefore be at risk but operational effects are unlikely given the pipeline is buried.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	The option will require works within or adjacent to the River Itchen, a main river and chalk river, as well as other waterbodies. There is potential for contamination effects from the construction phase. Operational impacts are also likely due to discharges. The option is not within a SPZ, however there are SPZs within 2000m. The option is within the River Itchen Chalk WFD groundwater body. The WFD assessment (2025) of the Southern Water Drought Plan 2022, highlights that with regard to the Candover Brook waterbody, there is a low risk of temporary deterioration to WFD status and that risks to the River Itchen SAC cannot be ruled out. Whilst for the Itchen waterbody, it highlights again that risks to the River Itchen SAC cannot be ruled out. As such, and in line with the SEA assessment (2025)	Best practice mitigation measures likely to be implemented during construction. The Candover Drought Order Mitigation package includes mitigation measures to improve the resilience of WFD related species that would potentially be impacted by operation of the drought order option.	0	0	0	--

						of the Drought Plan 2022, a moderate negative effect has been identified during operation.					
	Deliver reliable and resilient water supplies	0	0	+	0	The option will likely increase the resilience of supplies by providing 21.96Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within 2000m. There are likely to be minor and temporary impacts on air quality during the construction phase.	Best practice mitigation measures implemented during construction, however minor on-air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	No embodied or operational carbon data available. Based on an estimate, it is anticipated that there will be minor construction and minor operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	The option will abstract water from a groundwater source which may relieve stresses on the freshwater environment. As such, the resilience of the freshwater and local environment to climate change may benefit, however there may be negative effects for groundwater.	Monitor groundwater levels	0	0	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The option is partly within the South Downs National Park. Minor negative effects during construction likely as excavation will be required for the pipeline, having a negative effect on landscape.	Best practice will be implemented to avoid negative effects, ground will be reinstated where possible, however likely to be some disturbance to landscape during works.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The option is within The Grange, Northington Grade II* Registered Park and Garden and is within close proximity to listed buildings. The Avington Park Registered Park and Garden is also within 500m as well as conservation areas, and scheduled monuments are present within 2000m. Construction may have direct impacts on the registered park and garden therefore moderate negative effects have been identified. The construction phase may also affect the setting of the other historic assets, however this is likely to be temporary and minimal. There is potential for the pipeline excavation to impact buried archaeology if present.	Re-route the pipeline to avoid direct effects on the registered park and garden. Best practice mitigation measures to be implemented to minimise setting effects during construction. Screening could be implemented to minimise any setting impact of plant. Given there is potential for the pipeline to impact buried archaeology, an Archaeology Watching Brief may be required during the construction phase. Further work may be required to determine the significance of the effect depending on the presence / absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are churches and religious grounds, cemetery, public parks or gardens, and a school within 500m. There is potential that the community and users of these community facilities will be disrupted during the construction phase. The option is within IMD deciles 6.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option is partly within the South Downs National Park. There are public parks or gardens within 500m. There may be temporary disturbance to users of footpaths and other public rights of way during the construction phase. Minor effects have been identified for recreation.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste during construction, including excavated materials.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The option does not intersect major roads, railways, national trails or national cycle routes. There is likely to be minor disruption to the local road network during the construction phase.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Drought option - demand side (HSE): NEUBs											
Southern Water											
Non-essential use ban – HSE WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water’s sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Minor adverse effect on soils management in dry weather.</p>	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Operation of the option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water’s sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (5.41Ml/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the ban.</p>	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 MI/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--

Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - supply side (HSE): Lower Itchen											
Southern Water											
Drought Order to reduce the proposed abstraction licence 'hands off' flow condition from 198MI/d to 160MI/d, as measured at Allbrook and Highbridge gauging station and Drought Order to reduce the 'hands off' flow condition from 194MI/d to 150MI/d, as measured at Portsmouth Water's Lower Itchen abstraction licence gauging station.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	0	---	<p>The option would be situated partially within the River Itchen SSSI (5% favourable, 15% unfavourable – recovering, 10% unfavourable – no change, 10% unfavourable – declining, 15% partially destroyed, 45% not recorded) and SAC site, both of which are GWDTE, therefore impacts from abstraction have the potential to occur during the operational phase. The River Itchen is also a chalk river therefore potential for impacts from surface water abstraction, however this will depend on exact location of the abstraction point.</p> <p>The option would also be situated within SSSI Impact Risk Zones associated with the River Itchen SSSI, including areas where all planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures, and any discharge of water or liquid waste that is discharged to ground (i.e. to seep away) or to surface water, such as a beck or stream have been highlighted as being a risk to the sensitive features for which the SSSI has been notified.</p> <p>There are no National Nature Reserves within 1km of the option. The option is unlikely to have any effect on Marine Conservation Zones.</p> <p>There are areas of Ancient Woodland in the vicinity of the option, although as the exact location it is unknown whether the option would cross or lie immediately adjacent to these. Therefore, it is concluded that there may be an adverse effect on Ancient Woodlands during construction of the option, although this is likely mitigable.</p> <p>The HRA Report for the Revised Southern Water Drought Plan 2022 (2025) considers the results of HRA Appropriate Assessment for the Lower Itchen Drought Order, which concluded that an adverse effect on the site integrity of the River Itchen SAC due to implementation of this option could not be ruled out. This conclusion, and the consequent need to provide compensation measures under the Habitats Directive, is</p>	<p>Monitor groundwater and river levels and implement measures to reduce impacts on ecology, however residual effects likely to remain during operation.</p> <p>The Environmental Assessment of the Lower Itchen Drought Order (2025) reports that a programme of mitigation and monitoring has been agreed with the Environment Agency and Natural England for the Drought Order as part of the Section 20 Agreement. A Lower Itchen Drought Order Mitigation Package has been prepared consisting of a package of in-river restoration and mitigation measures for the Itchen, including a programme of measures aimed at increasing the resilience of the Itchen valley Southern damselfly population, and catchment-wide work, aimed at addressing wider catchment pressures so as to increase resilience to synergistic and compounding effects. Potential generic mitigation measures are also proposed to address adverse effects of the drought order, including temporary reduction or cessation of the terms of the drought order; fish distress monitoring and response plan; and protection of 'spate flows' following periods of heavy rain to flush sediment/pollutants from the system or promote fish passage.</p>	0	0	0	---/?

						therefore reflected in the assignment of a major adverse residual effect for this option. Specific measures to mitigate adverse effects have been identified in the Lower Itchen Drought Order Mitigation Package.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	The option is located within Grade 5 agricultural land. Given the option does not involve construction, neutral effects are identified.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is within Flood Zones 2 and 3, however given the option is a drought order, flood risk is not likely to be an issue therefore neutral effects are identified.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	0	--	<p>The option is adjacent to the River Itchen, a main river and chalk stream. No construction associated with this option therefore neutral construction effects. There is potential for negative effects on the water environment as the option aims to permit the continuation of abstraction during lower flows by reducing the hands off flow condition.</p> <p>The WFD assessment (2025) of the Southern Water Drought Plan 2022, highlights that with regard to the Itchen waterbody, there is a medium risk of temporary deterioration in status and that risks to the River Itchen SAC cannot be ruled out.</p> <p>The SEA assessment (2025) of the Southern Water Drought Plan 2022 highlights that whilst adverse effects on SAC site integrity cannot be ruled out, detailed ecological assessment concluded that the reduction in river flow due to the drought order would have a very minor effect on river flow velocities and river water depths downstream of the abstraction. During extreme drought, groundwater heads in the chalk aquifer would already be low and any incremental effect of additional abstraction due to the drought order would not affect the hydrological functioning of wetlands, or recovery after the drought. Consequent effects on flora and fauna are assessed as low to negligible: there would be no likely significant effects on the River Itchen SAC features of Bullhead, White-clawed Crayfish, Brook Lamprey, and Otter. Impacts on the Ranunculus plant species and underlying chalk river habitat, the Southern Damselfly and River Itchen salmon would be minor and reversible. Any incremental effects from the additional abstraction are not likely to cause permanent damage to the River Itchen SSSI features. This includes the SSSI wetland communities and assemblages of breeding birds.</p>	Continue to monitor river levels. Monitor groundwater and river levels. The Environmental Assessment of the Lower Itchen Drought Order (2022) reports that a programme of mitigation and monitoring has been agreed with the Environment Agency and Natural England for the Drought Order as part of the Section 20 Agreement.	0	0	0	--

	Deliver reliable and resilient water supplies	0	0	++	0	The resilience of the water environment is likely to increase as abstractions will continue in lower flows. It is anticipated to result in benefit of 27.89Ml/d.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	0	0	0	There are 2 AQMA's within 5km of the abstraction point however no air quality effects are anticipated as a result of the option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data available for the option. Given this is a drought order option, carbon emissions are estimated to be zero and therefore neutral effects are identified.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	0	-	Given the option aims to continue abstractions during low flow periods, by reducing the hands-off flow conditions, there is likely to be a negative effect on the climate resilience of the local environment.	Continue to monitor river levels.	0	0	0	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	-	The option is partially within the South Downs National Park and would have a minor visual effect on the landscape during operation, due to hydrological impacts of the drought order.	N/A	0	0	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	There are no historic assets within 500m, however there are listed buildings within 2000m. No effects on the historic environment are anticipated as a result of the option.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+++	0	The drought permit would provide additional yield, helping to maintain essential public water supplies during drought conditions, and will therefore help maintain public health and well being. Due to the volume of water involved, this has been assessed as having a major positive effect. There are no community facilities within 500m. The option is located within IMD decile 8.	N/A	0	0	+++	0
	Maintain and enhance tourism and recreation	0	0	0	0	No effects on recreation are anticipated as a result of this option.	N/A	0	0	0	0
Material Assets	Minimise resource use and waste production	0	0	0	-	The option does not require any new infrastructure and will not generate any additional waste therefore neutral effects have been identified.	N/A	0	0	0	-

	Avoid negative effects on built assets and infrastructure	0	0	0	0	There are major roads, railways and national cycle routes within 500m. No effects on built assets and infrastructure are anticipated as a result of this option.	N/A	0	0	0	0
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Drought option - demand side (HSE): Reduce transfer to other commercial customers											
Southern Water											
Drought option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (0.2Ml/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been estimated for construction and operation at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought conditions, it is not resulting in the long-term resilience of the local environment.	N/A	0	0	+	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Drought option - demand side (HSE): TUBs											
Southern Water											
Temporary use bans - HSE WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water's sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought.</p> <p>The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
	Soil	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
	Water	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
Water	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (3.38Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the temporary use ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water’s Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water.	N/A	0	0	+	--

						The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.					
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Bulk import (HSE): PWC Source A to Otterbourne WSW (21Ml/d)											
Southern Water											
A new additional potable water transfer of 21Ml/d capacity using a new pipeline from Portsmouth Water Source A to Otterbourne. This scheme is dependent on development of Havant Thicket reservoir to provide the water.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	0	The option crosses the River Itchen SAC and SSSI (5% favourable, 15% unfavourable – recovering, 10% unfavourable – no change, 10% unfavourable – declining, 15% partially destroyed, 45% not recorded). The option would also be situated within the SSSI Impact Risk Zone associated with the River Itchen SSSI, including areas where pipeline development and discharge of water to ground or to surface water is highlighted as being a risk to the sensitive features for which the SSSI is notified.	Option routing should be considered to avoid crossing SSSI, where possible. Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys. Construction phase significant effects for the River Itchen SAC, Solent and Dorset Coast SPA, Solent and Southampton Water SPA/Ramsar and Solent Maritime SAC are considered to be mitigatable through use of best practice guidelines such as use of a robust CEMP. Mitigation measures will need to be developed in more detail and secured during the project-stage HRA when a detailed design and construction method statement is available. The HRA AA (2025) for River Itchen SAC, Solent and Dorset Coast SPA, Solent and Southampton Water SPA/Ramsar and Solent Maritime SAC, the AA concludes that potential effects can be reliably avoided with established project-level measures.	0	-	0	0
						There are no NNR’s located within 1km of the option. The option crosses 1 area of Ancient Woodland and is adjacent to 9 others. Adverse effects are likely through noise, dust and vibration during construction and resultant physical damage or loss of land/habitat.					
						It is proposed to tunnel beneath the river and woodland, and there are potential risks associated with construction impacts and permanent impacts to groundwater flows and changes to floodplain hydrodynamics.					
						Construction phase effects from INNS is considered to be unlikely assuming best practice guidance is followed and work sites are set back a suitable distance from watercourses. No INNS risk transfer identified during operational phase as water is treated and is likely to be entirely free of INNS.					
						The HRA screening (2025) screened in River Itchen SAC, Solent and Dorset Coast SPA, Solent and Southampton Water SPA/Ramsar and Solent Maritime SAC for the construction phase. For all of these sites environmental changes are associated with construction only but can be reliably avoided with project-level mitigation, although these must necessarily be accounted for at AA (hence 'screened in'). No pathways for operational effects are identified.					
The HRA AA (2025) concludes no adverse effects.											
The Solent and Dorset Coast SPA, Solent and Southampton Water SPA/Ramsar and Solent											

						Maritime SAC overlap with The Needles, Yarmouth to Cowes and Bembridge Marine Conservation Zones, however no adverse effects are expected on the MCS during construction with established measures/normal best practice, and no operational pathways are identified by the HRA.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	Pipeline route indicates that option route may cross a historic landfill site, and other historic landfill sites are located within 500m. There is potential to disturb contaminated material during construction. Option is predominately located on grade 3 agricultural land, whilst crossing multiple areas of grade 2 and grade 4 agricultural land. Likely disturbance to these soils during construction.	Land reinstated upon completion. Best practice construction measures to be implemented to avoid pollution of groundwater from landfill, however residual construction effects likely.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	--	0	0	Option is located predominately within Flood Zone 1, whilst also crossing watercourses and Flood Zones 2 and 3 on occasions. This may have an effect on construction.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	0	Option crosses the River Itchen, in multiple locations. Option passes through SPZ Zones I, II and III. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice mitigation measures likely to be implemented during construction. However minor and temporary impacts may remain.	0	-	0	0
	Deliver reliable and resilient water supplies	0	0	++	0	Option will facilitate water supply once operational, through an additional bulk import from PWC Gaters Mill to Otterbourne distribution network using spare capacity of existing 30MI/d main, dependent on resource development (World's End WTW) by PWC. Capacity of 21MI/d.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	0	Option does not pass through any AQMAs but is within 500m of the Eastleigh AQMA. Construction is likely to have minor and temporary impact.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Water levels not predicted to be significantly affected therefore, unlikely to affect resilience of the local environment to climate change.	N/A	0	0	0	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	Part of the option located within the Itchen Valley Country Park and adjacent to the South Downs National Park. The option is within the South Hampshire Lowlands Character Area. Potential for impacts on landscape character and visual amenity during construction.	Best practice measures i.e. landscape screening will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Land reinstated upon completion.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	---	0	0	Option within 500m of multiple listed buildings and Scheduled Monuments. Option crosses Bishopstoke Conservation Area and within 500m of Itchen Valley Conservation Area. Construction may affect the setting of the historic assets, however this will be temporary. Potential impact on buried archaeology, if present.	Option routing should be considered to avoid heritage assets, where possible. Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	--	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	0	0	Option crosses within 500m of public parks and gardens, playing fields, play spaces, allotments and tennis courts. Disturbance to the local community will be moderate yet temporary in nature.	Option routing should be considered to avoid crossing school, if possible. Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	--	0	0	Option is within the Itchen Valley and adjacent to the South Downs National Park. Option is within 500m of public parks and gardens, playing fields, play spaces, allotments and tennis courts. Therefore, there may be some moderate and temporary effects on recreation during construction.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste.	Opportunity to implement sustainable design measures and reuse excavated material on site, to reduce impact. Minor negative construction effects will likely remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	Option crosses rail tracks and roads (including the B3335 and B3037). The pipeline would require tunnelling under two railway sections. Likely to be moderate and temporary impacts during the construction.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur. Directional drilling under the railway is likely.	0	-	0	0

Bulk import (HSE): Havant Thicket Reservoir to Otterbourne WSW (90MI/d)													
Southern Water													
A new raw water transfer (Pumping Station, Pipeline & Break Pressure tank) between Havant Thicket Reservoir and Otterbourne WSW. The capacity of the first section is for 90MI/d to the mid point and a possible connection to Portsmouth Water.													
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects			
		+	-	+	-			+	-	+	-		
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	---	<p>The pipeline passes through the River Itchen SSSI (5% favourable, 15% unfavourable – recovering, 10% unfavourable – no change, 10% unfavourable – declining) and River Itchen SAC, both of which are GWDTE. There is potential for direct effects during the construction phase on the site.</p> <p>Waltham Chase Meadows SSSI (0.51km, 100% favourable) —is within 1km and is also both GWDTE. The Botley Wood and Everett’s and Mushes Copses SSSI (0.64km, 75% unfavourable – recovering), Portsdown SSSI (0.19km, 100% partially destroyed), Hook Heath Meadows SSSI (0.71km, 33.33% favourable) Langstone Harbour SSSI (0.06km, 91.30% favourable) also lie within 1km of the proposal. As such, there is potential for indirect effects during the construction phase upon these identified biodiversity assets, in terms of noise and disturbance.</p> <p>The option would also be within 1km of the SSSI Impact Risk Zones associated with Downend Chalk Pit SSSI, he Moors, Bishop’s Waltham SSSI and Lye Heath Marsh SSSI. However, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified in the area of the SSSI Impact Risk Zones.</p> <p>The pipeline crosses chalk rivers therefore potential for construction effects.</p> <p>There are anticipated to be direct effects on woodland including Ancient Woodland and deciduous woodland Priority Habitats, and other Priority Habitats, including coastal and floodplain grazing marsh and lowland dry acid grassland, during construction.</p> <p>Low risk for the transfer / movement of INNS.</p> <p>The HRA screening (2025) screened in the River Itchen SAC, River Test SAC Compensatory Habitat (River Meon), Solent Maritime SAC, Portsmouth Harbour SPA, Solent and Southampton Water SPA, Solent and Dorset Coast SPA, Chichester and Langstone Harbours Ramsar, Portsmouth Harbour Ramsar, and Solent and Southampton Water Ramsar, due to environmental changes associated with construction only. No pathways for operational effects were identified.</p> <p>The HRA AA (2025) identified no adverse effects.</p>	<p>If possible, re-route pipeline to avoid passing through designated sites. Best practice methods to be implemented to minimise disturbance effects and habitat loss including refining pipeline alignment and trenchless techniques to avoid designated sites and woodland habitat, in particular Ancient Woodland. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys. However, likely residual effects on designated sites.</p> <p>The HRA AA (2025) for River Itchen SAC, River Test SAC Compensatory Habitat (River Meon), Solent Maritime SAC, Portsmouth Harbour SPA, Solent and Southampton Water SPA, Solent and Dorset Coast SPA, Chichester and Langstone Harbours Ramsar, Portsmouth Harbour Ramsar, and Solent and Southampton Water Ramsar concludes that adverse effects will not occur as a result of the option, and potential effects can be reliably avoided with established project-level measures.</p>	0	--	0	-		

Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The pipeline passes through Grade 3 and Grade 4 agricultural land. There is likely to be disturbance to these soils during the construction phase. The pipeline intersects two historic landfill sites and is within 500m of other authorised and historic landfill sites with potential to disturb contaminated material during construction.	Land reinstated upon completion. Best practice construction measures to be implemented for working within or within close proximity to landfill sites.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	The pipeline predominately passes through Flood Zone 1, however there are areas of Flood Zones 2 and 3 along the route and flood defences. There may be some risk of flooding during the construction phase. Operational impacts are unlikely as pipeline will be buried. Otterbourne WSW and Havant Thicket Reservoir are both within Flood Zone 1.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The pipeline intersects watercourses, including main rivers and chalk rivers, and works will likely occur adjacent to other waterbodies. There is potential that the construction phase could lead to the contamination of these water bodies, affecting water quality. The pipeline is within SPZs. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice mitigation measures likely to be implemented during construction.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+++	0	The option will increase the transfer capacity (90Ml/d).	N/A	0	0	+++	0
Air	Reduce and minimise air emissions	0	-	0	0	Eastleigh AQMA No.2 (M3) is within 2000m. There is likely to be impacts on air quality during the construction phase.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	--	No carbon data available for this option. The option is estimated to have minor construction and moderate operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Water levels are not anticipated to be significantly affected therefore neutral effects identified for climate resilience.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The pipeline passes through the South Downs National Park and runs in close proximity to this National Park for much of the pipeline's route. The Chichester Harbour National Landscape lies within 1.2km of the pipeline. There are likely to be impacts on landscape character and visual amenity during the construction phase of the works.	Best practice measures will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Land reinstated upon completion.	0	-	0	0

						Operational impacts unlikely given Havant Thicket Reservoir and Otterbourne are existing sites and the pipeline will be buried.					
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The pipeline passes through a conservation area, Leigh Park Registered Park and Garden, and numerous listed buildings, and scheduled monuments are within 500m of the pipeline. There is potential for the construction phase to impact the setting of these assets. There is potential for the pipeline excavation to impact archaeology, if present.	Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are schools, public parks or gardens, noise action areas, playing fields, play spaces, golf courses, sports facilities, allotments, cemeteries and other community facilities within 500m. There is likely to be disturbance to the local community and users of these community facilities during the construction phase. IMD deciles range from 2 to 10 along the pipeline route.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The pipeline is on the edge of the South Downs National Park, on the edge of a Country Park and intersects a national cycle route. There are public parks and gardens, golf courses, sports facilities, allotments and other recreational facilities within 500m. The option crosses watercourses and habitat areas/woodland that could be used for recreation, therefore there may be some temporary effects on recreation, angling and other water-based recreation during the construction phase. There may be temporary disturbance to users of footpaths and other public rights of way during the construction phase.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. Direct land take of recreational sites to be avoided where possible and land to be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste during construction, including excavated materials.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline intersects railway, major roads, and national cycle routes. There is likely to be moderate and temporary impacts during construction.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur. Directional drilling under the railway and major roads is likely to be required.	0	-	0	0

Recycling (HSE): Recharge of Havant Thicket from recycled water from Budds Farm (60MI/d)											
Southern Water											
60MI/d of recycled water will be sent to Otterbourne via Havant Thicket Reservoir. Budds Farm WWTW transfer to new Water Recycling Plant then transfer to Havant Thicket. Direct raw water transfer from Havant Thicket to Otterbourne for treatment.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	--	<p>The following SSSI is located within 1km of the option: Langstone Harbour, within 0.1km, 91.3% favourable condition, 8.70% not recorded. There is potential for indirect effects. The</p> <p>The proposed pipeline is adjacent to areas of ancient woodland which could be directly affected during construction and or indirectly affected through noise and disturbance. This option is likely to result in a of loss of habitat during construction. Pipeline will be buried so it is unlikely that there will be any operational effects.</p> <p>The option is also within 0.1km of the Solent Maritime SAC and Chichester and Langstone Harbours SPAs/RAMSAR. Within 5km of Solent & Southampton Water Ramsar, Portsmouth Harbour Ramsar. Within 5km of Solent and Dorset Coast SPA.</p> <p>The HRA screening (2025) screens in the following sites for both construction and operation:</p> <p>Solent and Dorset Coast SPA Chichester and Langstone Harbours SPA Chichester and Langstone Harbours Ramsar Portsmouth Harbour Ramsar Solent and Isle of Wight Lagoons SAC Portsmouth Harbour SPA Solent Maritime SAC</p> <p>The HRA screening (2025) also screens in River Test SAC Compensatory Habitat (River Meon) for potential effects during construction only.</p> <p>The HRA screening concludes that the option will require construction close to sites associated with Chichester harbour; operation will potentially effect sites associated with the Solent due to changes in discharges from Budds Farm WwTW.</p> <p>The HRA AA (2025) refers to the SRO gated process and following that outcome finds no adverse effects.</p>	<p>Consider option routing and alternative location for new Water Recycling Plant to avoid direct effects on Chichester and Langstone Harbours Ramsar and SPA, Langstone Harbour SSSI and Solent Maritime SAC. Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys. Consider directional drilling.</p> <p>Mitigation measures can be employed to ensure that the risk of damage to the habitats in the Site, that may have knock-on effects on the qualifying bird species, are reduced if not eliminated. These would centre on sediment control in the watercourses, by using sediment screens etc, or by the use of directional drilling beneath watercourses to completely avoid these effects. Employment of a robust, comprehensive CEMP, with a draft of pollution and sediment control measures, should mean that likely significant effects can be avoided. It would likely require in-river measures to remove any mobilised sediment, by avoiding unnecessary work in the watercourse. Directional drilling beneath the watercourse would be a very effective means of avoiding effects too and should be considered as a preferred construction methodology.</p> <p>2025 HRA AA concludes no adverse effect subject to the implementation of mitigation measures identified through the SRO gated process for the following sites The HRA AA (2025) for the following sites: Solent and Dorset Coast SPA Chichester and Langstone Harbours SPA Chichester and Langstone Harbours Ramsar Portsmouth Harbour Ramsar Solent and Isle of Wight Lagoons SAC Portsmouth Harbour SPA Solent Maritime SAC River Test SAC Compensatory Habitat (River Meon)</p>	0	--	0	-

						The INNS risk assessment identifies that there is a very low risk of the transfer / movement of INNS. Physical transfer of treated water (between two locations assumed currently unconnected. No INNS risk as treated water will be free from INNS.	states that the option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.				
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	The option is primarily located on previously developed land. No likely effects identified.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	-	The option crosses Flood Zone 2 area which may have an impact on construction.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur. The new Water Recycling Plant will be subject to FRA and may need to be made flood resilient, depending on where it is located.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1). The WFD assessment highlights that these conclusions are based on Scheme B4 (Budds Farm to Havant Thicket components only) of Water Framework Directive Compliance Assessment. Water for Life Hampshire: Gate 2 Submission (Dec 2021) This concludes changes to discharges from Budds Farm would be compliant. Construction activities between Budds Farm and Havant Thicket would be compliant. Impacts on Havant Thicket itself not assessed because water body does not yet exist.	Best practice mitigation measures likely to be implemented during construction. However minor and temporary impacts may remain.	0	-	0	0
	Deliver reliable and resilient water supplies	0	0	+++	0	Option will facilitate water supply once operational, via Recharge of Havant Thicket Res with Recycled water from Budds Farm WwTW and a new Water Recycling Plant located near Portsmouth. Capacity of 60ML/d.	N/A	0	0	+++	0
Air	Reduce and minimise air emissions	0	-	0	0	There may be some negative effects from an increase in emissions associated with water supply / treatment, however this is not anticipated to be significant.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain. The new Water Recycling Plant will need to operate within air quality limits.	0	-	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	There is no carbon data available for this option. Minor negative effects have been estimated at this stage. There may be some negative effects from an increase in carbon emissions associated with water supply / treatment, however this is not anticipated to be significant.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	Water levels not predicted to be significantly affected by option. Using water recycling plants to keep water within the environment. Therefore, may increase resilience of the local environment to climate change in periods of water deficit/drought.	Monitor ground water flows.	0	0	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	-	Potential for impacts on landscape character and visual amenity during construction and operation due to new infrastructure.	Best practice measures will likely be implemented to minimise effects during construction and operation, however temporary impacts may remain for construction. Design of permanent infrastructure to minimise visual impact e.g. through screening planting. However, residual effects will remain.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are a small number of listed buildings close to the pipeline location within the built-up area. There is potential for Option have some limited, temporary effects on their setting. There may be archaeological remains. Unlikely to have an effect on the historic environment in operation.	Best practice mitigation measures likely to be implemented during construction phase, however minor impacts may occur. Desk based assessment recommended to dictate potential requirement for archaeological watching brief during the works.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option intersects a public park or garden. There is potential that the construction phase will disrupt the local community and users of these community facilities, however this is likely to be minor and temporary.	Implement traffic management measures and best construction measures. Use directional drilling to minimise disturbance.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option intersects a public park or garden. There is also potential that the construction phase will lead to the diversion of public rights of way. Minor negative effects have been identified.	Implement screening and provide appropriate trail diversions or space to pass the construction area safely.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	Likely to have some disturbance to built environment. Minor effect on built assets and infrastructure.	N/A. Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur. Directional drilling under the railway and major roads is likely to be required.	0	-	0	0

Interzonal transfer (HSE-HWZ): Otterbourne WSW to Yew Hill bi-directional (74MI/d)											
Southern Water											
Transfer from Otterbourne to Andover to Kingsclere WRZs. This scheme is designed to support network improvements needed for UTMRD transfer to Hampshire and/or the strategic scheme from IoW/South Hampshire.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	--	<p>The following SSSI's are also located within 1km of the option: Crab Wood (0.76km, 100% not recorded), River Itchen (0.33km, 5% favourable, 15% unfavourable – recovering, 10% unfavourable – no change, 10% unfavourable – declining, 15% partially destroyed, 45% not recorded).</p> <p>The option would cross SSSI Impact Risk Zones associated with the Crab Wood, and River Itchen SSSI's, including where pipeline development and discharge of water to ground or surface water is highlighted as being a risk to the sensitive features for which the SSSI's are notified.</p> <p>The option is not expected to have adverse effects on any National Nature Reserves.</p> <p>The HRA highlights that the indicative pipeline route crosses tributaries of the Solent and Dorset Coast SPA, which overlaps with areas of the Bembridge, Yarmouth to Cowes and The Needles MCZ's. There are no pathways for operational effects and construction effects are avoidable with established measures/normal best practice.</p> <p>The option would cross 2 areas of Ancient Woodland. Potential impacts on Ancient Woodlands due to construction include noise disturbance, dust emissions and habitat destruction. Impacts are mitigatable through best practice construction techniques and pipe jacking methods to avoid tree roots.</p> <p>The option also intersects priority habitat including coastal and floodplain grazing marsh, deciduous woodland and lowland calcareous grassland.</p> <p>The HRA screening (2025) screens in the River Itchen SAC, Solent and Dorset Coast SPA, and Solent and Southampton Water SPA /Ramsar, due to environmental changes associated with construction only, but can be reliably avoided with project-level mitigation (applied at AA). No pathways for operational effects identified.</p> <p>The HRA AA (2025) identified no adverse effects.</p> <p>High level construction phase INNS risk, as pipeline</p>	<p>Implement established measures / normal best practice during the construction phase. Ecological surveys prior to construction. Provide habitat compensation and relocation where required.</p> <p>The 2025 HRA AA considered effects on River Itchen SAC, Solent and Dorset Coast SPA, and Solent and Southampton Water SPA/Ramsar. The AA found that potential effects can be reliably avoided with established project-level measures.</p>	0	-	0	-

						route passes through sensitive habitats. No INNS risk during operational phase as water is treated and free of INNS.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	Land is classed as Grade 3 agricultural land, there is likely to be disturbance to this land during construction. Historic landfill sites within 500m, however no direct impact anticipated.	Reinstate land following construction.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	Option is within FZ1 therefore low risk of flooding.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The option intersects SPZ1 and 2, a nitrate vulnerable zone and the River Itchen Chalk WFD groundwater body. Three WFD river waterbodies are also intersected. There is potential for contamination during the construction phase. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Implement pollution prevention and control measures. Use appropriate bedding materials and directional drilling where possible to minimise disturbance.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+++	0	The option will increase transfers within the region therefore increasing resilience through provision of a yield of 62.2MI/d.	N/A	0	0	+++	0
Air	Reduce and minimise air emissions	0	-	0	0	The option is not within an AQMA. There is potential for the construction phase to have an effect on quality, however this is likely to be minor and temporary.	Best construction practices and pollution prevention and control measures e.g. damping.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	The option is not anticipated to result in a change in water levels so no likely effect on water environment with respect to climate change.	N/A	0	0	0	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The following National Park is within 5km of the option: South Downs (0.34km). The option also intersects the Hampshire Downs National Landscape Character Area. Visual disturbance is likely to occur during construction, however this will be minor and temporary.	Implement temporary screening during construction. Reinstatement landscape to original state once pipeline is buried.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are multiple listed buildings and one conservation area within 500m. There are also scheduled monuments and Cranbury Park Registered Park and Garden within 2000m. There is potential for the setting of these assets to be affected during the construction phase, however this is likely to be minor and temporary. There is also potential that the pipeline excavation will impact archaeology if present.	Implement temporary screening during construction. Reinstatement landscape to original state once pipeline is buried. Archaeological Watching Brief may be required during the construction phase depending on the presence / absence of archaeology.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are golf courses, schools, playing fields, play space, and public parks and gardens within 500m of the pipeline. There is potential for disruption to the local community and users of these community facilities during the construction phase. Impacts may include noise, dust and vibration but no effects anticipated once operational as pipeline will be buried. IMD decile 10 along extent of route.	Implement best practice during construction to minimise effects, however residual effects are likely to remain.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option is within 500m of golf courses, play spaces, playing fields and public parks and gardens. It also crosses a national cycle route and may result in the diversion of public rights of way during the construction phase. As such, there is potential to impact recreation, however this is likely to be minimal and temporary.	Implement best practice during construction to minimise effects, however residual effects are likely to remain.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Construction is likely to require material resources and will generate waste, including excavated materials.	Source materials locally and reinstate dug materials where possible.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The option is likely to disrupt transport infrastructure as it intersects major roads, railways and national cycle route. Moderate and temporary impacts are likely to occur during the construction phase.	Use of directional drilling where possible to minimise disruption. Traffic management plan to minimise disruption.	0	-	0	0

1.11. HANTS SOUTHAMPTON WEST (HSW)

Drought option - demand side (HSW): NEUBs											
Southern Water											
Non-essential use ban - HSW WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water's sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc. This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Minor adverse effect on soils management in dry weather.	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to cause or exacerbate flooding elsewhere.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water's sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources. The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.	N/A	0	0	+	0

	Deliver reliable and resilient water supplies	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reduction in demand for water (1.93Ml/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water’s Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water’s sources, potentially	N/A	0	0	+	-

						reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.					
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (HSW): Reduce transfer to other commercial customers											
Southern Water											
Drought option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There are not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (by 0.07Ml/d), the resilience of Southern Water's supplies is likely to increase. However, there are likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been identified at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought conditions, it	N/A	0	0	+	0

						is not resulting in the long-term resilience of the local environment.					
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Drought option - supply side (HSW): River Test (80MI/d)											
Southern Water											
Test Surface Water Drought Order (from 2027 onwards).											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	0	--	<p>Drought permit option. No new infrastructure required but increased abstraction is considered to have potential to affect groundwater dependent SAC. Low risk of transfer/movement of INNS due to ground water source.</p> <p>HRA undertaken for the Southern Water Drought Plan 2022 (2025) screened in impacts to the Solent Maritime SAC, Solent & Southampton Water SPA/Ramsar, Solent and Dorset Coast SPA, and River Itchen SAC. The HRA screening concluded that the option should be taken forward for Appropriate Assessment as LSEs cannot be ruled out when implemented alone due to recent drought permit/order applications. No in-combination assessment necessary as River Test is first permit to be used before other are introduced. Any in-combination assessments are undertaken via the other sources (River Itchen and Isle of Wight options).</p> <p>The July 2024 project level HRA Appropriate Assessment (AA) for the River Test Drought Permit concluded that there was no likely significant effect for all European sites except for the River Itchen SAC. It found that for “the River Itchen SAC, the assessment concludes that adverse effect on integrity cannot be excluded with certainty, at this juncture, with the various mitigation measures, as proposed. Further discussion with the EA on the mitigation measures is welcomed to progress this assessment.”</p> <p>These ongoing discussions with regulators relating to the River Test surface water drought permit project level HRA indicated that the EA did not consider the mitigation proposed to be sufficient to prevent any potential adverse effects. Adopting the precautionary principle in relation to what may be functionally linked habitat, SW have decided that this project level HRA will now progress to stage 3 and, if required, stage 4 of the HRA process. SW wrote to the EA on 21 November 2024 to confirm this decision. This is part of the ‘application ready’ principles that SW adhere to should such a drought option be needed in the future.</p> <p>This process will need to be finalised before any River Test Drought Permit can be granted and implemented. It is currently expected that this process will conclude by summer 2025.</p>	N/A	0	0	0	--
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	Drought permit option. No new infrastructure required therefore neutral effect.	N/A	0	0	0	0

Water	Increase resilience and reduce flood risk	0	0	0	0	Drought permit option. No new infrastructure required therefore neutral effect.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	0	--	<p>The WFD assessment (2025) of the Southern Water Drought Plan 2022, highlights that with regard to the Test (Lower) waterbody, there is a low to medium (but low confidence) risk of deterioration to WFD status. There is uncertainty due to the lack of WFD monitoring in the Lower River Test downstream of the abstraction intake).</p> <p>The SEA assessment (2025) of the Drought Plan 2022 highlights that the incremental impact of the Drought Permit beyond that of the prevailing drought conditions (i.e. without the Drought Permit in place) is not likely to have a significant effect on designated SSSI features, but a moderate adverse effect has been assessed based on the uncertainties arising from a paucity of ecological evidence. Water quality concerns in the zone of influence of the abstraction during application of the Drought Permit are largely limited to the parameters of temperature and dissolved oxygen, other water quality parameters have been shown to be well within levels of concern for the ecology and therefore not considered likely to lead to a significant impact on the River Test SSSI. The Drought Permit is not considered likely to damage the notified features of the Lower Test Valley SSSI. Given that during a drought, river flows would naturally be low, the additional recreational effects of the Drought Permit are expected to be minimal.</p> <p>As such, and in line with the SEA assessment (2025) of the Drought Plan 2022, a moderate negative effect has been identified during operation.</p>	N/A	0	0	0	--
	Deliver reliable and resilient water supplies	0	0	+++	0	Drought permit option will allow for the delivery of water supplies (80Ml/d) during drought periods.	N/A	0	0	+++	0
Air	Reduce and minimise air emissions	0	0	0	0	Drought permit option. No new infrastructure required therefore neutral effect.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	-	<p>No new infrastructure however increased abstraction likely to have increased energy demand. No carbon data available. The option is estimated to have neutral construction and minor operational carbon emissions.</p> <p>Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.</p>		0	0	0	-

	Reduce vulnerability to climate change risks and hazards	0	0	0	-	The option will reduce resilience of the environment by abstracting water during a drought period.	River level should be monitored	0	0	0	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	Drought permit option. No new infrastructure required therefore neutral effect.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Drought permit option. No new infrastructure required therefore neutral effect.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	0	Drought permit option. The option will support human health by ensuring a supply of water.	N/A	0	0	+	0
	Maintain and enhance tourism and recreation	0	0	0	0	Drought permit option. No new infrastructure required therefore neutral effect.	N/A	0	0	0	0
Material Assets	Minimise resource use and waste production	0	0	0	0	Drought permit option. No new infrastructure required therefore neutral effect.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Drought permit option. No new infrastructure required therefore neutral effect.	N/A	0	0	0	0

Drought option - demand side (HSW): TUBs											
Southern Water											
Temporary use bans - HSW WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water’s sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought.</p> <p>The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
	Soil	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
	Water	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
Water	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (1.21Ml/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the temporary use ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban	N/A	0	0	+	--

						would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.					
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Groundwater (HSW): Test MAR (5.5Ml/d)											
Southern Water											
<p>This option is a Managed Aquifer Recharge (MAR) scheme. It would provide recharge of the confined chalk aquifer from mains water in winter months, with subsequent onsite abstraction from the same aquifer in summer/autumn critical low flow periods. Treatment is available on site and it is assumed that there is sufficient treatment capacity for the abstracted water. The scheme assumes an extended pilot trial period to prove the viability of yield and water quality, with subsequent development of the MAR scheme. Expected DO from the developed scheme is ~5Ml/d. The pilot scheme assumes 1 No. abstraction/recharge borehole and 1No. monitoring borehole, each 250m deep. For the duration of the trial, abstracted water will run to waste (River Test). The developed scheme will comprise a total of 5No. boreholes at 250m depth; 3No. abstraction/recharge boreholes and 2No. monitoring boreholes, inclusive of those used in the pilot scheme. Abstracted water from the developed scheme will be treated onsite as required, before entering supply. The suggested WTW site boundary may not support a DO of 5Ml/d. It is understood that SWS own adjacent land to the north of the River Test, and it is proposed that 1 No. abstraction/recharge borehole and 1 No. monitoring borehole be located on this land in order to achieve the desired scheme DO. Groundwater from the confined chalk aquifer is expected to be under artesian pressure and therefore gate valves would be required on all boreholes. Pumped recharge from mains water supply would also be required to overcome artesian pressure.</p>											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The Solent and Southampton Water SPA and Ramsar are within 500m and are GWDTE. Solent Maritime SAC is within 2000m. There is potential for effects on these sites during the construction phase. No abstraction anticipated from the River Test, which is a chalk river, however potential for effects from the groundwater abstraction. There are priority habitats and woodland within 500m which may be directly affected during construction.					
						The following SSSIs are located within 1km of the option: the River Test SSSI (0.15km, 15.38% of features in unfavourable condition – no change, 84.62% not recorded) and the Lower Test Valley SSSI (0.29km, 66.67% of features favourable condition, 33.33% unfavourable – recovering). These SSSIs are GWDTE. Construction for the option is expected to be limited to Test Surface Water WSW operational works; however, construction activities have the potential to cause indirect adverse effects on the designated features of these SSSIs through airborne pollution, noise, vibration and disturbance of aquatic ecosystems, habitats and wetland breeding birds. The option is located within the SSSI Impact Risk Zones associated with the River Test SSSI and the Lower Test Valley SSSI, which identifies that planning applications (except household) as being a risk to the sensitive features for which the SSSIs are notified.	Implement established measures / normal best practice during the construction phase.				
		0	--	0	0	The HRA screening (2025) screened in River Test SAC Compensatory Habitat (River Test), Solent and Southampton Water SPA/Ramsar, Solent Maritime SAC and Solent and Dorset Coast SPA and confirmed the above. No adverse effects.	Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. A robust CEMP for use during construction should remove the scope for excessive mobilisation of sediment etc. Monitor groundwater levels. Future design will need to undertake ecology surveys.	0	-	0	0
						HRA screening (2025) identified that construction would be required close the European sites associated with Southampton Water (environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA)). Operation will have no effect on any sites (all the available geological evidence strongly suggests that the aquifer is deeply confined beneath the London Clay and so there are no pathways by which the scheme operation could affect this site; importantly, if this is proven to not be the case then the scheme would not be able to operate as intended and so would not be viable as	The HRA AA (2025) found that for River Test SAC Compensatory Habitat (River Test), Solent and Southampton Water SPA/Ramsar, Solent Maritime SAC and Solent and Dorset Coast SPA, potential effects can be reliably avoided with established project-level measures.				

						<div>an option (i.e. effects would not occur because the scheme would not be technically achievable).</div> <div>HRA AA (2025) identified no adverse effects.</div> <div>The transfer / spread of INNS will be very low given groundwater sources are likely to be completely free of INNS. Water used to recharge the aquifer will be treated water.</div>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	The option is within Grade 4 and 5 agricultural land. There is potential for disturbance to these soils during the construction phase. There is a historic landfill site within close proximity to two of the boreholes therefore potential to disturb contaminants.	Land reinstated upon completion. Best practice construction measures to be implemented for working within or within close proximity to landfill sites.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	--	0	--	Two of the boreholes are located in Flood Zones 2 and 3, the remaining three are located in Flood Zone 1. There is potential for flood risk to have impacts on construction and operation of these boreholes. The pipeline is partially located in Flood Zones 2 and 3 which may have an impact on construction.	Best practice mitigation measures likely to be implemented during construction and operation.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	+	0	<div>The option aims to abstract groundwater and therefore may have negative effects on groundwater sources. However, the option also includes proposals to recharge the aquifer during winter months where excess water is available at Test Surface Water WTW which is therefore likely to result in positive effects. The option is within the Central Hants Bracklesham Group WFD groundwater body and is not within SPZs.</div> <div>The WFD assessment (2025) concludes that this option would be compliant (with medium confidence) reflecting that the Stage 2 assessment concluded WFD compliance (with medium confidence) for the River Test Chalk groundwater body.</div>	Best practice mitigation measures likely to be implemented during construction.	0	0	+	0

	Deliver reliable and resilient water supplies	0	0	+	0	The option is likely to increase the resilience of supplies by delivering 5.5MI/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	AQMA No.5 (Redbridge Road & Millbrook Road) is within 2000m. There is likely to be minor and temporary impacts on air quality during the construction phase.	Best practice mitigation measures implemented during construction, however minor effects on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	No carbon data available. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	The option has the potential to increase the resilience of surface water and the local environment by utilising groundwater sources. There may be negative effects on the resilience of groundwater as a result, particularly during summer months, however the option does aim to recharge the aquifer during winter.	Monitor groundwater levels.	0	-	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The New Forest National Park is within 2000m. The construction phase has the potential to have a negative effect on the landscape. There is likely to be minimal operational impacts from the boreholes.	Best practice will be implemented to avoid negative effects, ground will be reinstated where possible, however likely to be some disturbance to landscape during works.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are no historic assets within 500m, however there are listed buildings within 2000m. It is not anticipated that the construction or operational phases will impact these assets due to the localised nature of the works. There is potential that excavation for the boreholes and pipeline will impact archaeology, if present.	Given there is potential to impact buried archaeology, an Archaeology Watching Brief may be required during the construction phase. Further work may be required to determine the significance of the effect depending on the presence / absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There is a school and church within 500m of the option. There is potential for the local community and users of the school to be impacted during the construction phase. IMD deciles range from 8 to 9.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The construction phase may lead to the diversion of public rights of way. This may have impacts on recreation therefore minor negative effects identified.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste during construction, including excavated materials.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	There are major roads, railways and national cycle routes within 2000m. There is likely to be minor impacts on the local road network during the works.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Interzonal transfer (HRZ-HSW): Romsey Town and Broadlands valve (3.1MI/d)											
Southern Water											
Development and upgrade of existing transfer between Romsey Town & Broadlands valve (HSW-HRZ). This option involves installing a new booster station with 5MI/d flow capacity to an existing transfer to allow bi-directional flow.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	0	<p>The following SSSI is within 1km of the option: River Test (0.52km, 15.38% unfavourable – no change, 84.62% not recorded). The option would be situated within the SSSI Impact Risk Zone associated with the River Test SSSI, where all planning applications outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures and any discharge of water to ground or to surface water are highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>The option is not expected to have adverse effects on any National Nature Reserves. Broughton Down and Danebury Hillfort LNR are both within 2000m. However, given the localised nature of the works, effects are not likely.</p> <p>The option is near to the Solent and Dorset Coast SPA, which overlaps with the Yarmouth to Cowes Marine Conservation Zone. No adverse effects are expected to the MCZ during construction however, due to the distance downstream from the option. No operational effects are expected as there are no pathways for operational effects.</p> <p>There is woodland priority habitats within 500m and there may be minimal indirect impacts on these.</p> <p>The HRA screening (2025) screened in River Test SAC Compensatory Habitat (River Test), Solent and Dorset Coast SPA, Solent Maritime SAC and Solent and Southampton Water Ramsar and SPA for construction only with all other sites screened out. The screening noted that construction is required in parkland within 500m of the River Test; significant and/or significant adverse effects are certainly avoidable with established measures / normal best-practice, although these must necessarily be accounted for at AA (hence 'screened in'). No pathways were identified for operational effects.</p> <p>The HRA AA (2025) identified no adverse effects.</p> <p>There is no additional risk for the transfer/ movement of INNS.</p>	<p>Best practice methods to be implemented to minimise disturbance effects. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys.</p> <p>HRA screening (2025) identified that significant effects are avoidable with established measures/normal best practice at River Test SAC Compensatory Habitat (River Test), Solent and Dorset Coast SPA, Solent Maritime SAC and Solent and Southampton Water Ramsar and SPA, although these must be accounted for at AA.</p> <p>The HRA AA (2025) concluded that potential effects can be reliably avoided with established project-level measures.</p>	0	-	0	0

Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	The option is located in Grade 3 and Grade 4 agricultural land. There is potential for minor disturbance during the works. There are no historic or authorised landfill sites within 500m.	Ground will be reinstated therefore residual effects unlikely.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	-	Part of the option is located within Flood Zone 2 and 3 therefore potential for flood risk to affect construction and operation.	Ensure best practice techniques during construction and operation to minimise flood risk.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The site is located within 500m of Wallop Brook, which is a main river, and is designated as a chalk river. There is likely to be minimal risk of impacting the quality of these rivers during the construction phase given works are localised. The option is not located within a SPZ. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Implement best practice to minimise any impacts on nearby water receptors.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	The option will increase the resilience of supplies by providing an additional 3.1Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	There are no AQMAs within 2000m. There is likely to be very minimal impacts on air quality during construction given the nature of the works therefore neutral effects have been identified.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Water levels are not anticipated to be significantly affected therefore neutral effects have been identified for climate resilience.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	There are no National Landscapes within 5km of the option, however the New Forest National Park is 4.63km from the option. The option is located in the Hampshire Downs NCA. There are likely to be minor impacts on the landscape as a result of the works. Operational impacts are not anticipated given the works are minor, part of the option is within an airfield and the other at an existing building.	Best practice measures to be implemented to minimise effects during construction although temporary effects during construction may remain.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	There are listed buildings and a conservation area within 500m of the part of the option. There is not anticipated to impacts on the setting of these historic assets given the localised nature of the works. No impacts on archaeology are anticipated.	N/A	0	0	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	0	0	Part of the option is within Middle Wallop Airfield and there is a school within 500m of the second part of the option. No impacts on the local community are anticipated given the nature of the works. The option is within IMD decile 7 and 8.	N/A	0	0	0	0
	Maintain and enhance tourism and recreation	0	0	0	0	No effects on recreation are anticipated as a result of the works given their localised nature.	N/A	0	0	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste.	Likely to be limited opportunity to implement sustainable design measures to reduce the impact, therefore it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	There are major roads within 2000m. No effects are anticipated given the nature of the works.	N/A	0	0	0	0

Interzonal transfer (HWZ-HSW): Yew Hill WSW to River Test WSW bi-directional (60MI/d)											
Southern Water											
Yew Hill to Rownans Southampton Link Main											
SEA Topic	SEA Objective	Construc tion Effects	Operatio nal Effects	Comment		Mitigation		Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodivers ity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>There are two National Site Network sites (previously known as European sites) within 2km of the Proposed Scheme, these are: the Emer Bog SAC (480m SE), and River Itchen SAC (410m). These National Site Network sites have been considered and assessed in the Stage 1 HRA Screening assessment which concluded 'no likely significant effects'.</p> <p>There are eight other Statutory sites designated under national legislation within 2km of the Proposed Scheme. The closest is over 0.5km from the pipeline corridor. These include: Shawford Down LNR (640m NE), Tadburn Meadows LNR (760m W), Hocombe Mead LNR (1.2km NE), River Test and SSSI (1.9km W). The proposed scheme is not anticipated to impact any of the aforementioned sites.</p> <p>The following designated sites have been considered in more detail due to potential hydrological pathways: Ratlake Meadow SSSI (190m NW), Trodds Copse SSSI (392m SW), River Itchen SSSI (410m E), and the Baddesley Common and Emer Bog SSSI (480m E). No significant impacts are expected on these sites, though there is potential for more minor effects during construction.</p> <p>There are 42 areas of Ancient Woodland within 500m of the Proposed Scheme, which are listed on the Ancient Woodland Inventory as ancient, semi-natural and ancient replanted woodland. The closest block of Ancient Woodland is an unnamed parcel where an existing gravel field access runs adjacent to the Ancient Woodland. This existing gravel field will be utilised during construction. The other is Oakwood Copse and Hoe Copse as mentioned above. The other areas of Ancient Woodland are all located in excess of 20m from the working corridor and Proposed Scheme. Impacts on Ancient Woodland are not anticipated to be significant.</p> <p>One invasive plant species, listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), was identified from the terrestrial field surveys. This was a strand of Japanese knotweed Fallopia japonica, and will be avoided by the pipeline.</p> <p>The HRA screening (2025) screened in River Itchen SAC, Solent Maritime SAC, Emer Bog SAC, Mottisfont Bats SAC, Solent and Southampton Water SPA/Ramsar, Solent and Dorset coast SPA, for construction only.</p>	<p>Best practice methods to be implemented to minimise disturbance effects. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys.</p> <p>Installation of tree protection fencing, ground protection and facilitation pruning.</p> <p>Scheme will be narrowed to reduce tree removal and any disturbed land will be reinstated.</p> <p>Construction will comply with relevant protected species legislation, and ‘no works’ Avoidance Zones will be established where necessary to reduce disturbance to habitats.</p> <p>An EPSML will be required where proposed works are within 250m of GCN ponds.</p> <p>A reptile mitigation strategy will be produced.</p> <p>Pre-construction surveys to monitor status of confirmed and potential holt sites. Maintain screening vegetation to provide screening of construction of trenchless section which runs under Tadburn Lake.</p> <p>Avoiding works within 150m of otter holts.</p> <p>Best practice pollution prevention to ensure no impacts to water quality within watercourses.</p> <p>Capping any exposed pipe systems when contractors are off site and providing exit ramps from any exposed trenches or holes.</p> <p>Pipeline routing will ensure that INNS are avoided.</p> <p>The HRA AA (2025) concludes that potential effects can be reliably avoided with established project-level measures.</p>	0	-	0	0

						The HRA AA (2025) identified no adverse effects.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	Sections of the scheme will cross land of Grade 2-3 Agricultural Land Classification. The pipeline would also be within 250m of three historic landfill sites, therefore there is potential for the construction phase to disturb contaminants.	Land reinstated upon completion. Best practice methods for working adjacent to or within landfills.	0	--	0	0
Water	Increase resilience and reduce flood risk	0	--	0	0	<p>The proposed pipeline route runs through one area of Flood Zone 2, and 3, resulting in a moderate risk of flooding during construction.</p> <p>As the pipeline would be below ground, and no new impermeable surfaces would be constructed, there is no risk of flooding or exacerbation of flood risk during operation.</p>	Ensure best practice techniques during construction and operation to minimise flood risk.	0	--	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	-	<p>The Proposed Scheme is located within the Test and Itchen Management Catchment as outlined in the South East River Basin Management Plan (EA, 2015). The closest the River Test approaches the Proposed Scheme is approximately 2.8km to the west at Crampmoor, and the River Itchen approximately 300m to the east of the Proposed Scheme at Otterbourne WSW.</p> <p>Any construction activities have the potential to introduce pollutant pathways for contaminants and fine sediment in run-off from the construction site, which could then flow into surface and groundwater bodies and result in a temporary deterioration of surface and groundwater quality.</p> <p>Above ground construction activity has the potential to alter overland flow and surface water flow patterns. This can be largely avoided by the application of best practice measures to maintain flows during construction (or working during lowest flows i.e. summer) and to minimise or prevent increased runoff during construction and flow into construction sites by having drainage mitigation in place.</p> <p>The permanent presence of the buried pipeline could have the potential to impact groundwater flow patterns, as well as watercourse geomorphology, however this is considered to be a very low risk as the pipeline will be laid within a porous pipe bedding material which will allow groundwater to flow around the pipe. Should the pipes leak, then there could be a risk posed to surface water and groundwater quality, however in the unlikely event of a leak the level of impact would be relatively minor due to the pipeline being</p>	Implement best practice to minimise any impacts on nearby water receptors.	0	-	0	-

						for potable water, and the pipe rapidly repaired. Based on the above, the potential for likely significant environmental effects to surface and ground waterbodies, including those classified under the WFD, during operation, are not anticipated. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).					
	Deliver reliable and resilient water supplies	0	0	+++	0	The option will increase transfer capacity (60MI/d), therefore improving resilience of supplies.	N/A	0	0	+++	0
Air	Reduce and minimise air emissions	0	-	0	0	The proposed scheme is not located within an AQMA. Construction will, however, have minor negative impacts on air quality due to dust and emissions associated with construction activity such as generators, excavating, tunnelling, and vehicle movements.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon) and construction activities. No significant effects on carbon emissions or climate change have been identified for the construction phase. Due to the scale of the option, it is assumed that there will be moderate amounts of embodied carbon. During operation, the only equipment requiring energy generation will be in relation to Otterbourne WSW, where the HLPs will pump water to Yew Hill WSR, however the energy requirements for this will not be significant in relation to climate.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The Proposed Scheme will provide greater resilience to water shortages, especially during dry weather and droughts.	N/A	0	0	+	0
Landscap e	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The Proposed Scheme, including the pipeline route, does not pass through any areas designated as important for landscape value, though the pipeline route passes within 350m of the South Downs National Park. Due to this, moderate, temporary, visual impacts are expected during construction as visual impacts are possible. Landscape impacts are also, expected during operation, in the short-term due to the removal of landscape features during construction (i.e., mature trees and tree groups and important hedgerows) and the time once the proposed scheme is in operation, for regeneration/ regrowth/ growth of reinstatement/ replanting. The pipeline will be laid entirely below ground, and the route (including temporary compound locations and construction accesses) will be suitably reinstated upon completion of the construction work, making all visual	Best practice measures to be implemented to minimise effects during construction although temporary effects during construction may remain. Land to be reinstated post construction where possible.	0	-	0	-

						impacts temporary. All visual impacts associated with the pipeline during operation are reversed completely.					
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	<p>There are three Scheduled Monuments, three Conservation Areas, two Registered Parks and Gardens, and 54 Grade II and Grade II* Listed Buildings, found within 500m of the proposed scheme, though none are intersected by the option. No physical impacts are expected on these designated assets, though there may be temporary access issues and visual impacts during construction.</p> <p>The proposed works will have a direct physical impact upon surviving archaeological deposits within excavated areas of the Proposed Scheme, and there is potential for limited impacts on hedgerows where the pipeline crosses through new breaches, but no impact is anticipated where the route follows existing roads.</p> <p>The proposed works will have a direct physical impact upon surviving archaeological deposits within excavated areas of the Proposed Scheme, and there is potential for limited impacts on hedgerows where the pipeline crosses through new breaches, but no impact is anticipated where the route follows existing roads.</p> <p>As land will be backfilled following pipeline development, no adverse impacts are expected during operation.</p>	Mitigation through a programme of further fieldwork will confirm the presence or absence of archaeological deposits and will remove the risk posed by the Proposed Scheme.	0	-	0	0
	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	+	0	<p>There are residential areas over a minority of the route including Otterbourne village at the eastern end (inclusive of tunnelling activities), and works are taking place in close proximity to Compton Down; Oliver's Battery; Bunstead village; Broadgate village at Hook Road (inclusive of tunnelling activities); Crampmoor (inclusive of tunnelling activities); properties on the western edge of North Baddesley; and Toot Hill at the western end.</p> <p>There is potential for temporary disruption to residents in terms of noise (including limited overnight works) and dust. These are however expected to be short term and localised in nature, and not expected to be significant.</p> <p>During the operation of the Proposed Scheme there will be long-term beneficial effects on the residential communities from improvements to the resilience of their water supply and decreased risk of water shortages, particularly during drought periods.</p>	Best practice construction mitigation measures to be utilised, including a CEMP and DMP.	0	-	+	0
Population and Human Health	Maintain and enhance tourism and recreation	0	--	0	0	<p>During construction, there will be a need to divert Public Rights of Way (PRoW). PRoW temporarily crossed include: Compton and Shawford 3/1, 4/3, 2/2 36/1; Hursley 2/1; Ampfield 3/1, 6/2, 5/1. Some minor footpaths will also be temporarily crossed during the open cut works. No significant effects are anticipated.</p> <p>No adverse effects are anticipated during operation.</p>	Local diversions will be in place and the PRoW suitably reinstated upon completion of the section of the pipeline affecting the PRoW.	0	-	0	0

Material Assets	Minimise resource use and waste production	0	--	0	0	Construction is likely to require material resources and will generate waste, including excavated materials. There is not anticipated to be a significant effect on resource consumption.	Likely to be limited opportunity to implement sustainable design measures to reduce the impact, therefore it is likely that minor negative effects will remain. A Site Waste Management Plan will be used to control waste volumes in line with relevant waste legislation and best practice measures, thereby limiting waste arising from the Proposed Scheme during construction phase.	0	--	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	Several local roads of varying importance are located within the study area including the M3 and A27 Botley Road. From east to west the other roads crossed by the Proposed Scheme are: Otterbourne Road, B3043, Poles Lane, Pound Lane, Green Lane, Botley Road, and Hoe Lane. Potential temporary effects as a result of the Proposed Scheme will include additional temporary traffic movements on the local road network, including an increase in HGVs transporting materials, construction equipment and construction workers commuting to site. No adverse effects are anticipated during operation.	Trenchless construction techniques will be used to cross under a number of local roads. A CTMP will be in place with measures to reduce impacts on traffic, including appropriate parking areas for construction staff and scheduling of HGV traffic to avoid queueing.	0	-	0	0

1.12. KENT MEDWAY EAST (KME)

Drought option - demand side (KME): NEUBs											
Southern Water											
Non-essential use ban - KMW WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water’s sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Minor adverse effect on soils management in dry weather.</p>	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Operation of the option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water’s sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (2.11Ml/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 MI/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist	N/A	0	0	0	--

						attractions, for example water features and parks/gardens associated with popular tourist sites.					
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (KME): TUBs											
Southern Water											
Temporary use bans - KMW WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water's sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought. The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (1.59Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 MI/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the	N/A	0	0	+	0

						efficiency of existing water resource use. It will not result in any increase in the generation of waste.					
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Desalination (KME): Isle of Sheppey (10MI/d) phase 2
Southern Water
The Isle of Sheppey Desalination options comprise a suite of modular options that represent different sizes of desalination plant that could be developed in one or more phases. This particular option proposes a second phase developing an additional 10MI/d desalination capacity and is contingent on the 10MI/d or 20MI/d first phase options i.e. IoS10 or IoS20.

SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The option passes through the Medway and Estuary Marshes SSSI (21.74% in favourable condition, 13.04% in unfavourable – recovering condition, 39.13% in unfavourable – declining condition, 26.09% not recorded). There is potential for direct impacts from construction and operation on Medway and Estuary Marshes SSSI and the Medway Estuary & Marshes SPA/RAMSAR. There is potential operational impacts associated with brine outfall.	Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual direct and indirect effects remain for designated sites. Future design will need to undertake ecology surveys. Ancient woodland could be avoided through detailed route design. The HRA AA (2025) concludes that construction effects are avoidable with normal measures.				
						The option is also adjacent to The Swale SSSI (52.27% in favourable condition, 2.27% in unfavourable – recovering condition, 6.82% in unfavourable – no change, 6.82% in unfavourable – declining condition, 31.82% not recorded).					
						The option would also cross the SSSI Impact Risk Zone associated with the South Thames Estuary and Marshes SSSI (19.35% Favourable condition, 9.68% Unfavourable – Declining condition, 70.97% not recorded), including an area where infrastructure (pipeline) development is highlighted as being a risk to the sensitive features for which the SSSI is notified. The option would also cross the Impact Risk Zone for Queendown Warren SSSI and Spot Lane Quarry SSSI however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified in the area of the SSSI Impact Risk Zone(s) which the option is located crosses.					
		0	---	0	---	There is potential for indirect impact on The Swale SPA/RAMSAR and Thames Estuary & Marshes SPA/RAMSAR, Outer Thames Estuary SPA and South Thames Estuary and Marshes SSSI.		0	--	0	---/?
						The option is located within the following MCZs: Medway Estuary - Zone 1 MCZ and The Swale Estuary MCZ. There is potential for effects on the protected features of the Medway Estuary MCZ in construction and operation. In construction the intake/outfall could directly affect the MCZ. In operation, saline plumes from outfall location could have impacts on the protected features.					
						With regards to the Swale Estuary MCZ, pipeline construction will likely follow existing roads reducing potential for effects on the protected features and in operation discharge of brine will be to the Medway which reduces likelihood of exposure to this MCZ.					
						The option would be located 0.40km from the Elmley NNR. There is potential for indirect effects from the construction phase on these sites through noise, dust and vibration causing disturbance.					
						The option (pipeline to Deans Hill) would cross one area of Ancient Woodland. There are potential impacts on these due to construction including potential					

						<p>loss/physical damage, noise and vibration, disturbance, dust emissions and habitat destruction.</p> <p>The risk of INNS is considered to be low as there is potential for pipe bursts cause water to be released to the environment (creating pathway for the transfer of INNS).</p> <p>The HRA screening (2025) screens in the following sites for both construction and operational effects:</p> <ul style="list-style-type: none">• The Swale SPA• Medway Estuary and Marshes SPA• Medway Estuary and Marshes Ramsar• The Swale Ramsar• Thames Estuary and Marshes Ramsar• Thames Estuary and Marshes SPA• Outer Thames Estuary SPA <p>The screening concludes that environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake and outfall, which may affect downstream sites or sites supporting mobile species.</p> <p>The HRA AA (2025) concludes that, for Medway Estuary and Marshes Ramsar/SPA, Outer Thames Estuary SPA, and Thames Estuary and Marshes Ramsar/SPA, adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.</p> <p>The HRA AA (2025) concludes that The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.</p> <p>Overall, the HRA 2025 concludes potential effects during operation.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The preferred location for the desalination plant is on land south of Sheerness Docks, currently used for storage of car imports. The option intersects with Lappel Bank Foreshore authorised landfill site, potential to disturb contaminated material during construction.	Best practicable means to prevent potential disturbance of contaminated material during construction.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	--	0	--	The preferred location is located entirely in Flood Zones 2 and 3, which may have an impact on construction and operation.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain. The desalination plant would be subject to FRA and would need to be flood resilient.	0	-	0	0

	Protect and enhance the quality of the water environment and water resources	0	--	0	--	<p>Potential for water quality impacts during construction and during operation due to brine discharge. A new abstraction license will also need to be attained.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Medway and Swale transitional waterbodies.</p> <p>The WFD assessment highlights that the discharge of hypersaline water into the transitional water body could impact on water quality and affect biological habitats. Water quality modelling will be required to determine the potential effects on biological compliance parameters and protected areas. Construction of new infrastructure to support this option could impact on both water quality and biology if significant seabed disturbance is required. Sediment sampling will be required to confirm whether there is sufficient risk to water quality to affect biological parameters. The new abstraction could impinge fish and phytoplankton.</p> <p>The WFD assessment highlights that it is not predicted that the discharge would contain any chemicals supporting chemical status. However, bed disturbance during construction could give rise to the release of sediment bound chemicals. Sediment sampling will therefore be required to confirm whether there is a risk to water quality.</p>	Best practice construction measures to be implemented to mitigate effects.	0	-	0	--
	Deliver reliable and resilient water supplies	0	0	+	0	The option is likely to provide 10MI/d supply of desalinated and treated water.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	-	The option is not within an AQMA nor are there any within 2km. Construction likely to have minor and temporary impact on air quality. There is potential for air quality impacts during operation given the high energy intensive process.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts may remain. Opportunity to use renewable energy to minimise air quality impacts.	0	-	0	-
Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	--	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has moderate construction and moderate operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	Desalination provides good climate change resilience for supply, especially for intakes from the sea. Where the use of desalination relieves pressure on stressed freshwater environments it could also contribute to environmental resilience.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	<p>The pipeline to Deans Hill is partially located within the Kent Downs National Landscape and is located in the North Kent Plain and North Downs national character areas. As a result, there are likely to be adverse effects during construction due to the presence of the construction site and associated excavations required for the pipeline. During the operational phase there may be adverse effects due to the presence of new pumping houses etc, but this is likely to be very minor. It is assumed the new pipeline will be buried below ground.</p> <p>The preferred location for the desalination plant is within the Greater Thames Estuary NCA. Negative effects likely during construction and operational phase however anticipated to be minor as site currently used for storage of car imports.</p>	<p>Construction best practice to be followed to reduce visual impacts from the works area. Ground to be reinstated following works. Operational phase infrastructure should be in keeping with local architecture and could implement screening to mitigate effects.</p> <p>Best practice will be implemented to avoid negative effects for desalination plant, however likely to be some disturbance to landscape during works. Screening could</p>	0	-	0	-

							be implemented to minimise visual impact of plant.				
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The Queenborough Lines scheduled monument is within 500m of the preferred location. Construction and operation may affect the setting of this historic asset since the preferred location is currently in an industrialised area, this may be limited. There is potential for any excavation to impact buried archaeology if present, however this is considered to be limited given the current use of the preferred location.	Best practice mitigation measures will likely be implemented to minimise setting effects during construction. An Archaeology Watching Brief may be required during the construction phase.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are numerous schools, medical facilities and other important buildings within 2km of option. There may be temporary disturbances during construction to users of these facilities. The preferred location is adjacent to an area in IMD decile 3.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction and land will be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	There are a number of parks and gardens and playing spaces along with sports facilities, and a National Cycle Network route within 2km that may be temporarily affected during construction works, e.g. noise, dust pollution, road congestion.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option anticipated to generate waste. Brine waste will be produced during desalination.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	-	0	0	There is likely to be localised traffic disruption during the construction phase. Operational effects on the local road network are likely to be minimal. There may be impacts on the operations of the Sheerness Docks although this is likely to be minimal.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Desalination (KME): Isle of Sheppey 20MI/d
Southern Water
The Isle of Sheppey Desalination options comprise a suite of modular options that represent different sizes of desalination plant that could be developed in one or more phases. This particular option proposes a first phase, developing a 20MI/d desalination capacity.

SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	---	<p>The option passes through the Medway and Estuary Marshes SSSI (21.74% in favourable condition, 13.04% in unfavourable – recovering condition, 39.13% in unfavourable – declining condition, 26.09% not recorded). There is potential for direct impacts from construction and operation on Medway and Estuary Marshes SSSI and the Medway Estuary & Marshes SPA/RAMSAR. There is potential operational impacts associated with brine outfall.</p> <p>The option is also adjacent to The Swale SSSI (52.27% in favourable condition, 2.27% in unfavourable – recovering condition, 6.82% in unfavourable – no change, 6.82% in unfavourable – declining condition, 31.82% not recorded).</p> <p>The option would also cross the SSSI Impact Risk Zone associated with the South Thames Estuary and Marshes SSSI (19.35% Favourable condition, 9.68% Unfavourable – Declining condition, 70.97% not recorded), including an area where infrastructure (pipeline) development is highlighted as being a risk to the sensitive features for which the SSSI is notified. The option would also cross the Impact Risk Zone for Queendown Warren SSSI and Spot Lane Quarry SSSI however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified in the area of the SSSI Impact Risk Zone(s) which the option is located crosses.</p> <p>There is potential for indirect impact on The Swale SPA/RAMSAR and Thames Estuary & Marshes SPA/RAMSAR, Outer Thames Estuary SPA and South Thames Estuary and Marshes SSSI.</p> <p>The option is located within the following MCZs: Medway Estuary - Zone 1 MCZ and The Swale Estuary MCZ. There is potential for effects on the protected features of the Medway Estuary MCZ in construction and operation. In construction the intake/outfall could directly affect the MCZ. In operation, saline plumes from outfall location could have impacts on the protected features.</p> <p>With regards to the Swale Estuary MCZ, pipeline construction will likely follow existing roads reducing potential for effects on the protected features and in operation discharge of brine will be to the Medway which reduces likelihood of exposure to this MCZ.</p> <p>The option would be located 0.40km from the Elmley NNR. There is potential for indirect effects from the construction phase on these sites through noise, dust and vibration causing disturbance.</p>	<p>Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual direct and indirect effects remain for designated sites. Future design will need to undertake ecology surveys. Ancient woodland could be avoided through detailed route design.</p> <p>The HRA AA (2025) concludes that construction effects are avoidable with normal measures.</p>	0	--	0	---/?

						<p>The option (pipeline to Deans Hill) would cross one area of Ancient Woodland. There are potential impacts on these due to construction including potential loss/physical damage, noise and vibration, disturbance, dust emissions and habitat destruction.</p> <p>The HRA screening (2025) screens in the following sites for both construction and operational effects:</p> <ul style="list-style-type: none">• The Swale SPA• Medway Estuary and Marshes SPA• Medway Estuary and Marshes Ramsar• The Swale Ramsar• Thames Estuary and Marshes Ramsar• Thames Estuary and Marshes SPA• Outer Thames Estuary SPA <p>The screening concludes that environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake and outfall, which may affect downstream sites or sites supporting mobile species.</p> <p>The HRA AA (2025) concludes that, for Medway Estuary and Marshes Ramsar/SPA, Outer Thames Estuary SPA, and Thames Estuary and Marshes Ramsar/SPA, adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.</p> <p>The HRA AA (2025) concludes that The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.</p> <p>Overall, the HRA 2025 concludes potential effects during operation.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The preferred location for the desalination plant is on land south of Sheerness Docks, currently used for storage of car imports. The option intersects with Lappel Bank Foreshore authorised landfill site, potential to disturb contaminated material during construction.	Best practicable means to prevent potential disturbance of contaminated material during construction.	0	0	0	0

Water	Increase resilience and reduce flood risk	0	--	0	--	The preferred location is located entirely in Flood Zones 2 and 3, which may have an impact on construction and operation.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain. The desalination plant would be subject to FRA and would need to be flood resilient.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	--	<p>Potential for water quality impacts during construction and during operation due to brine discharge. A new abstraction license will also need to be attained.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Medway and Swale transitional waterbodies.</p> <p>The WFD assessment highlights that the discharge of hypersaline water into the transitional water body could impact on water quality and affect biological habitats. Water quality modelling will be required to determine the potential effects on biological compliance parameters and protected areas. Construction of new infrastructure to support this option could impact on both water quality and biology if significant seabed disturbance is required. Sediment sampling will be required to confirm whether there is sufficient risk to water quality to affect biological parameters. The new abstraction could impinge fish and phytoplankton.</p> <p>The WFD assessment highlights that it is not predicted that the discharge would contain any chemicals supporting chemical status. However, bed disturbance during construction could give rise to the release of sediment bound chemicals. Sediment sampling will therefore be required to confirm whether there is a risk to water quality.</p>	Best practice construction measures to be implemented to mitigate effects.	0	-	0	--
	Deliver reliable and resilient water supplies	0	0	++	0	The option is likely to provide 20MI/d supply of desalinated and treated water.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	-	The option is not within an AQMA nor are there any within 2km. Construction likely to have minor and temporary impact on air quality. There is potential for air quality impacts during operation given the high energy intensive process.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts may remain. Opportunity to use renewable energy to minimise air quality impacts.	0	-	0	-
Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	--	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has moderate construction and moderate operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	Desalination provides good climate change resilience for supply, especially for intakes from the sea. Where the use of desalination relieves pressure on stressed freshwater environments it could also contribute to environmental resilience.	N/A	0	0	+	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	<p>The pipeline to Deans Hill is partially located within the Kent Downs National Landscape and is located in the North Kent Plain and North Downs national character areas. As a result, there are likely to be adverse effects during construction due to the presence of the construction site and associated excavations required for the pipeline. During the operational phase there may be adverse effects due to the presence of new pumping houses etc, but this is likely to be very minor. It is assumed the new pipeline will be buried below ground.</p> <p>The preferred location for the desalination plant is within the Greater Thames Estuary NCA. Negative effects likely during construction and operational phase however anticipated to be minor as site currently used for storage of car imports.</p>	<p>Construction best practice to be followed to reduce visual impacts from the works area. Ground to be reinstated following works. Operational phase infrastructure should be in keeping with local architecture and could implement screening to mitigate effects.</p> <p>Best practice will be implemented to avoid negative effects for desalination plant, however likely to be some disturbance to landscape during works. Screening could be implemented to minimise visual impact of plant.</p>	0	-	0	-
	Historic Environment	0	-	0	0	<p>The Queenborough Lines scheduled monument is within 500m of the preferred location. Construction and operation may affect the setting of this historic asset since the preferred location is currently in an industrialised area, this may be limited. There is potential for any excavation to impact buried archaeology if present, however this is considered to be limited given the current use of the preferred location.</p>	<p>Best practice mitigation measures will likely be implemented to minimise setting effects during construction. An Archaeology Watching Brief may be required during the construction phase.</p>	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	<p>There are numerous schools, medical facilities and other important buildings within 2km of option. There may be temporary disturbances during construction to users of these facilities. The preferred location is adjacent to an area in IMD decile 3.</p>	<p>Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction and land will be reinstated. However, minor and temporary effects are likely to still occur.</p>	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	<p>There are a number of parks and gardens and playing spaces along with sports facilities, and a National Cycle Network route within 2km that may be temporarily affected during construction works, e.g. noise, dust pollution, road congestion.</p>	<p>Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.</p>	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	<p>New infrastructure required for option anticipated to generate waste. Brine waste will be produced during desalination.</p>	<p>Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.</p>	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	-	0	0	<p>There is likely to be localised traffic disruption during the construction phase. Operational effects on the local road network are likely to be minimal. There may be impacts on the operations of the Sheerness Docks although this is likely to be minimal.</p>	<p>Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.</p>	0	-	0	0

Groundwater (KME): Recommission Gravesend (2.7MI/d)											
Southern Water											
Windmill Hill source is a well and audit system that was decommissioned in 2007 due to high nitrate levels. A new nitrate treatment plant was constructed on site in 2006. A Source Investigation & Optimisation Study (SIOS) suggested that the nitrate problem was likely to be a faulty nitrate monitor. The report recommended the source could be recommissioned through a) Undertaking a long-term step test with steps of seven days duration at rates of 3.0MI/d, 3.3MI/d and maximum pump capacity (approximately 3.66MI/d) subject to stabilisation of pumping water levels during each step b) Recalibration or repair of the online raw water nitrate monitor, c) Modify the headworks to the satellite well chamber to facilitate improved access. Refurbishment of the existing nitrate plant will also be required. Scheme Output: 5MI/d											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	0	0	<p>There are no designated sites within 1km. The option would also be situated within the SSSI Impact Risk Zone associated with South Thames Estuary and Marshes SSSI. However, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSI is notified in the area of the SSSI Impact Risk Zone which the option is located within.</p> <p>The 2025 HRA screens in Thames Estuary and Marshes SPA and Ramsar for the operational phase. The HRA notes that WINEP investigations currently ongoing in relation to North Kent sites; previous studies for the North Kent sites indicated that some abstractions may affect flows into the sites, but that this did not translate into adverse effects on the features.</p> <p>The risk of the transfer / spread of INNS is anticipated to be very low as groundwater will likely be entirely free from INNS.</p>	N/A	0	0	0	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	The option is located on urban land. It is not anticipated that this option will have significant impacts on local soil.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is within Flood Zone 1 and therefore flood risk is low. No effects on flood risk are anticipated as a result of this option.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	---	<p>Option intersects with SPZ I, II and III and North Kent Medway Chalk WFD Groundwater body. Abstraction capacity to be confirmed, however the recommissioning of this source has the potential to have an impact on groundwater quality and levels.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with medium confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with medium confidence) for the North Kent Medway Chalk groundwater body and potential WFD non-compliance (with low confidence) for the Ebbsfleet waterbody.</p> <p>The WFD assessment highlights that the Medway ALS (from 2013) highlights the vulnerability of the North Kent Chalk aquifer and associated abstractions to drought, and the potential influence on groundwater sources. While the RNAGs on the Catchment Data Explorer attribute the Poor status to natural conditions, from the ALS it can be presumed that abstraction contributes to the water balance failures. The ALS states a desire to "seek to secure downward variations of existing licences" from the Chalk.</p>	Monitor ground water levels.	0	-	0	---

						<p>In addition, the ALS indicates restricted water available (Q30 only) in the Ebsfleet catchment, with similarly restricted water availability in other nearby surface water bodies, and the licence is also included in the ongoing North Kent Marshes WINEP investigation.</p> <p>Therefore, it may be concluded that an increase in abstraction, even within licence, would be considered to fail the water balance test and potentially dependent surface water body status.</p> <p>Furthermore, the WFD notes that with regard to the groundwater body, it still fails the drinking water protected area test. If the measured high nitrate levels were due to a faulty monitor, this may not be relevant to the Windmill Hill source. However, there is also potential of poor water quality from wastewater leakage in this area (pers. comm. from North Kent Marshes investigations). Further investigations will be required to confirm, and a conclusion of Non-compliant has been applied until those investigations are completed.</p>					
	Deliver reliable and resilient water supplies	0	0	+	0	New resource. 2.65Ml/d capacity.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	Northfleet Industrial Area AQMA and Gravesham A226 One-way system AQMA are within 2000m. There is no construction likely given the option is recommissioning of an existing source. There may be operational impacts on air quality, however these are likely be negligible.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	-	There is no carbon data available for this option. The option is estimated to have neutral construction and minor operational carbon emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	0	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	There may be positive effects on the resilience of the freshwater environment as the option aims to recommission a groundwater abstraction source. However, the resilience of groundwater to climate change may be impacted.	Monitor ground water levels.	0	0	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	The option would be situated within the High Weald National Landscape, and the Kent Downs National Landscape lies 2.8km to the south east of the option. No effects predicted as option is located on existing site and involves recommissioning of an existing source therefore impacts on landscape are unlikely.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	The option is within Gravesend Conservation Area and there are also listed buildings within 500m. Effects on the setting of these assets are unlikely given the option is the recommissioning of an existing source. Excavation is not likely to be required, as it is an existing source, therefore impacts on buried archaeology are unlikely.	N/A	0	0	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	0	0	There is a school, sports facility, play space, playing field, public parks or gardens, and a nursing home within 500m. No disturbance to the wider community and users of these community facilities is anticipated as the option involves recommissioning of an existing source and construction effects are not likely. The option is within IMD decile 6.	N/A	0	0	0	0
	Maintain and enhance tourism and recreation	0	0	0	0	There are sports facilities, play spaces, playing fields and public parks or gardens within 500m. However, given the nature of the option, it is unlikely to have any impact on tourism and recreation.	N/A	0	0	0	0
Material Assets	Minimise resource use and waste production	0	0	0	0	Given the option involves recommissioning an existing source, it is not likely new infrastructure will be required on a significant scale.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No effects on built assets and infrastructure are anticipated given the option involves recommissioning of an existing source. There may be some disruption on the local road network, however this is likely to be negligible.	N/A	0	0	0	0

Recycling (KME): Sittingbourne Industrial Water Reuse (7.5Mld)											
Southern Water											
This option is to use a water recycling scheme to unlock additional volume in an existing industrial borehole licence to increase the scope of the licence trading. The existing industrial user currently utilises the groundwater in its paper/board making processes. It has been assumed at this stage that the reverse osmosis wastewater can be discharged through Sittingbourne WwTW existing outfall.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	---	<p>The option is within 500m of the Swale SSSI (97.83% favourable, 2.17% unfavourable - no change), SPA and Ramsar which are GWDTE. The option would also cross the SSSI Impact Risk Zones associated with Queendown Warren SSSI, Medway Estuary and Marshes and Purple Hill. However, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified in the area of the SSSI Impact Risk Zones.</p> <p>The Swale Estuary MCZ is also within 500m. There is ancient woodland adjacent to the option, and the option is anticipated to have direct effects on woodland and priority habitats. No effects anticipated for chalk rivers.</p> <p>The HRA screening (2025) screened in The Swale SPA and Ramsar and Medway Estuary and Marshes SPA and Ramsar for construction and operation. The scheme will require construction close to the Milton Creek in Sittingbourne (tributary of the Swale); the net effect of the scheme operation would be a minor reduction to non-saline inputs to Milton Creek from Sittingbourne WwTW, and to alter concentrations of some determinands (not total load however) that are discharged to this waterbody (It has been assumed at this stage that the reverse osmosis wastewater can be discharged through Sittingbourne WwTW existing outfall), hence to the Swale.</p> <p>The HRA AA (2025) concludes that the principal issues for The Swale SPA/Ramsar are the potential effects on Milton Creek as potential 'functional habitat'; and the small reduction in non-saline inputs to The Swale via Milton Creek (note, all potential construction effects can be avoided with established measures).</p> <p>With regard to functional habitat, Milton Creek is highly unlikely to represent functionally linked habitat. It is of low value in this regard as (a) it is a constrained creek / channel in a high-disturbance urban / industrial area that will inherently have a low attractiveness for the qualifying features (assuming there are no dominating non-natural attractants) and (b) is substantially lower value than the extensive areas of equivalent mud-flat and creek habitat available in the SPA/Ramsar; it is therefore very unlikely that the creek is critical to the functional integrity of the site, and environmental changes in this location would not be expected to adversely affect these sites.</p>	<p>Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys. Uncertain effects identified for The Swale SPA and Ramsar are considered partially mitigatable through use of construction best practice measures such as a robust CEMP. Despite this, the proximity of the option to the designated sites mean that adverse effects due to disturbance remain possible. Undertake HRA AA to address residual uncertain effects identified for the Swale SPA and Ramsar. Consider alternative routing options.</p> <p>The findings of the 2025 HRA AA for The Swale SPA and Ramsar and Medway Estuary and Marshes SPA and Ramsar for operation are noted in the comments column. With regards to construction all potential effects can be avoided with established measures.</p>	0	-	0	--/?

						<p>With regard to effects on habitats in The Swale itself, the possibility of localised and minor changes to the invertebrate fauna as a result of reductions in non-saline inputs around the confluence with Milton Creek cannot be excluded; however, the reduction of ~7.5Ml/d will be small relative to the inputs from the creek (from the WwTW and surface water catchment in Sittingbourne), and likely inconsequential in relation to the tidal turnover and dominance of saline inputs in the Swale; furthermore, any minor and localised shifts in biotope would not fundamentally alter the value of the area to the qualifying features; however, aspects of this can only be confirmed with the benefit of project-level survey and modelling, hence minor residual uncertainties remain.</p> <p>In light of the predicted effect of this option both alone and in-combination with other plans and projects, it is considered that there is sufficient confidence that appropriate mitigation measures are available at the project level and can be implemented to enable a conclusion of no adverse effect on the integrity of the Swale SPA/Ramsar to be drawn for the WRMP HRA. There are residual uncertainties that can only be explored through project-level investigations and addressed through mitigation at the project level.</p> <p>Moderate INNS construction phase risk due to nearby sensitive habitats. Very limited operational INNS risk/transfer as the source water is likely to be treated and be entirely free of INNS.</p> <p>Given the uncertainties in operational phase for The Swale SPA and Ramsar moderate negative effects with uncertainty are assessed post mitigation.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The pipeline passes through Grade 1, 2, 3 and 4 agricultural land as well as non-agricultural land. There is potential that these soils will be disturbed during the construction phase. There are authorised and historic landfill sites within 500m therefore potential for contaminants to be disturbed during construction.	Land reinstated upon completion. Best practice methods for working adjacent to or within landfills.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	Option predominately located within Flood Zone 1, however there are areas of Flood Zones 2 and 3 on the pipeline route. This may have an effect on construction. The WTWs may be located in FZ2 and FZ3 therefore potential to be at risk from flooding, however this is an existing site therefore operational effects not included in this assessment.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	--	<p>The works are adjacent to main rivers and as such there is potential for contamination during the construction phase. There may be impacts on water quality from the discharges as a result of this option. The option is within SPZs.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential</p>	Best practice mitigation measures likely to be implemented during construction.	0	-	0	--

						<p>WFD non-compliance (with low confidence) for the Swale transitional waterbody.</p> <p>The WFD assessment highlights that the option will result in reduced discharge from Sittingbourne WwTW to the Swale. The North Kent & Swale ALS (2013) shows restricted water available (Q30 only) for the lower Swale catchment. As the discharge is to the tidal Milton Creek, shortly upstream of the Swale SPA boundary. Considering the perceived sensitivity of freshwater flows to estuaries, potential non-compliance has been concluded on a precautionary basis. However, this requires further assessment.</p> <p>The WFD assessment highlights that from a water quality perspective, the option will reduce loading to Milton Creek, but will also reduce the total flow in the creek. It is assumed that it is more likely to have a positive effect overall, although further assessment would be required to confirm this.</p> <p>It is assumed that there will be no net change to groundwater abstraction as a result of the licence trading, and hence the option will be compliant with respect to the groundwater body.</p>					
	Deliver reliable and resilient water supplies	0	0	+	0	The option aims to use the reuse scheme to free up water within the borehole licence (7.5Ml/d) which may help to increase the resilience of supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	The option is not within an AQMA. AQMA No 4 - St Pauls Street, Sittingbourne and AQMA No 3 - East Street, Sittingbourne Kent are within 2000m. There is likely to be impacts to air quality during the construction.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	There is not anticipated to be any effects on the resilience of the local environment as water levels are not anticipated to be affected.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The Kent Downs National Landscape is 1km away from the option. There is potential for minor and temporary impacts on the landscape during the construction phase.	Best practice measures will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Land reinstated upon completion.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The pipeline passes through a conservation area, and there are also listed buildings and a scheduled monument within 500m. There is potential that the construction phase will impact the setting of these historic assets, however this will	Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of	0	-	0	0

						be minor and temporary. The pipeline excavation may impact buried archaeology.	buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.				
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	0	0	There are sports facilities, schools, churches and religious grounds, play spaces, allotments, schools, playing fields and public parks or gardens within 500m. The pipeline also passes through a school, playing field, and country park. Users of these community facilities and the wider community may be disrupted during the construction phase, however this is likely to be minor and temporary. IMD deciles range from 2 to 10 along the route.	Best practice measures will likely be implemented to minimise disturbance during construction. However, moderate yet temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	--	0	0	The construction phase has the potential to result in the diversion of public rights of way and may also impact recreational facilities including the playing fields and country park the option passes through.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste during construction, including excavated materials.	Opportunity to implement sustainable design measures and reuse excavated material on site, to reduce impact.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline intersects major roads and railways. There is likely to be moderate and temporary impacts during construction.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still remain.	0	-	0	0

Drought option - demand side (KME): Reduce transfer to other commercial customers											
Southern Water											
Drought Option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (0.1MI/d), the resilience of Southern Water's supplies is likely to increase. However, there are likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been identified at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought conditions, it is not resulting in the long-term resilience of the local environment.	N/A	0	0	+	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9MI/d)											
Southern Water											
The current operational transfer from Kent Medway East to Kent Thanet is limited to the output from Faversham4 WSW. This option enables flows from the Faversham3 groundwater source to be directed, via an existing main, towards Selling WSW. A soakaway is installed at Selling to allow for reconditioning of the existing main and the addition of UV treatment at Selling permits disinfection of the Throwley flows.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	-	0	-	<p>The option does not pass through any area that is classified as a statutory or non-statutory designated area. There are areas of ancient woodland close to the option (<500m), but the option does not pass through these. The option however does pass through woodland areas and section (2) of the option description outlines that pipeline construction is involved. It is assumed that this would be constructed via direction drilling under the woodland, but it is likely that there would still be disturbance to biodiversity features of the area during construction due to the presence of the construction site and machinery. There are no watercourses within 2000m of the option, meaning the likelihood of spread of INNS during construction and operation is negligible.</p> <p>The nearest SSSI (the Swale) is >2000m north of the option (Favourable 97.83% / Unfavourable - no change 2.17%) and due to its distance, it is not anticipated for the option to result in effects.</p> <p>During the operational phase there will be new permanent above ground infrastructure including a new pumping station, tanks and associated infrastructure. This means there will likely be an increased level of disturbance above the baseline during the operational phase, resulting in adverse effects. It is assumed that the pipeline will be buried below ground and ground reinstated.</p> <p>The HRA Screening (2025) concluded no LSE. The option is a network solution that would utilise an existing main, and so no potentially notable environmental changes associated with construction or operation are expected.</p>	<p>Construction best practice mitigation to be followed to reduce disturbance to biodiversity in the area and to avoid pollution spills. Ground to be reinstated following works. Due to the presence of the construction sites, residual effects likely to remain but to be minor. During operation there will be an increased level of disturbance above the baselined due to additional above ground infrastructure, likely resulting in minor adverse effects.</p>	0	-	0	-
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	-	<p>The option results in the construction of a pipeline within Grades 1, 2 & 3 agricultural land, resulting in an adverse effect on soils. There is one historic landfill within 2000m of the option - due to the distance no effect is anticipated. There are no authorised landfills.</p>	<p>Ground to be reinstated following the works. Best practice techniques to be followed to avoid contamination of ground during construction. Some permanent land take of agricultural land will remain into the operational phase due to the new permanent infrastructure (pumping station, tanks, etc.)</p>	0	-	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>The option is not located in a flood zone. Flood zone 2 + 3 are present within 2000m of the option. Therefore, there is no impact to the assets from flood risk and resilience is high.</p>	<p>Ensure that site compounds etc. are situated away from the nearest area of flood zone.</p>	0	0	0	0

	Protect and enhance the quality of the water environment and water resources	0	0	0	0	This option does not involve the increased abstraction of water, but instead increases the capacity of the pipeline to convey more water instead. Therefore, quality of water resources will not be impacted. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice construction methods to be followed (as outlined in the WFD screening).	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	++	0	This option conveys water along a new pipeline, therefore there will be a transfer of water to areas of deficit (bi-directional) without requiring abstraction - therefore a moderate positive effect is anticipated in the operational phase due to the ability to deliver more water to multiple regions.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	0	The option is not located in an AQMA or within 2000m from a AQM site. There will likely be minor adverse effects in the construction phase from emissions associated with plant and machinery. There will likely be emissions generated in the construction phase due to the increased operational infrastructure although these levels will be so low it is considered negligible.	Construction best practice to be followed to reduce emissions.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Option results in the conveyance of water - no new abstraction will take place as a result of this option so there are not considered to be any changes to vulnerability or risk.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The option is partially located within the Kent Downs National Landscape and is located in the North Kent Plain and North Downs national character areas. As a result, there is likely to be adverse effects during construction due to the presence of the construction site and associated excavations required for the pipeline. During the operational phase there may be adverse effects due to the presence of new pumping houses etc, but this is likely to be very minor. It is assumed the new pipeline will be buried below ground.	Construction best practice to be followed to reduce visual impacts from the works area. Ground to be reinstated following works. Operational phase infrastructure should be in keeping with local architecture and could implement screening to mitigate effects.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	Part of the option passes through a conservation area. There are no scheduled monuments within 2000m of the works. There are two registered parks/gardens within 2000m but these are not anticipated to be impacted due to their distance from the site. The option is within close proximity to (<500m) a number of listed buildings. It is assumed that the pipeline installation would take place via directional drilling that could avoid any impact on the curtilage of these buildings. The excavation for the pipeline could impact archaeology if present.	Construction best practice should be followed to reduce visual impacts. The design of the above ground permanent infrastructure should be in keeping with the local historic setting. All ground should be reinstated following the works. Pipeline pathway realignment should be investigated to avoid the conservation area. An archaeological watching brief may be required depending on the presence or absence of archaeology.	0	-	0	0

						The option is within 5km of the Canterbury Cathedral, St Augustine's Abbey, and St Martin's Church World Heritage Site, though no effects are anticipated due to the distance.					
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option will involve construction of a pipeline underneath a golf course (assumed via directional drilling). The option is within IMD deciles 5 and 6. There are no schools or hospitals close to the option and so disturbance is considered low and unlikely to impact on the local community or wellbeing (only in the construction phase due to the presence of the construction site and works).	Construction best practice to be followed to reduce disturbance to local residents. Ground to be reinstated following the works. Stakeholder consultation with the community recommended ahead of the design and construction.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	There are no national trails or cycle paths near to the option. The only element considered to generate tourism would be the golf course under which the pipeline is being installed and there is also potential for diversions to public rights of way during the construction works. As a result, it is considered for very minor effects to be present in the construction phase with no effect at operation.	Construction best practice to be followed to reduce disturbance to golf course. Ground to be reinstated following the works.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Pipeline to be installed requires excavation and generation of excavated material. Resource use needed for construction of pipeline.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The option crosses one major road, which has the potential to be impacted during the construction phase. It is not considered for any impact to take place during operation. There are no important buildings located within 2000m of the option. There are a number of small schools located within 2000m but these are not considered to be effected due to their distance from the option and associated works.	Directional drilling to take place for pipeline installation under the main road. Consultation with utility owners in the area to take place. Ground to be reinstated following the works.	0	-	0	0

1.13. KENT MEDWAY WEST (KMW)

Drought option - demand side (KMW): NEUBs											
Southern Water											
Non-essential use ban - KMW WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water's sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc. This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.	N/A	0	0	+	0
	Soil	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Minor adverse effect on soils management in dry weather.	N/A	0	0	0	-
	Water	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to cause or exacerbate flooding elsewhere.	N/A	0	0	0	0
Water	Protect and enhance the quality of the water environment and water resources	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water's sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources. The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Reduction in demand for water (1.33MI/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the ban.	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0

	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0
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Drought option - demand side (KMW): TUBs											
Southern Water											
Temporary use bans - KMW WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water's sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought.</p> <p>The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (1Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the temporary use ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water’s Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water’s sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--

	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Desalination (KMW): Thames Estuary (10MI/d)											
Southern Water											
The Thames Estuary Desalination Options are a modular suite of options to develop a desalination plant of differing capacities that could be developed in one or more phases. The plant would be developed adjacent to Britannia Refined Metal on the Swanscombe Peninsula. Treated water would be transferred to Singlewell WSR for distribution to the Kent Medway WRZ and the plant would combine discharge with Swanscombe WwTW's existing outfall. This option represents a potential first phase development of a 10MI/d capacity desalination plant.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The option crosses the Swanscombe Peninsula SSSI (91.67% favourable, 8.33% unfavourable – no change), with potential for some loss, and the following SSSI is located within 1km of the option: Swanscombe Skull Site (0.88km, 100% favourable). The option would also cross SSSI Impact Risk Zones associated with the Swanscombe Peninsula, Swanscombe Skull Site, and Shorne and Ashenbank Woods SSSI's, including areas where all planning applications, including pipeline development and discharge of water to ground or to surface water are highlighted as being a risk to the sensitive features for which the SSSI's are notified. The following NNR is located within 1km of the option: Swanscombe Skull Site (0.89km). There is potential for indirect effects from the construction phase on these sites through noise, dust and vibration causing disturbance during construction.					
						The desalination plant and discharge point would be located 0.59km from the Swanscombe Marine Conservation Zone, and pipeline construction would take place 0.77km from the MCZ at its closest point. Indirect effects during construction are possible, through dust, noise and vibration, although these are likely mitigable with best practice measures. The discharge is unlikely to have an adverse effect on the MCZ during operation as it would be located downstream. The discharge would be, however, upstream from the Thames Estuary & Marshes Ramsar and SPA, which overlap with the Medway Estuary – Zone 1 MCZ. Construction effects are likely to be limited but mobile features may be vulnerable to disturbance. Operational effects are unlikely due to the distance downstream from the discharge, however additional information or plume investigations will be needed.	Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual direct and indirect effects remain for designated sites. Future design will need to undertake ecology surveys.				
		0	---	0	---	The option intersects woodland and priority habitat, though it does not cross, or run adjacent to, any Ancient Woodlands. There is potential for direct loss of priority habitat from the construction of the desalination plant. There are no anticipated impacts on chalk rivers or GWDTE. Potential impacts from operation, as highly saline discharge from plant may have negative impacts on marine ecosystems.	The HRA AA (2025) for the Thames Estuary and Marshes SPA/Ramsar notes that construction effects are avoidable with normal measures. In the operational phase, appropriate mitigation measures are available at the project level and can be implemented to enable a conclusion of no adverse effect. Detailed mitigation measures are outlined in Appendix E8 of the HRA report.	0	--	0	---/?

						<p>The risk of transfer / spread of INNS is low.</p> <p>The HRA screening (2025) screened in the Thames Estuary and Marshes SPA/Ramsar for both construction and operational effects. Environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake (no European sites / features likely to be exposed here) and the outfall which would combine discharge with Swanscombe WwTW's existing outfall (where brine from the desalination process will be discharged; may affect downstream sites).</p> <p>The AA notes that based on the predicted effect of this option both alone and in-combination with other plans and projects, there is sufficient confidence that appropriate mitigation measures are available at the project level and can be implemented to enable a conclusion of no adverse effect on the integrity of the Thames Estuary and Marshes SPA/Ramsar to be drawn for the WRMP HRA.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The desalination plant and part of the pipeline route is within urban land. The pipeline also passes through Grade 1, 2 and Grade 3 agricultural land. There are historic landfill sites within close proximity to the option and the construction phase has the potential to disturb contaminants. Swanscombe Skull Site, a geological SSSI, is also within 2000m but no effects anticipated.	Reinstate land where possible. Best practice methods for working within landfill sites to be implemented to minimise effects.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	--	0	--	The desalination plant is located within FZ2 and FZ3 therefore potential risk for both the construction and operational phases.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>Option located in SPZ 3 and intersects with two WFDGW bodies: North Kent Medway Chalk; West Kent Darent and Cray Chalk. The construction phase could lead to contamination of the water environment and there is potential for water quality impacts during operation due to brine discharge.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Thames Middle transitional waterbody.</p> <p>The WFD assessment highlights that the discharge of hypersaline water into the transitional water body could impact on water quality and affect habitats for biological parameters. Water quality modelling will</p>	Best practice construction measures including flood risk and pollution management will likely be implemented. A new abstraction license will also need to be attained.	0	-	0	--

						be required to determine potential effects on water quality, which would then determine the potential effects on biological compliance parameters and protected areas. The new abstraction could impinge fish and phytoplankton.					
	Deliver reliable and resilient water supplies	0	0	+	0	Option may provide up to 10MI/d supply of desalinated and treated water Kent Medway WRZ.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	--	0	--	The desalination plant is located within Northfleet Industrial Area AQMA and Gravesham A2 AQMA is within 500m. Construction likely to have minor and temporary impact on air quality. There is potential for air quality impacts during operation given the high energy intensive process.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts may remain. Use best practice methods to reduce operational impacts on air quality.	0	-	0	-
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and minor operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The use of desalination relieves pressure on stressed freshwater environments therefore contributing to increased resilience to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The following National Landscape is located within 5km of the option: Kent Downs (2.33km). The option intersects the Greater Thames Estuary NLCA and the pipeline passes through the London Area Greenbelt. There is likely to be negative effects during the construction phase. There will also be permanent effects on visual amenity during operation.	Best practice will be implemented to avoid negative effects, however likely to be some disturbance to landscape during works. Screening could be implemented to minimise visual impact of plant.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are listed buildings and conservation areas within 500m of the option. There is potential for the construction phase to affect the setting of these historic assets. The excavation for the desalination plant and pipeline may impact archaeology, if present.	Best practice mitigation measures will likely be implemented to minimise setting effects during construction and operation. Given there is potential to impact buried archaeology, an Archaeology Watching Brief may be required during the construction phase.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are schools, playing fields, play spaces, churches and religious grounds, cemeteries, emergency services, medical facilities and other community facilities within 500m. There are also noise action areas within 500m. There may be minor, temporary disturbances during construction to users of these facilities and the wider community. The desalination plant is within IMD decile 1 and the pipeline passes through IMD decile 4 to 9.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

	Maintain and enhance tourism and recreation	0	-	0	0	There are playing fields and play spaces within 500m. The pipeline also intersects national cycle routes. There may be diversions to public rights of way during the construction phase. Minor negative effects have therefore been identified.	Best practice mitigation measures will be implemented to minimise effects. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option anticipated to generate waste. Brine waste will be produced during desalination.	Seek opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain during construction.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option intersects major roads, railways and national cycle routes. There is likely to be disruption during the construction phase.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction.	0	-	0	0

Desalination (KMW): Thames Estuary (10MI/d) Phase 2												
Southern Water												
The Thames Estuary Desalination Options are a modular suite of options to develop a desalination plant of differing capacities that could be developed in one or more phases.												
This option represents a potential second phase development of a 10MI/d capacity desalination plant contingent on one of the first phase 10MI/d or 20MI/d capacity options (Swa10 or Swa20).												
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects		
		+	-	+	-			+	-	+	-	
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The option crosses the Swanscombe Peninsula SSSI (91.67% favourable, 8.33% unfavourable – no change), with potential for some loss, and the following SSSI is located within 1km of the option: Swanscombe Skull Site (0.88km, 100% favourable). The option would also cross SSSI Impact Risk Zones associated with the Swanscombe Peninsula, Swanscombe Skull Site, and Shorne and Ashenbank Woods SSSI's, including areas where all planning applications, including pipeline development and discharge of water to ground or to surface water are highlighted as being a risk to the sensitive features for which the SSSI's are notified. The following NNR is located within 1km of the option: Swanscombe Skull Site (0.89km). There is potential for indirect effects from the construction phase on these sites through noise, dust and vibration causing disturbance during construction.						
						The desalination plant and discharge point would be located 0.59km from the Swanscombe Marine Conservation Zone, and pipeline construction would take place 0.77km from the MCZ at its closest point. Indirect effects during construction are possible, through dust, noise and vibration, although these are likely mitigable with best practice measures. The discharge is unlikely to have an adverse effect on the MCZ during operation as it would be located downstream. The discharge would be, however, upstream from the Thames Estuary & Marshes Ramsar and SPA, which overlap with the Medway Estuary – Zone 1 MCZ. Construction effects are likely to be limited but mobile features may be vulnerable to disturbance. Operational effects are unlikely due to the distance downstream from the discharge, however additional information or plume investigations will be needed.	Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual direct and indirect effects remain for designated sites. Future design will need to undertake ecology surveys.					
		0	---	0	---	The option intersects woodland and priority habitat, though it does not cross, or run adjacent to, any Ancient Woodlands. There is potential for direct loss of priority habitat from the construction of the desalination plant. There are no anticipated impacts on chalk rivers or GWDTE. Potential impacts from operation, as highly saline discharge from plant may have negative impacts on marine ecosystems.	The HRA AA (2025) for the Thames Estuary and Marshes SPA/Ramsar notes that construction effects are avoidable with normal measures. In the operational phase, appropriate mitigation measures are available at the project level and can be implemented to enable a conclusion of no adverse effect. Detailed mitigation measures are outlined in Appendix E8 of the HRA report.	0	--	0	---/?	

						<p>The risk of transfer / spread of INNS is low.</p> <p>The HRA screening (2025) screened in the Thames Estuary and Marshes SPA/Ramsar for both construction and operational effects. Environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake (no European sites / features likely to be exposed here) and the outfall which would combine discharge with Swanscombe WwTW's existing outfall (where brine from the desalination process will be discharged; may affect downstream sites).</p> <p>The AA notes that based on the predicted effect of this option both alone and in-combination with other plans and projects, there is sufficient confidence that appropriate mitigation measures are available at the project level and can be implemented to enable a conclusion of no adverse effect on the integrity of the Thames Estuary and Marshes SPA/Ramsar to be drawn for the WRMP HRA.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The desalination plant and part of the pipeline route is within urban land. The pipeline also passes through Grade 1, 2 and Grade 3 agricultural land. There are historic landfill sites within close proximity to the option and the construction phase has the potential to disturb contaminants. Swanscombe Skull Site, a geological SSSI, is also within 2000m but no effects anticipated.	Reinstate land where possible. Best practice methods for working within landfill sites to be implemented to minimise effects.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	--	0	--	The desalination plant is located within FZ2 and FZ3 therefore potential risk for both the construction and operational phases.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>Option located in SPZ 3 and intersects with two WFDGW bodies: North Kent Medway Chalk; West Kent Darent and Cray Chalk. The construction phase could lead to contamination of the water environment and there is potential for water quality impacts during operation due to brine discharge.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Thames Middle transitional waterbody.</p> <p>The WFD assessment highlights that the discharge of hypersaline water into the transitional water body could impact on water quality and affect habitats for biological parameters. Water quality modelling will</p>	Best practice construction measures including flood risk and pollution management will likely be implemented. A new abstraction license will also need to be attained. Further WFD assessment required	0	-	0	--

						be required to determine potential effects on water quality, which would then determine the potential effects on biological compliance parameters and protected areas. The new abstraction could impinge fish and phytoplankton.					
	Deliver reliable and resilient water supplies	0	0	+	0	Option may provide up to 10MI/d supply of desalinated and treated water Kent Medway WRZ.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	--	0	--	The desalination plant is located within Northfleet Industrial Area AQMA and Gravesham A2 AQMA is within 500m. Construction likely to have minor and temporary impact on air quality. There is potential for air quality impacts during operation given the high energy intensive process.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts may remain. Use best practice methods to reduce operational impacts on air quality.	0	-	0	-
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and minor operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The use of desalination relieves pressure on stressed freshwater environments therefore contributing to increased resilience to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The following National Landscape is located within 5km of the option: Kent Downs (2.33km). The option intersects the Greater Thames Estuary NLCA and the pipeline passes through the London Area Greenbelt. There is likely to be negative effects during the construction phase. There will also be permanent effects on visual amenity during operation.	Best practice will be implemented to avoid negative effects, however likely to be some disturbance to landscape during works. Screening could be implemented to minimise visual impact of plant.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are listed buildings and conservation areas within 500m of the option. There is potential for the construction phase to affect the setting of these historic assets. The excavation for the desalination plant and pipeline may impact archaeology, if present.	Best practice mitigation measures will likely be implemented to minimise setting effects during construction and operation. Given there is potential to impact buried archaeology, an Archaeology Watching Brief may be required during the construction phase.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are schools, playing fields, play spaces, churches and religious grounds, cemeteries, emergency services, medical facilities and other community facilities within 500. There are also noise action areas within 500m. There may be minor, temporary disturbances during construction to users of these facilities and the wider community. The desalination plant is within IMD decile 1 and the pipeline passes through IMD decile 4 to 9.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

	Maintain and enhance tourism and recreation	0	-	0	0	There are playing fields and play spaces within 500m. The pipeline also intersects national cycle routes. There may be diversions to public rights of way during the construction phase. Minor negative effects have therefore been identified.	Best practice mitigation measures will be implemented to minimise effects. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option anticipated to generate waste. Brine waste will be produced during desalination.	Seek opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain during construction.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option intersects major roads, railways and national cycle routes. There is likely to be disruption during the construction phase.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction.	0	-	0	0

Desalination (KMW): Thames Estuary (20MI/d)											
Southern Water											
The Thames Estuary Desalination Options are a modular suite of options to develop a desalination plant of differing capacities that could be developed in one or more phases. This option represents a potential first phase development of a 20MI/d capacity desalination plant.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The option crosses the Swanscombe Peninsula SSSI (91.67% favourable, 8.33% unfavourable – no change), with potential for some loss, and the following SSSI is located within 1km of the option: Swanscombe Skull Site (0.88km, 100% favourable). The option would also cross SSSI Impact Risk Zones associated with the Swanscombe Peninsula, Swanscombe Skull Site, and Shorne and Ashenbank Woods SSSI’s, including areas where all planning applications, including pipeline development and discharge of water to ground or to surface water are highlighted as being a risk to the sensitive features for which the SSSI’s are notified. The following NNR is located within 1km of the option: Swanscombe Skull Site (0.89km). There is potential for indirect effects from the construction phase on these sites through noise, dust and vibration causing disturbance during construction.					
						The desalination plant and discharge point would be located 0.59km from the Swanscombe Marine Conservation Zone, and pipeline construction would take place 0.77km from the MCZ at its closest point. Indirect effects during construction are possible, through dust, noise and vibration, although these are likely mitigable with best practice measures. The discharge is unlikely to have an adverse effect on the MCZ during operation as it would be located downstream. The discharge would be, however, upstream from the Thames Estuary & Marshes Ramsar and SPA, which overlap with the Medway Estuary – Zone 1 MCZ. Construction effects are likely to be limited but mobile features may be vulnerable to disturbance. Operational effects are unlikely due to the distance downstream from the discharge, however additional information or plume investigations will be needed.	Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual direct and indirect effects remain for designated sites. Future design will need to undertake ecology surveys.				
		0	---	0	---		The HRA AA (2025) for the Thames Estuary and Marshes SPA/Ramsar notes that construction effects are avoidable with normal measures. In the operational phase, appropriate mitigation measures are available at the project level and can be implemented to enable a conclusion of no adverse effect. Detailed mitigation measures are outlined in Appendix E8 of the HRA report.	0	--	0	---/?
						The option intersects woodland and priority habitat, though it does not cross, or run adjacent to, any Ancient Woodlands. There is potential for direct loss of priority habitat from the construction of the desalination plant. There are no anticipated impacts on chalk rivers or GWDTE. Potential impacts from operation, as highly saline discharge from plant may have negative impacts on marine ecosystems.					
						The risk of transfer / spread of INNS is low.					

						<p>The HRA screening (2025) screened in the Thames Estuary and Marshes SPA/Ramsar for both construction and operational effects. Environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake (no European sites / features likely to be exposed here) and the outfall which would combine discharge with Swanscombe WwTW’s existing outfall (where brine from the desalination process will be discharged; may affect downstream sites).</p> <p>The AA notes that based on the predicted effect of this option both alone and in-combination with other plans and projects, there is sufficient confidence that appropriate mitigation measures are available at the project level and can be implemented to enable a conclusion of no adverse effect on the integrity of the Thames Estuary and Marshes SPA/Ramsar to be drawn for the WRMP HRA.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The desalination plant and part of the pipeline route is within urban land. The pipeline also passes through Grade 1, 2 and Grade 3 agricultural land. There are historic landfill sites within close proximity to the option and the construction phase has the potential to disturb contaminants. Swanscombe Skull Site, a geological SSSI, is also within 2000m but no effects anticipated.	Reinstate land where possible. Best practice methods for working within landfill sites to be implemented to minimise effects.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	--	0	--	The desalination plant is located within FZ2 and FZ3 therefore potential risk for both the construction and operational phases.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>Option located in SPZ 3 and intersects with two WFDGW bodies: North Kent Medway Chalk; West Kent Darent and Cray Chalk. The construction phase could lead to contamination of the water environment and there is potential for water quality impacts during operation due to brine discharge.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Thames Middle transitional waterbody.</p> <p>The WFD assessment highlights that the discharge of hypersaline water into the transitional water body could impact on water quality and affect habitats for biological parameters. Water quality modelling will be required to determine potential effects on water quality, which would then determine the potential</p>	Best practice construction measures including flood risk and pollution management will likely be implemented. A new abstraction license will also need to be attained. Further WFD assessment required	0	-	0	--

						effects on biological compliance parameters and protected areas. The new abstraction could impinge fish and phytoplankton.					
	Deliver reliable and resilient water supplies	0	0	++	0	Option may provide up to 20MI/d supply of desalinated and treated water in the Kent Medway WRZ.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	--	0	--	The desalination plant is located within Northfleet Industrial Area AQMA and Gravesham A2 AQMA is within 500m. Construction likely to have minor and temporary impact on air quality. There is potential for air quality impacts during operation given the high energy intensive process.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts may remain. Use best practice methods to reduce operational impacts on air quality.	0	-	0	-
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and minor operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The use of desalination relieves pressure on stressed freshwater environments therefore contributing to increased resilience to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The following National Landscape is located within 5km of the option: Kent Downs (2.33km). The option intersects the Greater Thames Estuary NLCA and the pipeline passes through the London Area Greenbelt. There is likely to be negative effects during the construction phase. There will also be permanent effects on visual amenity during operation.	Best practice will be implemented to avoid negative effects, however likely to be some disturbance to landscape during works. Screening could be implemented to minimise visual impact of plant.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are listed buildings and conservation areas within 500m of the option. There is potential for the construction phase to affect the setting of these historic assets. The excavation for the desalination plant and pipeline may impact archaeology, if present.	Best practice mitigation measures will likely be implemented to minimise setting effects during construction and operation. Given there is potential to impact buried archaeology, an Archaeology Watching Brief may be required during the construction phase.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are schools, playing fields, play spaces, churches and religious grounds, cemeteries, emergency services, medical facilities and other community facilities within 500. There are also noise action areas within 500m. There may be minor, temporary disturbances during construction to users of these facilities and the wider community. The desalination plant is within IMD decile 1 and the pipeline passes through IMD decile 4 to 9.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

	Maintain and enhance tourism and recreation	0	-	0	0	There are playing fields and play spaces within 500m. The pipeline also intersects national cycle routes. There may be diversions to public rights of way during the construction phase. Minor negative effects have therefore been identified.	Best practice mitigation measures will be implemented to minimise effects. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option anticipated to generate waste. Brine waste will be produced during desalination.	Seek opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain during construction.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option intersects major roads, railways and national cycle routes. There is likely to be disruption during the construction phase.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction.	0	-	0	0

Desalination (KMW): Thames Estuary (20MI/d) Phase 2											
Southern Water											
The Thames Estuary Desalination Options are a modular suite of options to develop a desalination plant of differing capacities that could be developed in one or more phases. This option represents a potential second phase development of a 20MI/d capacity desalination plant contingent on one of the first phase 10MI/d or 20MI/d capacity options (Swa10 or Swa20).											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The option crosses the Swanscombe Peninsula SSSI (91.67% favourable, 8.33% unfavourable – no change), with potential for some loss, and the following SSSI is located within 1km of the option: Swanscombe Skull Site (0.88km, 100% favourable). The option would also cross SSSI Impact Risk Zones associated with the Swanscombe Peninsula, Swanscombe Skull Site, and Shorne and Ashenbank Woods SSSI's, including areas where all planning applications, including pipeline development and discharge of water to ground or to surface water are highlighted as being a risk to the sensitive features for which the SSSI's are notified. The following NNR is located within 1km of the option: Swanscombe Skull Site (0.89km). There is potential for indirect effects from the construction phase on these sites through noise, dust and vibration causing disturbance during construction.					
						The desalination plant and discharge point would be located 0.59km from the Swanscombe Marine Conservation Zone, and pipeline construction would take place 0.77km from the MCZ at its closest point. Indirect effects during construction are possible, through dust, noise and vibration, although these are likely mitigable with best practice measures. The discharge is unlikely to have an adverse effect on the MCZ during operation as it would be located downstream. The discharge would be, however, upstream from the Thames Estuary & Marshes Ramsar and SPA, which overlap with the Medway Estuary – Zone 1 MCZ. Construction effects are likely to be limited but mobile features may be vulnerable to disturbance. Operational effects are unlikely due to the distance downstream from the discharge, however additional information or plume investigations will be needed.	Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual direct and indirect effects remain for designated sites. Future design will need to undertake ecology surveys.				
		0	---	0	---	The option intersects woodland and priority habitat, though it does not cross, or run adjacent to, any Ancient Woodlands. There is potential for direct loss of priority habitat from the construction of the desalination plant. There are no anticipated impacts on chalk rivers or GWDTE. Potential impacts from operation, as highly saline discharge from plant may have negative impacts on marine ecosystems.	The HRA AA (2025) for the Thames Estuary and Marshes SPA/Ramsar notes that construction effects are avoidable with normal measures. In the operational phase, appropriate mitigation measures are available at the project level and can be implemented to enable a conclusion of no adverse effect. Detailed mitigation measures are outlined in Appendix E8 of the HRA report.	0	--	0	---/?
						The risk of transfer / spread of INNS is low.					

						<p>The HRA screening (2025) screened in the Thames Estuary and Marshes SPA/Ramsar for both construction and operational effects. Environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake (no European sites / features likely to be exposed here) and the outfall which would combine discharge with Swanscombe WwTW's existing outfall (where brine from the desalination process will be discharged; may affect downstream sites).</p> <p>The AA notes that based on the predicted effect of this option both alone and in-combination with other plans and projects, there is sufficient confidence that appropriate mitigation measures are available at the project level and can be implemented to enable a conclusion of no adverse effect on the integrity of the Thames Estuary and Marshes SPA/Ramsar to be drawn for the WRMP HRA.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The desalination plant and part of the pipeline route is within urban land. The pipeline also passes through Grade 1, 2 and Grade 3 agricultural land. There are historic landfill sites within close proximity to the option and the construction phase has the potential to disturb contaminants. Swanscombe Skull Site, a geological SSSI, is also within 2000m but no effects anticipated.	Reinstate land where possible. Best practice methods for working within landfill sites to be implemented to minimise effects.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	--	0	--	The desalination plant is located within FZ2 and FZ3 therefore potential risk for both the construction and operational phases.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	-	0	--	<p>Option located in SPZ 3 and intersects with two WFDGW bodies: North Kent Medway Chalk; West Kent Darent and Cray Chalk. The construction phase could lead to contamination of the water environment and there is potential for water quality impacts during operation due to brine discharge.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Thames Middle transitional waterbody.</p> <p>The WFD assessment highlights that the discharge of hypersaline water into the transitional water body could impact on water quality and affect habitats for biological parameters. Water quality modelling will be required to determine potential effects on water quality, which would then determine the potential</p>	Best practice construction measures including flood risk and pollution management will likely be implemented. A new abstraction license will also need to be attained. Further WFD assessment required	0	-	0	--

						effects on biological compliance parameters and protected areas. The new abstraction could impinge fish and phytoplankton.					
	Deliver reliable and resilient water supplies	0	0	++	0	Option may provide up to 20MI/d supply of desalinated and treated water in the Kent Medway WRZ.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	--	0	--	The desalination plant is located within Northfleet Industrial Area AQMA and Gravesham A2 AQMA is within 500m. Construction likely to have minor and temporary impact on air quality. There is potential for air quality impacts during operation given the high energy intensive process.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts may remain. Use best practice methods to reduce operational impacts on air quality.	0	-	0	-
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and minor operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	The use of desalination relieves pressure on stressed freshwater environments therefore contributing to increased resilience to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The following National Landscape is located within 5km of the option: Kent Downs (2.33km). The option intersects the Greater Thames Estuary NLCA and the pipeline passes through the London Area Greenbelt. There is likely to be negative effects during the construction phase. There will also be permanent effects on visual amenity during operation.	Best practice will be implemented to avoid negative effects, however likely to be some disturbance to landscape during works. Screening could be implemented to minimise visual impact of plant.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are listed buildings and conservation areas within 500m of the option. There is potential for the construction phase to affect the setting of these historic assets. The excavation for the desalination plant and pipeline may impact archaeology, if present.	Best practice mitigation measures will likely be implemented to minimise setting effects during construction and operation. Given there is potential to impact buried archaeology, an Archaeology Watching Brief may be required during the construction phase.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are schools, playing fields, play spaces, churches and religious grounds, cemeteries, emergency services, medical facilities and other community facilities within 500. There are also noise action areas within 500m. There may be minor, temporary disturbances during construction to users of these facilities and the wider community. The desalination plant is within IMD decile 1 and the pipeline passes through IMD decile 4 to 9.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

	Maintain and enhance tourism and recreation	0	-	0	0	There are playing fields and play spaces within 500m. The pipeline also intersects national cycle routes. There may be diversions to public rights of way during the construction phase. Minor negative effects have therefore been identified.	Best practice mitigation measures will be implemented to minimise effects. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option anticipated to generate waste. Brine waste will be produced during desalination.	Seek opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain during construction.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option intersects major roads, railways and national cycle routes. There is likely to be disruption during the construction phase.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction.	0	-	0	0

Recycling (KMW): Medway WTW to lake (14MI/d)											
Southern Water											
This option involves the transfer of 18MI/d of treated effluent from Aylesford WWTW to near Rochester WSW's raw water storage reservoir Eccles Lake.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The following SSSI's are located within 1km of the option: Holborough to Burham Marshes (0.11km, 100% not recorded), which is a GWDTE, and Aylesford Pit (0.72km, 100% favourable). The option would also cross the SSSI Impact Risk Zone associated with Holborough to Burham Marshes SSSI, including areas where all planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures, pipeline development, and Any discharge of water or liquid waste that is discharged to ground (i.e. to seep away) or to surface water, such as a beck or stream have been highlighted as being a risk to the sensitive features for which the SSSI is notified. Peters Pit SAC and Ditton Quarry LNR are also within 2000m. There is potential for indirect effects on these sites during the construction phase.					
						The option is not expected to have any effects on National Nature Reserves.	Best practice mitigation to minimise impacts. If applicable, ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys.				
		0	--	0	-	The route is within 500m of Medway Estuary Zone 2 Marine Conservation Zone. There is potential for construction effects, although these are almost certainly avoidable with best practice construction measures. Operation of the option could lead to changes in flow regime, which could have knock on effects on the MCZ.	The AA for Medway Estuary and Marshes SPA and Ramsar concludes that adverse construction effects alone are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects..	0	-	0	-
						The option will not cross or run adjacent to any Ancient Woodland, however, intersects deciduous woodland and priority habitats therefore there is potential for direct effects during construction to impact habitats.					
						The HRA screening (2025) screens in Medway Estuary and Marshes SPA and Ramsar for construction and operation. This option involves the transfer of 18MI/d of treated effluent from Aylesford WwTW to near Rochester WSW's raw water storage reservoir Eccles Lake. It will require construction close to the River Medway, and will remove a proportion of the treated water / non-saline flows that would otherwise flow into the Medway Estuary from the WwTW; however, the zone of influence for this operational environmental change will not extend a substantive distance downstream due to the dominance of tidal mixing.					

						<p>The HRA AA (2025) concludes that adverse construction effects alone will not occur (clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects). For operation the magnitude of the environmental change is expected to be too small to adversely affect the SPA/Ramsar site or its qualifying features.</p> <p>Very low risk of transfer of INNS as the treated source water is likely to be entirely free of INNS. Construction phase risk of INNS is considered to be very low.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	<p>The pipeline passes through Grade 2, 3 and urban land. There is potential for disturbance to these soils during the construction phase. The pipeline is within close proximity to historic landfill sites therefore potential for the construction phase to disturb contaminants.</p>	Reinstate land following construction stage. Implement best practice techniques for working within or within close proximity to landfill sites.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	--	0	0	<p>The option is within FZ1, however there are areas within FZ2 and FZ3 therefore potential risk during the construction phase. The pipeline will be buried therefore operational impacts not anticipated.</p>	Implement best practice techniques to reduce flood risk.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	---	<p>The option intersects SPZ1 and 2 and two WFD groundwater bodies. There is potential for the water environment to be contaminated during the construction phase from leaching of contaminants.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with medium confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with medium confidence) for the Eccles Lake waterbody.</p> <p>The WFD assessment highlights that a new discharge into the reservoir could potentially change the physico-chemistry of the water body, for example by increasing nutrient concentrations, changing dissolved oxygen concentrations, and changing water temperature. This could impact on biological status elements. Phosphate is Moderate, and there is a risk that the option could result in further deterioration, or prevent future improvements. This could, in turn, impact phytoplankton communities. The status of phytoplankton reduced from High to Good between 2015 to 2019, so there is a risk of a deteriorating trend, which could be exacerbated by the option. This is particularly a risk if the option was used during drought periods, i.e. with low water levels and high temperatures. Further assessment is therefore required to consider the final characteristics of the new discharge and ensure that water quality is not compromised.</p> <p>The WFD assessment also highlights that the installation of new discharge infrastructure and the increase in inflow to the lake may have a minor influence on the hydromorphology of the water body, although this may</p>	Implement pollution prevention and control measures. Further WFD assessment is required therefore significant effects remain.	0	--	0	---

						be positive if it helps to maintain water levels during dry periods, so is expected to be compliant.					
	Deliver reliable and resilient water supplies	0	0	+	0	The option will improve water transfers (14Ml/d), increasing resilience.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	Tonbridge and Malling - M20 AQMA, Tonbridge and Malling - Ditton AQMA, Tonbridge and Malling - Larkfield AQMA, Tonbridge and Malling - Aylesford AQMA, and Maidstone Borough Air Quality Management Area are all within 2000m of the option location. Construction is likely to generate air emissions from dust and construction vehicles/machinery.	Best construction practices such as use of damping.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	There is no carbon data available for this option. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	The option is not anticipated to have an effect on climate resilience as it will not likely have a significant effect on water levels.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The option is located 1.05km from the Kent Downs National Landscape, and the London Area Greenbelt is within 2000m. The option intersects the Wealden Greensand national landscape character area. Visual disturbance is likely during construction. The pipeline will be buried therefore operational impacts are not anticipated.	Implement screening to minimise visual disturbance and reinstate landscape to original state where possible, however residual effects likely to remain during construction.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	---	0	0	The option intersects Romano-British villa, Anglo-Saxon cemetery and associated remains at Eccles Scheduled Monument. Therefore, potential for direct effects. There are also listed buildings within close proximity. It appears to intersect a listed building, however this is likely the GIS alignment as the pipeline following the road network. The setting of these assets may be impacts during construction. The excavation for the pipeline may impact archaeology, if present.	Re-route the pipeline or utilise directional drilling to avoid direct impacts on the scheduled monument. Best practice mitigation measures to be implemented to minimise setting effects during construction. Given there is potential to impact buried archaeology, an Archaeology Watching Brief may be required during the construction phase. Further work may be required to determine the significance of the effect depending on the presence / absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The pipeline appears to intersect a school, however it is likely the GIS alignment, and there are also allotments, playing fields, play spaces and other community facilities within 500m. Temporary disturbance on the local community and users of these community facilities is possible during construction from dust, noise and vibration. The pipeline is within IMD decile 6 and 7.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	There are playing fields, allotments and play spaces within 500m therefore potential for disturbance on recreation during the construction phase. There may be diversions to public rights of way.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste, including excavation materials.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	There are major roads, a national rail and national cycle way within 2000m, however effects are not anticipated. There may be minor impacts on the local road network during construction.	Best practice mitigation measures including a Traffic Management Plan to be implemented to minimise effects during construction.	0	-	0	0

Drought option - supply side (KMW): River Medway Scheme 1-4 (17MI/d)											
Southern Water											
Bewl Water increased filling. Drought option: There are four sub-options involving a change in MRF and the release factor from the reservoir: (1) 2nd Dry Winter, MRF 150MI/d, RF 1:1 (2) 3rd Dry Winter, MRF 150MI/d RF, 1:0 (3) The following Summer, MRF 275MI/d RF, 1:0 (4) The following Autumn MRF None, RF 0:0, Springfield abstracts without releases from Bewl Water. Normal compensation releases continue. Bewl Water is a pumped storage reservoir with abstractions from the River Teise at Smallbridge and the River Medway near Maidstone. The Permit may take the form of authorisations to allow increased re-filling and conservation of existing storage of Bewl. The precise conditions applied for will depend upon the severity and timing of each drought.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	0	-	<p>Potential impacts on Holborough to Burham Marshes SSSI (100% favourable) upstream. Potential impacts on aquatic habitats and fish downstream of the abstraction points, it is not known how far the effects a change in downstream flow rate will be seen therefore minor operational effects have been identified. These measures are to be implemented during extreme drought and therefore ecosystems may already be under severe stress.</p> <p>The HRA has identified that reduced freshwater input into the Medway Estuary would have a negligible impact on the Medway Estuary and Marshes SPA, SSSI and Ramsar sites, as well as the Emley NNR and other SSSI's and LNR's in the area, during the operation of sub options 1,2 and 3. This reduced input during operation of sub-option 4 is unlikely to have any impact the sites, although there would be a minor impact on Scotney Castle SSSI, Holborough to Burham Marshes SSSI, Tower Hill to Cockham SSSI, and Rive Beult SSSI.</p> <p>Sub-options 1, 2 and 3 are not expected to have any effect on Marine Conservation Zones, however sub-option 4 would have a minor negative impact on the Medway Estuary Marine Conservation Zone.</p> <p>The HRA Screening (2025) identified no likely significant effects, alone or in combination. There is not anticipated to be any additional risk for the transfer / spread of INNS as a result of this option.</p>	Undertake fisheries and biodiversity monitoring as set out in the Drought Permit Order, including water level monitoring at Holborough to Burham Marshes SSSI and INNS monitoring.	0	0	0	-
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	No new infrastructure required. Option unlikely to have effect on the soils.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	No new infrastructure required. The option is not likely to affect flood risk or be affected by flood risk.	N/A	0	0	0	0

	Protect and enhance the quality of the water environment and water resources	0	0	0	---	<p>The WFD assessment (2025) of the Southern Water Drought Plan 2022, highlights that with regard to the Bewl, Teise at Lamberhurst, Teise and Lesser Teise, Beult at Yalding, Lower Teise, and Medway at Maidstone waterbodies, there is a low to medium risk of temporary deterioration in status, with risks of impacting on the waterbody that is immediately downstream of each of the waterbodies listed (i.e. in the order as listed above). Whilst for the Medway transitional waterbody, there is a low risk of temporary deterioration in status.</p> <p>The SEA assessment (2025) of the Southern Water Drought Plan 2022 highlights that the implementation of Stage 4 of the Drought Order in winter would result in major adverse effects on river flows downstream of Bewl Water Reservoir and through all downstream river reaches to the tidal limit of the river, with moderate adverse effects on freshwater flow to the Medway Estuary. There would be a moderate adverse effect on water quality and major adverse effects on aquatic ecology in the freshwater reaches of the river. Minor adverse effects on aquatic ecology in the Medway Estuary Marine Conservation Zone are anticipated, with no likely significant effects anticipated on the Medway Estuary and Marshes SPA, SSSI and Ramsar sites.</p> <p>As such, and in line with the conclusions of the SEA of the Drought Plan a significant negative effect has been identified during operation.</p>	Monitor river flows and quality as set out in the Drought Permit Order.	0	0	0	---
	Deliver reliable and resilient water supplies	0	0	+	0	Option will increase storage of water (17Ml/d) during drought conditions with an assumed drought action duration.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	No new infrastructure required. There may be some negative effects from an increase in emissions associated with water supply / treatment, however this is not anticipated to be significant.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No new infrastructure required. There may be some negative effects from an increase in carbon emissions associated with water supply / treatment, however this is not anticipated to be significant.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	0	-	Reduced flow downstream of reservoir during period of drought may reduce the ability of the water environment to recover in the future.	Monitor river flows and quality as set out in the Drought Permit Order.	0	0	0	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	No new infrastructure required. Option unlikely to have effect on landscape, townscape and seascape character and visual amenity.	N/A	0	0	0	0

Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	No new infrastructure required. Option unlikely to have effect on the historic environment	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	0	0	No new infrastructure required. Option not likely to have a significant effect on the local community.	N/A	0	0	0	0
	Maintain and enhance tourism and recreation	0	0	0	-	Drought permit option could temporarily affect recreation, angling and other water based activities, including navigation along the River Medway.	Ensure no detrimental impact on water levels for navigation in accordance with drought permit.	0	0	0	0
Material Assets	Minimise resource use and waste production	0	0	0	0	No new infrastructure required. There may be some negative effects from increased resources required and waste produced from increased water treatment, however since this is a temporary operational change to the abstraction licence, this is not anticipated to be significant.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No new infrastructure required. Option unlikely to have effect on built assets and infrastructure.	N/A	0	0	0	0

Asset enhancement (KMW): Remove network constraint at Longfield (13MI/d)											
Southern Water											
System simulation modelling has identified that the KMW Water Resource Zone Deployable Output appears to be constrained due to a network capacity issue between Nursted and Pitfield Service Reservoirs. There is also a flow limitation between Cobham and Singlewell Service Reservoirs which restricts the movement of water from the River Medway Scheme. This scheme would undertake further network modelling to remove these network constraints to allow currently locked-in deployable output to be used to support the restricted parts of the network. The potential solutions would be to: <ul style="list-style-type: none">• Validate the network constraint through updated and further exploration and validation of the Pywr System model to determine the optimal solution• If required, upgrade new transfer valve and/or booster (Northfleet Nurstead WBS) station Between Northfleet WSW and Nurstead Meopham WSR.• If required, upgrade water treatment process at Longfield WSW (upgrade to Amazon Filtration) to allow source to produce higher output up to licence and historical limit (~7MI/d)• Increase capacity water main and, if required, an upgraded Booster station at Singlewell or Cobham WSRs											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--/?	0	0	The following SSSIs are located within 1km of the option: Shorne and Ashenbank Woods SSSI adjacent to the option (50% favourable/50% unfavourable – no change); Great Crabbles Wood SSSI at 0.36km from the option (100% unfavourable – no change), Cobham Woods SSSI at 0.7km (57.14% favourable/42.86% unfavourable – recovering). Some impacts are likely in terms of disturbance, noise and dust However, it is envisaged that any works, if required following modelling, would be routed via/along the A2. The option is within the impact risk zone for all applications for Shorne and Ashenbank Woods SSSI and for pipeline infrastructure for Great Crabbles Wood SSSI and Cobham Woods SSSI. The option has some features within 50m of ancient woodland and there could be possible indirect effect from noise, dust and vibration from any construction. The option is located 4km from Thames Estuary & Marshes Ramsar and SPA, and North Downs Woodlands SAC. The HRA screening (2025) concludes no likely significant effects.	Subject to final routing if required, and construction techniques/ mitigation, likely to be at least temporary impacts during construction relating to disturbance to terrestrial habitats.	0	-	0	0
	Protect and enhance the functionality, quantity and quality of soils	0	--/?	0	0	There is likely to be direct impacts on soil during the construction phase as excavation will be required for the laying of the pipeline, if required.	Ground will be reinstated therefore residual effects unlikely.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	--/?	0	0	There may be a temporary increased risk in flooding during construction, if required following modelling. Impacts on operation unlikely.	Measures to reduce the impact on flooding during the construction phase are likely to be implemented, to minimise risk of flooding.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The option does not cross any waterbodies. However, some risks to water quality remain. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice construction measures will be implemented.	0	0	0	0

	Deliver reliable and resilient water supplies	0	0	+	0	Diversity/flexibility of water supply. Availability of water for abstraction may reduce as a result of climate change. Additional yield of 13.3Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	The option partly passes through the Gravesham A2 AQMA. There is likely to be minor and temporary impacts on air quality during the construction phase, if required following modelling. There may be operational impacts on air quality, however these are likely to be negligible.	Best practice mitigation measures to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	No carbon data is available for this option. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Option unlikely to affect resilience of the local environment to climate change.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--/?	0	0	Part of the option (potential pipeline) is located within the Kent Downs National Landscape. Potential impacts of the pipeline will be during the construction phase and include excavation works, temporary lighting and the presence of a workforce with associated transport (HGVs).	Impacts could be mitigated through detailed routing of the pipeline and construction best practices. Ground will be reinstated following pipeline construction therefore residual effects unlikely. Measures to reduce the visual impact during construction e.g. screening could be implemented, however residual effects remain.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--/?	0	0	The option (potential pipeline works) is located within 50m of Cobham Hall Registered Park and Garden. The option is located within 1km of the following Scheduled Monuments: 0.18km from Romano-British villa and 19th century reservoir in Cobham Park; 0.47km from Bowl barrow in Ashenbank Wood south of Cobham Park reservoir. There are also several listed buildings within 1km including four adjacent to the option. There is potential for effects on the setting of these assets if construction required.	Best practice mitigation measures will be implemented to minimise setting effects during construction. Archaeological Watching Brief may be required during the construction phase.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There is likely to be minimal and temporary disturbance effects on the local community and users of these facilities during construction phase.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

	Maintain and enhance tourism and recreation	0	-	0	0	There may be diversions to public rights of way during the construction phase, if required. There is likely to be minimal and temporary disturbance effects on the local community and users of these areas during construction.	Best practice mitigation measures will likely be implemented to minimise effects during construction, however some disruption is likely to remain.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New pipeline infrastructure may be required for option which will use materials.	Opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline crosses major roads (A2). There is likely to be moderate and temporary impacts during the construction phase from disruption for users (e.g. road closures, diversions), if required.	Best practice mitigation measures will likely be implemented to minimise effects during construction and roads will be reinstated above the pipeline. However, minor and temporary effects are likely to still occur.	0	-	0	0

Drought option - demand side (KMW): Reduce transfer to other commercial customers											
Southern Water											
Drought Option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (0.09Ml/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been identified at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought conditions, it is not resulting in the long-term resilience of the local environment.	N/A	0	0	+	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

1.14. KENT THANET (KTZ)

Drought option - demand side (KTZ): NEUBs											
Southern Water											
Non-essential use ban - KTZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water’s sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Minor adverse effect on soils management in dry weather.</p>	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Operation of the option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water’s sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (1.54Ml/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0

Air	Reduce and minimise air emissions	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. No impacts on air quality are anticipated as a result of the ban.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 MI/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist	N/A	0	0	0	--

						attractions, for example water features and parks/gardens associated with popular tourist sites.					
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Drought option - demand side (KTZ): TUBs											
Southern Water											
Temporary use bans - KTZ WRZ.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water's sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought. The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (1.16Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 MI/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the	N/A	0	0	+	0

						efficiency of existing water resource use. It will not result in any increase in the generation of waste.					
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Bulk import (KTZ): SEW Kingston to Near Canterbury (2MI/d)											
Southern Water											
A 2MI/d import from SEW Kingston SWS to SWS Canterbury WSW.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>The option is located within 1km of Ileden and Oxenden Woods SSSI (within 0.1km at the closest point) (50% unfavourable-recovering condition, 50% not recorded). This could be vulnerable to noise, dust and disturbance during the construction, although direct effects in terms of loss could be avoided. There is ancient woodland contiguous with the boundaries of the SSSI with other pockets further from the option. There is potential for indirect effects related to noise and disturbance during the construction phase. There are no European designated sites in proximity to the pipeline.</p> <p>No adverse effects to National Nature Reserves are expected during the construction or operation phases.</p> <p>The HRA screening (2025) screens in Thanet Coast and Sandwich Bay Ramsar and SPA for construction effects only but notes that Environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA). No environmental changes are identified associated with operation.</p> <p>The HRA AA (2025) concludes no adverse effects.</p>	<p>Subject to final routing and construction techniques/ mitigation, likely to be at least temporary impacts during construction relating to indirect effects on terrestrial habitats or aquatic ecology.</p> <p>Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual effects to remain as removal of priority species likely. Future design will need to undertake ecological surveys.</p> <p>The HRA AA (2025) notes that potential effects can be reliably avoided with established project-level measures.</p>	0	--	0	0
	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	<p>Option passes through grade 1,2, and 3 agricultural land. Construction of pipeline will require excavation. There may be a temporary effects on soil quality during construction.</p>	<p>Ground will be reinstated therefore residual effects unlikely.</p>	0	-	0	0
	Increase resilience and reduce flood risk	0	--	0	0	<p>There may be a temporary increased risk in flooding during construction. Impacts on operation unlikely given the pipeline is buried. The pipeline is unlikely to increase the risk of flooding.</p>	<p>Measures to reduce the impact on flooding during the construction phase are likely to be implemented, to minimise risk of flooding.</p>	0	-	0	0
Water	Protect and enhance the quality of the water environment and water resources	0	-	0	0	<p>Pipeline crosses waterways, including main rivers and chalk rivers. There is potential for water quality impacts as a result of construction which could impact WFD status.</p> <p>The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).</p>	<p>Best practice construction measures will be implemented.</p>	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>Diversity/flexibility of water supply through an additional yield of 2MI/d. Availability of water for abstraction may reduce as a result of climate change.</p>	<p>N/A</p>	0	0	+	0

Air	Reduce and minimise air emissions	0	-	0	0	The option does not pass through any AQMAs. Construction likely to have minor and temporary impact on air quality.	Best practice mitigation measures to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	No carbon data is available for this option. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Option unlikely to affect resilience of the local environment to climate change. Availability of water for abstraction may reduce as a result of climate change.	N/A	0	0	0	0
Landsc	ape pe Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The section of the proposed transfer pipeline (>2.5km) which makes up the main component of this scheme will need to be sited in the Kent Downs National Landscape. Potential impacts of the pipeline will be during the construction phase and include excavation works, temporary lighting and the presence of a workforce with associated transport (HGVs).	Impacts could be mitigated through detailed routing of the pipeline and construction best practices. Ground will be reinstated following pipeline construction therefore residual effects unlikely. Measures to reduce the visual impact during construction e.g. screening could be implemented, however residual effects remain.	0	-	0	0
Historic Environment Population and Human Health	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	Careful routing of pipelines would be required to avoid direct impacts to designated archaeological and cultural heritage assets, particularly the Anglo-Saxon barrow field and prehistoric linear earthwork on Barham Downs (SAM) although this lies 0.13km from the option at its closest point. Additionally, a number of listed buildings are within 1km of the option. There are likely to be effects on the setting of these assets during construction. Also, due to the length of the proposed pipelines (>6km) and their location in largely undeveloped rural areas in proximity to other heritage assets there is a reasonable risk of damaging undiscovered archaeological remains. The option is 7.9km from the Canterbury World Heritage Site at its closest point. Given the distance and intervening development there are unlikely to be effects on its setting.	Best practice mitigation measures will be implemented to minimise setting effects during construction. Archaeological Watching Brief may be required during the construction phase.	0	-	0	0
	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There is likely to be minimal and temporary disturbance effects on the local community and users of these facilities during construction phase.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	There may be diversions to public rights of way during the construction phase. There is likely to be minimal and temporary disturbance effects on the local community and users of these areas during construction.	Best practice mitigation measures will likely be implemented to minimise effects during construction, however some disruption is likely to remain.	0	-	0	0

Material Assets	Minimise resource use and waste production	0	-	0	0	New pipeline infrastructure required for option which will use materials.	Opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The pipeline crosses major roads. There is likely to be moderate and temporary impacts during the construction phase from disruption for users (e.g. road closures, diversions).	Best practice mitigation measures will likely be implemented to minimise effects during construction and roads will be reinstated above the pipeline. However, minor and temporary effects are likely to still occur.	0	-	0	0

Desalination (KTZ): East Thanet (20MI/d)
Southern Water
The East Thanet Desalination Options are a modular suite of options to develop a desalination plant of differing capacities near to the North Thanet Coast and could be developed in one or more phases. The plant would supply potable desalinated water to the Kent Thanet WRZ.
This option represents a potential first phase development of a 20MI/d capacity desalination plant.

SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	---	<p>The intake/outfall is located within the Thanet Coast SSSI (45.83% favourable condition, 16.67% in unfavourable – declining condition, 37.50% not recorded). The designated features of the SSSI are sensitive to possible effects during construction of the pipeline in terms of disturbance to shingle within the foreshore (and potentially bird assemblages will be sensitive to disturbance).</p> <p>The pipeline to Fleete Manston WSR will also cross SSSI Impact Risk Zones associated with Sandwich Bay to Hacklinge Marshes SSSI where any discharge of water or liquid waste of more than 20m³/day to ground (i.e. to seep away) or to surface water, such as a beck or stream, is highlighted as a risk to the sensitive features for which the SSSI is notified.</p> <p>The intake/outfall passes through the Thanet Coast MCZ. The MCZ has an area of subtidal chalk that extends seawards from chalk reefs, cliffs and coves. There is potential for direct and indirect effects (via disturbance) on site habitats depending on the construction approach. In operation, the outfall extends 3.36km north of the MCZ although there is potential for impacts from hypersaline discharge.</p> <p>Low risk of transfer of INNS as the water will be treated by desalination after abstraction and is likely to be entirely free of INNS. Construction phase risk of INNS is considered to be low.</p>	<p>Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat.</p> <p>The findings of the HRA AA (2025) are outlined in the comments column. Uncertain effects are identified for Outer Thames Estuary SPA and Margate and Long Sands SAC, relating to the introduction of hypersaline discharge, are considered to be mitigatable. Detailed mitigation measures are outlined in Appendix E6 of the HRA report.</p>	0	---/?	0	---/?
						<p>The HRA screening (2025) screens in Thanet Coast and Sandwich Bay SPA/Ramsar, Outer Thames Estuary SPA, Thanet Coast SAC, and Margate and Long Sands SAC for both construction and operational effects, and also screens in Stodmarsh SPA for construction only. This option proposes an initial 20MI/d desalination plant (with a second 20MI/d module added in Phase 2) located on the north coast of Thanet (new offshore intake / outfall required), and a new terrestrial pipeline to supply potable desalinated water to the Kent Thanet WRZ. Environmental changes associated with onshore construction can be reliably avoided with project-level mitigation (applied at AA); however, the outfall will require construction in the marine environment close to or within European sites (direct effects possible). With regard to operation, the principal pathways for operational effects will be through environmental changes at the intake (no European sites / features likely to be exposed here) and the outfall (where brine from the desalination process will be discharged; may affect offshore sites or features).</p> <p>The HRA AA (2025) reports the following conclusions:</p> <p>Thanet Coast and Sandwich Bay SPA and Ramsar: Adverse effects alone will not occur (construction effects clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective i.e. it will be possible to avoid direct effects on this site with directional drill or similar, and other construction effects can be managed/avoided)); operational effects will not occur,</p>					

			<p>based on the likely distance to the outfall location and consequent low exposure / sensitivity of qualifying features or supporting habitats to the likely magnitude of environmental change; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.</p> <p>Outer Thames Estuary SPA: Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. In summary, the outfall for the plant will be located in this site. The qualifying features of the site may be vulnerable to construction disturbance (although this is clearly avoidable with normal measures) or through impacts on the supporting habitats (i.e. sandbanks over which they forage). However, the sandbank supporting habitats are likely to have a low sensitivity to both construction and operation, being essentially low-diversity highly-mobile sandbank habitats that will be resilient to short-term perturbation associated with construction; the environmental changes associated with operation effects are likely to be limited in spatial extent (based on other desalination schemes), and the features will have a low sensitivity to this. The extent of any effects will also be very small (arguably inconsequential) in relation to the size of the site. There are inevitably some uncertainties due to the long timescales that can only be resolved with detailed design (e.g. sediment deposition and hydrodynamics may be affected if the pipeline is not buried), but these appear avoidable or mitigatable, such that adverse effects on integrity do not appear to be an unavoidable outcome of the option.</p> <p>Thanet Coast SAC: Adverse effects alone will not occur (construction effects clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective i.e. it will be possible to avoid direct effects on this site with directional drill or similar, and other construction effects can be managed/avoided); operational effects will not occur, based on the likely distance to the outfall location; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.</p> <p>Margate and Long Sands SAC: Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. In summary, the outfall for the plant is likely to be located in or close to this site (although location outside the site will be possible). The interest features of the site are likely to have a low sensitivity to both construction and operation, being essentially low-diversity highly-mobile sandbank habitats that will be resilient to short-term perturbation associated with construction; the environmental changes associated with operation effects are likely to be limited in spatial extent (based on other desalination schemes), and the features will have a low sensitivity to this. There are inevitably some uncertainties due that can only be resolved with detailed design (e.g. sediment deposition and hydrodynamics may be affected if the pipeline is not buried), but these appear avoidable or mitigatable, such that adverse effects on integrity do not appear to be an unavoidable outcome of the option.</p> <p>Stodmarsh SPA: Adverse effects alone will not occur; qualifying features of the SPA will not make substantive use of the coastal habitats of the Thanet Coast and Sandwich Bay SPA/Ramsar based on typical habitat preferences; some of the terrestrial wetland habitats near Birchington (hence potentially affected by the transfer to Fleete) may be periodically used by species associated with Stodmarsh, but these areas are unlikely to be critical to the functional integrity of Stodmarsh SPA and effects will be temporary during construction and avoidable with established measures (e.g. timing works). Residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.</p>		
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Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	Option located on grade 1 agricultural land, therefore likely disturbance to these soils during construction. There is likely to be a permanent loss as the plant will be constructed within Grade 1.	Land reinstated upon completion where possible. Best practice construction measures to be implemented, however residual construction effects likely.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	Option located within Flood Zone 1 therefore low risk of flooding. There is potential that the plant may contribute to risk of flooding by increasing hardstanding.	Implement measures to minimise exacerbation of flood risk or shift the flood risk through appropriate design.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	--	<p>Option does not cross any watercourses. Option partially located within SPZ Zone III. Option will involve pumping out brine, which may affect water quality, particularly if pumped out to sea (Thanet coasts is a Marine Conservation Zone).</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Kent North coastal waterbody.</p> <p>The WFD assessment highlights that the discharge of hypersaline water into the coastal water body could impact on water quality and affect biological elements. Water quality modelling will be required to determine the potential effects on biological compliance parameters and protected areas. Whilst fish is not a parameter monitored under coastal water bodies, the potential impacts on fish resulting from a plume of hypersaline water could give rise to an impact on nearby transitional water bodies, e.g. by creating a barrier to population movements. Construction of new infrastructure to support this option could impact on both water quality and biology if significant seabed disturbance is required. Sediment sampling will be required to confirm whether there is sufficient risk to water quality to affect biological parameters.</p>	Best practice mitigation measures likely to be implemented during construction. However minor and temporary impacts may remain.	0	-	0	--
	Deliver reliable and resilient water supplies	0	0	++	0	Option will facilitate water supply once operational, by supplying potable desalinated water to the Kent Thanet WRZ. Capacity of 20Ml/d.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	0	Option does not pass through any AQMAs, nor any within 500m or 2000m. However, construction is likely to have minor and temporary impact. There may be impacts on air quality as a result of the operation of the desalination plant.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain. Ensure appropriate mitigation to minimise effects on air quality during operation.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	--	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has moderate construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Water levels not predicted to be significantly affected therefore, unlikely to affect resilience of the local environment to climate change.	N/A	0	0	0	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	Option located within North Kent Plain National Character Area. Option involves construction of desalination plant. Potential for impacts on landscape character and visual amenity during construction and upon operational.	Best practice measures will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Impact on landscape during operation should be considered with desalination plant design.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	Option not within 2000m of heritage assets (and 15km from Canterbury Cathedral WHS). There is potential that archaeology may be impacted during the construction phase if present.	Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	Option located within area of 6 IMD decile. Option not located in a highly urban area. Therefore, disturbance to the local community will be minimal and temporary in nature.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	0	0	0	Option not located within 2000m of tourist attractions or recreation site. There are no national trails or cycle routes which are likely to be impacted. There may be diversions to public rights of way during the construction phase.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	0	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option which will use materials and generate waste. Waste upon operation will include brine pumped out.	Opportunity to implement sustainable design measures and reuse excavated material on site, to reduce impact. Minor negative construction and operational effects will likely remain.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	-	0	0	Option does not cross any major roads, however adjacent to Seamark Road, which may cause minor yet temporary impacts during construction.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Desalination (KTZ): East Thanet (20MI/d) Phase 2
Southern Water
The East Thanet Desalination Options are a modular suite of options to develop a desalination plant of differing capacities near to the North Thanet Coast and could be developed in one or more phases. The plant would supply potable desalinated water to the Kent Thanet WRZ.
This option represents a potential second phase development of a 20MI/d capacity desalination plant contingent on one of the first phase 20MI/d option.

SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	---	<p>The intake/outfall is located within the Thanet Coast SSSI (45.83% favourable condition, 16.67% in unfavourable – declining condition, 37.50% not recorded). The designated features of the SSSI are sensitive to possible effects during construction of the pipeline in terms of disturbance to shingle within the foreshore (and potentially bird assemblages will be sensitive to disturbance).</p> <p>The pipeline to Fleete Manston WSR will also cross SSSI Impact Risk Zones associated with Sandwich Bay to Hacklinge Marshes SSSI where any discharge of water or liquid waste of more than 20m³/day to ground (i.e. to seep away) or to surface water, such as a beck or stream, is highlighted as a risk to the sensitive features for which the SSSI is notified.</p> <p>The intake/outfall passes through the Thanet Coast MCZ. The MCZ has an area of subtidal chalk that extends seawards from chalk reefs, cliffs and coves. There is potential for direct and indirect effects (via disturbance) on site habitats depending on the construction approach. In operation, the outfall extends 3.36km north of the MCZ although there is potential for impacts from hypersaline discharge.</p> <p>Low risk of transfer of INNS as the water will be treated by desalination after abstraction and is likely to be entirely free of INNS. Construction phase risk of INNS is considered to be low.</p> <p>The HRA screening (2025) screens in Thanet Coast and Sandwich Bay SPA/Ramsar, Outer Thames Estuary SPA, Thanet Coast SAC, and Margate and Long Sands SAC for both construction and operational effects, and also screens in Stodmarsh SPA for construction only. This option proposes an initial 20MI/d desalination plant (with a second 20MI/d module added in Phase 2) located on the north coast of Thanet (new offshore intake / outfall required), and a new terrestrial pipeline to supply potable desalinated water to the Kent Thanet WRZ. Environmental changes associated with onshore construction can be reliably avoided with project-level mitigation (applied at AA); however, the outfall will require construction in the marine environment close to or within European sites (direct effects possible). With regard to operation, the principal pathways for operational effects will be through environmental changes at the intake (no European sites / features likely to be exposed here) and the outfall (where brine from the desalination process will be discharged; may affect offshore sites or features).</p> <p>The HRA AA (2025) reports the following conclusions:</p> <p>Thanet Coast and Sandwich Bay SPA and Ramsar: Adverse effects alone will not occur (construction effects clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective i.e. it will be possible to avoid direct effects on this site with directional drill or similar, and other</p>	<p>Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat.</p> <p>The findings of the HRA AA (2025) are outlined in the comments column. Uncertain effects are identified for Outer Thames Estuary SPA and Margate and Long Sands SAC, relating to the introduction of hypersaline discharge, are considered to be mitigatable. Detailed mitigation measures are outlined in Appendix E6 of the HRA report.</p>	0	--	0	---/?

				<p>construction effects can be managed/avoided)); operational effects will not occur, based on the likely distance to the outfall location and consequent low exposure / sensitivity of qualifying features or supporting habitats to the likely magnitude of environmental change; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.</p> <p>Outer Thames Estuary SPA: Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. In summary, the outfall for the plant will be located in this site. The qualifying features of the site may be vulnerable to construction disturbance (although this is clearly avoidable with normal measures) or through impacts on the supporting habitats (i.e. sandbanks over which they forage). However, the sandbank supporting habitats are likely to have a low sensitivity to both construction and operation, being essentially low-diversity highly-mobile sandbank habitats that will be resilient to short-term perturbation associated with construction; the environmental changes associated with operation effects are likely to be limited in spatial extent (based on other desalination schemes), and the features will have a low sensitivity to this. The extent of any effects will also be very small (arguably inconsequential) in relation to the size of the site. There are inevitably some uncertainties due to the long timescales that can only be resolved with detailed design (e.g. sediment deposition and hydrodynamics may be affected if the pipeline is not buried), but these appear avoidable or mitigatable, such that adverse effects on integrity do not appear to be an unavoidable outcome of the option.</p> <p>Thanet Coast SAC: Adverse effects alone will not occur (construction effects clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective i.e. it will be possible to avoid direct effects on this site with directional drill or similar, and other construction effects can be managed/avoided); operational effects will not occur, based on the likely distance to the outfall location; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.</p> <p>Margate and Long Sands SAC: Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. In summary, the outfall for the plant is likely to be located in or close to this site (although location outside the site will be possible). The interest features of the site are likely to have a low sensitivity to both construction and operation, being essentially low-diversity highly-mobile sandbank habitats that will be resilient to short-term perturbation associated with construction; the environmental changes associated with operation effects are likely to be limited in spatial extent (based on other desalination schemes), and the features will have a low sensitivity to this. There are inevitably some uncertainties due that can only be resolved with detailed design (e.g. sediment deposition and hydrodynamics may be affected if the pipeline is not buried), but these appear avoidable or mitigatable, such that adverse effects on integrity do not appear to be an unavoidable outcome of the option.</p> <p>Stodmarsh SPA: Adverse effects alone will not occur; qualifying features of the SPA will not make substantive use of the coastal habitats of the Thanet Coast and Sandwich Bay SPA/Ramsar based on typical habitat preferences; some of the terrestrial wetland habitats near Birchington (hence potentially affected by the transfer to Fleete) may be periodically used by species associated with Stodmarsh, but these areas are unlikely to be critical to the functional integrity of Stodmarsh SPA and effects will be temporary during construction and avoidable with established measures (e.g. timing works). Residual effects after mitigation (etc.)</p>				
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						likely to be nil or very small, so low risk of i/c effects. Given the residual uncertainty in relation to Outer Thames Estuary SPA and Margate and Long Sands SAC significant effects with uncertainty are identified for the operation phase.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	Option located on grade 1 agricultural land, therefore likely disturbance to these soils during construction. There is likely to be a permanent loss as the plant will be constructed within Grade 1.	Land reinstated upon completion where possible. Best practice construction measures to be implemented, however residual construction effects likely.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	Option located within Flood Zone 1 therefore low risk of flooding. There is potential that the plant may contribute to risk of flooding by increasing hardstanding.	Implement measures to minimise exacerbation of flood risk or shift the flood risk through appropriate design.	0	-	0	0

	Protect and enhance the quality of the water environment and water resources	0	--	0	--	<p>Option does not cross any watercourses. Option partially located within SPZ Zone III. Option will involve pumping out brine, which may affect water quality, particularly if pumped out to sea (Thanet coasts is a Marine Conservation Zone).</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Kent North coastal waterbody.</p> <p>The WFD assessment highlights that the discharge of hypersaline water into the coastal water body could impact on water quality and affect biological elements. Water quality modelling will be required to determine the potential effects on biological compliance parameters and protected areas. Whilst fish is not a parameter monitored under coastal water bodies, the potential impacts on fish resulting from a plume of hypersaline water could give rise to an impact on nearby transitional water bodies, e.g. by creating a barrier to population movements. Construction of new infrastructure to support this option could impact on both water quality and biology if significant seabed disturbance is required. Sediment sampling will be required to confirm whether there is sufficient risk to water quality to affect biological parameters.</p>	Best practice mitigation measures likely to be implemented during construction. However minor and temporary impacts may remain.	0	-	0	--
	Deliver reliable and resilient water supplies	0	0	++	0	<p>Option will facilitate water supply once operational, by supplying potable desalinated water to the Kent Thanet WRZ. Capacity of 20Ml/d.</p>	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	0	<p>Option does not pass through any AQMAs, nor any within 500m or 2000m. However, construction is likely to have minor and temporary impact. There may be impacts on air quality as a result of the operation of the desalination plant.</p>	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain. Ensure appropriate mitigation to minimise effects on air quality during operation.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	--	<p>Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has moderate construction and operation carbon emissions (relative to other WRSE Regional Plan options).</p>	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	<p>Water levels not predicted to be significantly affected therefore, unlikely to affect resilience of the local environment to climate change.</p>	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	<p>Option located within North Kent Plain National Character Area. Option involves construction of desalination plant. Potential for impacts on landscape character and visual amenity during construction and upon operational.</p>	Best practice measures will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Impact on landscape during operation should be considered with desalination plant design.	0	-	0	0

Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	Option not within 2000m of heritage assets (and 15km from Canterbury Cathedral WHS). There is potential that archaeology may be impacted during the construction phase if present.	Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	Option located within area of 6 IMD decile. Option not located in a highly urban area. Therefore, disturbance to the local community will be minimal and temporary in nature.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	0	0	0	Option not located within 2000m of tourist attractions or recreation site. There are no national trails or cycle routes which are likely to be impacted. There may be diversions to public rights of way during the construction phase.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	0	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	New infrastructure required for option which will use materials and generate waste. Waste upon operation will include brine pumped out.	Opportunity to implement sustainable design measures and reuse excavated material on site, to reduce impact. Minor negative construction and operational effects will likely remain.	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	-	0	0	Option does not cross any major roads, however adjacent to Seamark Road, which may cause minor yet temporary impacts during construction.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8MI/d)											
Southern Water											
Conditioning of existing Selling-Fleete main to enable bi-directional transfers (and specifically from Kent Thanet to Kent Medway). It is not thought that any additional pipeline would be required, although this is dependent on the existing main being structurally sound.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity , flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	-	<p>The following SSSIs are located within 1km of the option: Church Woods, Blean SSSI, SAC & NNR (adjacent, 40% favourable), Ellenden Wood SSSI & SAC (0.36km, 100% favourable), West Blean and Thornden Woods SSSI (withing, 16.67% unfavourable – no change, 33.33% unfavourable – declining), East Blean Woods SSSI & SAC (adjacent, 75% unfavourable – recovering, 25% unfavourable – declining), Stodmarsh SSSI, Ramsar, NNR, SAC, SPA (0.54km, 8.33% favourable, 16.67% unfavourable – no change). The option would also cross within the SSSI Impact Risk Zone associated with The Swale SSSI. However, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSI is notified in the area of the SSSI Impact Risk Zone.</p> <p>The option runs through and lies adjacent to several Ancient Woodlands and woodlands/forests.</p> <p>As such there is potential for direct effects upon the identified protected areas from the construction of the option due to noise, dust, lighting and general construction activities.</p> <p>There is also potential for indirect effects during the construction works as part 2 of the option outlines the need for a duplication of the existing main. However, this is identified as being unlikely and assumed that conditioning works only.</p> <p>The HRA ToLS (2021) identified no likely significant effects for Blean Complex SAC, Stodmarsh SAC, SPA and Ramsar. The INNS risk is broken down across the following three areas aligned with the option description:</p> <p>(1) High risk of INNS transfer and the pipeline will now become bi-directional. Construction is considered to have a low risk of INNA transfer.</p> <p>(2) Low risk of transfer of INNS as the abstracted (BH) source water is likely to be entirely free of INNS. Construction phase risk of INNS is considered to be low. More information is needed on the Near Test Valley Bypass to Fleete res. aspect of this option.</p> <p>(3) More information needed</p> <p>The HRA screening (2025) screened in Stodmarsh Ramsar, SAC and SPA, and Thanet Coast and Sandwich Bay Ramsar and SPA, for construction effects only. It is not thought that any additional pipeline would be required, although this is dependent on the existing main being structurally sound and so a new pipeline has been assumed as a worst case. Environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); no environmental changes associated with operation.</p> <p>The HRA AA (2025) concludes no adverse effects.</p>	Re-route the works to avoid direct effects on the designated sites. Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys. <p>The HRA AA (2025) concludes that potential effects can be reliably avoided with established project-level measures.</p>	0	-	0	0

Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	There are historic landfill sites within 500m therefore potential for disturbance to contaminants during construction. The pipeline passes through Grade 1, 2, 3, 4 and non-agricultural land. There is potential for these soils to be disturbed during the reconditioning.	Land reinstated upon completion. Best practice construction measures to be implemented, however residual construction effects likely.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	Option predominately located within Flood Zone 1, however there is a large area of Flood Zones 2 and 3 on the pipeline route. This may have an effect on construction. Any above ground infrastructure anticipated to be located in FZ1 therefore no operational effects identified.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	0	There is potential for contamination to water bodies, including main rivers, which the pipeline crosses. Option is within SPZ and partly within North Kent Tertiaries and East Kent Tertiaries WFD groundwater bodies. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice mitigation measures likely to be implemented during construction.	0	--	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	The option is anticipated to increase resilience by increasing transfer capacities (15.75Ml/d).	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	The option does not pass through any AQMAs. Thanet Urban AQMA is within 2000m. The construction phase will likely impact air quality.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct any new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	The option is not anticipated to affect the resilience of the local environment to climate change as water levels are not likely to be affected.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The option is partly within Kent Downs National Landscape. There will likely be minor and temporary effects on landscape and visual during the construction works, and there may also be permanent changes to the landscape as a result of new above ground infrastructure, however effects are anticipated to be minor.	Best practice measures will likely be implemented to minimise effects during construction and to reduce visual impact during operation, however minor and temporary impacts may remain. Land reinstated upon completion where possible.	0	-	0	-

Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The option passes through conservation areas, and appears to pass through or is directly adjacent to two scheduled monuments (Anglo-Saxon cemetery, parish church of St Giles and associated remains immediately east of Sarre Mill, and Anglo-Saxon cemetery and associated remains at Monkton, 550m north of Walters Hall Farm). There are also listed buildings, conservation areas and other scheduled monuments within 500m. There is potential for direct impacts on the scheduled monuments and potential for impacts on the setting of the other historic assets during construction. There is also potential that any excavation required will impact buried archaeology.	Re-route or use directional drilling to minimise direct impacts on the scheduled monuments. Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option passes through a golf course and Kent International Airport. There are also churches and religious grounds, cemeteries, public parks or gardens, schools, play spaces, playing fields, sports facilities, allotments and other community facilities within 500m of the option. There is likely to be minor and temporary impacts on users of these community facilities and the wider community during construction. IMD deciles range from 4 to 10 along the route.	Best practice measures will likely be implemented to minimise disturbance during construction. However, effects are likely to still occur.	0	-	0	0
Population and Human Health	Maintain and enhance tourism and recreation	0	-	0	0	The option intersects a golf course and national cycle route, and there are also other recreational facilities within 500m of the option. There is potential that construction will lead to diversions of public rights of way. As such, there is potential for minor and temporary effects for recreation during the construction phase.	Best practice measures will likely be implemented to minimise disturbance during construction. However, effects are likely to still occur.	0	-	0	0
	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste during construction, including excavated materials.	Opportunity to implement sustainable design measures and reuse excavated material on site where possible, to reduce impact.	0	-	0	0
Material Assets	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option intersects major roads, railways and national cycle routes. It also passes through Kent International Airport. There is likely to be moderate and temporary disturbance during the construction phase.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still remain.	0	-	0	0

Bulk import (KTZ): SEW Canterbury to Near Canterbury (20MI/d)											
Southern Water											
Bi-directional transfer between South East Water RZ8 and Kent Thanet WRZ in the vicinity of Southern Water’s Canterbury WS. Indirectly supplied from Broad Oak Reservoir. Maximum capacity of 20MI/d.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	-	<p>The option would cross the Sturry Pit (100% Unfavourable – Declining). The following SSSI’s are located within 1km of the option: West Blean and Thornden Woods (0.71km, 16.67% Unfavourable – no change, 33.33% Unfavourable – Declining, 50% not recorded), Stodmarsh (0.17km, 8.33% favourable, 16.67% Unfavourable – no change, 75% not recorded), and Chequer’s Wood and Old Park (0.2km, 40% favourable, 20% unfavourable – recovering, 20% unfavourable – recovering, 20% not recorded). No direct effects are expected however there may be disturbance effects during the construction phase due to noise and vibration, and potential effects on protected species.</p> <p>The option would also cross SSSI Impact Risk Zones associated with West Blean and Thornden Woods, Sturry Pit, Stodmarsh, Chequer’s Wood and Old Park, Preston Marshes, and Ileden and Oxden Woods, including areas where all planning applications, and others where pipeline development is specified, are highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>No effects are anticipated on national nature reserves or marine conservation zones. The HRA has identified no pathways for operational effects, and any significant effects during construction are almost certainly avoidable with established measures/normal best practice.</p> <p>The option would cross three Ancient Woodlands and would be situated adjacent to a further 7. The pipeline would follow existing roads where crossing Ancient Woodlands, and so the impacts could be limited. The option intersects other areas of woodland in including deciduous Priority Habitat and other Priority Habitat. The option crosses chalk rivers.</p> <p>The HRA ToLS (2021) identified likely significant effects for Stodmarsh SPA, SAC and Ramsar (located 445m east of proposed option). Due to the close proximity, likely significant effects from construction activities including noise and air pollution, and visual disturbance. The pipeline will also cross a watercourse, Great Stour, which has a direct hydrological connection to the Stodmarsh SPA, SAC and Ramsar downstream. Direct pollution events, excess sediment release into the watercourse and changes to habitats for the designated feature from the aforementioned impacts. Uncertain effects were identified for Thanet Coast & Sandwich Bay Ramsar and SPA (located 16.3km downstream from pipeline crossing) and Sandwich Bay SAC (16km downstream). The designated species and habitats may be adversely effected in the event of a major pollution event,</p>	<p>Best practice methods to be implemented to minimise disturbance effects and habitat loss including refining pipeline alignment to avoid woodland habitat, in particular Ancient Woodland. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys. Undertaken HRA AA to address likely significant and uncertain effects identified for the various N2K sites.</p> <p>The 2023 AA for Stodmarsh Ramsar/SAC/SPA and Thanet Coast and Sandwich Bay Ramsar and SPA notes that potential effects can be reliably avoided with established project-level measures.</p>	0	-	0	0

	Reduce vulnerability to climate change risks and hazards	0	0	0	0	There is not anticipated to be any effects on the resilience of the natural environment as water levels are not likely to be significantly affected as a result of this option.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	<p>The option lies within the North Downs and North Kent Plain National Landscape Character Areas. Minor negative effects during construction likely as excavation will be required for the transfer pipeline.</p> <p>The following National Landscapes are located within 5km of the option: Kent Downs (1.95km). The option would not introduce any above ground infrastructure, however pipeline excavation in the vicinity of the National Landscape may have some minor negative, temporary impacts.</p>	Best practice measures to be implemented to minimise effects during construction although temporary effects during construction may remain. Land reinstated upon completion so no residual effects likely to remain during operation.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	<p>The option lies within four conservation areas and potentially intersects three Grade II listed buildings, although is aligned along an existing road at these locations. There are additional conservation areas and listed buildings within 500m. Construction may affect the setting of these historic assets, however this is likely to be temporary as the pipeline will be buried. There is potential for the excavation of the pipeline to impact buried archaeology if present.</p> <p>The option would also be situated 2.32km from the Canterbury Cathedral, St Augustine's Abbey, and St Martin's Church World Heritage Site. No operational effects are expected but visual impacts during pipeline excavation may have temporary effects on this objective.</p>	Best practice measures to be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option crosses a sports facility and playing field. The option is within 500m of schools, churches, allotments, a cemetery and other community areas. There is no direct land take from these areas. There is likely to be minimal and temporary disturbance effects on users of these sites and the local community during construction. The option lies within a noise action important area. IMD deciles range from 5 to 8 along the pipeline route.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. Direct land take of community greenspaces to be avoided where possible and land to be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The option intersects a sports facility and playing field, and cycle route. The option crosses watercourses and habitat areas/woodland that could be used for recreation, therefore there may be some minor and temporary effects on recreation, angling and other water based recreation during the construction phase. There may be temporary disturbance to users of the National Cycle Network route, footpaths and other public rights of way during the construction phase.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. Direct land take of recreational areas to be avoided where possible and land to be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option is aligned along major roads for some of its length and crosses a railway and National Cycle Network route. Likely to	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction.	0	-	0	0

					be temporary impacts during the construction from disruption for users.	However, minor and temporary effects are likely to still occur. Directional drilling under the railway is likely to be required.				
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Drought option - demand side (KTZ): Reduce transfer to other commercial customers											
Southern Water											
Drought Option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (0.1MI/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	No carbon data has been provided for this option. Neutral effects have been identified at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought conditions, it is not resulting in the long-term resilience of the local environment.	N/A	0	0	+	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

1.15. SUSSEX HASTINGS (SHZ)

Drought option - demand side (SHZ): NEUBs											
Southern Water											
Non-essential use ban - SHZ WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in reduced requirement for abstraction from Southern Water’s sources and, therefore, potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have minor beneficial effects on natural capital assets by reducing the need for additional abstraction during severe drought conditions.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	-	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Minor adverse effect on soils management in dry weather.</p>	N/A	0	0	0	-
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Operation of the option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in a reduced requirement for increased abstraction from Southern Water’s sources, reducing associated impacts on surface water and groundwater quality during drought conditions and help to maintain water resources.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for NEUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (0.66MI/d) will result in reduced requirement for abstraction from Southern Water’s sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the ban.</p>	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	---	No construction effects have been identified as there would be no construction phase associated with this option. The ban carries the risk of economic impacts on businesses that benefit directly or indirectly from certain water uses that would be prohibited under the ban (e.g. sports and leisure facilities). The ban may result in some business loss if the water-related operations have to be suspended. The ban will provide water savings of approximately 2.41 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and there will be no impact on essential water uses that are necessary to maintain public health and well-being of the population served by Southern Water.	N/A	0	0	+	---
	Maintain and enhance tourism and recreation	0	0	0	--	No construction effects have been identified as there would be no construction phase associated with this option. There may be potential for moderate impacts upon recreational activities due to restrictions on filling of swimming pools, watering of sports pitches, etc. There may be moderate impacts associated with the setting of tourist attractions, for example water features and parks/gardens associated with popular tourist sites.	N/A	0	0	0	--
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the efficiency of existing water resource use. It will not result in any increase in the generation of waste.	N/A	0	0	+	0

	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0
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Drought option - demand side (SHZ): TUBs											
Southern Water											
Temporary use bans - SHZ WRZ											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>A temporary use ban is considered to have no impact on biodiversity, flora and fauna, other than to acknowledge that reduced consumer demand for water will result in a reduced requirement for abstraction at Southern Water's sources and, therefore, there is the potential for positive impacts on flow, sensitive habitats/species etc.</p> <p>This option will have some minor beneficial effects on natural capital assets by reducing abstraction pressures on ecosystems during drought. The temporary use ban is likely to have no impact on avoiding the introduction or spreading of INNS, with reduced abstraction requirements leaving more water in river systems.</p>	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on geology, geomorphology and quality/quantity of soils are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>The operation of this option is not expected to cause or exacerbate flooding elsewhere.</p>	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reductions in demand for water would result in reduced requirement for abstraction at source, reducing the risk of associated impacts on surface water and groundwater quality in drought conditions.</p> <p>The WFD assessment (2025) of the Drought Plan 2022 highlights that for TUBs there would be no risk of deterioration in WFD status.</p>	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>Reduction in demand for water (0.49Ml/d) will result in reduced requirement for abstraction from Southern Water's sources, helping to deliver reliable and resilient water supplies.</p>	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	0	0	0	<p>No construction effects have been identified as there would be no construction phase associated with this option.</p> <p>No impacts on air quality are anticipated as a result of the temporary use ban.</p>	N/A	0	0	0	0

Climatic Factors	Reduce embodied and operational carbon emissions	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will not involve an increase in energy consumption or associated greenhouse gas emissions. Minor beneficial impacts include reducing demand for water and the associated energy consumption.	N/A	0	0	+	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. Demand management measures are a key component of Southern Water's Drought Plan. The Plan aims to ensure resilience of water supplies to drought which may become more prevalent due to climate change.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be some localised adverse effects on townscapes and the setting of some visual amenities due to the ban on watering of gardens and grounds. However, the ban is considered to have no direct impact on landscape and visual amenity or any changes to access to the countryside or open space. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction from Southern Water's sources, potentially reducing the magnitude of any drought-related effects on landscape or visual amenity.	N/A	0	0	+	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	+	-	No construction effects have been identified as there would be no construction phase associated with this option. There may be minor adverse impacts associated with the setting of some heritage assets, for example, visual impacts on registered parks and gardens and /or the grounds of listed buildings due to restrictions on the use of water for any non-essential purposes. Notwithstanding these impacts, the ban is considered unlikely to have any direct impact on the historic environment, heritage assets and archaeologically important sites. There is the potential for reduced consumer demand for water to result in reduced requirement for abstraction at Southern Water's sources, potentially reducing the magnitude of any drought-related effects on archaeology and cultural heritage assets.	N/A	0	0	+	-
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	--	No construction effects have been identified as there would be no construction phase associated with this option. A temporary use ban will provide water savings of approximately 4.01 Ml/d which will contribute towards improving security of supply of water in the Southern Water supply region. Drinking water quality will not be affected by the restrictions and the measures do not restrict essential water uses that are important in maintaining health and well-being of the population served by Southern Water. The principal impact will be on domestic customers as the ban would preclude the use of water for those use categories set out under the temporary use ban powers. The ban may indirectly adversely impact business which benefit from the sale of certain water-using appliances such as hosepipes and sprinklers.	N/A	0	0	+	--
	Maintain and enhance tourism and recreation	0	0	0	-	No construction effects have been identified as there would be no construction phase associated with this option. Reducing the demand for non-essential water use is unlikely to have any impacts for recreation, tourism and navigation. There may be some limited domestic impact, for example not being able to refill or maintain a domestic swimming pool.	N/A	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	+	0	No construction effects have been identified as there would be no construction phase associated with this option. The ban will reduce the demand for water in the region, improving the	N/A	0	0	+	0

						efficiency of existing water resource use. It will not result in any increase in the generation of waste.					
	Avoid negative effects on built assets and infrastructure	0	0	0	0	No construction effects have been identified as there would be no construction phase associated with this option. Operation of the option is not expected to have any effect on built assets and infrastructure.	N/A	0	0	0	0

Groundwater (SHZ): Reconfigure Rye Wells (1.5MI/d)											
Southern Water											
Brede groundwater source is a well & audit system that is over 100 years old, and has reached the end of its asset life. It abstracts from the Ashdown Beds. Operational wells 1 and 3 are to be replaced by boreholes. Additional land may be required for at least one of the boreholes due to space constraints on site. Wells 2 and 4 are out of service and do not require replacement. Scheme output is 1.5MI/d. There is an existing surface water WSW on site and no further treatment is required.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	--	There are no SSSI's within 1km of the option, although the option is situated within a SSSI Impact Risk Zone associated with the Dungeness, Romney Marsh and Rye Bay SSSI, where any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream, is highlighted as a risk to the sensitive features for which the SSSI is notified.	Best practice methods to be implemented to minimise disturbance effects. Future design may need to undertake ecology surveys. The previous HRA Tier 2 Screening identified that the operational effects are likely to be mitigable therefore no likely significant effects are identified. Operationally, it is assumed that in order to build up resilience during the drier months, increased surface water and groundwater abstraction will take place over the winter period when increased flow in the River Brede is available and when the ground water aquifer is recharged. Should an increase in abstraction take place in the drier summer months, the daily abstraction levels should be lowered so as to allow sufficient water to remain within the hydrological systems at the designated sites. The HRA AA (2025) finds that potential effects can be reliably avoided with established project-level measures.	0	-	0	0
						The option is not expected to have any adverse effect on National Nature Reserves. It is however, upstream of the Dungeness, Romney Marsh and Rye Bay SPA, which overlaps with the Beachy Head East Marine Conservation Zone, although construction effects are almost certainly avoidable with established measures/normal best practice, though these must necessarily be accounted for at AA, and there are no pathways for operational effects.					
						There is Ancient Woodland and Priority Habitat, including deciduous woodland and coastal and floodplain grazing marsh, within 500m of option. Potential for disturbance effects on fauna during construction however these are not anticipated to be significant. There are no GWTDE or chalk rivers within 2km.					
						The HRA screening (2025) screens in Dungeness, Romney Marsh and Rye Bay SPA and Ramsar in for construction only but notes for construction, that environmental changes associated with construction will be minor given the scale of the works, and can be reliably avoided with project-level mitigation (applied at AA). Operation might theoretically affect inputs to the River Brede, although abstraction will be within the existing licence and recently abstracted volumes; the Rother ALS indicates that water is available for abstraction from the relevant groundwater body and the River Brede.					
						The HRA AA (2025) concludes no adverse effects.					
						The risk for the spread / transfer of INNS is likely to be very low as the source water is likely to be entirely free of INNS. It is assumed that groundwater is free of INNS, and that accessing it will not permit any additional inputs of INNS.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	The option is located on grade 3 agricultural land although it is replacement of existing boreholes at an existing site therefore no impacts anticipated.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is within Flood Zone 1 and unlikely to affect flood risk.	N/A	0	0	0	0

	Protect and enhance the quality of the water environment and water resources	0	-	0	-	<p>Increased abstraction has potential to decrease water resource resilience over time. The option is within approximately 100m of the River Brede. Potential for the option to have negative impacts on water quality during construction.</p> <p>The WFD assessment (2025) concludes that this option would be compliant (with low confidence) reflecting that the Stage 2 assessment concluded WFD compliance (with low confidence) for the Brede waterbody and the Kent Weald Eastern- Rother groundwater body. As such a minor negative effect has been identified.</p> <p>The WFD assessment highlights that an increase in abstraction could potentially affect flow in nearby River Brede, although the Rother ALS (most recent from 2013) notes that at a "broad scale... only in the upper reaches of the Rother, are existing licensed groundwater abstractions likely to have the potential to significantly reduce baseflow in our surface watercourses". The ALS also states that there is a "theoretical surplus of water within this groundwater management unit", although notes that the situation can vary locally due to the heterogeneity of the geology. For surface water, the ALS shows there is restricted water available at Q95 and Q70 on the Brede, with water available at Q50 and Q30. As this is an existing licence, with potentially limited connectivity to the river, then a tentative conclusion of compliant (low conf.) has been drawn.</p>	N/A	0	-	0	-
	Deliver reliable and resilient water supplies	0	0	+	0	The option involves replacing boreholes to increase yield and resilience (increased redundancy). 1.5Ml/d capacity.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	Emissions likely to be generated during construction although these are unlikely to be significant.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality may still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	There is no carbon data available for this option. The option is estimated to have minor construction and operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	-	There may be positive effects on the freshwater environment as the option relates to abstraction from groundwater. However, there may be negative effects on the resilience of groundwater to climate change	Monitor groundwater levels.	0	0	+	-
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	-	0	0	The option is in the Romney Marshes NCA and High Weald National Landscape. Boreholes likely to be replaced on existing site so unlikely for effects on the landscape. Potential for short term impacts to visual amenity during construction.	Ground will be reinstated following construction therefore residual effects unlikely. Measures to reduce the visual impact during construction e.g. screening could be implemented, however temporary residual effects remain.	0	-	0	0

Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Brede Valley Waterworks is a Grade II listed building however no setting impacts are anticipated as this is replacement of existing boreholes. Impacts on buried archaeology are likely to be limited as this is an existing site.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	Potential disturbance impacts during construction to residents of Brede Waterworks Cottages.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	0	0	0	The option is unlikely to have any impact on tourism and recreation.	N/A	0	0	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	Waste likely to be generated and materials to be used during construction.	Limited opportunity to implement sustainable design measures to reduce the impact therefore it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Option is unlikely to have impacts on built assets and infrastructure. There may be some localised traffic disruption but this is unlikely to be over and above existing traffic for the Brede works.	N/A	0	0	0	0

Recycling (SHZ): Tonbridge to Bewl (5.7MI/d)											
Southern											
New resource. This option is a new 8MI/d water recycling plant producing a DO of 5.7MI/d near Tunbridge WwTW and a transfer of the treated water to Bewl reservoir, which feeds into Darwell reservoir. Process losses have been included.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>The option within 500m of Brookland Wood SSSI (100% favourable) and Scotney Castle SSSI (69.55% unfavourable - recovering, 30.45% favourable), both of which are GWDTEs. The option located in SSSI Impact Risk Zones. The option crosses woodland including several areas of Ancient Woodland and deciduous woodland Priority Habitat, and other Priority Habitats including good quality semi-improved woodland.</p> <p>The HRA screening (2025) identified no likely significant effects.</p> <p>The risk of the transfer / spread of INNS is very low as the option involves the physical transfer of treated water (between two locations assumed currently unconnected) (no INNS risk as treated water will be free from INNS).</p>	Re-route pipeline to avoid SSSI. Best practice methods to be implemented to minimise disturbance effects and habitat loss including refining pipeline alignment to avoid woodland habitat, in particular Ancient Woodland. Habitat to be reinstated on completion, or if unavoidable compensatory habitat to be considered to replace damaged or lost habitat. Future design will need to undertake ecology surveys.	0	-	0	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	<p>The option within 500m of Pembury Cutting and Pit SSSI (100% favourable) although no impacts are anticipated. Option crosses areas of grade 3 and 4 agricultural land and non-agricultural land. Likely disturbance to these soils during construction. Option within 500m of six historic landfill sites. There is potential to disturb contaminated material during construction.</p>	Land reinstated upon completion, where possible. Best practice construction measures to be implemented.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	--	0	0	<p>The majority of the option is within Flood Zone 1 with the exception of two sections, which pass through Flood Zones 2 and 3 and flood defences, and may have an impact on construction. Impacts on operation unlikely given the pipeline is buried. The pipeline is unlikely to increase the risk of flooding.</p>	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	---	<p>The option crosses multiple watercourses, including main rivers in two locations. Option crosses SPZ 3 in one location and abuts SPZ 1.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with medium confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with medium confidence) for the Bewl Water waterbody and potential WFD non-compliance (with low confidence) for the Mid Medway from Eden Confluence to Yalding Water Body waterbody.</p> <p>The WFD assessment highlights that with regard to Bewl Water a new discharge into the reservoir could potentially change the physico-chemistry of the water body, for example by increasing nutrient concentrations, changing dissolved oxygen concentrations, and changing water temperature. The water body is already at Poor status for phosphate, and the introduction of treated effluent (depending on the final discharge quality) could worsen this or prevent future</p>	Best practice mitigation measures likely to be implemented during construction. However minor and temporary impacts may remain.	0	-	0	---

						improvements. This could have a resulting impact on macrophyte communities, which are currently Moderate. This is particularly a risk if the option was used during drought periods, i.e. with low water levels and high temperatures. Further assessment is therefore required to consider the final characteristics of the new discharge and ensure that water quality is not compromised.					
	Deliver reliable and resilient water supplies	0	0	+	0	The option will facilitate water supply once operational, from Tonbridge WwTW to Bewl reservoir, which feeds into Darwell reservoir, Bewl WSW and near Rochester WSW. Additional tertiary treatment required at Tonbridge Capacity of 23MI/d, with an overall yield of 5.7MI/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	The option does not pass through any AQMAs, nor any within 500m or 2000m. However, construction is likely to have minor and temporary impact.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	There is no carbon data available for this option. The option is estimated to have minor construction and minor operational carbon.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	Water levels not predicted to be significantly affected therefore unlikely to affect resilience of the local environment to climate change.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The majority of the option is located within High Weald National Landscape and partially within the London Area Greenbelt. The option is in the High Weald NCA. Negative effects during construction likely as excavation will be required for the transfer pipeline. Land purchase likely required for option which may result in permanent infrastructure within the landscape. However, likely to only result in minor residual effects due to presence of Tonbridge WwTW in close proximity. Tonbridge WwTW is not located within the National Landscape or Greenbelt.	Best practice measures will likely be implemented to minimise effects during construction, however minor and temporary impacts may remain. Land reinstated upon completion, where possible.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The option crosses Scotney Castle Grade I Registered Park and Garden and Summerhill Grade II Registered Park and Garden. Option within 500m of multiple listed buildings, some of which are in close proximity, and one Scheduled Monument, which is in close proximity. Construction may affect the setting of the	Consider option re-routing or trenchless techniques to avoid direct impacts on Registered Parks and Gardens. Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to	0	-	0	0

						historic assets, however this will be temporary. Potential impact on buried archaeology, if present.	be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.				
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	0	0	Option crosses the grounds of a school and is within 500m of other education sites, medical care facilities, and Important Buildings. Option crosses one golf course, one Public Park and Garden and is adjacent to the grounds of a church. The option is within 500m of sports facilities, Public Park of Gardens, play spaces, playing fields. There is likely to be temporary disturbance effects on users of these sites and the local community during construction. The option crosses five Noise Action Planning Important Areas. IMD deciles along the pipeline route vary from 7 to 10.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. Direct land take of community assets to be avoided where possible and land to be reinstated. However, minor and temporary effects are likely to still occur.	0	--	0	0
	Maintain and enhance tourism and recreation	0	--	0	0	Option crosses one golf course, one Public Park and Garden and one religious grounds. Within 500m of sports facilities, Public Park of Gardens, play spaces, playing fields. The option crosses watercourses and habitat areas/woodland that could be used for recreation, therefore there may be some temporary effects on recreation, angling and other water based recreation during the construction phase. There may be temporary disturbance of users of a national cycle route, footpaths and other public rights of way during the construction phase.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. Direct land take of recreational sites assets to be avoided where possible and land to be reinstated. However, minor and temporary effects are likely to still occur.	0	--	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste.	Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option crosses major roads, including A21, rail tracks and National Cycle Route. Likely to be moderate and temporary impacts during the construction.	Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur. Directional drilling under the railway and major roads is likely to be required.	0	-	0	0

Recycling (SHZ): Hastings to Darwell (15.3MI/d)											
SWS											
This option is a new 21.5MI/d water recycling plant producing a DO of 15.3MI/d near Bexhill and Hastings WwTW and a transfer of the treated effluent to Darwell reservoir, which feeds into the Hastings Area. Process losses have been included.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	The following SSSIs are located within 1km of the option: Darwell Wood SSS (0.23km, 33.33% favourable), River Line SSSI (0.43km, 100% favourable), Ashburnham Park SSSI (0.78km, 66.67% unfavourable – declining), Fore Wood SSSI (0.72km, 100% favourable), Combe Haven SSSI (0.08km, 33.33% favourable). There is potential for construction effects upon these SSSIs, especially where they are in close proximity to the option, due to the creation of dust and noise. The option would also cross SSSI Risk Impact Zone associated with Marline Valley Woods SSSI. However, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSI is notified in the area of the SSSI Impact Risk Zones. The Beachy Head East MCZ and the Dungeness, Romney Marsh and Rye Bay SPA lies 1.31km from the option, though the option would not discharge into the waters covered by this MCZ.	Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys.	0	-	0	0
						The option intersects woodland, ancient woodlands and priority habitat including deciduous woodland, good quality semi-improved grassland and lowland heathland therefore potential for direct effects. There is potential for indirect effects and disruption from dust, noise and vibration during construction but effects will be localised.	During construction, works will follow best practice guidelines e.g. use of a robust CEMP detailing mitigation measures to minimise potential impacts with the use of DMPs, pollution prevention, coverage of construction stockpiles during adverse weather conditions to minimise potential affects of pollution and run-off. Construction dust could be mitigated through wet cutting/crushing and vacuum drilling.				
						The HRA screening (2025) screens in Dungeness, Romney Marsh and Rye Bay SPA and Ramsar and Pevensey Levels SAC and Ramsar. All of these designated sites are screened in for construction effects, with the Dungeness, Romney Marsh and Rye Bay SPA also screened in for operation.	The HRA AA (2025) for Dungeness, Romney Marsh and Rye Bay SPA and Ramsar and Pevensey Levels SAC and Ramsar found all potential construction effects are of a scale and type that can be reliably prevented with established measures, such that effects ‘alone’ would be nil or negligible and ‘in combination’ effects would not be expected.				
						The HRA AA (2025) concludes no adverse effects during operation or construction.					
Water	Protect and enhance the quality of the water environment and water resources	0	--	+	---	The option overlies nitrate vulnerable zones, the Hastings Beds Cuckmere and Pevensey Levels, and Kent Weald Eastern - Rother WFD groundwater bodies. The option is not within SPZs. The option also intersects several surface water bodies, including main rivers, therefore there is potential for leaks and spills during construction that could contaminate the water environment. Given the option is conjunctive use, there is potential for positive effects on the water environment as it may help to reduce pressures during dry periods.	Best practice mitigation measures likely to be implemented during construction such as use of appropriate bedding materials, trenchless crossings and directional drilling. Further WFD assessment is required therefore moderate negative effects identified.	0	--	+	---
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The pipeline passes through agricultural land classed as Grades 3 and 4 as well as non-agricultural land. There may be disturbance to these soils during the construction phase. The expansion of the WTWs may result in permanent loss of soil. There are two authorised landfills and two historic landfills within 500m of the option. Potential for contamination during construction but due to localised nature, effects are likely to be minimal.	Reinstate land following construction phase, however there will be permanent loss from WTW expansion. Best construction practices for working within or within close proximity to landfills likely to be implemented to minimise impact.	0	-	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	The pipeline is predominately within flood zone 1, however parts of the option lie within flood zones 2 and 3 therefore potential flood risk during the construction phase. The WTW appear to be located within flood zone 1 and the pipeline will be buried therefore low risk of flood risk during operation. The option is unlikely to significantly affect flood risk.	Measures to reduce the impact on flooding during the construction and operational phase. Flood risk may still occur.	0	-	0	0

						<p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with medium confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with medium confidence) for the Darwell Reservoir waterbody.</p> <p>The WFD assessment highlights that a new discharge into the reservoir would change the physico-chemistry of the water body, for example by increasing nutrient concentrations, changing dissolved oxygen concentrations, and changing water temperature. The water body has had previous issues due to phosphorus, as demonstrated in the 2015 status classification which for phosphorous was moderate. This could impact phytoplankton communities. This is particularly a risk if the option was used during drought periods, i.e. with low water levels and high temperatures. In addition, the discharge could introduce new or increased concentrations of chemicals in to the water body. This will require further review to determine the relative concentrations of chemicals in the discharge and receiving water. Further assessment is therefore required to consider the final characteristics of the new discharge and ensure that water quality is not compromised.</p>					
	Deliver reliable and resilient water supplies	0	0	+	0	Option will facilitate water supply once operational, increasing water transfer and supply. The option is anticipated to have a default benefit of 15.3Ml/d therefore minor positive effects identified.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within 2000m. The construction has the potential to impact air quality, however effects are likely to be minor and temporary.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	There is no carbon data available for this option. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	The option is not thought to result in a change in water levels. Therefore, no effect on water environment vulnerability to climate change anticipated.	N/A	0	0	0	0
Landscap e	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The option lies within the High Weald National Landscape and NCA. Potential for visual disturbance during construction. The WTW expansion is unlikely to have a significant effect on the landscape given it is adjacent to an existing WTW sites.	Best practice measures will likely be implemented to minimise effects during construction such as use of construction, however minor and temporary impacts may remain. Land reinstated upon completion.	0	-	0	0
Historic Environ ment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	There are listed buildings within proximity to the pipeline route and there are also additional listed buildings and registered parks and gardens within 2000m. The construction phase may have effect the setting of these assets, however this is likely to be minor. Any excavation required has the potential to impacts archaeology, if present.	Best practice methods to minimise the effects on the setting of the historic assets. An Archaeology Watching Brief may be required. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential	0	-	0	0

							loss of archaeological remains due to construction.				
Populati on and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	0	0	The option appears to intersect a cemetery. There are playing fields, play spaces and schools within 500m of the pipeline route. There may be temporary disturbance to local communities and users of these community facilities from dust, noise and vibration. IMD deciles 4-6 along extent of pipeline.	Re-reroute the pipeline to avoid direct effects on the cemetery. Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	No tourism or recreational assets are directly impacted by the option, however there are playing fields and play spaces within 500m of the route. Potential for disruption from dust, noise, vibration and diversions during construction.	Best construction practices and the implementation of appropriate diversions to minimise impact.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste, including excavated materials.	Seek opportunity to implement sustainable design measures and reuse excavated material on site, to reduce impact. Minor negative construction effects will likely remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option intersects a major road therefore potential for moderate disruption effects, however this is likely to be minor.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

Bulk import (SHZ): SEW RZ8 to Rye											
Southern Water											
A new bi-directional Transfer between SEW Kingsnorth and Southern Water Brede WSW with a capacity of 10MI/d.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	<p>The following SSSIs are located within 1km of the option: Leasam Heronry Wood SSSI (0.2km from the option) (100% favourable condition) and Brede Pit and Cutting SSSI (0.91km from the option) (33.33% favourable/ 66.67% unfavourable condition). No direct impacts are considered likely but there may be significant disturbance effects from noise and dust on important species during construction.</p> <p>The option would also cross SSSI Impact Risk Zones associated with the Orlestone Forest SSSI and Maplehurst Woodhowever SSSI, although the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified, and Dungeness, Romney Marsh and Rye Bay SSSI where all planning applications have been highlighted as being a risk to the sensitive features for which the SSSI is notified.</p> <p>Dungeness, Romney Marsh and Rye Bay Ramsar and SAC, SPA and Ramsar is 2.17km from the option at its closest point.</p> <p>There are no National Nature Reserves within 1km of the option. The option passes close to a several areas of ancient woodland. No direct impacts are likely but there may be disturbance effects from noise and dust on important species during construction.</p> <p>Option involves the transfer of treated water so there is a very low risk of spreading INNS during both operation and construction phases.</p> <p>The HRA screening (2025) screens in Dungeness SAC and Dungeness, Romney Marsh and Rye Bay SPA and Ramsar for construction but notes that environmental changes associated with construction only (network solution), can be reliably avoided with project-level mitigation (applied at AA).</p> <p>The HRA AA (2025) concludes no adverse effects.</p>	<p>Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual effects to remain as removal of priority species likely. Future design will need to undertake ecological surveys.</p> <p>The 2023 AA for Dungeness SAC and Dungeness, Romney Marsh and Rye Bay SPA notes that potential effects can be reliably avoided with established project-level measures.</p>	0	--	0	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	Option passes through grade 2, and 3 agricultural land with some parcels of grade 4. Construction of pipeline will require excavation. There may be a temporary effects on soil quality during construction.	Ground will be reinstated so effects on soil only temporary. Best practice construction techniques to be implemented.	0	0	0	0
Water	Increase resilience and reduce flood risk	0	-	0	0	The option passes through flood zones 2 and 3 which may have impacts on construction. Pipeline infrastructure will be buried so unlikely for there to be any effect on flooding after construction.	Measures to reduce the impact on flooding during the construction phase are likely to be implemented, however potential residual flood risk likely to remain.	0	-	0	0

	Protect and enhance the quality of the water environment and water resources	0	-	0	0	The option crosses a number of rivers and other waterbodies. There may be impacts on WFD groundwater or surface water quality during construction phase. The WFD assessment (2025) concludes that this option would be WFD compliant (Stage 1).	Best practice construction measures to be implemented.	0	0	0	0
	Deliver reliable and resilient water supplies	0	0	+	0	Upon completion, the option will provide 10 MI/d transfer between Kingsnorth and Southern Water Brede WSW, providing an overall yield of 7.05MI/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	The option is not within an AQMA. Construction likely to have minor and temporary impact on air quality.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts on air quality are likely to still occur.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. Given the length of the pipeline the carbon is potentially of a moderate scale.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	No effect anticipated. The option is not anticipated to have a significant effect on water levels as such is not likely to affect the resilience to climate change.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The pipeline crosses the High Weald National Landscape and Low Weald and High Weald NCA. It is likely that there will be effects on visual amenity during construction as excavation will be required for pipeline construction.	Construction management plan and temporary screening during construction. Restoration to original landscape character where possible once construction is complete. Possibility for landscaping to restore/enhance visual amenity. However, minor and temporary impacts are likely to occur.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The option is within 1km of the following Scheduled Monuments: Romano-British roadside settlement and World War II pillbox immediately east of Westhawk Farm (0.66km from the option) and Medieval moated site and adjoining fishpond, Moat Farm (0.7km). The option is also within 1km of a number of listed buildings with some in close proximity to the site. The construction could affect the setting of these assets (albeit temporarily). The option is over 20km from the Canterbury WHS and no effects are likely on its setting. Excavation will be required during construction, there may be impacts on archaeological artifacts.	Best practice mitigation measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	The option passes through largely rural areas but there likely to be some impacts on communities in the construction phase. There is likely to be disturbance effects during construction of pipeline.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction and land will be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	There may be minor effects on tourism as the option likely intersects a PRoW. Diversions may be necessary. Pipeline will be buried to effects will only be temporary.	Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. Direct land take of recreational sites to be avoided where possible and land to be reinstated. However, minor and temporary effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials. Waste will be produced during excavation for pipeline.	Seek opportunity to implement sustainable design measures to reduce the impact, however it is likely that minor negative effects will remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	Option intersects a number of B-roads and an A-road. It is likely that there will be disturbance effects e.g. diversions during construction.	Best practice mitigation measures including a Traffic Management Plan will likely be implemented to minimise effects during construction and roads will be reinstated above the pipeline. However, minor and temporary effects are likely to still occur. Directional drilling under the railway likely to be required.	0	-	0	0

Drought option - demand side (SHZ): Reduce transfer to other commercial customers											
Southern Water											
Drought Option: In the event of a drought the Company would hold discussions with a commercial customer with regards to the resources position and their supply.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	0	+	0	Option may reduce the amount of water required for supply which may help protect biodiversity, GWDTE and priority habitat by conserving water in the environment. These measures are to be implemented during drought conditions and therefore ecosystems may already be under severe stress, additional water retained in the natural environment will be beneficial. The HRA screening (2025) indicated no likely significant effect on Natura 2000 sites.	N/A	0	0	+	0
Soil	Protect and enhance the functionality, quantity and quality of soils	0	0	0	0	There is not anticipated to be any effects on soil quality as a result of this option.	N/A	0	0	0	0
Water	Increase resilience and reduce flood risk	0	0	0	0	The option is not likely to be affected by flooding or lead to the exacerbation of flood risk.	N/A	0	0	0	0
	Protect and enhance the quality of the water environment and water resources	0	0	+	0	Option is temporary and is only to be implemented in drought conditions. Option aims to reduce the water required for supply to other commercial customers. Decreased consumer demand will have a net positive effect by reducing pressures on water resources and reducing the need for abstraction from water sources. No risk of deterioration in WFD status.	N/A	0	0	+	0
	Deliver reliable and resilient water supplies	0	0	+	-	By reducing the amount of water transferred to commercial companies (0.05Ml/d), the resilience of Southern Water's supplies is likely to increase. However, there is likely to be wider impacts on the resilience of supply for these commercial customers.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions.	0	0	+	-
Air	Reduce and minimise air emissions	0	0	0	0	No effect on air emissions is anticipated from this option.	N/A	0	0	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	0	0	0	There is no carbon data available for this option. Neutral effects identified at this stage.	N/A	0	0	0	0
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	By reducing the amount of water required for supply to commercial companies and therefore potentially reducing abstraction, the option may help reduce vulnerability to climate change by conserving water within the natural environment. However, given this is only to be implemented during drought conditions, it is not resulting in the long-term resilience of the local environment.	N/A	0	0	+	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	0	0	0	There is not anticipated to be impacts on the landscape, townscape or visual amenity.	N/A	0	0	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	0	0	0	Option is not likely to have an effect on the historic environment given it is a drought option with limited duration.	N/A	0	0	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	0	+	-	The reduction in the amount of water supplied to commercial customers may have an impact on the local economy if they are not able to carry out their business activity or have to operate at a reduced capacity. However, there is potential that the wider population will benefit from this option.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	+	-
	Maintain and enhance tourism and recreation	0	0	0	-	Given the option is to reduce the transfer of water for commercial customers, tourism and recreation could be affected if these customers rely on water to support these activities.	Ensure high levels of communication with the other water companies and commercial customers before, during and following the restrictions. Categorise commercial clients to allow for a proportionate reduction in transfer.	0	0	0	-
Material Assets	Minimise resource use and waste production	0	0	0	0	Unlikely to have effect on waste production or resource use as it is a drought option.	N/A	0	0	0	0
	Avoid negative effects on built assets and infrastructure	0	0	0	0	Unlikely to have effect on built assets and infrastructure as it is a drought option.	N/A	0	0	0	0

Storage (SHZ): Raising Bewl Reservoir 0.4m (3Ml/d)											
Southern Water											
The scheme involves the raising of Bewl Water, by 0.4m to increase storage and yield. The major works for raising Bewl to higher TWL levels will include: Raising the dam crest and building a new wave wall; Raising the overflow and valve chamber shafts and many ancillary works around the perimeter of the reservoir.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	--	0	0	There are no SSSI's within 1km of the option, although the option is situated within SSSI Impact Risk Zones associated with the Combwell Wood and Scotney Castle SSSI's, including areas where applications including pipelines or 'Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.' Combwell Wood SSSI and Scotney Castle SSSI / GWDTE are within 2000m therefore potential for indirect effects during construction.	Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Ancient Woodlands should be avoided in raising of the reservoir and further landscape mitigation should be provided where possible. Future design will need to undertake ecology surveys.	0	-	0	0
						No adverse effects on National Nature Reserves or Marine Conservation Zones are expected during the construction or operation phases.					
						Combwell Wood SSSI and Scotney Castle SSSI / GWDTE are within 2000m therefore potential for indirect effects during construction.					
						The option would cross 15 areas of Ancient Woodland and would be situated immediately adjacent to a further 11, which may be impacted directly during construction and operation. Woodland and priority habitats also surround Bewl Water which may also be directly impacted. No impacts are anticipated on chalk rivers.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	-	0	0	The HRA screening (2025) screens out all sites.	Reinstate land where possible, however there may be some minor permanent losses around Bewl Water perimeter as a result of the works.	0	-	0	0
						The option is located within Grade 3 agricultural land and there may be some permanent losses and/or disturbance during the construction phase. There are no historic or authorised landfills within 500.					
Water	Increase resilience and reduce flood risk	0	--	0	0	Bewl Water is located within FZ2 and FZ3 and there may be some impacts to construction works as a result.	Measures to reduce the impact on flooding during the construction phase. Flood risk during construction may still occur.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	--	The option involves work around the Bewl Water and as such there may be contamination during the construction phase. Part of the option is located within a SPZ. The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Bewl Water lake waterbody and Bewl river waterbody. The WFD assessment highlights that raising the reservoir could have impacts on upstream feeder streams (flooding of short reaches, and reduced connectivity to downstream), on the reservoir (temporary impacts on marginal habitat; potential longer-term impacts on water quality) and downstream waterbody (delayed spills and potential reduction to total spills,	Undertake further WFD assessments. Best practice mitigation measures likely to be implemented during construction.	0	--	0	--

						with potential impacts on biological elements). The WFD assessment highlights that further assessment will be required, to provide an improved understanding.					
	Deliver reliable and resilient water supplies	0	0	+	0	The option is aiming to increase the capacity of Bewl Water which has the potential to contribute to the resilience of supplies through an additional yield of 3Ml/d.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	There are no AQMAs within 2000m. The construction phase will likely result in impacts on air quality.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has minor construction and operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	-	0	-
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	There is potential that the increased capacity at Bewl Water will increase the resilience to the local environment.	N/A	0	0	+	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	The option is located within the High Weald National Landscape. The construction phase has the potential to impact the landscape, given the option is to increase the capacity at Bewl Water which may involve with works on the perimeter. There may also be permanent changes to the landscape. However, as this is already an existing reservoir, impacts are not anticipated to be significant and therefore minor effects identified for operation.	Best practice measures will likely be implemented to minimise effects during construction and to reduce visual impact during operation, however minor and temporary impacts may remain. Land reinstated upon completion where possible. Operational phase infrastructure could implement screening to mitigate effects.	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	The option is within a conservation area, and there are also listed buildings on the perimeter of Bewl Water which may be impacted as well as additional listed buildings within 500m. The works may impact archaeology if present.	Best practice measures will likely be implemented to minimise setting effects during construction. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0

Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	There are sports facilities and play spaces within 500m of the option location. There is potential that users of these facilities and the wider community are impacts during the construction works, however this is likely to be minor and temporary. IMD deciles range from 7 to 8 around the perimeter of Bewl Water.	Best practice measures will likely be implemented to minimise disturbance during construction. However, effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	The users of the sport facilities and play spaces have the potential to be affected during construction and there may be some diversions to public rights of way during the works. As such, the option has the potential to have a minor and temporary impact on recreation.	Best practice measures will likely be implemented to minimise disturbance during construction. However, effects are likely to still occur.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste during construction, including excavated materials.	Opportunity to implement sustainable design measures and reuse excavated material on site where possible, to reduce impact.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	-	0	0	The option is not anticipated to impact major roads, railways, national trails or national cycle routes. There may be some disturbance to local roads during the construction works.	Best practice measures will likely be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still remain.	0	-	0	0

1.16. REASONABLE PLAN ALTERNATIVES (within SLCP/BESP)

Options within either the SLCP or BESP that are not also within the BVP.

Desalination (KME): Isle of Sheppey 20MI/d Phase 2
Southern Water
The Isle of Sheppey Desalination options comprise a suite of modular options that represent different sizes of desalination plant that could be developed in one or more phases. This particular option proposes a second phase, developing a 20MI/d desalination capacity.

SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	0	---	0	---	<p>The option passes through the Medway and Estuary Marshes SSSI (21.74% in favourable condition, 13.04% in unfavourable – recovering condition, 39.13% in unfavourable – declining condition, 26.09% not recorded). There is potential for direct impacts from construction and operation on Medway and Estuary Marshes SSSI and the Medway Estuary & Marshes SPA/RAMSAR. There is potential operational impacts associated with brine outfall.</p> <p>The option is also adjacent to The Swale SSSI (52.27% in favourable condition, 2.27% in unfavourable – recovering condition, 6.82% in unfavourable – no change, 6.82% in unfavourable – declining condition, 31.82% not recorded).</p> <p>The option would also cross the SSSI Impact Risk Zone associated with the South Thames Estuary and Marshes SSSI (19.35% Favourable condition, 9.68% Unfavourable – Declining condition, 70.97% not recorded), including an area where infrastructure (pipeline) development is highlighted as being a risk to the sensitive features for which the SSSI is notified. The option would also cross the Impact Risk Zone for Queendown Warren SSSI and Spot Lane Quarry SSSI however, the type of development proposed as part of the option is not considered to be a risk to the sensitive features for which the SSSIs are notified in the area of the SSSI Impact Risk Zone(s) which the option is located crosses.</p> <p>There is potential for indirect impact on The Swale SPA/RAMSAR and Thames Estuary & Marshes SPA/RAMSAR, Outer Thames Estuary SPA and South Thames Estuary and Marshes SSSI.</p> <p>The option is located within the following MCZs: Medway Estuary - Zone 1 MCZ and The Swale Estuary MCZ. There is potential for effects on the protected features of the Medway Estuary MCZ in construction and operation. In construction the intake/outfall could directly affect the MCZ. In operation, saline plumes from outfall location could have impacts on the protected features.</p> <p>With regards to the Swale Estuary MCZ, pipeline construction will likely follow existing roads reducing potential for effects on the protected features and in operation discharge of brine will be to the Medway which reduces likelihood of exposure to this MCZ.</p>	<p>Best practice mitigation to minimise impacts and reinstatement /compensation of habitats, but potential for residual direct and indirect effects remain for designated sites. Future design will need to undertake ecology surveys. Ancient woodland could be avoided through detailed route design.</p> <p>The HRA AA (2025) concludes that construction effects are avoidable with normal measures.</p>	0	--	0	---/?

						<p>The option would be located 0.40km from the Elmley NNR. There is potential for indirect effects from the construction phase on these sites through noise, dust and vibration causing disturbance.</p> <p>The option (pipeline to Deans Hill) would cross one area of Ancient Woodland. There are potential impacts on these due to construction including potential loss/physical damage, noise and vibration, disturbance, dust emissions and habitat destruction.</p> <p>The HRA screening (2025) screens in the following sites for both construction and operational effects:</p> <ul style="list-style-type: none">• The Swale SPA• Medway Estuary and Marshes SPA• Medway Estuary and Marshes Ramsar• The Swale Ramsar• Thames Estuary and Marshes Ramsar• Thames Estuary and Marshes SPA• Outer Thames Estuary SPA <p>The screening concludes that environmental changes associated with construction can be reliably avoided with project-level mitigation (applied at AA); with regard to operation, the principal pathways for operational effects will be through environmental changes at the intake and outfall, which may affect downstream sites or sites supporting mobile species.</p> <p>The HRA AA (2025) concludes that, for Medway Estuary and Marshes Ramsar/SPA, Outer Thames Estuary SPA, and Thames Estuary and Marshes Ramsar/SPA, adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.</p> <p>The HRA AA (2025) concludes that The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.</p> <p>Overall, the HRA 2025 concludes potential effects during operation.</p>					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	<p>The preferred location for the desalination plant is on land south of Sheerness Docks, currently used for storage of car imports. The option intersects with Lappel Bank Foreshore authorised landfill site, potential to disturb contaminated material during construction.</p>	Best practicable means to prevent potential disturbance of contaminated material during construction.	0	0	0	0

Water	Increase resilience and reduce flood risk	0	--	0	--	The preferred location is located entirely in Flood Zones 2 and 3, which may have an impact on construction and operation.	Measures to reduce the impact on flooding during the construction phase is likely to be implemented, however potential residual flood risk likely to remain. The desalination plant would be subject to FRA and would need to be flood resilient.	0	-	0	0
	Protect and enhance the quality of the water environment and water resources	0	--	0	--	<p>Potential for water quality impacts during construction and during operation due to brine discharge. A new abstraction license will also need to be attained.</p> <p>The WFD assessment (2025) concludes that this option would be potentially non-compliant (with low confidence) reflecting that the Stage 2 assessment concludes potential WFD non-compliance (with low confidence) for the Medway and Swale transitional waterbodies.</p> <p>The WFD assessment highlights that the discharge of hypersaline water into the transitional water body could impact on water quality and affect biological habitats. Water quality modelling will be required to determine the potential effects on biological compliance parameters and protected areas. Construction of new infrastructure to support this option could impact on both water quality and biology if significant seabed disturbance is required. Sediment sampling will be required to confirm whether there is sufficient risk to water quality to affect biological parameters. The new abstraction could impinge fish and phytoplankton.</p> <p>The WFD assessment highlights that it is not predicted that the discharge would contain any chemicals supporting chemical status. However, bed disturbance during construction could give rise to the release of sediment bound chemicals. Sediment sampling will therefore be required to confirm whether there is a risk to water quality.</p>	Best practice construction measures to be implemented to mitigate effects.	0	-	0	--
	Deliver reliable and resilient water supplies	0	0	++	0	The option is likely to provide 20MI/d supply of desalinated and treated water.	N/A	0	0	++	0
Air	Reduce and minimise air emissions	0	-	0	-	The option is not within an AQMA nor are there any within 2km. Construction likely to have minor and temporary impact on air quality. There is potential for air quality impacts during operation given the high energy intensive process.	Best practice mitigation measures likely to be implemented during construction phase, however minor and temporary impacts may remain. Opportunity to use renewable energy to minimise air quality impacts.	0	-	0	-
Climatic Factors	Reduce embodied and operational carbon emissions	0	--	0	--	Carbon will be generated from materials used to construct the new infrastructure (embodied carbon), construction activities and from operation. The relative carbon scale identified that the option has moderate construction and moderate operation carbon emissions (relative to other WRSE Regional Plan options).	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is decarbonised, greener energy will be available.	0	--	0	--
	Reduce vulnerability to climate change risks and hazards	0	0	+	0	Desalination provides good climate change resilience for supply, especially for intakes from the sea. Where the use of desalination relieves pressure on stressed freshwater environments it could also contribute to environmental resilience.	N/A	0	0	+	0

Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	-	<p>The pipeline to Deans Hill is partially located within the Kent Downs National Landscape and is located in the North Kent Plain and North Downs national character areas. As a result, there are likely to be adverse effects during construction due to the presence of the construction site and associated excavations required for the pipeline. During the operational phase there may be adverse effects due to the presence of new pumping houses etc, but this is likely to be very minor. It is assumed the new pipeline will be buried below ground.</p> <p>The preferred location for the desalination plant is within the Greater Thames Estuary NCA. Negative effects likely during construction and operational phase however anticipated to be minor as site currently used for storage of car imports.</p>	<p>Construction best practice to be followed to reduce visual impacts from the works area. Ground to be reinstated following works. Operational phase infrastructure should be in keeping with local architecture and could implement screening to mitigate effects.</p> <p>Best practice will be implemented to avoid negative effects for desalination plant, however likely to be some disturbance to landscape during works. Screening could be implemented to minimise visual impact of plant.</p>	0	-	0	-
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	-	0	0	<p>The Queenborough Lines scheduled monument is within 500m of the preferred location. Construction and operation may affect the setting of this historic asset since the preferred location is currently in an industrialised area, this may be limited. There is potential for any excavation to impact buried archaeology if present, however this is considered to be limited given the current use of the preferred location.</p>	<p>Best practice mitigation measures will likely be implemented to minimise setting effects during construction. An Archaeology Watching Brief may be required during the construction phase.</p>	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	-	0	0	<p>There are numerous schools, medical facilities and other important buildings within 2km of option. There may be temporary disturbances during construction to users of these facilities. The preferred location is adjacent to an area in IMD decile 3.</p>	<p>Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction and land will be reinstated. However, minor and temporary effects are likely to still occur.</p>	0	-	0	0
	Maintain and enhance tourism and recreation	0	-	0	0	<p>There are a number of parks and gardens and playing spaces along with sports facilities, and a National Cycle Network route within 2km that may be temporarily affected during construction works, e.g. noise, dust pollution, road congestion.</p>	<p>Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.</p>	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	-	<p>New infrastructure required for option anticipated to generate waste. Brine waste will be produced during desalination.</p>	<p>Seek opportunity to implement sustainable design measures (design to reduce footprint, selection of materials) and reuse excavated material to reduce the impact, however it is likely that minor negative effects will remain.</p>	0	-	0	-
	Avoid negative effects on built assets and infrastructure	0	-	0	0	<p>There is likely to be localised traffic disruption during the construction phase. Operational effects on the local road network are likely to be minimal. There may be impacts on the operations of the Sheerness Docks although this is likely to be minimal.</p>	<p>Best practice measures including a Traffic Management Plan to be implemented to minimise disturbance during construction. However, minor and temporary effects are likely to still occur.</p>	0	-	0	0

Recycling (SHZ): Tunbridge Wells with Bewl (3.6Ml/d)											
SWS											
New Resource. Effluent pipeline (13,883 m of pipeline with a 200 mm diameter) from Tunbridge Wells WTW to Bewl reservoir, which feeds Darwell reservoir, Bewl WSW and near Rochester WSW. Additional tertiary treatment required at Tunbridge Wells WTW, which may require land purchase. 190 kW pump required. Very high pipe pressure.											
SEA Topic	SEA Objective	Construction Effects		Operational Effects		Comment	Mitigation	Residual Construction Effects		Residual Operational Effects	
		+	-	+	-			+	-	+	-
Biodiversity, flora and fauna	Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)					The following SSSI’s are within 1km of the option: Southborough Pit (0.67km, 100% unfavourable - declining), Pembury Cutting and Pit (0.03km, 100% favourable), Brookland Wood (0.18km, 100% favourable), and Scotney Castle (0.01km, 80% unfavourable – recovering, 20% not recorded). Scotland Castle and Brookland Wood are both GWDTE. The option would also cross SSSI Impact Risk Zones associated with the Pembury Cutting and Pit, Brookland Wood and Scotney Castle SSSI’s, including areas where all planning applications, and pipeline development, are highlighted as being a risk to the sensitive features for which the SSSI is notified.	Ensure best practicable means to prevent loss of habitat during construction, reinstate habitat on completion or if unavoidable consider compensatory habitat to replace damaged or lost habitat. Future design will need to undertake ecology surveys.				
		0	--	0	0	The option is not expected to have any adverse effect on National Nature Reserves or Marine Conservation Zones.					
						The option would cross 6 areas of Ancient Woodland and would be situated immediately adjacent to a further 17. The option would also intersect The option intersects six ancient woodlands, woodland and priority habitats including deciduous woodland, traditional orchard and good quality semi-improved grassland. The option lies within SSSI Impact Risk Zones. Barnett's Wood LNR is within 500m. Scotney Castle SSSI (30% Favourable, 70% Unfavourable - Recovering) and Brookland Wood (100% Favourable), which are both GWDTE and are within 500m of the pipeline route. Combwell Wood SSSI is within 2000m.					
						There is potential for indirect effects and disruption from dust, noise and vibration during construction but effects will be localised. The HRA ToLS identifies no likely significant effect due to distance and lack of hydrological connection from Natura 2000 sites.					
						The 2023 HRA screened in Medway Estuary and Marshes SPA and Ramsar for construction only but notes that construction related changes will have no effect on the site itself and effects on functionally associated land will not occur.					
						The risk of INNS is very low as the option involves the physical transfer of treated water which will likely be free from INNS.					
Soil	Protect and enhance the functionality, quantity and quality of soils	0	--	0	0	The pipeline passes through agricultural land classed as Grade 3 and Grade 4 as well as urban and non-agricultural land. There is potential for disturbance to these soils during construction. The expansion of the WTW may result in permanent loss of soil. Kipling Cross historic landfill is intersected by the option, with four further historic landfills within 500m. Potential for contamination during construction but due to localised nature, effects are likely to be minimal.	Reinstate land following construction phase, however there will be permanent loss from WTW expansion. Best construction practices for working within or within close proximity to landfills likely to be implemented to minimise impact.	0	-	0	0

Water	Increase resilience and reduce flood risk	0	--	0	--	The pipeline is predominately within flood zone 1 but does intersect flood zones 2 and 3 therefore some risk during the construction phase. The option involves additional treatment at the existing Tunbridge WTW which may require site expansion. The site is within or within close proximity to flood 2 and 3 therefore potential for operational flood risk.	Measures to reduce the impact on flooding during the construction and operational phase. Flood risk may still occur.	0	-	0	-
	Protect and enhance the quality of the water environment and water resources	0	--	+	---	<p>The option intersects nitrate vulnerable zones, SPZ2 and overlies the Kent Weald Western - Medway WFD groundwater body. The option also intersects several surface water bodies, including main rivers, therefore potential for the construction phase to contaminate the water environment from leaks and spills. Given the option is conjunctive use, there is potential for positive effects on the water environment as it may help to reduce pressures during dry periods. WFD Screening Assessment (2021) concluded one waterbody requires further assessment due to impacts identified at the construction phase.</p> <p>The WFD Assessment (2023) applied to Bew 3 has been applied for this option on a precautionary basis. It states confirms WFD non-compliance (with medium confidence) regarding discharge into Bewl water. The WFD assessment identifies that new discharge of treated effluent could potentially result in physico-chemical effects that could impact on biological status elements. Macrophytes are already at Poor status, and the option could make it more difficult to achieve future improvements. A new discharge into the reservoir could potentially change the physico-chemistry of the water body, for example by increasing nutrient concentrations, changing dissolved oxygen concentrations, and changing water temperature. The water body already fails for phosphate, which is at Poor status, and the introduction of treated effluent (depending on the final discharge quality) could worsen this or prevent future improvements. Further assessment is therefore required to consider the final characteristics of the new discharge and ensure that water quality is not compromised.</p>	Best practice mitigation measures likely to be implemented during construction such as use of appropriate bedding materials, trenchless crossings and directional drilling. Further WFD assessment is required therefore moderate negative effects identified.	0	--	+	---
	Deliver reliable and resilient water supplies	0	0	+	0	Option will facilitate water supply once operational, increasing water transfer and supply.	N/A	0	0	+	0
Air	Reduce and minimise air emissions	0	-	0	0	Tunbridge Wells A26 AQMA is within 2000m. Construction is likely to result in air quality impacts.	Best practice mitigation measures implemented during construction, however minor and temporary impacts on air quality may remain.	0	-	0	0
Climatic Factors	Reduce embodied and operational carbon emissions	0	-	0	-	There is no carbon data available for this option. The option is estimated to have minor construction and minor operational emissions.	Investigate use of renewables during construction and operation for energy supply and use of materials with lower embodied carbon. Carbon footprint study could help identify areas for carbon savings or alternative materials. As the electricity grid is	0	-	0	-

							decarbonised, greener energy will be available.				
	Reduce vulnerability to climate change risks and hazards	0	0	0	0	The option is not thought to result in a change in water levels. Therefore, no effect on water environment vulnerability to climate change anticipated.	N/A	0	0	0	0
Landscape	Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	0	--	0	0	The option lies within the High Weald National Landscape, the London Area Greenbelt and NCLA, and also intersects Green Belt land. Potential for visual disturbance during construction. Tunbridge Wells WTW expansion is unlikely to have a significant effect on the landscape given it is adjacent to an existing WTW site and within an industrial area.	Best practice measures will likely be implemented to minimise effects during construction such as use of construction, however minor and temporary impacts may remain. Land reinstated upon completion.	0	-	0	0
Historic Environment	Conserve, protect and enhance the historic environment, including archaeology	0	--	0	0	The option appears to intersect a Grade II listed building, however this is likely to be a result of the GIS alignment. There are numerous listed buildings and the Scotney Castle Registered Park and Garden within 500m. There are additional listed buildings, a registered park and garden, and scheduled monuments. The pipeline excavation has the potential to impact archaeology, if present.	Consider re-routing of pipeline to avoid listed building or utilise directional drilling if required. Best practice methods to minimise the effects on the setting of the historic assets. An Archaeology Watching Brief may be required during the construction phase. Further work likely to be required to determine significance of effect, depending on the presence or absence of buried archaeology. Residual effects may remain due to potential loss of archaeological remains due to construction.	0	-	0	0
Population and Human Health	Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	0	--	0	0	There are sports facilities, golf courses, schools, churches and religious grounds, allotments, playing fields and a hospital within 500m. The option is also shown to intersect several residential properties on the GIS. The option may cause temporary disturbance to local communities and the users of these community facilities from dust, noise and vibration. IMD deciles range from 8-10 along the extent of the route.	Consider re-routing of pipeline to avoid residential properties or utilise directional drilling. Best practice mitigation measures e.g. noise management to be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0
	Maintain and enhance tourism and recreation	0	--	0	0	The option intersects a national cycle route and there are also sports facilities, golf courses, allotments and playing fields within 500m. There is potential for disruption on recreational assets from dust, noise, vibration and diversions during construction.	Best construction practices and implementation of appropriate diversions to minimise impact.	0	-	0	0
Material Assets	Minimise resource use and waste production	0	-	0	0	New infrastructure required for option which will use materials and generate waste, including excavated materials.	Seek opportunity to implement sustainable design measures and reuse excavated material on site, to reduce impact. Minor negative construction effects will likely remain.	0	-	0	0
	Avoid negative effects on built assets and infrastructure	0	--	0	0	The option intersects major roads and a national cycle route. There is likely to be moderate and temporary disruption to these assets during the construction phase.	Best practice mitigation measures will likely be implemented to minimise effects during construction. However, minor and temporary effects are likely to still occur.	0	-	0	0

