

AffinityWater

Drought Plan Strategic Environmental Assessment – Environmental Report Appendix E



Affinity Water



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E. Assessment Scoring Criteria

SEA Objective	Datasets/Key Themes	Effect	Description
Biodiversity, Flora, Fauna: • Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible)	<ul style="list-style-type: none"> • SPA • SAC • Ramsar site • SSSIs (including favourable condition assessments) • MPA • MCZ • NNR • LNR • Priority habitats and species • Non-designated sites • Terrestrial, aquatic and marine habitats, species and protected sites • Green networks and corridors 	+++	Major Positive The option would result in a major enhancement on the quality of designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat quality and availability. The option would result in a major increase in the population of a priority species. Effects could be caused by beneficial changes in water flows/water quality, or large amounts of creation or enhancement of habitat, promoting a major increase in ecosystem structure and function. The option would result in a major reduction or management of INNS.
		++	Moderate Positive The option would result in a moderate enhancement on the quality of designated and/or non-designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat creation and enhancement measures. The option would result in a moderate increase in the population of a priority species. Effects could be caused by beneficial changes in water flows/water quality, or moderate amounts of creation or enhancement of habitat, promoting a moderate increase in ecosystem structure and function. The option would result in a moderate reduction or management of INNS.
		+	Minor Positive The option would result in a minor enhancement of the quality of designated and/or non-designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat creation and enhancement measures.

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	(e.g. foraging areas and commuting routes, migration routes, hibernation areas etc. at all scales) • LWS (where available)		The option would result in a minor increase in the population of a priority species. Effects could be caused by beneficial changes in water flows/water quality, or small amounts of creation or enhancement of habitat, promoting a minor increase in ecosystem structure and function. The option would result in a minor reduction or management of INNS.
		0	Neutral
		-	Minor Negative
		--	Moderate Negative
			The option would result in a moderate negative effect on the quality of nationally designated sites / habitats due to changes in flow or groundwater levels, water quality or habitat loss or degradation. The option would result in a moderate decrease in the population of a priority species. Effects could be caused by detrimental changes in flows/water quality, or moderate loss or degradation of habitat leading to a moderate loss of ecosystem structure and function.

SEA Objective	Datasets/Key Themes	Effect	Description
			The options would result in a moderate increase or spread of INNS.
		---	<p>The option would result in a negative effect on the quality of internationally designated sites due to changes in flow or groundwater levels, water quality or habitat loss or degradation.</p> <p>The option would result in a major decrease in the population of a priority species.</p> <p>Effects could be caused by detrimental changes in flows/water quality, or large losses or degradation of habitat leading to a major loss of ecosystem structure and function.</p> <p>The option would result in a major increase or spread of INNS.</p>
		?	Uncertain From the level of information available the effect that the option would have on this objective is uncertain
Soil: • Protect and enhance the functionality, quantity and quality of soils	<ul style="list-style-type: none"> • Agricultural Land Classification • Landfill sites – authorised and historic • Mineral & Waste allocations (where available) 	+++	Major Positive The option would result in a major enhancement on the quality of soils through the implementation of catchment approaches, remediation or other measures.
		++	Moderate Positive The option would result in a moderate enhancement on the quality of soils through the implementation of catchment approaches, remediation or other measures.
		+	Minor Positive The option is located on a brownfield site and has no effect on soils or existing land use. The option results in the remediation of contaminated land.
		0	Neutral The option would not result in any effects on soils or land use.

SEA Objective	Datasets/Key Themes	Effect	Description
		-	Minor Negative The option is not located on a brownfield site and/or results in a minor loss of best and most versatile agricultural land or is in conflict with existing land use. The option results in land contamination.
		--	Moderate Negative The option will result in a moderate loss of best and most versatile agricultural land or is in substantial conflict with existing land use. The option is partially overlying mineral resources leading to partial mineral sterilisation.
		---	Major Negative The option will result in a major loss of best and most versatile agricultural land or is in substantial conflict with existing land use. The option results in land contamination. The option is directly overlying mineral resources leading to mineral sterilisation.
		?	Uncertain From the level of information available the effect that the option would have on this objective is uncertain
Water: • Increase resilience and reduce flood risk • Protect and enhance the quality of the water environment	<ul style="list-style-type: none"> • Environment Agency Flood Defences • Environment Agency Main Rivers • Flood Zones 2 and 3 • Surface Water Features 	+++	Major Positive The option results in addressing failure of WFD Good Ecological Status / Good Ecological Potential. The option would result in a major improvement to flood risk. The option would result in a major improvements in water efficiency, reduces demand and improves resilience.
		++	Moderate Positive The option achieves savings through demand management and does not require abstraction to achieve yield. The option contributes to addressing failure of WFD Good Ecological Status / Good Ecological Potential. The option would result in a moderate improvement to flood risk.

SEA Objective	Datasets/Key Themes	Effect	Description	
and water resources • Deliver reliable and resilient water supplies	<ul style="list-style-type: none"> • WFD River Waterbody Catchments • WFD River Waterbodies Cycle 2 • Bathing Waters (for desal options) • Shellfish Waters (desal options) • Source Protection Zones • WFD Groundwater bodies 		The option would result in a moderate improvements in water efficiency, reduces demand and improves resilience.	
		+	Minor Positive	The option achieves savings through demand management and does not require abstraction to achieve yield. The option would result in a minor improvement to flood risk. The option would result in a minor improvements in water efficiency, reduces demand and improves resilience.
		0	Neutral	The option would have no discernible effect on river flows or surface/coastal water quality or on groundwater quality or levels. The option would not have an effect on or be affected by flood risk.
		-	Minor Negative	The option would result in minor decreases in river flows. River and/or coastal water quality may be affected and lead to short term or intermittent effects on receptors (e.g. designated habitats, protected species or recreational users of rivers and the coastline) that could not be avoided but could be mitigated. The option would result in minor decreases in groundwater quality or levels. The option is located in Flood Zone 2. The option would result in minor decreases in water efficiency, increases demand and reduces resilience.
		--	Moderate Negative	The option would result in moderate decreases in river flows. River and/or coastal water quality may be affected and lead to long term or continuous effects on receptors (e.g. designated habitats, protected species or recreational users of rivers and the coastline) that could not reasonably be mitigated. The option results in the likely deterioration of WFD classification.

SEA Objective	Datasets/Key Themes	Effect	Description
			The option would result in moderate decreases in groundwater quality or levels. The option is located in Flood Zone 3. The option would result in moderate decreases in water efficiency, increases demand and reduces resilience.
		---	Major Negative The option would result in major decreases in river flows. River and/or coastal water quality may be affected and lead to long term or continuous effects on receptors (e.g. designated habitats, protected species or recreational users of rivers and the coastline) that could not reasonably be mitigated. The option results in the deterioration of WFD classification. The option would result in major decreases in groundwater quality or levels. The option is located in Flood Zone 2 or 3 and further contributes to flood risk. The option would result in major decreases in water efficiency, increases demand and reduces resilience.
		?	Uncertain From the level of information available the effect that the option would have on this objective is uncertain.
Air: • Reduce and minimise air emissions	<ul style="list-style-type: none"> • Air Quality Management Zones • Air quality monitoring sites 	+++	Major Positive The option would result in a major enhancement of the air quality within one or more AQMAs.
		++	Moderate Positive The option would result in a moderate enhancement of the air quality within one or more AQMAs.
		+	Minor Positive The option would result in an enhancement of the air quality.
		0	Neutral The option would not result in any effects on Air Quality and AQMAs.
		-	Minor Negative The option would result in a decrease of the air quality.

SEA Objective	Datasets/Key Themes	Effect	Description
		--	Moderate Negative The option would result in a decrease of the air quality within one or more AQMAs.
		---	Major Negative The option would result in a major decrease in the air quality within one or more AQMAs.
		?	Uncertain From the level of information available the effect that the option would have on this objective is uncertain.
Climate Factors: • Reduce embodied and operational carbon emissions • Reduce vulnerability to climate change risks and hazards	Option Carbon data UKCP18 climate data Sea level rise projections	+++	Major Positive The option will generate additional zero carbon energy that can be fed back into the grid The option will result in a major increase in carbon sequestration.
		++	Moderate Positive The option will be carbon neutral The option will increase resilience/decrease vulnerability to climate change effects. The option will reduce operational carbon emissions by between 100 and 1,000 tonnes CO ₂ e/year. The option will result in a moderate increase in carbon sequestration.
		+	Minor Positive The option includes renewable energy sources that bring operational carbon to under 100 tonnes CO ₂ e/year The option will increase resilience/decrease vulnerability to climate change effects. The option will reduce operational carbon emissions by up to 100 CO ₂ e/year.
		0	Neutral The option would have no discernible effect on greenhouse gas emissions, nor would the option increase resilience/decrease vulnerability to climate change effects.

SEA Objective	Datasets/Key Themes	Effect	Description
		-	Minor Negative The option will have a minor impact on resilience/decrease vulnerability to climate change effects. The option will generate operational carbon emissions of between 100 and 1,000 tonnes CO ₂ e/year.
		--	Moderate Negative The option will have a moderate impact on resilience/significantly decrease vulnerability to climate change effects. The option will generate operational carbon emissions of between 1,000 and 10,000 CO ₂ e/year. The option will result in a moderate release of previously sequestered carbon.
		---	Major Negative The option will have a major impact on resilience/significantly decrease vulnerability to climate change effects. The option will generate operational carbon emissions of more than 10,000 tonnes CO ₂ e/year. The option will result in a major release of previously sequestered carbon.
		?	Uncertain From the level of information available the effect that the option would have on this objective is uncertain.
Landscape: • Conserve, protect and enhance landscape, townscape and seascape character and visual amenity	<ul style="list-style-type: none"> • Areas of Outstanding Natural Beauty • National Character Areas • Green Belt land • National Park 	+++	Major Positive The option would have a major positive contribution to designated landscape (AONB or National Park) management plan objectives The option results in new, above ground infrastructure that significantly enhances the local landscape, townscape or seascape.
		++	Moderate Positive The option would have a moderate positive contribution to designated landscape management plan objectives The option results in new, above ground infrastructure that has a moderate positive effect on the local landscape, townscape or seascape.

SEA Objective	Datasets/Key Themes	Effect	Description
		+	Minor Positive The option results in new, above ground infrastructure that has a minor positive effect on the local landscape, townscape or seascape.
		0	Neutral The option would not result in any effects on the local landscape, townscape or seascape.
		-	Minor Negative The option results in new, above ground infrastructure that has a minor negative effect on the local landscape, townscape or seascape.
		--	Moderate Negative The option would have a moderate negative effect on a designated landscape or feature (i.e. significant visually intrusive infrastructure) whose effects could not be reasonably mitigated. The option results in new, above ground infrastructure that has a moderate negative effect on the local landscape, townscape or seascape.
		---	Major Negative The option would have a negative effect on a designated landscape or feature (i.e. significant visually intrusive infrastructure) whose effects could not be reasonably mitigated. The option results in new, above ground infrastructure that has a major negative effect on the local landscape, townscape or seascape.
		?	Uncertain From the level of information available the effect that the option would have on this objective is uncertain.
Historic Environment • Conserve, protect and enhance the historic environment,	<ul style="list-style-type: none"> • Listed buildings: <ul style="list-style-type: none"> - Grade I listed structures - Grade II* listed structures - Grade II listed structures 	+++	Major Positive The option will result in enhancements to designated heritage assets and/or their setting, fully realising the significance and value of the asset, such as: <ul style="list-style-type: none"> • Securing repairs or improvements to heritage assets, especially those identified in the Historic England Buildings/Monuments at Risk Register; • Improving interpretation and public access to important heritage assets.
		++	Moderate Positive The option will result in enhancements to designated heritage assets and/or their setting.

SEA Objective	Datasets/Key Themes	Effect	Description
including archaeology	<ul style="list-style-type: none"> • Registered Parks and Gardens: - Grade I Registered Parks and Gardens - Grade II* Registered Parks and Gardens - Grade II Registered Parks and Gardens • Protected Wreck • Registered Battlefields • Scheduled Monuments • Conservation Areas • World Heritage Sites 		Improving interpretation and public access to important heritage assets.
		+	Minor Positive The option will result in enhancements to non-designated heritage assets and/or their setting.
		0	Neutral The option will have no effect on cultural heritage assets or archaeology.
		-	Minor Negative The option will result in the loss of significance of undesignated heritage assets and/or their setting, notwithstanding remedial recording of any elements affected. There will be limited damage to known, undesignated archaeology important sites with a consequent loss of significance only partly mitigated by archaeological investigation.
		--	Moderate Negative The option will result in the loss of significance of undesignated heritage assets and/or their setting, notwithstanding remedial recording of any elements affected. The option will diminish of significance of designated heritage assets and/or their setting, notwithstanding remedial recording of any elements affected.
		---	Major Negative The option will diminish the significance of designated heritage assets and/or their setting such as: <ul style="list-style-type: none"> • Demolition or further deterioration in the condition of designated heritage assets especially those identified in the Historic England Buildings/Monuments at Risk Register. • Loss of public access to important heritage assets and lack of appropriate interpretation. • There will be major damage to known, designated archaeology important sites with a consequent loss of significance only partly mitigated by archaeological investigation.

SEA Objective	Datasets/Key Themes	Effect	Description
		?	Uncertain From the level of information available the effect that the option would have on this objective is uncertain.
Population, Human Health • Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing • Maintain and enhance tourism and recreation	• Noise action important area • Indices of Multiple Deprivation 2015	+++	Major Positive The option leads to major positive effect on the health of local communities and will ensure that surface water and bathing water quality is maintained within statutory limits. The option creates new, and significantly enhances existing, recreational facilities, publicly accessible greenspace and/or tourism within the operational area.
	• Functional site: - Schools - Medical facilities	++	Moderate Positive The option leads to positive effect on the health of local communities and will ensure that surface water and bathing water quality is maintained within statutory limits. The option enhances existing, recreational facilities, publicly accessible greenspace and/or tourism within the operational area
	• OS Greenspace dataset: - Allotments - Bowling green - Cemetery - Golf course	+	Minor Positive The option has a temporary positive effect on the health of local communities and will ensure that surface water and bathing water quality is maintained within statutory limits
	- Sports facility - Play space	0	Neutral The option would not result in any effects on human health and existing recreational facilities and/or tourism.
	- Playing field - Public park or garden	-	Minor Negative The option has a temporary effect on human health (e.g. noise or air quality). The option reduces the availability and quality of existing recreational facilities and/or tourism within the operational area.
	- Religious grounds	--	Moderate Negative The option results in the permanent removal of existing recreational facilities, publicly accessible greenspace and/or tourism within the operational area

SEA Objective	Datasets/Key Themes	Effect	Description
	<ul style="list-style-type: none"> - Tennis courts • Natural England - Country Parks • National Parks • Section 15 open access areas • CRoW S4 Conclusive Registered Common Land 	---	<p>Major Negative</p> <p>The option has a significant long-term effect on human health (e.g. noise or air quality).</p> <p>The option results in the removal of existing recreational facilities, publicly accessible greenspace and/or tourism within the operational area.</p>
		?	<p>Uncertain</p> <p>From the level of information available the effect that the option would have on this objective is uncertain.</p>
<p>Material Assets</p> <ul style="list-style-type: none"> • Minimise resource use and waste production • Avoid negative effects on built assets and infrastructure 	<ul style="list-style-type: none"> • Housing allocations (where available) • Transport: <ul style="list-style-type: none"> - Major roads – A roads - Major roads motorway - Railway line - National cycle route - National trails 	+++	<p>Major Positive</p> <p>The option will re-use or recycle substantial quantities of waste materials and any new infrastructure will incorporate substantial sustainable design measures and materials. There will be no increase in energy consumption or energy will be from 100% renewable sources.</p> <p>The option improves national cycle routes or national trails.</p>
		++	<p>Moderate Positive</p> <p>The option will re-use or recycle moderate quantities of waste materials and any new infrastructure will incorporate some sustainable design measures and materials. There will be no increase in energy consumption or energy will be from 90% renewable sources.</p> <p>The option improves national cycle routes or national trails.</p>
		+	<p>Minor Positive</p> <p>The option will re-use or recycle a limited quantity of waste materials and any new infrastructure will incorporate some limited sustainable design measures and materials. There will be no increase in energy consumption or energy will be from 80% renewable sources.</p>

SEA Objective	Datasets/Key Themes	Effect	Description
			The option improves national cycle routes or national trails.
		0	Neutral The option would not result in any effects on material assets.
		-	Minor Negative The option will require new infrastructure with only limited opportunities for the re-use or recycling of waste materials. There are limited opportunities for sustainable design or the use of sustainable materials. The option results in a minor increase in energy consumption with no renewable energy options. The option results in a minor disruption on built assets and infrastructure, including transport.
		--	Moderate Negative The option will require new infrastructure with only limited opportunities for the re-use or recycling of waste materials. The option results in a moderate increase in energy consumption with no renewable energy options. The option results in a moderate disruption on built assets and infrastructure, including transport links.
		---	Major Negative The option will require significant new infrastructure that cannot be provided through the re-use or recycling of waste materials. There are no opportunities for sustainable design or the use of sustainable materials. The option results in a major increase in energy consumption with no renewable energy options. The option results in a major distribution on built assets and infrastructure, including transport links.
		?	Uncertain From the level of information available the effect that the option would have on this objective is uncertain.