Final Draft Water Resources Management Plan 2024: Annex 13: Factfiles

Submission date: May 2025

from Southern Water

Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (KTZ): AFW - existing (0.1Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Thannet
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	0.1
DO 1:200 Peak [Ml/d]	0.1
DO 1:500 Average [Ml/d]	0.1
DO 1:500 Peak [Ml/d]	0.1
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

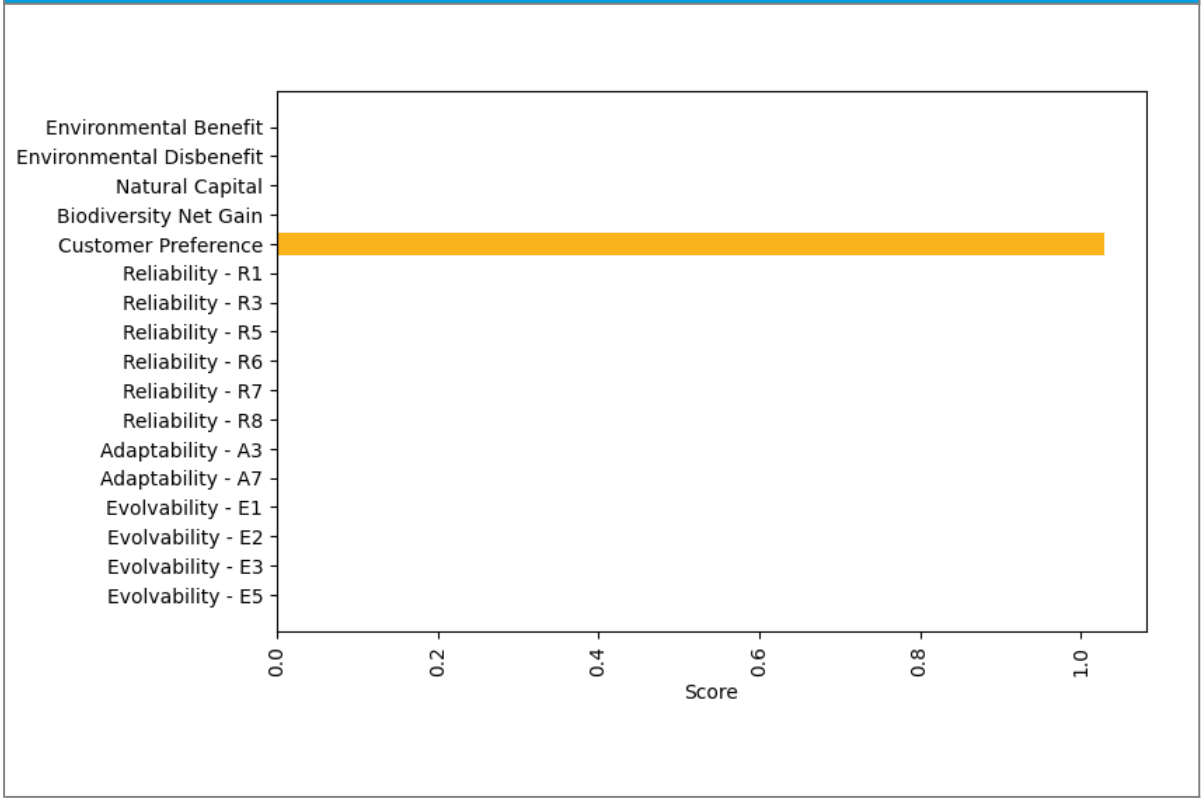
Other

Metric	

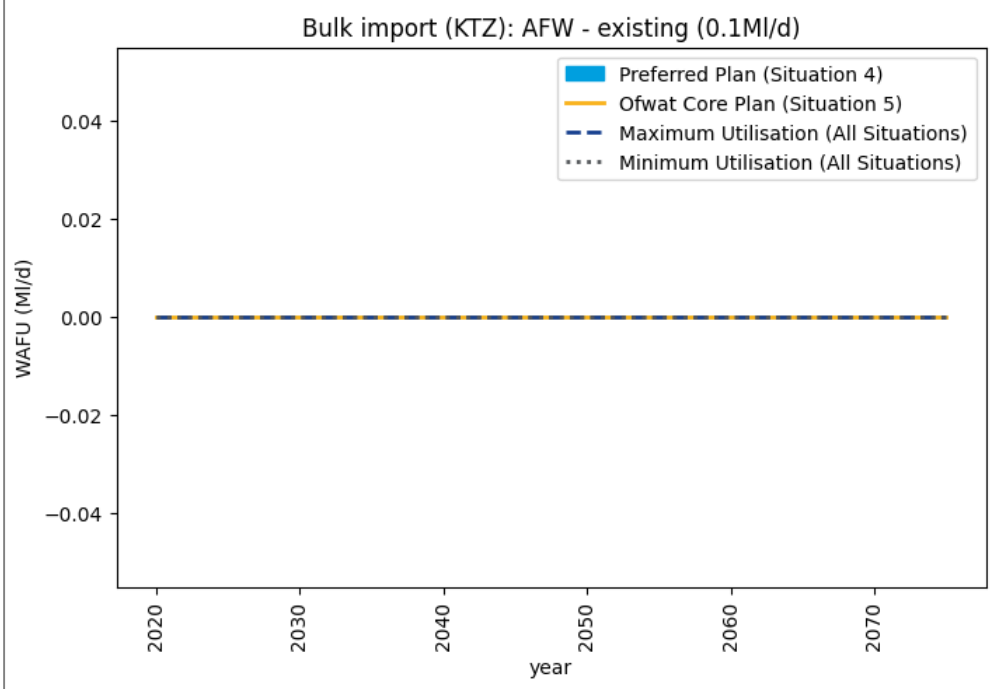
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (KMW-SHZ): Bewl Reservoir (35Ml/d) - existing
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Hastings
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	3.29
Maximum annual utilisation [Ml/d]	15.70
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.02
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

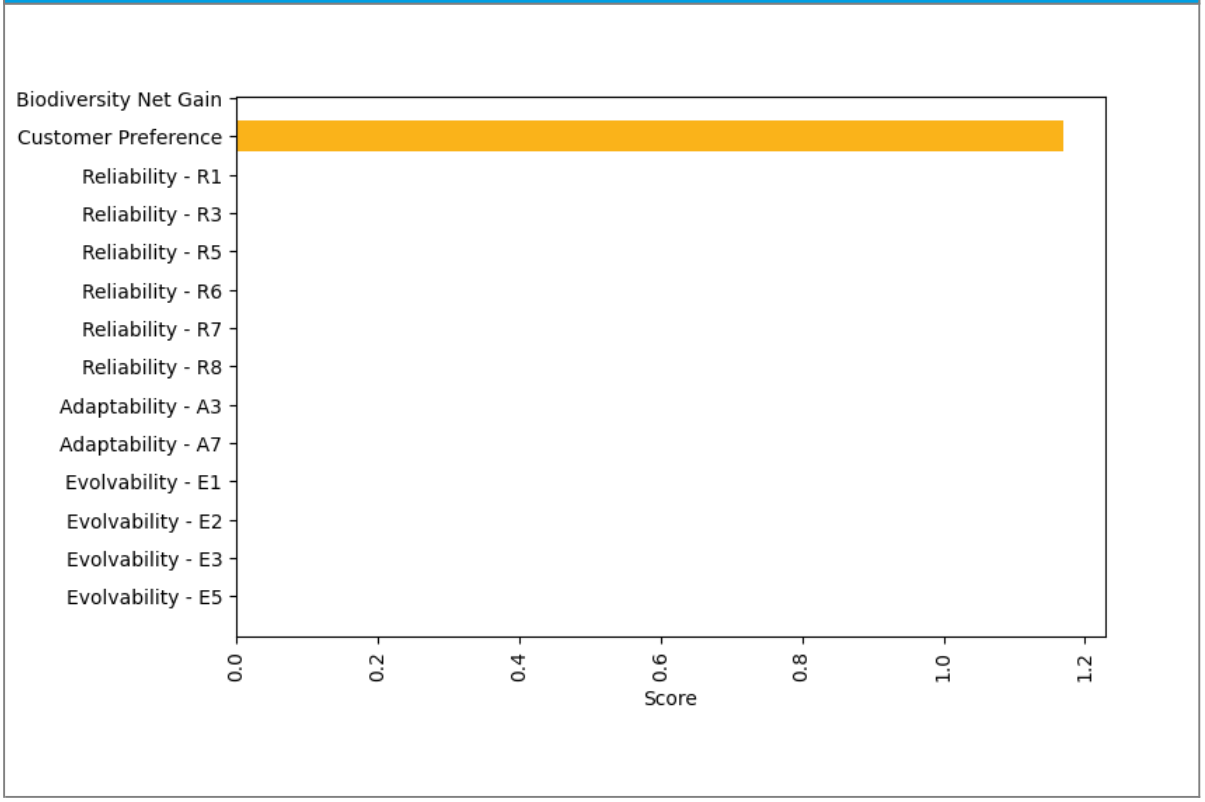
Other

Metric	

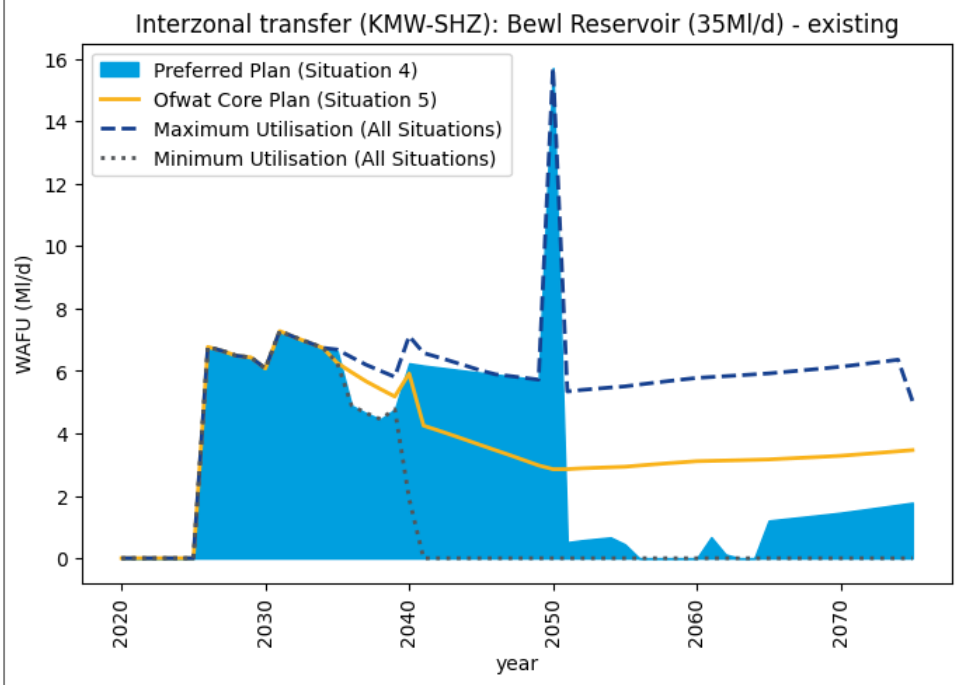
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HSW-HRZ): Romsey Town and Broadlands valve expansion (5Ml/d)
Source of Supply and main operational features	Interzonal transfer (HSW-HRZ): Romsey Town and Broadlands - bidirectional
Area over which option is to be implemented	Hampshire Rural
Dependencies	Bidirectional Version: Interzonal transfer (HRZ-HSW): Romsey Town and Broadlands valve expansion (5Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	5
DO 1:200 Peak [Ml/d]	5
DO 1:500 Average [Ml/d]	5
DO 1:500 Peak [Ml/d]	5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	2
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-9.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	7.53
Financing Cost [£m]	9.76
Opex [£m]	7.77
Embodied Carbon [tCo2e]	2,699.10
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	1.31
Average Incremental Cost (AIC) [p/m3]	12.63

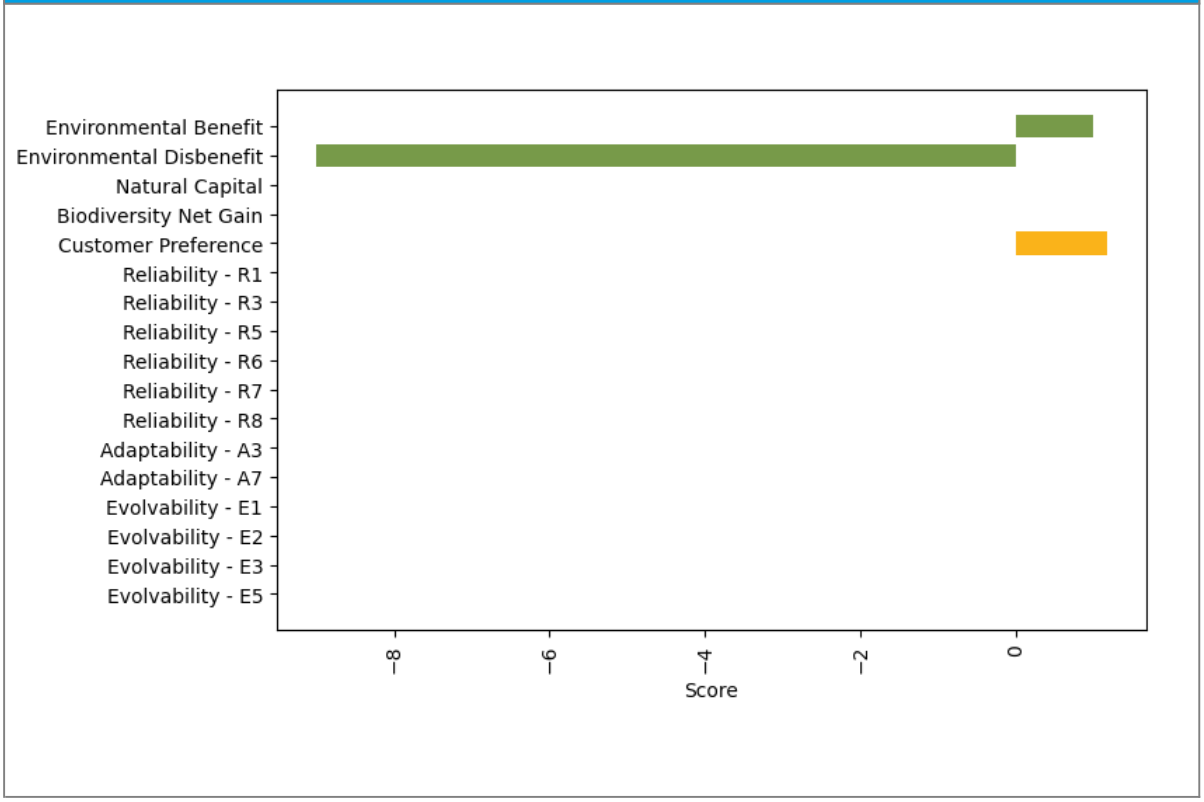
Other

Metric

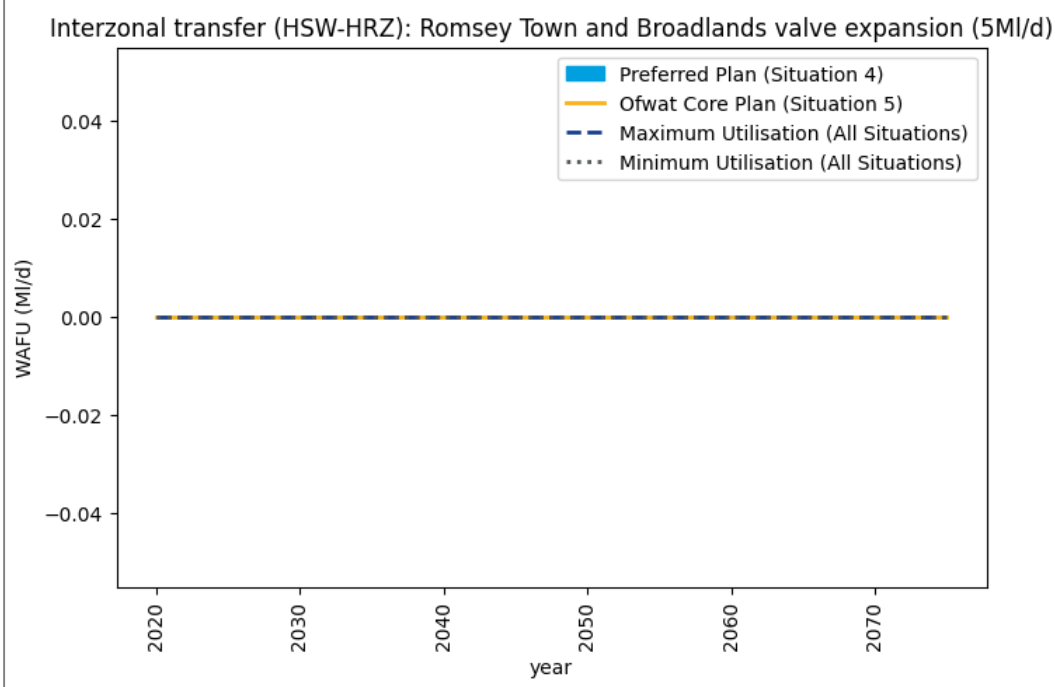
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-9.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HRZ-HSW): Romsey Town and Broadlands valve expansion (5Ml/d)
Source of Supply and main operational features	Interzonal transfer (HRZ-HSW): Romsey Town and Broadlands - bidirectional (3.1Ml/d)
Area over which option is to be implemented	Southampton West
Dependencies	Bidirectional Version: Interzonal transfer (HSW-HRZ): Romsey Town and Broadlands valve expansion (5Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	5
DO 1:200 Peak [Ml/d]	5
DO 1:500 Average [Ml/d]	5
DO 1:500 Peak [Ml/d]	5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	2
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	3.13
Maximum annual utilisation [Ml/d]	5.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-9.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	6.27
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	2.10
Total Carbon Cost [£m]	0.09
Average Incremental Cost (AIC) [p/m3]	4.40

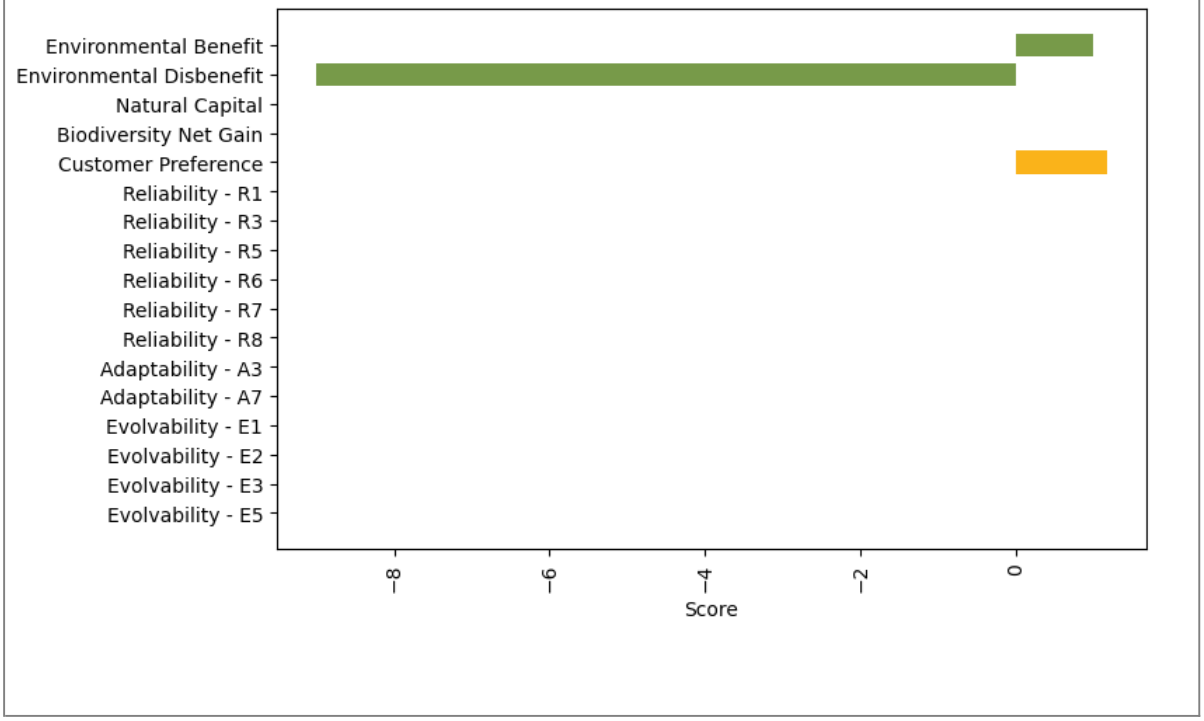
Other

Metric

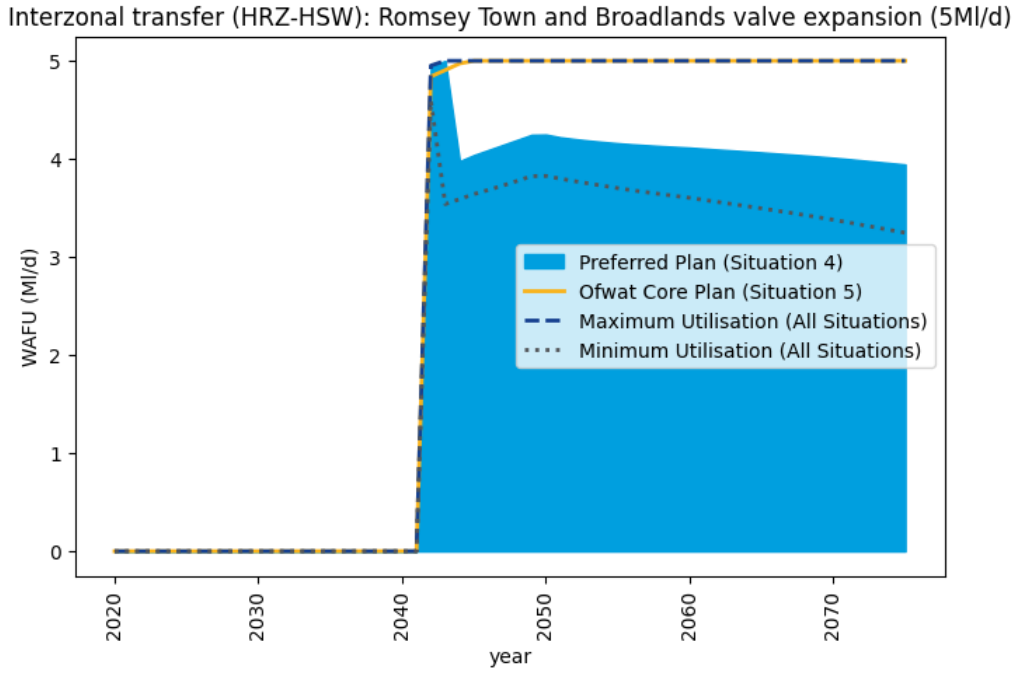
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-9.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Catchment management (SHZ): Cuckmere and Pevensey Levels
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Hastings
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2026
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.61
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.32
Flexibility	
Scalability and modularity [Best Value Metric]	4.27273
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	0.13
Financing Cost [£m]	0.29
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

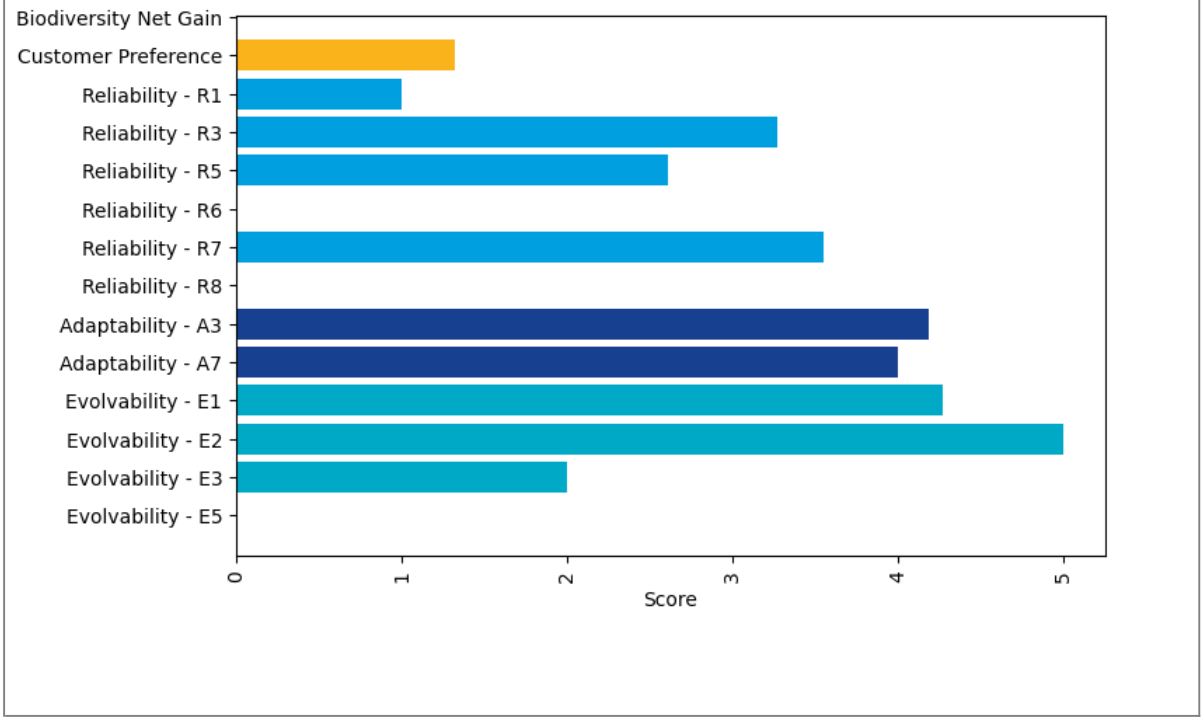
Other

Metric	

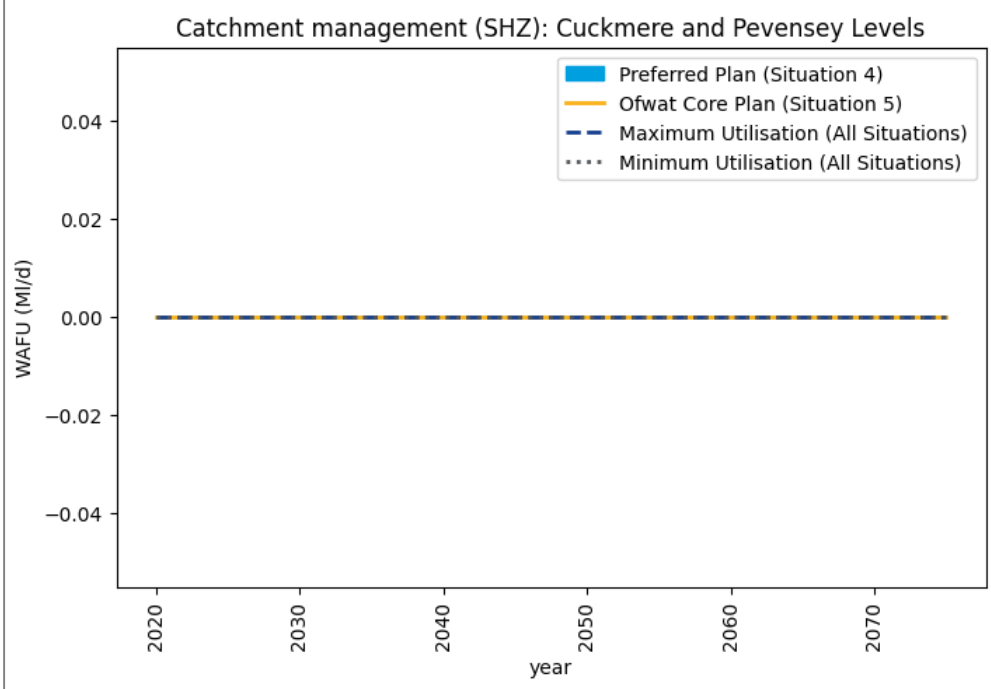
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.32
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.27
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2.61012
Resilience: Reliability R6 – Capacity of catchment services	0.00098
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3.54545
Resilience: Reliability R8 – Improvements to soil health	0.00022
Resilience: Adaptability A3 – Operational complexity and flexibility	4.18182
Resilience: Adaptability A7 – Customer engagement with demand restrictions	4
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4.27273
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	0.00073

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Catchment management (HKZ): Kennet and tributaries
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Kingsclere
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2026
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.22
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.32
Flexibility	
Scalability and modularity [Best Value Metric]	4.17647
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	0.53
Financing Cost [£m]	1.16
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

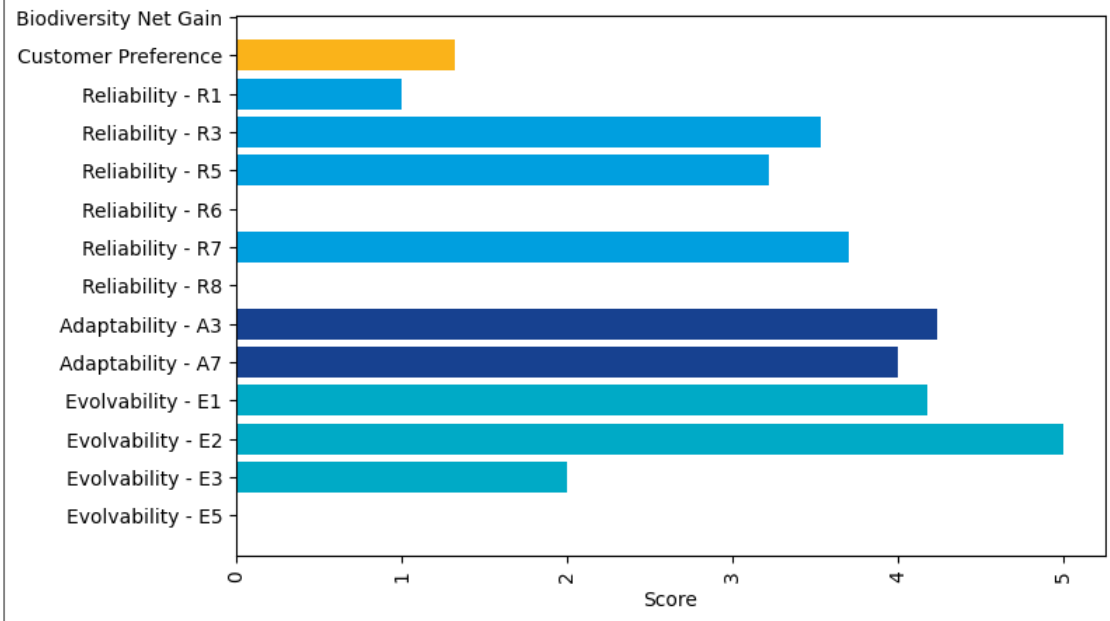
Other

Metric	

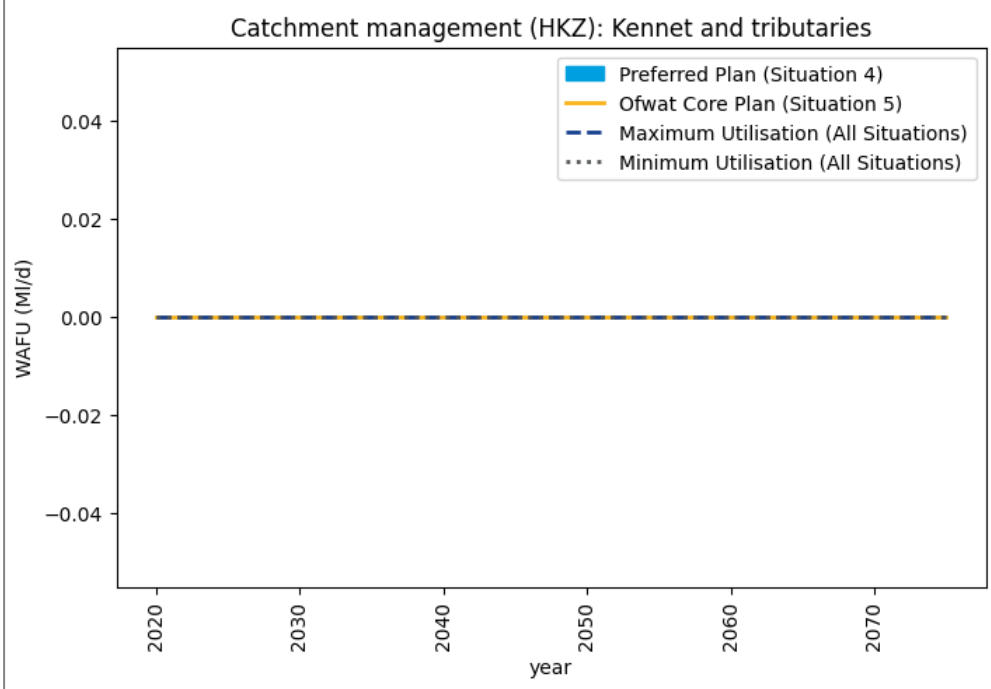
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.32
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.53
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3.21805
Resilience: Reliability R6 – Capacity of catchment services	0.0025
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3.70588
Resilience: Reliability R8 – Improvements to soil health	0.0013
Resilience: Adaptability A3 – Operational complexity and flexibility	4.23529
Resilience: Adaptability A7 – Customer engagement with demand restrictions	4
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4.17647
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	0.00349

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Catchment management (KME): North Kent
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2026
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.50
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.32
Flexibility	
Scalability and modularity [Best Value Metric]	4
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	0.53
Financing Cost [£m]	1.16
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

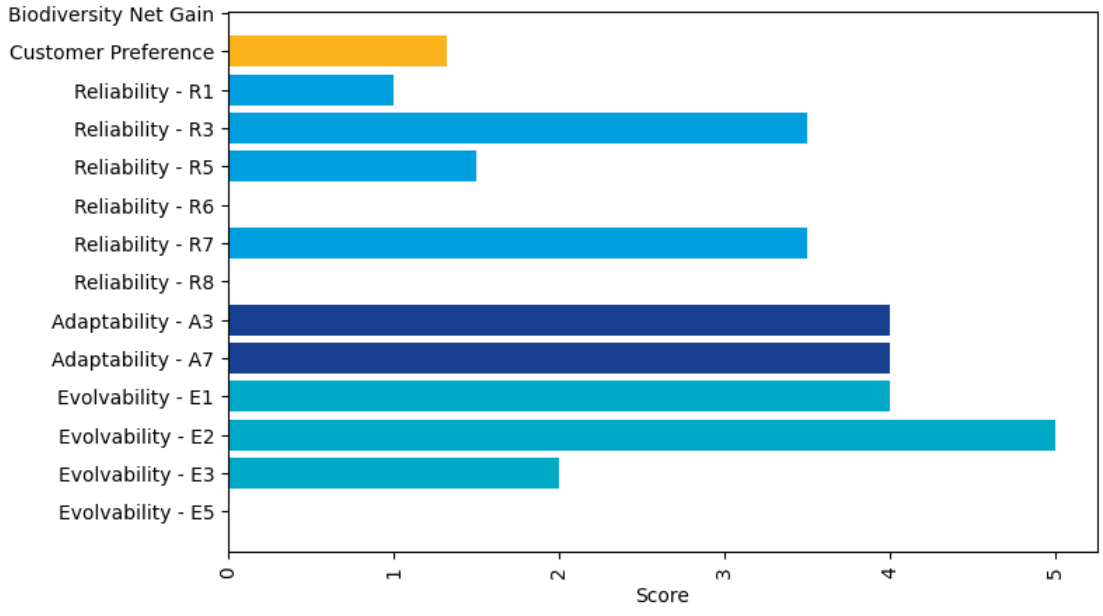
Other

Metric	

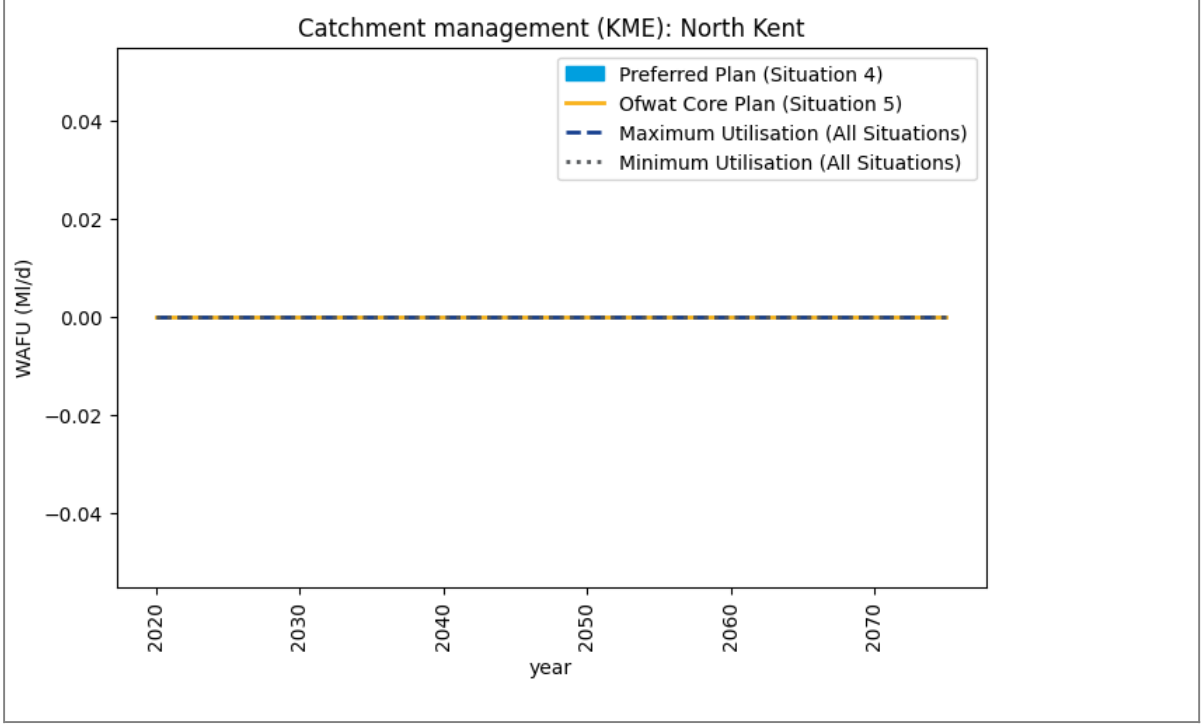
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.32
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.50
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1.5
Resilience: Reliability R6 – Capacity of catchment services	0.00061
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3.5
Resilience: Reliability R8 – Improvements to soil health	0.00002
Resilience: Adaptability A3 – Operational complexity and flexibility	4
Resilience: Adaptability A7 – Customer engagement with demand restrictions	4
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	0.00279

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Catchment management (KME): Medway
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway East, Kent Medway West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2026
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.59
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.32
Flexibility	
Scalability and modularity [Best Value Metric]	4.12903
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	2.25
Financing Cost [£m]	3.87
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

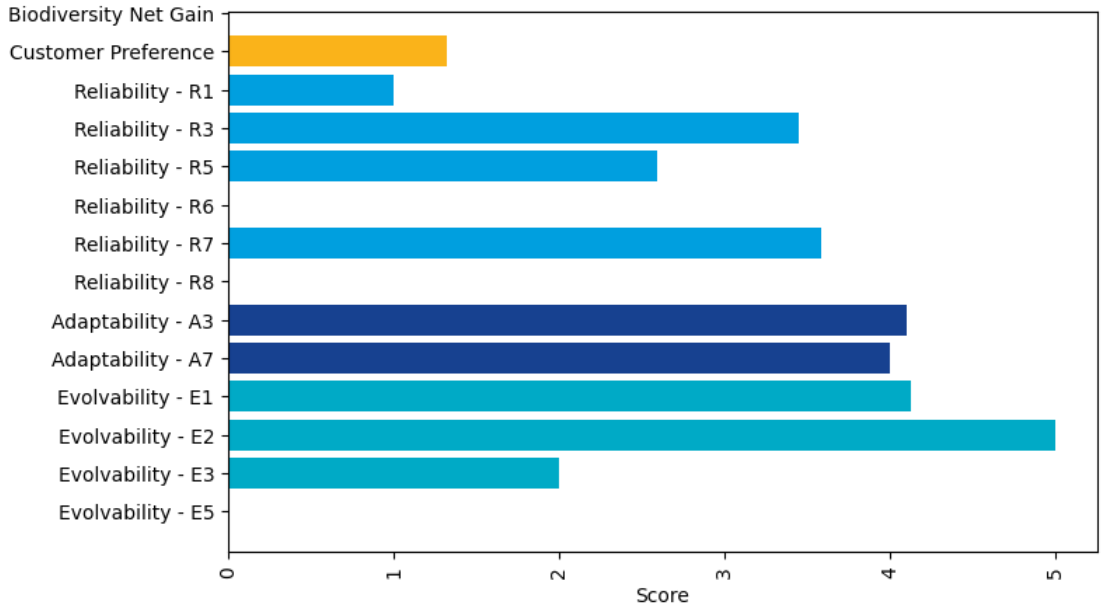
Other

Metric	

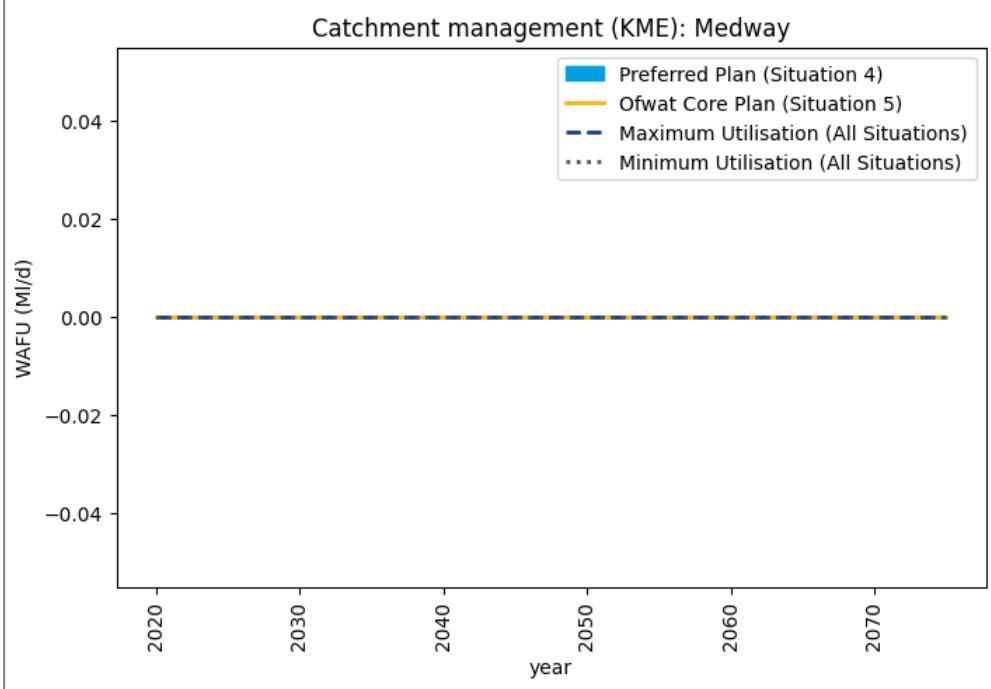
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.32
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.45
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2.59127
Resilience: Reliability R6 – Capacity of catchment services	0.00122
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3.58065
Resilience: Reliability R8 – Improvements to soil health	0.00118
Resilience: Adaptability A3 – Operational complexity and flexibility	4.09677
Resilience: Adaptability A7 – Customer engagement with demand restrictions	4
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4.12903
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	0.00239

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Catchment management (SHZ): Rother
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Hastings
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2026
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.44
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.32
Flexibility	
Scalability and modularity [Best Value Metric]	4.33333
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	0.26
Financing Cost [£m]	0.58
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

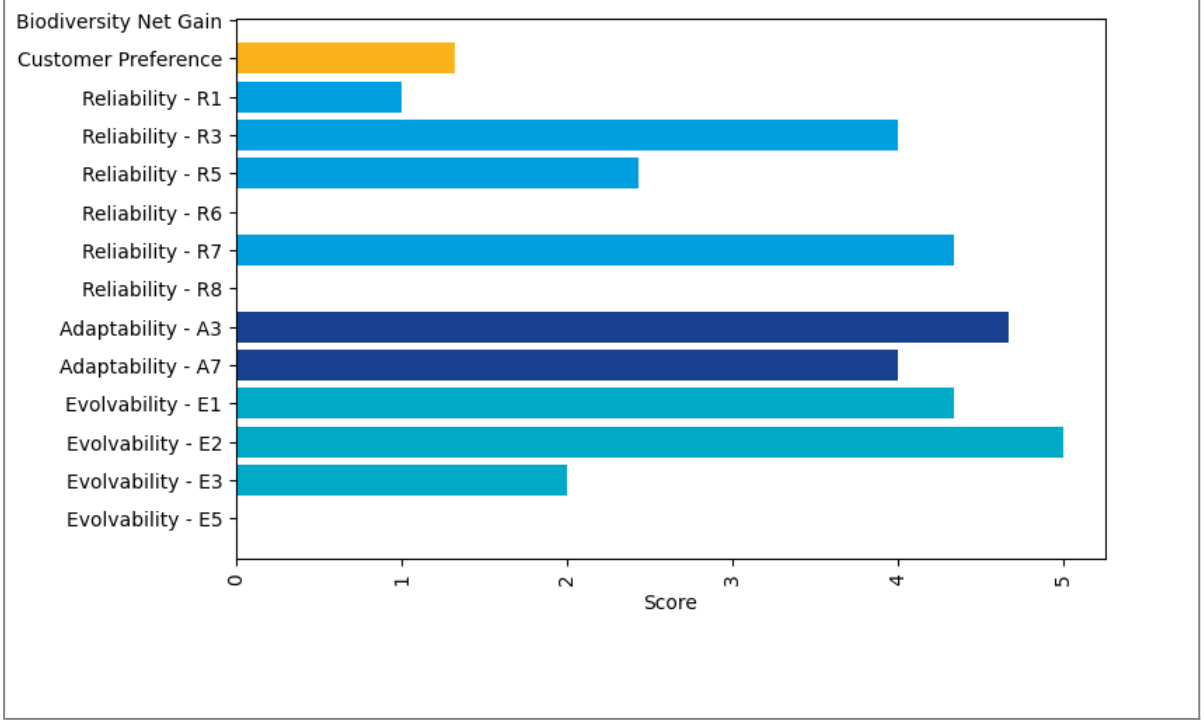
Other

Metric	

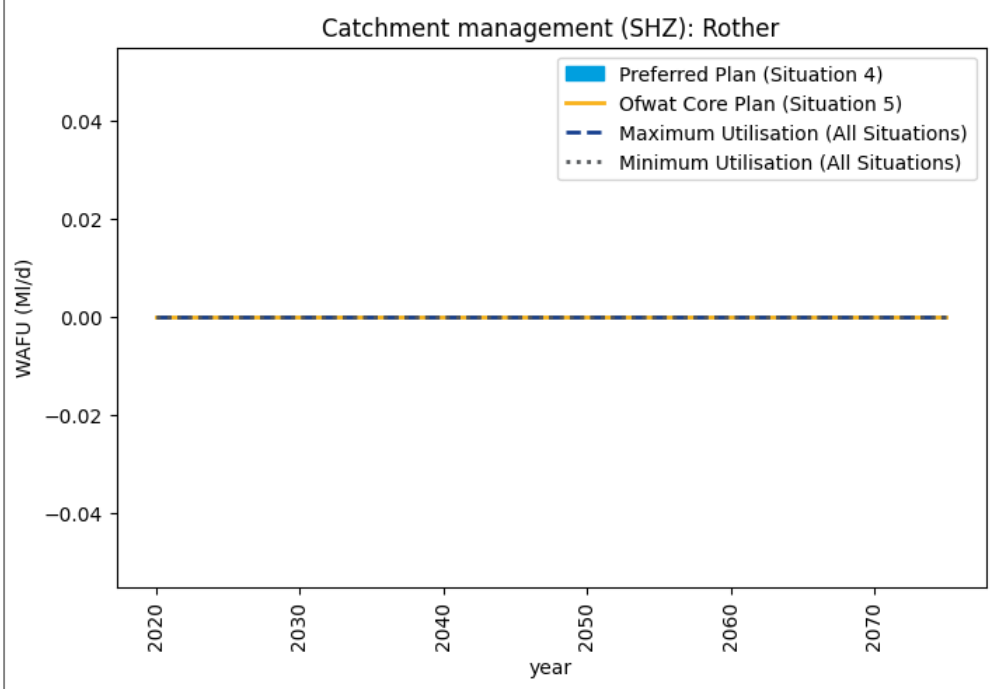
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.32
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	4.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2.43571
Resilience: Reliability R6 – Capacity of catchment services	0.00059
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	4.33333
Resilience: Reliability R8 – Improvements to soil health	0.00026
Resilience: Adaptability A3 – Operational complexity and flexibility	4.66667
Resilience: Adaptability A7 – Customer engagement with demand restrictions	4
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4.33333
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	0.00323

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Catchment management (KTZ): Stour
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Thannet
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2026
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.67
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.32
Flexibility	
Scalability and modularity [Best Value Metric]	4.21875
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	34.83
Financing Cost [£m]	76.89
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

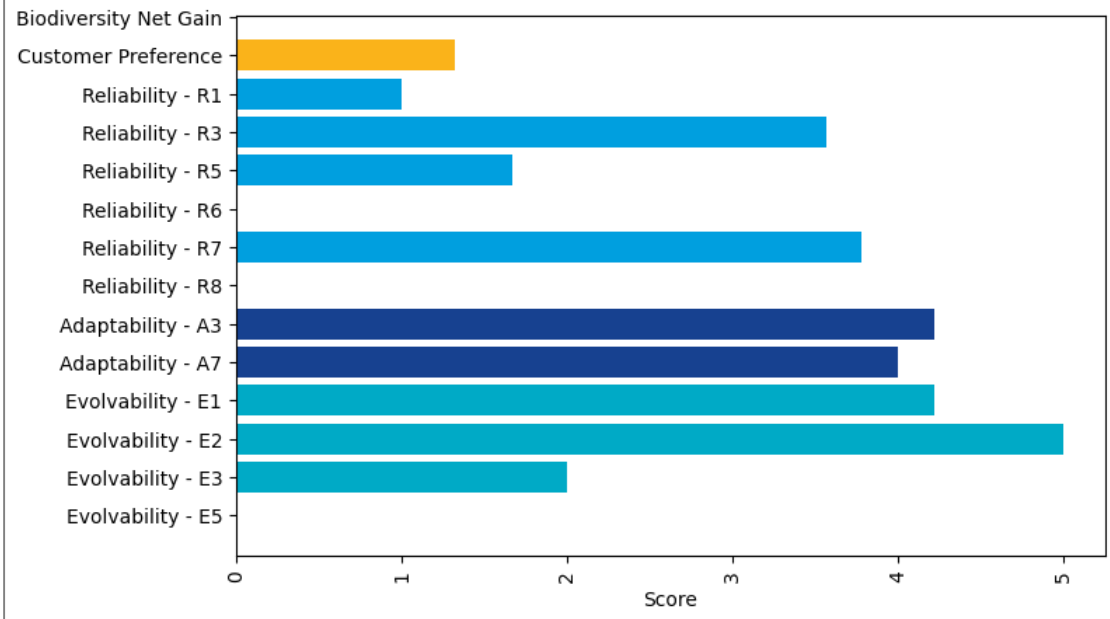
Other

Metric	

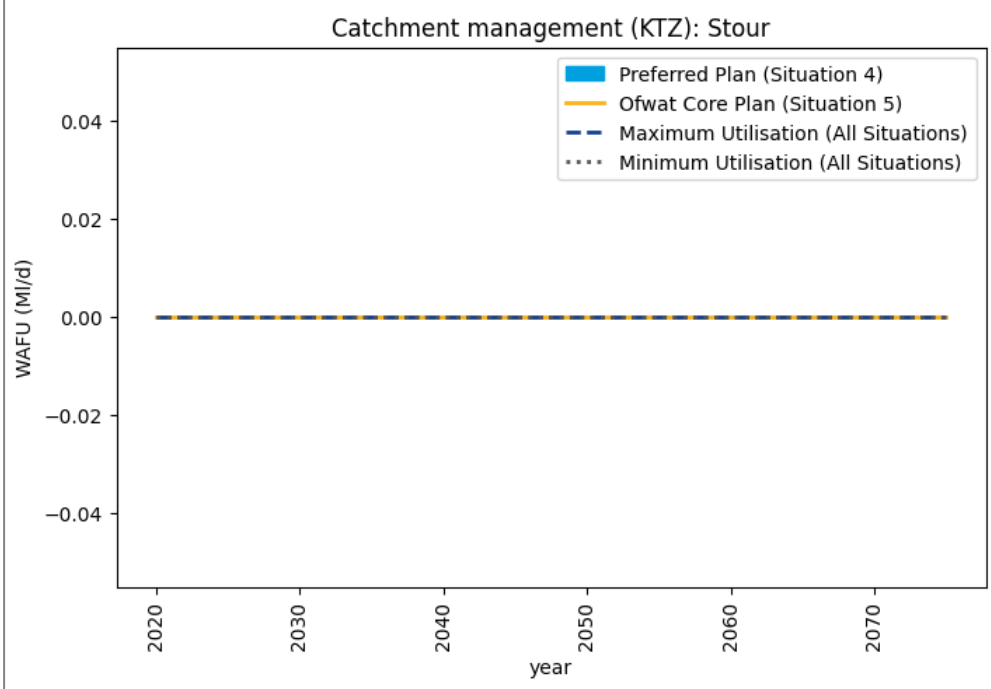
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.32
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.56
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1.66667
Resilience: Reliability R6 – Capacity of catchment services	0.00781
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3.78125
Resilience: Reliability R8 – Improvements to soil health	0.00407
Resilience: Adaptability A3 – Operational complexity and flexibility	4.21875
Resilience: Adaptability A7 – Customer engagement with demand restrictions	4
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4.21875
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	0.00957

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (SWZ-SBZ): Pulborough winter transfer stage 2 (4Ml/d)
Source of Supply and main operational features	Interzonal transfer (SWZ-SBZ): Pulborough winter transfer stage 2 (4Ml/d)
Area over which option is to be implemented	Sussex Brighton
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	3
DO 1:200 Peak [Ml/d]	3
DO 1:500 Average [Ml/d]	3
DO 1:500 Peak [Ml/d]	3
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	6
Earliest start date	01/04/2027
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	1.07
Maximum annual utilisation [Ml/d]	3.00
Environment	
SEA benefit effect	3.00
SEA negative effect	-40.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-109.07

Financial and Cost Information

Metric	
Capex [£m]	27.24
Financing Cost [£m]	42.89
Opex [£m]	12.27
Embodied Carbon [tCo2e]	7,935.74
Average operational carbon emissions [tCo2e/yr]	1.82
Total Carbon Cost [£m]	3.18
Average Incremental Cost (AIC) [p/m3]	73.52

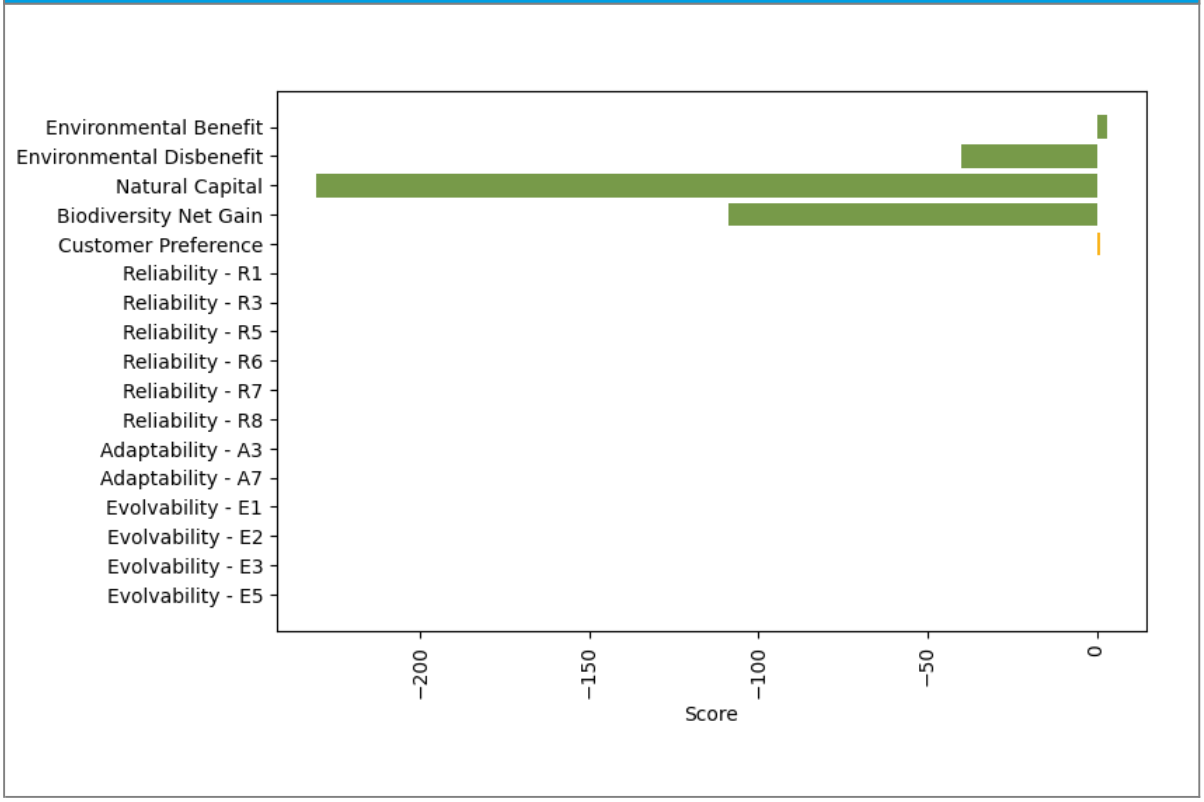
Other

Metric	

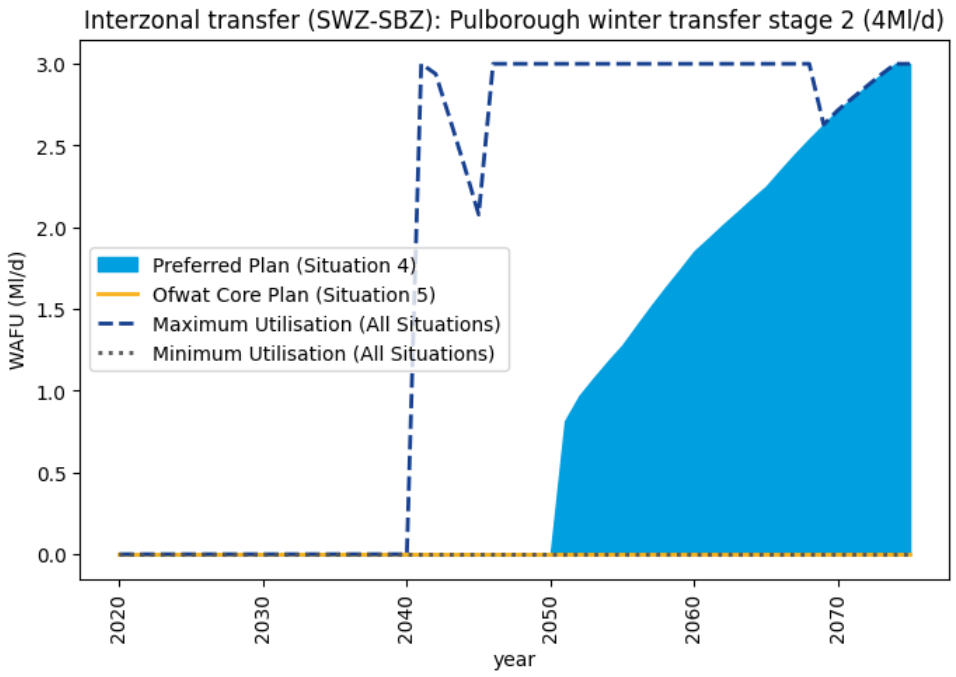
Best Value Metrics

Metric	
Environmental: Environmental Benefit	3.00
Environmental: Environmental Disbenefit	-40.00
Environmental: Natural Capital	-230.74
Environmental: Biodiversity Net Gain	-109.07
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk export (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d) Phase 2
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North
Dependencies	Inclusive with: Bulk export (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2035
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	3.43
Maximum annual utilisation [Ml/d]	17.71
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	226.39
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	16.54

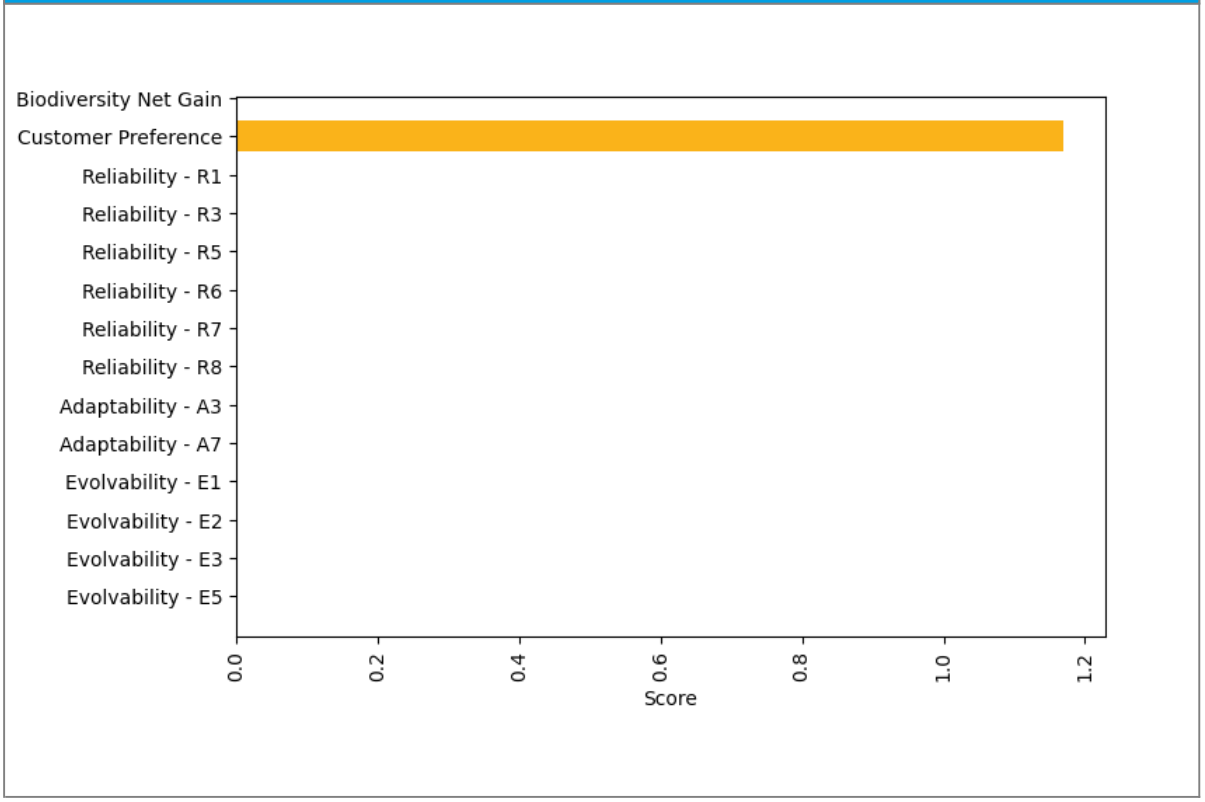
Other

Metric	

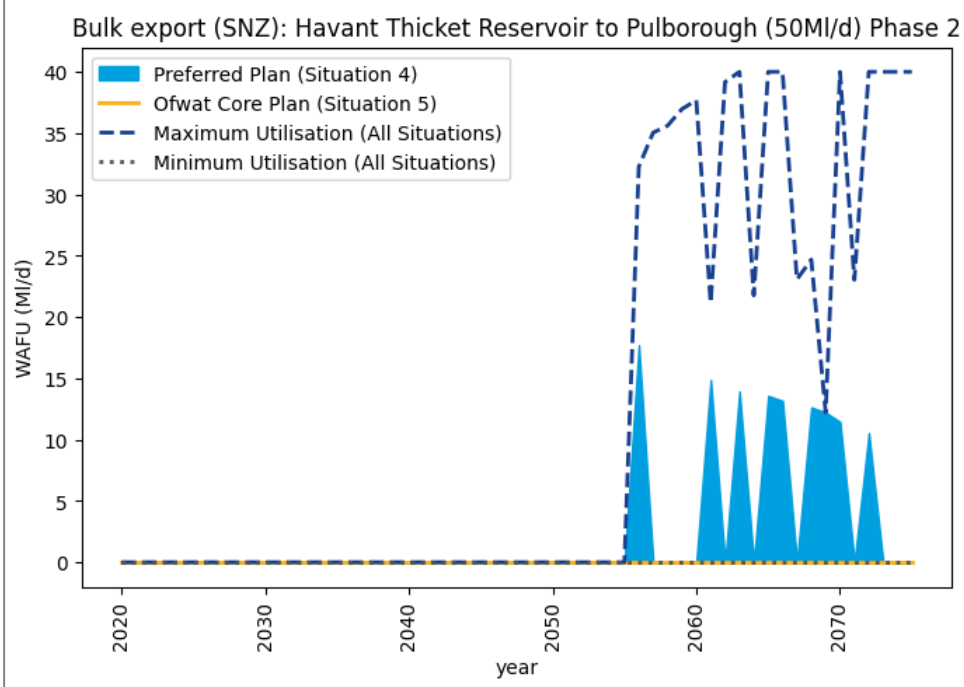
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (HAZ): T2ST to Andover (20Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Andover
Dependencies	Inclusive with: Bulk import (HWZ): SESRO and/or STT to Yew Hill (120Ml/d) After one of: Bulk import (HSW): SESRO and/or STT to Test WSW - raw (80Ml/d), Bulk import (HSW): SESRO and/or STT to Test WSW - raw (50Ml/d), Bulk import (HSW): SESRO and/or STT to Test WSW - raw (200Ml/d), Bulk import (HSW): SESRO and/or STT to Test WSW - raw (120Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (80 Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (50 Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (200 Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (120 Ml/d), Bulk import (HWZ): SESRO and/or STT to Yew Hill - Planning & Development After: Bulk import (HWZ): SESRO and/or STT to Yew Hill - Planning & Development

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	12
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	4.48
Maximum annual utilisation [Ml/d]	4.57
Environment	
SEA benefit effect	9.00
SEA negative effect	-44.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-218.96

Financial and Cost Information

Metric	
Capex [£m]	31.90

Financing Cost [£m]	72.35
Opex [£m]	158.60
Embodied Carbon [tCo2e]	1,390.48
Average operational carbon emissions [tCo2e/yr]	136.38
Total Carbon Cost [£m]	22.48
Average Incremental Cost (AIC) [p/m3]	51.24

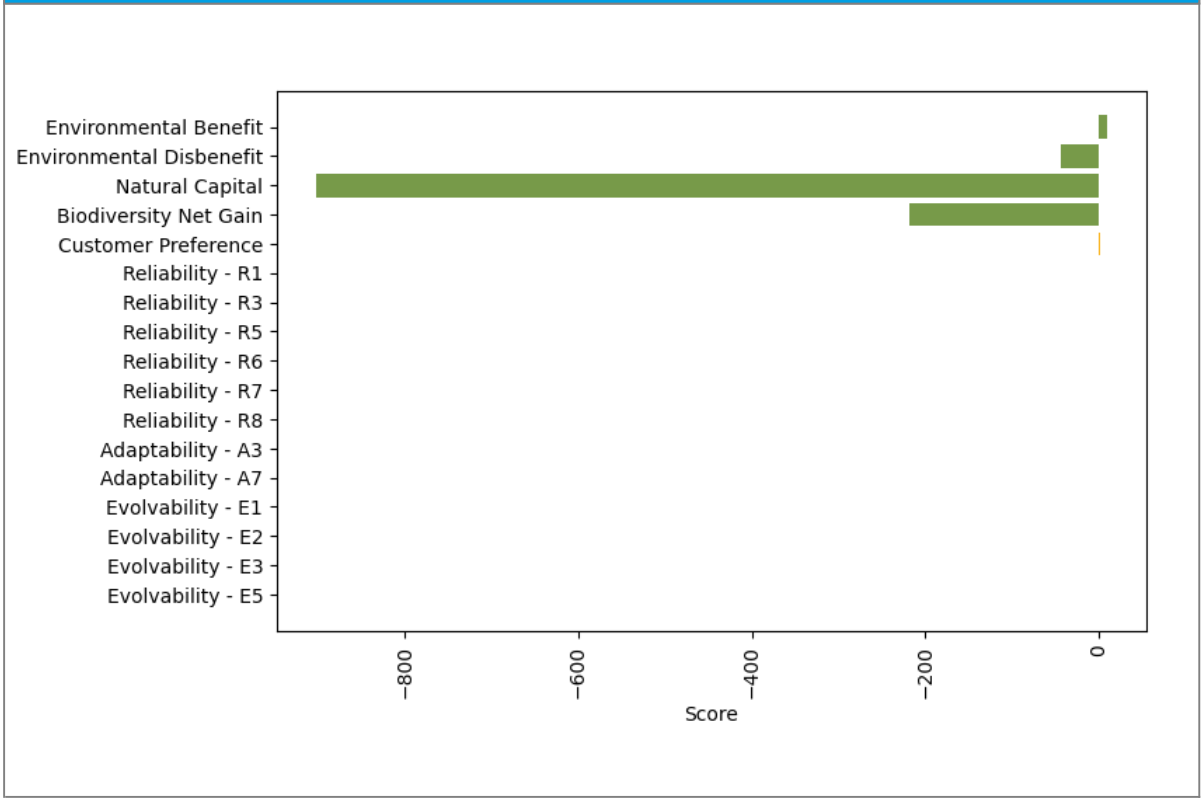
Other

Metric	

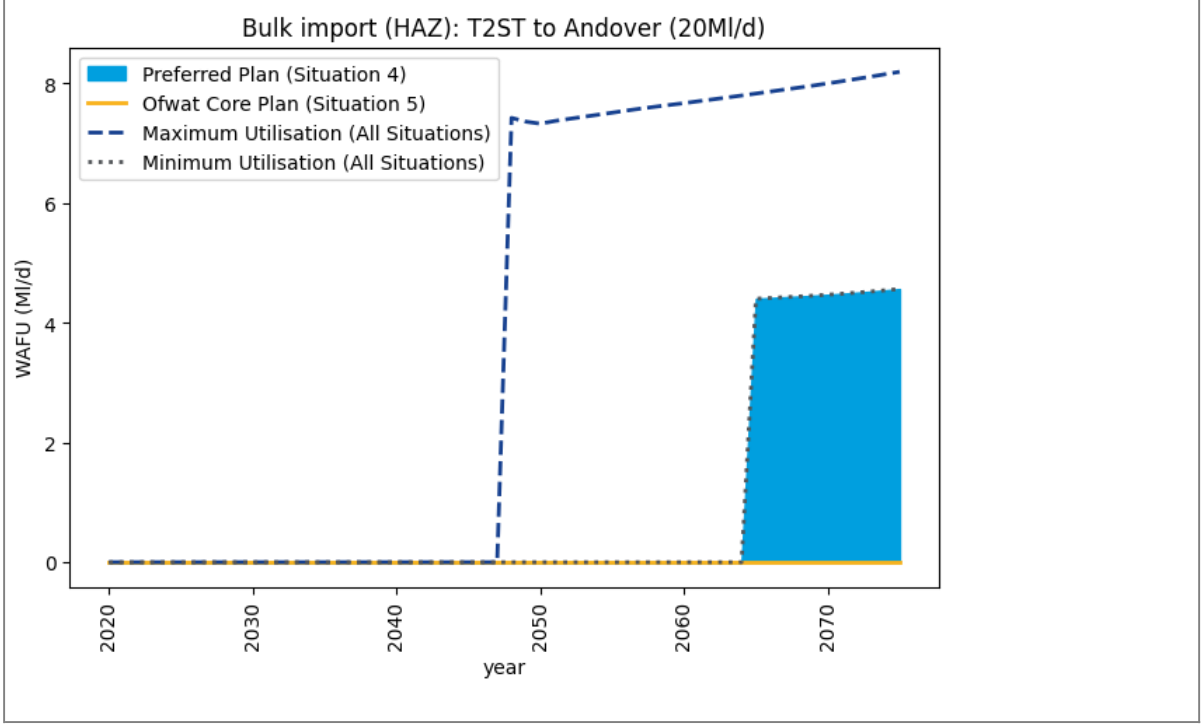
Best Value Metrics

Metric	
Environmental: Environmental Benefit	9.00
Environmental: Environmental Disbenefit	-44.00
Environmental: Natural Capital	-901.80
Environmental: Biodiversity Net Gain	-218.96
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (HAZ): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Andover
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.03
DO 1:500 Peak [Ml/d]	0.03
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.03
Maximum annual utilisation [Ml/d]	0.03
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

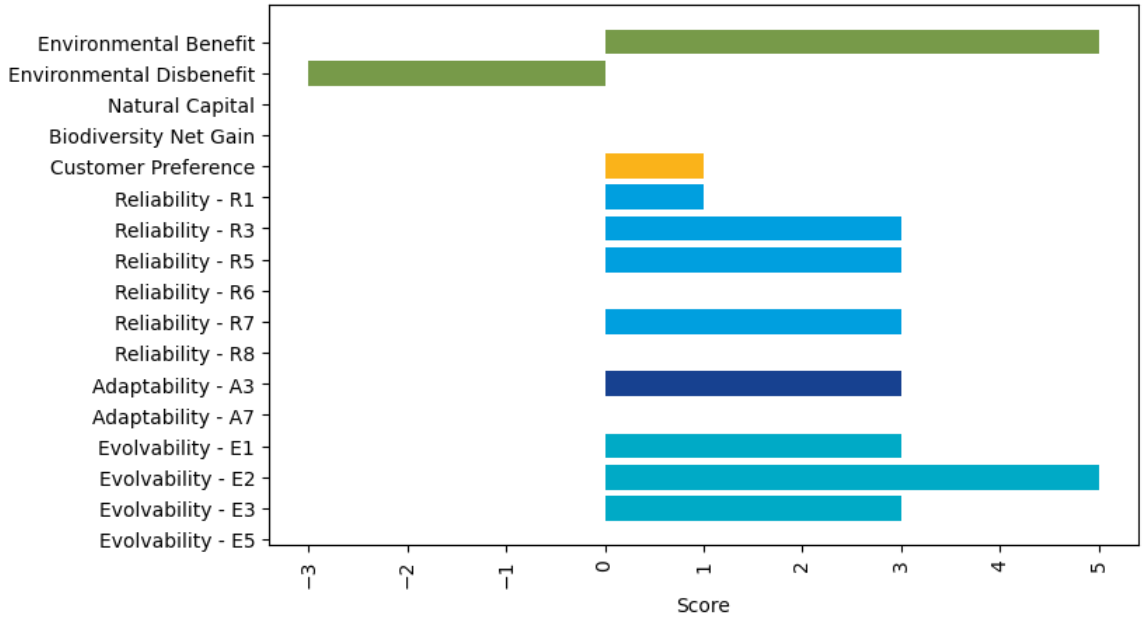
Other

Metric	

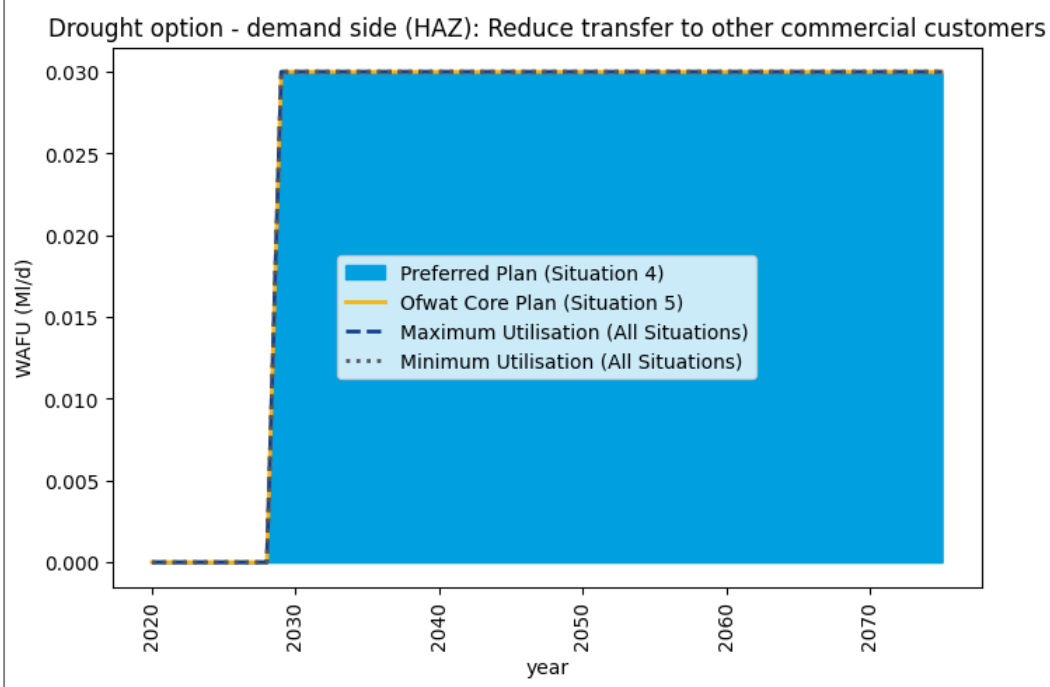
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (HKZ): Remove constraints at Newbury to increase yield (1.2Ml/d)
Source of Supply and main operational features	The scheme is located within the Hampshire Kingsclere resource group (which consists of, and is served by, Near Basingstoke and Newbury WSWs). The scheme will increase the yield of the Newbury 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 Newbury water supply works (WSW) and additional pumps and treatment facilities to increase the supply to a WSR. Additional high-lift pumping capacity would be required at Newbury. Newbury 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 London Clay.
Area over which option is to be implemented	Hampshire Kingsclere
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	1.2
DO 1:200 Peak [Ml/d]	1.2
DO 1:500 Average [Ml/d]	1.2
DO 1:500 Peak [Ml/d]	1.2
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2027
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	5.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.46
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	1.20
Maximum annual utilisation [Ml/d]	1.20
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	8.52

Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	7.88
Total Carbon Cost [£m]	0.21
Average Incremental Cost (AIC) [p/m3]	25.95

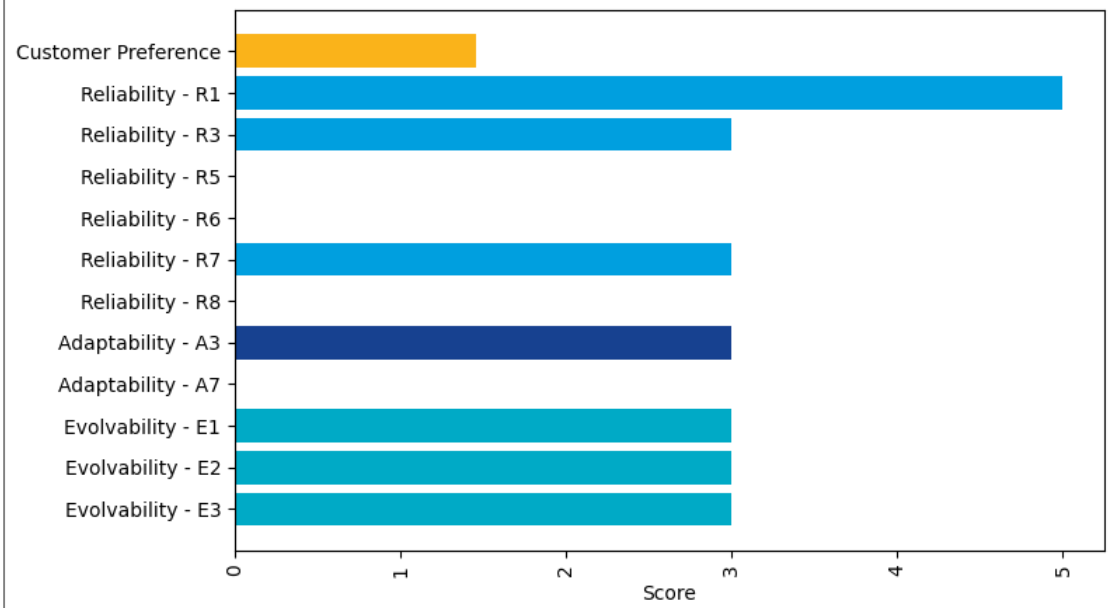
Other

Metric	

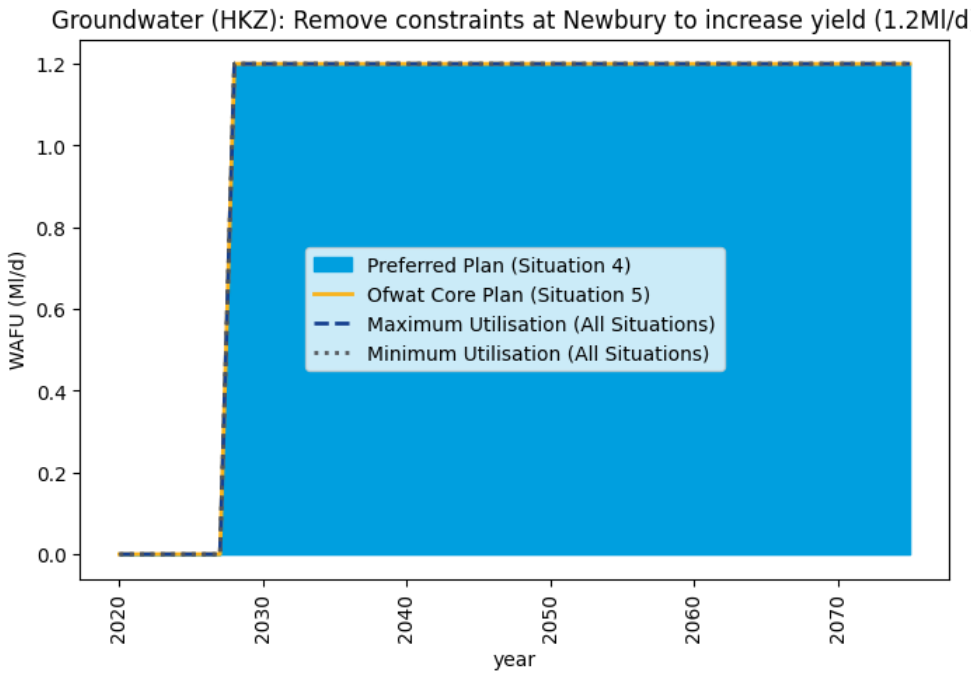
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.46
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	5.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	3
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (HKZ): T2ST to HKZ (5Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Kingsclere
Dependencies	Inclusive with: Bulk import (HWZ): SESRO and/or STT to Yew Hill (120Ml/d) After one of: Bulk import (HSW): SESRO and/or STT to Test WSW - raw (80Ml/d), Bulk import (HSW): SESRO and/or STT to Test WSW - raw (50Ml/d), Bulk import (HSW): SESRO and/or STT to Test WSW - raw (200Ml/d), Bulk import (HSW): SESRO and/or STT to Test WSW - raw (120Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (80 Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (50 Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (200 Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (120 Ml/d), Bulk import (HWZ): SESRO and/or STT to Yew Hill - Planning & Development After: Bulk import (HWZ): SESRO and/or STT to Yew Hill - Planning & Development

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	12
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	3.10
Maximum annual utilisation [Ml/d]	5.00
Environment	
SEA benefit effect	9.00
SEA negative effect	-44.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-218.96

Financial and Cost Information

Metric	
Capex [£m]	15.18

Financing Cost [£m]	34.40
Opex [£m]	40.04
Embodied Carbon [tCo2e]	435.05
Average operational carbon emissions [tCo2e/yr]	94.45
Total Carbon Cost [£m]	5.64
Average Incremental Cost (AIC) [p/m3]	68.94

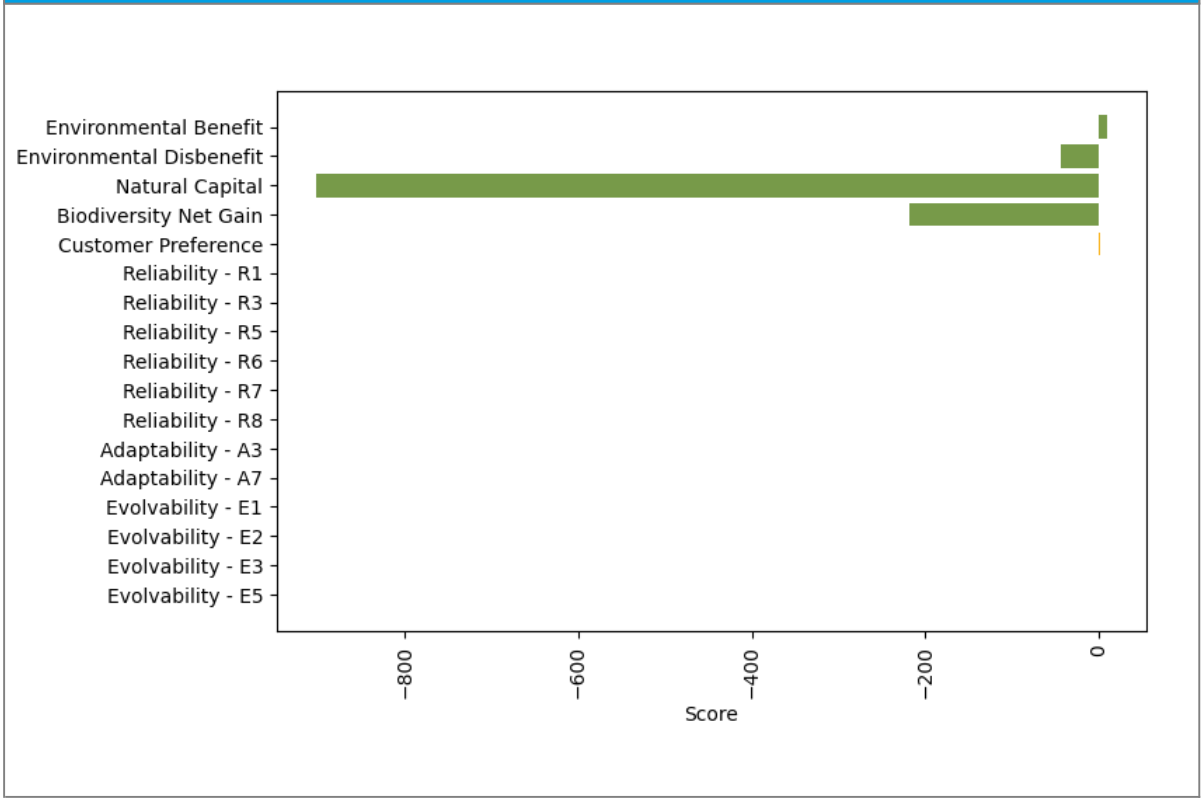
Other

Metric	

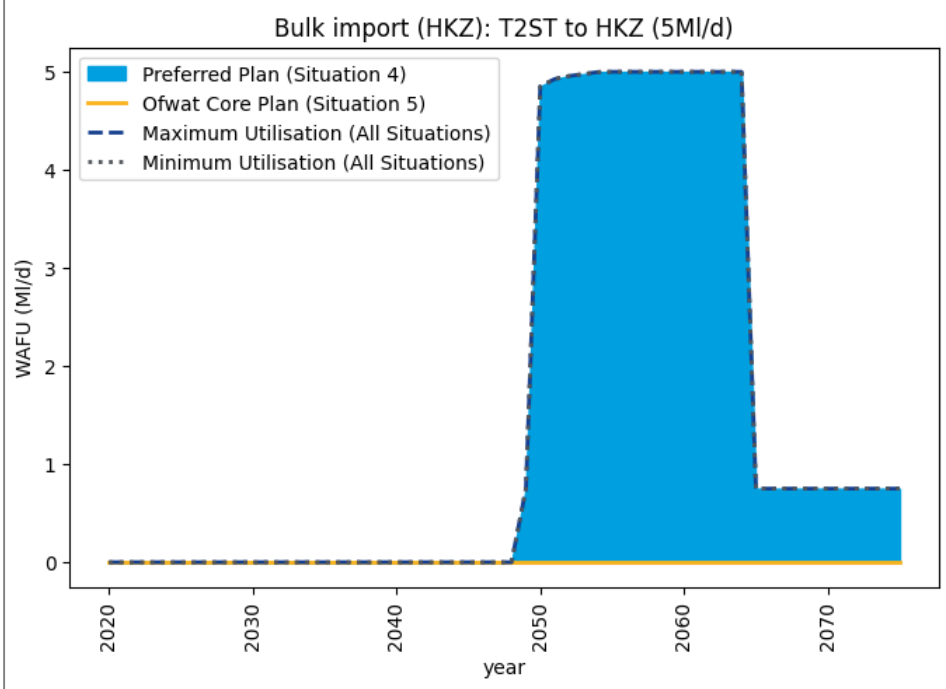
Best Value Metrics

Metric	
Environmental: Environmental Benefit	9.00
Environmental: Environmental Disbenefit	-44.00
Environmental: Natural Capital	-901.80
Environmental: Biodiversity Net Gain	-218.96
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (HKZ): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Kingsclere
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0
DO 1:500 Peak [Ml/d]	0
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

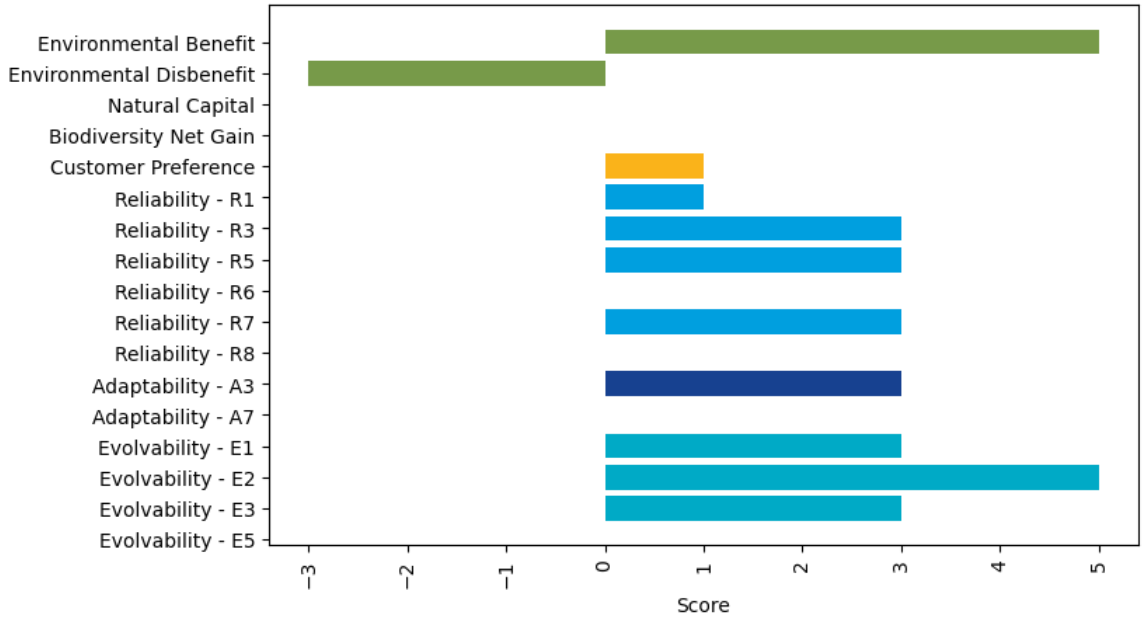
Other

Metric	

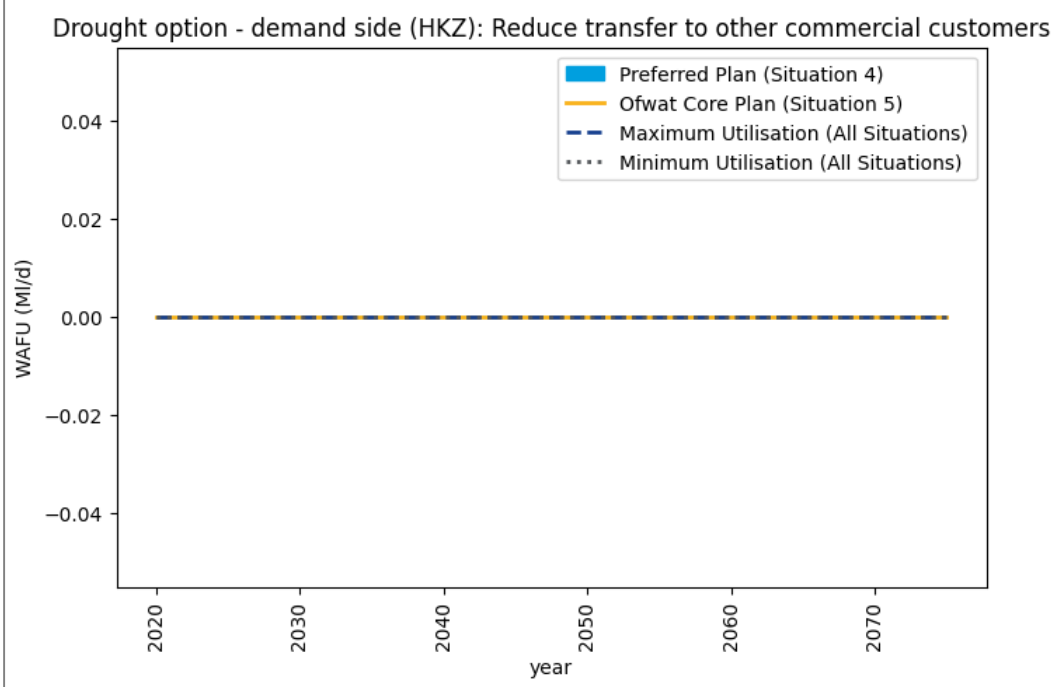
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (HRZ): Remove constraints at Kings Sombourne (2.5Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Rural
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	2.5
DO 1:500 Peak [Ml/d]	2.5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	3
Earliest start date	01/04/2028
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.86
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	2.50
Maximum annual utilisation [Ml/d]	2.50
Environment	
SEA benefit effect	3.00
SEA negative effect	-32.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-0.06

Financial and Cost Information

Metric	
Capex [£m]	7.56
Financing Cost [£m]	9.31
Opex [£m]	5.20
Embodied Carbon [tCo2e]	212.13
Average operational carbon emissions [tCo2e/yr]	14.60
Total Carbon Cost [£m]	0.66
Average Incremental Cost (AIC) [p/m3]	21.17

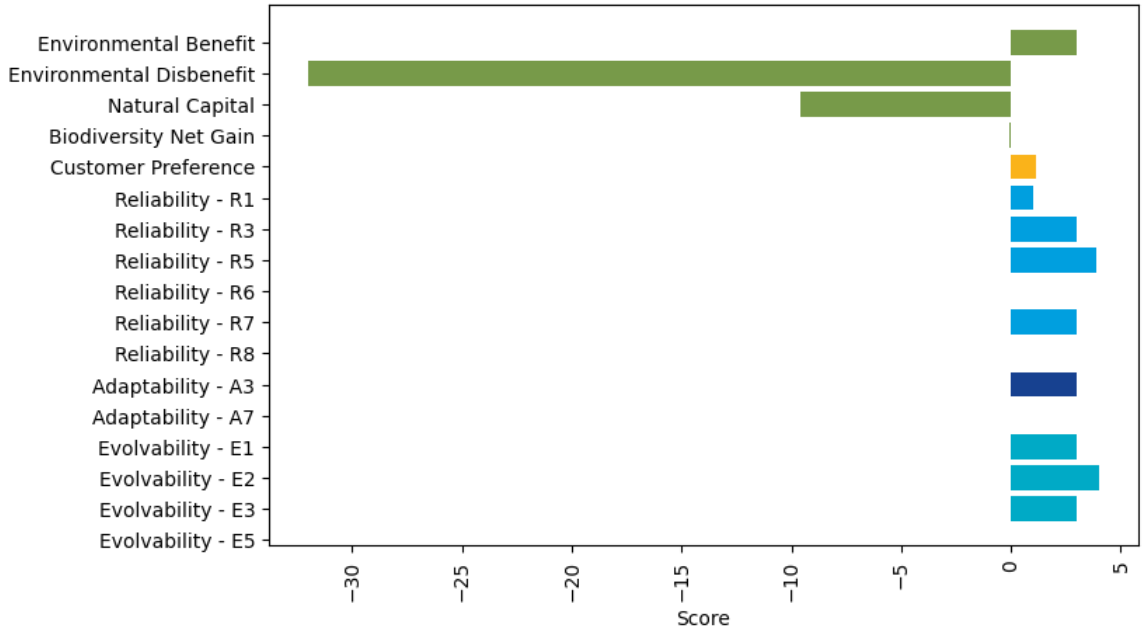
Other

Metric	

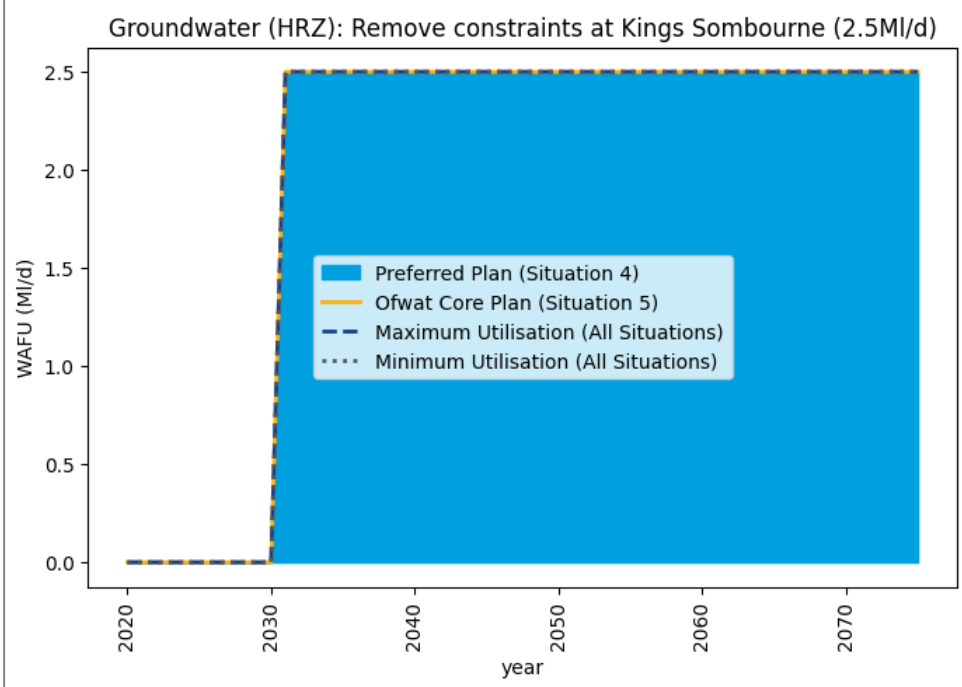
Best Value Metrics

Metric	
Environmental: Environmental Benefit	3.00
Environmental: Environmental Disbenefit	-32.00
Environmental: Natural Capital	-9.56
Environmental: Biodiversity Net Gain	-0.06
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3.857142857
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	4
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)
Source of Supply and main operational features	The existing boreholes and well adits that supply Romsey WSW are either out of service or operating below their full capacity due to quality issues. This option proposes 3 replacement boreholes to increase DO on site. This would provide a benefit of 4.8Ml/d and allow total source output to increase to 13.7Ml. Scheme output is 13.7Mld. No additional treatment is required. Replacement borehole locations are distant from existing borehole locations and require new pipelines to connect to WSW.
Area over which option is to be implemented	Hampshire Rural
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	4.8
DO 1:200 Peak [Ml/d]	4.8
DO 1:500 Average [Ml/d]	4.8
DO 1:500 Peak [Ml/d]	4.8
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	6
Earliest start date	01/04/2030
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	4.80
Maximum annual utilisation [Ml/d]	4.80
Environment	
SEA benefit effect	2.00
SEA negative effect	-26.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	7.30
Financing Cost [£m]	10.12
Opex [£m]	10.12
Embodied Carbon [tCo2e]	1,319.90
Average operational carbon emissions [tCo2e/yr]	3.20
Total Carbon Cost [£m]	0.68
Average Incremental Cost (AIC) [p/m3]	16.44

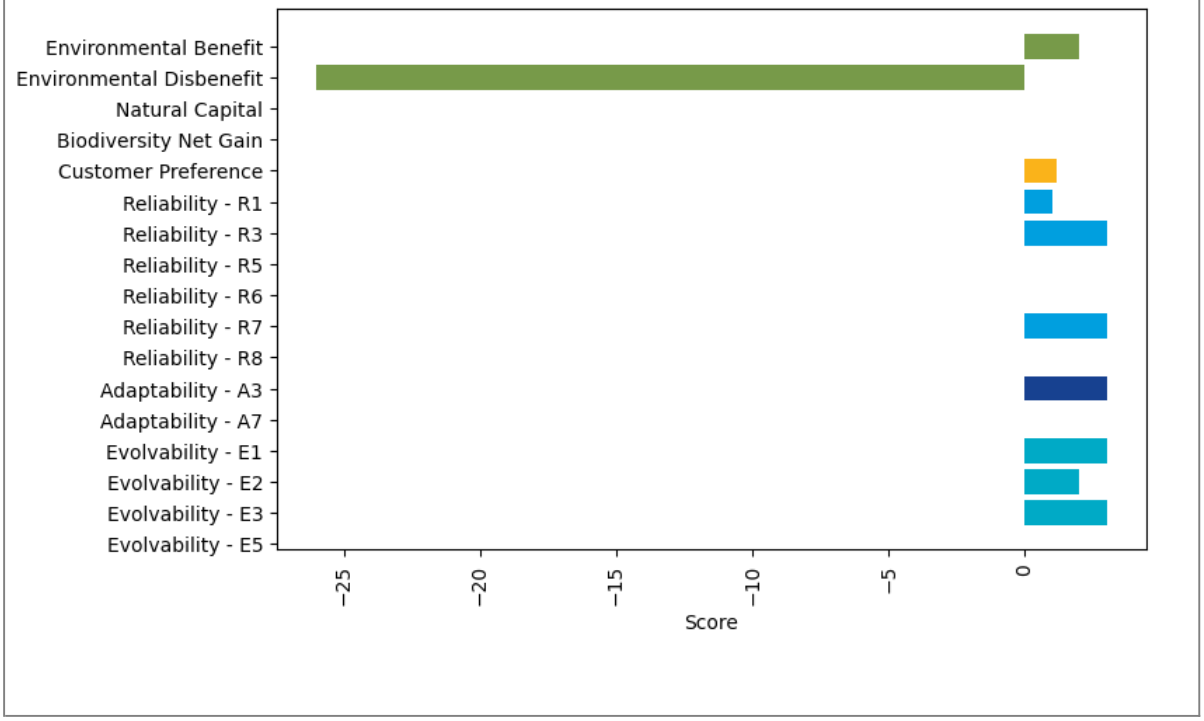
Other

Metric	

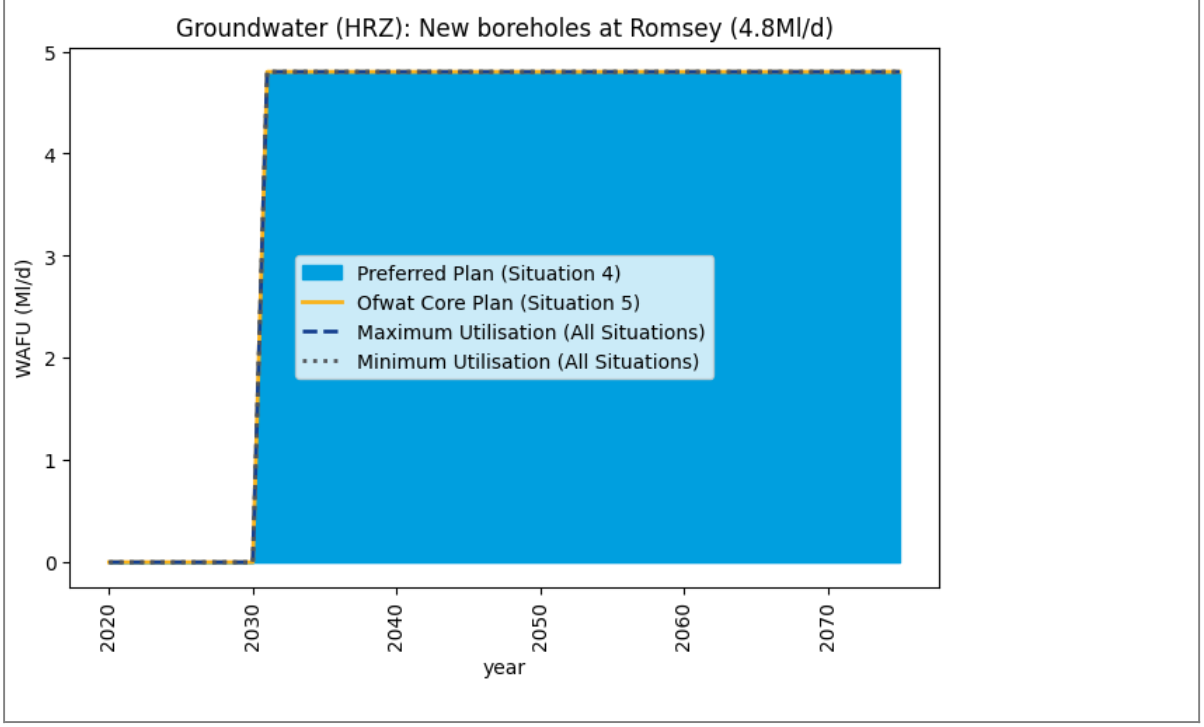
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-26.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (HRZ): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Rural
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0
DO 1:500 Peak [Ml/d]	0
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

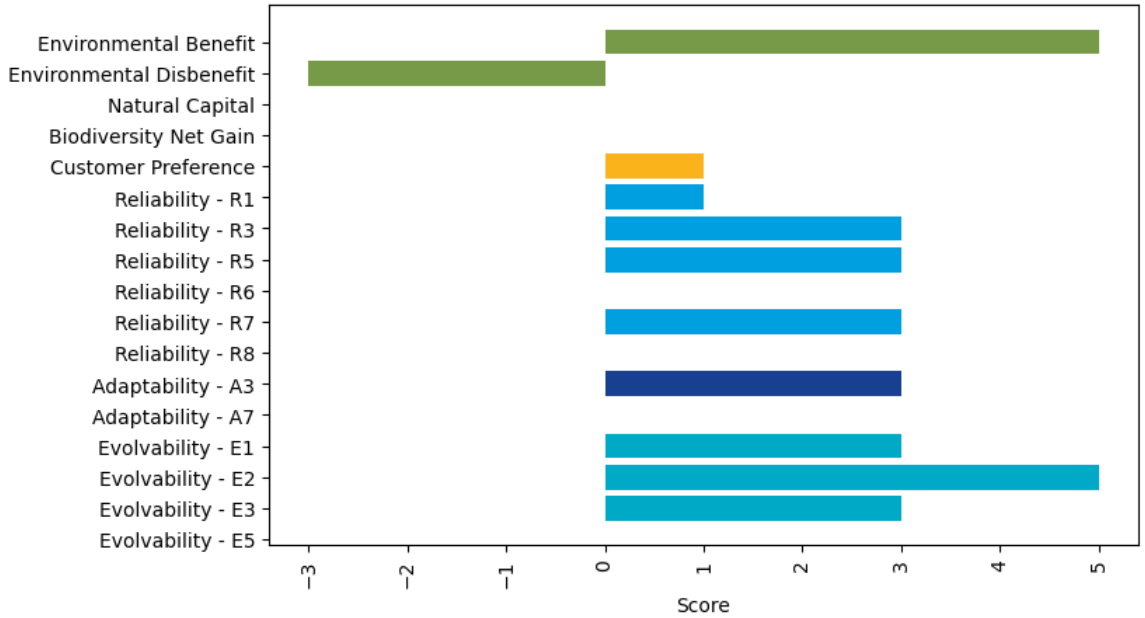
Other

Metric	

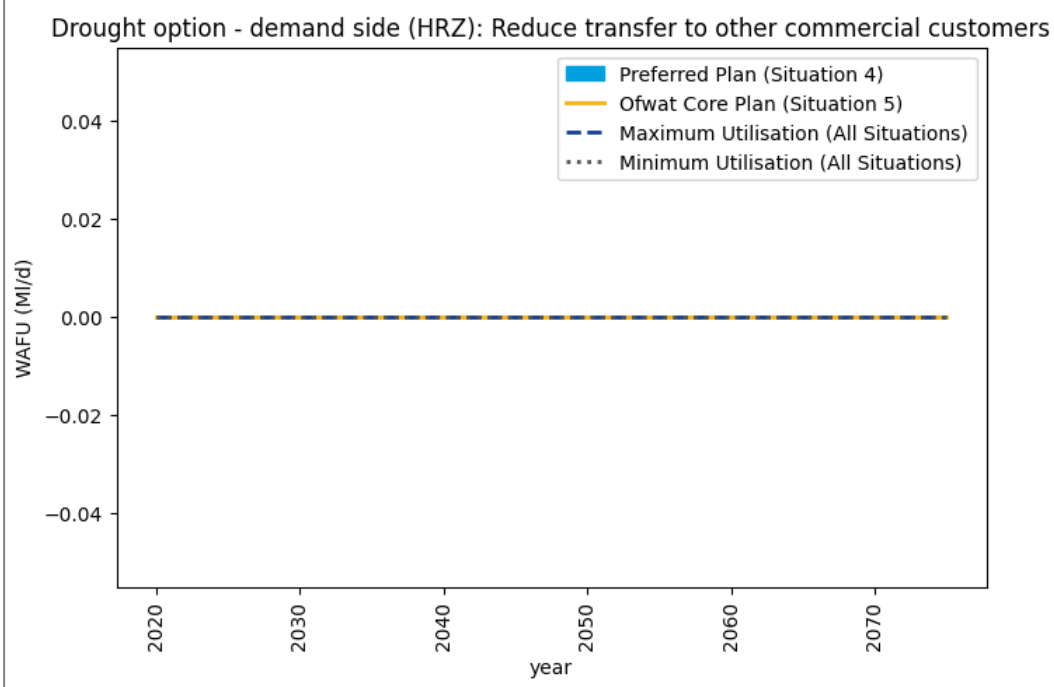
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (HSE): Reading to Itchen WSW - raw (200Ml/d) (25 Ml/d Phase 1)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	21
DO 1:200 Peak [Ml/d]	21
DO 1:500 Average [Ml/d]	21
DO 1:500 Peak [Ml/d]	21
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2029
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-45.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-280.85

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	28.83
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	0.28
Average Incremental Cost (AIC) [p/m3]	5.02

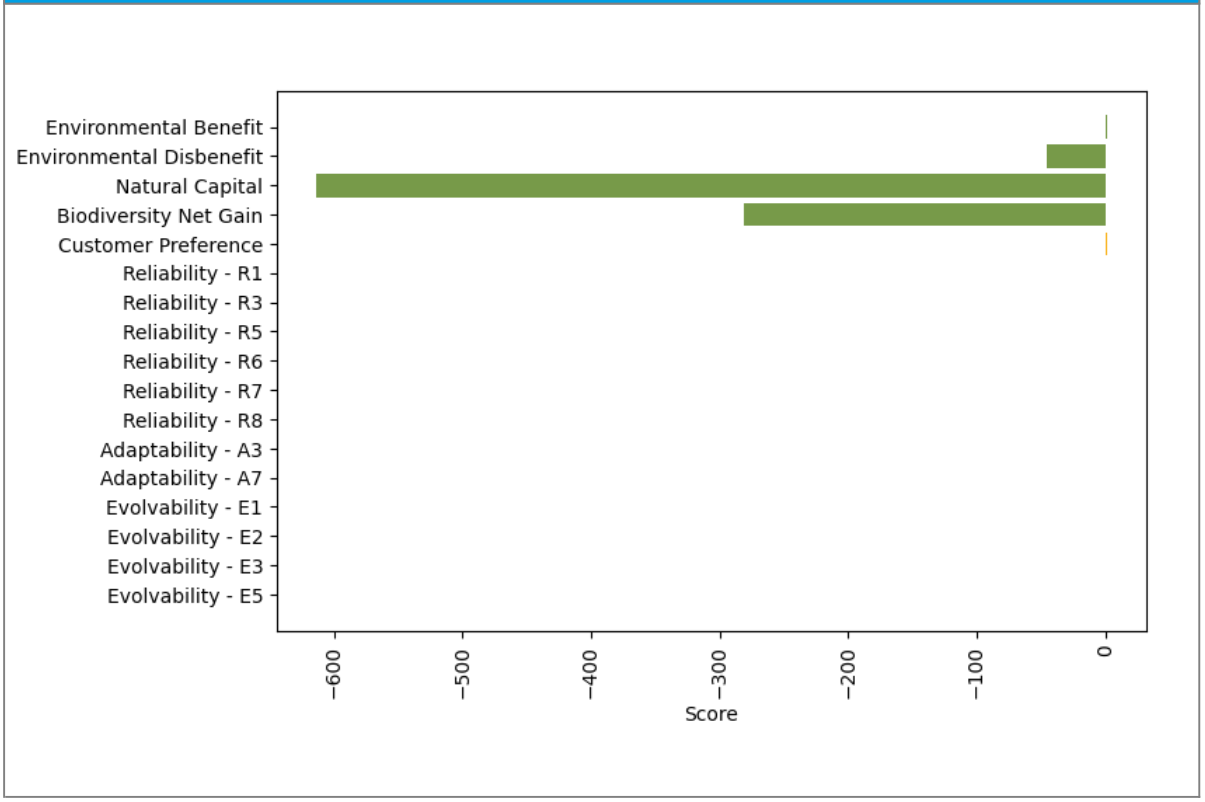
Other

Metric	

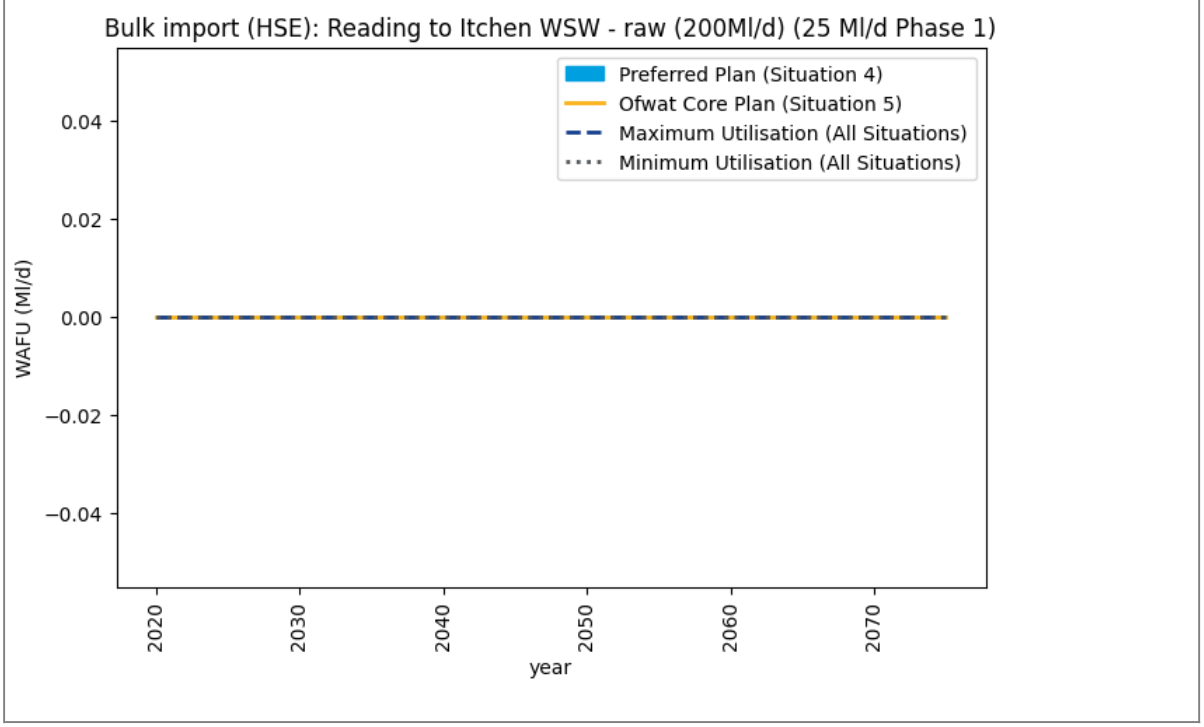
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-45.00
Environmental: Natural Capital	-613.47
Environmental: Biodiversity Net Gain	-280.85
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (HSE): Havant Thicket Reservoir to Itchen WSW (90Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	77.05
Maximum annual utilisation [Ml/d]	90.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	417.86
Financing Cost [£m]	495.49
Opex [£m]	0.05
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	21.01

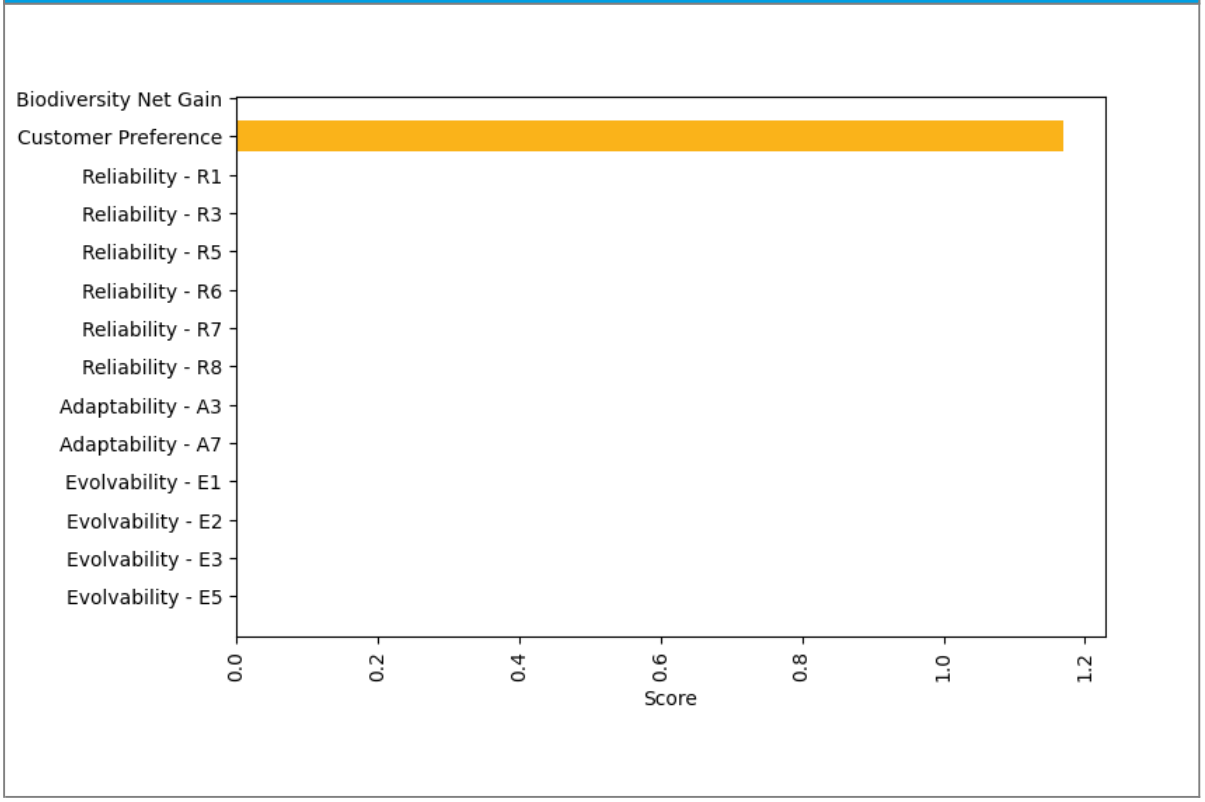
Other

Metric	

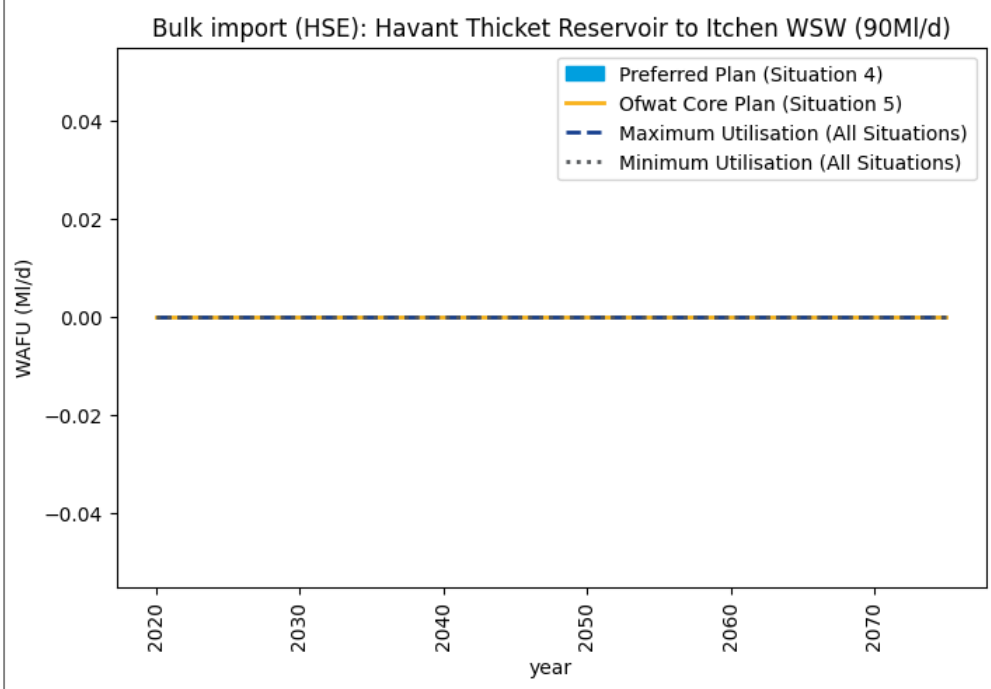
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (HSE): Lower Itchen
Source of Supply and main operational features	Drought Order to reduce the proposed abstraction licence 'hands off' flow condition from 198Mld to 160Mld as measured at Allbrook and Higbridge gauging station and Drought Order to reduce the 'hands off' flow condition from 194Mld to 150Mld as measured at Riverside Park gauging station
Area over which option is to be implemented	Southampton East
Dependencies	After one of: Drought option - supply side (HSW): River Test Order (80Ml/d), Drought option - supply side (HSW): River Test Order (80Ml/d) (from 2027 onwards), Drought option - supply side (HSW): River Test Order (80Ml/d) (2027-2036), Drought option - supply side (HSW): River Test Order (80Ml/d) (2027-2046), Drought option - supply side (HSW): River Test Order (80Ml/d) (2027-2051), Drought option - supply side (HSW): River Test Order (80Ml/d) (2026-2051)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	35.36
DO 1:200 Peak [Ml/d]	38
DO 1:500 Average [Ml/d]	38
DO 1:500 Peak [Ml/d]	38
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	2.70
Maximum annual utilisation [Ml/d]	27.89
Environment	
SEA benefit effect	4.00
SEA negative effect	-6.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	1.50
Financing Cost [£m]	3.46
Opex [£m]	2.82
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	1.79

Total Carbon Cost [£m]	0.24
Average Incremental Cost (AIC) [p/m3]	5.94

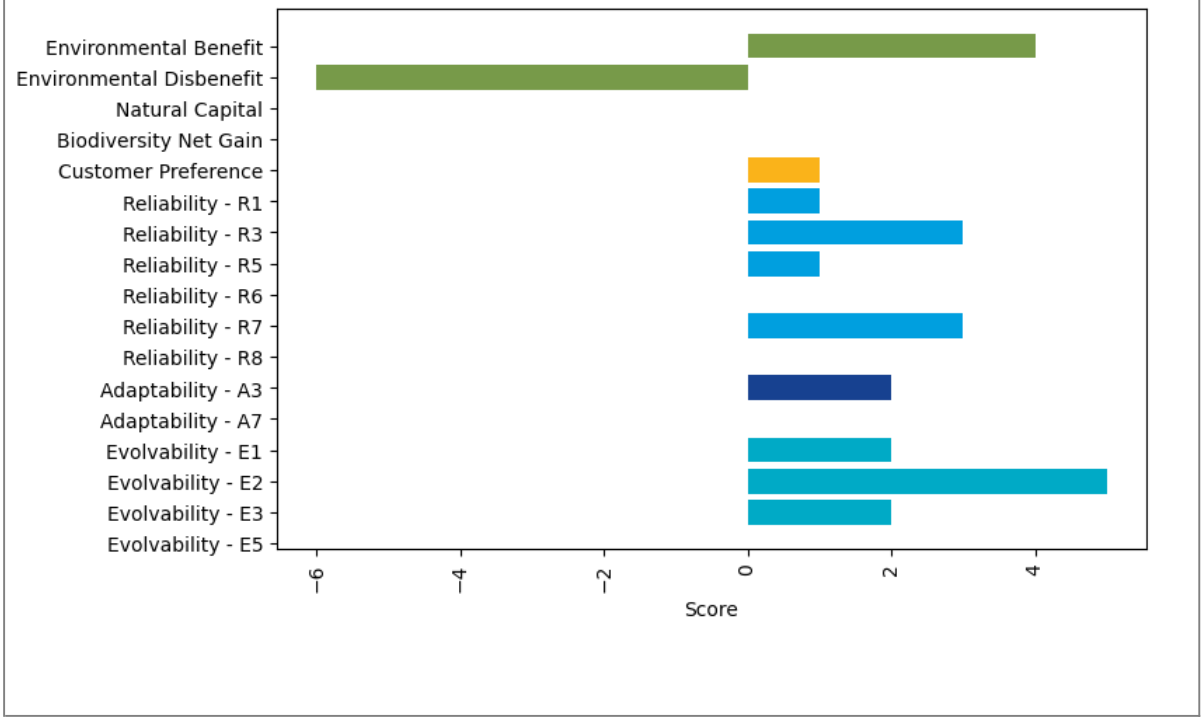
Other

Metric	

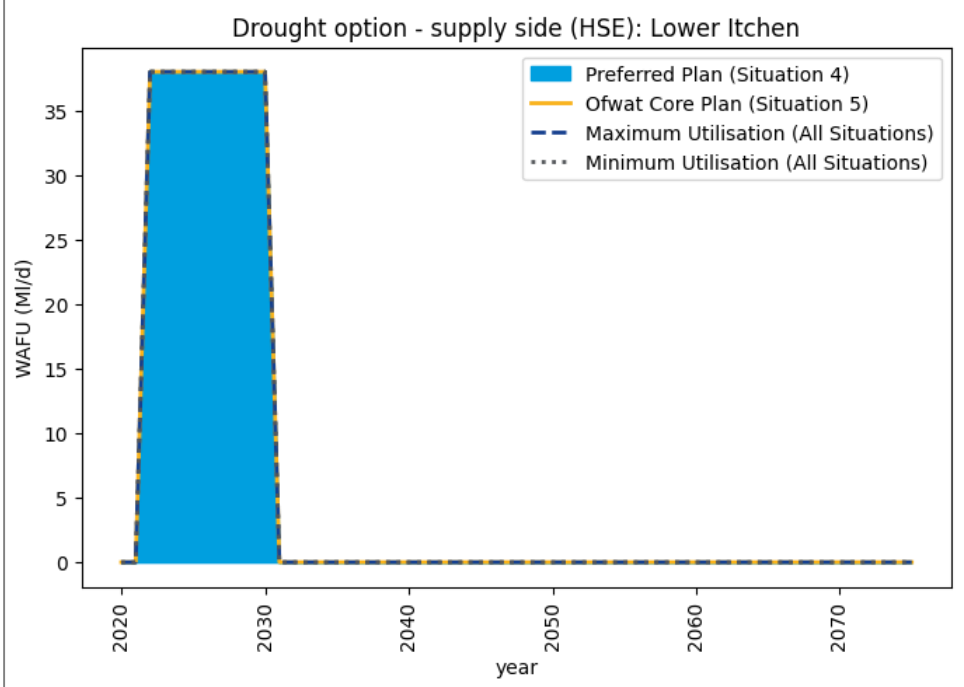
Best Value Metrics

Metric	
Environmental: Environmental Benefit	4.00
Environmental: Environmental Disbenefit	-6.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (HSE): Candover (22Ml/d)
Source of Supply and main operational features	To allow up to 27Mld and 3750Mlyear (average of 20.8Mld over 6 months) to be abstracted from the Candover Augmentation Scheme. 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 220Mld. 2Mld environmental support (within the limits above) at the existing discharge to the Candover Stream. Operated during and potentially after discharges to the River Itchen.
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	14.37
DO 1:200 Peak [Ml/d]	15.37
DO 1:500 Average [Ml/d]	4.87
DO 1:500 Peak [Ml/d]	8.88
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	2.00
SEA negative effect	-36.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.94
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	0.04

Average Incremental Cost (AIC) [p/m3]	10.53

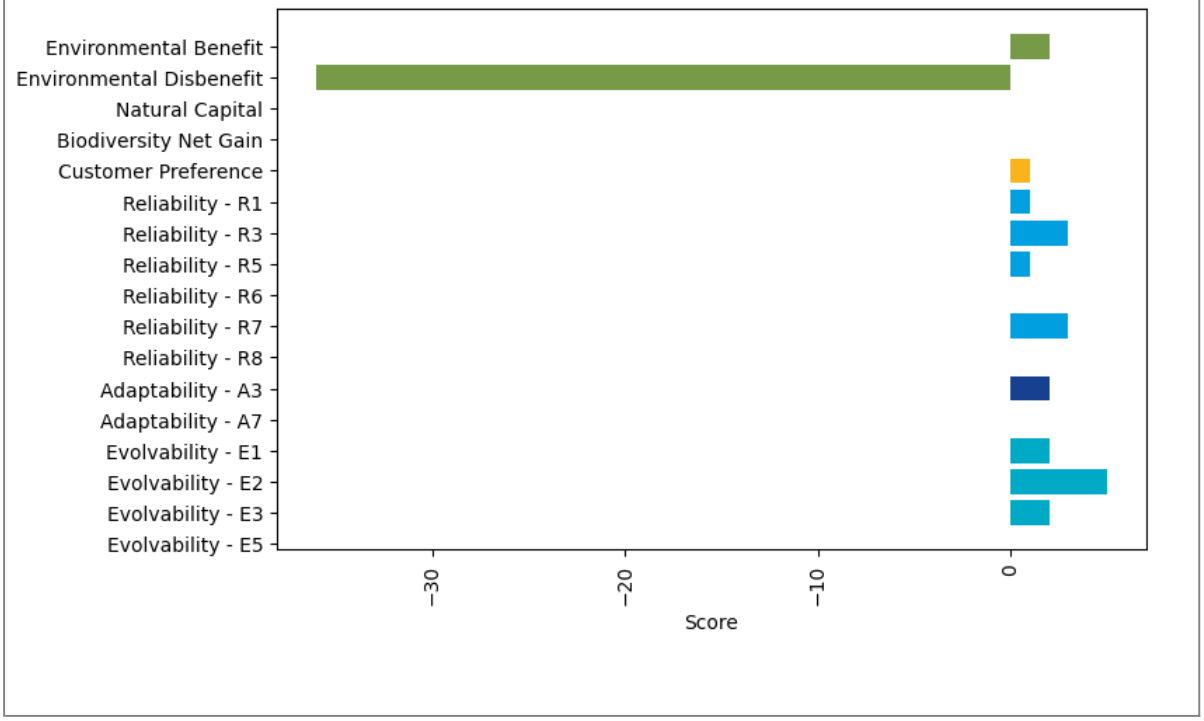
Other

Metric	

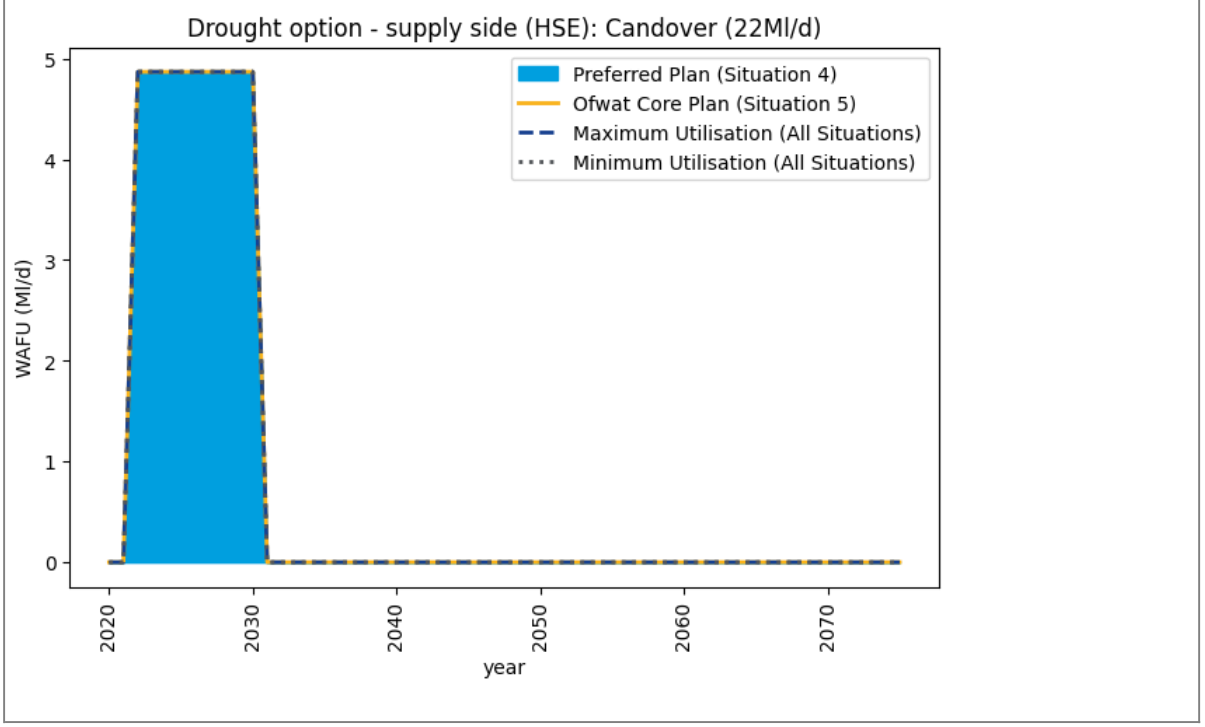
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-36.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (HSE): Candover (22Ml/d) (extension to 2034/35)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	14.37
DO 1:200 Peak [Ml/d]	15.37
DO 1:500 Average [Ml/d]	4.87
DO 1:500 Peak [Ml/d]	8.88
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	
Earliest start date	01/04/2030
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	-1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.43
Maximum annual utilisation [Ml/d]	4.87
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.75
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	0.74
Total Carbon Cost [£m]	0.01
Average Incremental Cost (AIC) [p/m3]	10.53

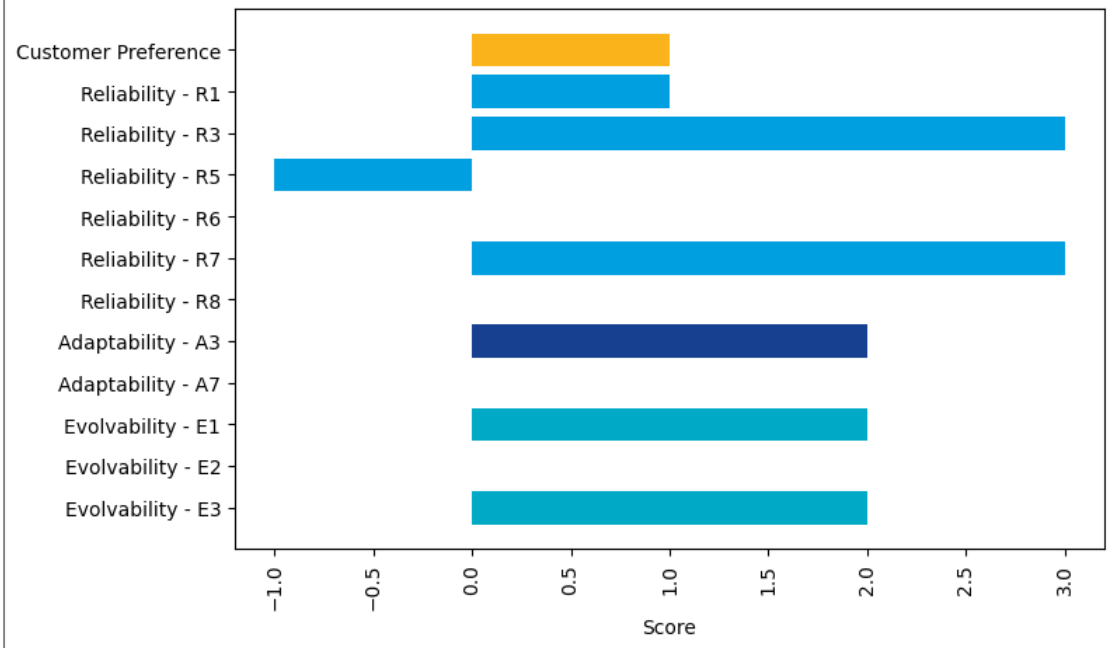
Other

Metric	

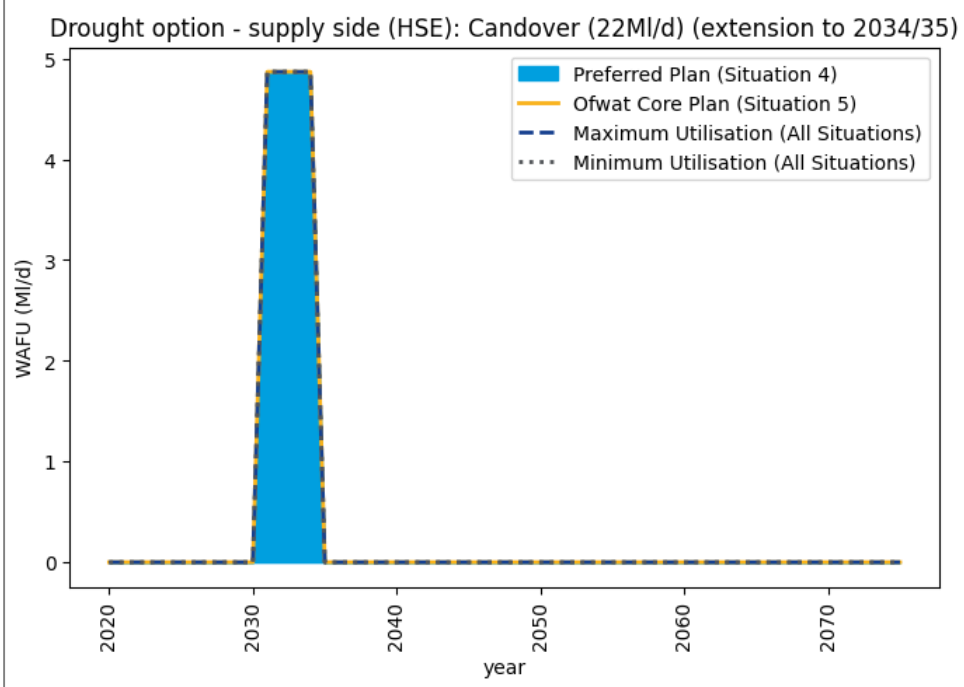
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	-1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (HSE): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.2
DO 1:500 Peak [Ml/d]	0.2
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.20
Maximum annual utilisation [Ml/d]	0.20
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

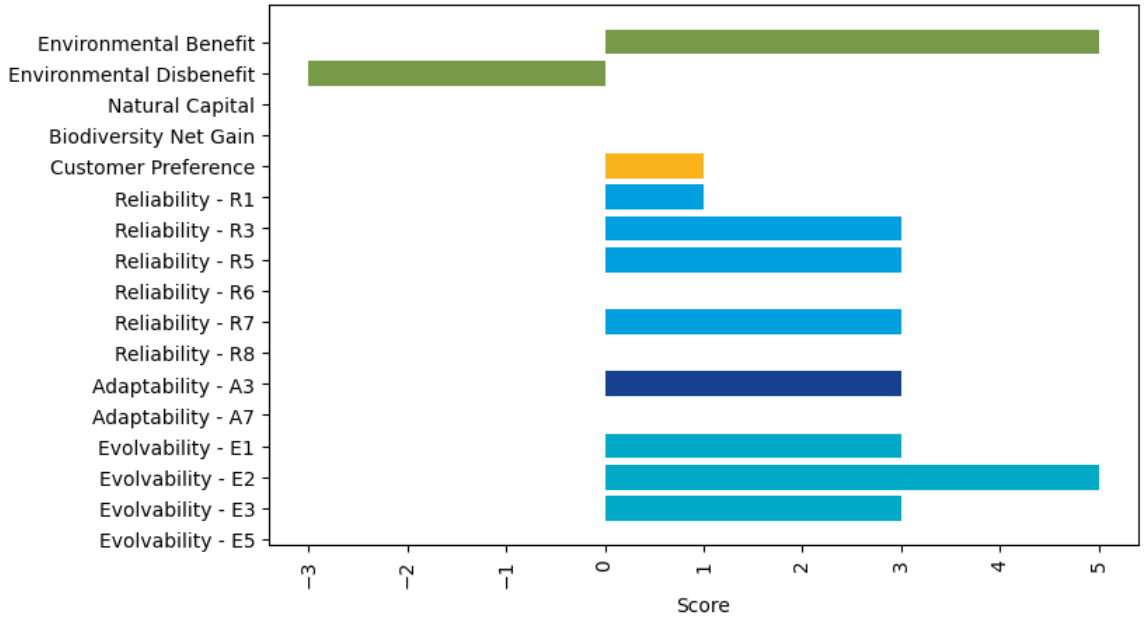
Other

Metric	

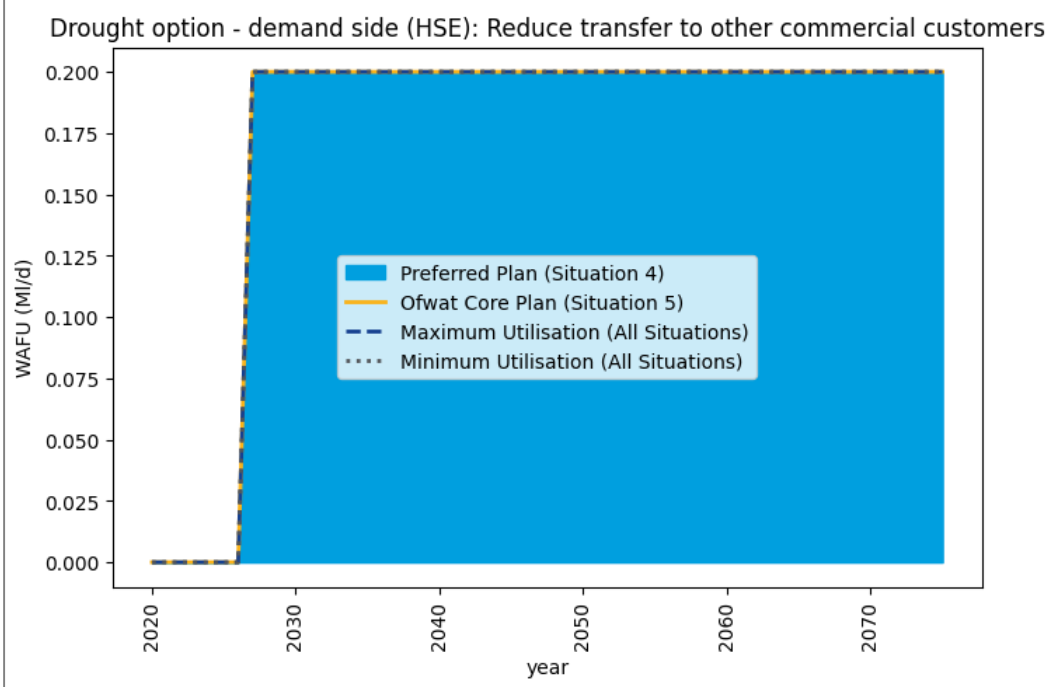
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (HSW): Test MAR (5.5Ml/d) - Construciton
Source of Supply and main operational features	Managed Aquifer Recharge (MAR). Recharge of the confined chalk aquifer from mains water in winter months with subsequent onsite abstraction from the same aquifer in summer and autumn critical low flow periods. Treatment is available onsite and it is assumed that there is sufficient treatment capacity for the abstracted water. The scheme assumes an extended pilot trial period with subsequent development of the MAR scheme.
Area over which option is to be implemented	Southampton West
Dependencies	After: Groundwater (HSW): Test MAR (5.5Ml/d) - Planning & Development

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	5.5
DO 1:200 Peak [Ml/d]	5.5
DO 1:500 Average [Ml/d]	5.5
DO 1:500 Peak [Ml/d]	5.5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	01/04/2035
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	4
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	4.68
Maximum annual utilisation [Ml/d]	5.50
Environment	
SEA benefit effect	3.00
SEA negative effect	-36.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	42.18
Financing Cost [£m]	56.73
Opex [£m]	23.41
Embodied Carbon [tCo2e]	1,999.80
Average operational carbon emissions [tCo2e/yr]	15.10
Total Carbon Cost [£m]	1.61
Average Incremental Cost (AIC) [p/m3]	56.01

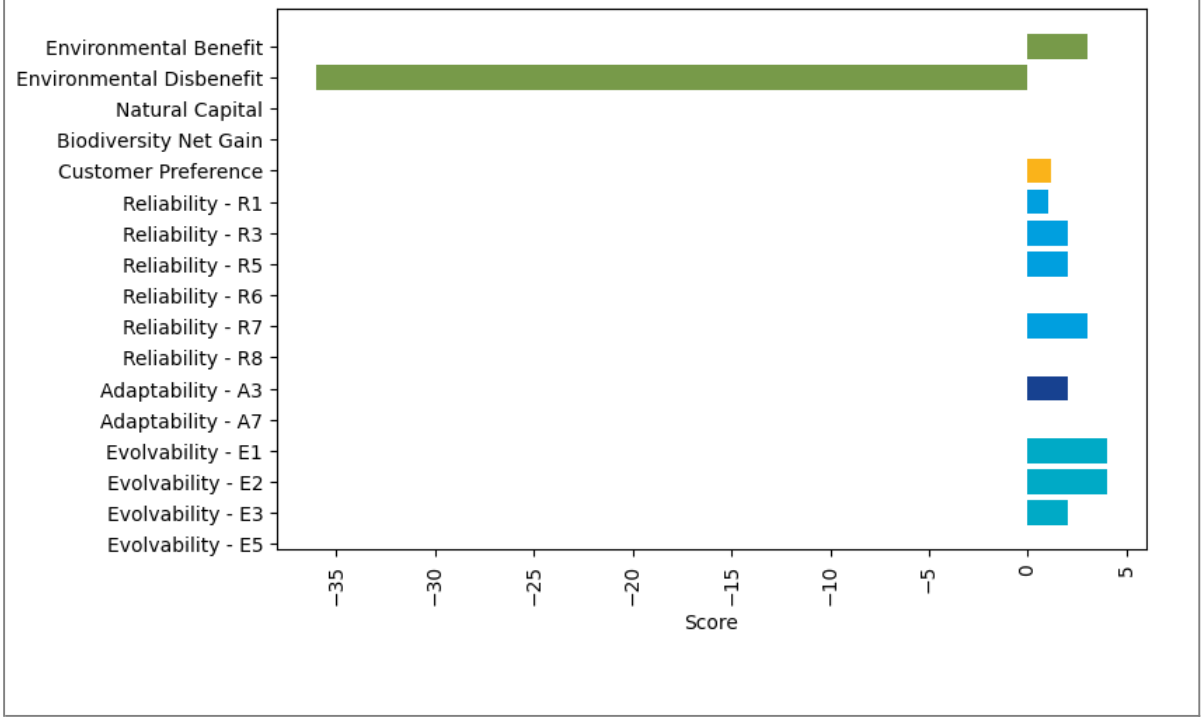
Other

Metric	

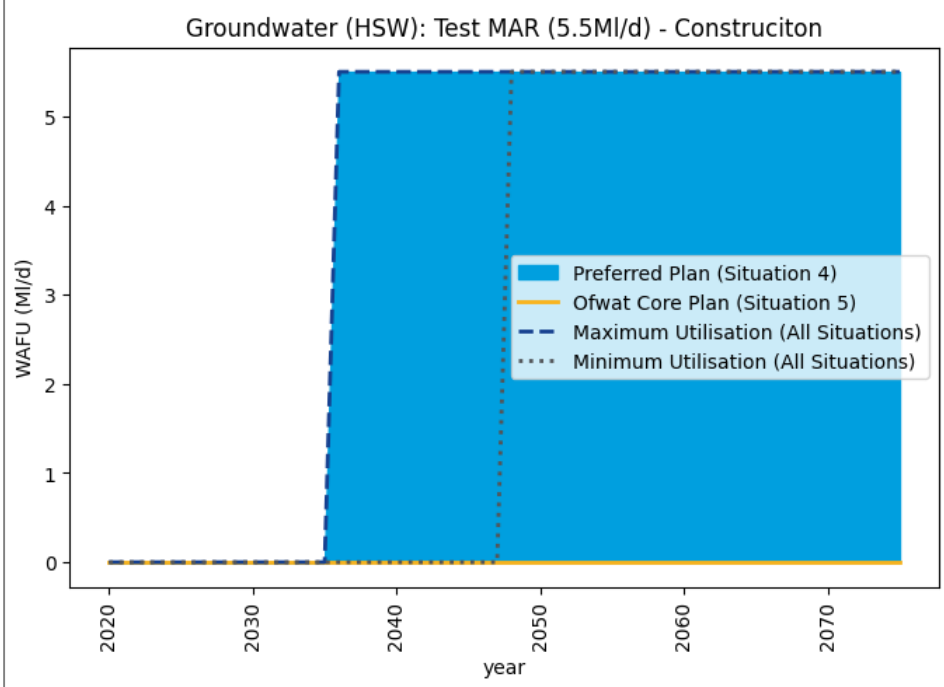
Best Value Metrics

Metric	
Environmental: Environmental Benefit	3.00
Environmental: Environmental Disbenefit	-36.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4
Resilience: Evolvability E2 – Intervention lead times	4
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (HSW): Test MAR (5.5Ml/d) - Planning & Development
Source of Supply and main operational features	Managed Aquifer Recharge (MAR). Recharge of the confined chalk aquifer from mains water in winter months with subsequent onsite abstraction from the same aquifer in summer and autumn critical low flow periods. Treatment is available onsite and it is assumed that there is sufficient treatment capacity for the abstracted water. The scheme assumes an extended pilot trial period with subsequent development of the MAR scheme. This option covers scheme development.
Area over which option is to be implemented	Southampton West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	1.27
Financing Cost [£m]	2.84
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

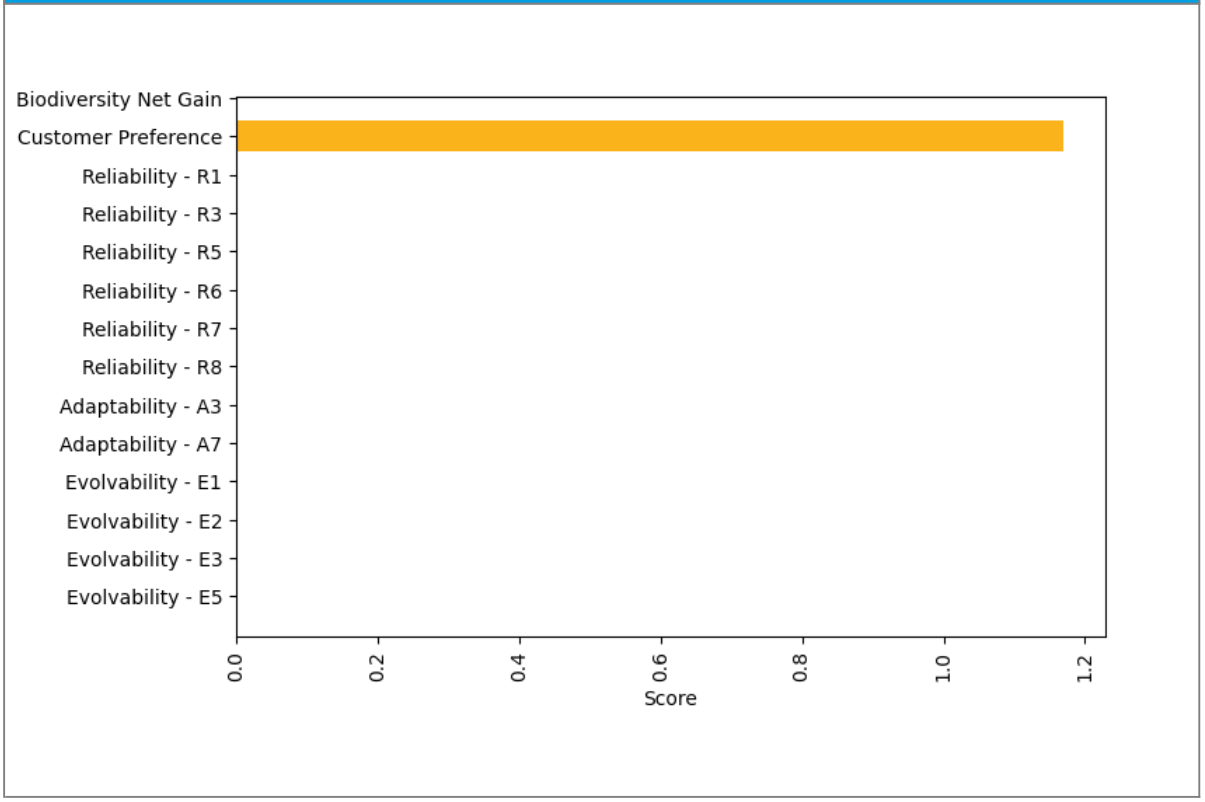
Other

Metric	

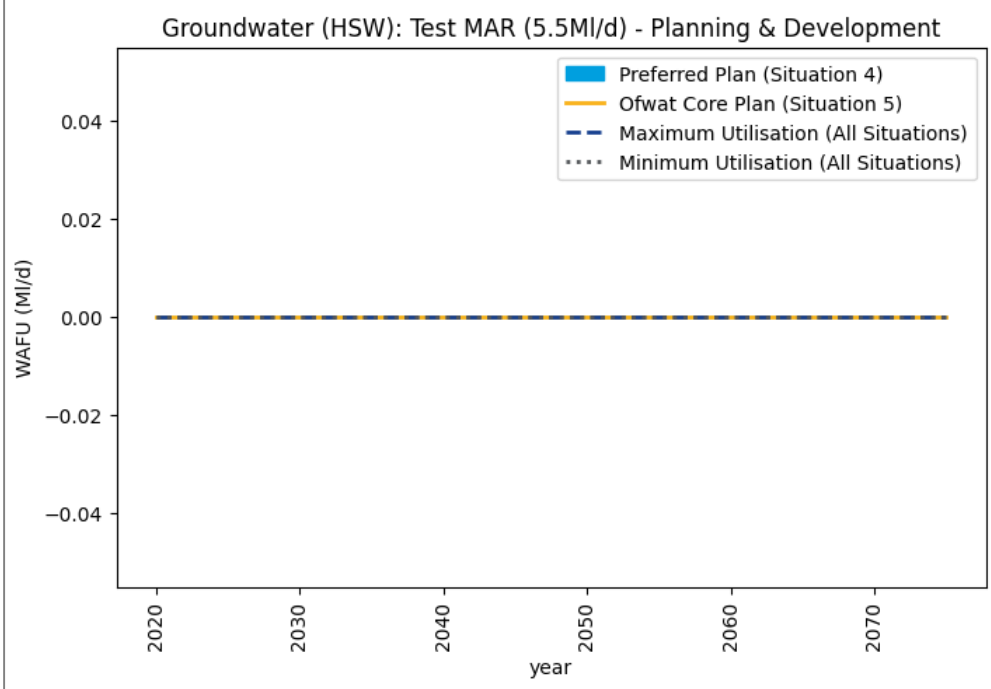
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (HSW): River Test Order (80Ml/d)
Source of Supply and main operational features	Testwood Drought Order (from 2027 onwards). Reduce the Test total flow condition in the abstraction licence from 355Ml/d to 200Ml/d.
Area over which option is to be implemented	Southampton West
Dependencies	After one of: Drought option - supply side (HSE): Candover (22Ml/d), Drought option - supply side (HSE): Candover (22Ml/d) (to 2029)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	0
DO 1:200 Peak [Ml/d]	0
DO 1:500 Average [Ml/d]	80
DO 1:500 Peak [Ml/d]	80
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	-1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	16.22
Maximum annual utilisation [Ml/d]	75.40
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	17.67
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	10.22
Total Carbon Cost [£m]	0.88
Average Incremental Cost (AIC) [p/m3]	3.78

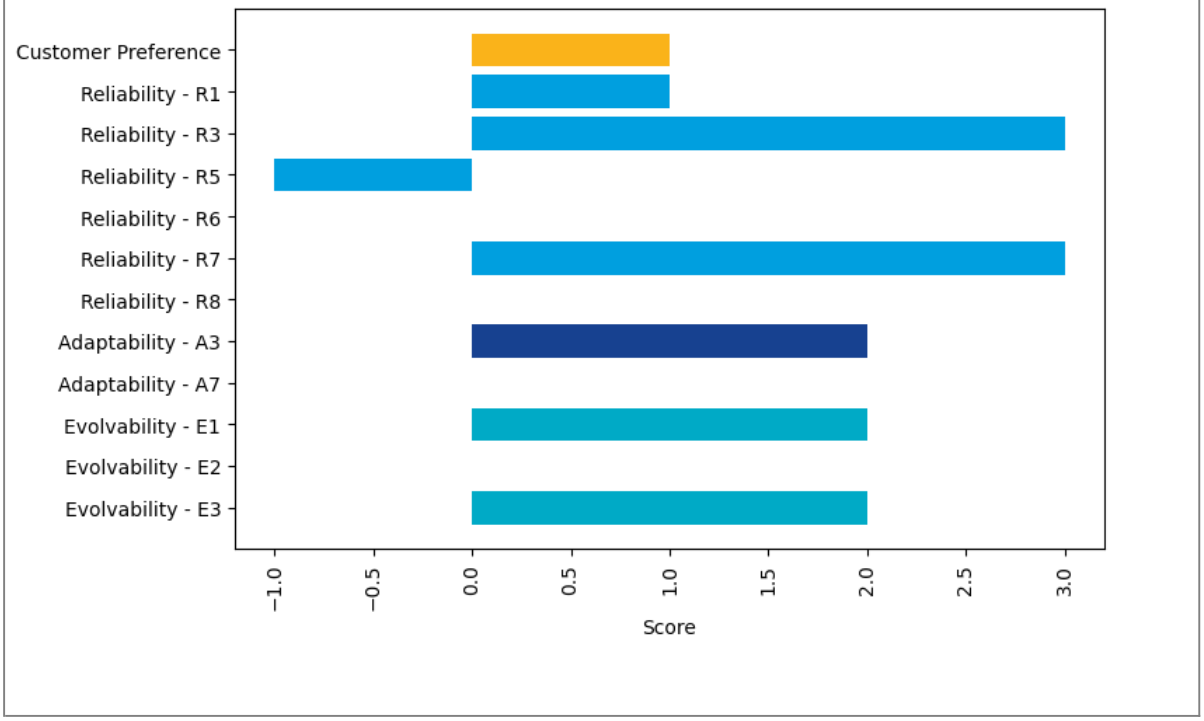
Other

Metric	

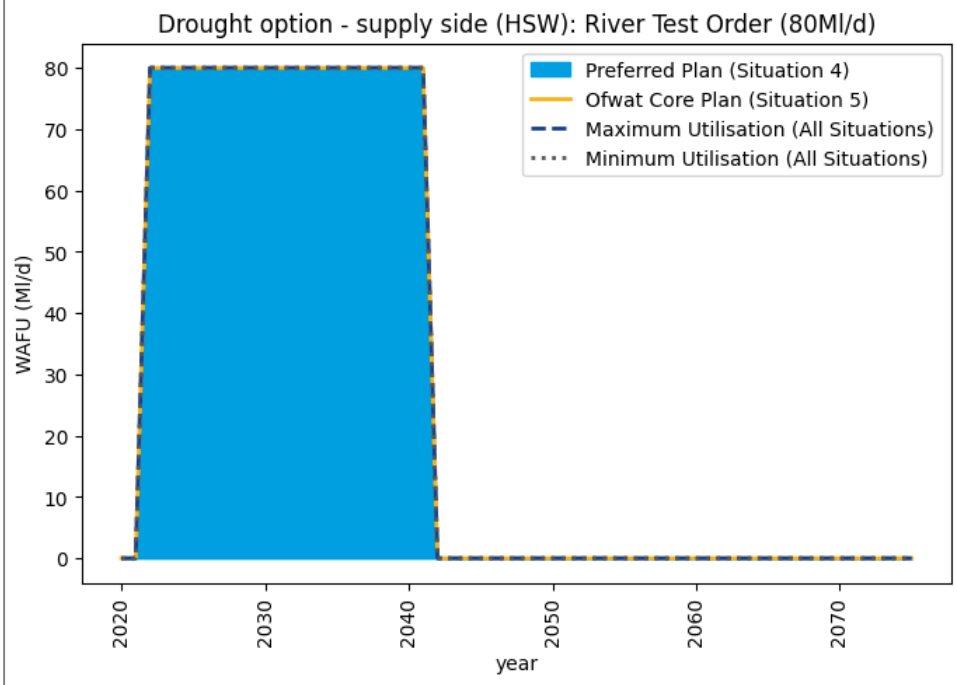
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	-1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (HSW): River Test Permit (80Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	80
DO 1:200 Peak [Ml/d]	80
DO 1:500 Average [Ml/d]	0
DO 1:500 Peak [Ml/d]	0
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-4.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	12.00
Financing Cost [£m]	25.23
Opex [£m]	1.04
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

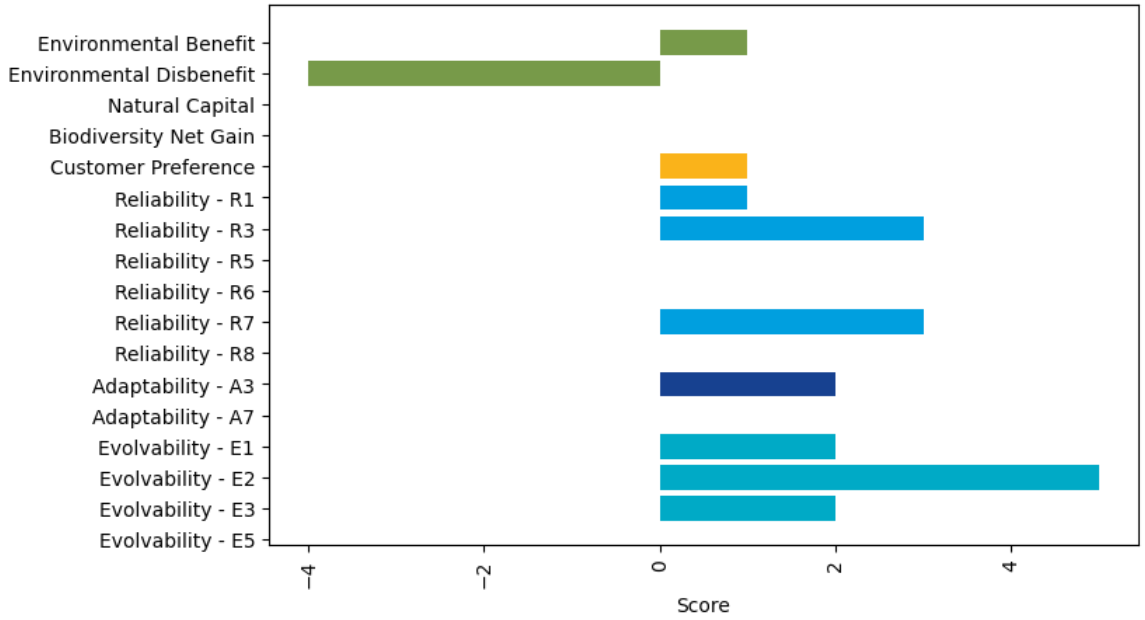
Other

Metric	

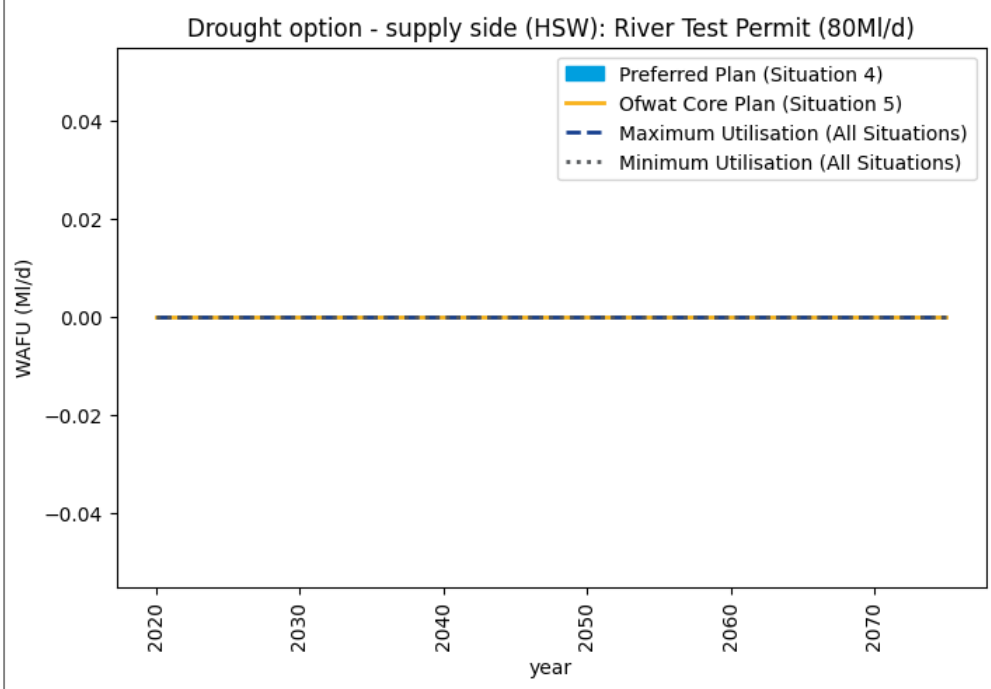
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-4.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (HSW): River Test Permit (80Ml/d) (extension to 2034/5)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	80
DO 1:200 Peak [Ml/d]	80
DO 1:500 Average [Ml/d]	0
DO 1:500 Peak [Ml/d]	0
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	
Earliest start date	01/04/2030
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	-1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	3.00
Financing Cost [£m]	6.39
Opex [£m]	0.26
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

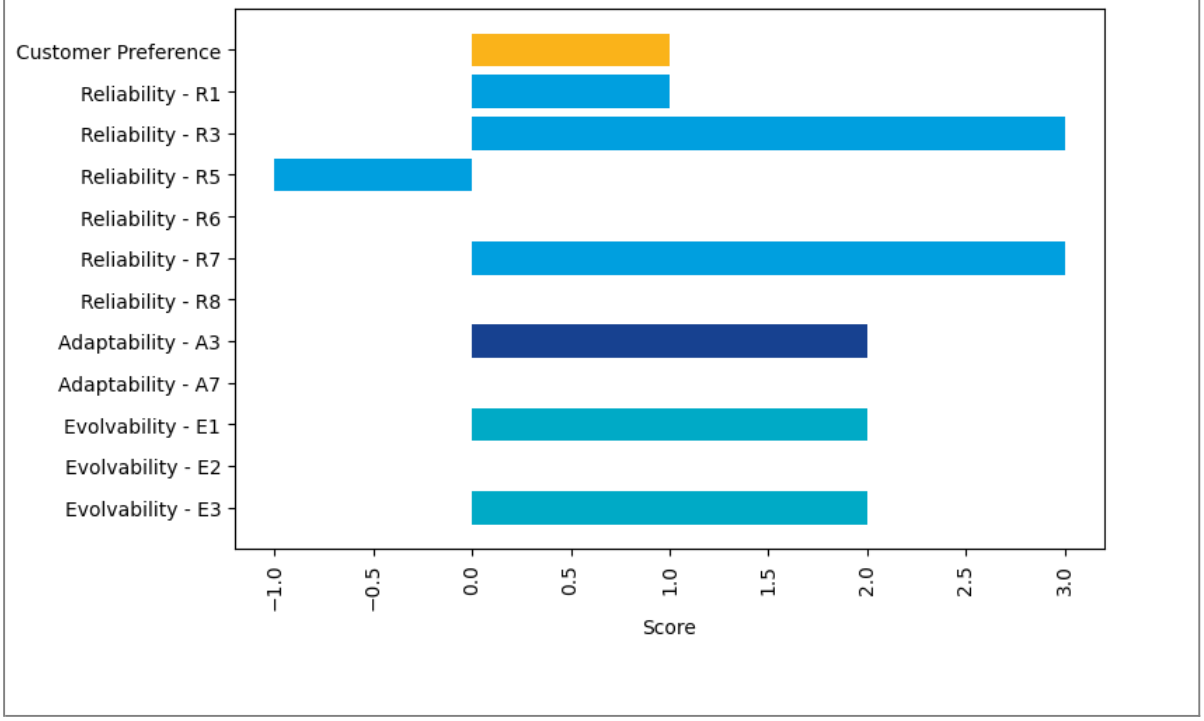
Other

Metric	

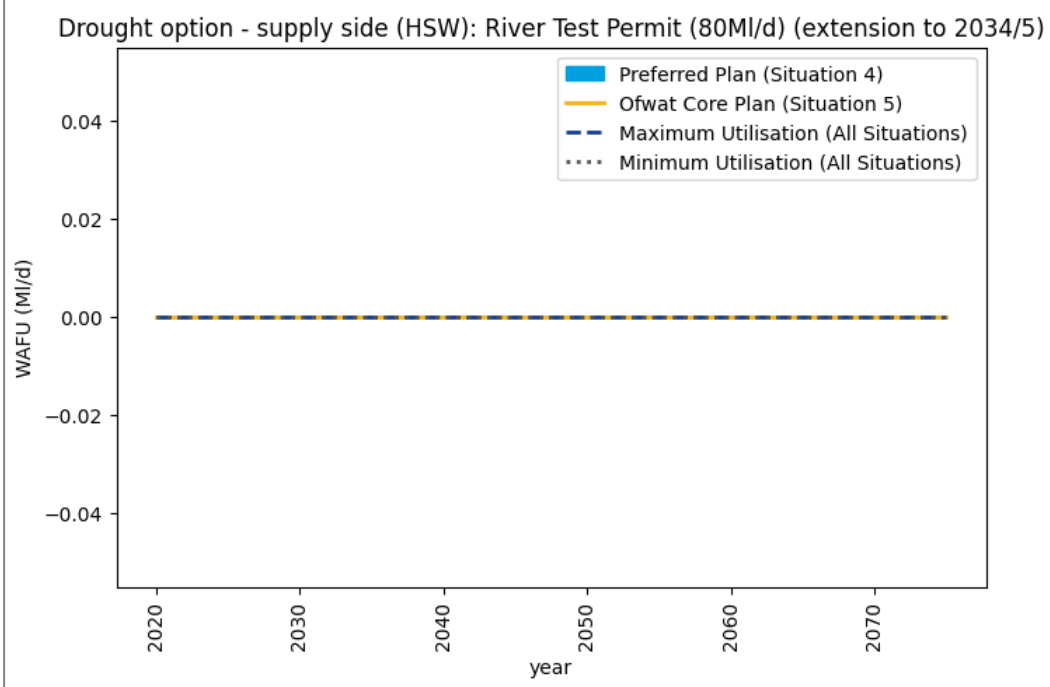
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	-1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (HSW): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.07
DO 1:500 Peak [Ml/d]	0.07
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.07
Maximum annual utilisation [Ml/d]	0.07
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

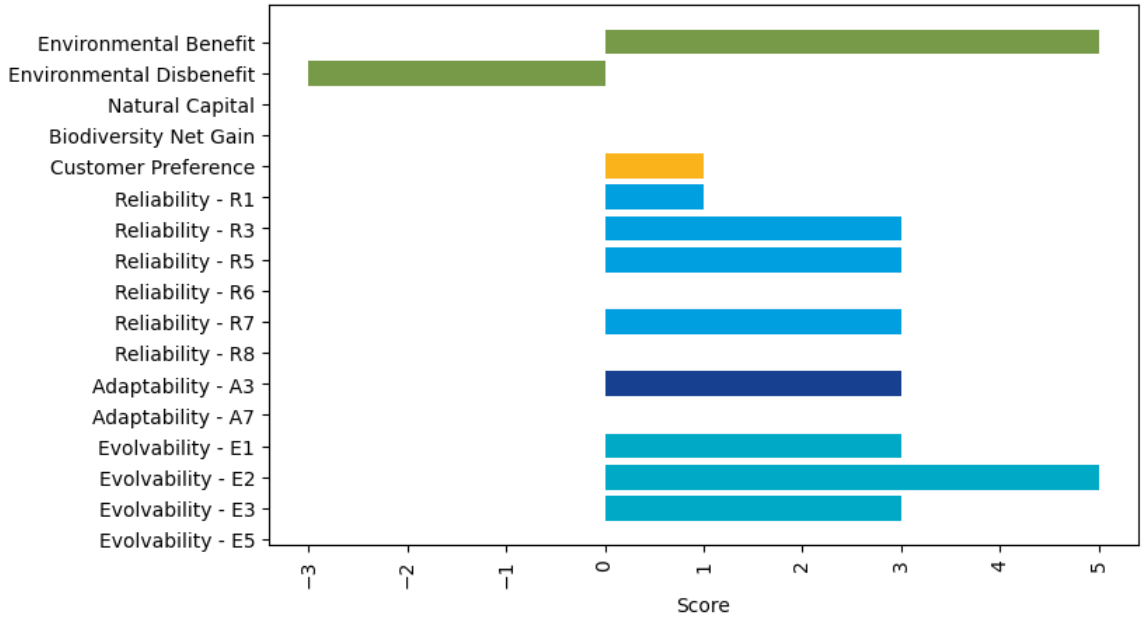
Other

Metric	

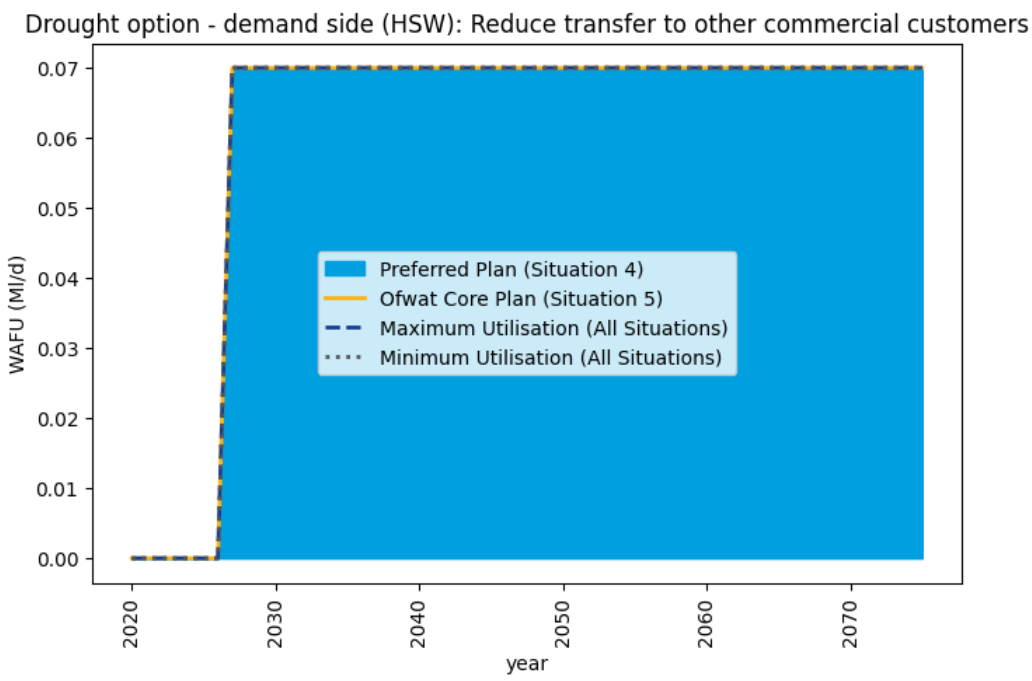
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (HSW): Sea tankering from Norway (45Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	45
DO 1:500 Peak [Ml/d]	45
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	01/04/2030
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	4
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	4.00
Maximum annual utilisation [Ml/d]	45.00
Environment	
SEA benefit effect	12.00
SEA negative effect	-43.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-22.46

Financial and Cost Information

Metric	
Capex [£m]	8.60
Financing Cost [£m]	19.96
Opex [£m]	361.25
Embodied Carbon [tCo2e]	17,334.87
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	4.86
Average Incremental Cost (AIC) [p/m3]	321.44

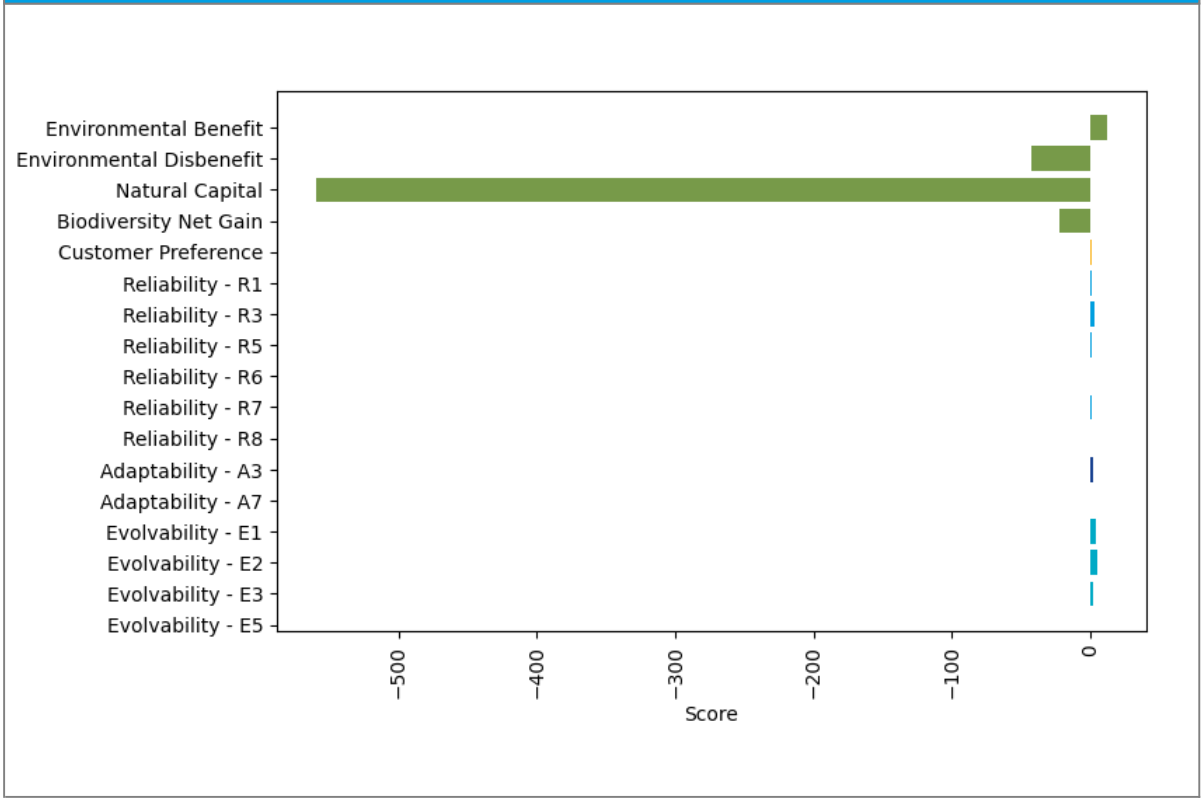
Other

Metric	

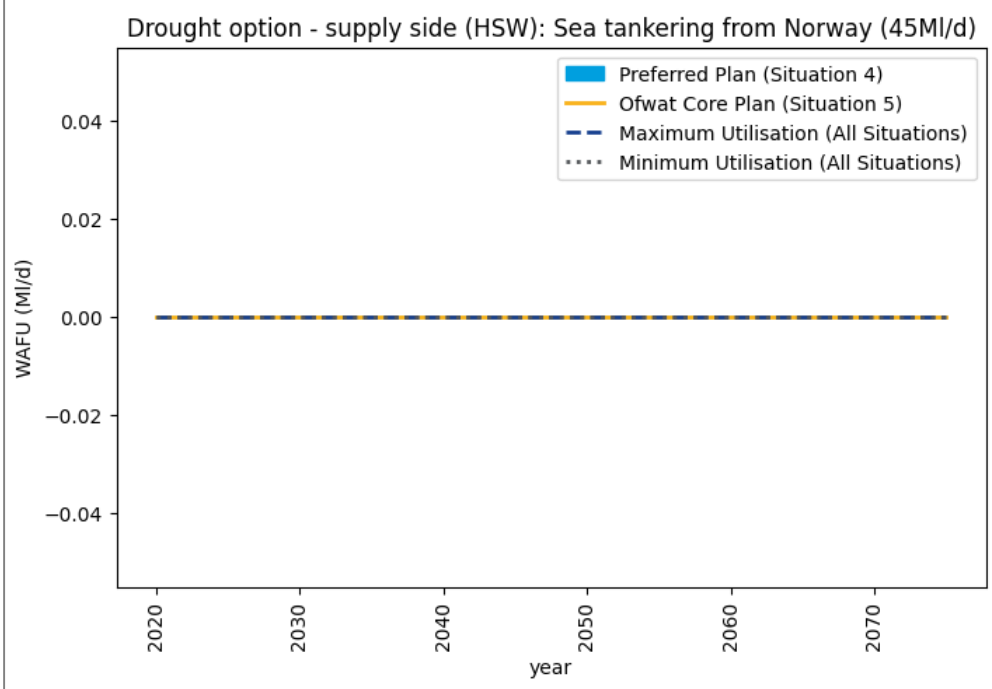
Best Value Metrics

Metric	
Environmental: Environmental Benefit	12.00
Environmental: Environmental Disbenefit	-43.00
Environmental: Natural Capital	-559.43
Environmental: Biodiversity Net Gain	-22.46
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HSW-HSE): Existing transfer (24Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	24
DO 1:200 Peak [Ml/d]	24
DO 1:500 Average [Ml/d]	24
DO 1:500 Peak [Ml/d]	24
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	10.56
Maximum annual utilisation [Ml/d]	24.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

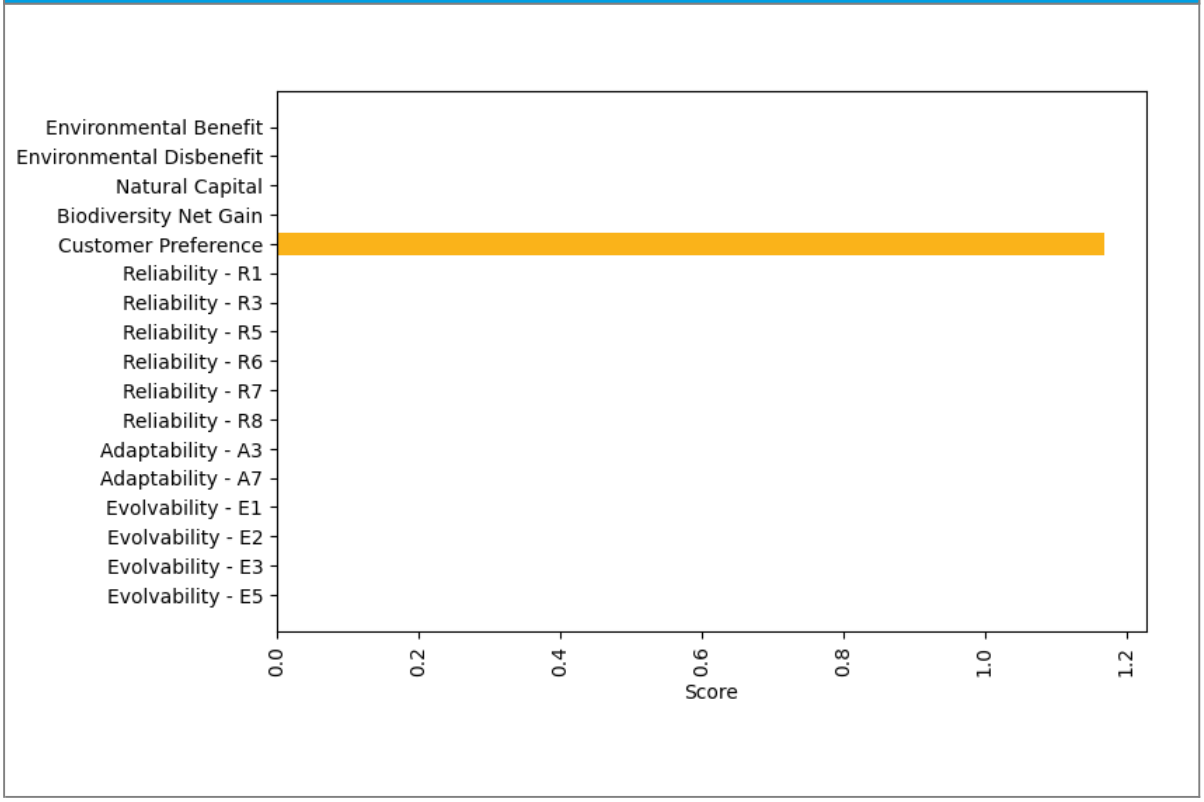
Other

Metric	

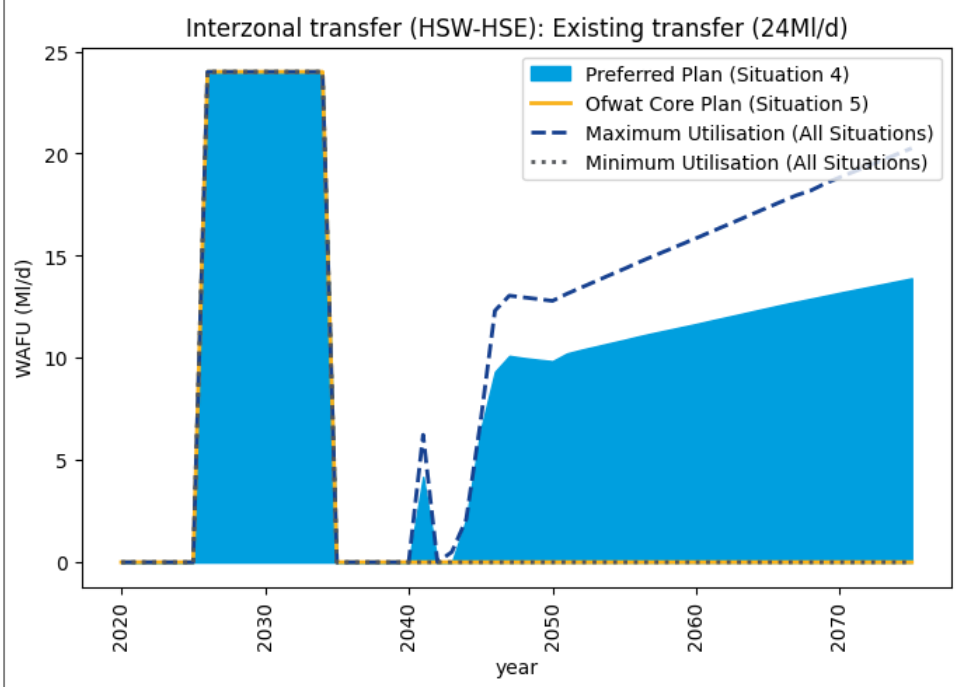
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (HSE): Havant Thicket Reservoir to Itchen WSW pipeline - first section (90Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	90
DO 1:200 Peak [Ml/d]	90
DO 1:500 Average [Ml/d]	90
DO 1:500 Peak [Ml/d]	90
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2034
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	20.00
Maximum annual utilisation [Ml/d]	20.00
Environment	
SEA benefit effect	8.00
SEA negative effect	-28.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-180.82

Financial and Cost Information

Metric	
Capex [£m]	700.18
Financing Cost [£m]	1,199.33
Opex [£m]	267.03
Embodied Carbon [tCo2e]	74,843.96
Average operational carbon emissions [tCo2e/yr]	15.85
Total Carbon Cost [£m]	32.74
Average Incremental Cost (AIC) [p/m3]	66.35

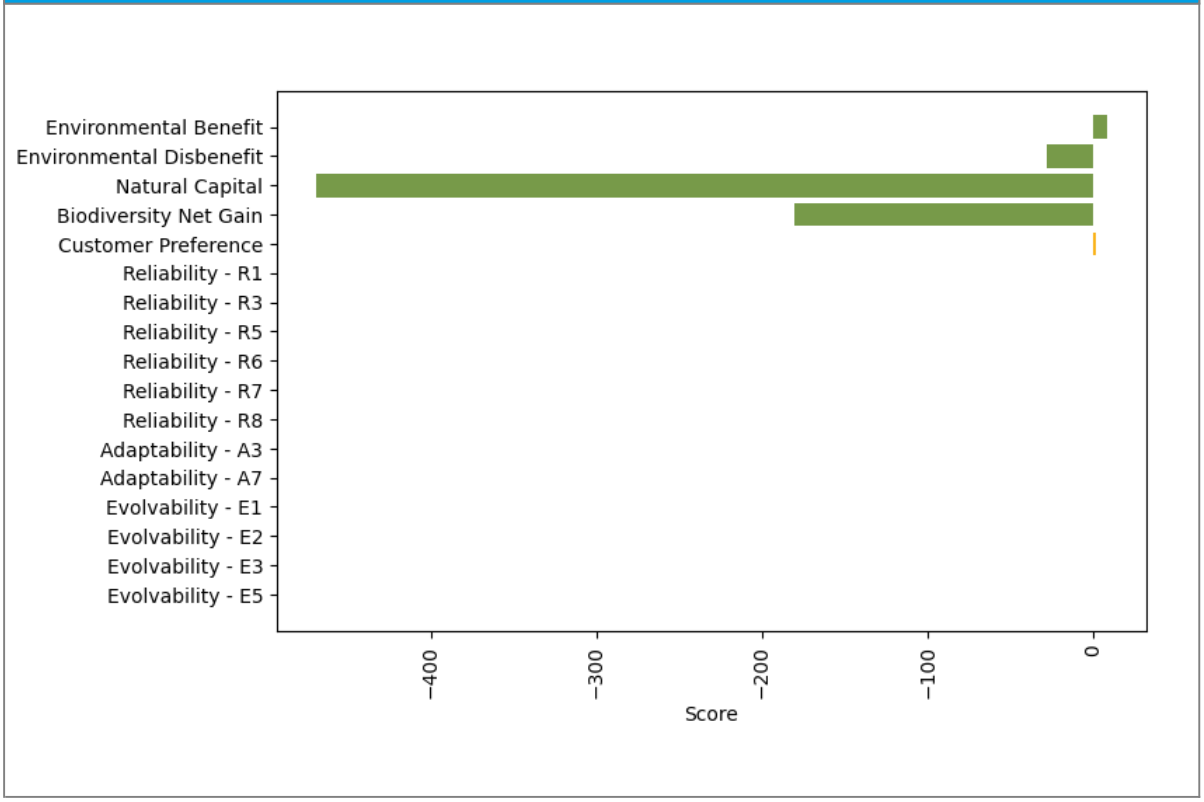
Other

Metric	

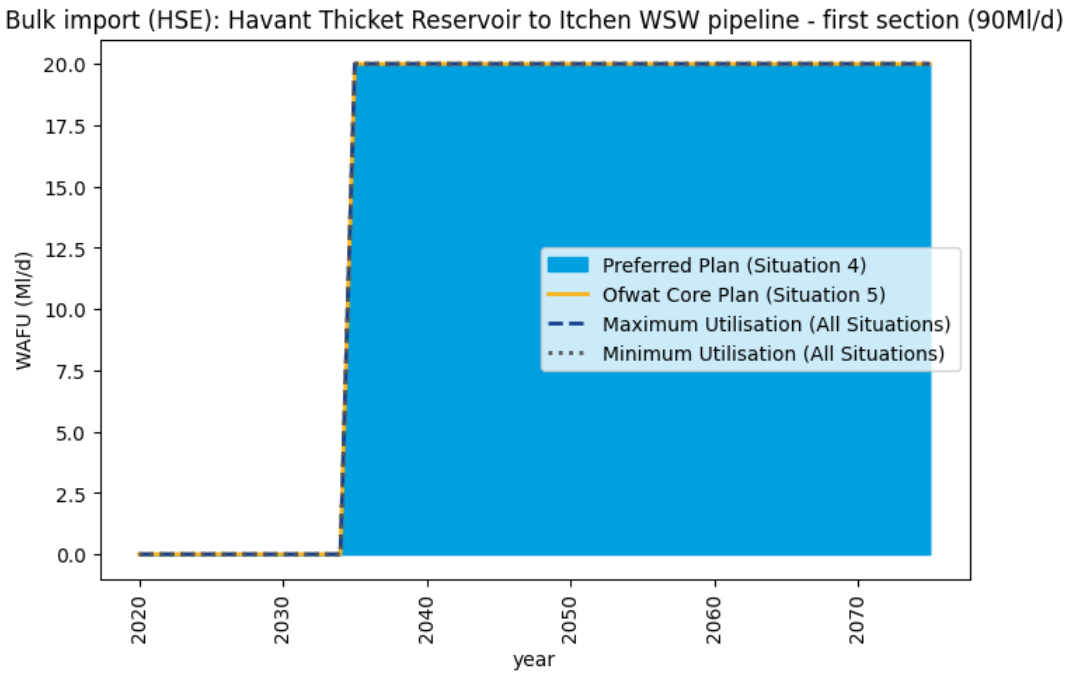
Best Value Metrics

Metric	
Environmental: Environmental Benefit	8.00
Environmental: Environmental Disbenefit	-28.00
Environmental: Natural Capital	-468.84
Environmental: Biodiversity Net Gain	-180.82
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Winchester
Dependencies	Bidirectional Version: Interzonal transfer (HWZ-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	60
DO 1:200 Peak [Ml/d]	60
DO 1:500 Average [Ml/d]	60
DO 1:500 Peak [Ml/d]	60
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	3
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	5.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.47
Maximum annual utilisation [Ml/d]	17.65
Environment	
SEA benefit effect	4.00
SEA negative effect	-29.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-80.81

Financial and Cost Information

Metric	
Capex [£m]	80.98
Financing Cost [£m]	116.52
Opex [£m]	116.60
Embodied Carbon [tCo2e]	35,828.88
Average operational carbon emissions [tCo2e/yr]	0.41
Total Carbon Cost [£m]	16.62
Average Incremental Cost (AIC) [p/m3]	14.40

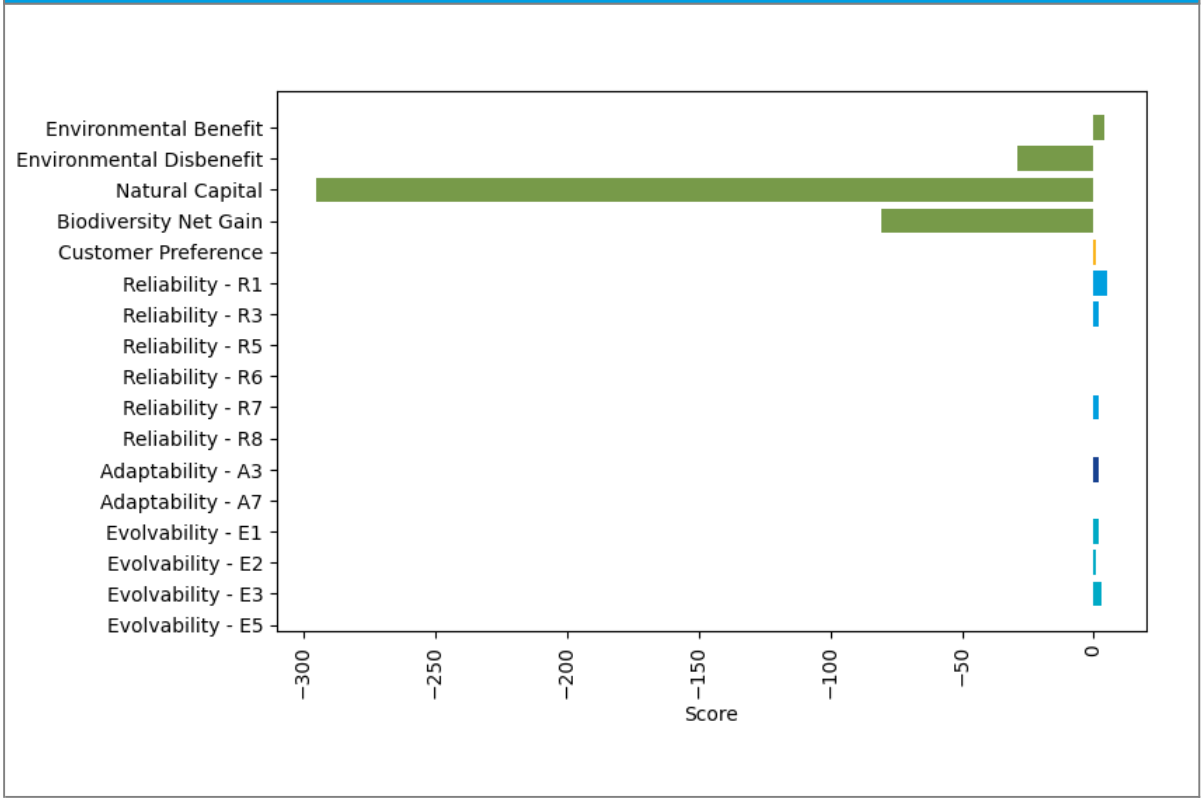
Other

Metric	

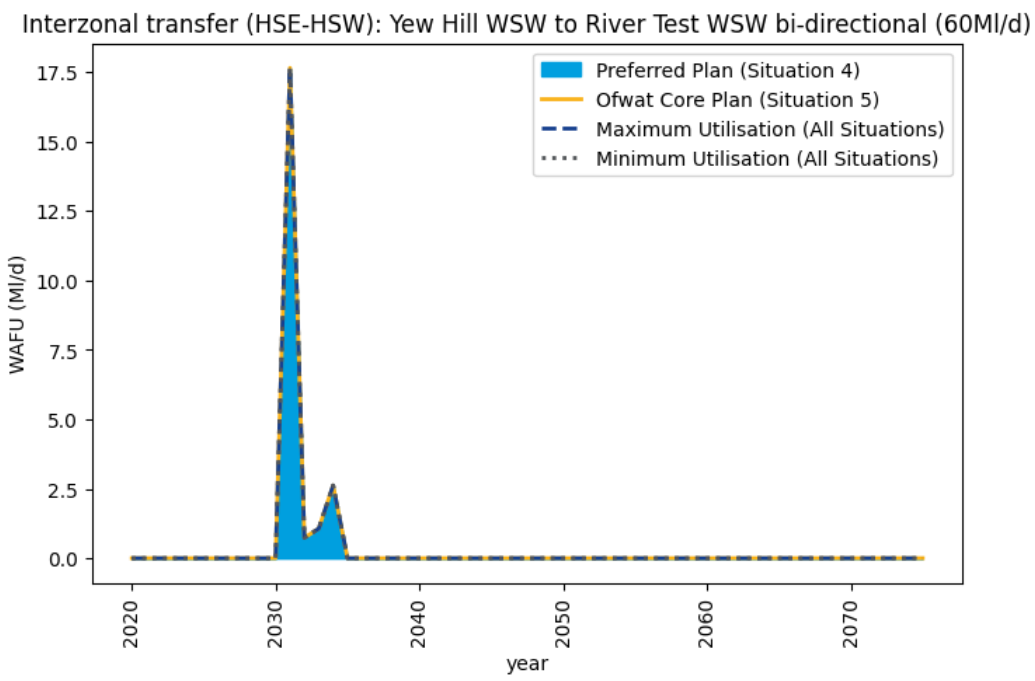
Best Value Metrics

Metric	
Environmental: Environmental Benefit	4.00
Environmental: Environmental Disbenefit	-29.00
Environmental: Natural Capital	-295.13
Environmental: Biodiversity Net Gain	-80.81
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	5.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	2
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	1
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HWZ-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton West
Dependencies	Bidirectional Version: Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	60
DO 1:200 Peak [Ml/d]	60
DO 1:500 Average [Ml/d]	60
DO 1:500 Peak [Ml/d]	60
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	3
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	5.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	31.25
Maximum annual utilisation [Ml/d]	47.45
Environment	
SEA benefit effect	4.00
SEA negative effect	-29.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-80.81

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	92.54
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	27.12
Total Carbon Cost [£m]	1.46
Average Incremental Cost (AIC) [p/m3]	5.49

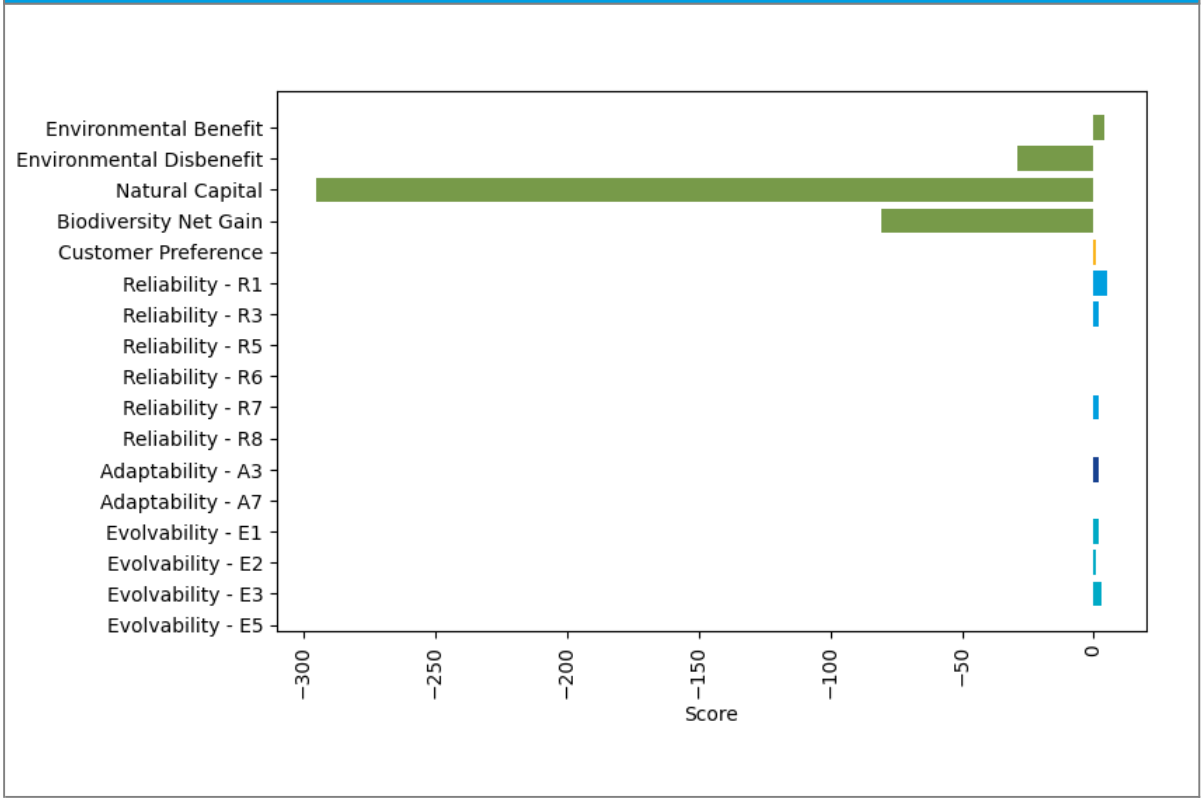
Other

Metric	

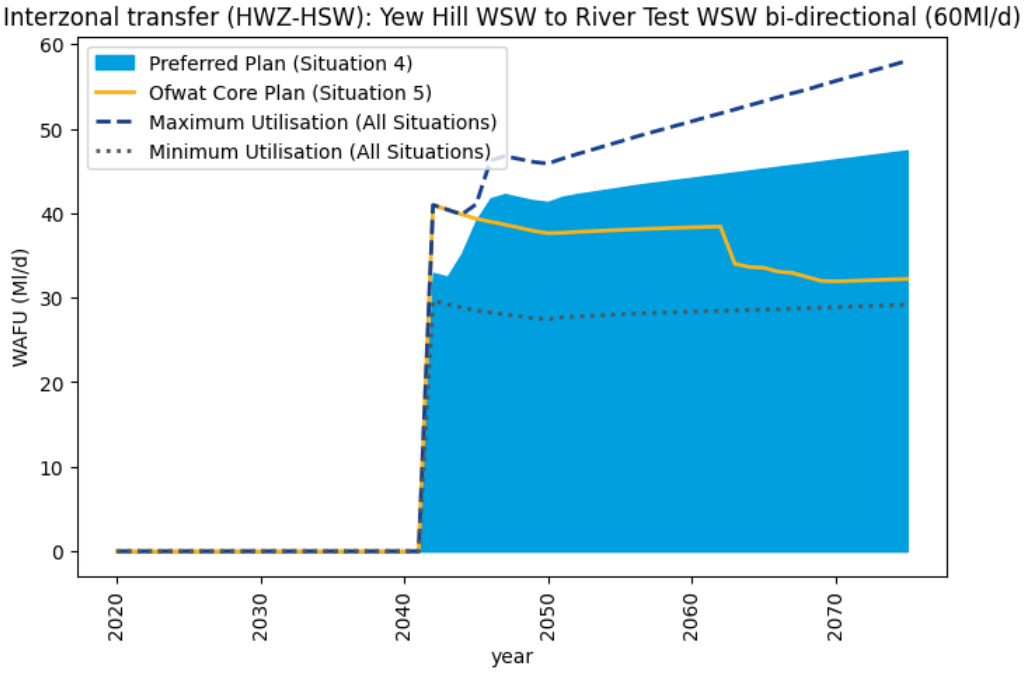
Best Value Metrics

Metric	
Environmental: Environmental Benefit	4.00
Environmental: Environmental Disbenefit	-29.00
Environmental: Natural Capital	-295.13
Environmental: Biodiversity Net Gain	-80.81
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	5.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	2
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	1
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (HWZ): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Winchester
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.05
DO 1:500 Peak [Ml/d]	0.05
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.05
Maximum annual utilisation [Ml/d]	0.05
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

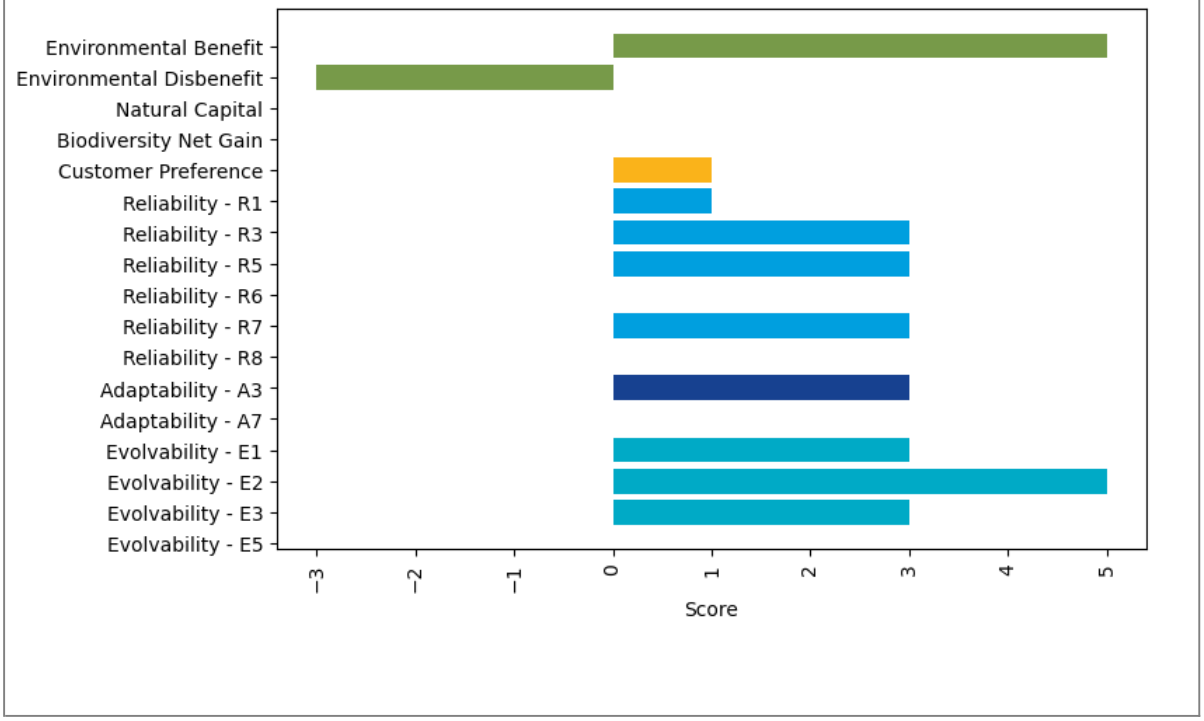
Other

Metric	

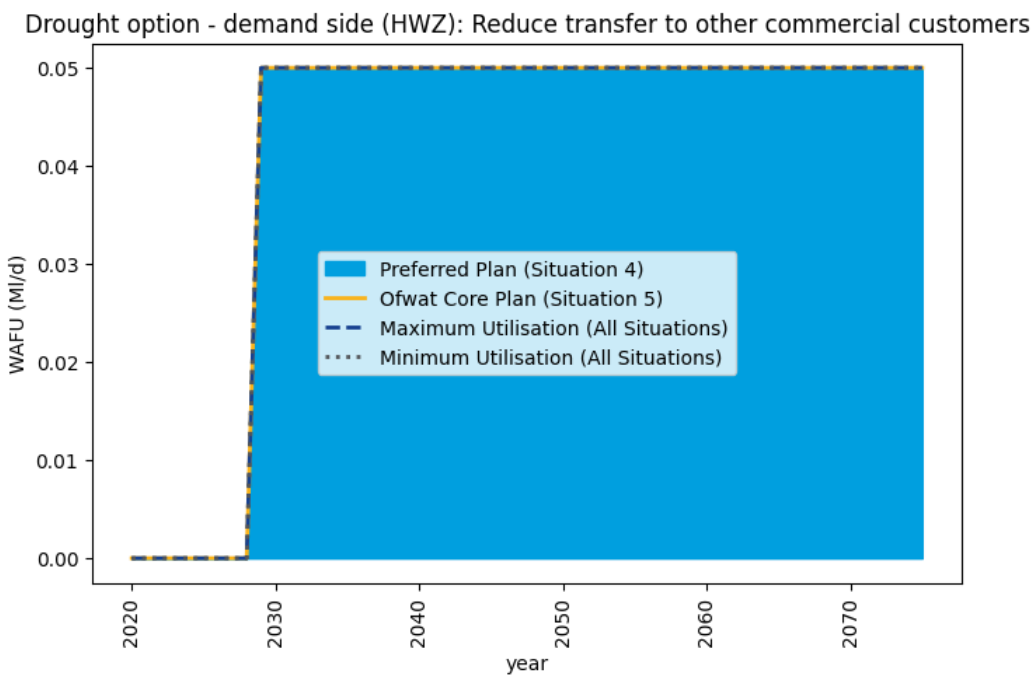
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)
Source of Supply and main operational features	The option is to drill a new replacement borehole 100m deep for an Augmentation well on the Isle of Wight. The existing borehole has c. 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 augmentation well field.
Area over which option is to be implemented	Isle of Wight
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0
DO 1:500 Peak [Ml/d]	0
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-16.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	1.85
Financing Cost [£m]	2.78
Opex [£m]	1.92
Embodied Carbon [tCo2e]	168.08
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	0.07
Average Incremental Cost (AIC) [p/m3]	-

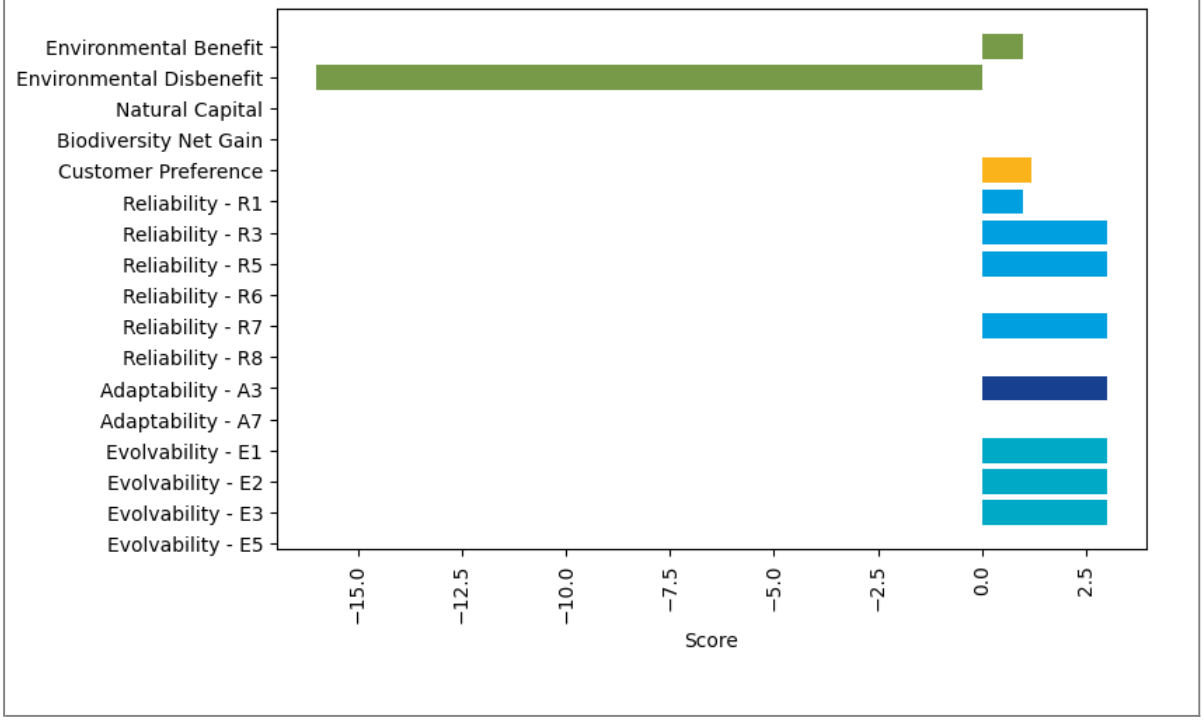
Other

Metric	

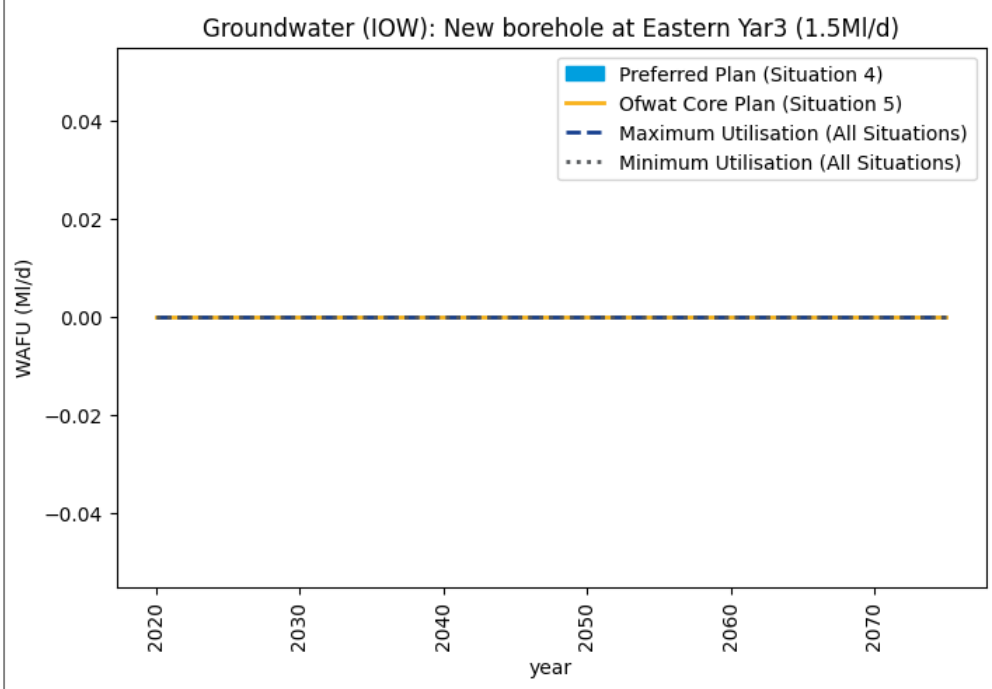
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-16.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	3
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (IOW): New boreholes at Newchurch (LGS) (1.9Ml/d)
Source of Supply and main operational features	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. Scheme output: 4.5Mld
Area over which option is to be implemented	Isle of Wight
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	1.95
DO 1:200 Peak [Ml/d]	1.95
DO 1:500 Average [Ml/d]	1.95
DO 1:500 Peak [Ml/d]	1.95
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	1.95
Maximum annual utilisation [Ml/d]	1.95
Environment	
SEA benefit effect	2.00
SEA negative effect	-15.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	5.80
Financing Cost [£m]	8.06
Opex [£m]	7.07
Embodied Carbon [tCo2e]	628.77
Average operational carbon emissions [tCo2e/yr]	2.55
Total Carbon Cost [£m]	0.36
Average Incremental Cost (AIC) [p/m3]	29.23

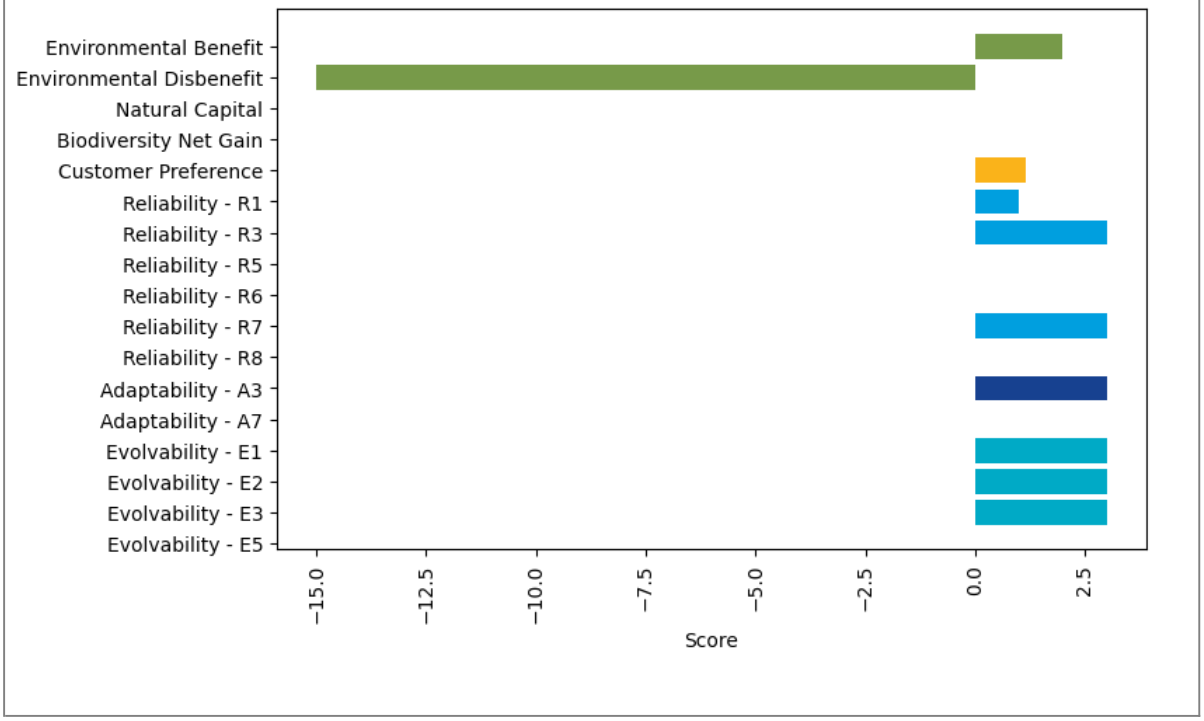
Other

Metric	

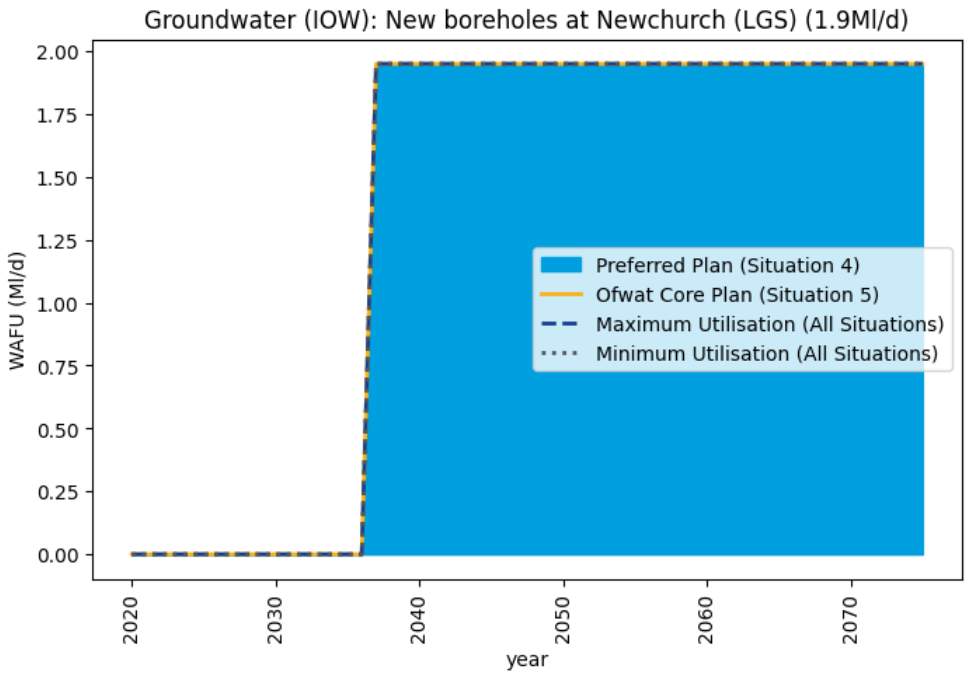
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-15.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	3
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Recycling (IOW): Sandown (8.5Ml/d)
Source of Supply and main operational features	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 Sandown WSW. Treated water in excess of the local demand will be transferred through a new transfer pipeline to a WSR near Newport for supply to much of the island. This option is reliant on the service reservoir enlargements carried out in IZT_CSM Cross-Solent upgrade. (2) Option 2 also includes upgrades to Sandown WSW to achieve the extra flow.
Area over which option is to be implemented	Isle of Wight
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	8.5
DO 1:200 Peak [Ml/d]	8.5
DO 1:500 Average [Ml/d]	8.5
DO 1:500 Peak [Ml/d]	8.5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	6
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.15
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	6.82
Maximum annual utilisation [Ml/d]	8.50
Environment	
SEA benefit effect	4.00
SEA negative effect	-29.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-73.88

Financial and Cost Information

Metric	
Capex [£m]	312.18
Financing Cost [£m]	408.14
Opex [£m]	138.39
Embodied Carbon [tCo2e]	32,517.13
Average operational carbon emissions [tCo2e/yr]	124.16
Total Carbon Cost [£m]	20.26
Average Incremental Cost (AIC) [p/m3]	249.42

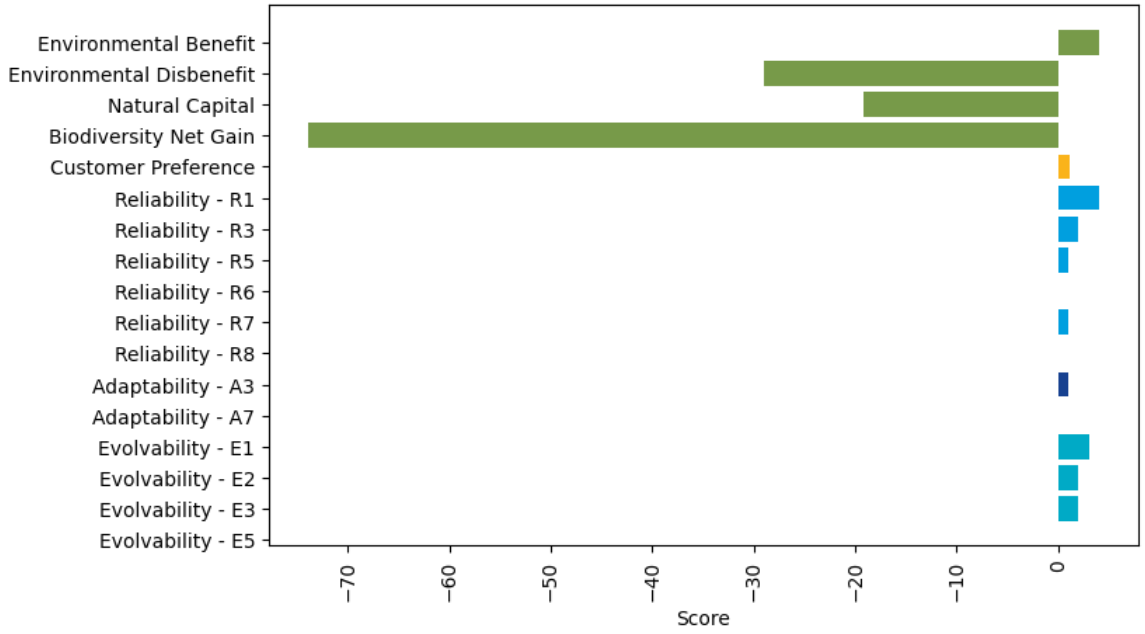
Other

Metric	

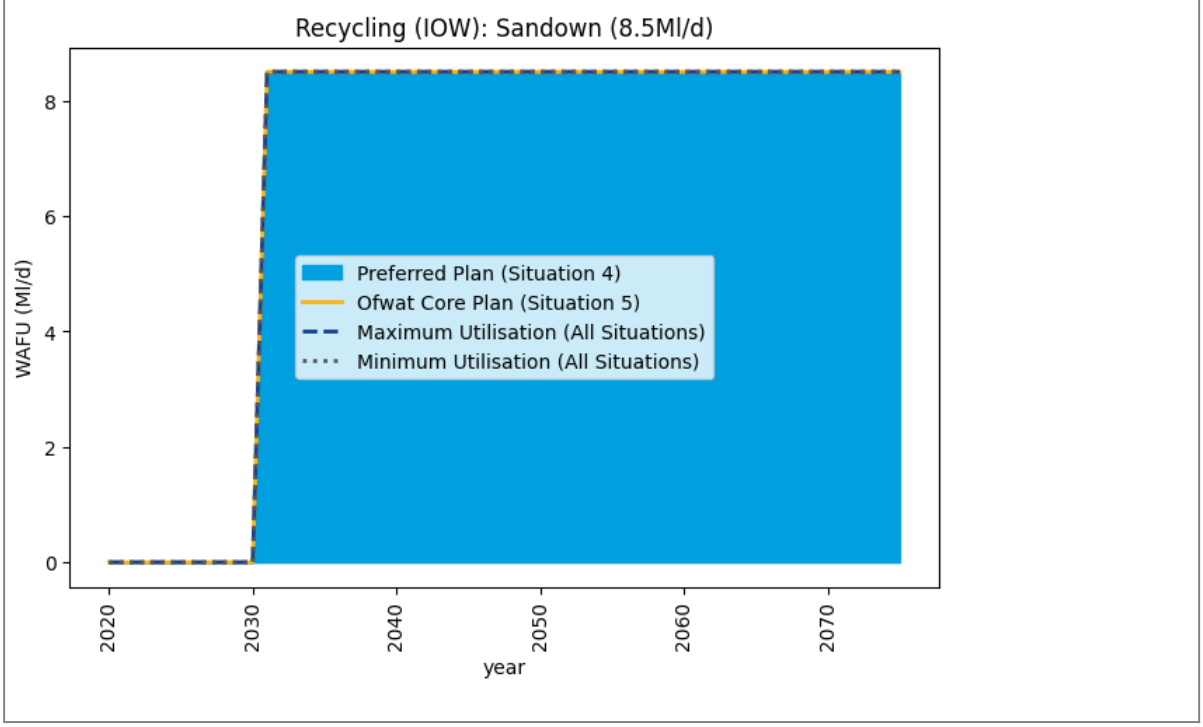
Best Value Metrics

Metric	
Environmental: Environmental Benefit	4.00
Environmental: Environmental Disbenefit	-29.00
Environmental: Natural Capital	-19.23
Environmental: Biodiversity Net Gain	-73.88
Social: Customer Preference	1.15
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (IOW): Caul Bourne (1.5Ml/d)
Source of Supply and main operational features	Drought option: Reduce the MRF in the Caul Bourne from 4l/s (0.3Ml/d) to 2l/s (0.15Ml/d)'. Remove the constraint that limits abstraction to 40Ml (1.3Ml/d) within a 30-day period when the flow drops below 20l/s (1.7Ml/d).
Area over which option is to be implemented	Isle of Wight
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	1.5
DO 1:200 Peak [Ml/d]	1.5
DO 1:500 Average [Ml/d]	1.5
DO 1:500 Peak [Ml/d]	1.5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-7.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	12.00
Financing Cost [£m]	25.23
Opex [£m]	1.49
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	0.03
Average Incremental Cost (AIC) [p/m3]	127.80

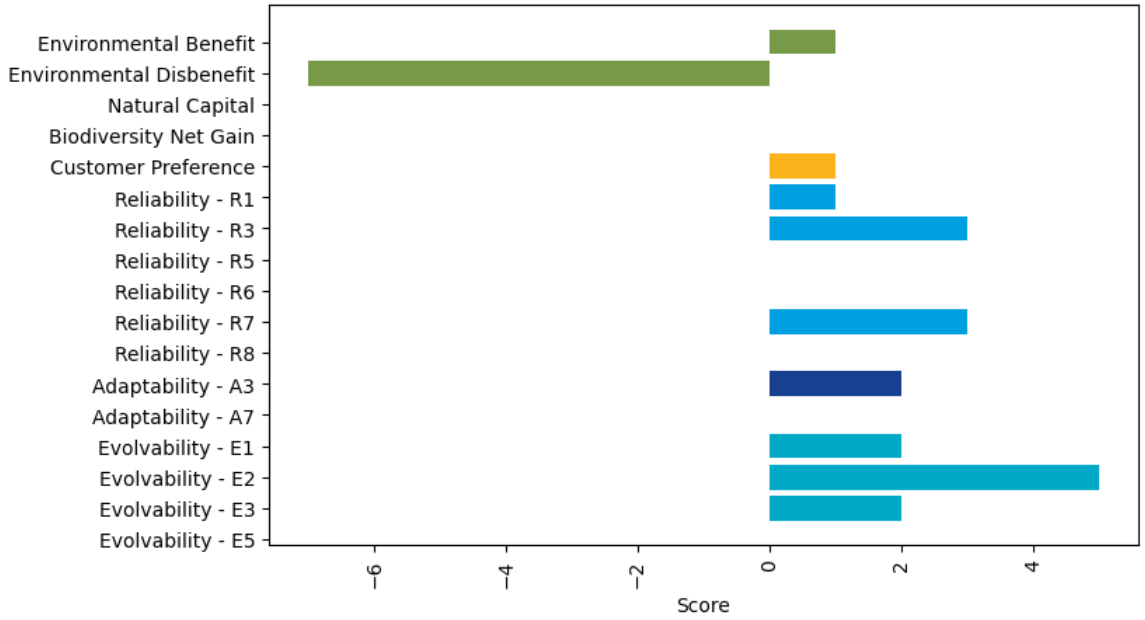
Other

Metric	

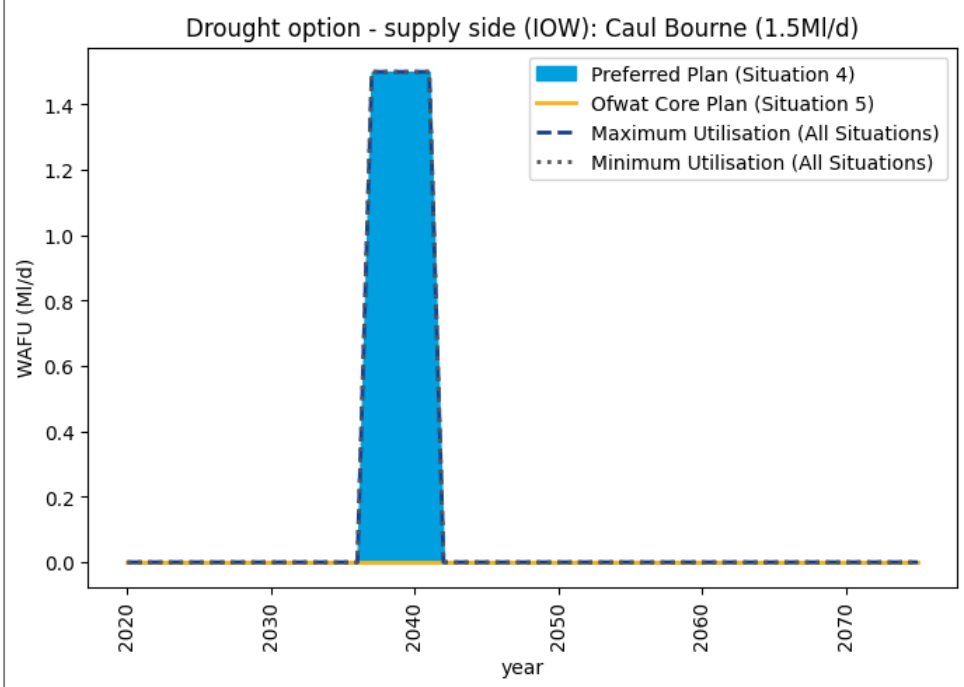
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-7.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (IOW): Eastern Yar scheme drought permit/order (1Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Isle of Wight
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	1
DO 1:200 Peak [Ml/d]	1
DO 1:500 Average [Ml/d]	1
DO 1:500 Peak [Ml/d]	1
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.50
Maximum annual utilisation [Ml/d]	
Environment	
SEA benefit effect	1.00
SEA negative effect	-12.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	12.00
Financing Cost [£m]	25.23
Opex [£m]	1.29
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	0.97
Total Carbon Cost [£m]	0.02
Average Incremental Cost (AIC) [p/m3]	188.42

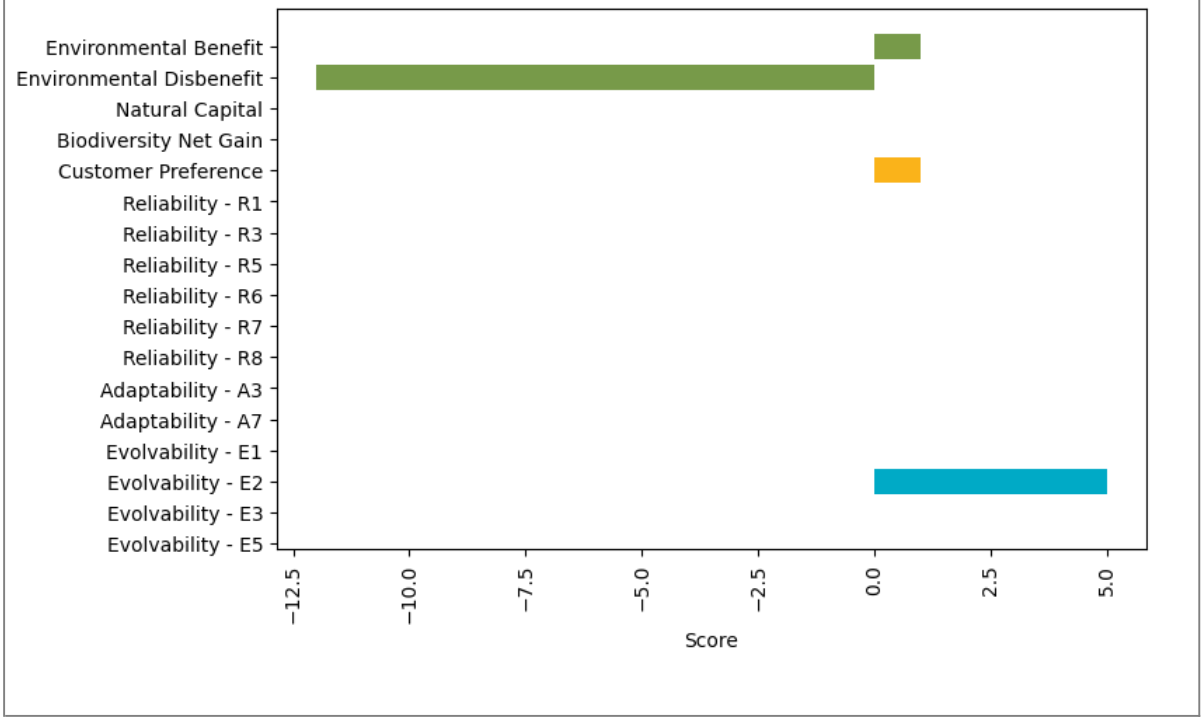
Other

Metric	

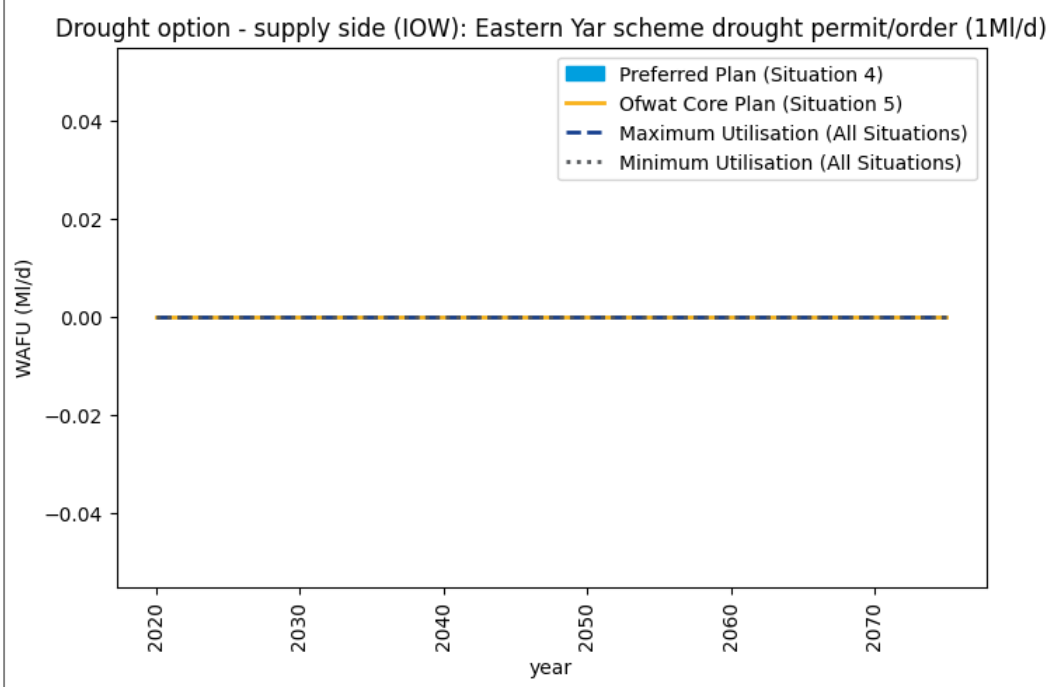
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-12.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (IOW): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Isle of Wight
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.07
DO 1:500 Peak [Ml/d]	0.07
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.07
Maximum annual utilisation [Ml/d]	0.07
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

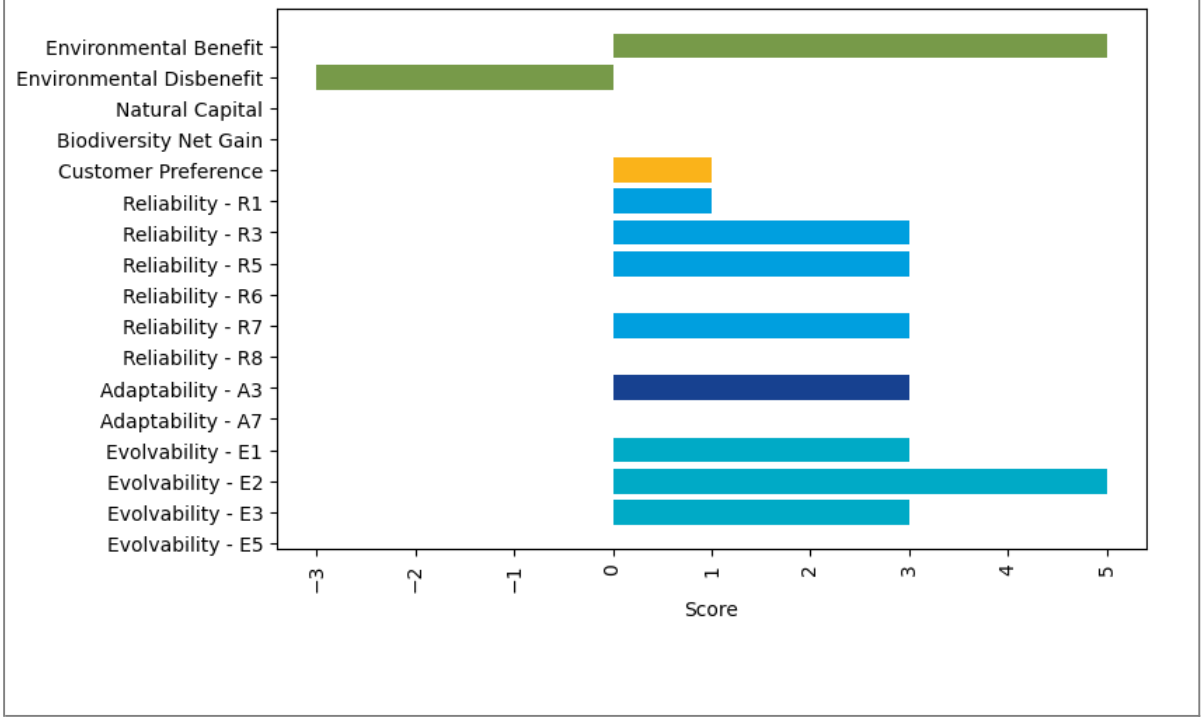
Other

Metric	

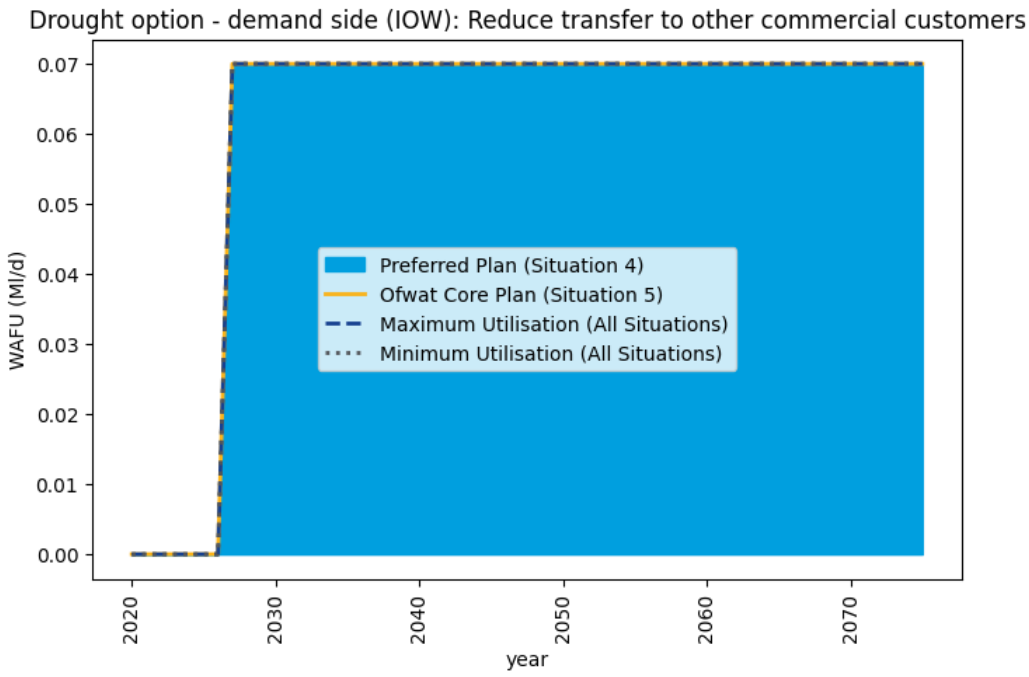
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (KME): Isle of Sheppey (10Ml/d) Phase 2
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway East
Dependencies	After one of: Desalination (KME): Isle of Sheppey (20Ml/d) - Construction, Desalination (KME): Isle of Sheppey (10Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	10
DO 1:200 Peak [Ml/d]	10
DO 1:500 Average [Ml/d]	10
DO 1:500 Peak [Ml/d]	10
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2037
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	8.01
Maximum annual utilisation [Ml/d]	10.00
Environment	
SEA benefit effect	2.00
SEA negative effect	-58.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	479.46
Financing Cost [£m]	617.29
Opex [£m]	229.71
Embodied Carbon [tCo2e]	29,977.22
Average operational carbon emissions [tCo2e/yr]	394.63
Total Carbon Cost [£m]	36.17
Average Incremental Cost (AIC) [p/m3]	326.16

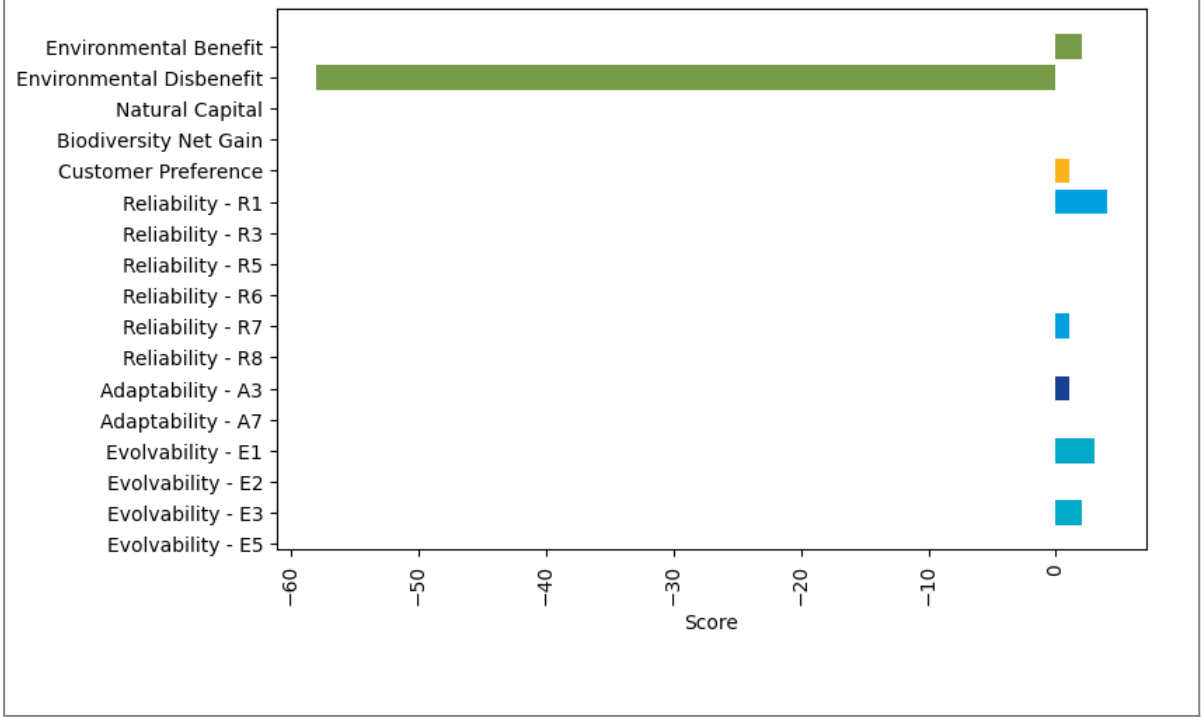
Other

Metric	

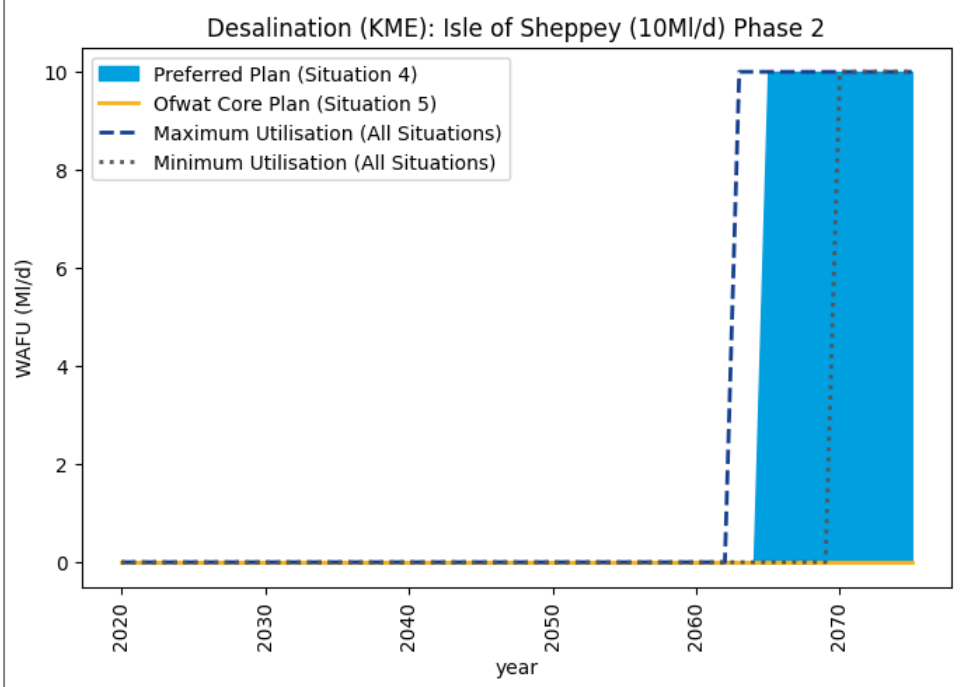
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-58.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (KME): Isle of Sheppey (20Ml/d) - Construction
Source of Supply and main operational features	This option proposes a 20Ml/d desalination plant to meet demand on the Isle of Sheppey. Locating a desalination plant on the Isle of Sheppey has a clear advantage: it would meet local demand while significantly reducing the need for transfers. This option could be enhanced to transfer treated water from the Isle of Sheppey to the wider Kent-Medway WRZs. A number of sites for a desalination plant were investigated and the most suitable would be located on land south of Sheerness Docks currently used for storage of car imports. Water treated at this site would then be pumped to service reservoirs on the island for distribution to customers. This site will be investigated further in the feasibility appraisal.
Area over which option is to be implemented	Kent Medway East
Dependencies	After: Desalination (KME): Isle of Sheppey (20Ml/d) - Planning & Development

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	20
DO 1:200 Peak [Ml/d]	20
DO 1:500 Average [Ml/d]	20
DO 1:500 Peak [Ml/d]	20
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2037
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	18.86
Maximum annual utilisation [Ml/d]	20.00
Environment	
SEA benefit effect	2.00
SEA negative effect	-57.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	565.56
Financing Cost [£m]	730.56
Opex [£m]	402.83
Embodied Carbon [tCo2e]	54,849.11

Average operational carbon emissions [tCo2e/yr]	934.03
Total Carbon Cost [£m]	69.68
Average Incremental Cost (AIC) [p/m3]	216.91

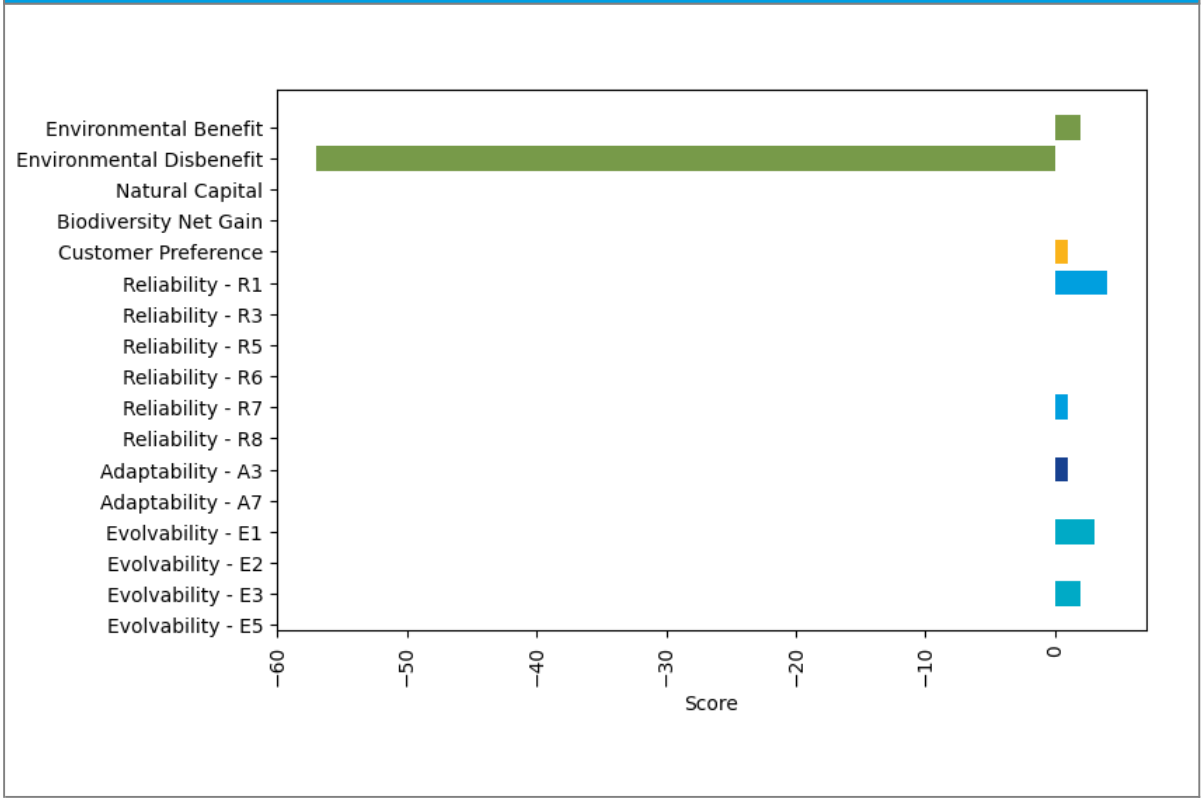
Other

Metric	

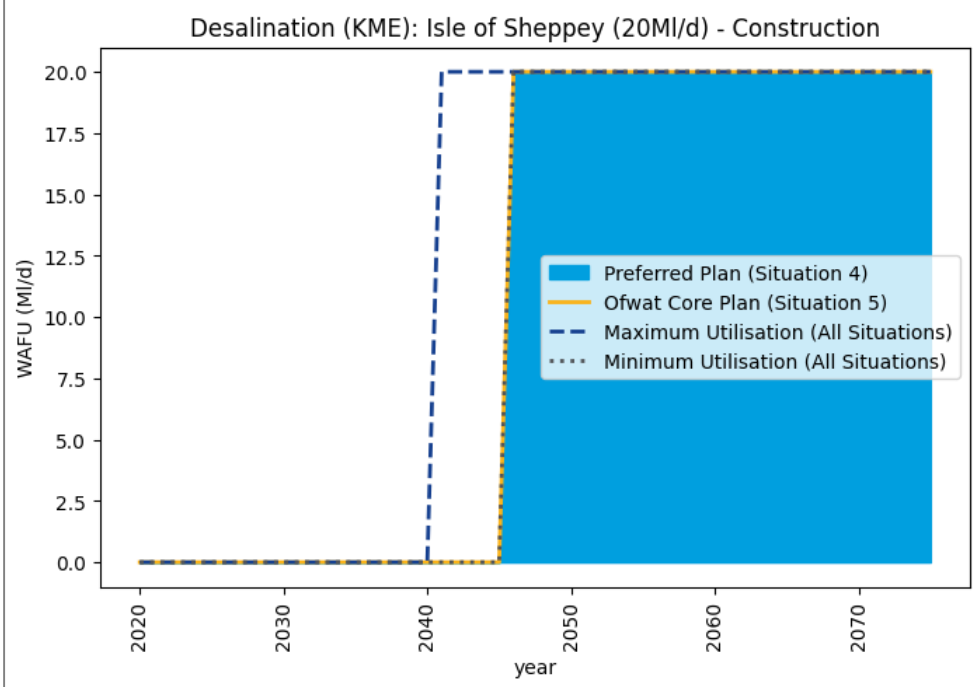
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-57.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (KME): Isle of Sheppey (20Ml/d) - Planning & Development
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2054
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	12.65
Financing Cost [£m]	28.58
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

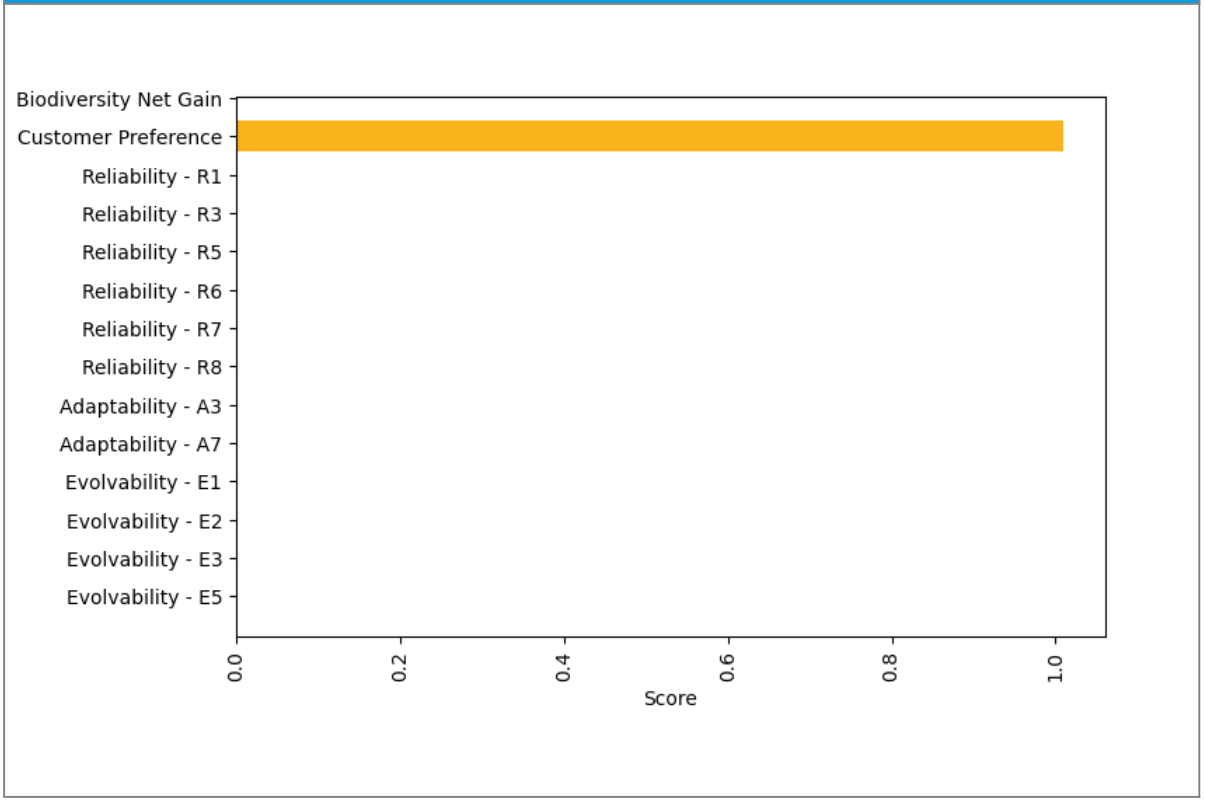
Other

Metric	

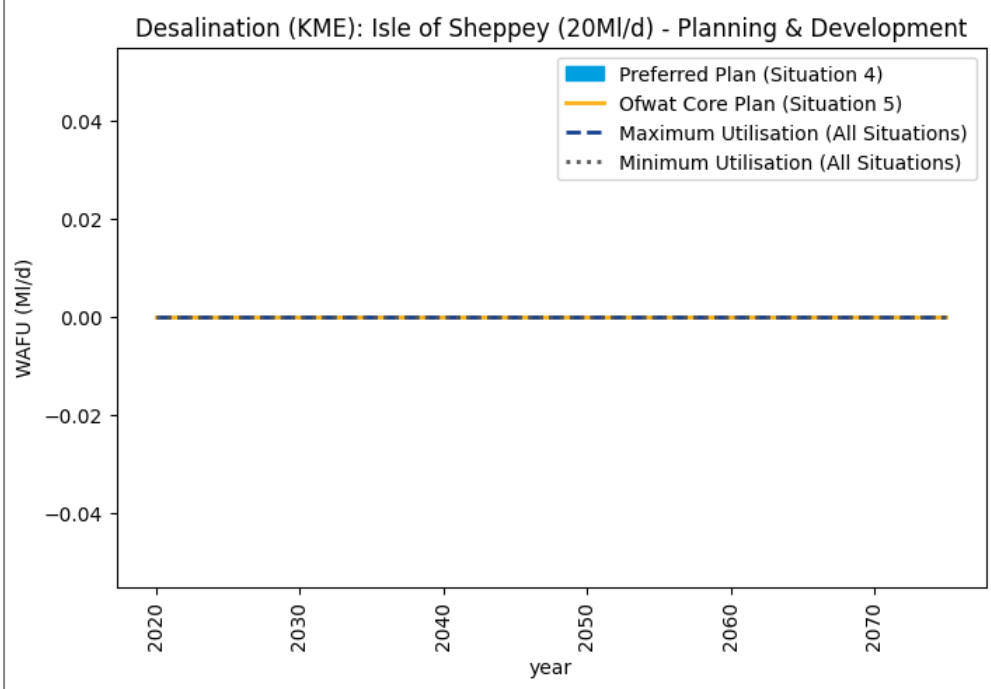
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (KME): Recommission Gravesend (2.7Ml/d)
Source of Supply and main operational features	Gravesend WSW is a well and adit 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) in 2008 suggests that the nitrate problem was likely to be a faulty nitrate monitor. The report recommends a) Undertake a long-term step test with steps of seven days duration at rates of 3.0Mld 3.3Mld and maximum pump capacity (approximately 3.66Mld) subject to stabilisation of pumping water levels during each step b) Recalibrate or repair the online raw water nitrate monitor c) Modify the cover to the satellite well chamber to facilitate improved access Refurbishment of the existing nitrate plant will be required. Scheme Output: 5Mld
Area over which option is to be implemented	Kent Medway East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	2.65
DO 1:200 Peak [Ml/d]	2.65
DO 1:500 Average [Ml/d]	2.65
DO 1:500 Peak [Ml/d]	2.65
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	2
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	2.63
Maximum annual utilisation [Ml/d]	2.65
Environment	
SEA benefit effect	2.00
SEA negative effect	-6.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	1.34
Financing Cost [£m]	2.09
Opex [£m]	8.04

Embodied Carbon [tCo2e]	66.46
Average operational carbon emissions [tCo2e/yr]	36.58
Total Carbon Cost [£m]	1.44
Average Incremental Cost (AIC) [p/m3]	13.50

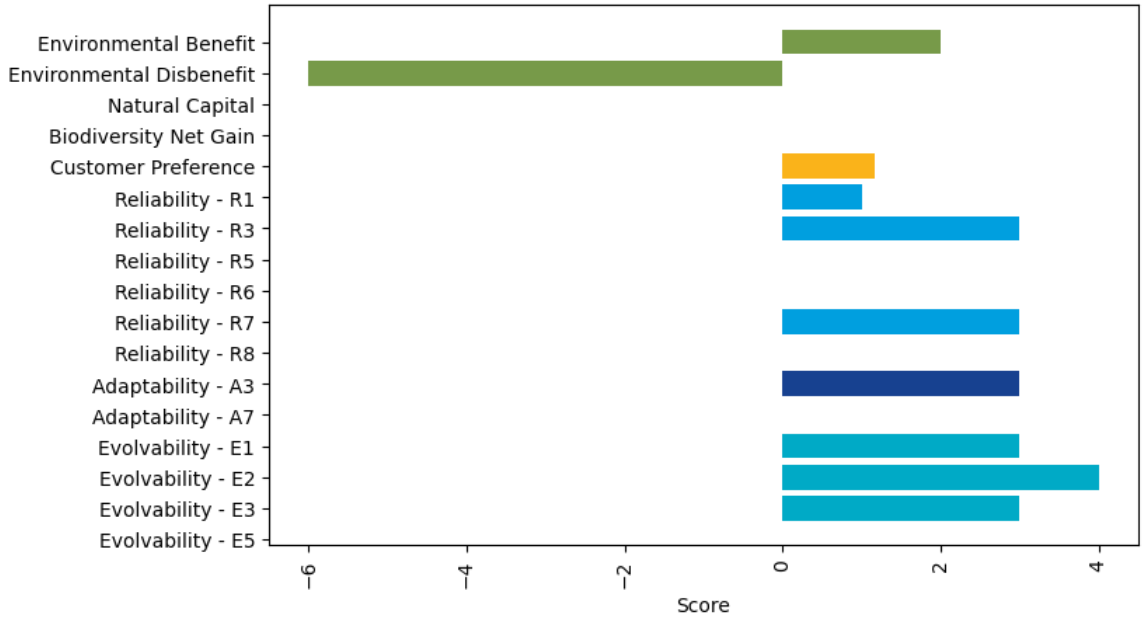
Other

Metric	

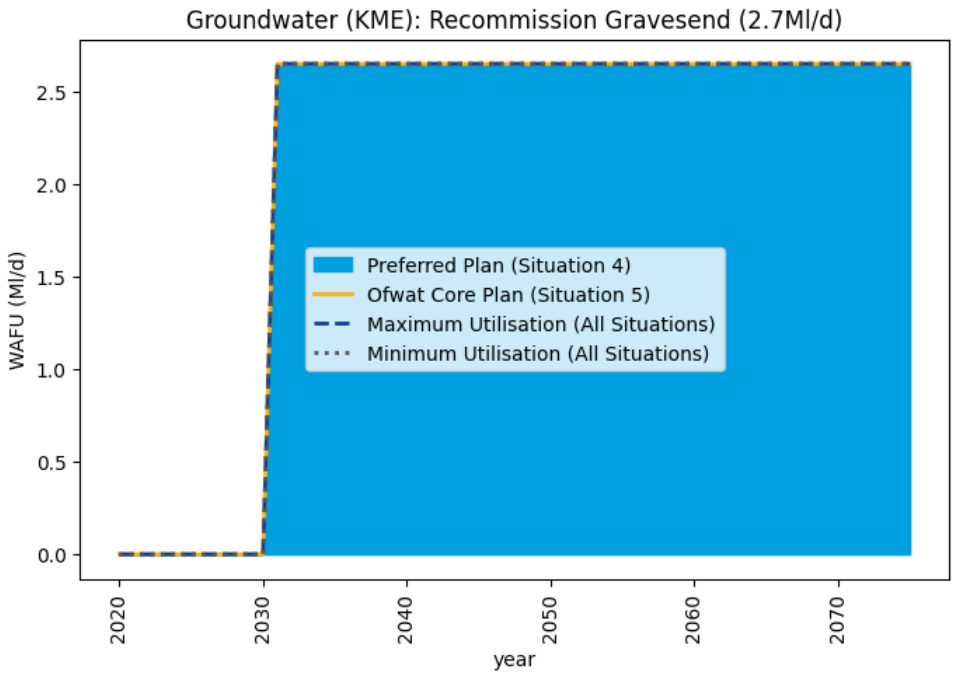
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-6.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	4
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d)
Source of Supply and main operational features	This option is to use a recycling scheme to free up recent actual volume in an Industrial borehole licence to facilitate licence trading. The groundwater is currently utilised in an industrial process. It has been assumed at this stage that the RO wastewater can be discharged through Sittingbourne WwTW existing outfall.
Area over which option is to be implemented	Kent Medway East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	7.5
DO 1:200 Peak [Ml/d]	7.5
DO 1:500 Average [Ml/d]	7.5
DO 1:500 Peak [Ml/d]	7.5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.36
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.15
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	6.30
Maximum annual utilisation [Ml/d]	7.50
Environment	
SEA benefit effect	1.00
SEA negative effect	-39.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-20.82

Financial and Cost Information

Metric	
Capex [£m]	367.04
Financing Cost [£m]	483.07
Opex [£m]	305.84
Embodied Carbon [tCo2e]	38,324.35
Average operational carbon emissions [tCo2e/yr]	66.16
Total Carbon Cost [£m]	20.18
Average Incremental Cost (AIC) [p/m3]	389.86

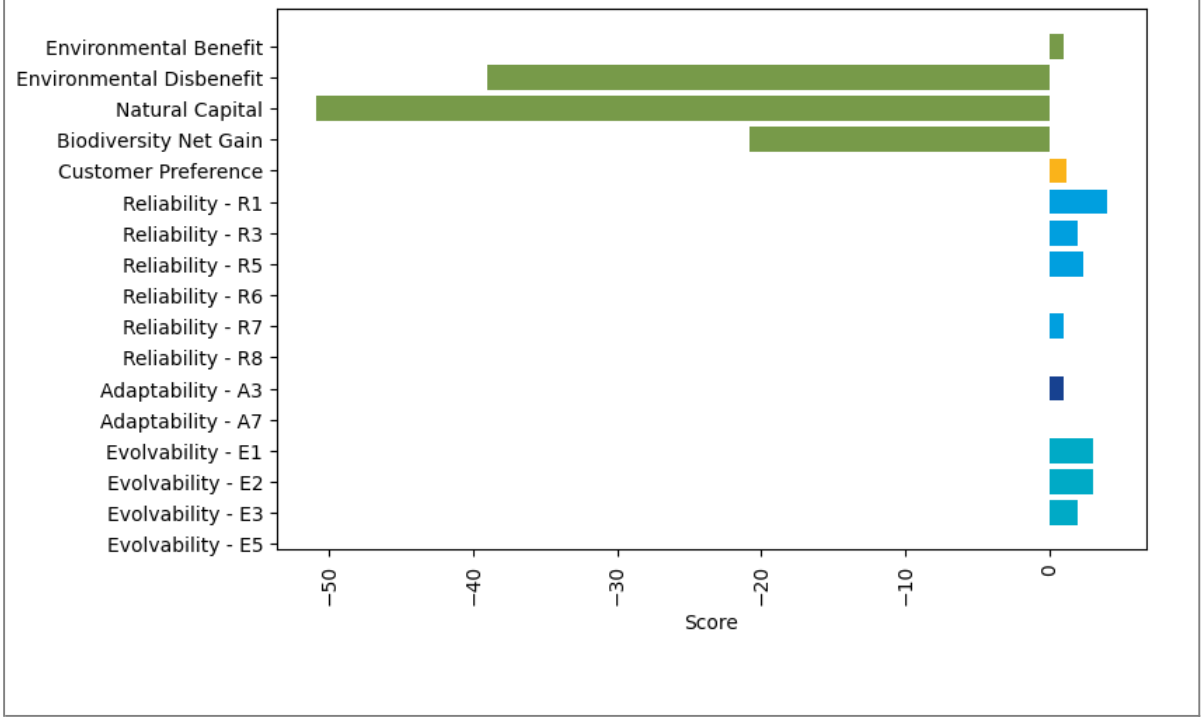
Other

Metric	

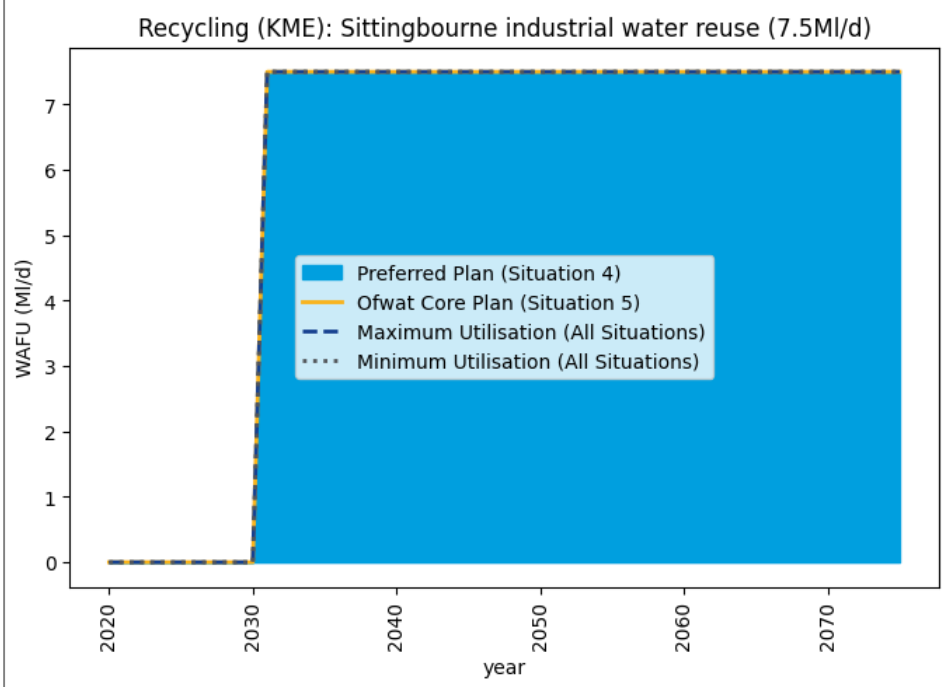
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-39.00
Environmental: Natural Capital	-50.90
Environmental: Biodiversity Net Gain	-20.82
Social: Customer Preference	1.15
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2.357142857
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	3
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (KME): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.1
DO 1:500 Peak [Ml/d]	0.1
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.10
Maximum annual utilisation [Ml/d]	0.10
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

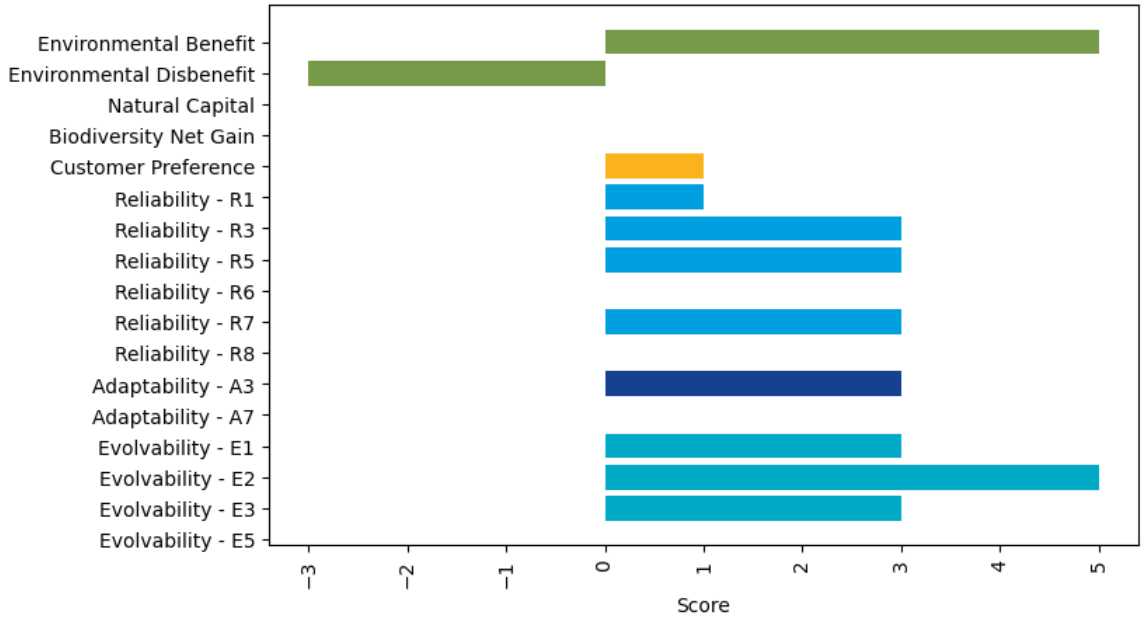
Other

Metric	

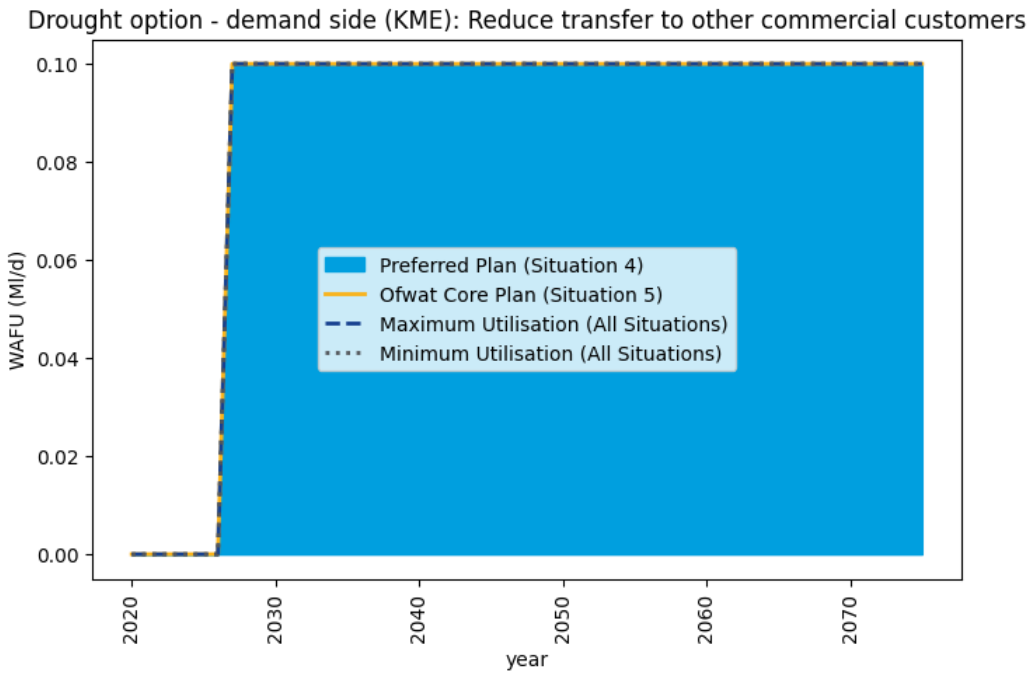
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (KMW): Thames Estuary (20Ml/d) Phase 2
Source of Supply and main operational features	This option proposes the development of a desalination plant on the Swanscombe Peninsula which would be capable of producing 20Mld and would combine discharge with Swanscombe WwTW's existing outfall. Treated water would be transferred to a service reservoir for distribution to the Kent Medway WRZs.
Area over which option is to be implemented	Kent Medway West
Dependencies	After one of: Desalination (KMW): Thames Estuary (20Ml/d) - Construction, Desalination (KMW): Thames Estuary (10Ml/d) - Construction

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	20
DO 1:200 Peak [Ml/d]	20
DO 1:500 Average [Ml/d]	20
DO 1:500 Peak [Ml/d]	20
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	3
Earliest start date	01/04/2039
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	19.22
Maximum annual utilisation [Ml/d]	20.00
Environment	
SEA benefit effect	5.00
SEA negative effect	-46.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-184.41

Financial and Cost Information

Metric	
Capex [£m]	627.56
Financing Cost [£m]	814.06
Opex [£m]	403.37
Embodied Carbon [tCo2e]	41,888.35
Average operational carbon emissions [tCo2e/yr]	558.35
Total Carbon Cost [£m]	47.43
Average Incremental Cost (AIC) [p/m3]	223.67

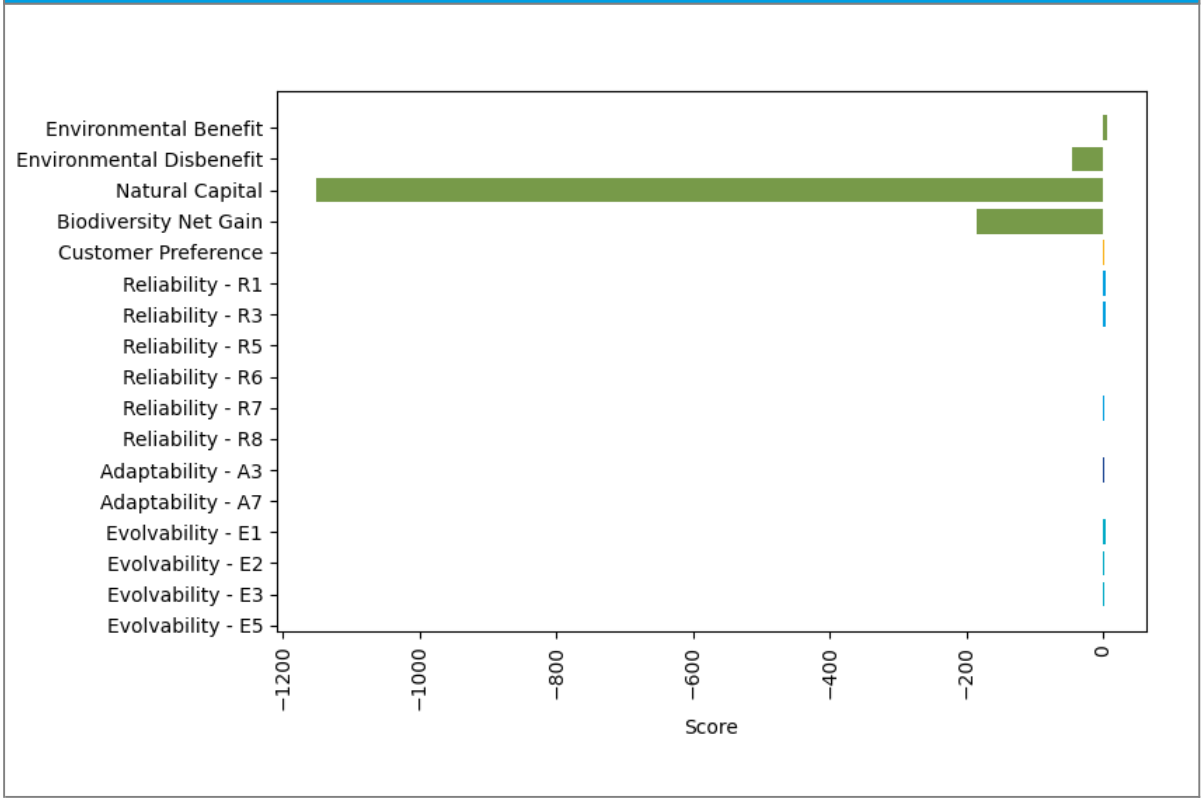
Other

Metric	

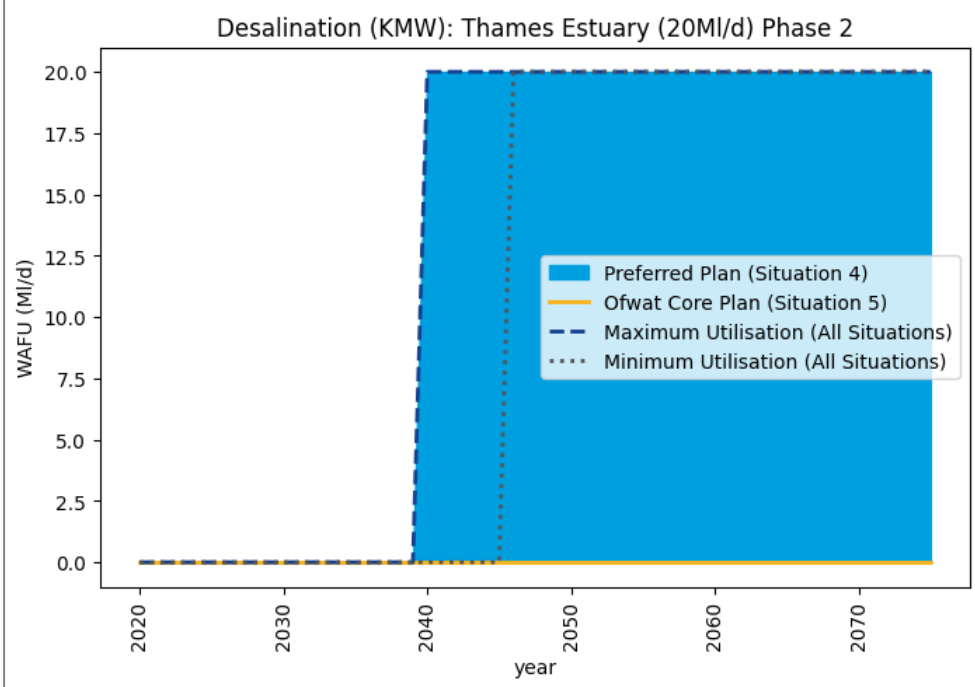
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-46.00
Environmental: Natural Capital	-1150.94
Environmental: Biodiversity Net Gain	-184.41
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (KMW): Thames Estuary (20Ml/d) - Construction
Source of Supply and main operational features	This option proposes the development of a desalination plant on the Swanscombe Peninsula which would be capable of producing 10Mld and would combine discharge with Swanscombe WwTW's existing outfall. Treated water would be transferred to a service reservoir for distribution to the Kent Medway WRZ.
Area over which option is to be implemented	Kent Medway West
Dependencies	After: Desalination (KMW): Thames Estuary (20Ml/d) - Planning & Development

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	20
DO 1:200 Peak [Ml/d]	20
DO 1:500 Average [Ml/d]	20
DO 1:500 Peak [Ml/d]	20
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	3
Earliest start date	01/04/2039
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	19.11
Maximum annual utilisation [Ml/d]	20.00
Environment	
SEA benefit effect	5.00
SEA negative effect	-46.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-184.41

Financial and Cost Information

Metric	
Capex [£m]	627.56
Financing Cost [£m]	814.06
Opex [£m]	403.37
Embodied Carbon [tCo2e]	41,888.35
Average operational carbon emissions [tCo2e/yr]	555.20
Total Carbon Cost [£m]	47.43
Average Incremental Cost (AIC) [p/m3]	223.67

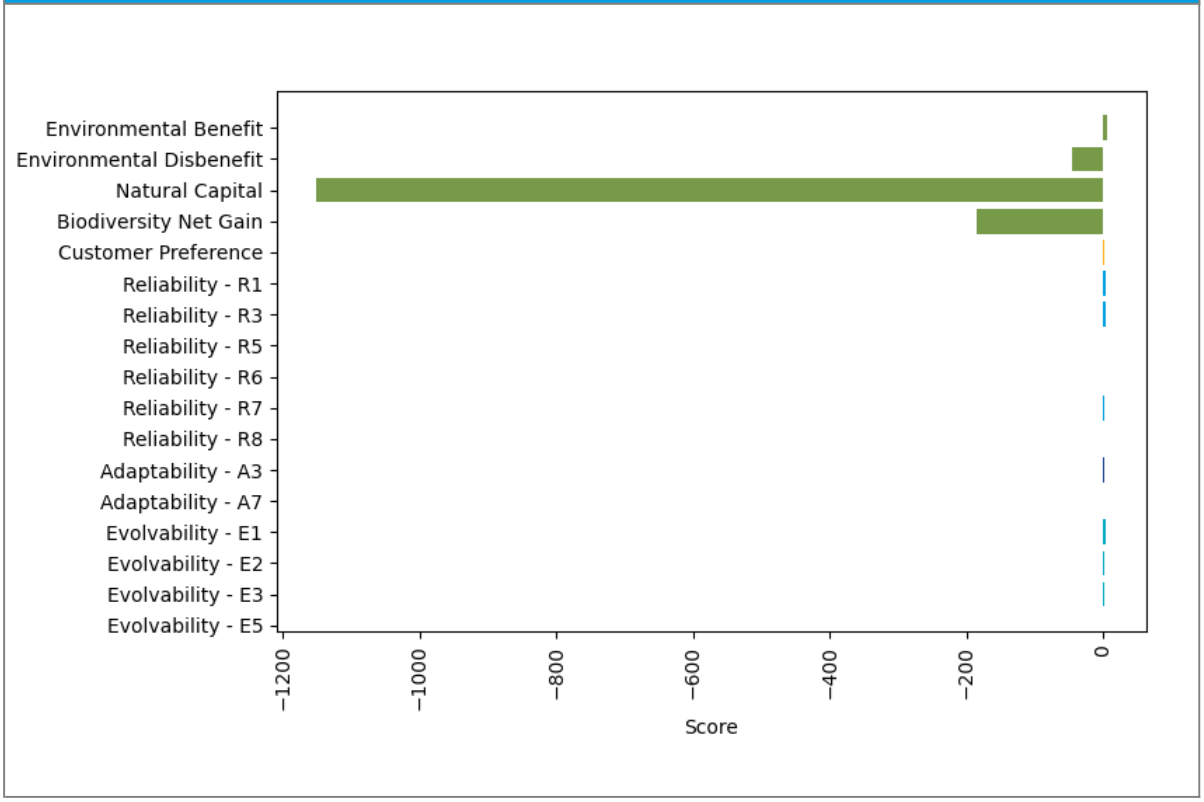
Other

Metric	

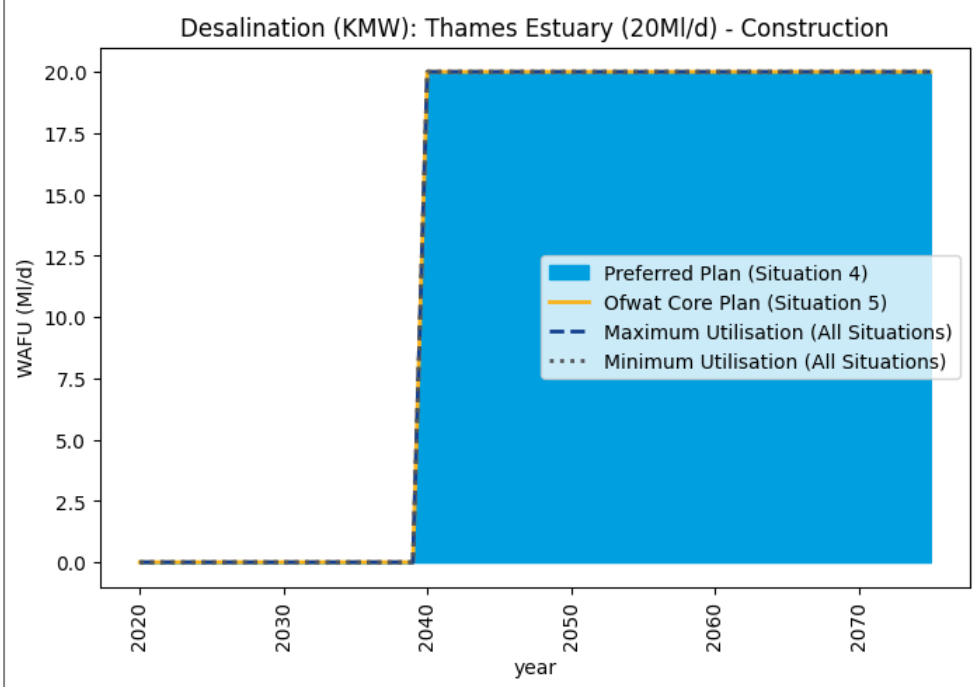
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-46.00
Environmental: Natural Capital	-1150.94
Environmental: Biodiversity Net Gain	-184.41
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (KMW): Thames Estuary (20Ml/d) - Planning & Development
Source of Supply and main operational features	This option proposes the development of a desalination plant on the Swanscombe Peninsula which would be capable of producing 20Mld and would combine discharge with Swanscombe WwTW's existing outfall. Treated water would be transferred to a service reservoir for distribution to the Kent Medway WRZs. This sub option covers plant development.
Area over which option is to be implemented	Kent Medway West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	3
Earliest start date	01/04/2054
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	18.03
Financing Cost [£m]	41.16
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

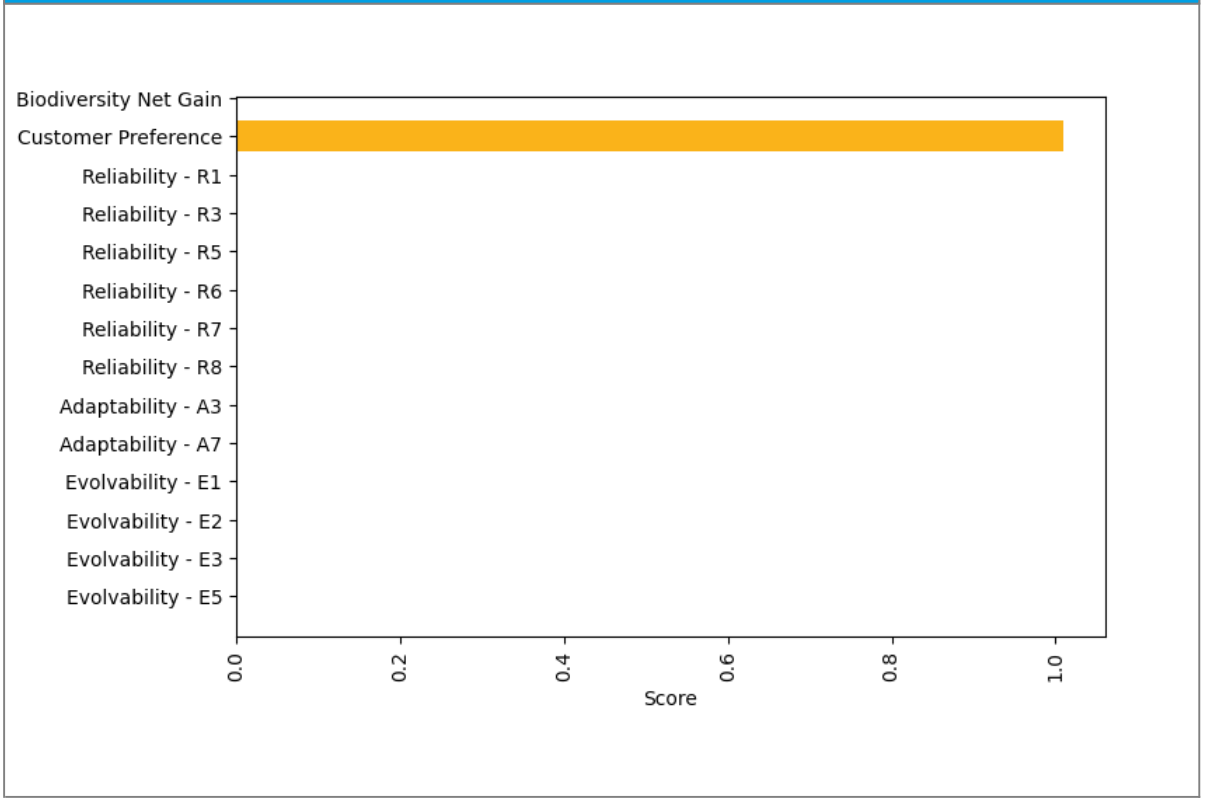
Other

Metric	

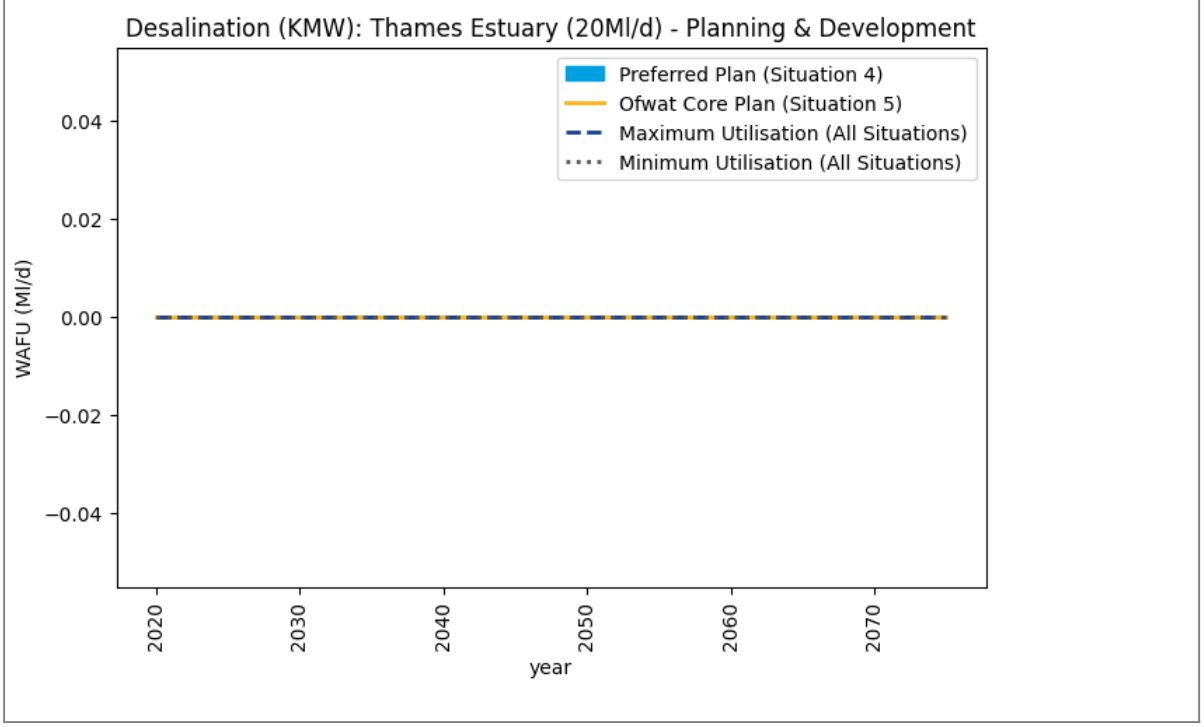
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (KMW): Thames Estuary (10Ml/d) - Planning
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	01/04/2054
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	1.43
Financing Cost [£m]	3.31
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

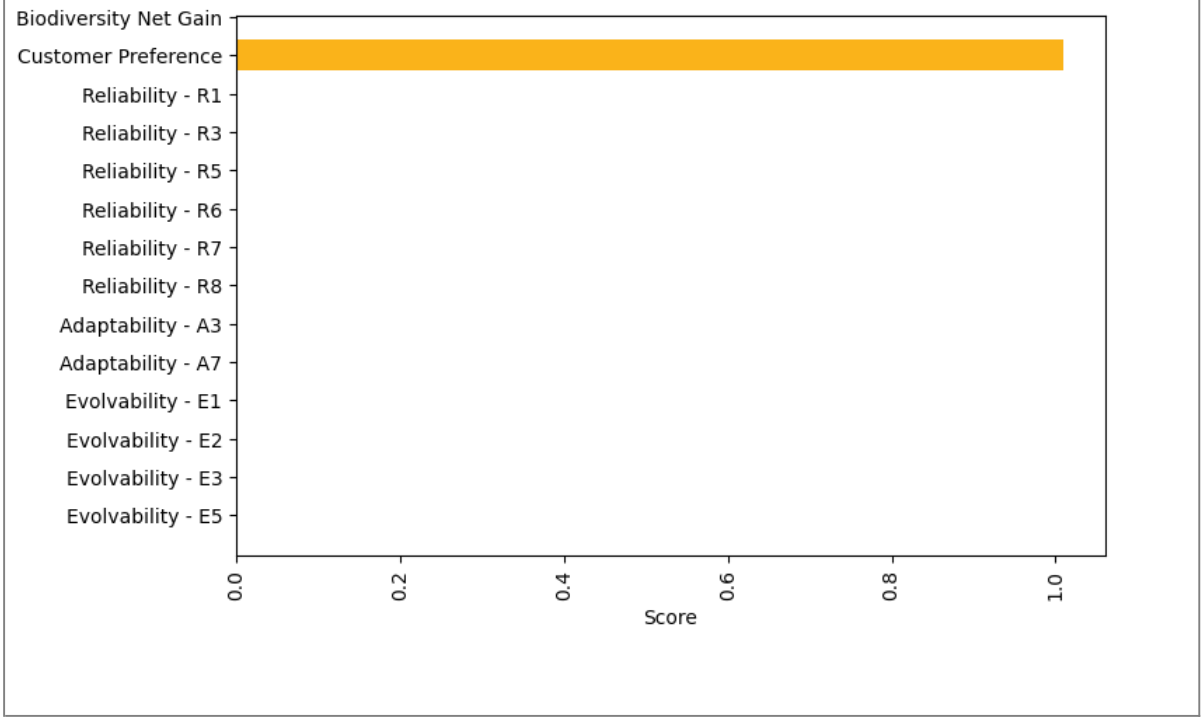
Other

Metric	

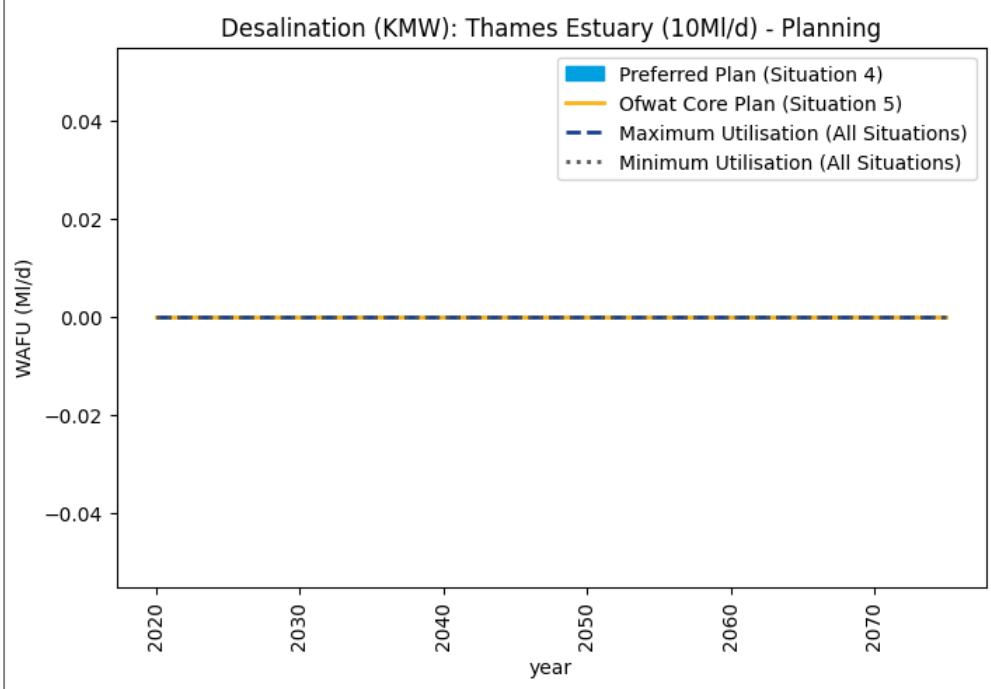
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Recycling (KMW): Medway to lake (14Ml/d)
Source of Supply and main operational features	This option involves the transfer of 18Mld of treated effluent from Medway WWTW to Near Rochester WSW's raw water storage reservoir.
Area over which option is to be implemented	Kent Medway West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	14
DO 1:200 Peak [Ml/d]	14
DO 1:500 Average [Ml/d]	14
DO 1:500 Peak [Ml/d]	14
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	2
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.15
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	10.61
Maximum annual utilisation [Ml/d]	14.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-33.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-41.81

Financial and Cost Information

Metric	
Capex [£m]	314.99
Financing Cost [£m]	425.38
Opex [£m]	173.37
Embodied Carbon [tCo2e]	42,048.41
Average operational carbon emissions [tCo2e/yr]	200.41
Total Carbon Cost [£m]	25.68
Average Incremental Cost (AIC) [p/m3]	153.52

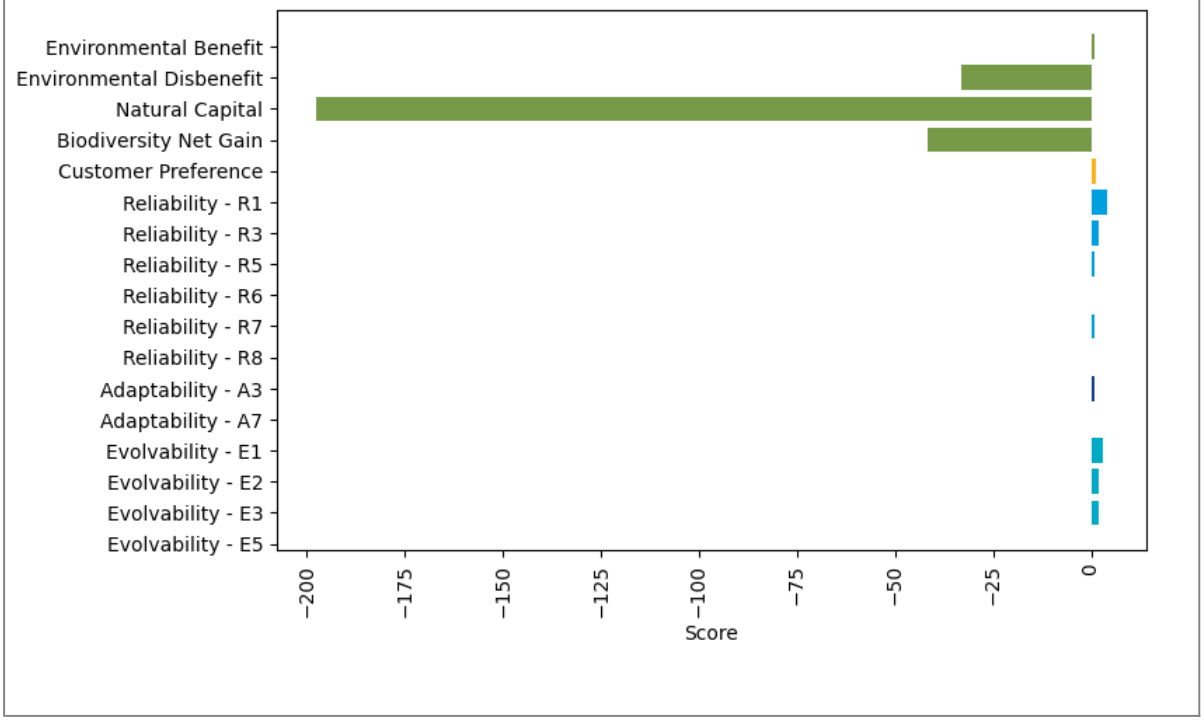
Other

Metric	

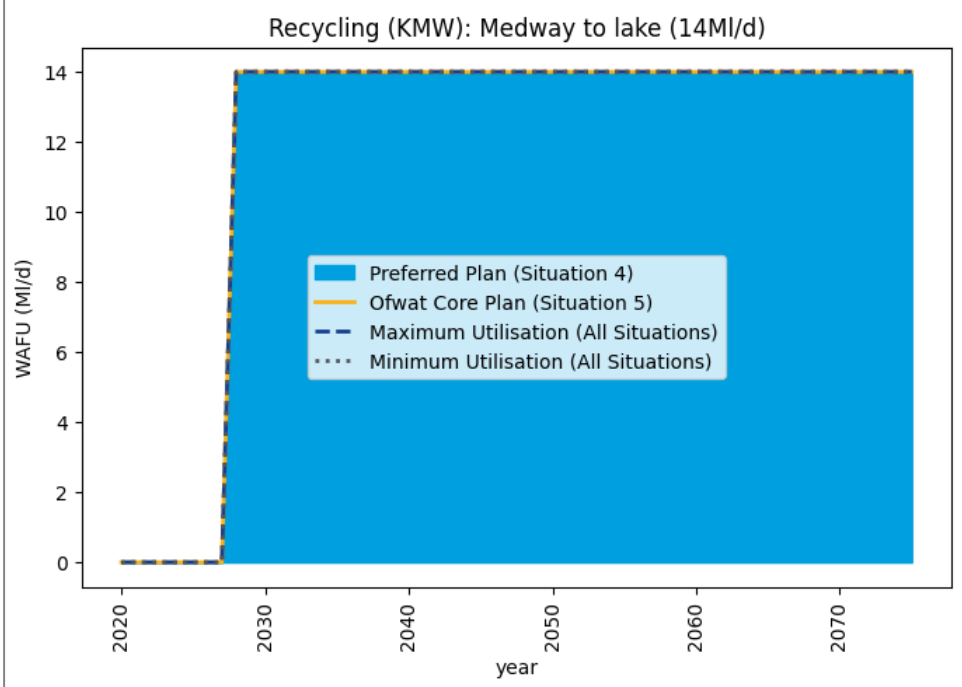
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-33.00
Environmental: Natural Capital	-197.60
Environmental: Biodiversity Net Gain	-41.81
Social: Customer Preference	1.15
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Storage (SHZ): Raising Bewl Reservoir 0.4m (3Ml/d)
Source of Supply and main operational features	The scheme involves the raising of Bewl Reservoir by 0.4m to increase storage and yield. The major works for raising Bewl to higher TWL levels will include: • Raise the dam crest and build new wave wall; • Raise overflow and valve chamber shafts; and • Many ancillary works around the perimeter of the reservoir.
Area over which option is to be implemented	Kent Medway West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	0
DO 1:200 Peak [Ml/d]	0
DO 1:500 Average [Ml/d]	3
DO 1:500 Peak [Ml/d]	0
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	6
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	3.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.57
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.26
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	3.00
Maximum annual utilisation [Ml/d]	3.00
Environment	
SEA benefit effect	2.00
SEA negative effect	-30.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-98.16

Financial and Cost Information

Metric	
Capex [£m]	97.24
Financing Cost [£m]	183.05
Opex [£m]	6.19
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	245.03

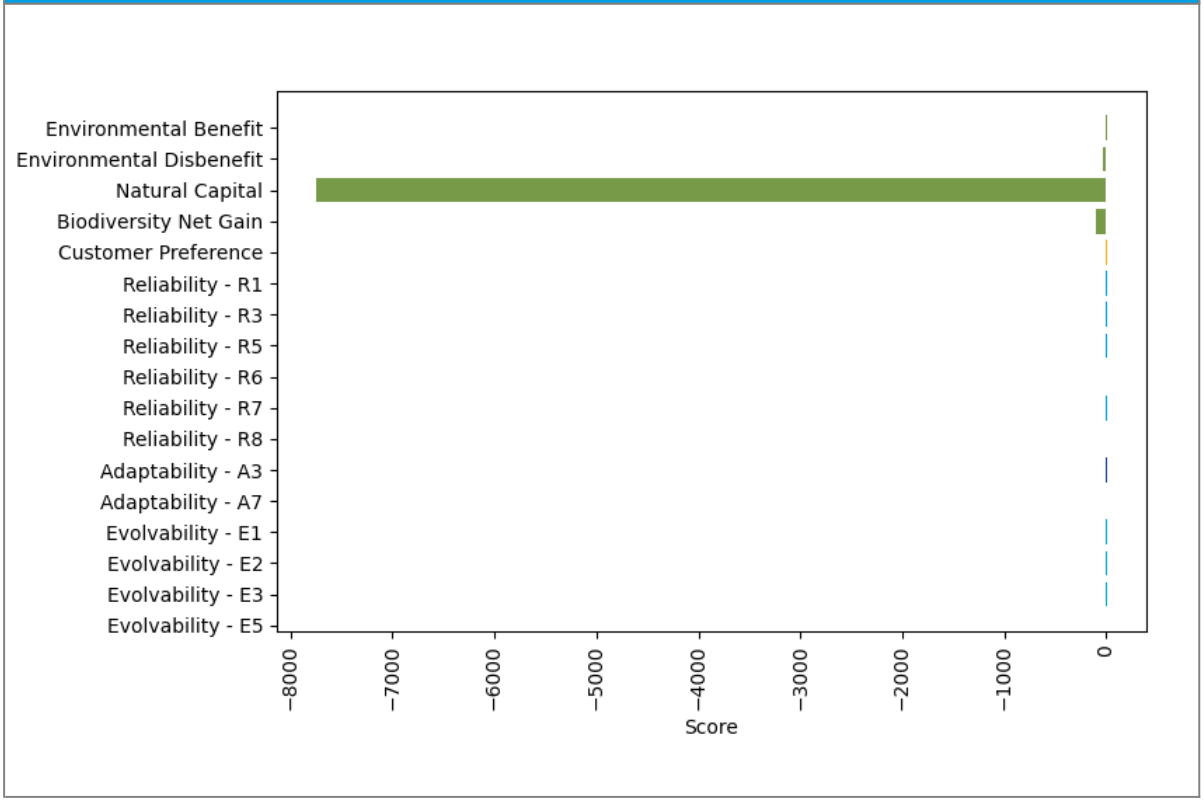
Other

Metric	

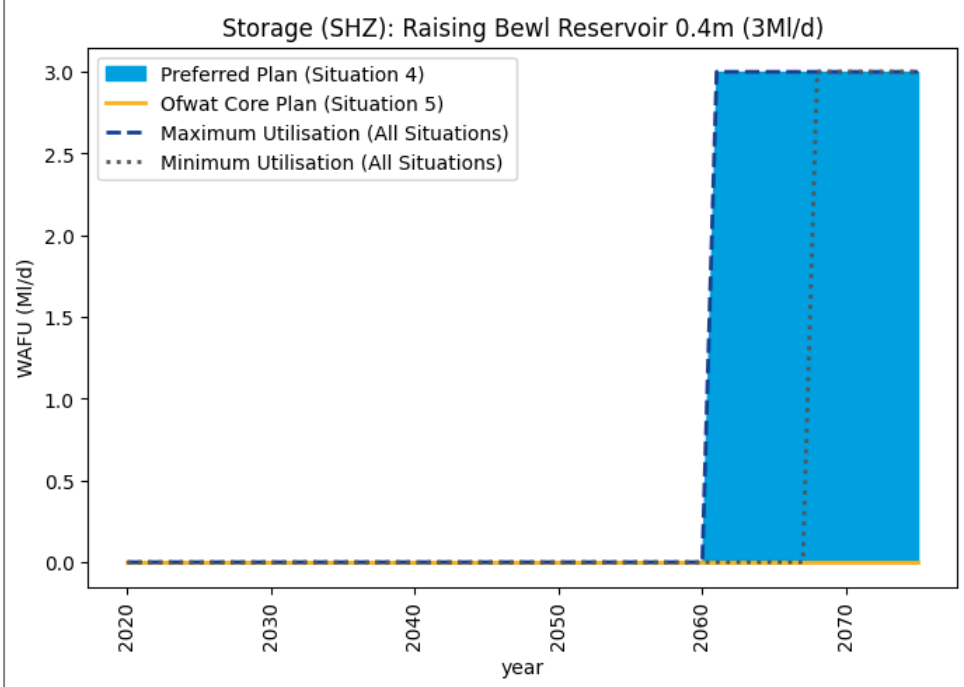
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-30.00
Environmental: Natural Capital	-7744.07
Environmental: Biodiversity Net Gain	-98.16
Social: Customer Preference	1.26
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	3.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	4.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3.571428571
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	4
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (KMW): River Medway Scheme 1-4 (17Ml/d)
Source of Supply and main operational features	Bewl Reservoir is a pumped storage reservoir with abstractions from the River Teise and the River Medway. 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.
Area over which option is to be implemented	Kent Medway West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	17
DO 1:200 Peak [Ml/d]	17
DO 1:500 Average [Ml/d]	17
DO 1:500 Peak [Ml/d]	17
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.57
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	5.09
Maximum annual utilisation [Ml/d]	17.00
Environment	
SEA benefit effect	8.00
SEA negative effect	-7.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	12.00
Financing Cost [£m]	25.23
Opex [£m]	4.44
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	3.61
Total Carbon Cost [£m]	0.20
Average Incremental Cost (AIC) [p/m3]	14.25

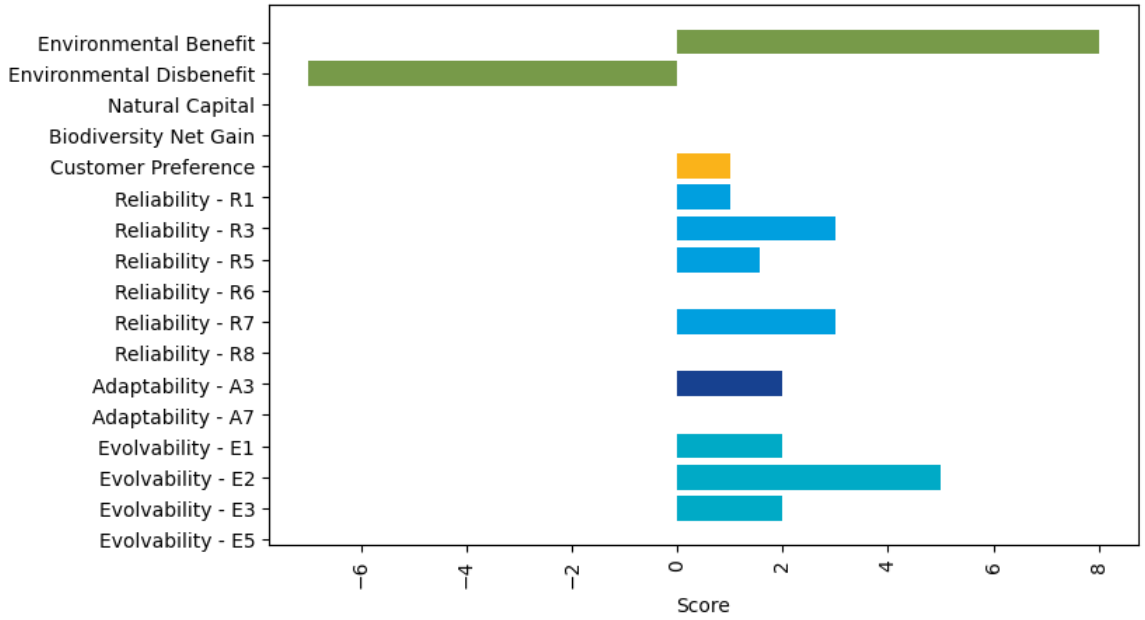
Other

Metric	

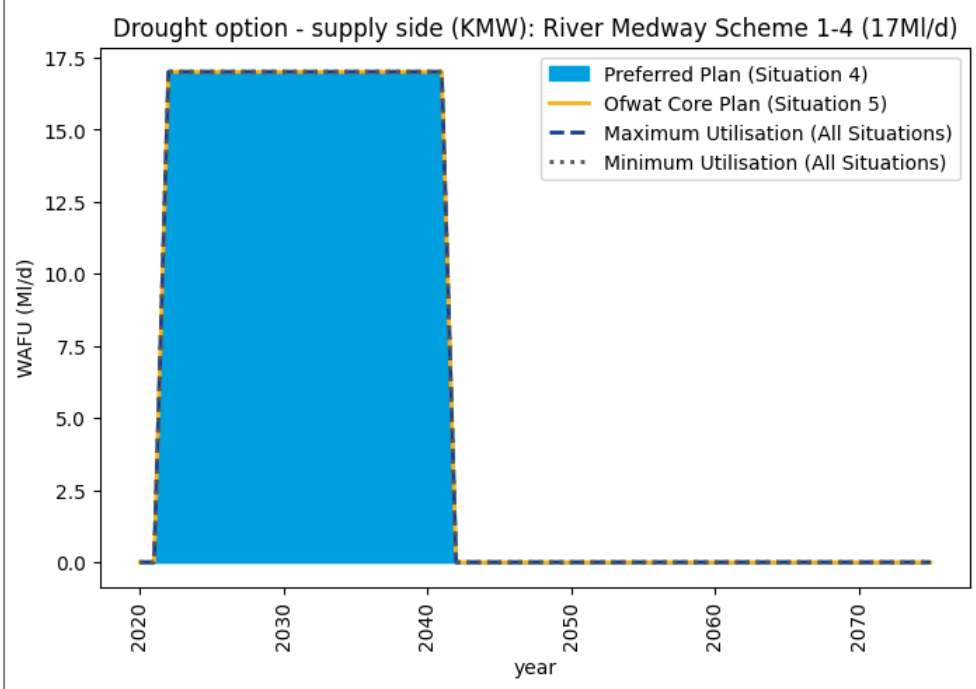
Best Value Metrics

Metric	
Environmental: Environmental Benefit	8.00
Environmental: Environmental Disbenefit	-7.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1.571428571
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (KMW): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway West
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.09
DO 1:500 Peak [Ml/d]	0.09
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.09
Maximum annual utilisation [Ml/d]	0.09
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

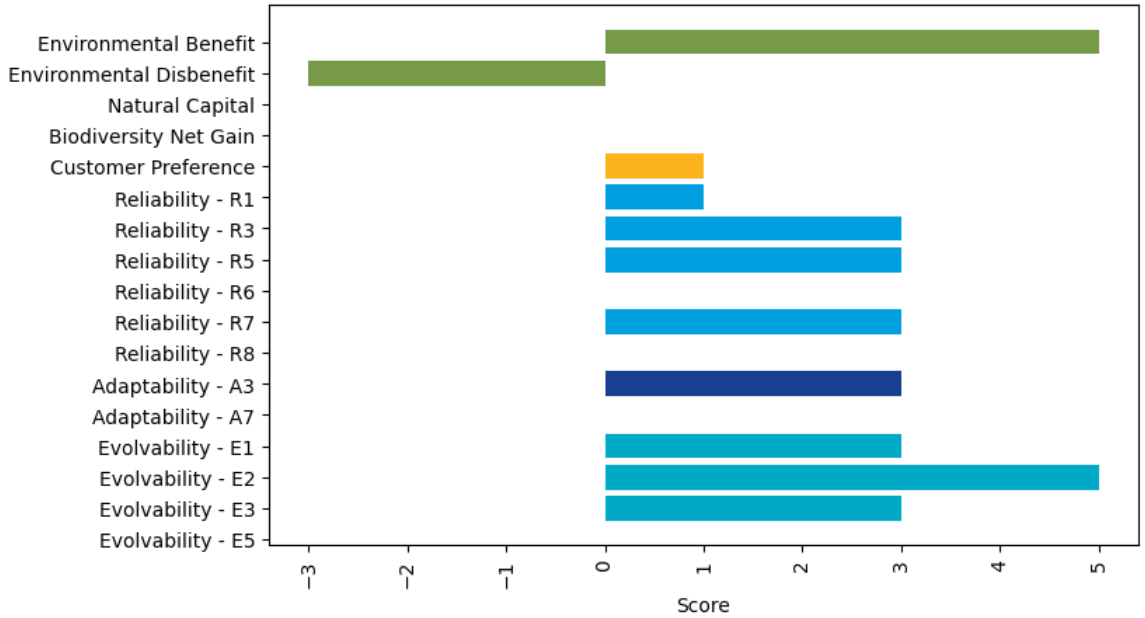
Other

Metric	

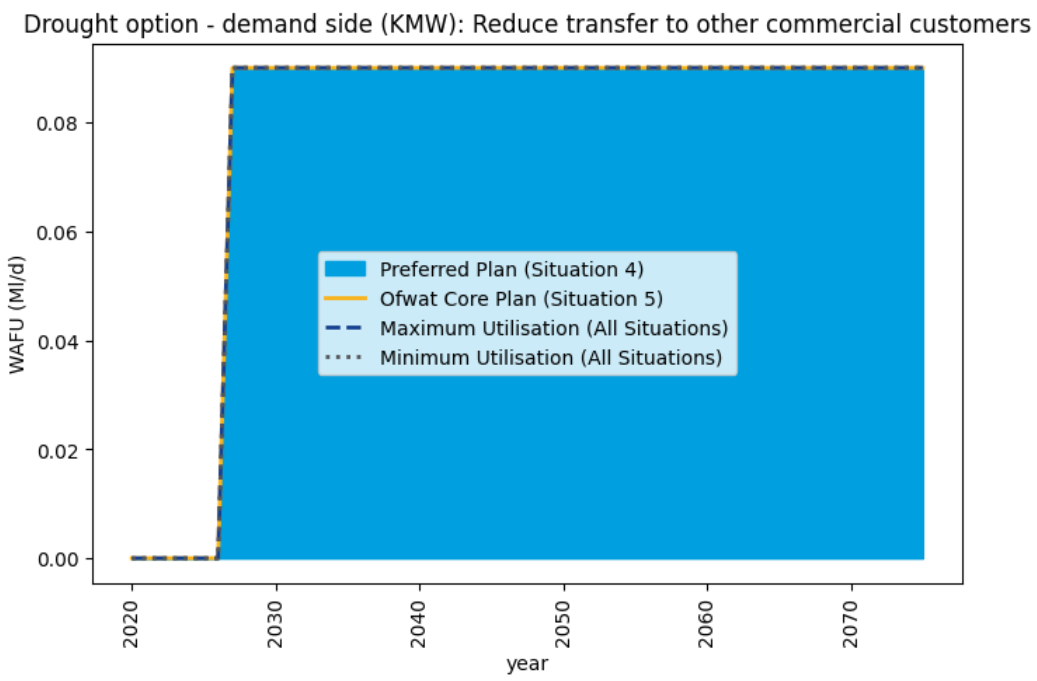
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (KMW-KME): Existing transfer (44.7Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	44.7
DO 1:200 Peak [Ml/d]	44.7
DO 1:500 Average [Ml/d]	44.7
DO 1:500 Peak [Ml/d]	44.7
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	27.25
Maximum annual utilisation [Ml/d]	40.91
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.02
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

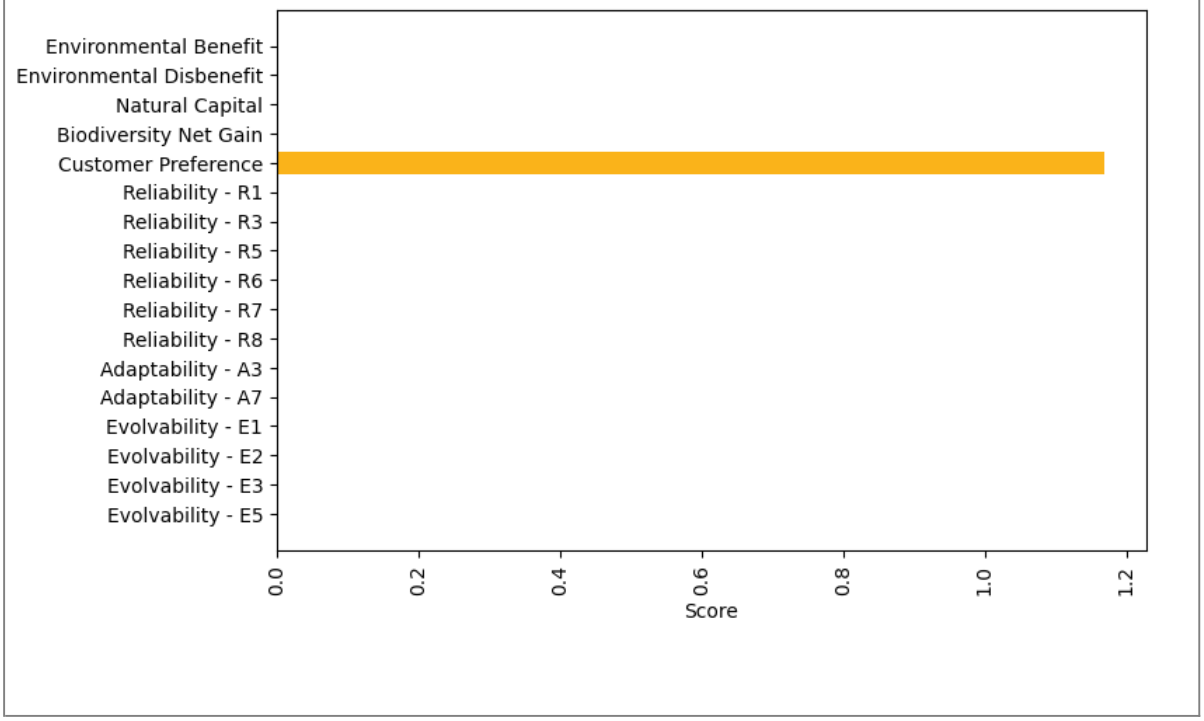
Other

Metric	

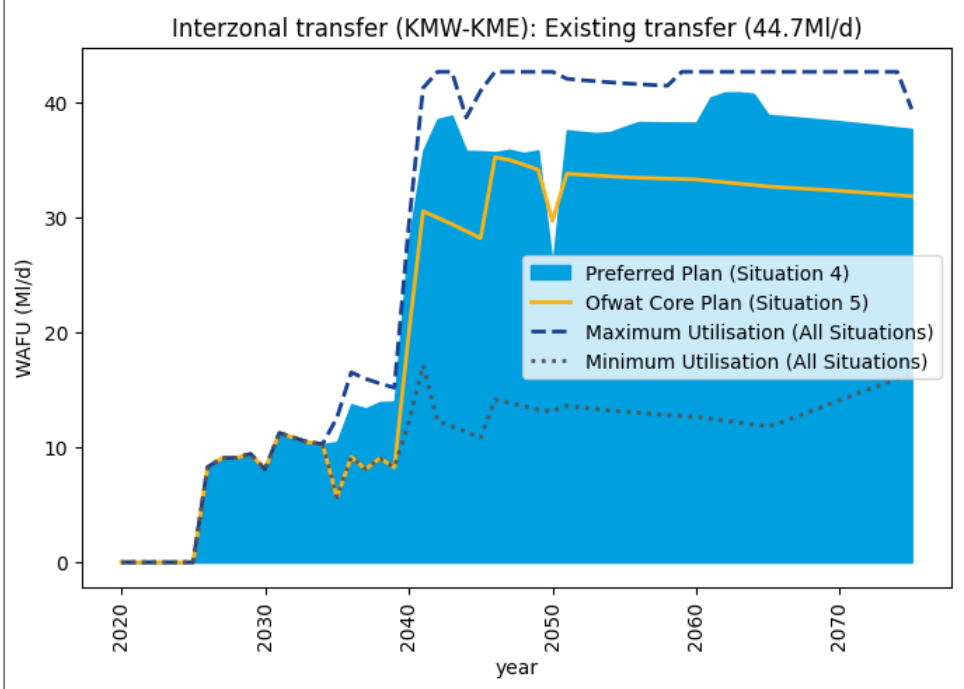
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (KME-KTZ): Utilise full existing transfer capacity (9Ml/d)
Source of Supply and main operational features	Interzonal transfer (KTZ-KMW): Utilise full existing transfer capacity (9Ml/d)
Area over which option is to be implemented	Kent Thannet
Dependencies	Bidirectional Version: Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	9
DO 1:200 Peak [Ml/d]	9
DO 1:500 Average [Ml/d]	9
DO 1:500 Peak [Ml/d]	9
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	2
Earliest start date	01/04/2027
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.02
Maximum annual utilisation [Ml/d]	1.00
Environment	
SEA benefit effect	4.00
SEA negative effect	-20.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-1.85

Financial and Cost Information

Metric	
Capex [£m]	52.44
Financing Cost [£m]	69.63
Opex [£m]	69.85
Embodied Carbon [tCo2e]	13,593.23
Average operational carbon emissions [tCo2e/yr]	0.12
Total Carbon Cost [£m]	7.45
Average Incremental Cost (AIC) [p/m3]	55.92

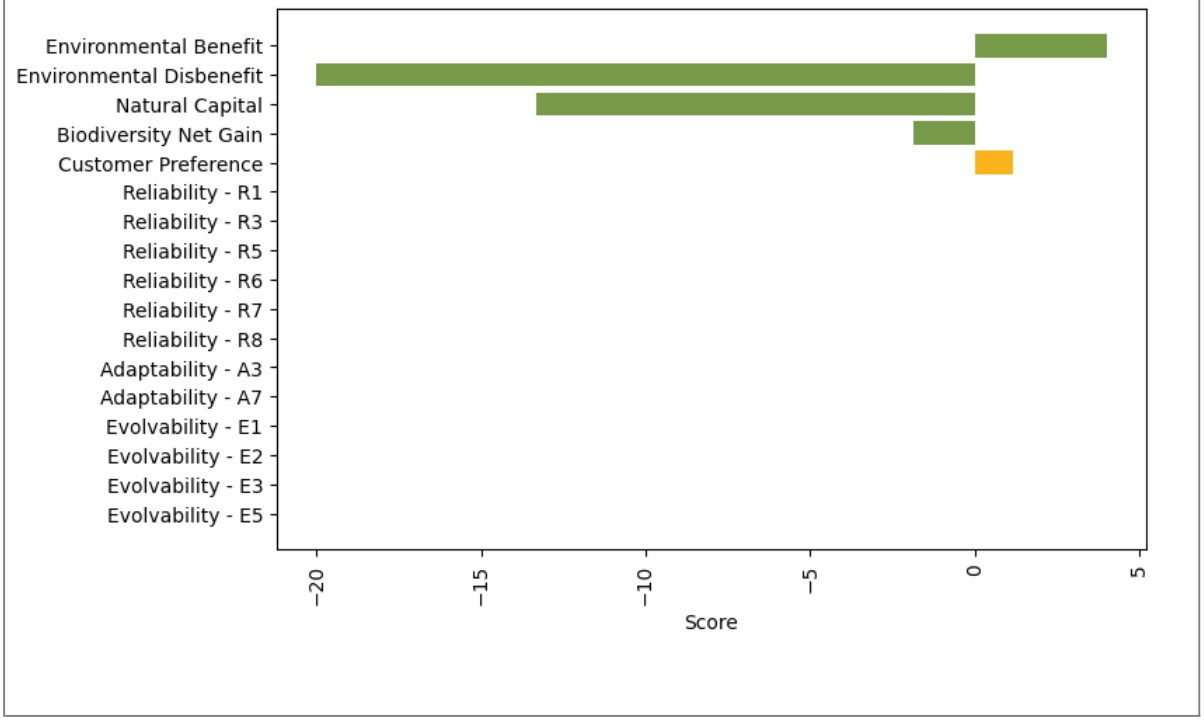
Other

Metric	

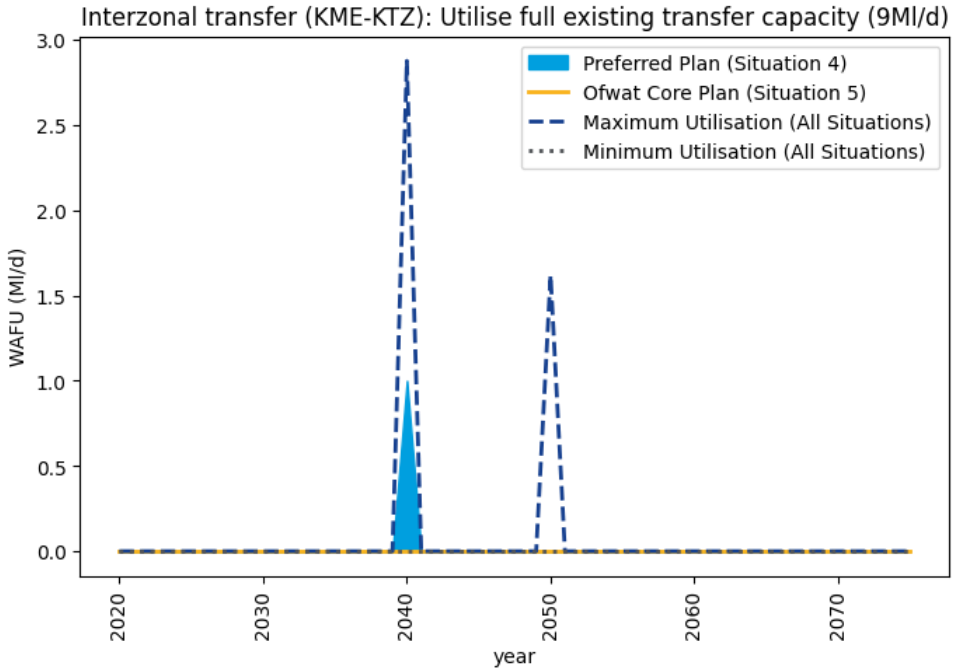
Best Value Metrics

Metric	
Environmental: Environmental Benefit	4.00
Environmental: Environmental Disbenefit	-20.00
Environmental: Natural Capital	-13.31
Environmental: Biodiversity Net Gain	-1.85
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway East
Dependencies	Bidirectional Version: Interzonal transfer (KME-KTZ): Utilise full existing transfer capacity (9Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	9
DO 1:200 Peak [Ml/d]	9
DO 1:500 Average [Ml/d]	9
DO 1:500 Peak [Ml/d]	9
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	2
Earliest start date	01/04/2027
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	4.00
SEA negative effect	-20.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-1.85

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	59.31
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	1.43
Average Incremental Cost (AIC) [p/m3]	23.15

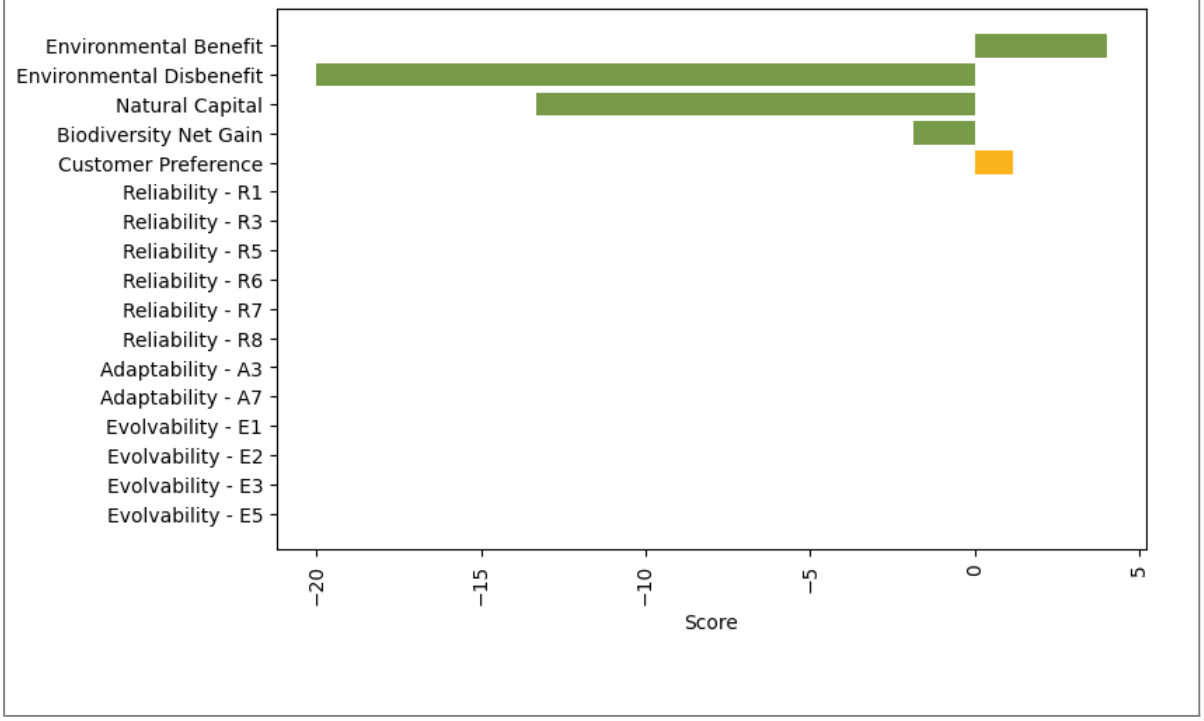
Other

Metric	

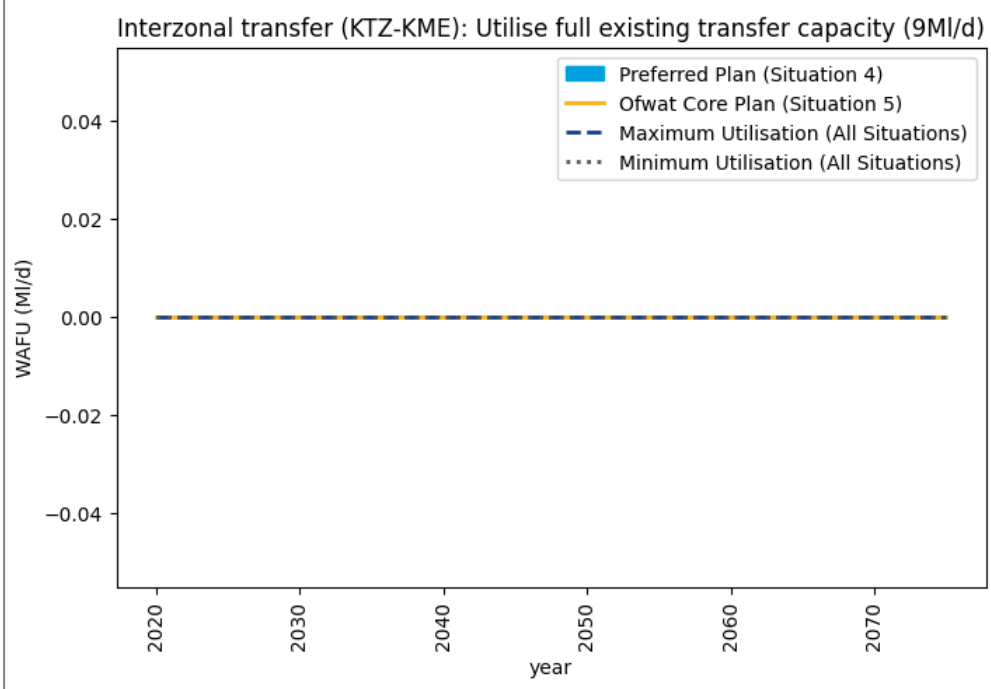
Best Value Metrics

Metric	
Environmental: Environmental Benefit	4.00
Environmental: Environmental Disbenefit	-20.00
Environmental: Natural Capital	-13.31
Environmental: Biodiversity Net Gain	-1.85
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Demand adjustment (KTZ): Headroom adjustment for Regional Plan integrity
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Thannet
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	1.7
DO 1:500 Peak [Ml/d]	1.7
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.46
Flexibility	
Scalability and modularity [Best Value Metric]	5
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.03
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	1.20
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	48.23

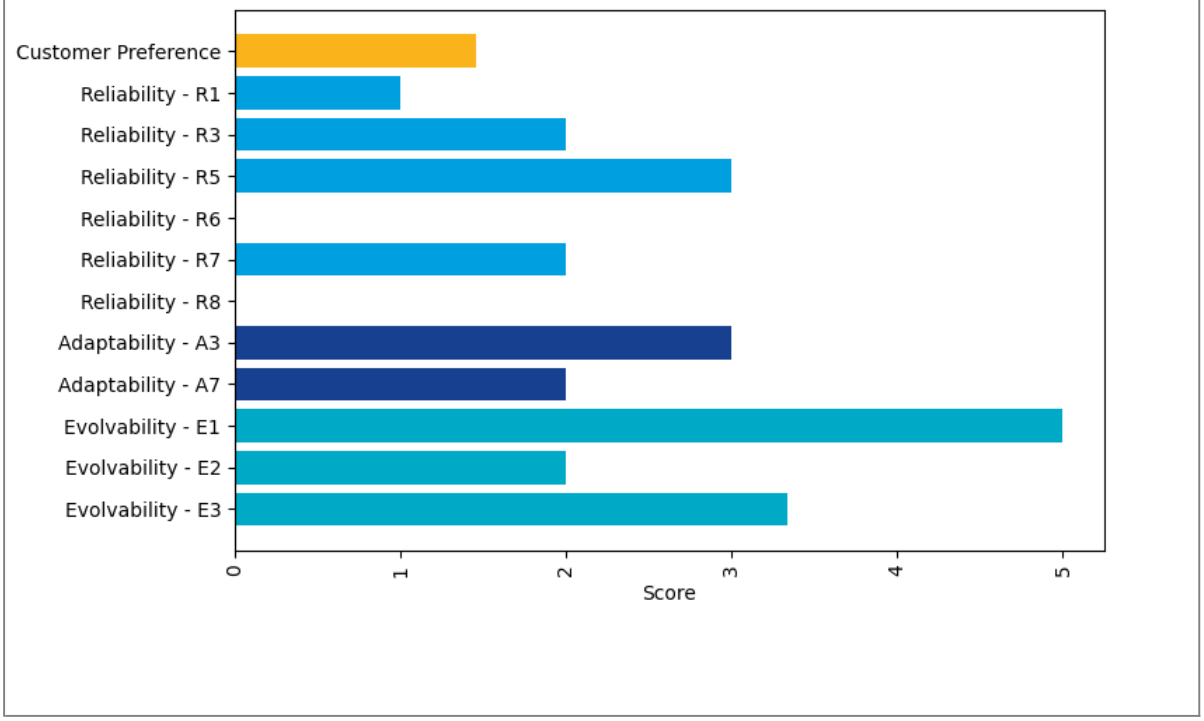
Other

Metric	

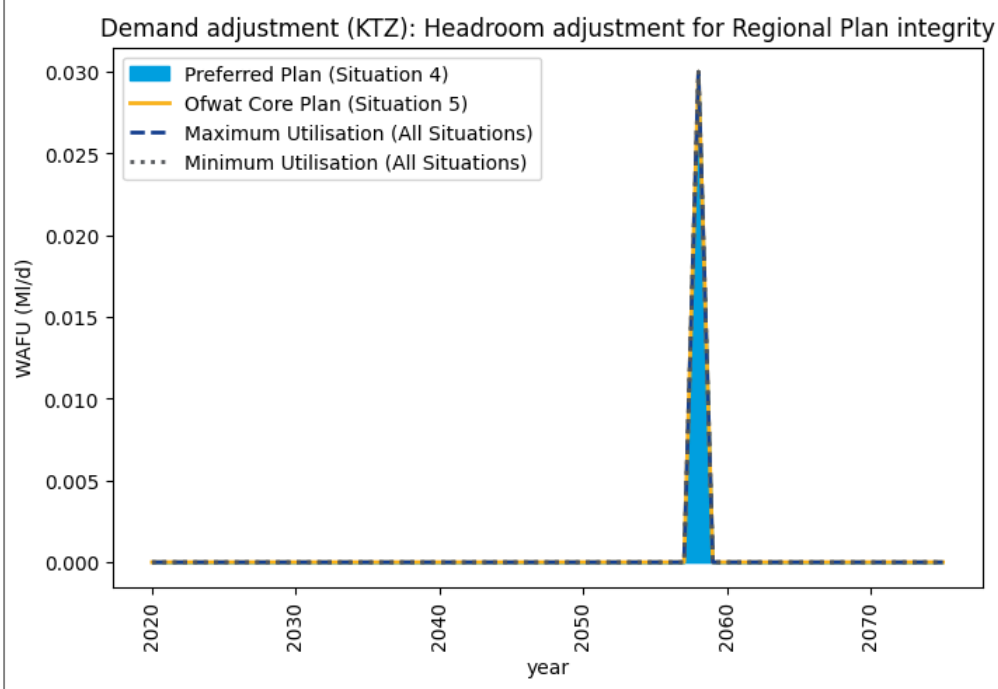
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.46
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	2
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	2
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	5
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3.333333333
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (KTZ): East Thanet (20Ml/d) - Construction
Source of Supply and main operational features	This option proposes a 20Ml/d desalination plant constructed near to the North Thanet Coast and would supply potable desalinated water to the Kent Thanet WRZ.
Area over which option is to be implemented	Kent Thannet
Dependencies	After: Desalination (KTZ): East Thanet (20Ml/d) - Planning & Development

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	20
DO 1:200 Peak [Ml/d]	20
DO 1:500 Average [Ml/d]	20
DO 1:500 Peak [Ml/d]	20
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2037
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	17.58
Maximum annual utilisation [Ml/d]	20.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-36.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-13.93

Financial and Cost Information

Metric	
Capex [£m]	689.84
Financing Cost [£m]	891.56
Opex [£m]	403.32
Embodied Carbon [tCo2e]	65,879.25
Average operational carbon emissions [tCo2e/yr]	872.62
Total Carbon Cost [£m]	75.72
Average Incremental Cost (AIC) [p/m3]	248.70

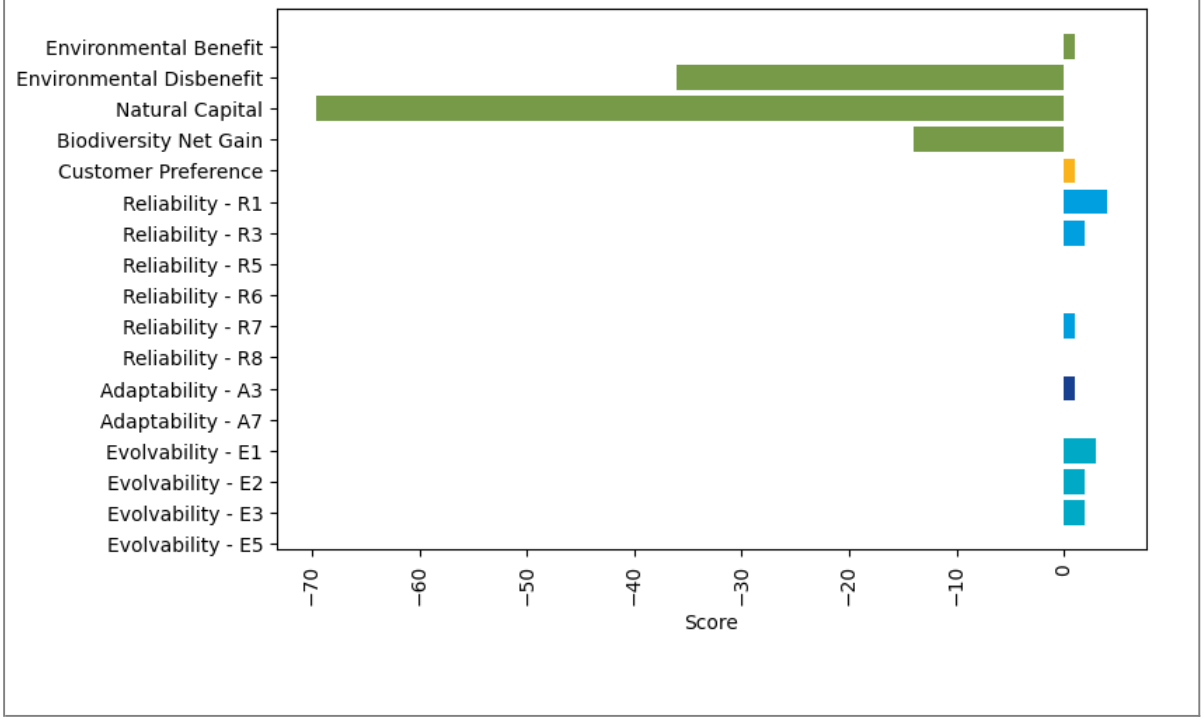
Other

Metric	

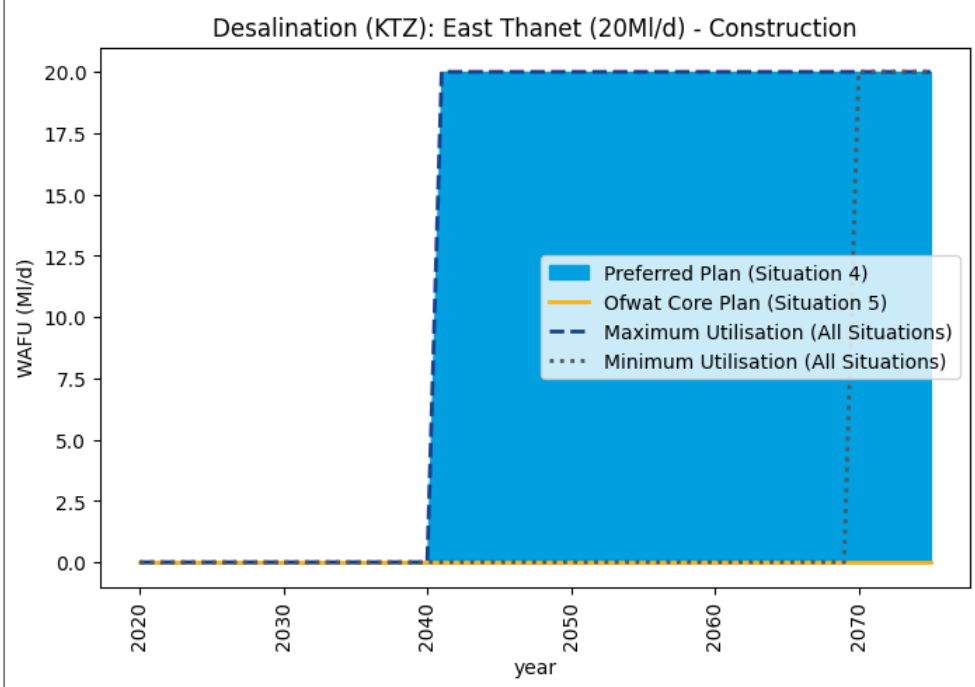
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-36.00
Environmental: Natural Capital	-69.59
Environmental: Biodiversity Net Gain	-13.93
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (KTZ): East Thanet (20Ml/d) - Planning & Development
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Thannet
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2054
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	15.68
Financing Cost [£m]	35.41
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

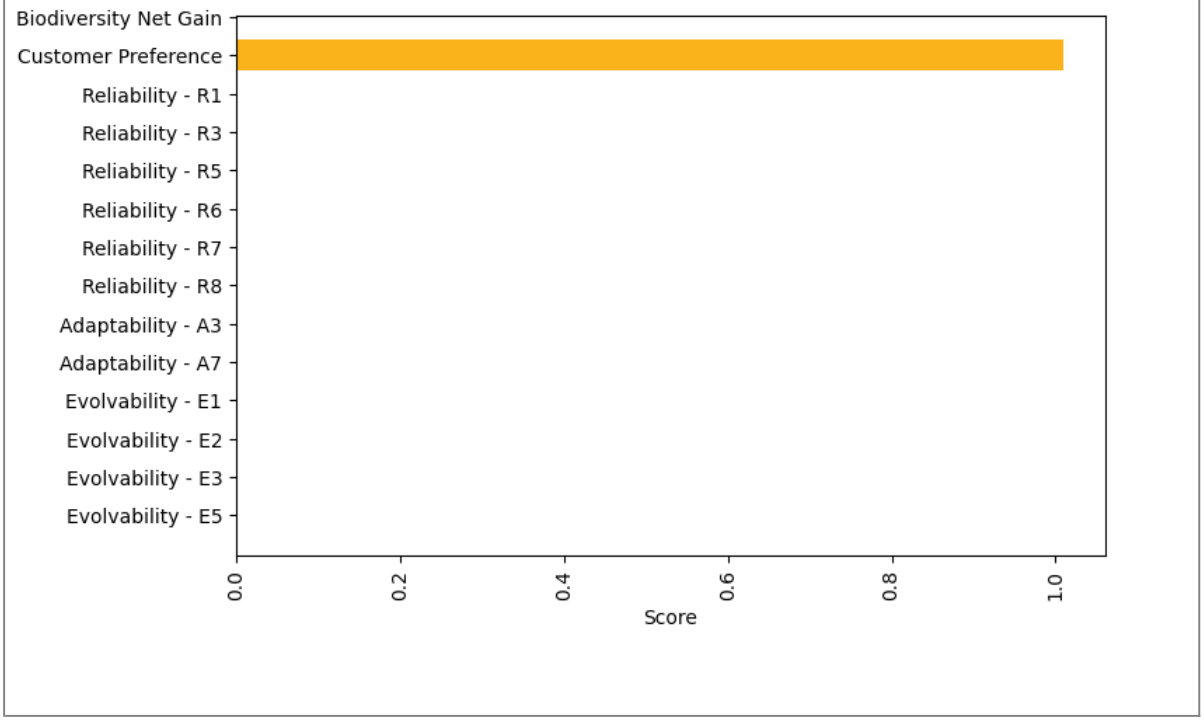
Other

Metric	

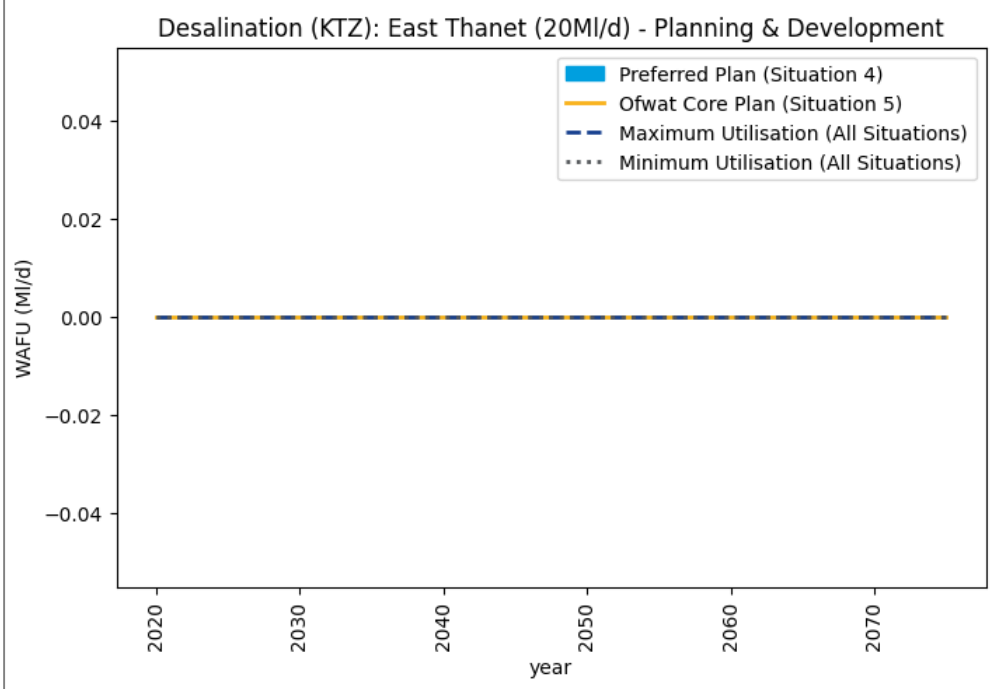
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)
Source of Supply and main operational features	Bulk import (KTZ): SEW RZ8 to near Canterbury
Area over which option is to be implemented	Kent Thannet
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2049
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-33.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-13.35

Financial and Cost Information

Metric	
Capex [£m]	39.13
Financing Cost [£m]	61.55
Opex [£m]	23.39
Embodied Carbon [tCo2e]	5,979.00
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	3.26
Average Incremental Cost (AIC) [p/m3]	16.88

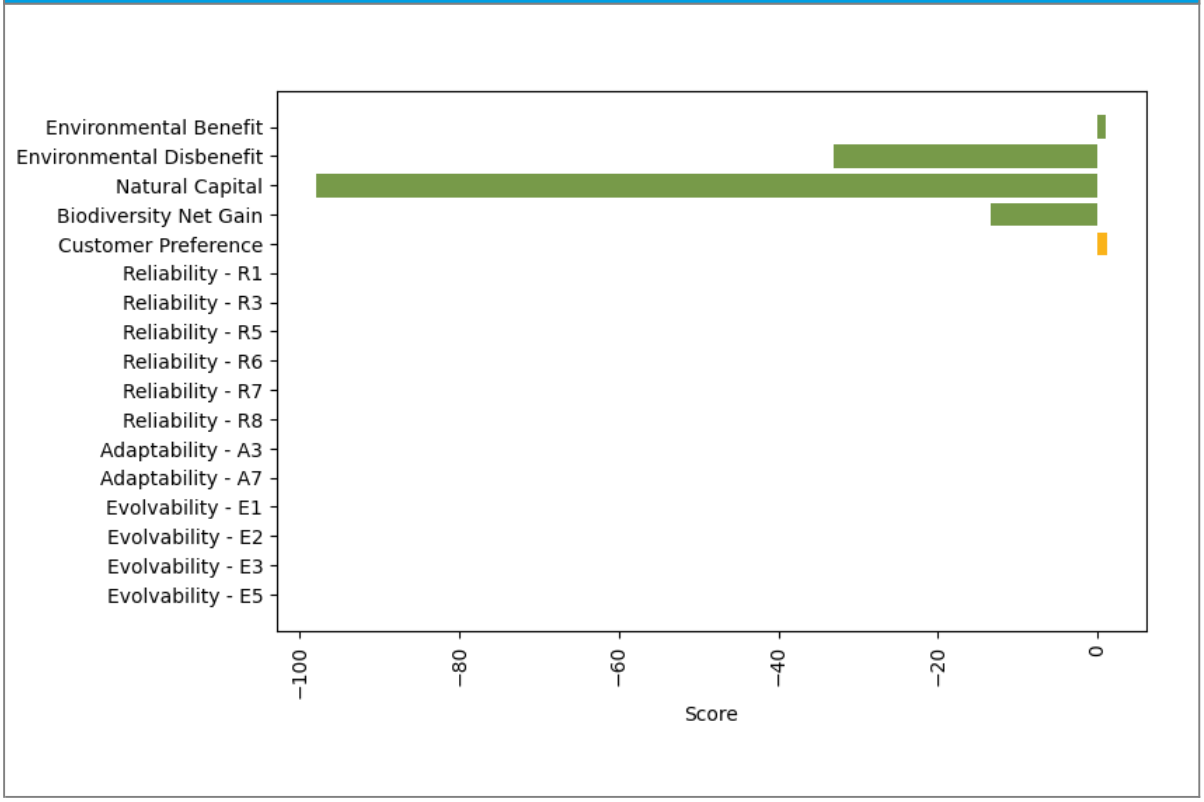
Other

Metric	

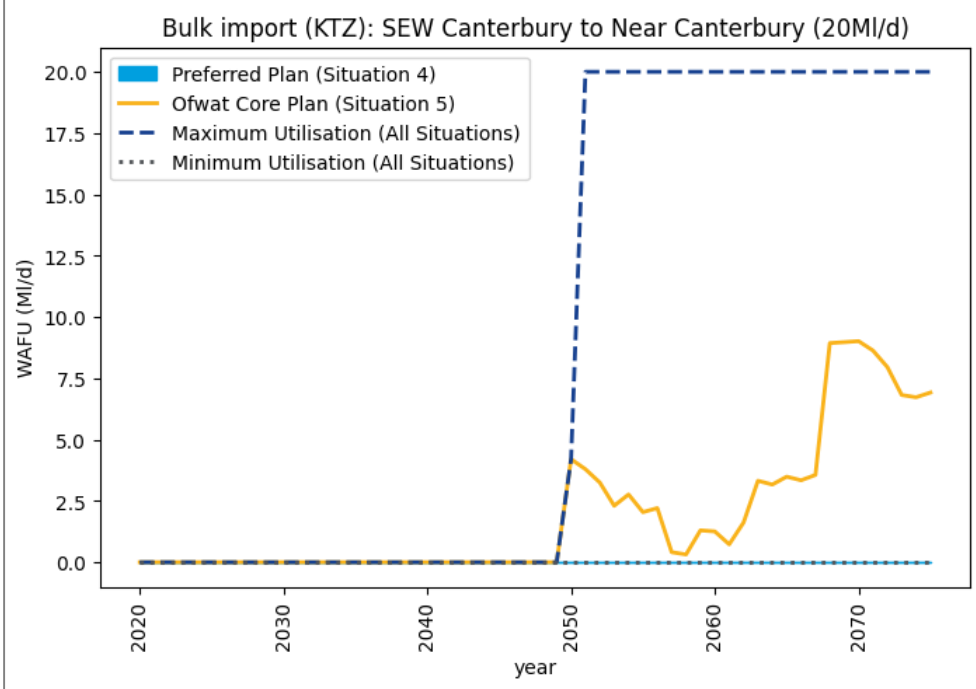
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-33.00
Environmental: Natural Capital	-97.92
Environmental: Biodiversity Net Gain	-13.35
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (KTZ): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Thannet
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.1
DO 1:500 Peak [Ml/d]	0.1
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.10
Maximum annual utilisation [Ml/d]	0.10
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

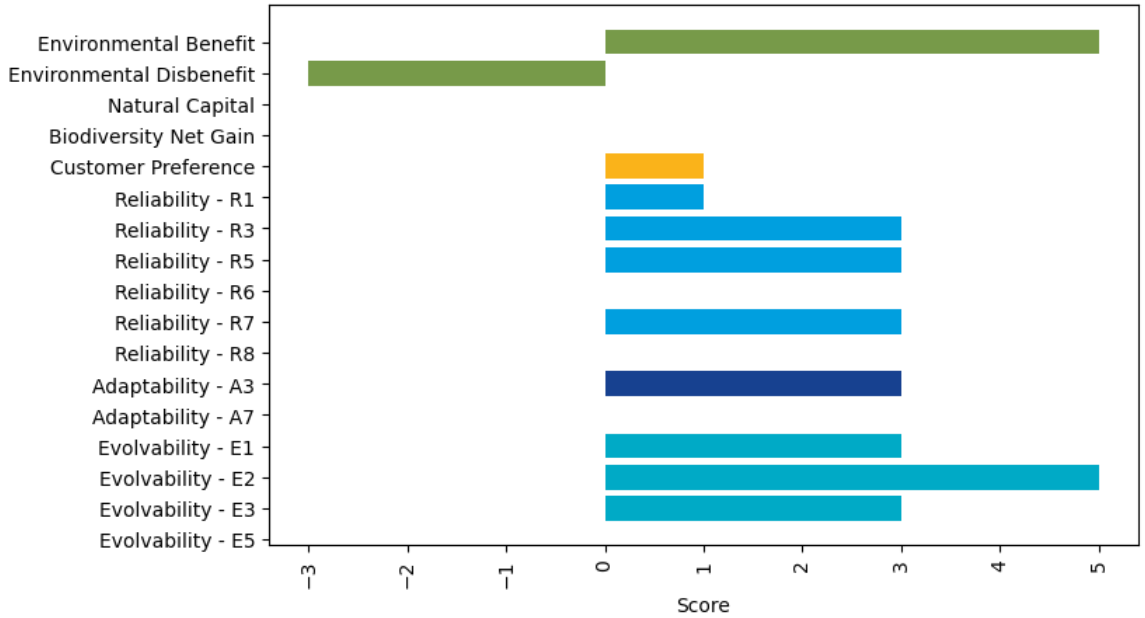
Other

Metric	

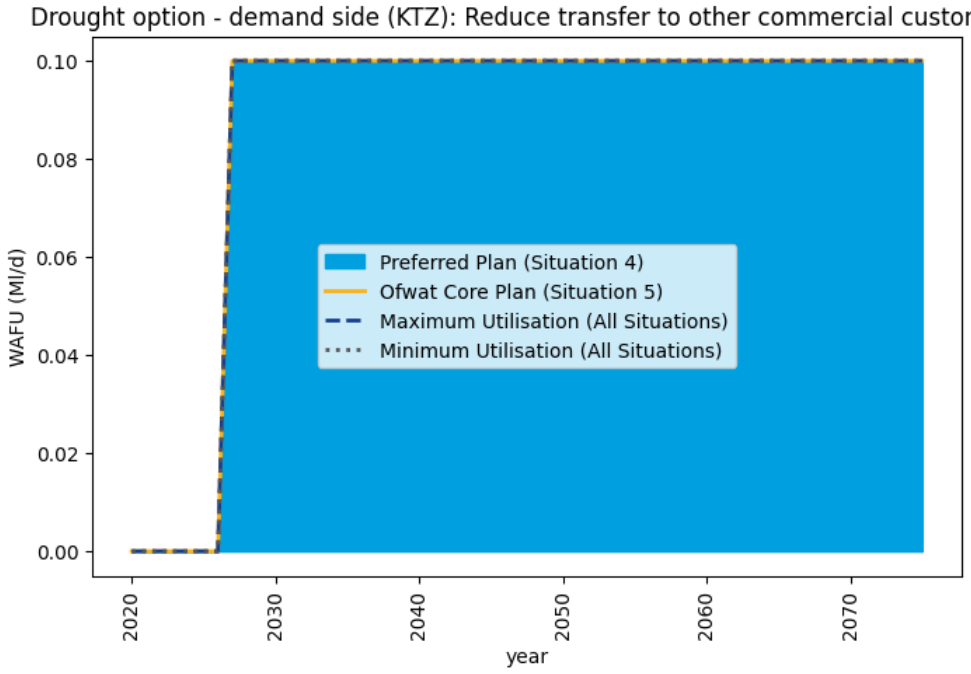
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (KME-KTZ): Existing transfer (14Ml/d)
Source of Supply and main operational features	Interzonal transfer (KTZ-KME): Existing transfer (14Ml/d)
Area over which option is to be implemented	Kent Thannet
Dependencies	Bidirectional Version: Interzonal transfer (KTZ-KME): Existing transfer (14Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	14
DO 1:200 Peak [Ml/d]	14
DO 1:500 Average [Ml/d]	14
DO 1:500 Peak [Ml/d]	14
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	9.87
Maximum annual utilisation [Ml/d]	14.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

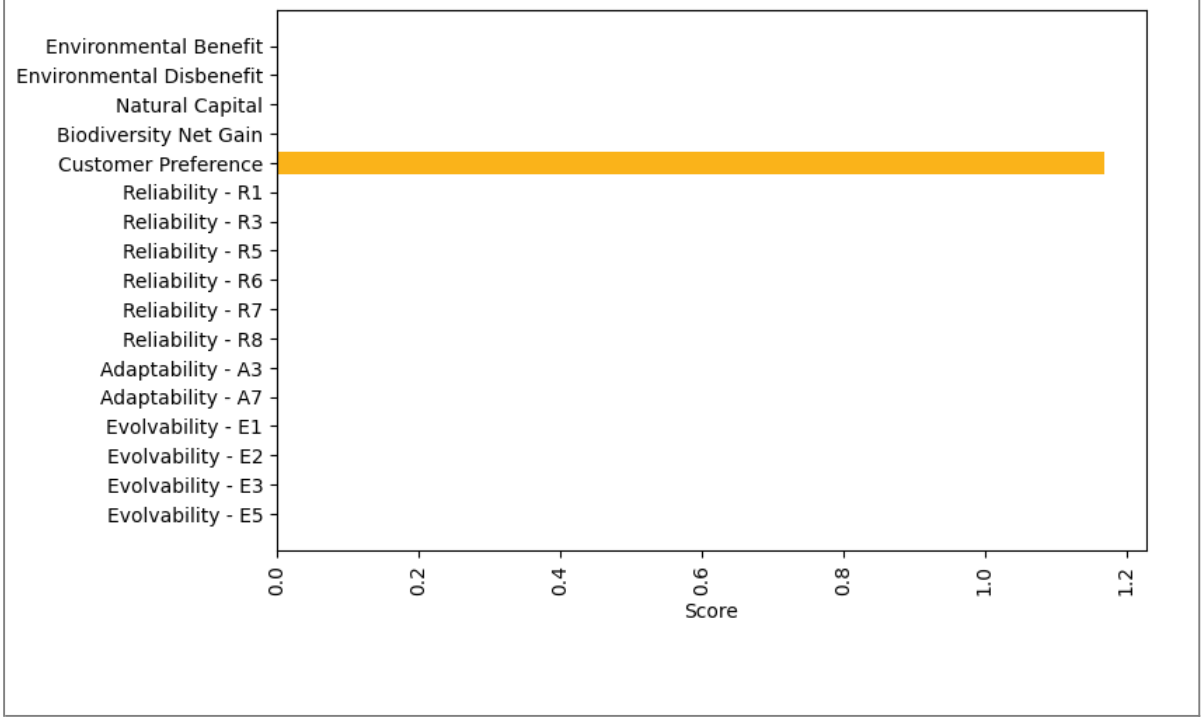
Other

Metric	

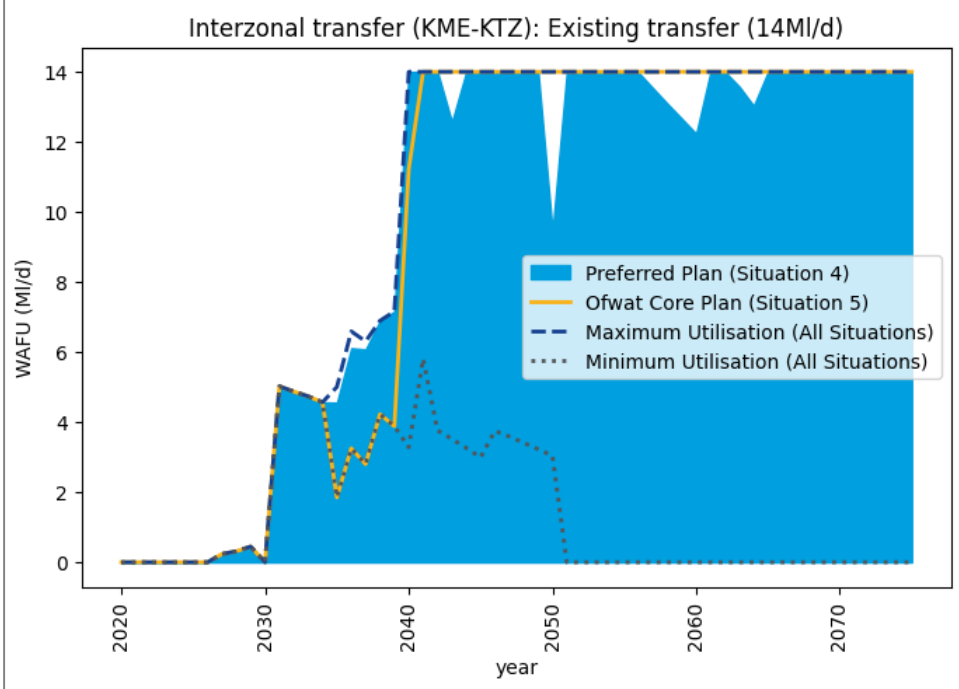
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (KTZ-KME): Existing transfer (14Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Kent Medway East
Dependencies	Bidirectional Version: Interzonal transfer (KME-KTZ): Existing transfer (14Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	14
DO 1:200 Peak [Ml/d]	14
DO 1:500 Average [Ml/d]	14
DO 1:500 Peak [Ml/d]	14
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.04
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

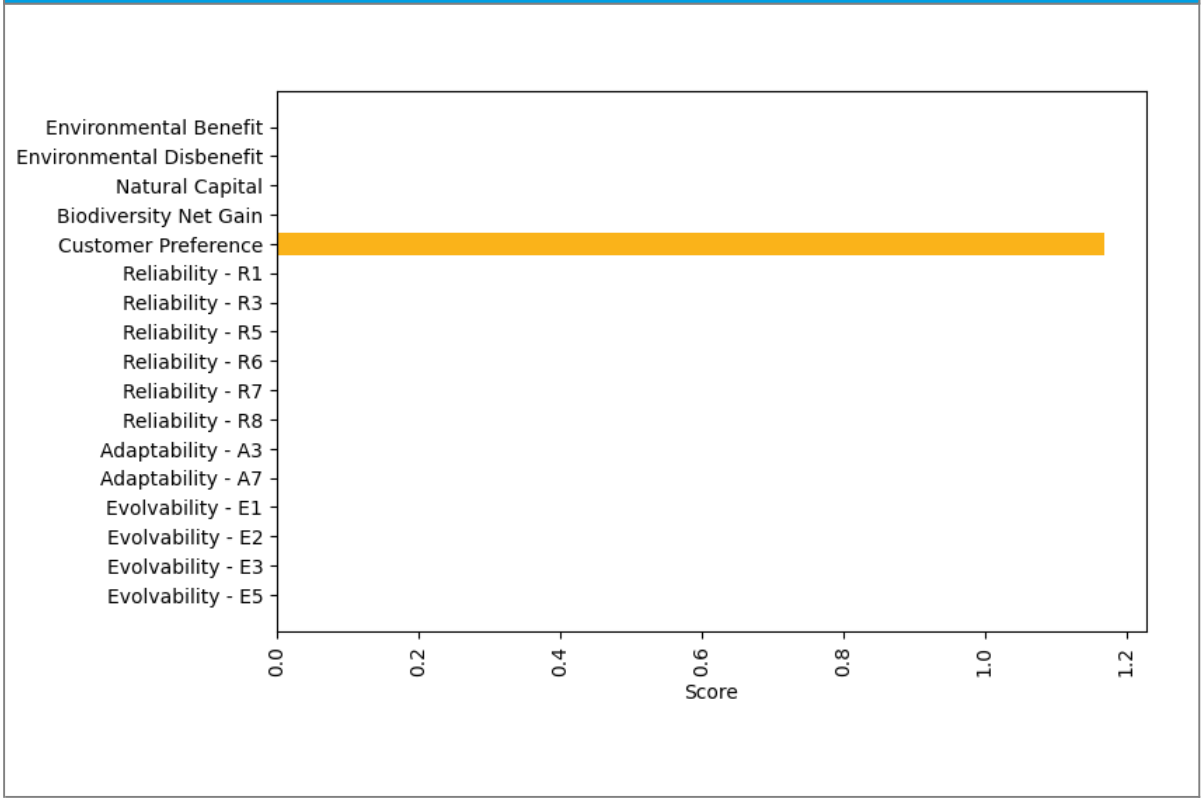
Other

Metric	

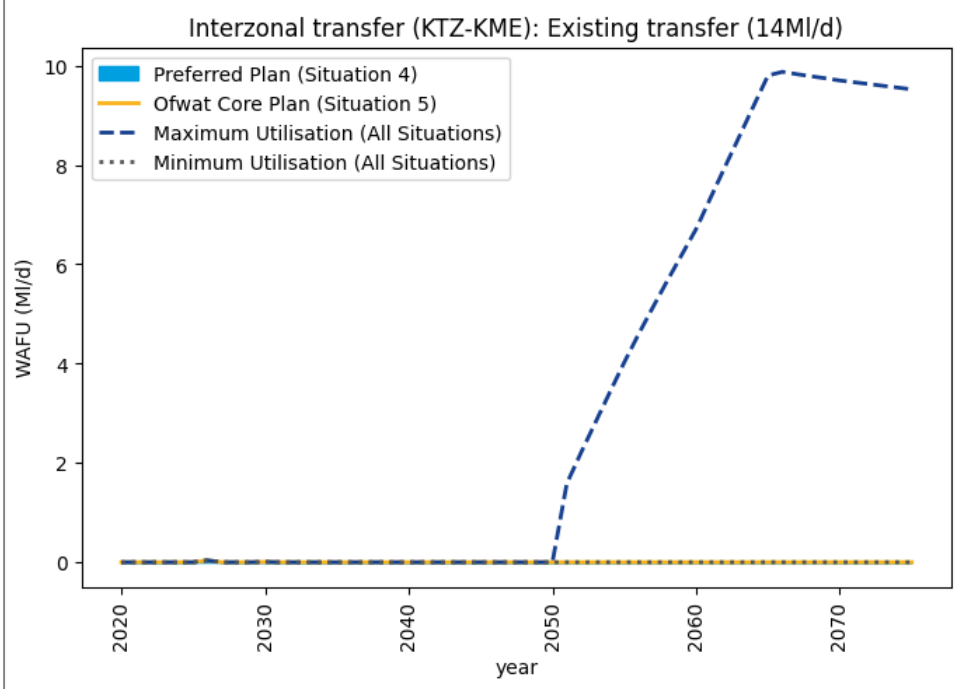
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HWZ-HSE): Existing transfer (7.5Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Winchester
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	7.5
DO 1:200 Peak [Ml/d]	7.5
DO 1:500 Average [Ml/d]	7.5
DO 1:500 Peak [Ml/d]	7.5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.52
Maximum annual utilisation [Ml/d]	7.50
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.00
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

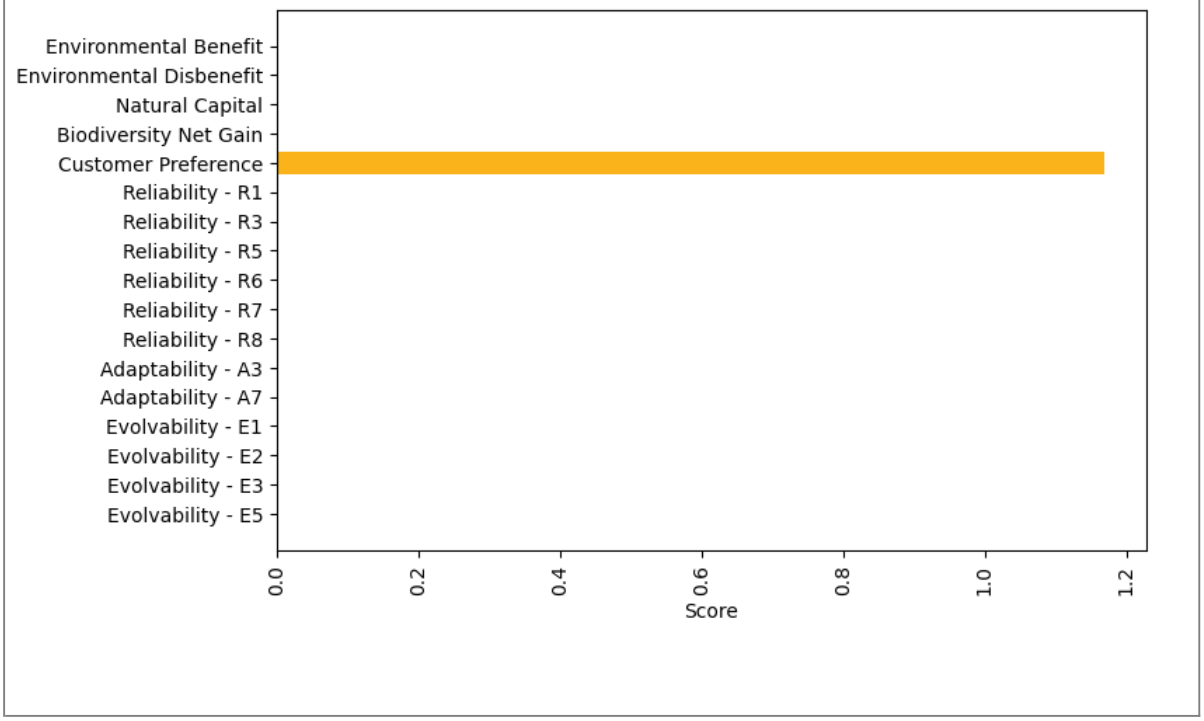
Other

Metric	

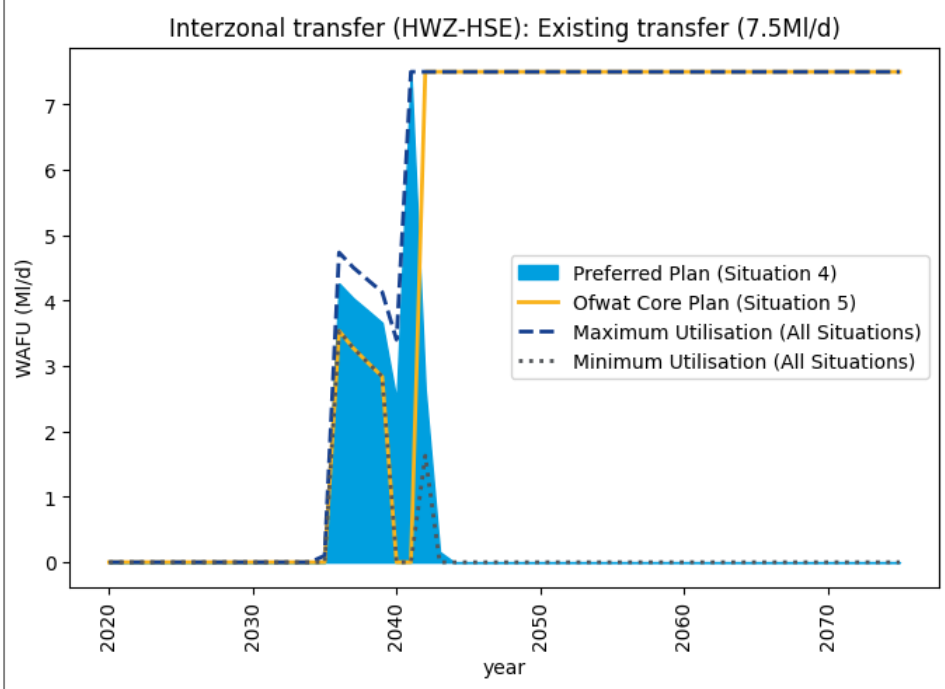
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HSE-HWZ): Itchen WSW to Yew Hill WSW bi-directional (74Ml/d)
Source of Supply and main operational features	Interzonal transfer (HSE-HWZ): Hampshire Grid - bidirectional
Area over which option is to be implemented	Hampshire Winchester
Dependencies	Bidirectional Version: Interzonal transfer (HWZ-HSE): Itchen WSW to Yew Hill WSW bi-directional (74Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	74
DO 1:200 Peak [Ml/d]	74
DO 1:500 Average [Ml/d]	74
DO 1:500 Peak [Ml/d]	74
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-19.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-23.42

Financial and Cost Information

Metric	
Capex [£m]	81.04
Financing Cost [£m]	113.89
Opex [£m]	218.60
Embodied Carbon [tCo2e]	15,122.81
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	10.65
Average Incremental Cost (AIC) [p/m3]	16.57

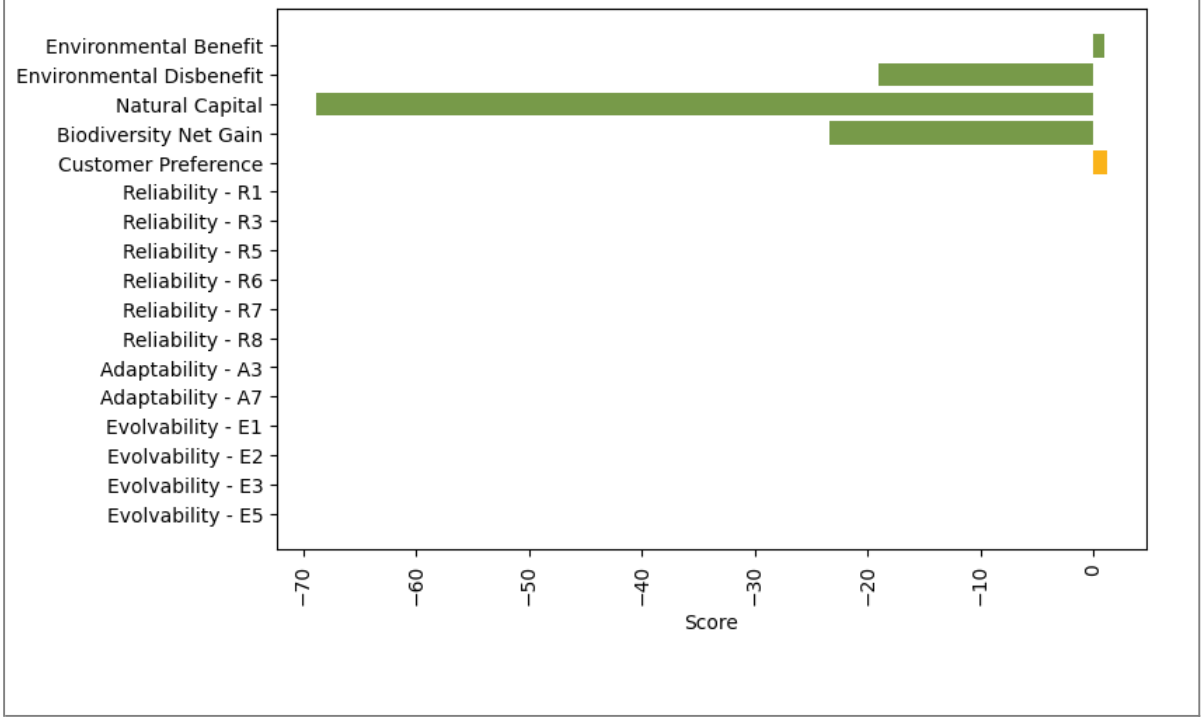
Other

Metric	

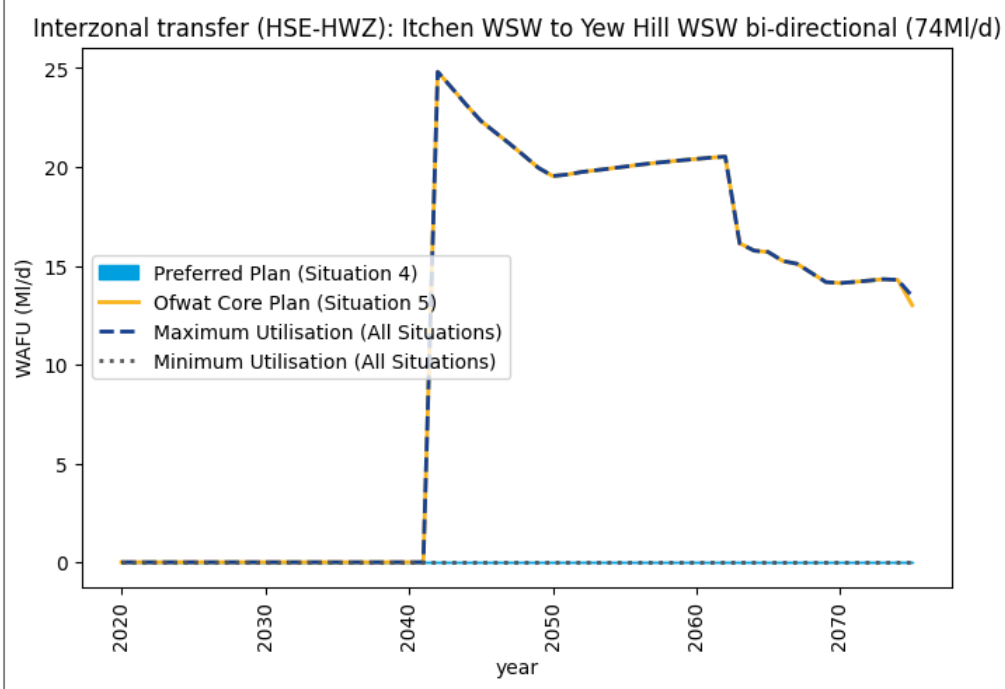
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-19.00
Environmental: Natural Capital	-68.81
Environmental: Biodiversity Net Gain	-23.42
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HWZ-HSE): Itchen WSW to Yew Hill WSW bi-directional (74Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton East
Dependencies	Bidirectional Version: Interzonal transfer (HSE-HWZ): Itchen WSW to Yew Hill WSW bi-directional (74Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	74
DO 1:200 Peak [Ml/d]	74
DO 1:500 Average [Ml/d]	74
DO 1:500 Peak [Ml/d]	74
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	3
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.56
Maximum annual utilisation [Ml/d]	21.79
Environment	
SEA benefit effect	1.00
SEA negative effect	-19.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-23.42

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	199.58
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	1.09
Total Carbon Cost [£m]	4.02
Average Incremental Cost (AIC) [p/m3]	9.72

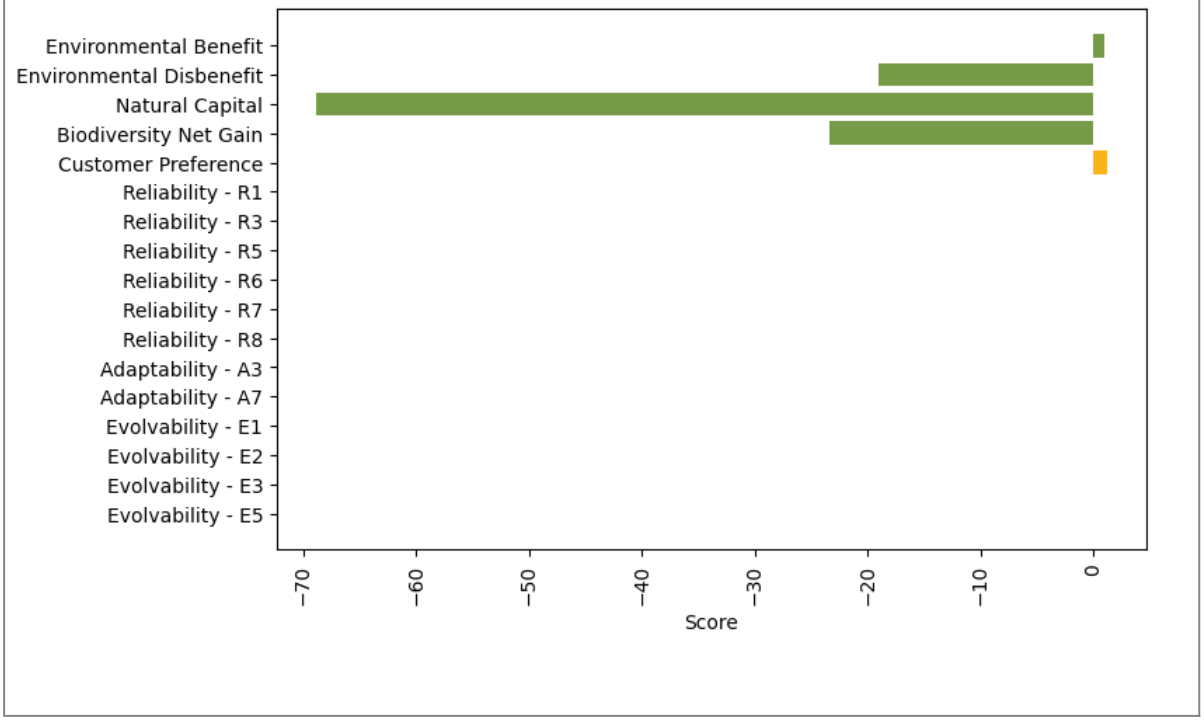
Other

Metric	

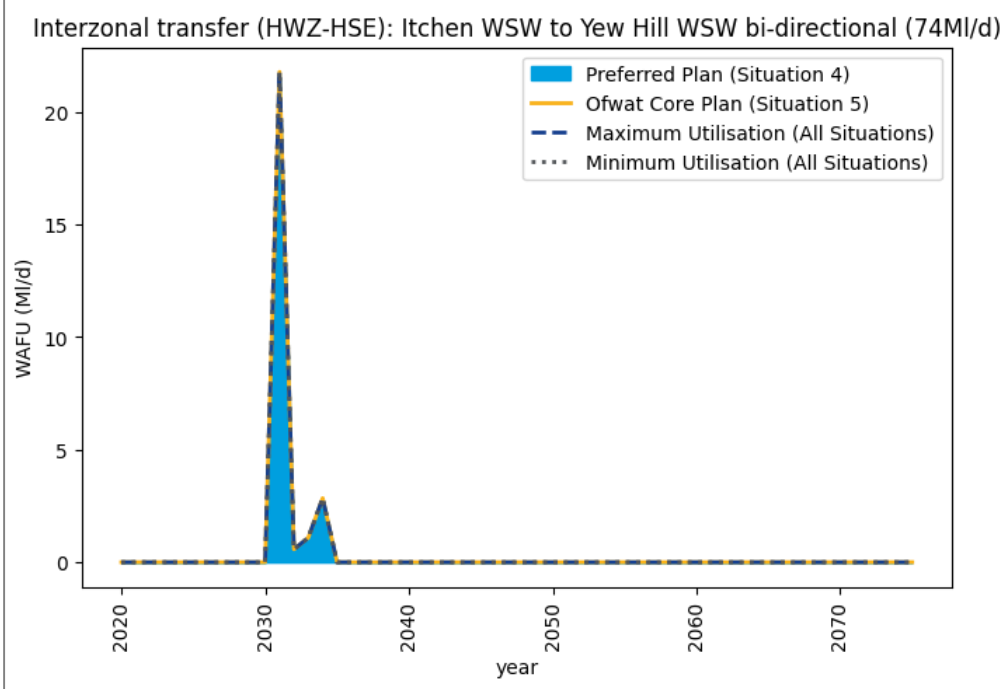
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-19.00
Environmental: Natural Capital	-68.81
Environmental: Biodiversity Net Gain	-23.42
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d)
Source of Supply and main operational features	Interzonal transfer (HWZ-HAZ): Hampshire Grid - bidirectional
Area over which option is to be implemented	Hampshire Andover
Dependencies	After one of: Interzonal transfer (HWZ-HSE): Itchen WSW to Yew Hill WSW bi-directional (74Ml/d), Interzonal transfer (HSE-HWZ): Itchen WSW to Yew Hill WSW bi-directional (74Ml/d) Bidirectional Version: Interzonal transfer (HAZ-HWZ): Winchester to Andover bi-directional (15Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	15
DO 1:200 Peak [Ml/d]	15
DO 1:500 Average [Ml/d]	15
DO 1:500 Peak [Ml/d]	15
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	1.47
Maximum annual utilisation [Ml/d]	7.24
Environment	
SEA benefit effect	1.00
SEA negative effect	-22.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-37.64

Financial and Cost Information

Metric	
Capex [£m]	92.68
Financing Cost [£m]	129.94
Opex [£m]	58.36
Embodied Carbon [tCo2e]	29,854.68
Average operational carbon emissions [tCo2e/yr]	2.87
Total Carbon Cost [£m]	13.78
Average Incremental Cost (AIC) [p/m3]	47.95

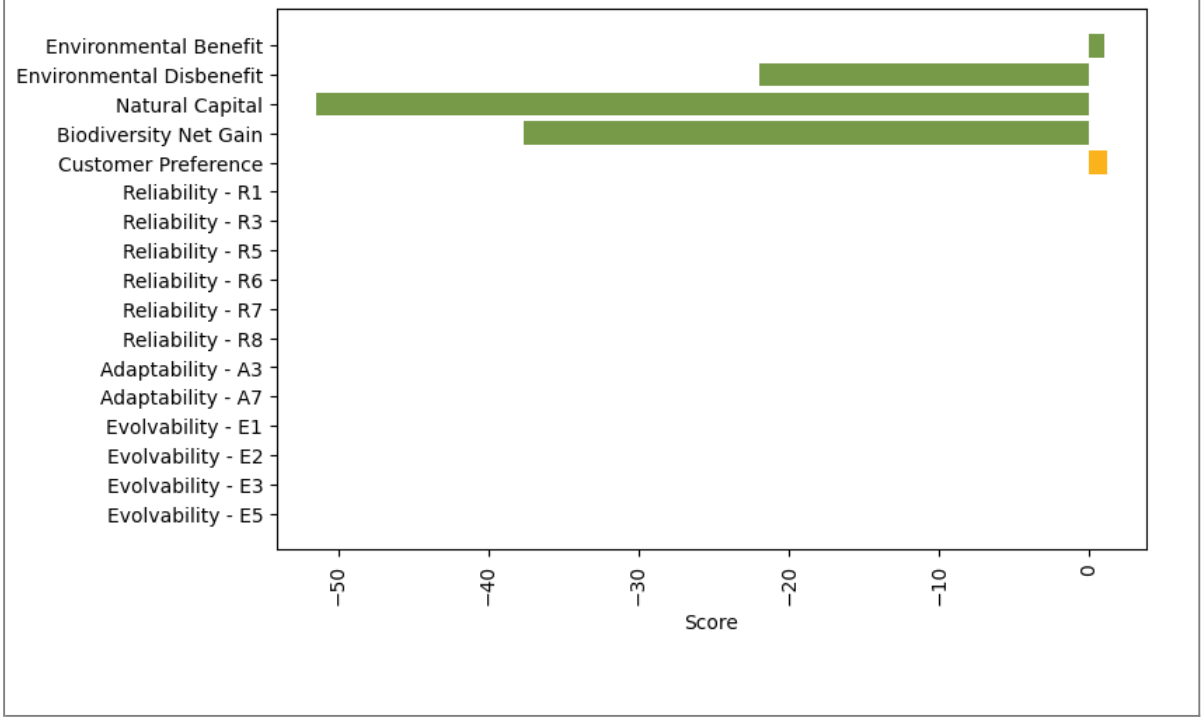
Other

Metric	

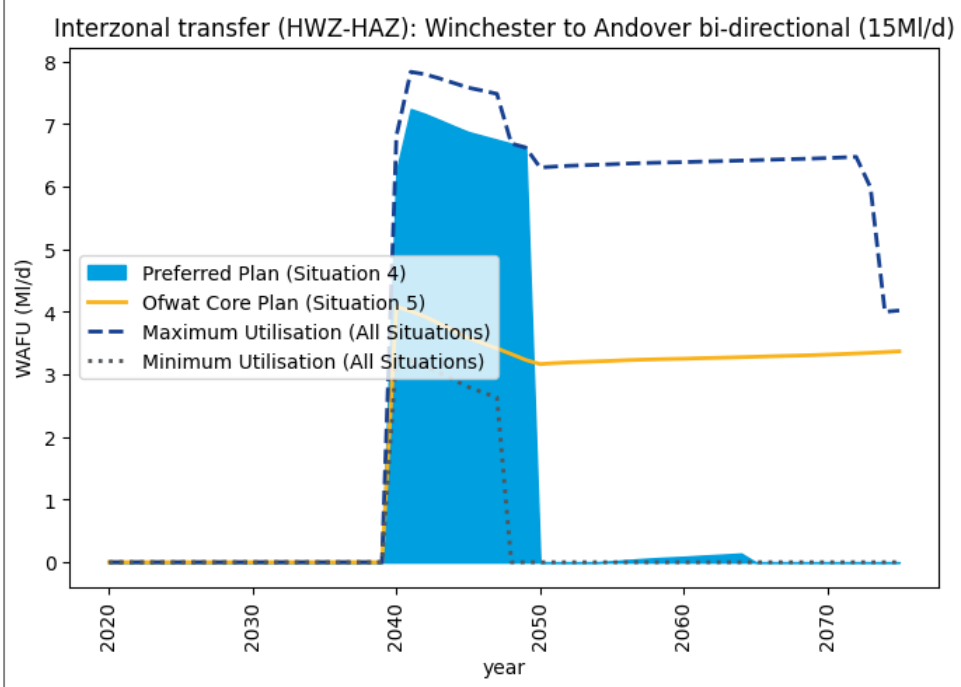
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-22.00
Environmental: Natural Capital	-51.46
Environmental: Biodiversity Net Gain	-37.64
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HAZ-HWZ): Winchester to Andover bi-directional (15Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Winchester
Dependencies	Bidirectional Version: Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	15
DO 1:200 Peak [Ml/d]	15
DO 1:500 Average [Ml/d]	15
DO 1:500 Peak [Ml/d]	15
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-22.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-37.64

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	40.94
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	0.81
Average Incremental Cost (AIC) [p/m3]	9.84

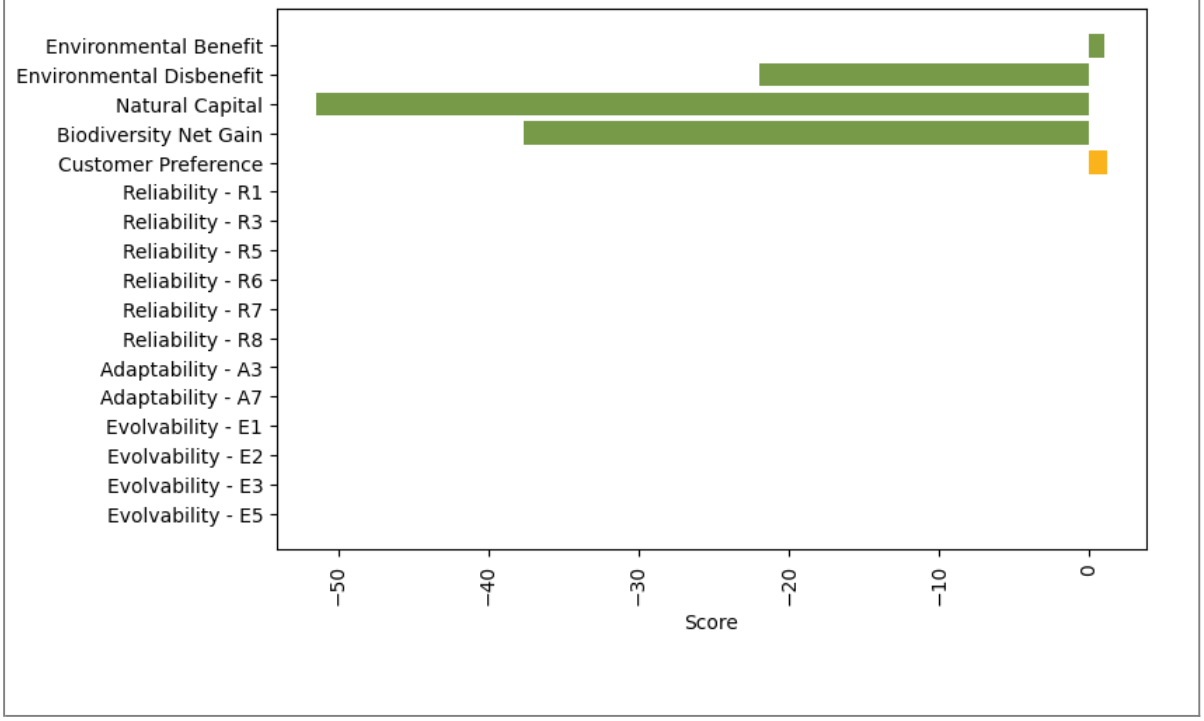
Other

Metric	

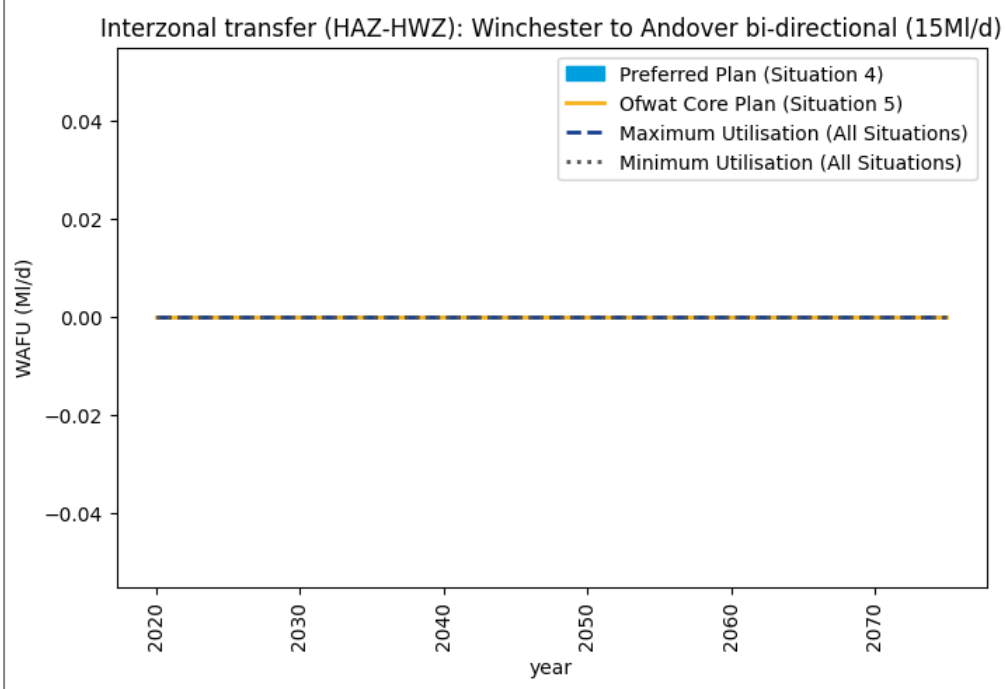
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-22.00
Environmental: Natural Capital	-51.46
Environmental: Biodiversity Net Gain	-37.64
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10Ml/d)
Source of Supply and main operational features	Interzonal transfer (HAZ-HKZ): Hampshire Grid - reversible
Area over which option is to be implemented	Hampshire Kingsclere
Dependencies	After one of: Interzonal transfer (HAZ-HWZ): Winchester to Andover bi-directional (15Ml/d), Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d) Bidirectional Version: Interzonal transfer (HKZ-HAZ): Andover to Kingsclere bi-directional (10Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	10
DO 1:200 Peak [Ml/d]	10
DO 1:500 Average [Ml/d]	10
DO 1:500 Peak [Ml/d]	10
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-19.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-48.93

Financial and Cost Information

Metric	
Capex [£m]	67.38
Financing Cost [£m]	94.54
Opex [£m]	41.51
Embodied Carbon [tCo2e]	14,441.48
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	6.78
Average Incremental Cost (AIC) [p/m3]	51.91

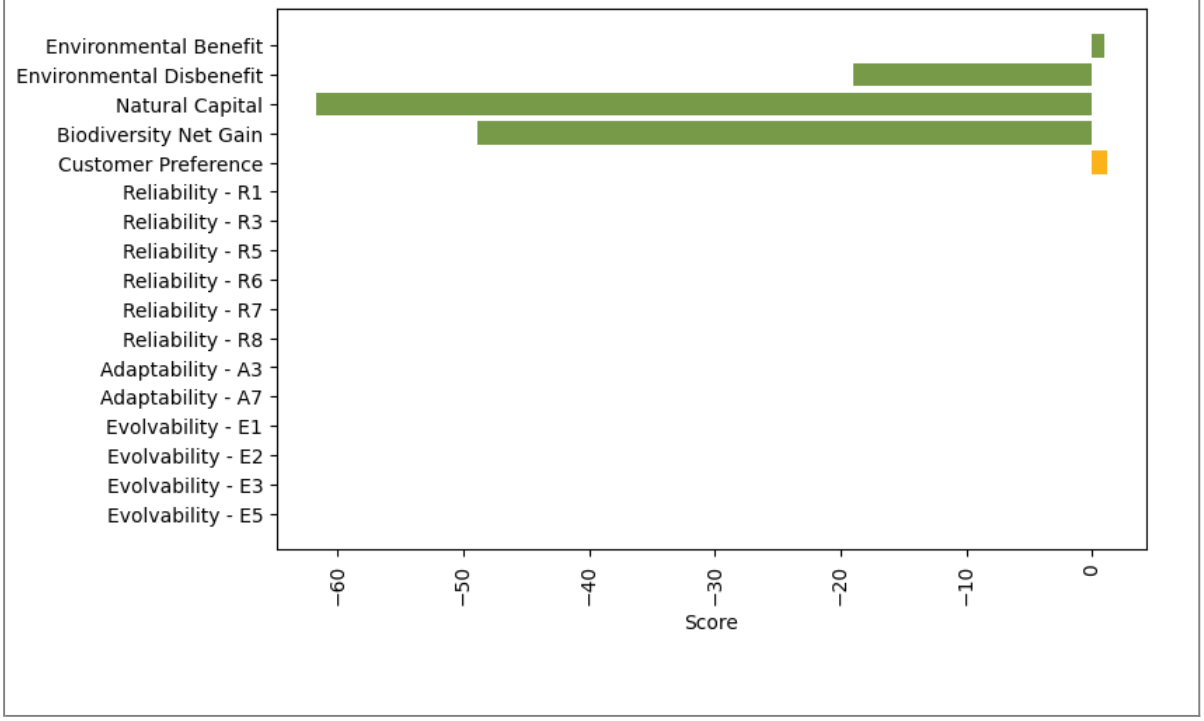
Other

Metric	

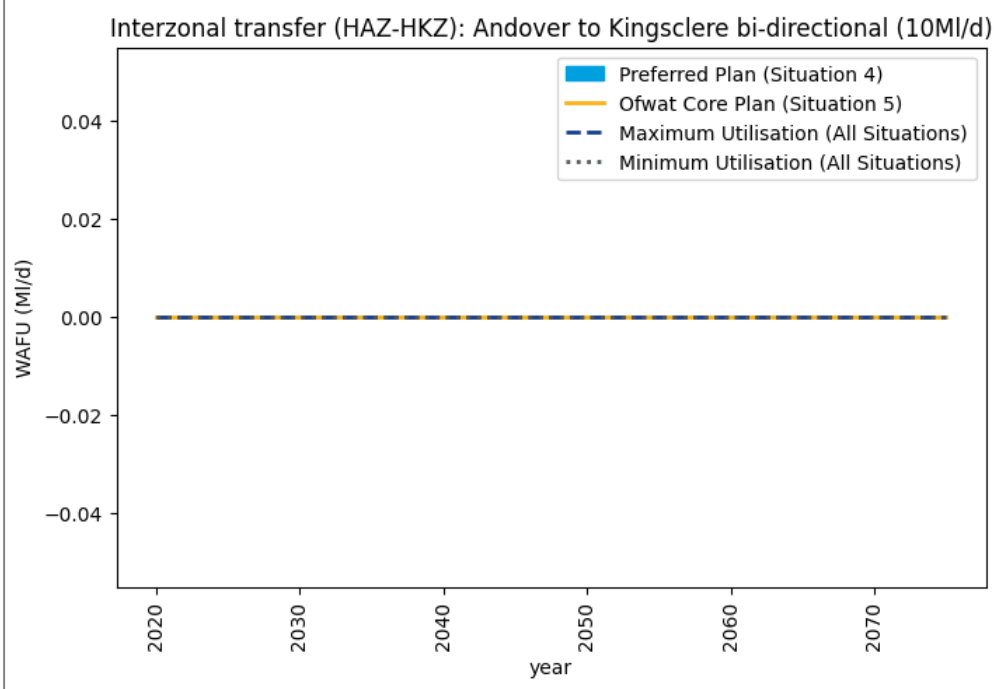
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-19.00
Environmental: Natural Capital	-61.69
Environmental: Biodiversity Net Gain	-48.93
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HKZ-HAZ): Andover to Kingsclere bi-directional (10Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Andover
Dependencies	After one of: Interzonal transfer (HAZ-HWZ): Winchester to Andover bi-directional (15Ml/d), Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d) Bidirectional Version: Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	10
DO 1:200 Peak [Ml/d]	10
DO 1:500 Average [Ml/d]	10
DO 1:500 Peak [Ml/d]	10
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	4.82
Maximum annual utilisation [Ml/d]	6.68
Environment	
SEA benefit effect	1.00
SEA negative effect	-19.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-48.93

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	28.19
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	8.80
Total Carbon Cost [£m]	0.52
Average Incremental Cost (AIC) [p/m3]	10.16

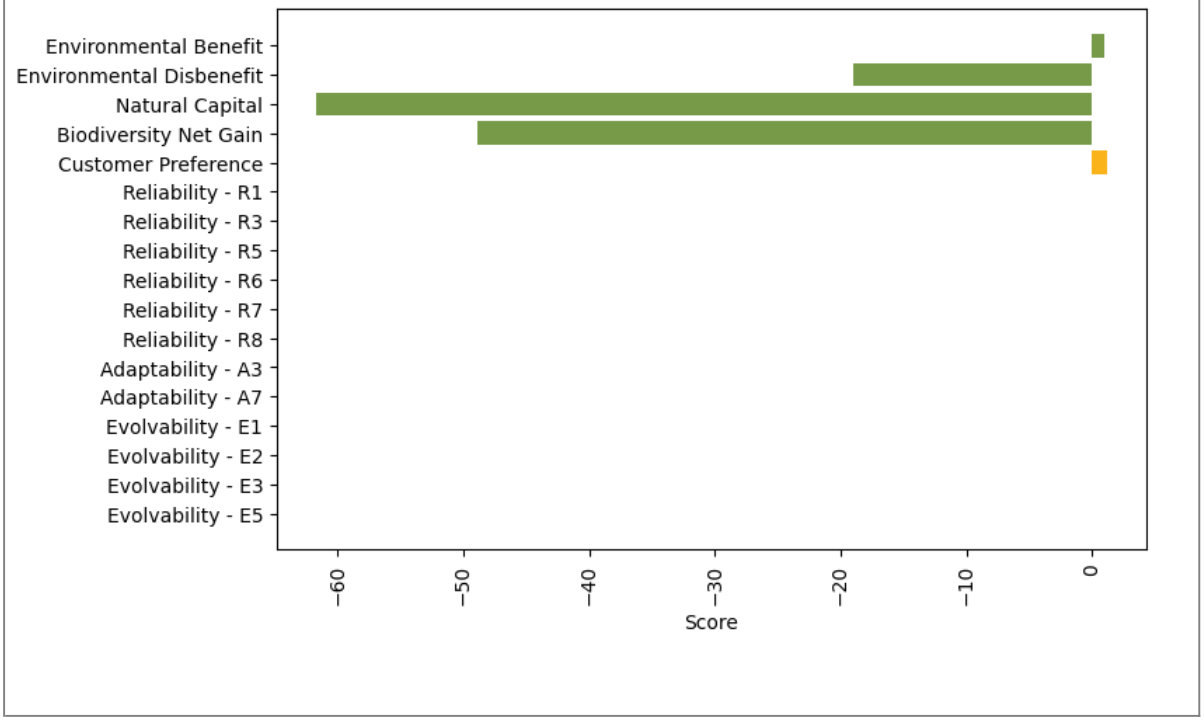
Other

Metric	

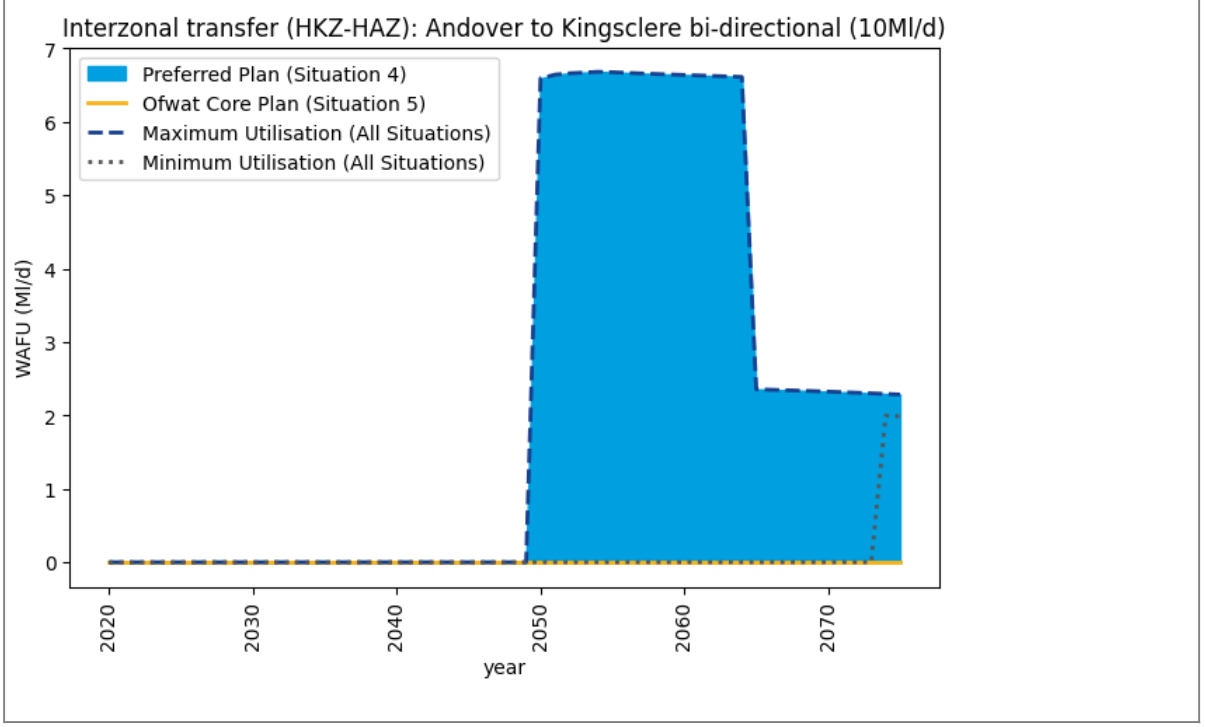
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-19.00
Environmental: Natural Capital	-61.69
Environmental: Biodiversity Net Gain	-48.93
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Catchment management (SBZ): Adur and Ouse
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Brighton, Sussex North, Sussex Worthing
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2026
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.74
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.32
Flexibility	
Scalability and modularity [Best Value Metric]	4
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	5.85
Financing Cost [£m]	11.34
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

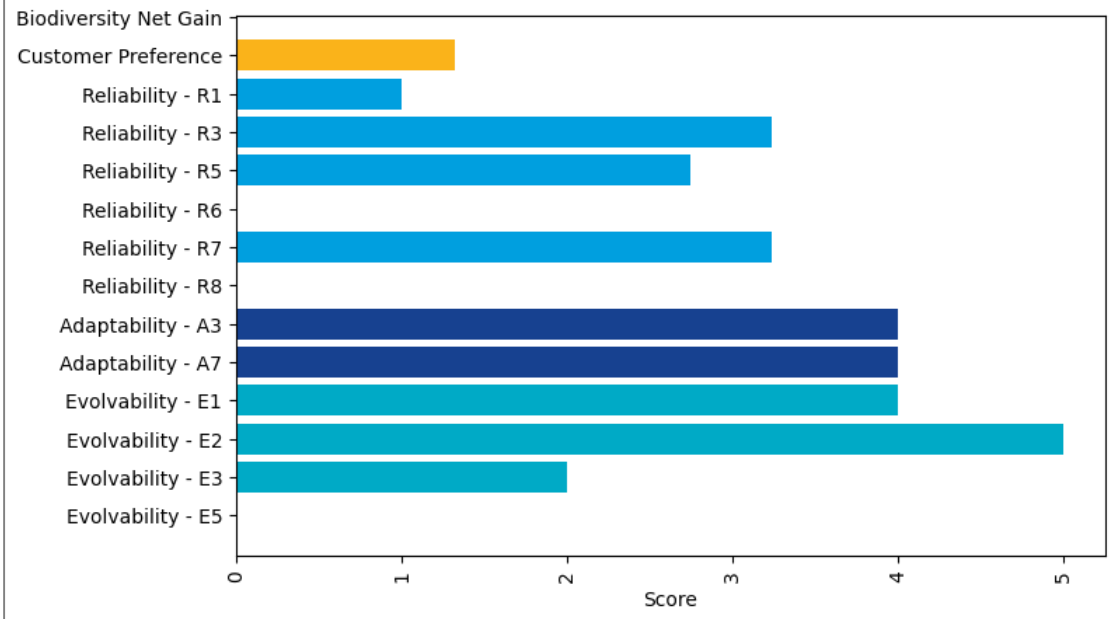
Other

Metric	

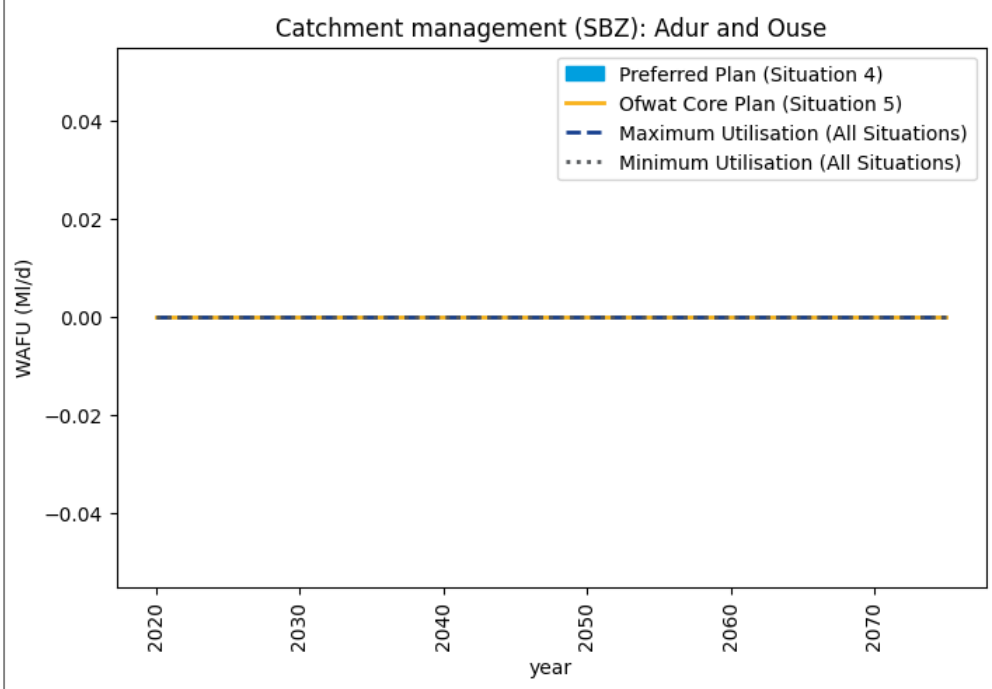
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.32
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.24
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2.74405
Resilience: Reliability R6 – Capacity of catchment services	0.00422
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3.2381
Resilience: Reliability R8 – Improvements to soil health	0.00053
Resilience: Adaptability A3 – Operational complexity and flexibility	4
Resilience: Adaptability A7 – Customer engagement with demand restrictions	4
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	0.00411

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Catchment management (SNZ): Arun and Western Streams
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North, Sussex Worthing
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2026
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.52
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.32
Flexibility	
Scalability and modularity [Best Value Metric]	4.21053
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	2.98
Financing Cost [£m]	5.55
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

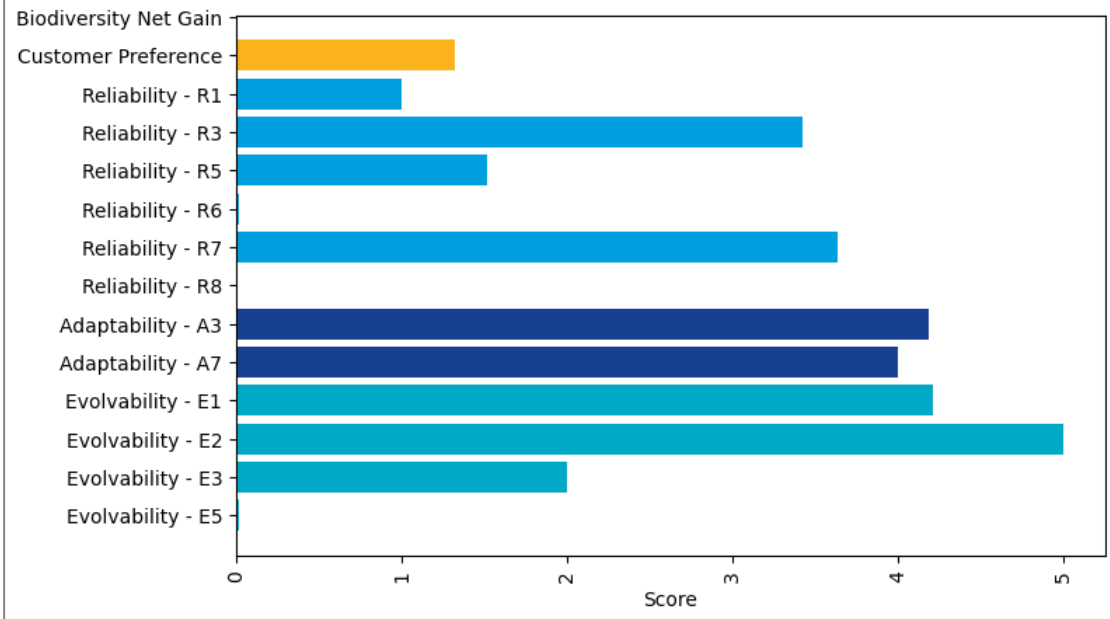
Other

Metric	

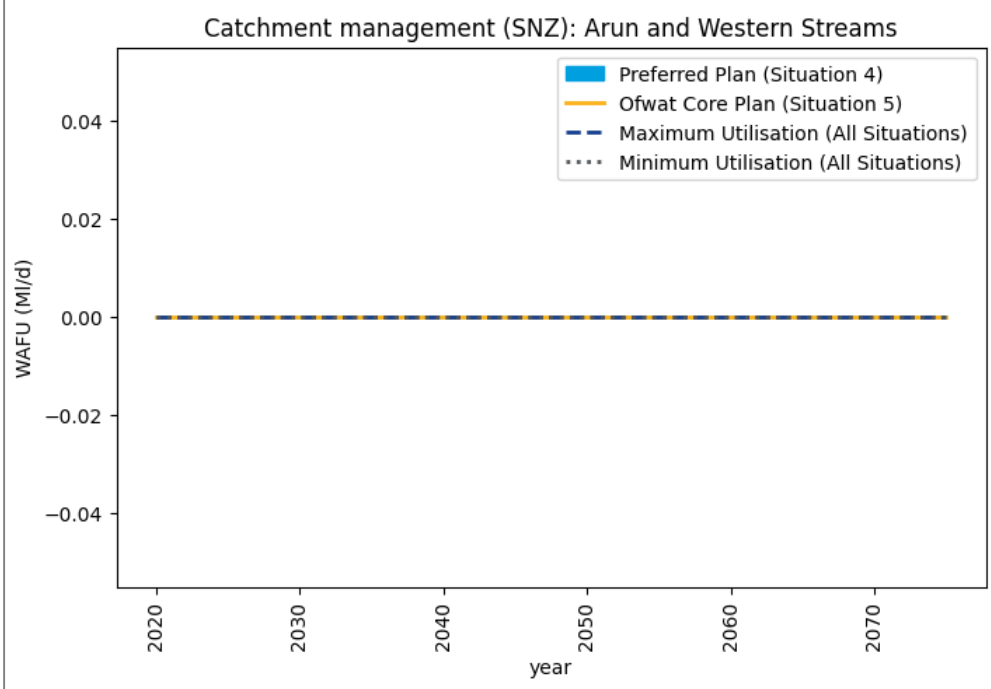
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.32
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.42
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1.51744
Resilience: Reliability R6 – Capacity of catchment services	0.02059
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3.63158
Resilience: Reliability R8 – Improvements to soil health	0.00758
Resilience: Adaptability A3 – Operational complexity and flexibility	4.18421
Resilience: Adaptability A7 – Customer engagement with demand restrictions	4
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	4.21053
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	0.01947

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (HSE): PWC Source A to Eastleigh WSR Extension (30Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	30
DO 1:200 Peak [Ml/d]	30
DO 1:500 Average [Ml/d]	30
DO 1:500 Peak [Ml/d]	30
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	2.63
Maximum annual utilisation [Ml/d]	15.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

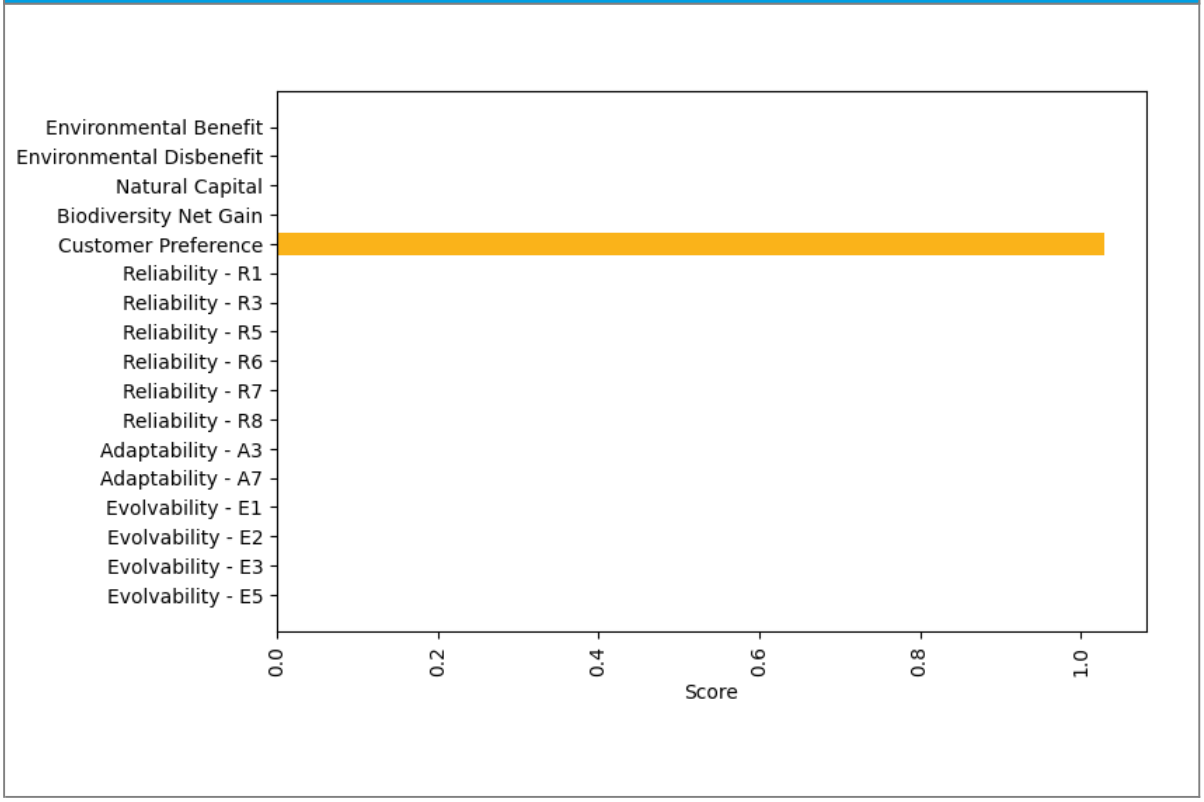
Other

Metric	

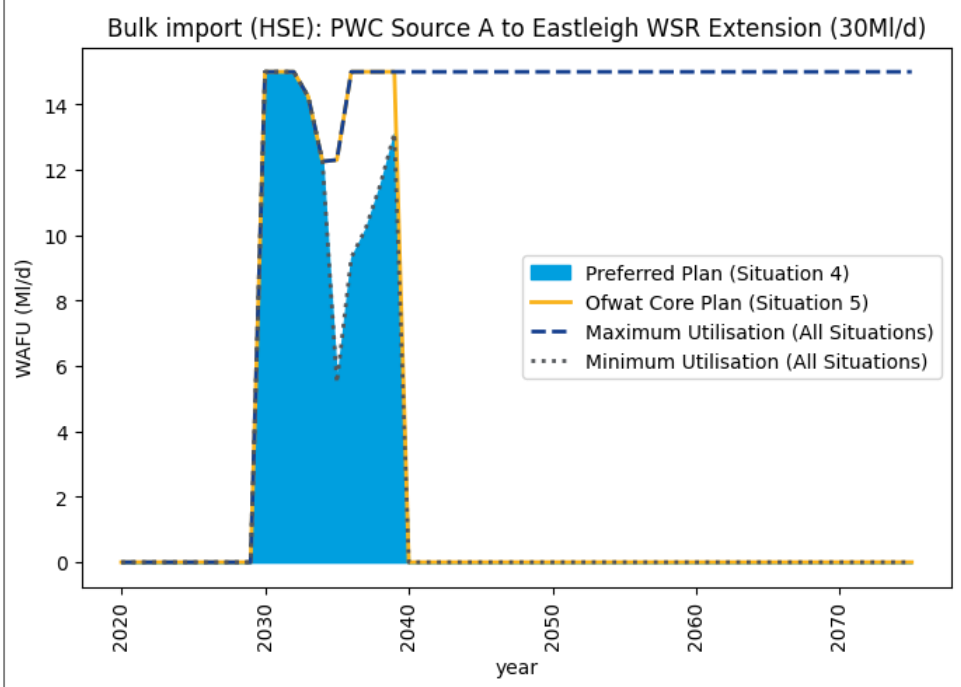
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (SNZ): PWC to Pulborough (15Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	15
DO 1:200 Peak [Ml/d]	15
DO 1:500 Average [Ml/d]	15
DO 1:500 Peak [Ml/d]	15
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

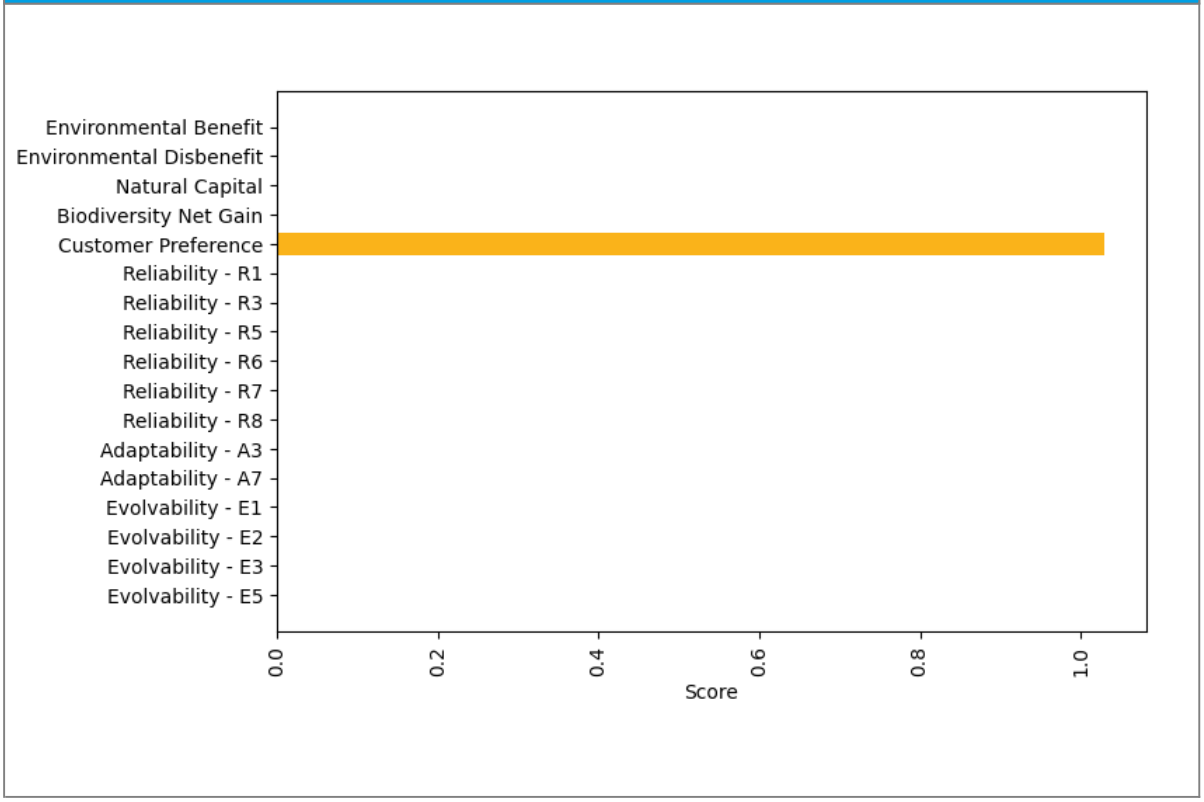
Other

Metric	

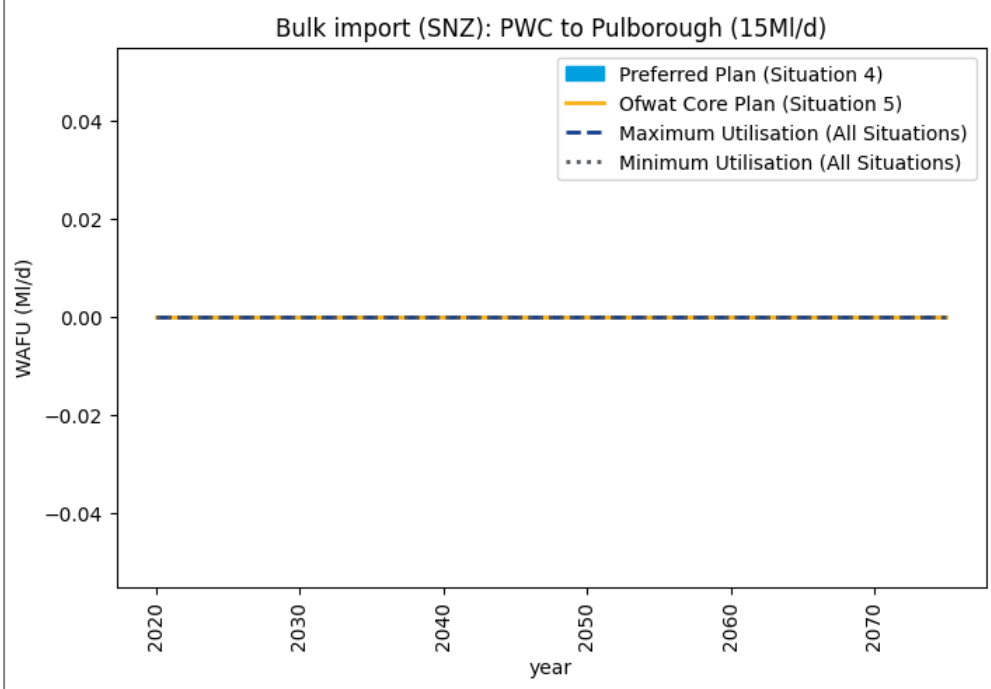
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (SNZ): PWC to Pulborough extension (15Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	15
DO 1:200 Peak [Ml/d]	15
DO 1:500 Average [Ml/d]	15
DO 1:500 Peak [Ml/d]	15
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	4.93
Maximum annual utilisation [Ml/d]	15.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

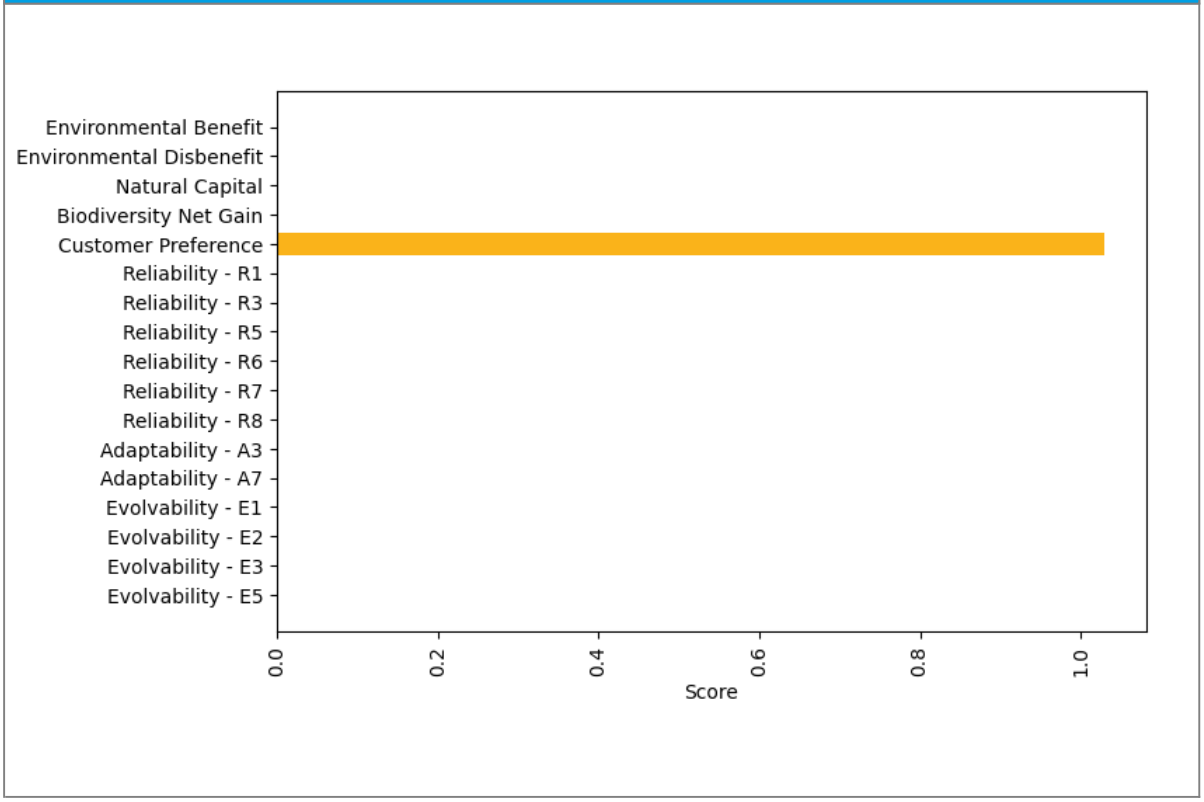
Other

Metric	

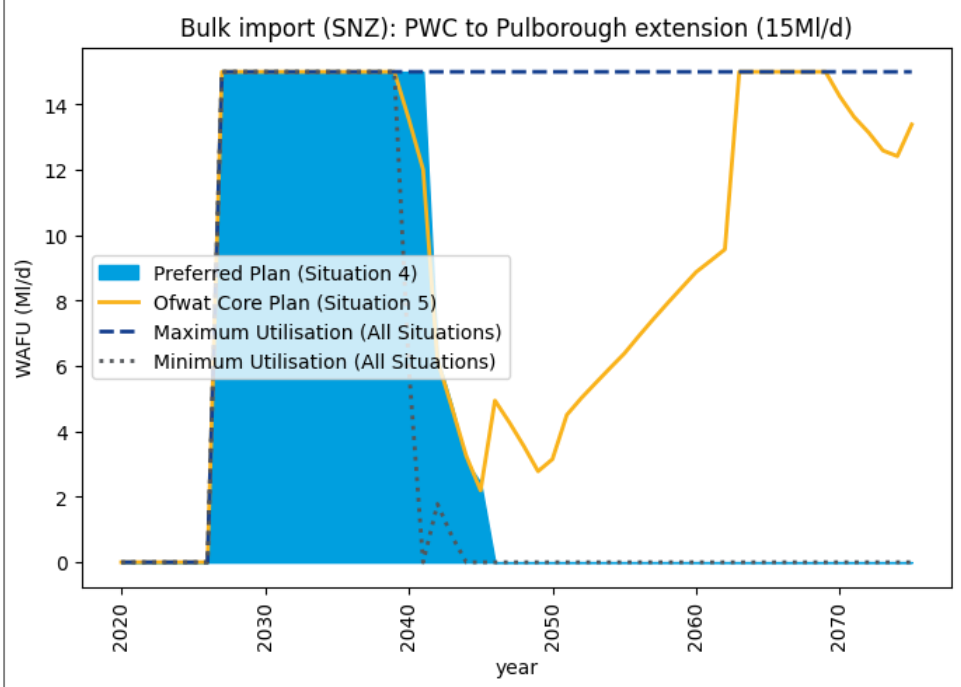
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (HSE): PWC Source A to Itchen WSW (21Ml/d)
Source of Supply and main operational features	Bulk import (HSE): PWC to Itchen WSW (21Ml/d)
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	21
DO 1:200 Peak [Ml/d]	21
DO 1:500 Average [Ml/d]	21
DO 1:500 Peak [Ml/d]	21
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2029
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	21.00
Maximum annual utilisation [Ml/d]	21.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-45.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-280.85

Financial and Cost Information

Metric	
Capex [£m]	17.73
Financing Cost [£m]	27.39
Opex [£m]	37.15
Embodied Carbon [tCo2e]	6,954.28
Average operational carbon emissions [tCo2e/yr]	15.92
Total Carbon Cost [£m]	3.50
Average Incremental Cost (AIC) [p/m3]	11.75

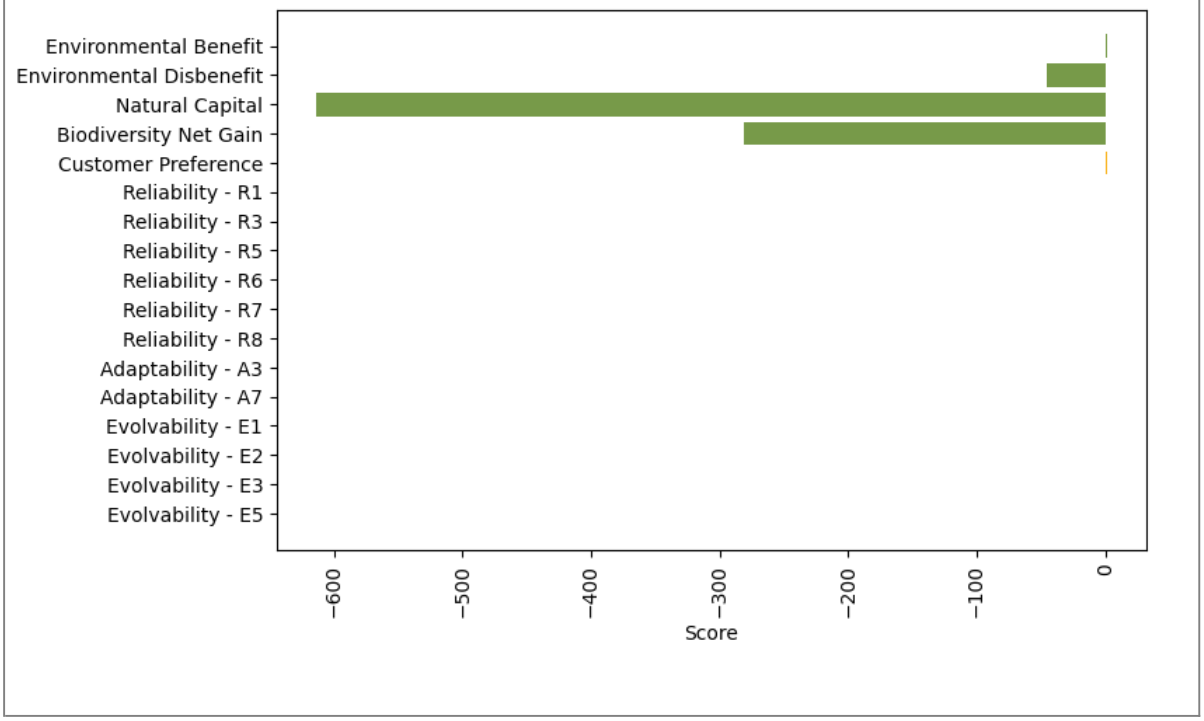
Other

Metric	

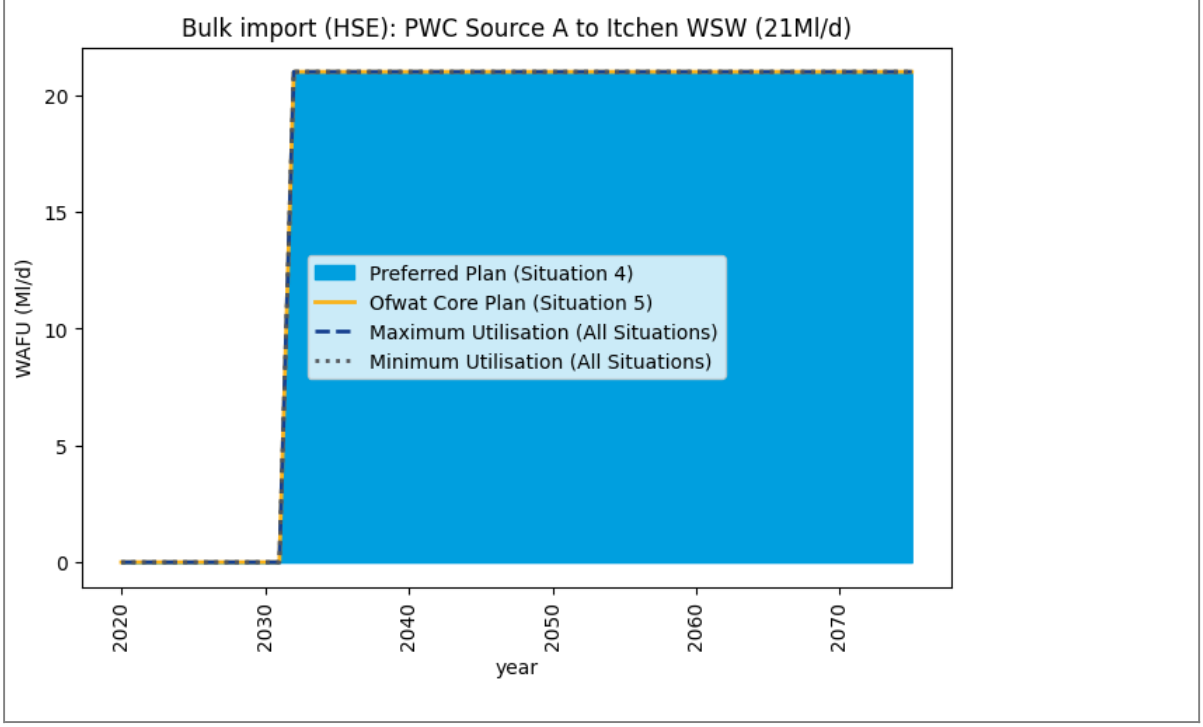
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-45.00
Environmental: Natural Capital	-613.47
Environmental: Biodiversity Net Gain	-280.85
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Harbour (60Ml/d)
Source of Supply and main operational features	60Mld Recycled water sent to Itchen WSW via Havant Thicket Reservoir. Portsmouth Harbour WWTW transfer to new WRP transfer to Havant Thicket then direct raw water transfer to Itchen WSW for treatment. Replaces SRO B4.
Area over which option is to be implemented	Portsmouth
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	60
DO 1:200 Peak [Ml/d]	60
DO 1:500 Average [Ml/d]	60
DO 1:500 Peak [Ml/d]	60
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2034
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.15
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	52.86
Maximum annual utilisation [Ml/d]	60.00
Environment	
SEA benefit effect	9.00
SEA negative effect	-54.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-122.73

Financial and Cost Information

Metric	
Capex [£m]	293.72
Financing Cost [£m]	383.60
Opex [£m]	395.18
Embodied Carbon [tCo2e]	74,182.10
Average operational carbon emissions [tCo2e/yr]	790.74
Total Carbon Cost [£m]	71.49
Average Incremental Cost (AIC) [p/m3]	48.88

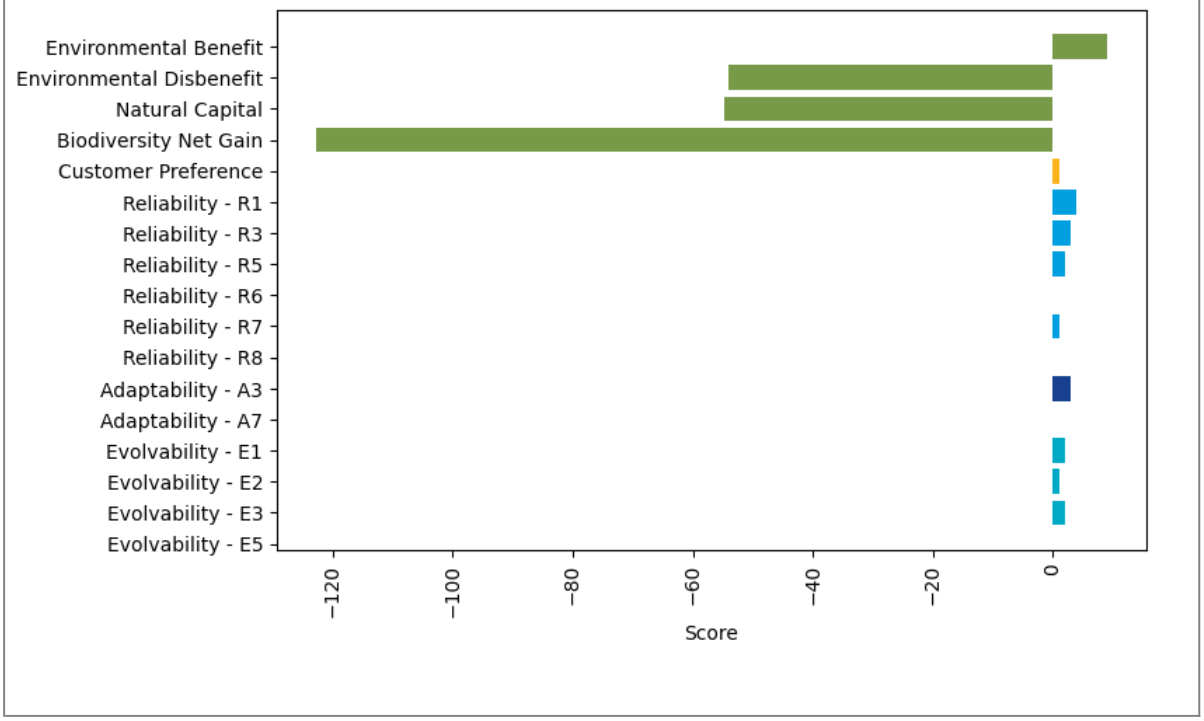
Other

Metric	

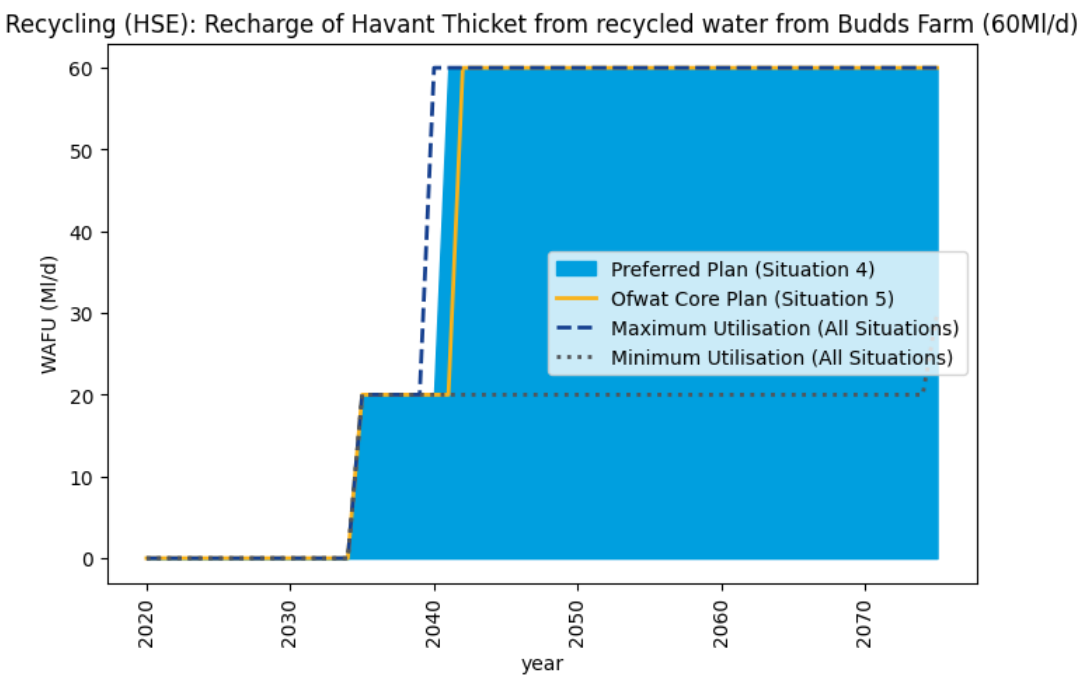
Best Value Metrics

Metric	
Environmental: Environmental Benefit	9.00
Environmental: Environmental Disbenefit	-54.00
Environmental: Natural Capital	-54.86
Environmental: Biodiversity Net Gain	-122.73
Social: Customer Preference	1.15
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	1
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HSW-HRZ): Romsey Town and Broadlands valve (3.1Ml/d)
Source of Supply and main operational features	Interzonal transfer (HSW-HRZ): Romsey Town and Broadlands - bidirectional (3.1Ml/d)
Area over which option is to be implemented	Hampshire Rural
Dependencies	Bidirectional Version: Interzonal transfer (HRZ-HSW): Romsey Town and Broadlands valve (3.1Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	3.1
DO 1:200 Peak [Ml/d]	3.1
DO 1:500 Average [Ml/d]	3.1
DO 1:500 Peak [Ml/d]	3.1
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2024
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.03
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	0.03

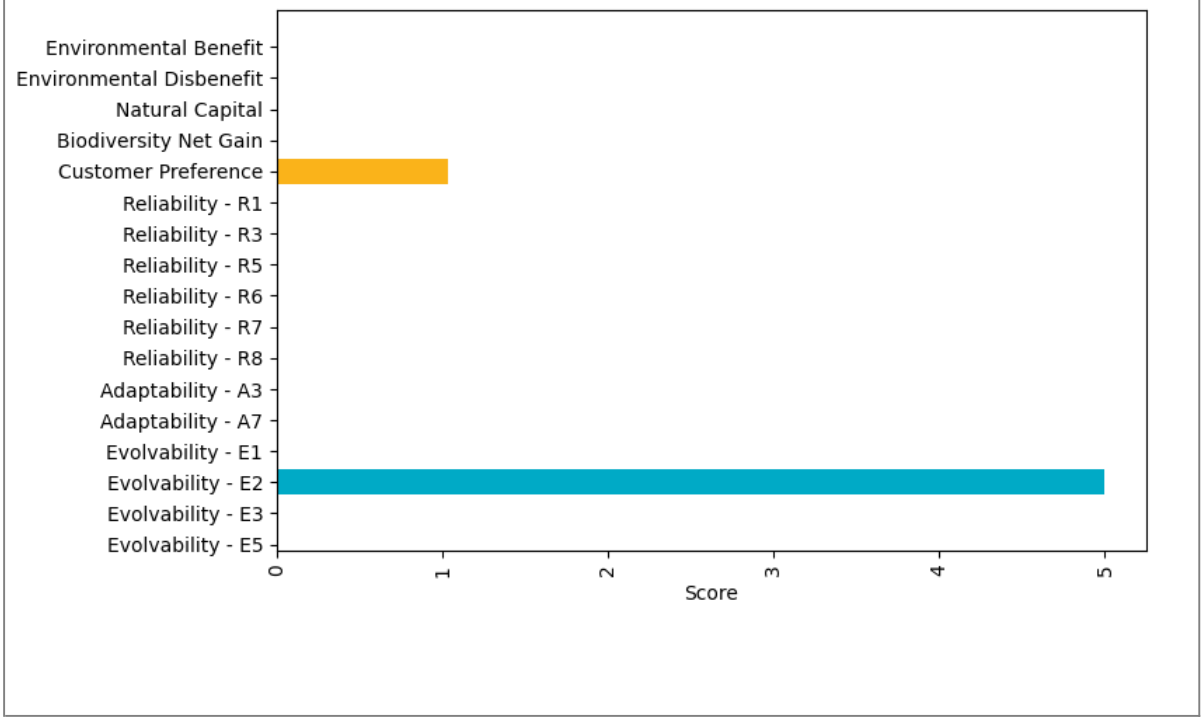
Other

Metric

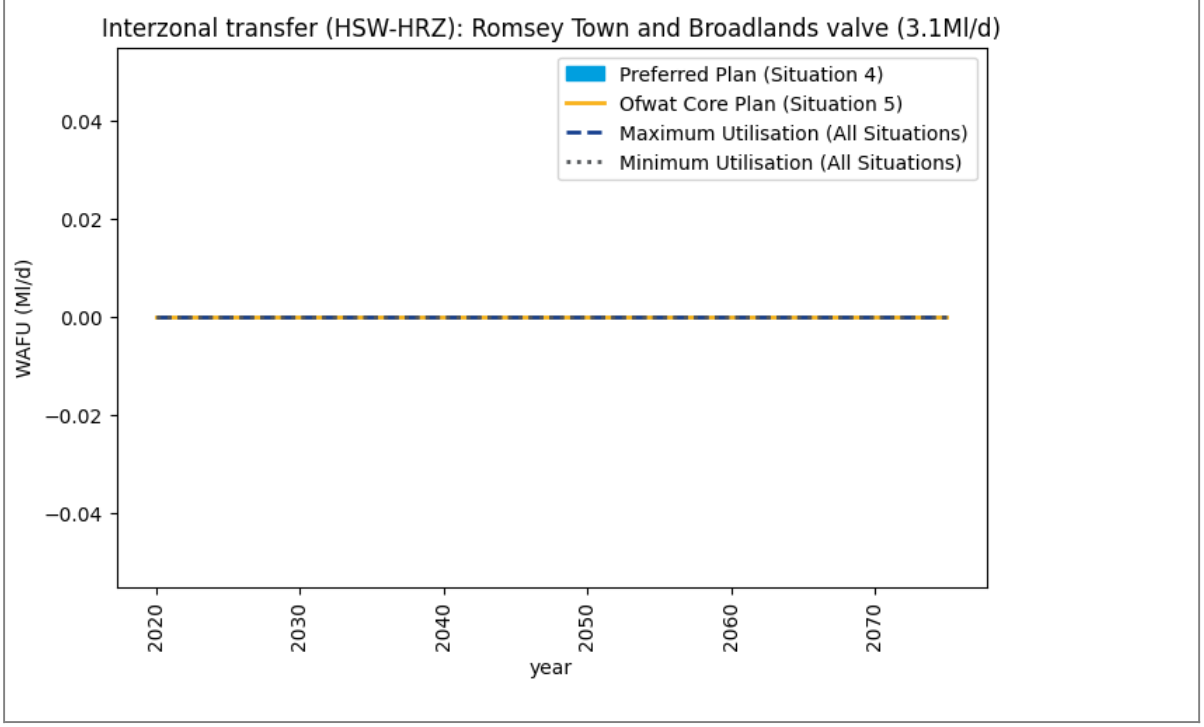
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HRZ-HSW): Romsey Town and Broadlands valve (3.1Ml/d)
Source of Supply and main operational features	Interzonal transfer (HRZ-HSW): Romsey Town and Broadlands - bidirectional (3.1Ml/d)
Area over which option is to be implemented	Southampton West
Dependencies	Bidirectional Version: Interzonal transfer (HSW-HRZ): Romsey Town and Broadlands valve (3.1Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	3.1
DO 1:200 Peak [Ml/d]	3.1
DO 1:500 Average [Ml/d]	3.1
DO 1:500 Peak [Ml/d]	3.1
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	01/04/2024
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	2.91
Maximum annual utilisation [Ml/d]	3.10
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.00
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

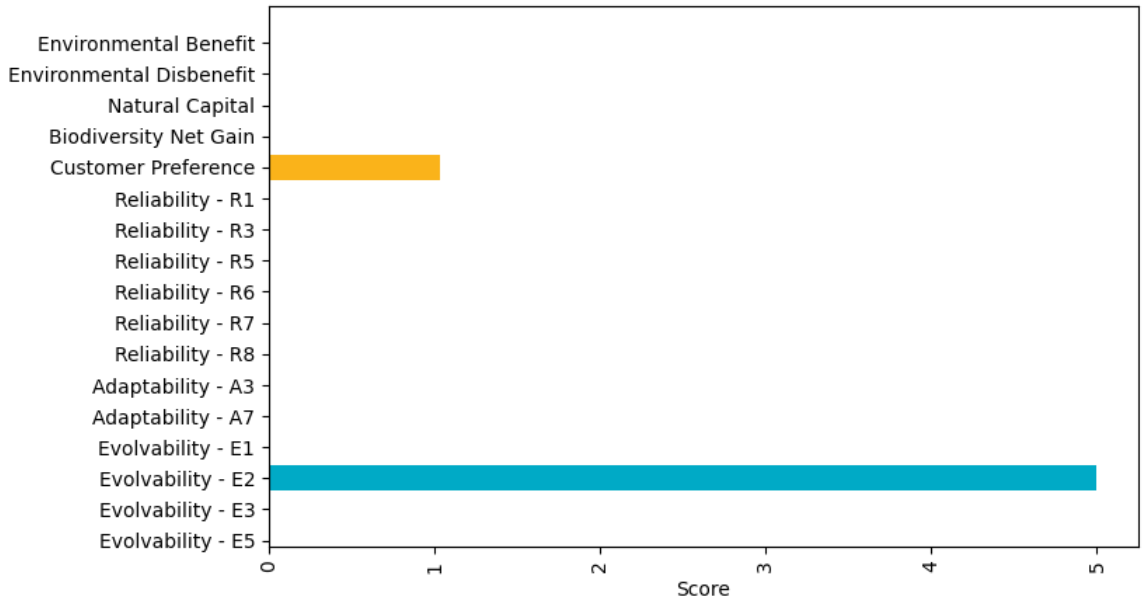
Other

Metric

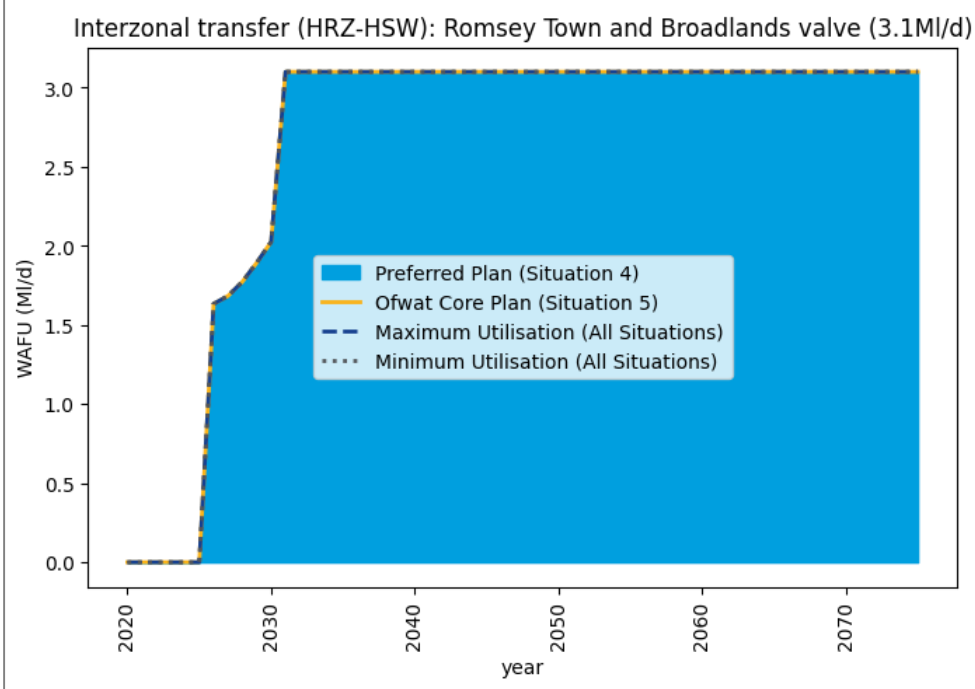
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (SWZ-SNZ): Rock Road bi-directional - existing (15Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North
Dependencies	Bidirectional Version: Interzonal transfer (SNZ-SWZ): Rock Road bi-directional - existing (15Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	15
DO 1:200 Peak [Ml/d]	15
DO 1:500 Average [Ml/d]	15
DO 1:500 Peak [Ml/d]	15
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

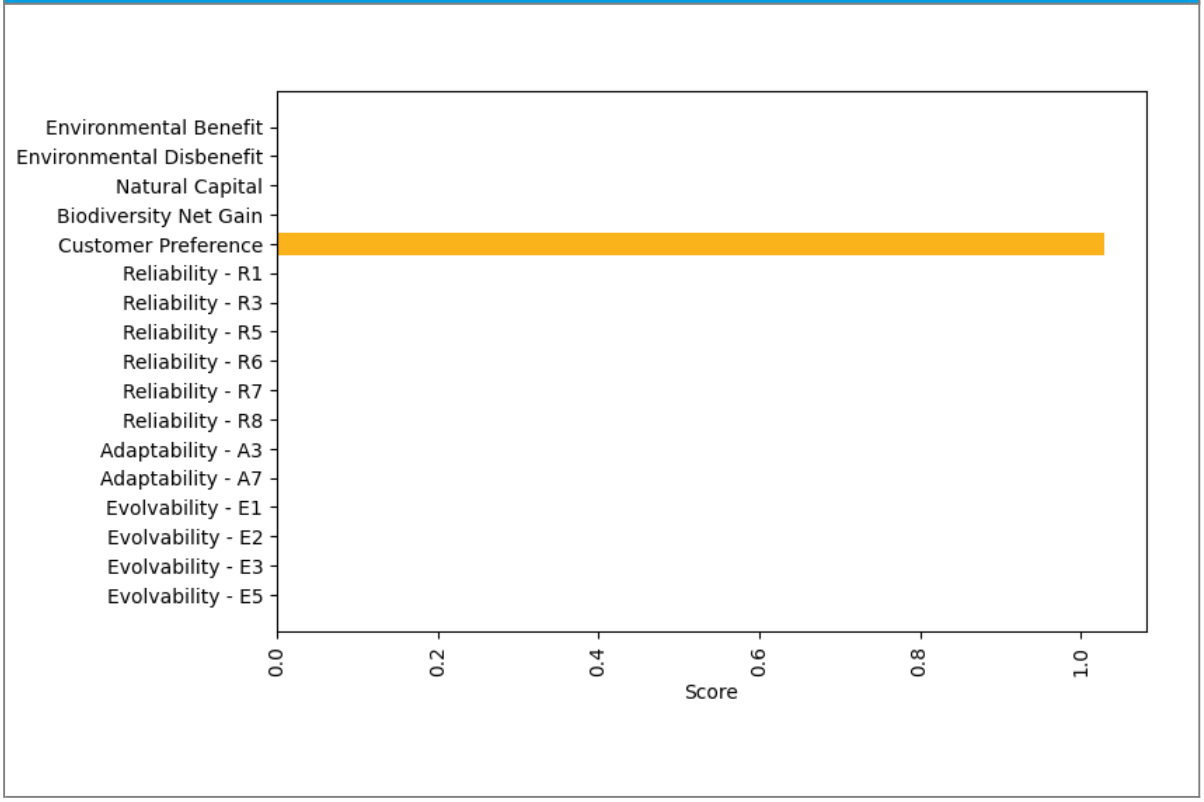
Other

Metric	

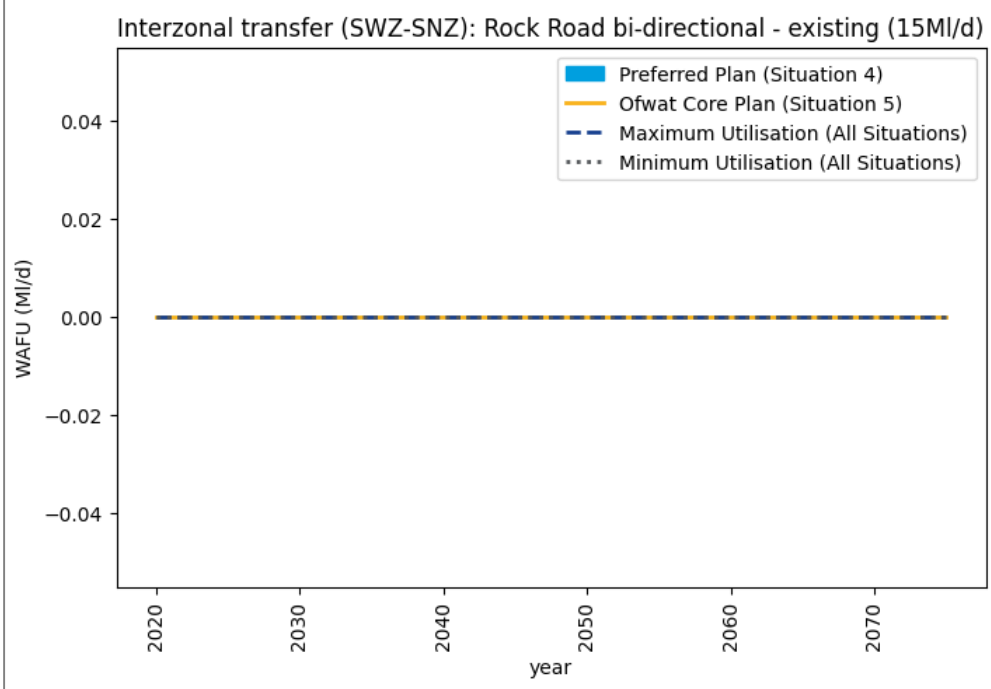
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (SNZ-SWZ): Rock Road bi-directional - existing (15Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Worthing
Dependencies	Bidirectional Version: Interzonal transfer (SWZ-SNZ): Rock Road bi-directional - existing (15Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	15
DO 1:200 Peak [Ml/d]	15
DO 1:500 Average [Ml/d]	15
DO 1:500 Peak [Ml/d]	15
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	12.62
Maximum annual utilisation [Ml/d]	15.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

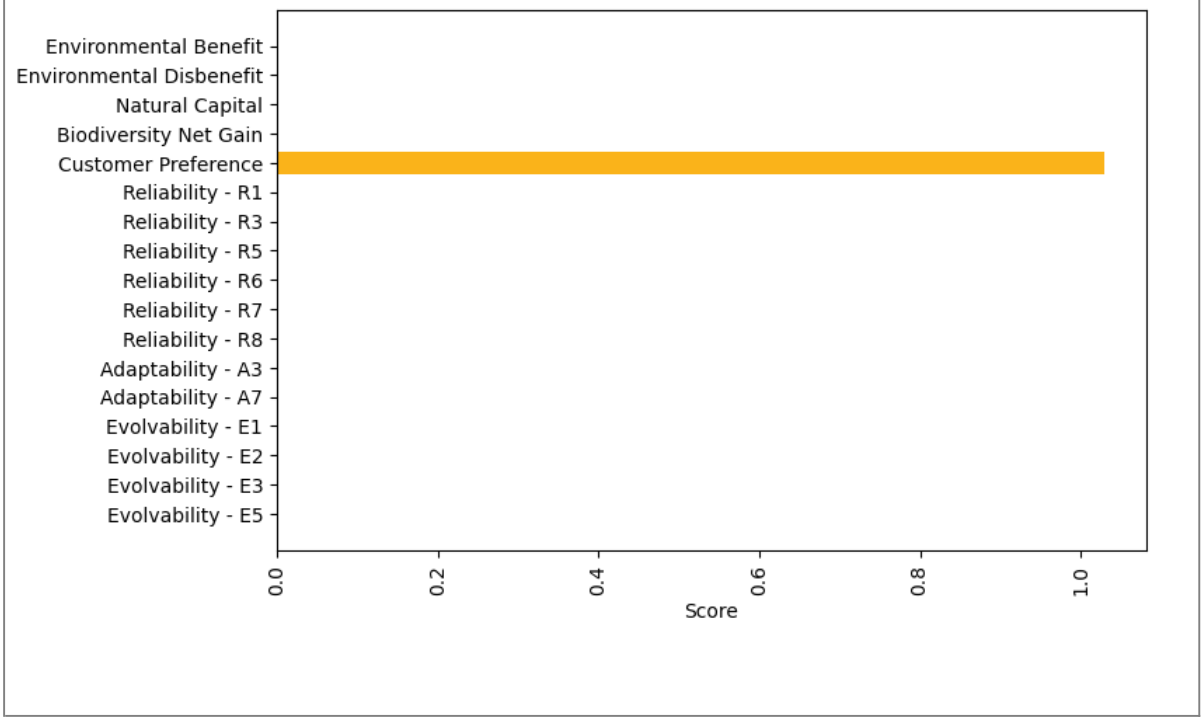
Other

Metric	

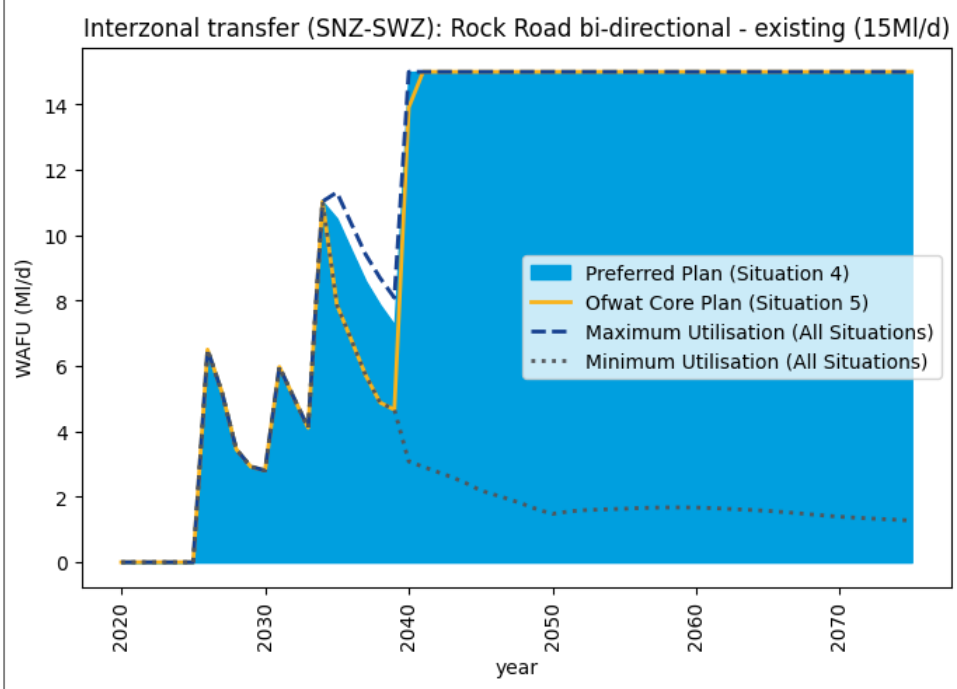
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk export (SHZ): SEW RZ8 to Rye (10Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	SWS line 48 or Table 4
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	SWS output 'supply-demand
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	Annex on demand measures
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	
Links and constraints	
Constituent WRSE Option IDs	
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	
Flexibility	
Scalability and modularity [Best Value Metric]	
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	34.90
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	12.75

Other

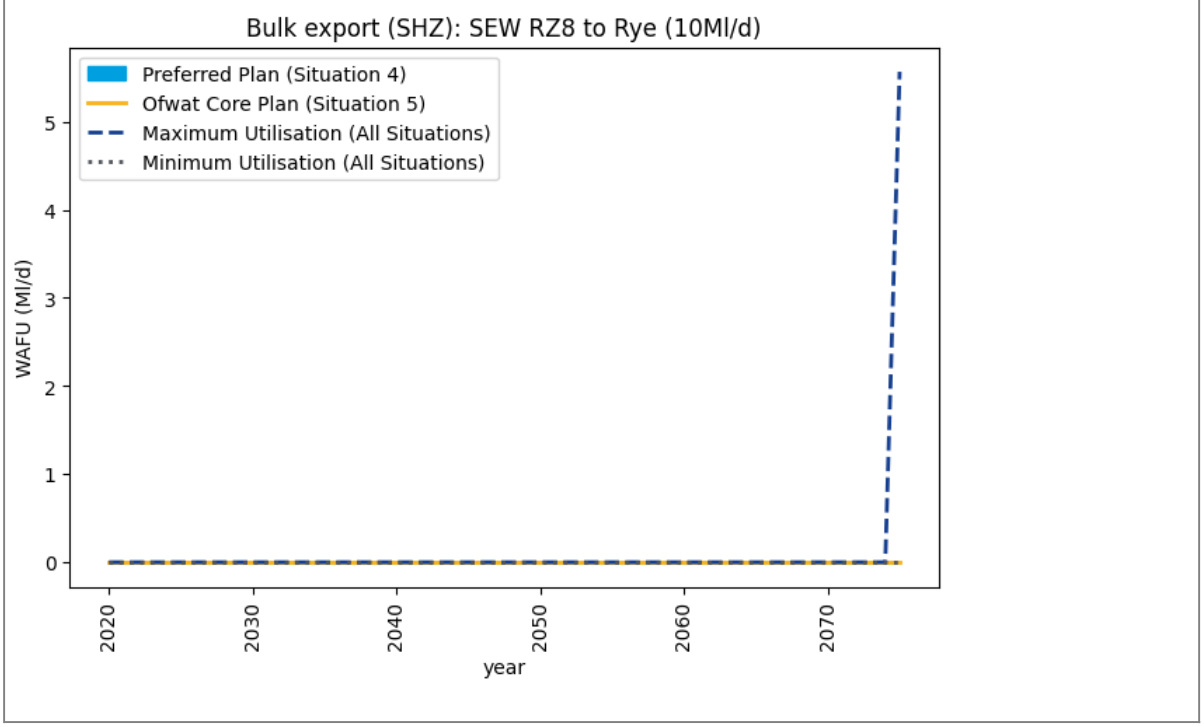
Metric	

Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	
Resilience: Evolvability E2 – Intervention lead times	
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot

Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HSE-HRZ): Abbotswood - existing (1.1Ml/d)
Source of Supply and main operational features	Interzonal transfer (HSE-HRZ): Abbotswood (1.1Ml/d)
Area over which option is to be implemented	Southampton East
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	1.1
DO 1:200 Peak [Ml/d]	1.1
DO 1:500 Average [Ml/d]	1.1
DO 1:500 Peak [Ml/d]	1.1
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.96
Maximum annual utilisation [Ml/d]	1.10
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.00
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

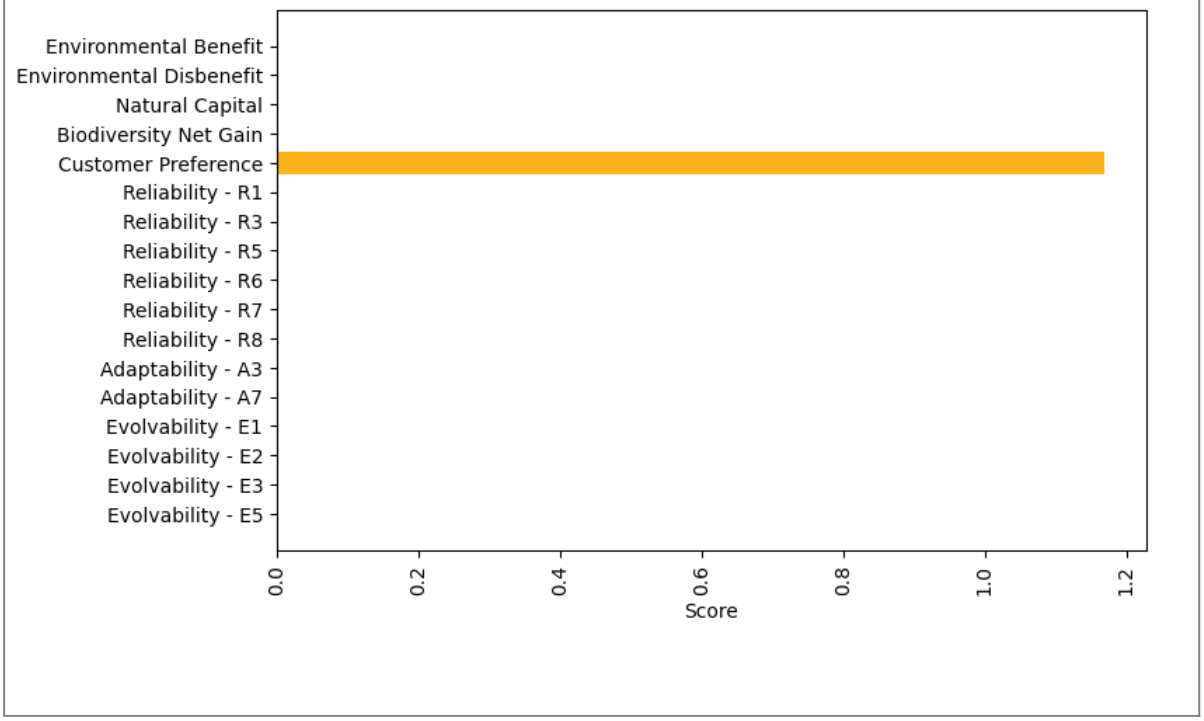
Other

Metric	

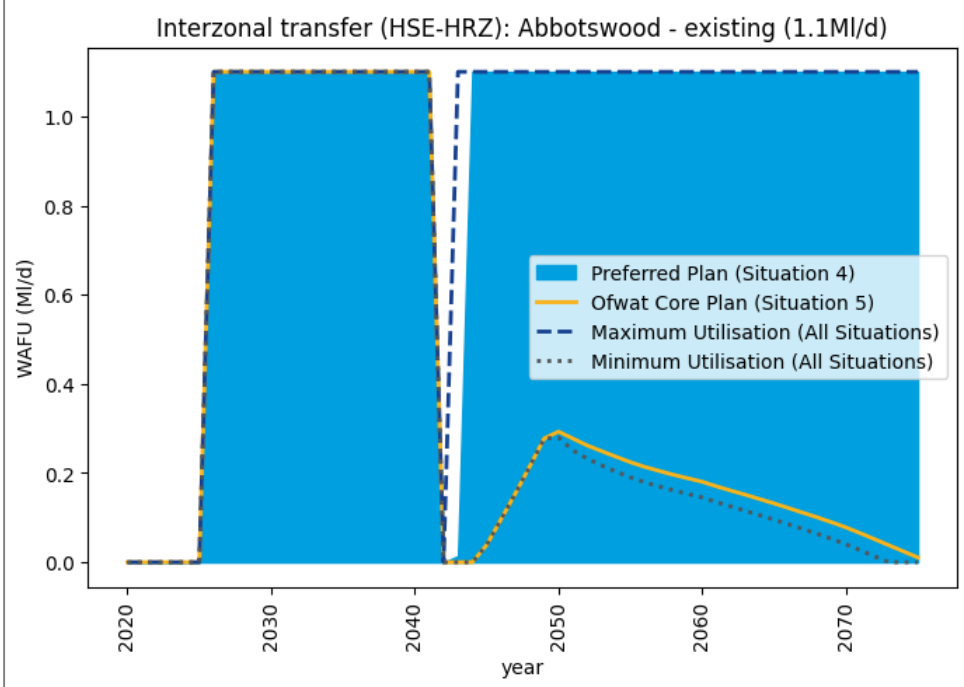
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (SBZ): Lewes Road (3.5Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Brighton
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	3.5
DO 1:200 Peak [Ml/d]	3.5
DO 1:500 Average [Ml/d]	3.5
DO 1:500 Peak [Ml/d]	3.5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	2
Earliest start date	01/04/2030
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	5.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.46
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	3.50
Maximum annual utilisation [Ml/d]	3.50
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	57.04
Financing Cost [£m]	73.64
Opex [£m]	15.37
Embodied Carbon [tCo2e]	2,350.00
Average operational carbon emissions [tCo2e/yr]	5.33
Total Carbon Cost [£m]	1.09
Average Incremental Cost (AIC) [p/m3]	91.41

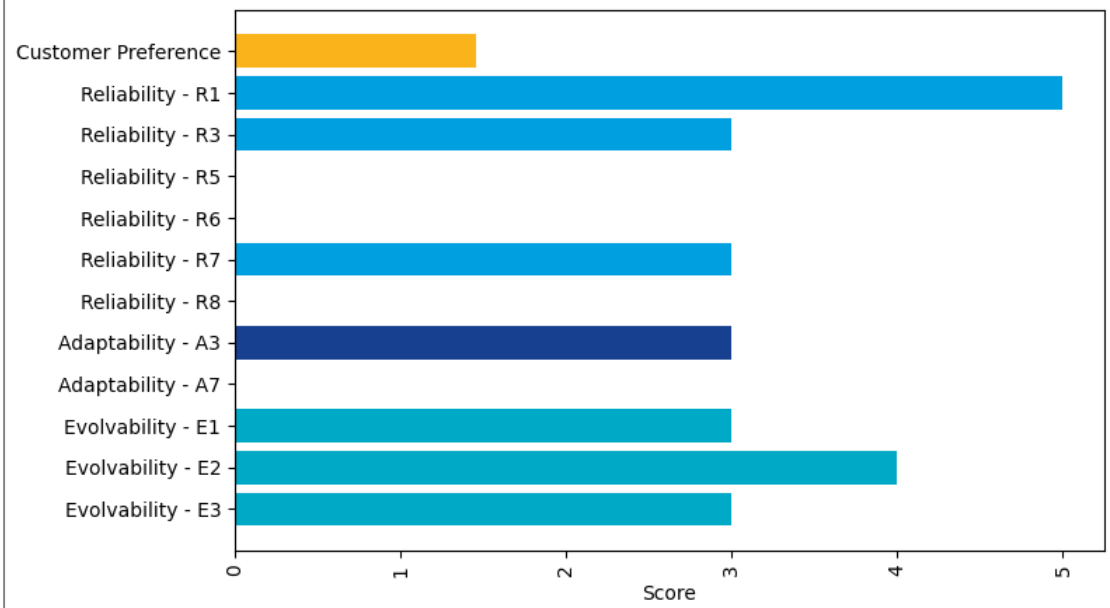
Other

Metric	

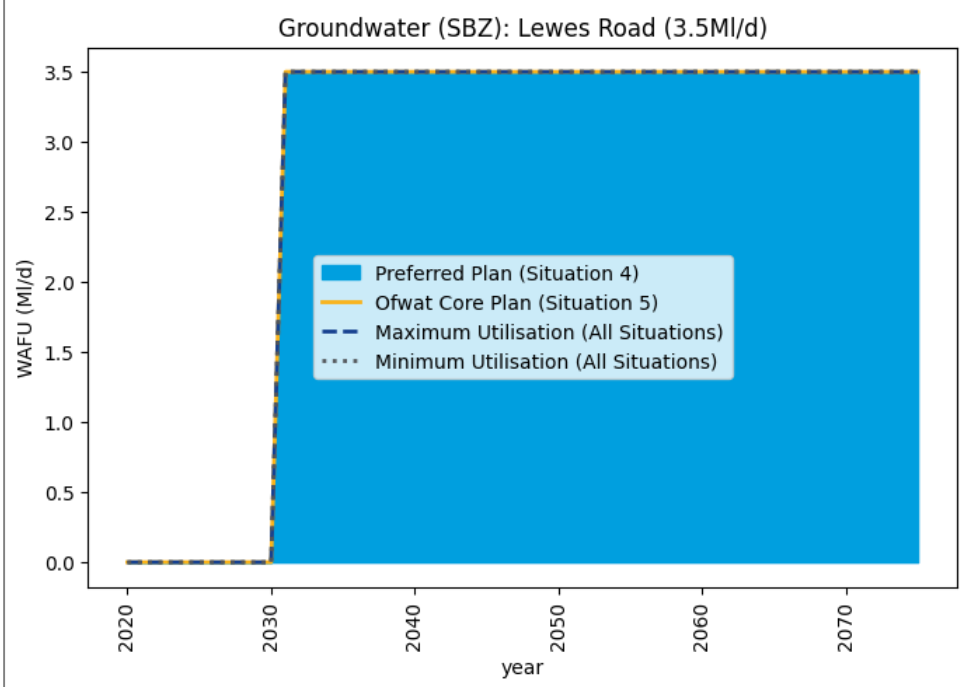
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.46
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	5.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	4
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (SWZ-SBZ): Brighton to Worthing (40Ml/d)
Source of Supply and main operational features	Interzonal transfer (SBZ-SWZ): Brighton to Worthing - bidirectional (40Ml/d)
Area over which option is to be implemented	Sussex Brighton
Dependencies	Bidirectional Version: Interzonal transfer (SBZ-SWZ): Brighton to Worthing (40Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.08
Environment	
SEA benefit effect	5.00
SEA negative effect	-23.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-227.92

Financial and Cost Information

Metric	
Capex [£m]	52.62
Financing Cost [£m]	94.44
Opex [£m]	95.87
Embodied Carbon [tCo2e]	12,659.59
Average operational carbon emissions [tCo2e/yr]	0.00
Total Carbon Cost [£m]	5.93
Average Incremental Cost (AIC) [p/m3]	18.71

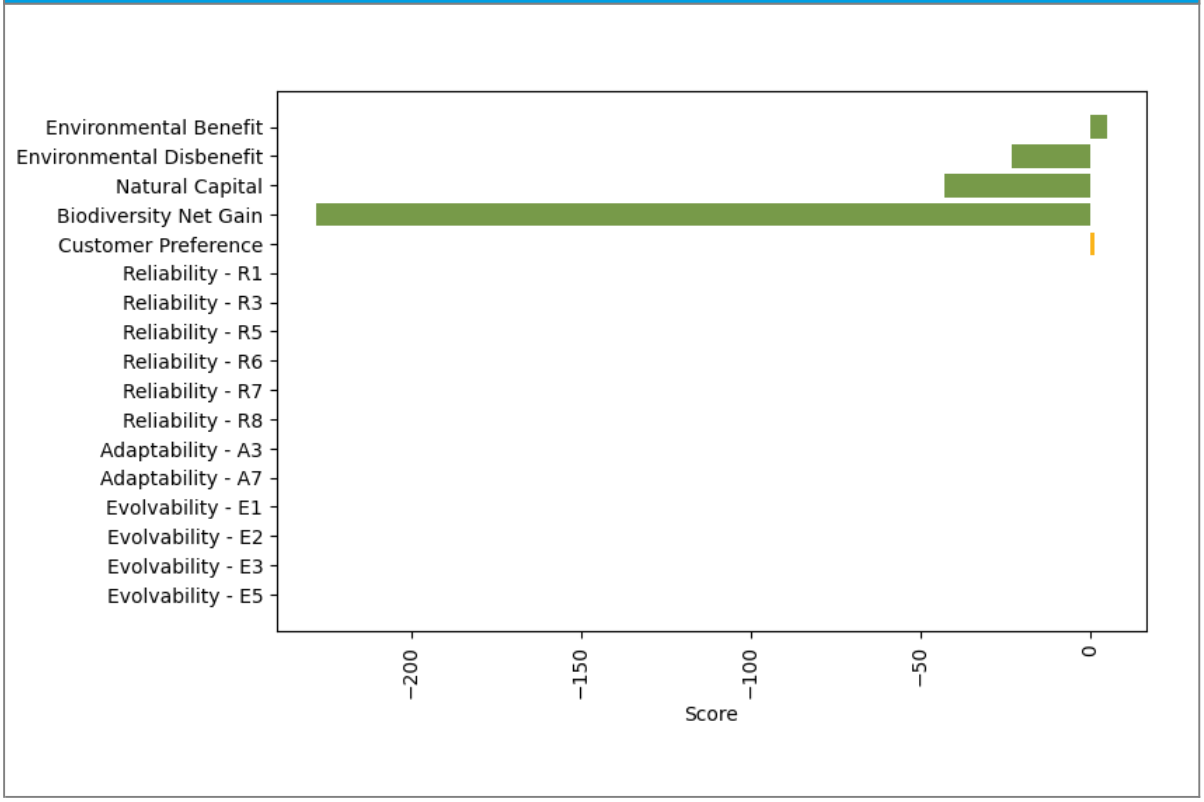
Other

Metric	

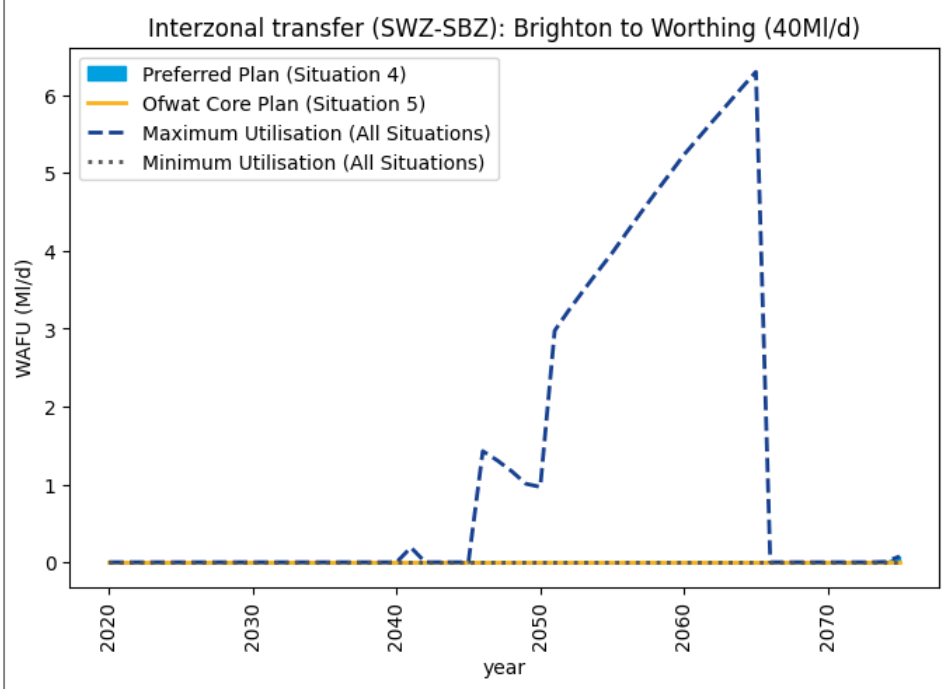
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-23.00
Environmental: Natural Capital	-42.98
Environmental: Biodiversity Net Gain	-227.92
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (SBZ-SWZ): Brighton to Worthing (40Ml/d)
Source of Supply and main operational features	Interzonal transfer (SWZ-SBZ): Brighton to Worthing - bidirectional (40Ml/d)
Area over which option is to be implemented	Sussex Worthing
Dependencies	Bidirectional Version: Interzonal transfer (SWZ-SBZ): Brighton to Worthing (40Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	5.00
SEA negative effect	-23.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-227.92

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	47.93
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	0.73
Average Incremental Cost (AIC) [p/m3]	8.76

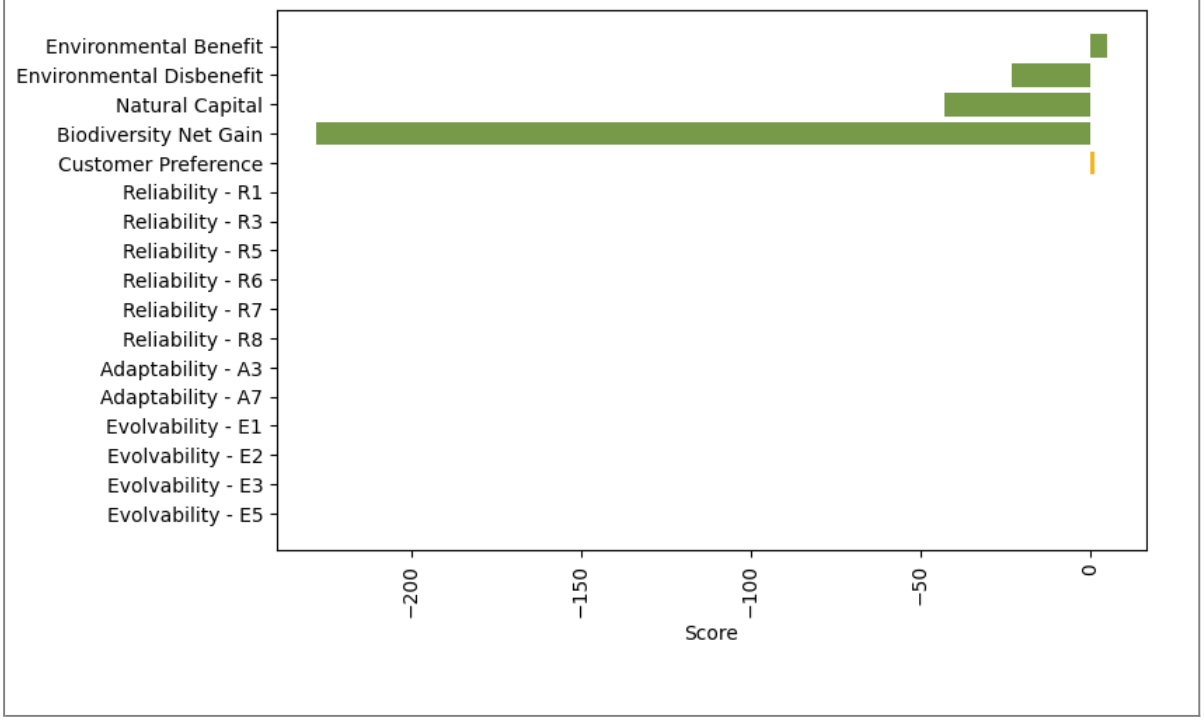
Other

Metric	

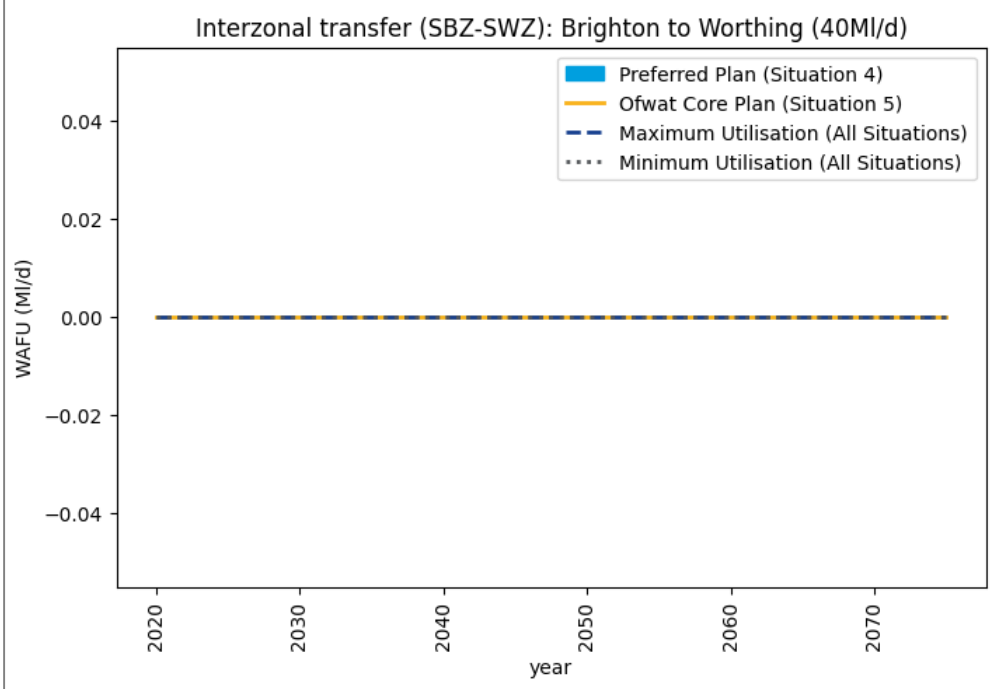
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-23.00
Environmental: Natural Capital	-42.98
Environmental: Biodiversity Net Gain	-227.92
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (SBZ): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Brighton
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.16
DO 1:500 Peak [Ml/d]	0.16
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.16
Maximum annual utilisation [Ml/d]	0.16
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

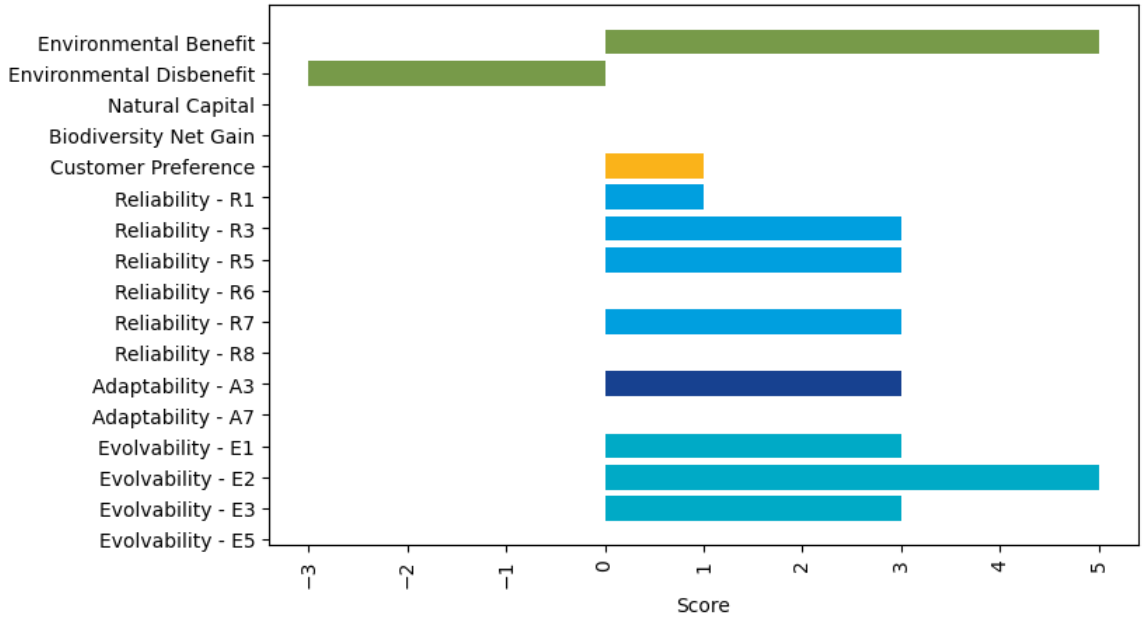
Other

Metric	

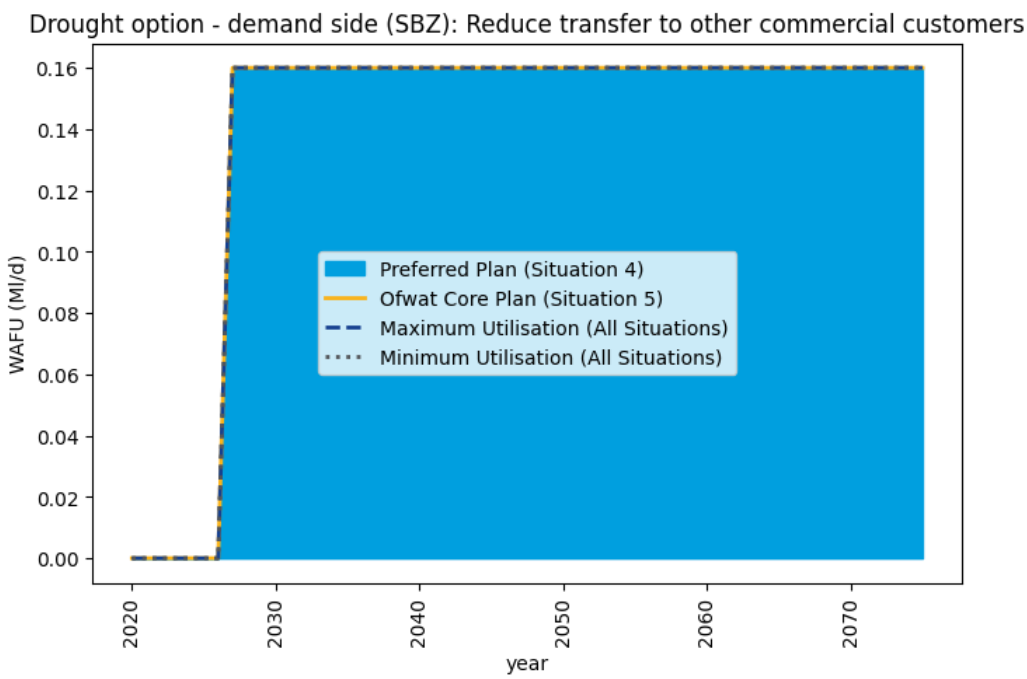
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (SNZ): SES re-zoning (4Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.48
Maximum annual utilisation [Ml/d]	4.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.00
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

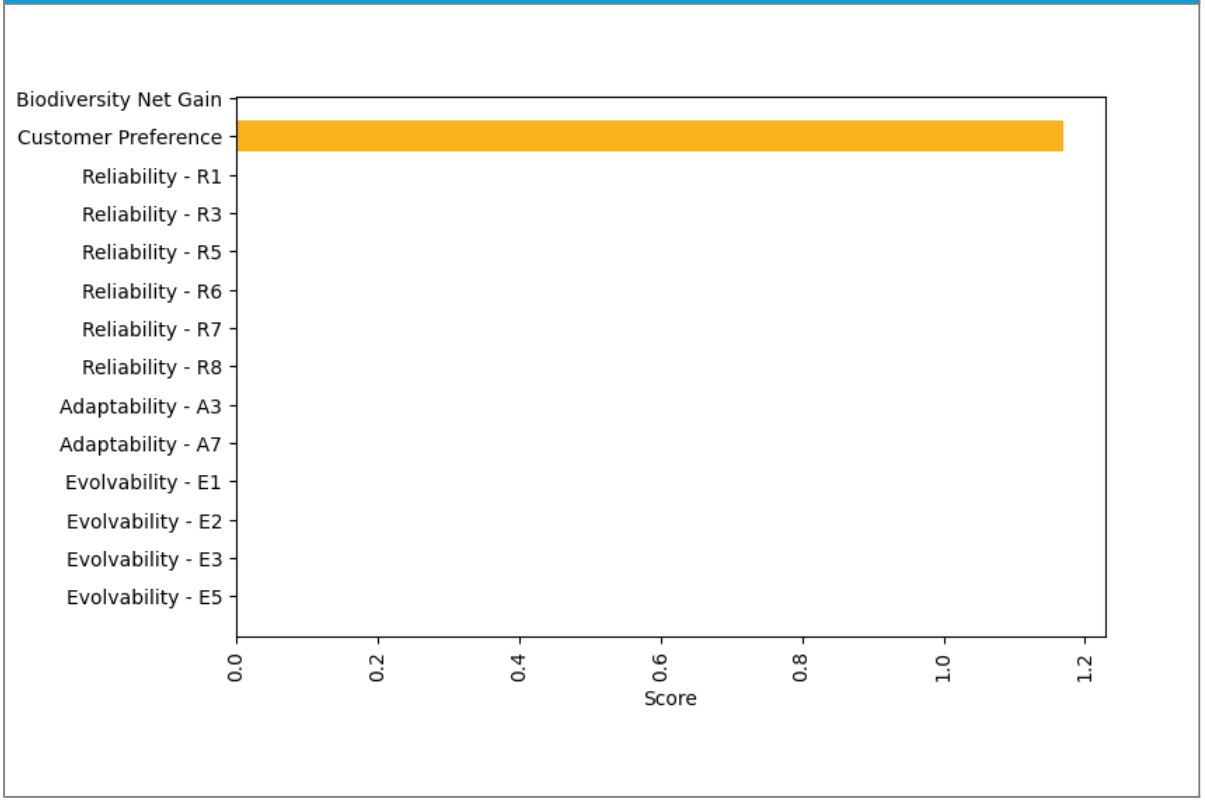
Other

Metric	

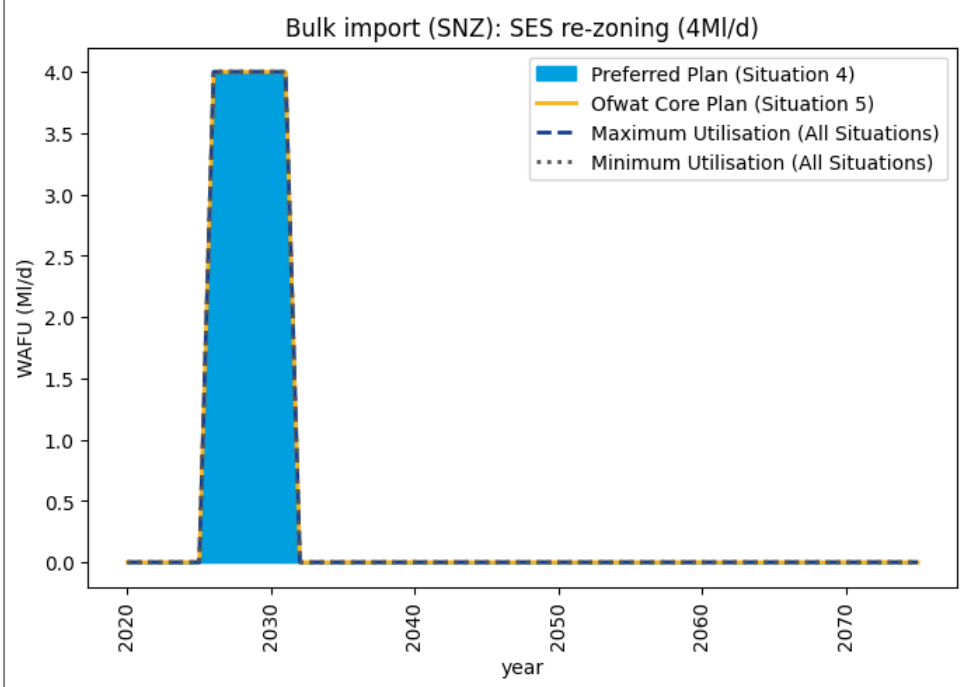
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)
Source of Supply and main operational features	Bulk import (KTZ): SEW RZ8 to near Canterbury
Area over which option is to be implemented	Kent Thannet
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	2
DO 1:200 Peak [Ml/d]	2
DO 1:500 Average [Ml/d]	2
DO 1:500 Peak [Ml/d]	2
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	01/04/2025
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.78
Maximum annual utilisation [Ml/d]	2.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-25.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-4.73

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.00
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

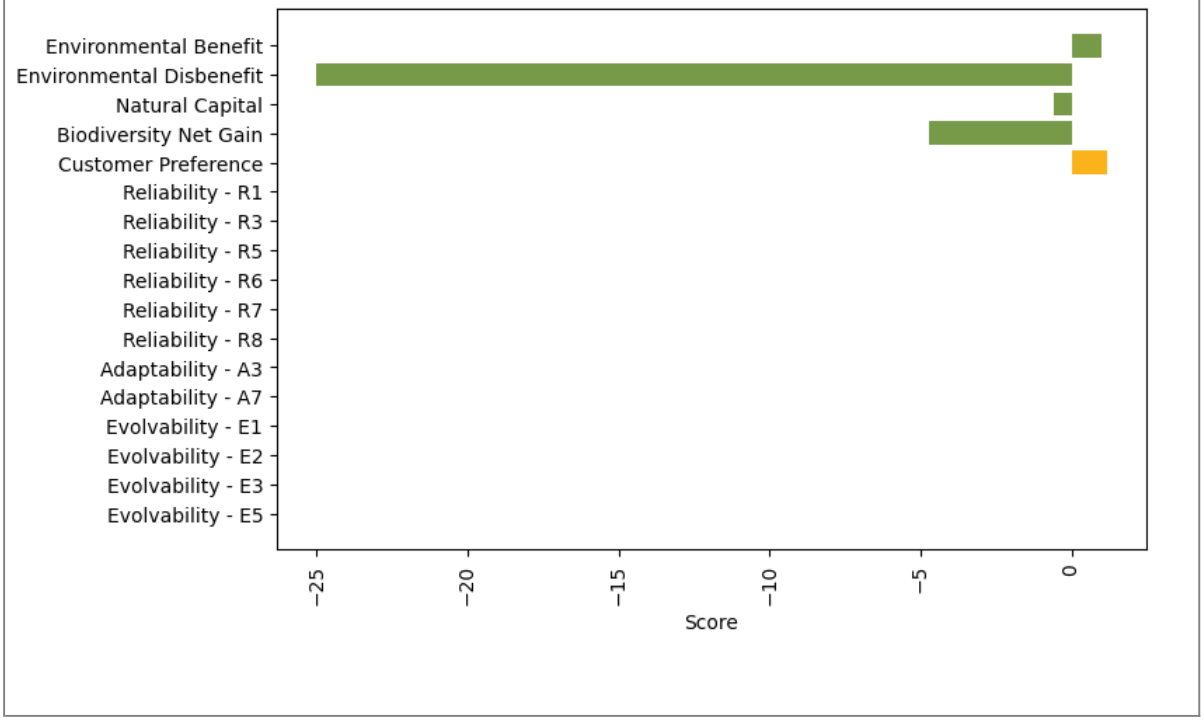
Other

Metric	

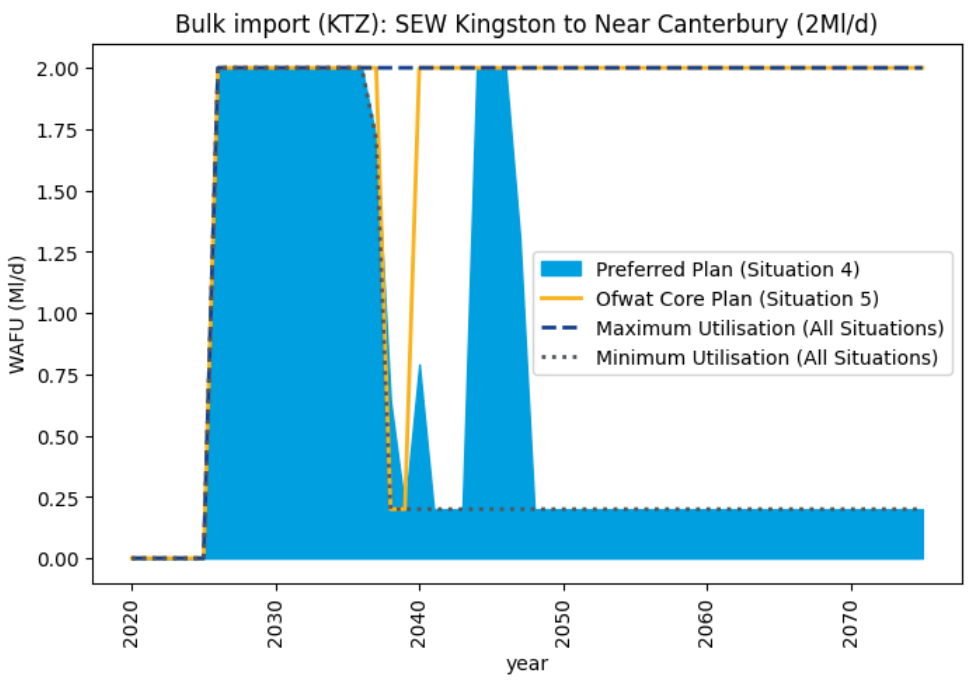
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-25.00
Environmental: Natural Capital	-0.57
Environmental: Biodiversity Net Gain	-4.73
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (SHZ): Reconfigure Rye Wells (1.5Ml/d)
Source of Supply and main operational features	Rye groundwater source is a well & adit 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 1.5Mld. There is an existing surface water WSW on site and no further treatment is required.
Area over which option is to be implemented	Sussex Hastings
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	1.5
DO 1:200 Peak [Ml/d]	1.5
DO 1:500 Average [Ml/d]	1.5
DO 1:500 Peak [Ml/d]	1.5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	1.49
Maximum annual utilisation [Ml/d]	1.50
Environment	
SEA benefit effect	2.00
SEA negative effect	-14.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	3.53
Financing Cost [£m]	4.99
Opex [£m]	6.92
Embodied Carbon [tCo2e]	463.30
Average operational carbon emissions [tCo2e/yr]	4.48
Total Carbon Cost [£m]	0.37
Average Incremental Cost (AIC) [p/m3]	30.11

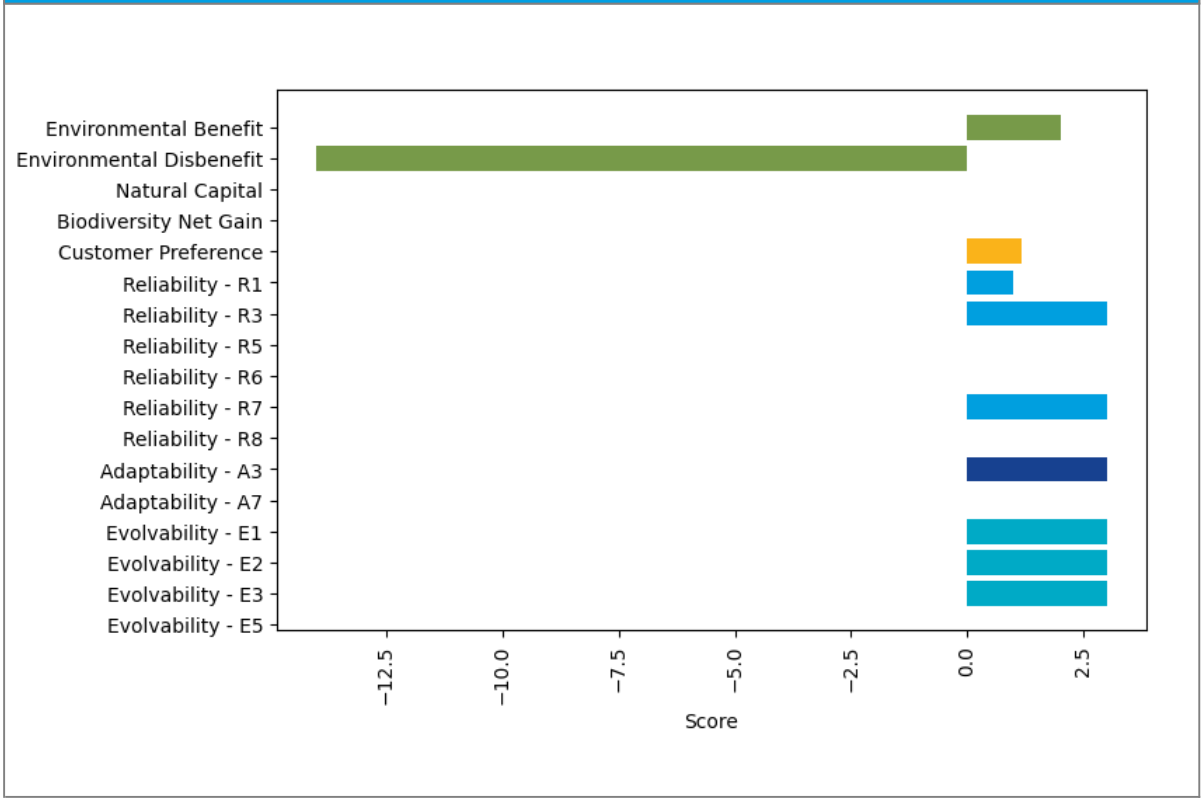
Other

Metric	

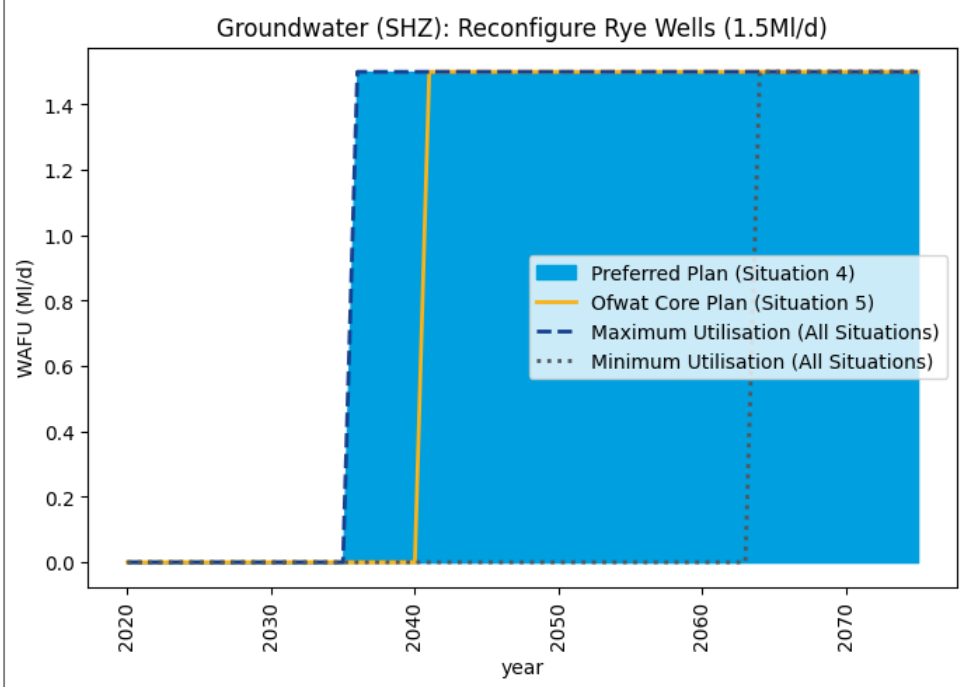
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-14.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	3
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Recycling (SHZ): Hastings to Darwell (15.3Ml/d)
Source of Supply and main operational features	New resource. This option is a new 21.5Mld water recycling plant producing a DO of 15.3Mld near Hastings WwTW and a transfer of the treated effluent to Darwell reservoir. Process losses have been included.
Area over which option is to be implemented	Sussex Hastings
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	15.3
DO 1:200 Peak [Ml/d]	15.3
DO 1:500 Average [Ml/d]	15.3
DO 1:500 Peak [Ml/d]	15.3
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	6
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.71
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.15
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	15.30
Maximum annual utilisation [Ml/d]	15.30
Environment	
SEA benefit effect	2.00
SEA negative effect	-31.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	358.37
Financing Cost [£m]	475.43
Opex [£m]	205.36
Embodied Carbon [tCo2e]	51,125.70
Average operational carbon emissions [tCo2e/yr]	266.83
Total Carbon Cost [£m]	33.06
Average Incremental Cost (AIC) [p/m3]	171.01

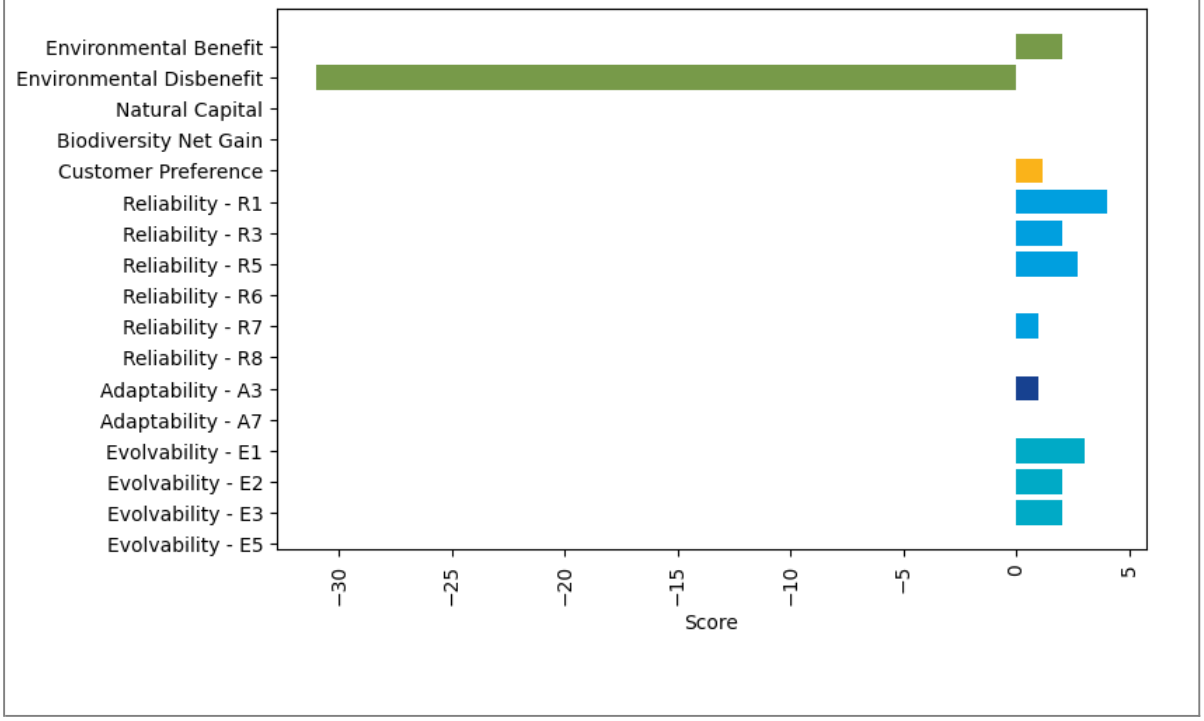
Other

Metric	

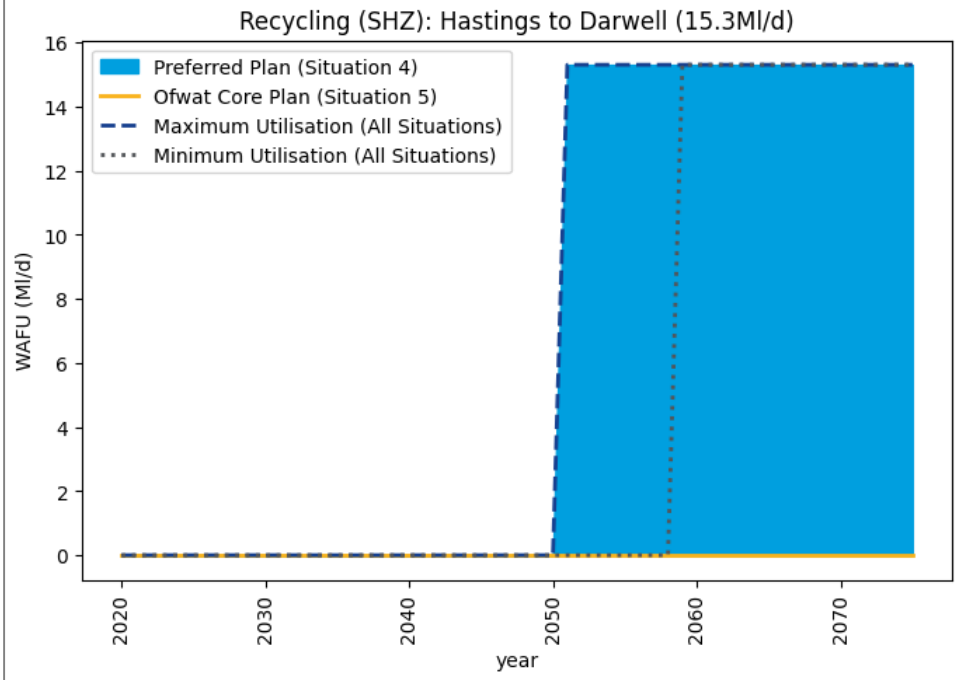
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-31.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.15
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2.714285714
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Recycling (SHZ): Tonbridge to Bewl (5.7Ml/d) - Planning
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Hastings
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	2
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.15
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	0.99
Financing Cost [£m]	2.29
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

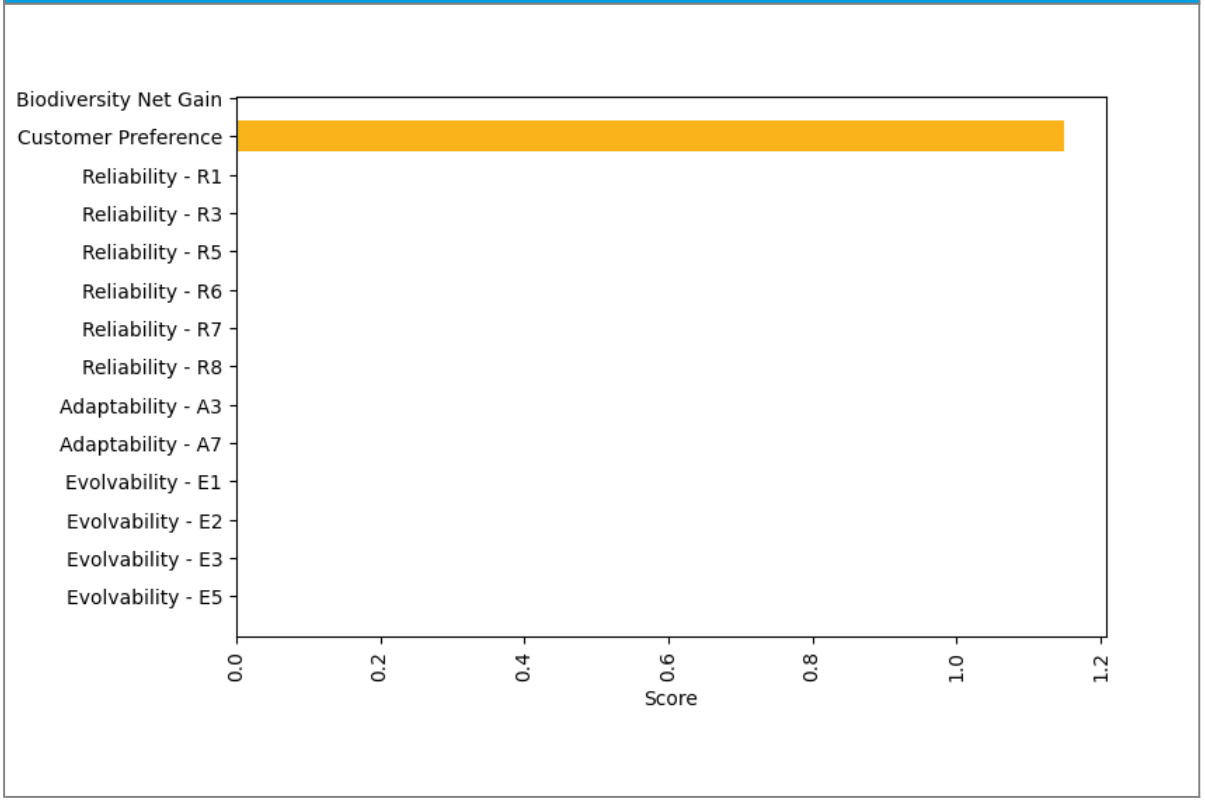
Other

Metric	

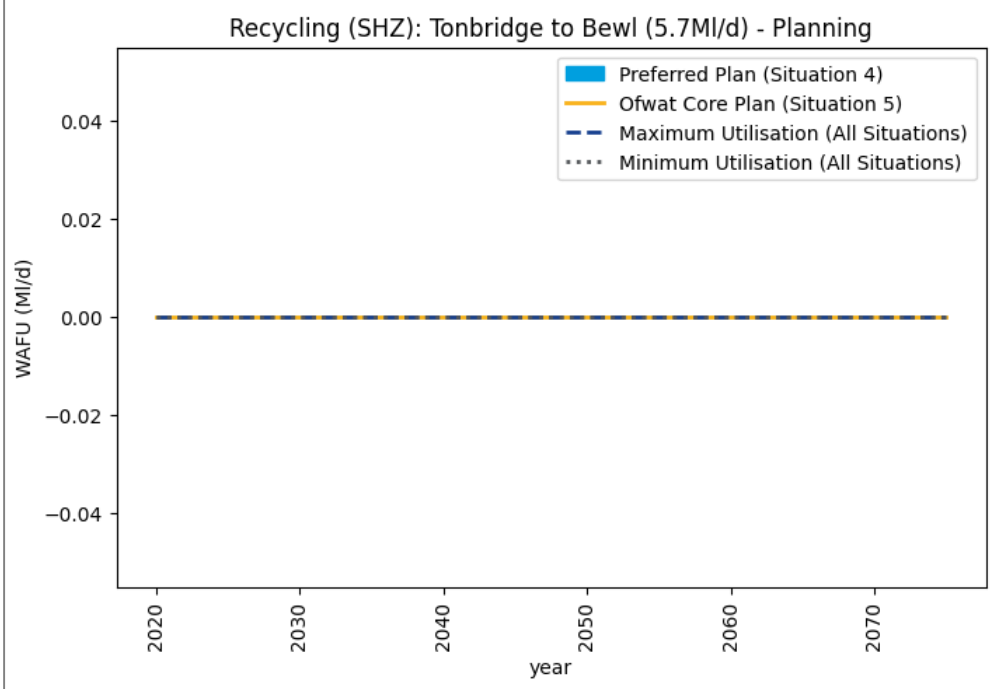
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.15
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option (SHZ): Terminate Darwell Reservoir supply to SEW
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Hastings
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	1.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

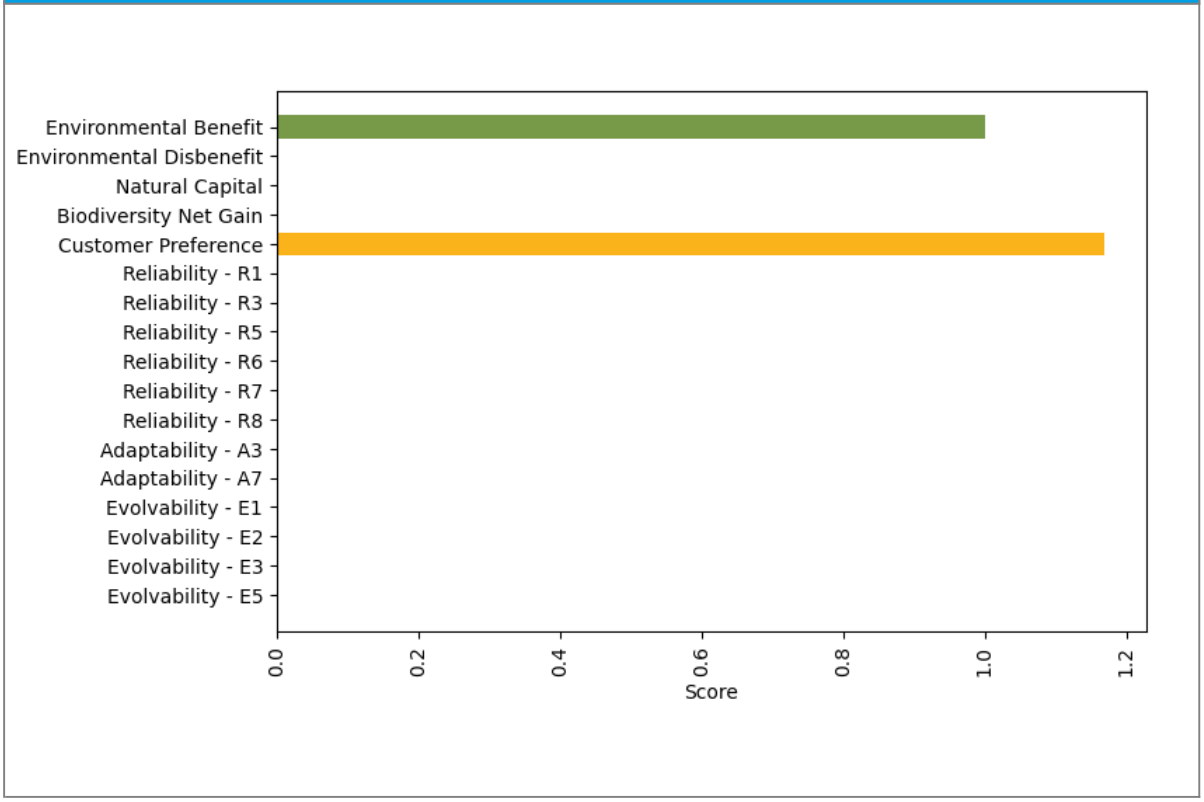
Other

Metric	

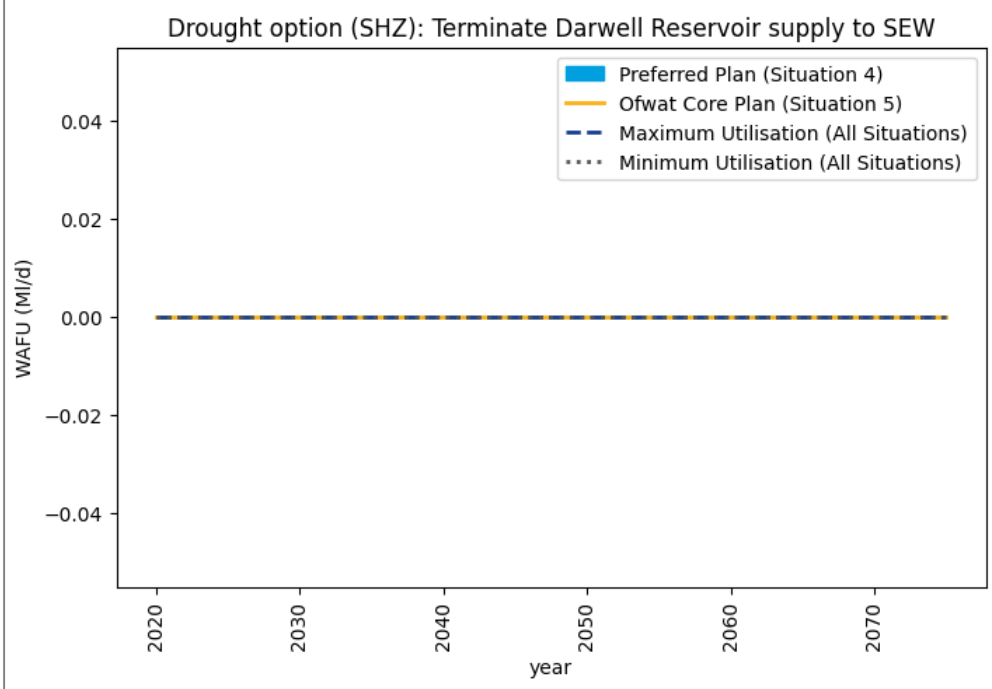
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (SHZ): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Hastings
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.05
DO 1:500 Peak [Ml/d]	0.05
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.05
Maximum annual utilisation [Ml/d]	0.05
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

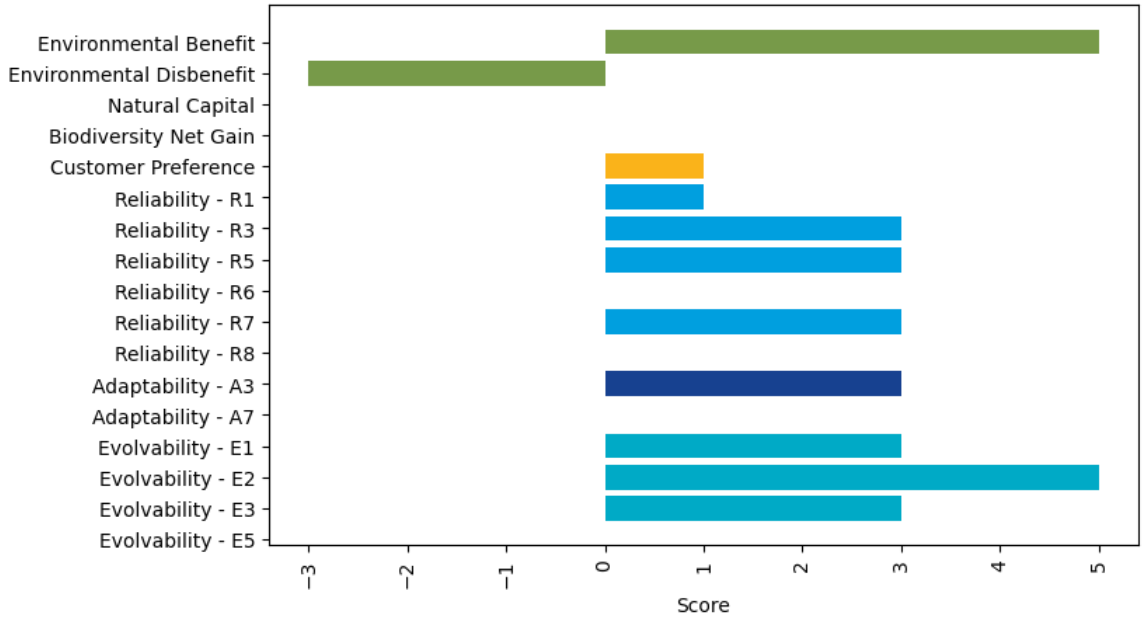
Other

Metric	

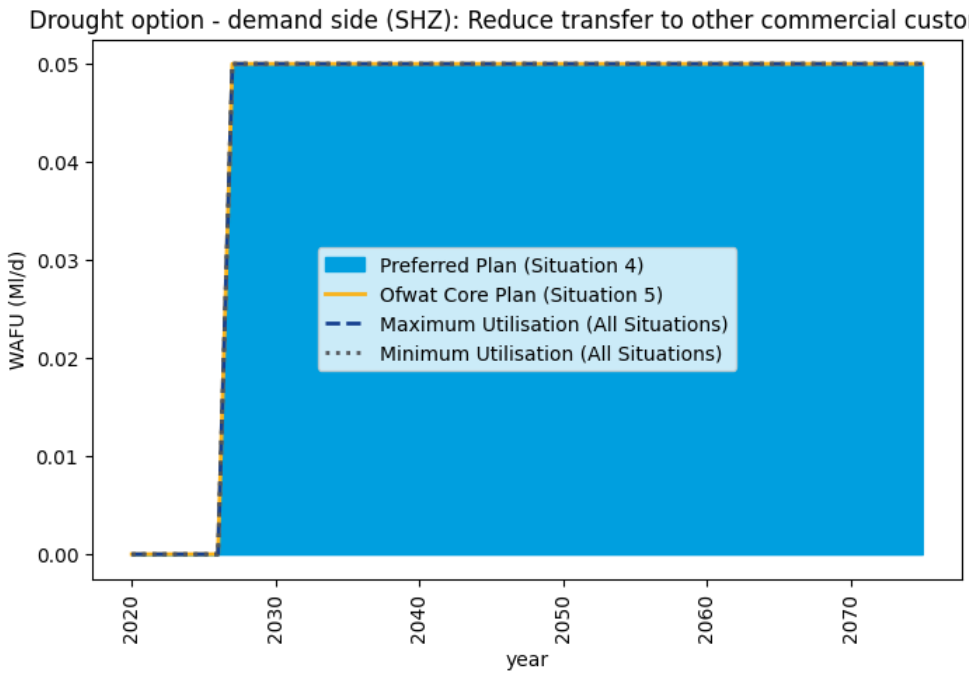
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	1.96
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	1.60
Maximum annual utilisation [Ml/d]	1.60
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

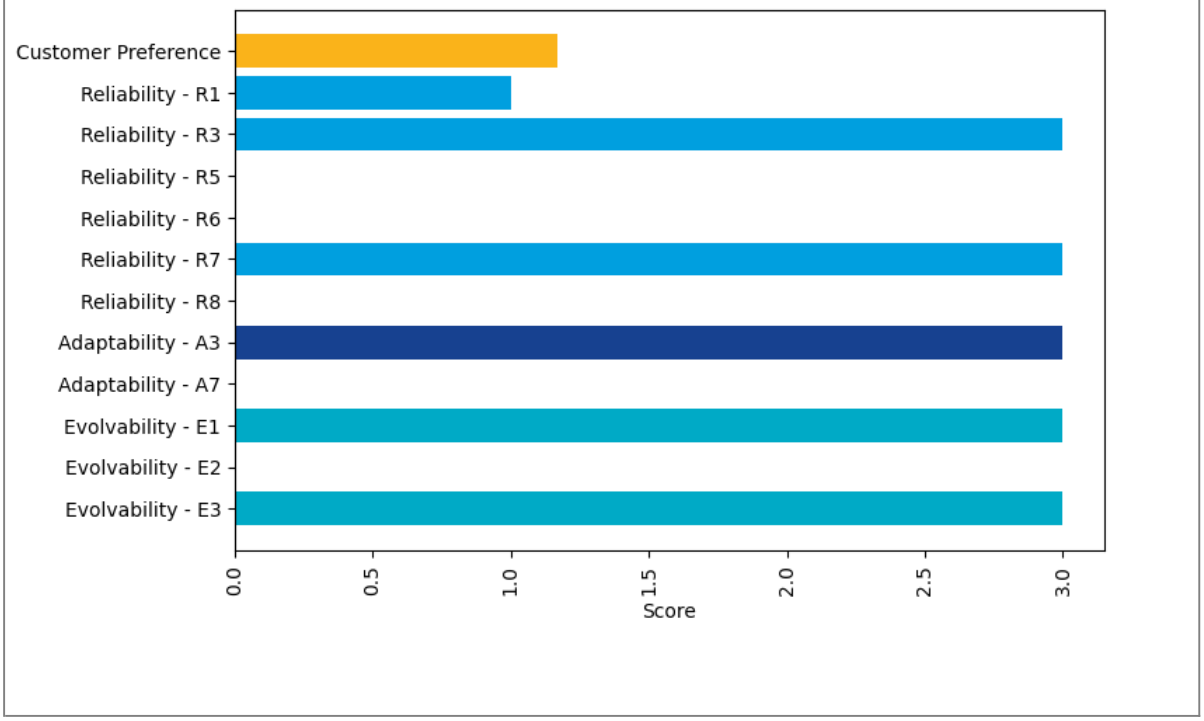
Other

Metric	

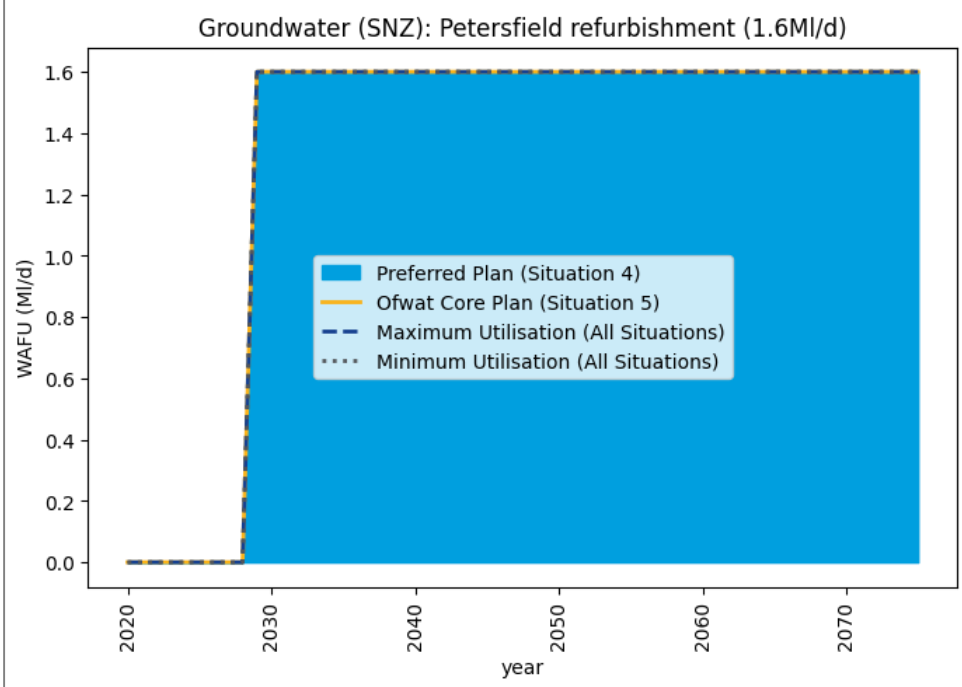
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (SNZ): Reinstate West Chiltington (3.1Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	3.12
Maximum annual utilisation [Ml/d]	3.12
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

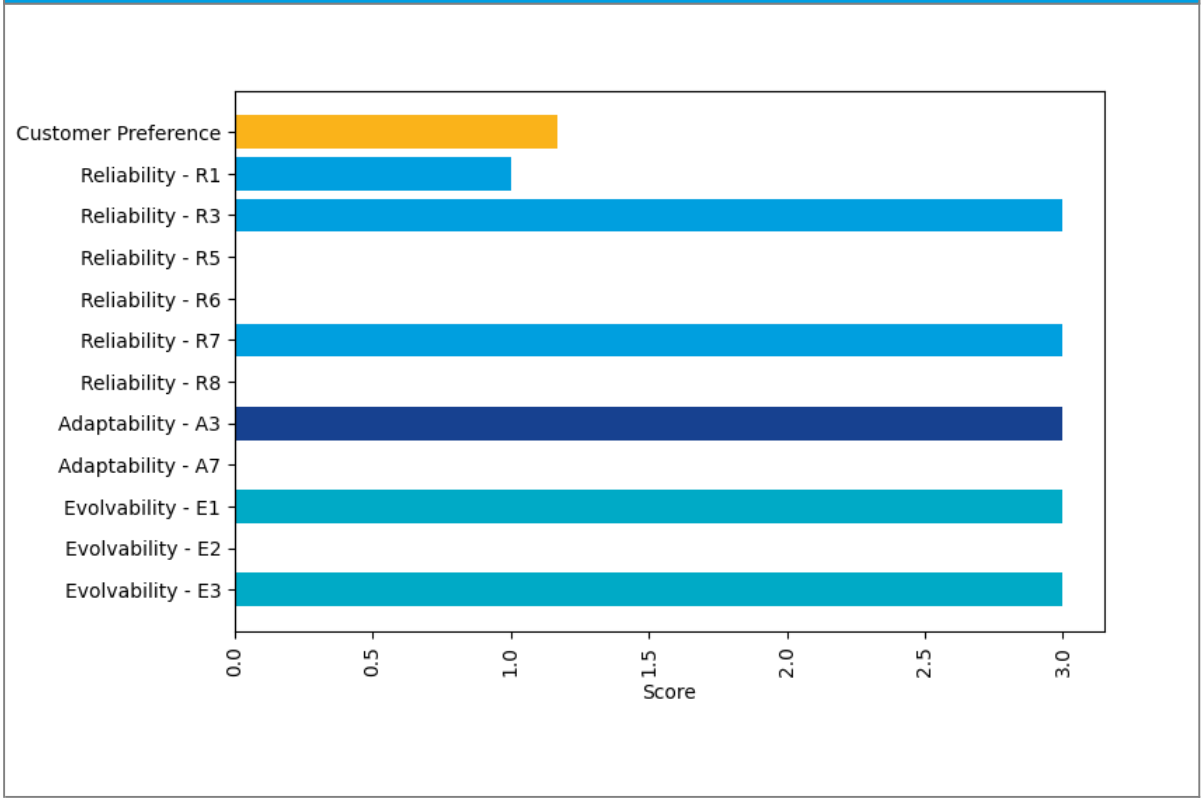
Other

Metric	

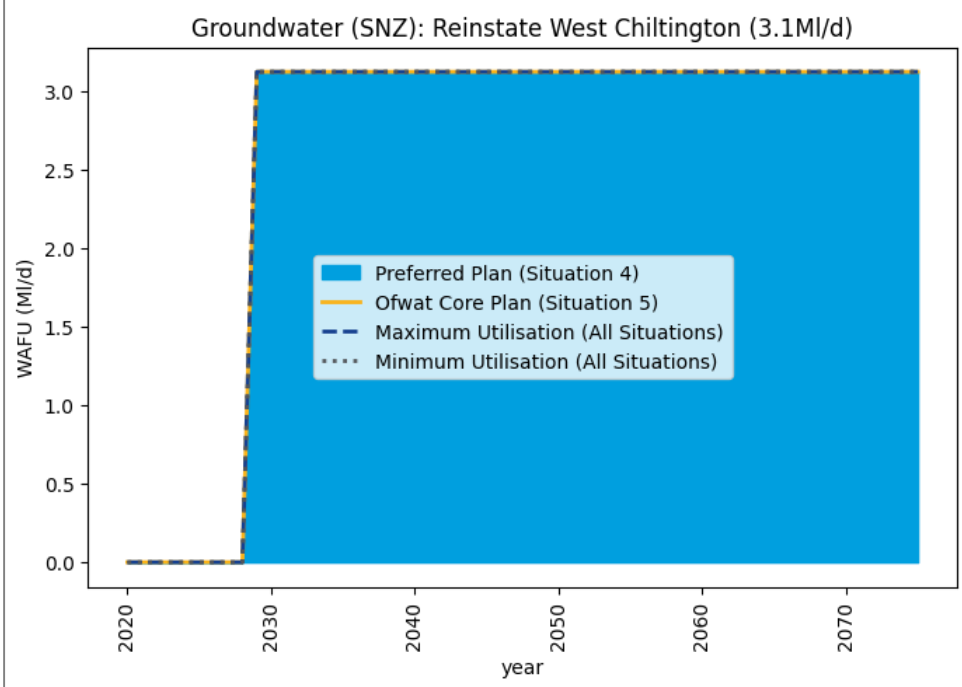
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d)
Source of Supply and main operational features	New resource. This option is a new 9.5Mld water recycling plant producing a DO of 6.8Mld near Horsham WwTW and a transfer of the treated effluent to reservoir which feeds into Pulborough WSW. Process losses have been included.
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	6.8
DO 1:200 Peak [Ml/d]	6.8
DO 1:500 Average [Ml/d]	6.8
DO 1:500 Peak [Ml/d]	6.8
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	8
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.15
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	6.80
Maximum annual utilisation [Ml/d]	6.80
Environment	
SEA benefit effect	1.00
SEA negative effect	-33.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-56.41

Financial and Cost Information

Metric	
Capex [£m]	240.81
Financing Cost [£m]	324.14
Opex [£m]	114.10
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	113.96
Total Carbon Cost [£m]	4.12
Average Incremental Cost (AIC) [p/m3]	258.16

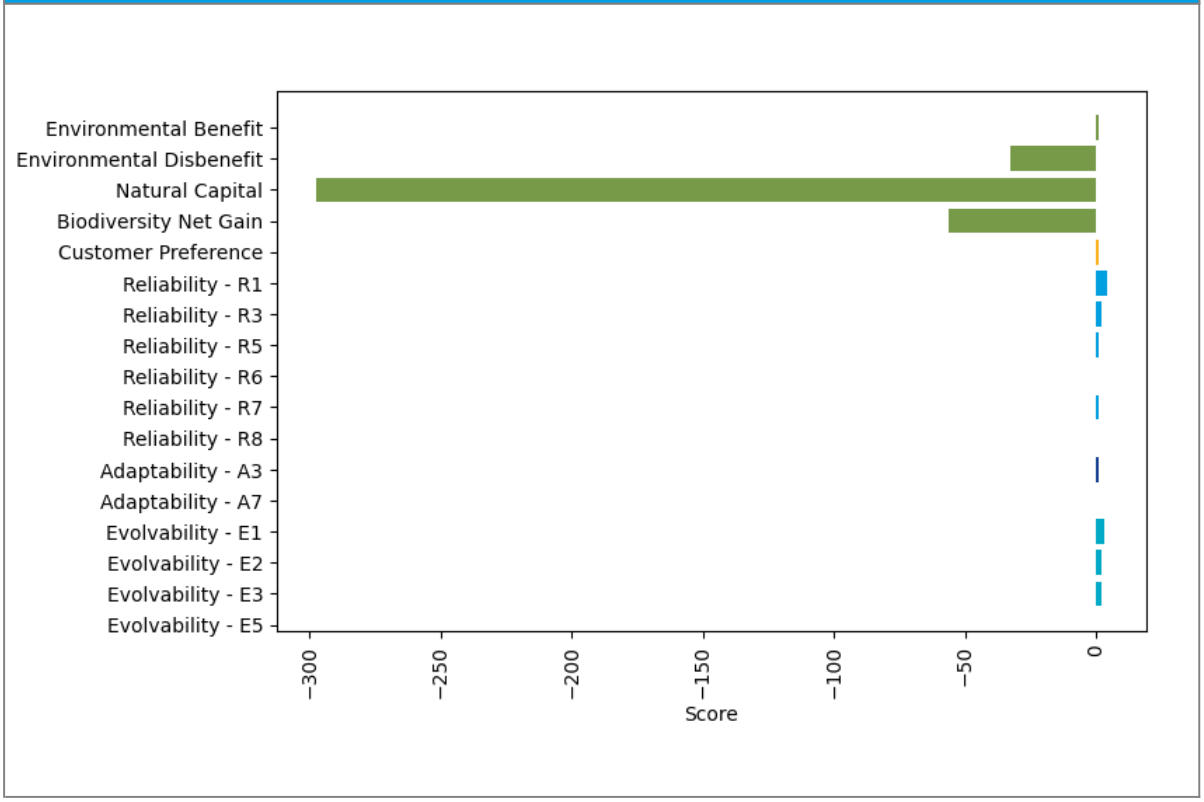
Other

Metric

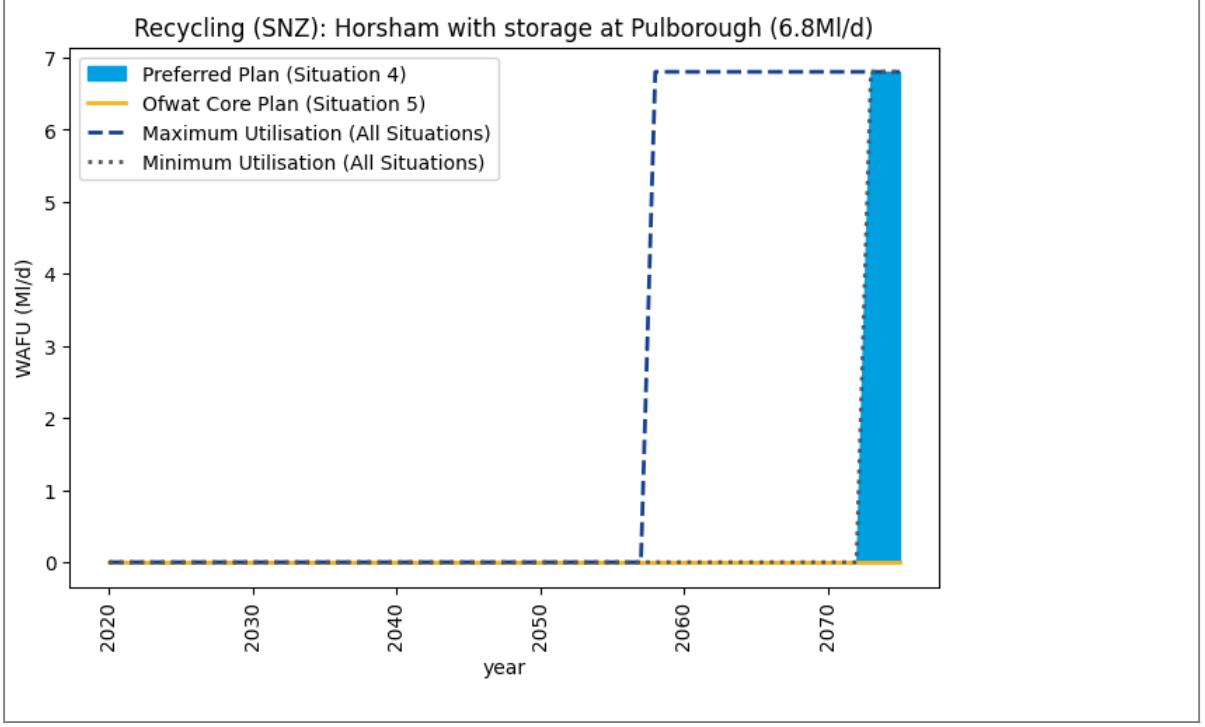
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-33.00
Environmental: Natural Capital	-297.40
Environmental: Biodiversity Net Gain	-56.41
Social: Customer Preference	1.15
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Recycling (SNZ): Littlehampton with direct river discharge (15Ml/d)
Source of Supply and main operational features	This scheme proposes the transfer of treated effluent from Littlehampton WwTW to a new disharge point to the western River Rother upstream of the Pulborough WSW abstraction. This would support flows over the wier as the MRF is approached therefore prolong production at Pulborough during a drought.20Mld represents the upper end of the reliable flow that could be expected from Littlehampton WwTW. Once abstracted at Pulborough WSW this water would be used to meet demand in the Sussex North WRZ.
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	14.96
DO 1:200 Peak [Ml/d]	14.96
DO 1:500 Average [Ml/d]	14.96
DO 1:500 Peak [Ml/d]	14.96
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	1.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.15
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	13.03
Maximum annual utilisation [Ml/d]	14.96
Environment	
SEA benefit effect	2.00
SEA negative effect	-55.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-186.87

Financial and Cost Information

Metric	
Capex [£m]	373.00
Financing Cost [£m]	494.32
Opex [£m]	199.83
Embodied Carbon [tCo2e]	51,610.04
Average operational carbon emissions [tCo2e/yr]	260.20
Total Carbon Cost [£m]	32.41
Average Incremental Cost (AIC) [p/m3]	175.60

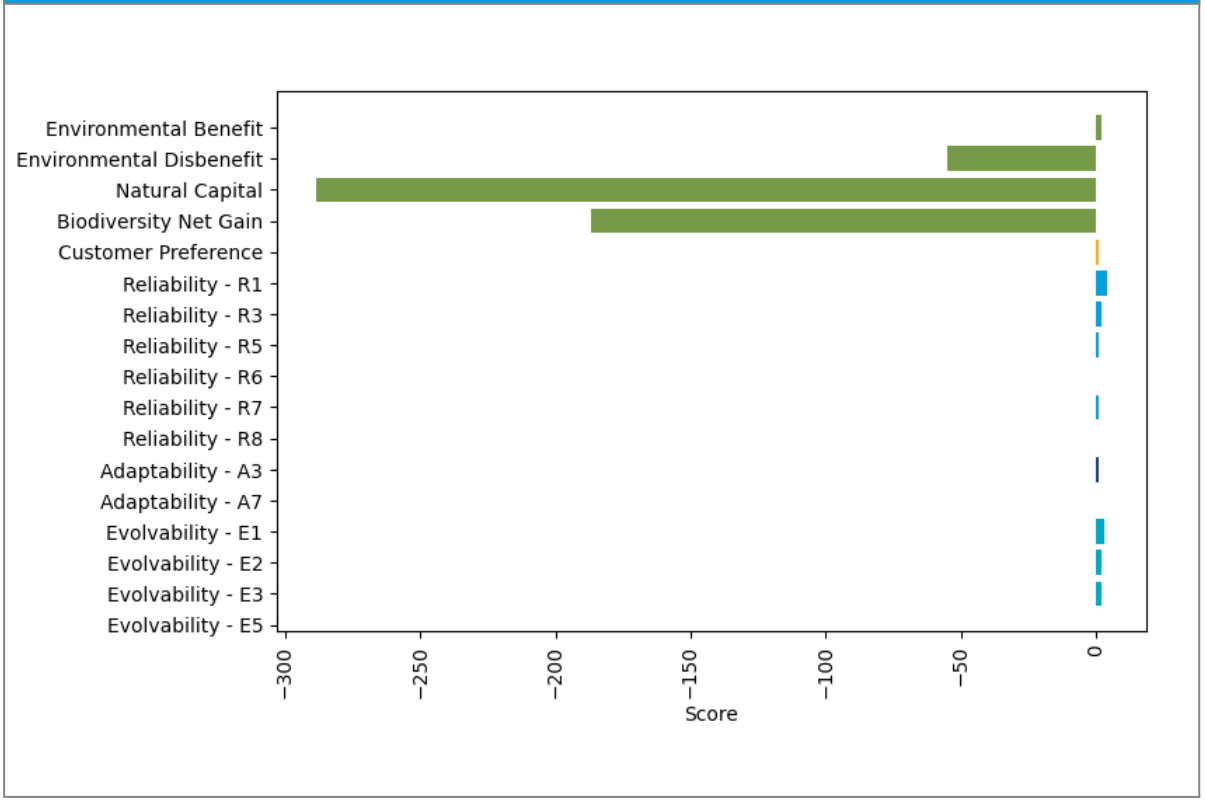
Other

Metric	

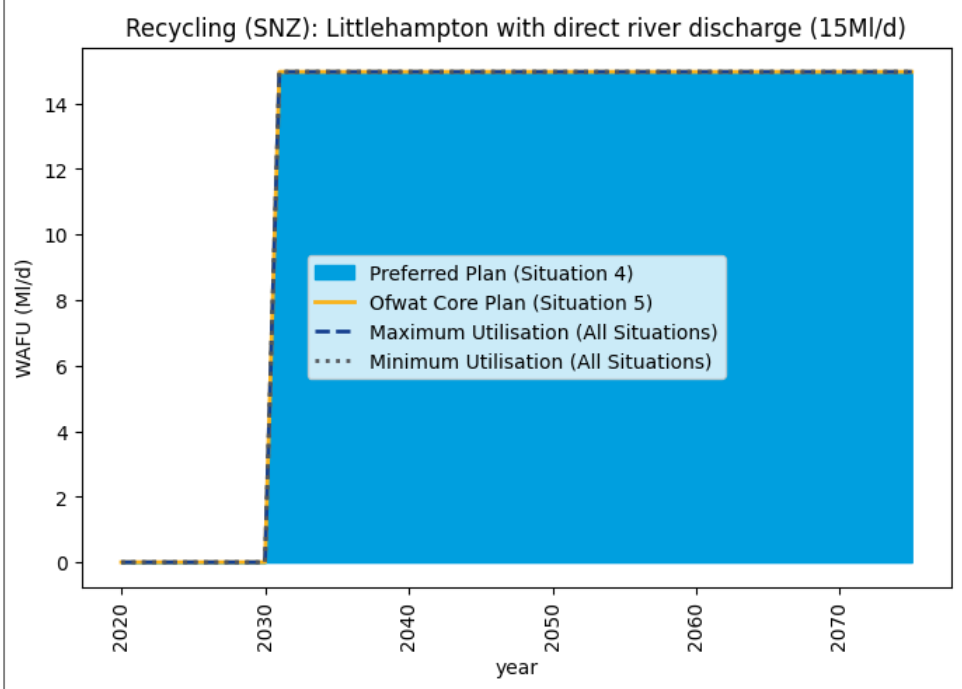
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-55.00
Environmental: Natural Capital	-288.40
Environmental: Biodiversity Net Gain	-186.87
Social: Customer Preference	1.15
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	1
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	2
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Groundwater (SNZ): New borehole at Petworth (4Ml/d)
Source of Supply and main operational features	Petworth WSW - return WSW to service with a new borehole c. 700m south of main WSW. The option is to drill a new replacement borehole for Petworth WSW in the Sussex North WRZ. Borehole to be minimum c. 300mm dia ID and c. 80m depth.
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	4
DO 1:200 Peak [Ml/d]	4
DO 1:500 Average [Ml/d]	4
DO 1:500 Peak [Ml/d]	4
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	8
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.46
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	3.91
Maximum annual utilisation [Ml/d]	4.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-35.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-0.02

Financial and Cost Information

Metric	
Capex [£m]	30.75
Financing Cost [£m]	40.43
Opex [£m]	18.07
Embodied Carbon [tCo2e]	977.79
Average operational carbon emissions [tCo2e/yr]	17.03
Total Carbon Cost [£m]	0.95
Average Incremental Cost (AIC) [p/m3]	58.78

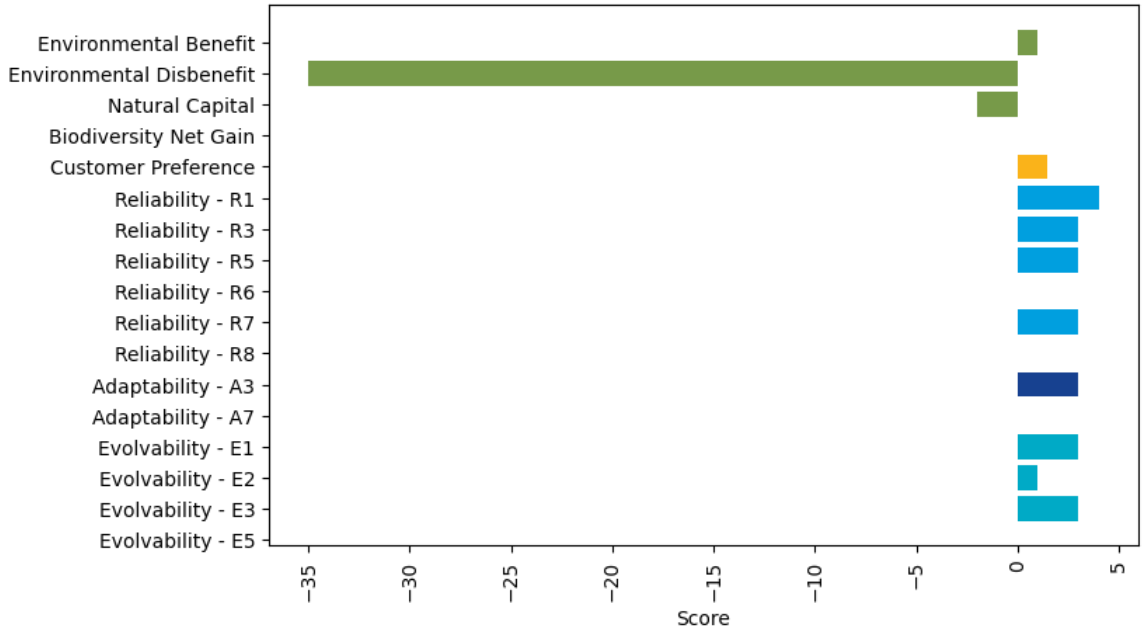
Other

Metric

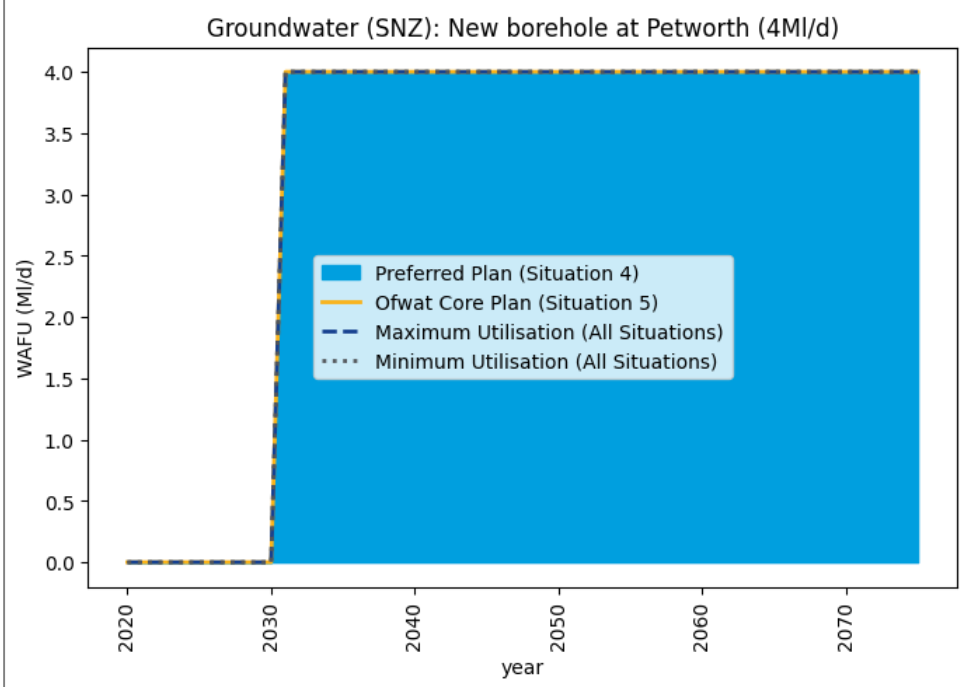
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-35.00
Environmental: Natural Capital	-2.02
Environmental: Biodiversity Net Gain	-0.02
Social: Customer Preference	1.46
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	1
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Storage (SNZ): River Adur Offline Reservoir (19.5Ml/d) - Construction
Source of Supply and main operational features	The option involves the construction of an earth embankment reservoir with a proposed storage capacity of up to 4600 Ml. The option will allow treated water to enter the distribution network to supply either the Sussex coastal block or Sussex North WRZ. 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 30Mld.
Area over which option is to be implemented	Sussex North
Dependencies	After: Storage (SNZ): River Adur Offline Reservoir (19.5Ml/d) - Development

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	19.5
DO 1:200 Peak [Ml/d]	19.5
DO 1:500 Average [Ml/d]	19.5
DO 1:500 Peak [Ml/d]	19.5
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2039
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	3.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.26
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	19.50
Maximum annual utilisation [Ml/d]	19.50
Environment	
SEA benefit effect	6.00
SEA negative effect	-35.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	73.53

Financial and Cost Information

Metric	
Capex [£m]	308.81
Financing Cost [£m]	578.64
Opex [£m]	148.16
Embodied Carbon [tCo2e]	68,794.92
Average operational carbon emissions [tCo2e/yr]	95.83
Total Carbon Cost [£m]	32.57
Average Incremental Cost (AIC) [p/m3]	149.62

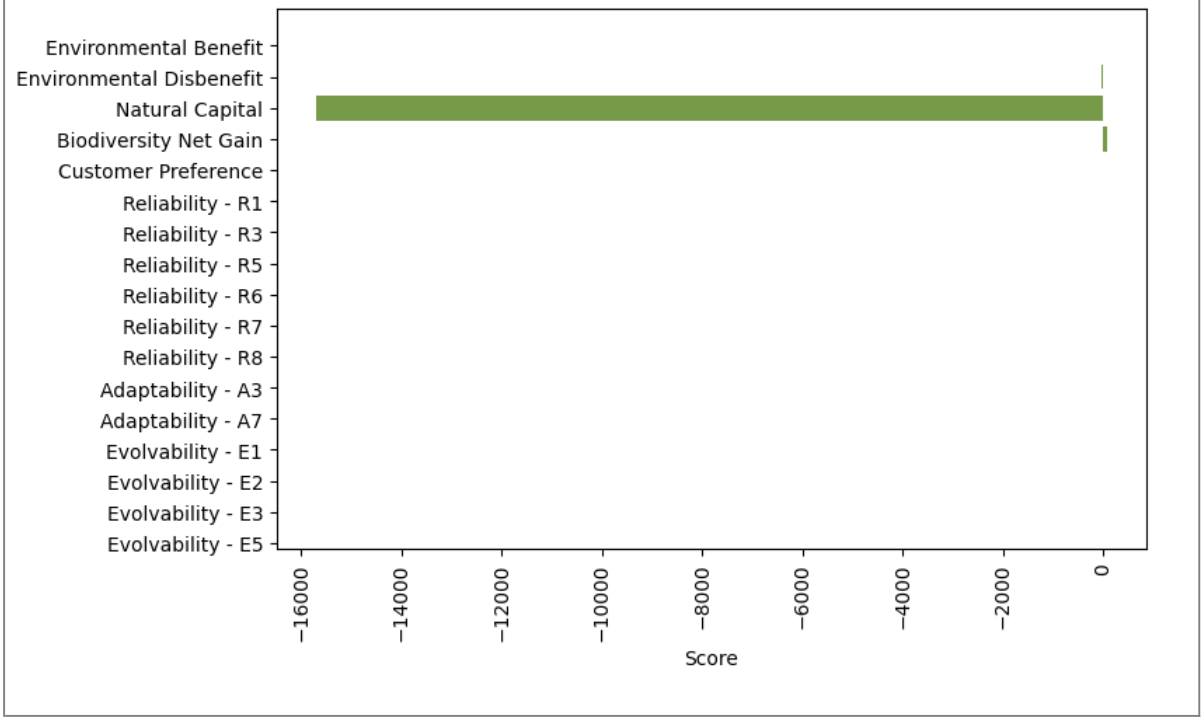
Other

Metric	

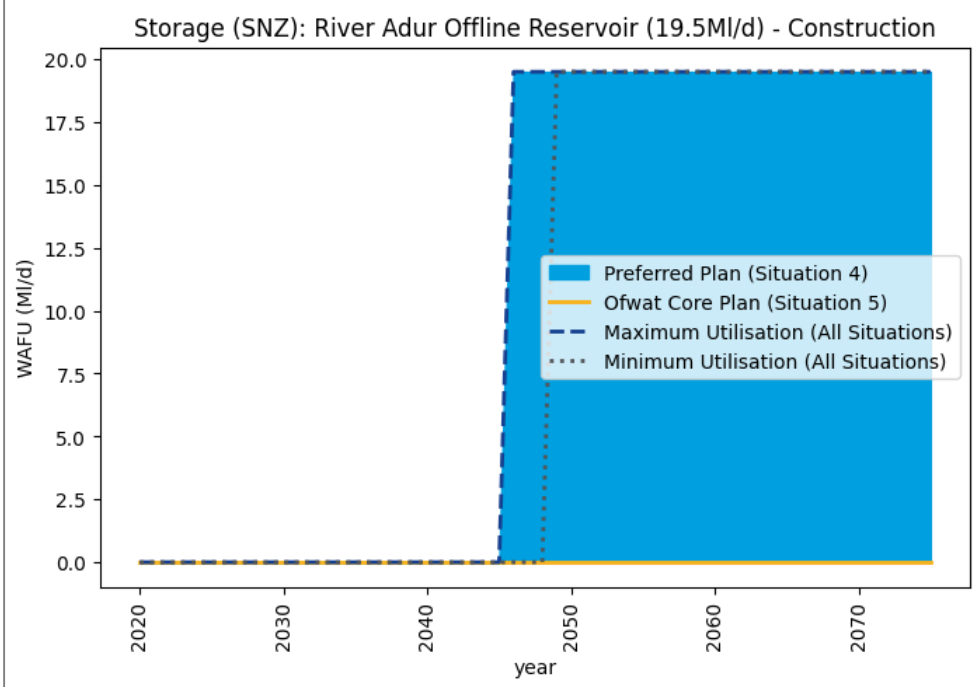
Best Value Metrics

Metric	
Environmental: Environmental Benefit	6.00
Environmental: Environmental Disbenefit	-35.00
Environmental: Natural Capital	-15700.96
Environmental: Biodiversity Net Gain	73.53
Social: Customer Preference	1.26
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	3.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	4.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	4
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	1
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Storage (SNZ): River Adur Offline Reservoir (19.5Ml/d) - Development
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North
Dependencies	After: Storage (SNZ): River Adur Offline Reservoir (19.5Ml/d) - Planning

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	3
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.26
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	12.68
Financing Cost [£m]	29.07
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

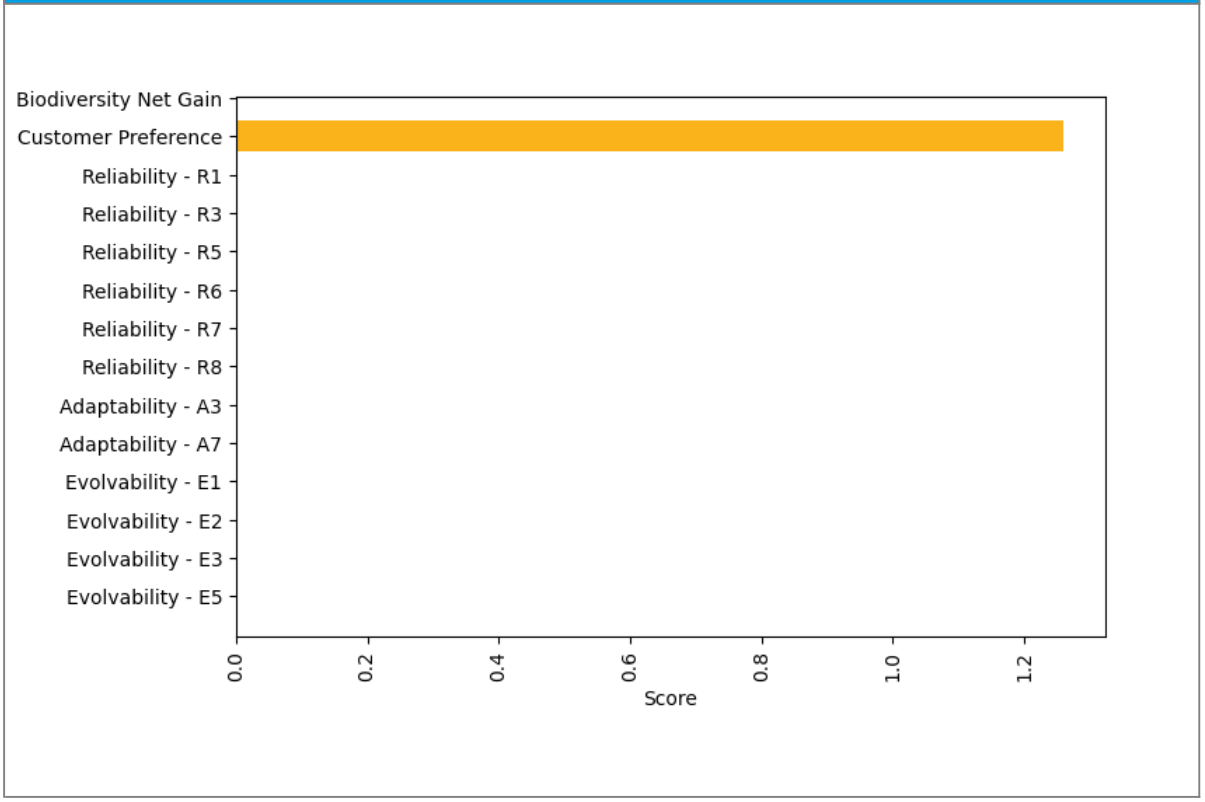
Other

Metric	

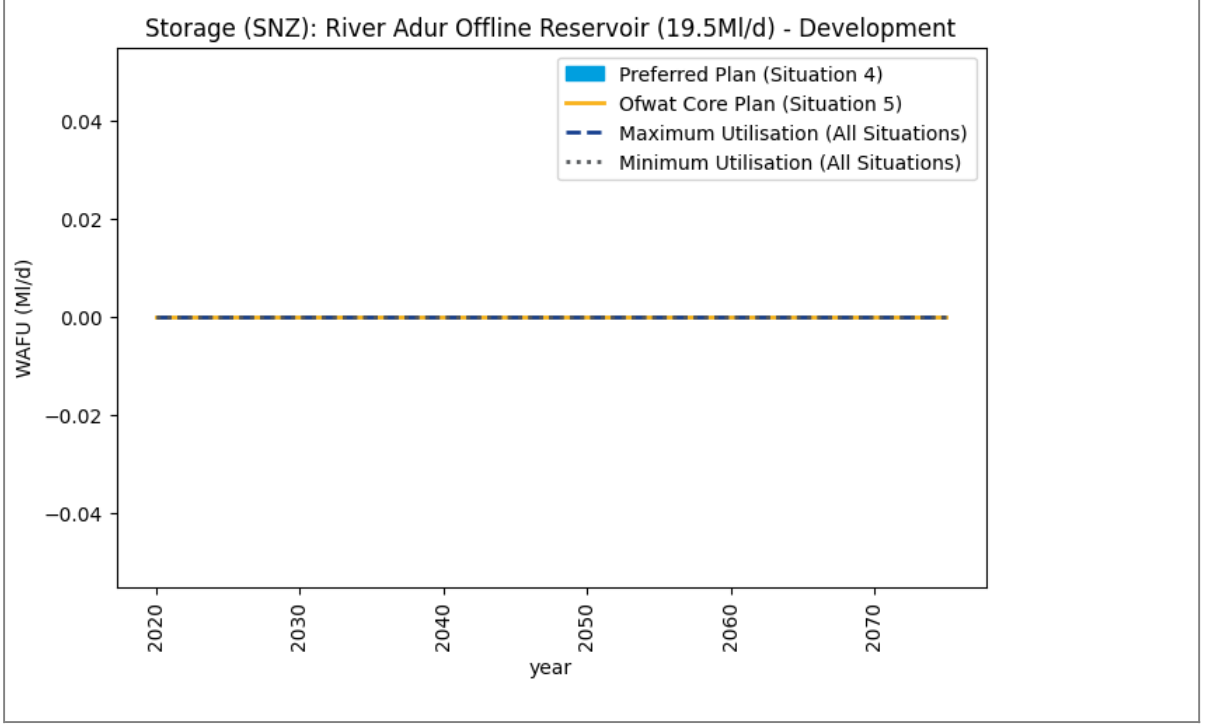
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.26
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Storage (SNZ): River Adur Offline Reservoir (19.5Ml/d) - Planning
Source of Supply and main operational features	The option involves the construction of an earth embankment reservoir with a proposed storage capacity of up to 4600 Ml. The option will allow treated water to enter the distribution network to supply either the Sussex coastal block or Sussex North WRZ. 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 30Mld.
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	4
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.26
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	2.26
Financing Cost [£m]	5.14
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

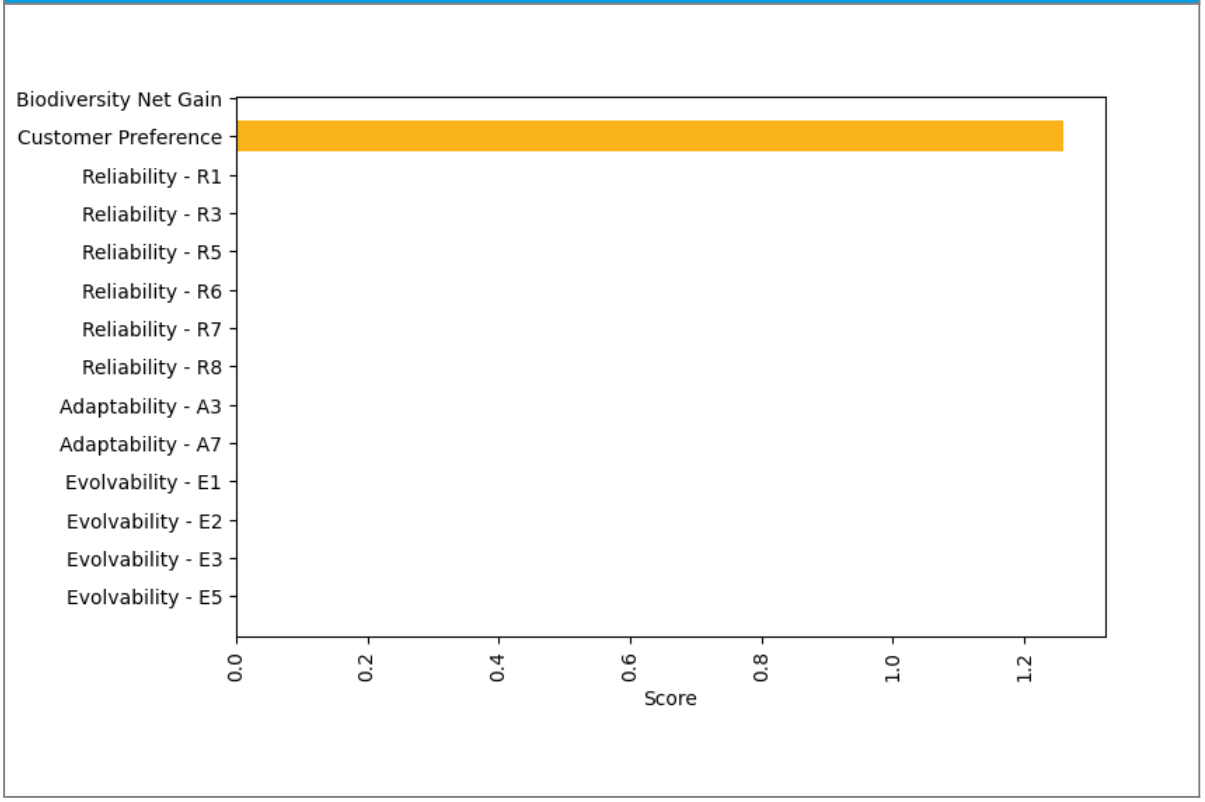
Other

Metric	

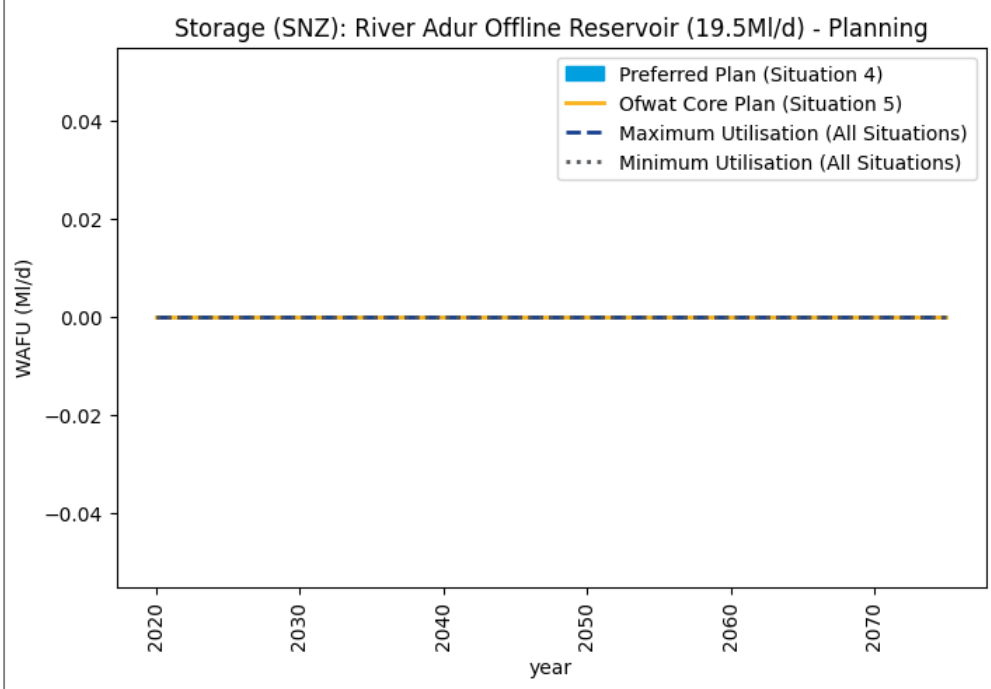
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.26
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk export (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)
Source of Supply and main operational features	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough WSW (50Ml/d)
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2035
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	15.36
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	106.35
Financing Cost [£m]	183.55
Opex [£m]	-
Embodied Carbon [tCo2e]	30,392.32
Average operational carbon emissions [tCo2e/yr]	25.17
Total Carbon Cost [£m]	12.44
Average Incremental Cost (AIC) [p/m3]	-

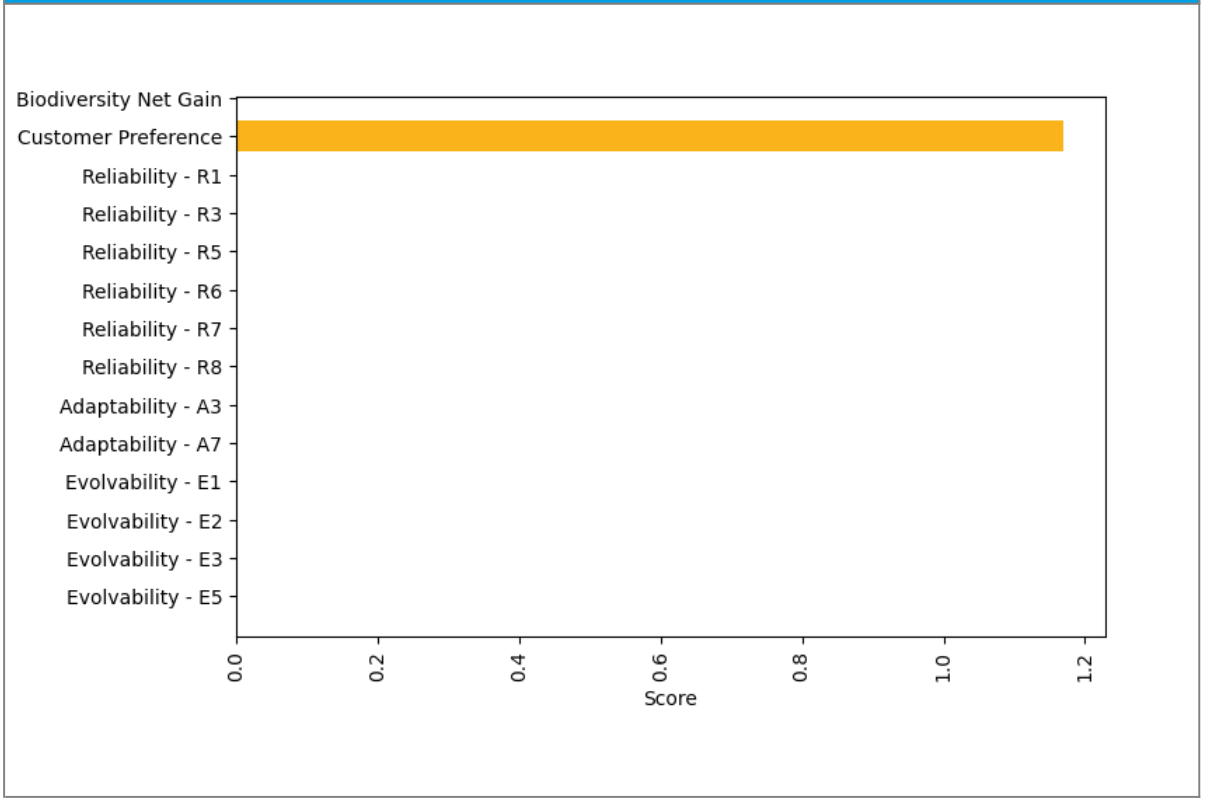
Other

Metric	

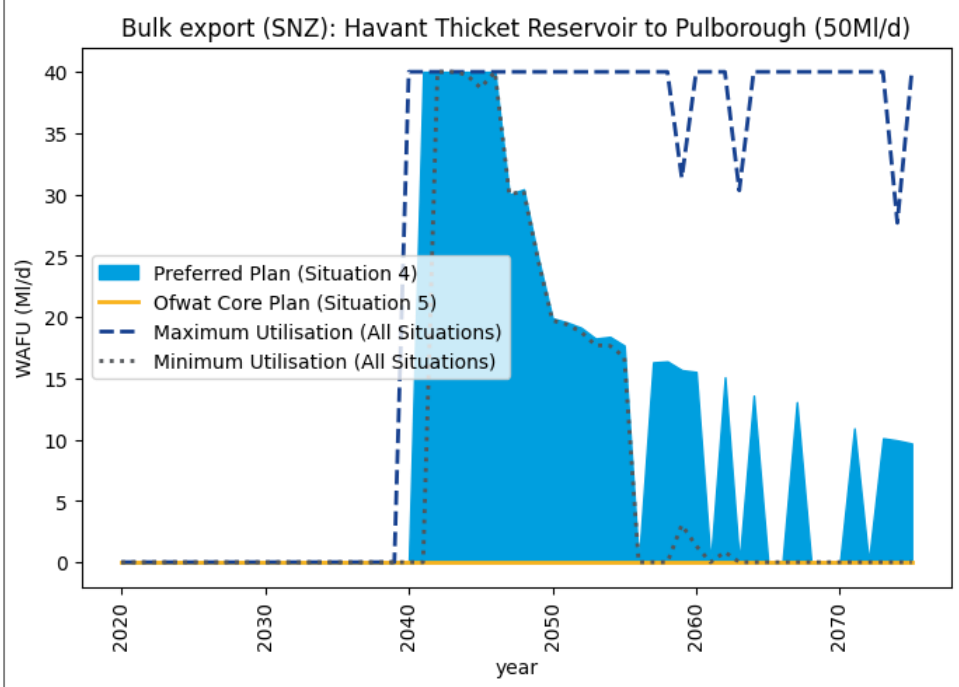
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (SNZ): SEW RZ5 to Pulborough (10Ml/d)
Source of Supply and main operational features	Bulk import (SNZ): SEW RZ5 to Pulborough (10Ml/d)
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2035
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	10.00
Maximum annual utilisation [Ml/d]	10.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-37.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-136.32

Financial and Cost Information

Metric	
Capex [£m]	31.46
Financing Cost [£m]	68.96
Opex [£m]	0.01
Embodied Carbon [tCo2e]	6,524.07
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	1.91
Average Incremental Cost (AIC) [p/m3]	30.15

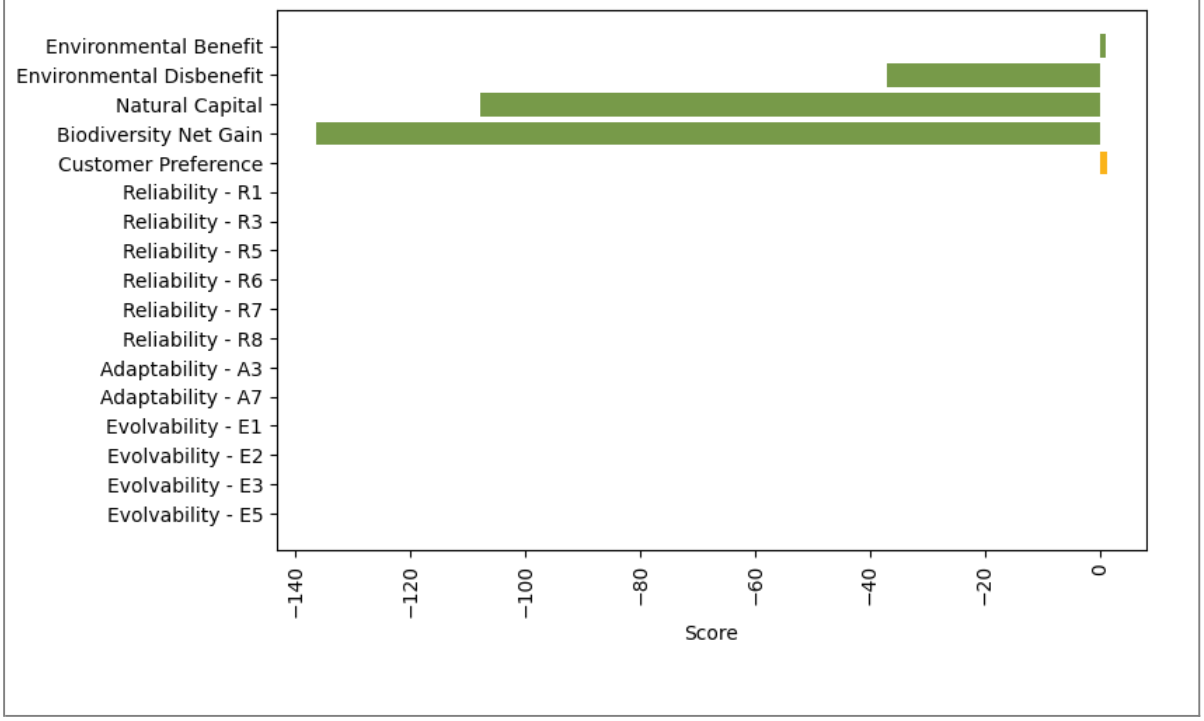
Other

Metric	

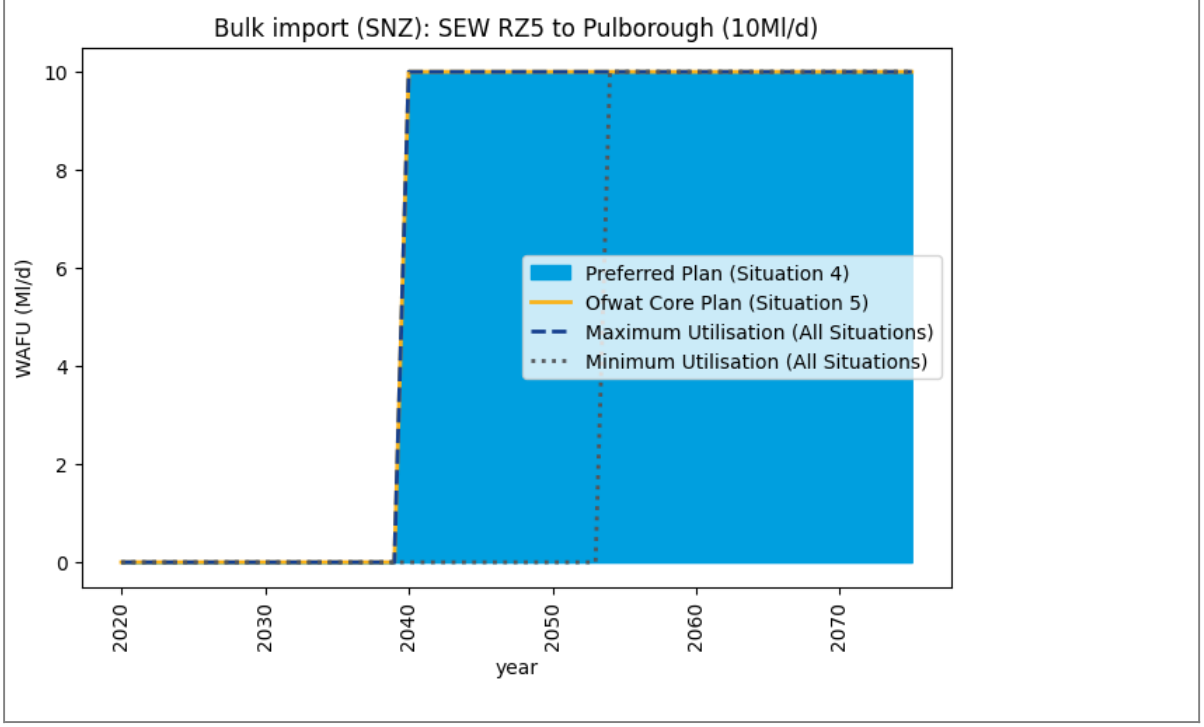
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-37.00
Environmental: Natural Capital	-107.89
Environmental: Biodiversity Net Gain	-136.32
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (SNZ): SES to SNZ (10Ml/d)
Source of Supply and main operational features	Bulk import (SNZ): SES to SNZ (10Ml/d)
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	7
Earliest start date	01/04/2033
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	10.00
Maximum annual utilisation [Ml/d]	10.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-14.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	12.36
Financing Cost [£m]	23.02
Opex [£m]	6.54
Embodied Carbon [tCo2e]	2,087.89
Average operational carbon emissions [tCo2e/yr]	2.78
Total Carbon Cost [£m]	0.86
Average Incremental Cost (AIC) [p/m3]	12.80

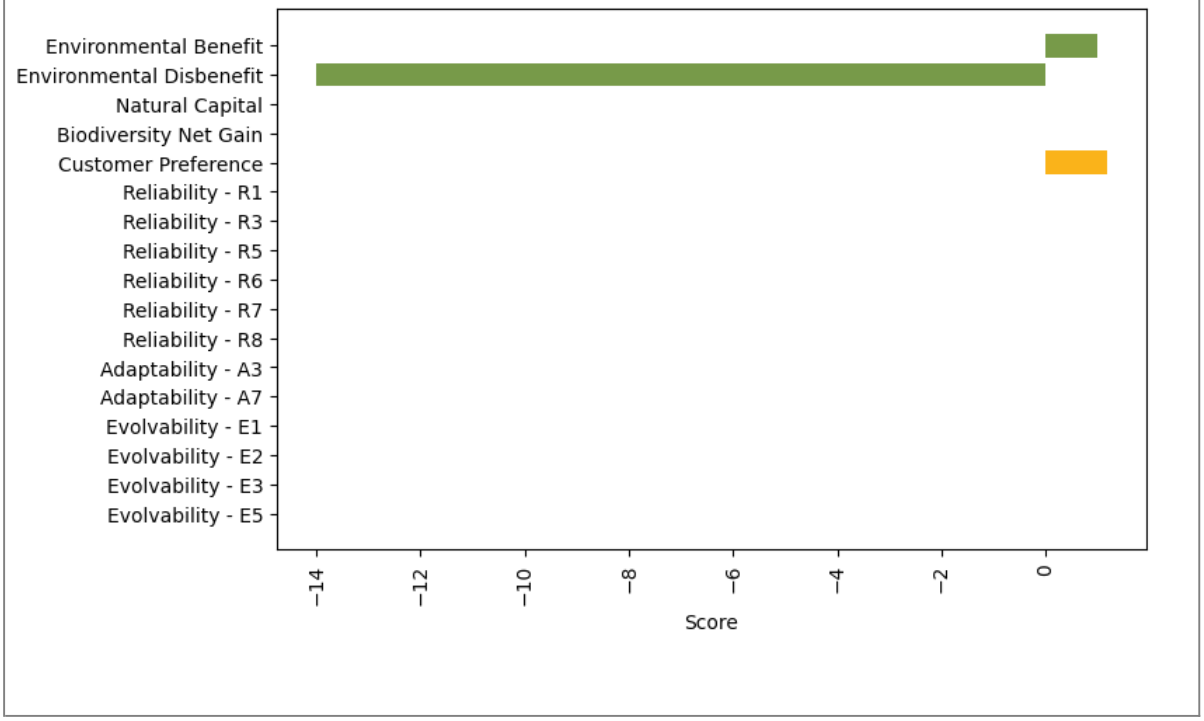
Other

Metric	

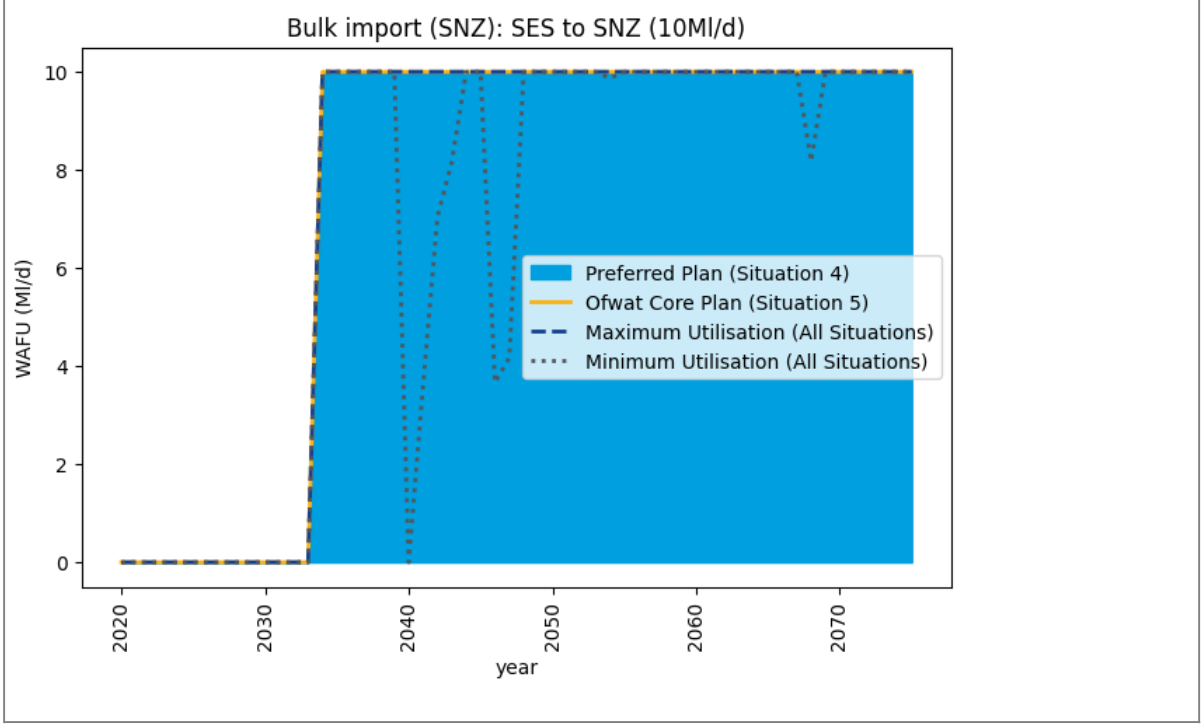
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-14.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (SNZ): Pulborough surface water phases 1-3 (23Ml/d)
Source of Supply and main operational features	Hardham surface water (Phases 1 to 3) Drought permit/order (2025 onwards)
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	15.37
DO 1:200 Peak [Ml/d]	15.37
DO 1:500 Average [Ml/d]	4.87
DO 1:500 Peak [Ml/d]	8.88
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	5.98
Maximum annual utilisation [Ml/d]	23.00
Environment	
SEA benefit effect	1.00
SEA negative effect	-7.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	12.75
Financing Cost [£m]	26.62
Opex [£m]	6.35
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	4.22
Total Carbon Cost [£m]	0.27
Average Incremental Cost (AIC) [p/m3]	12.28

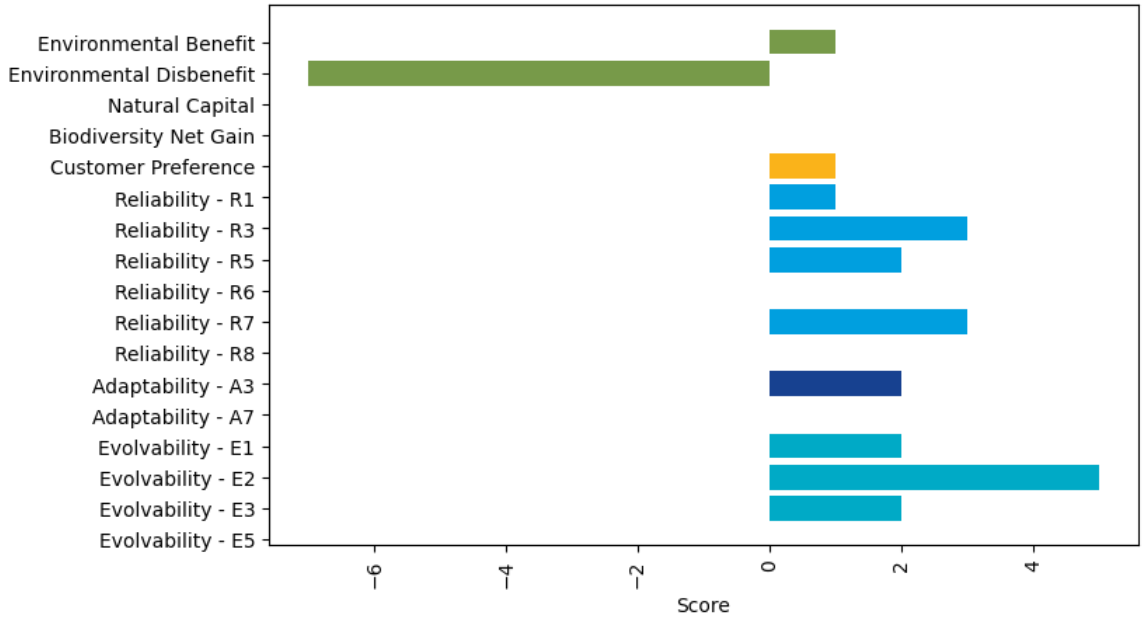
Other

Metric	

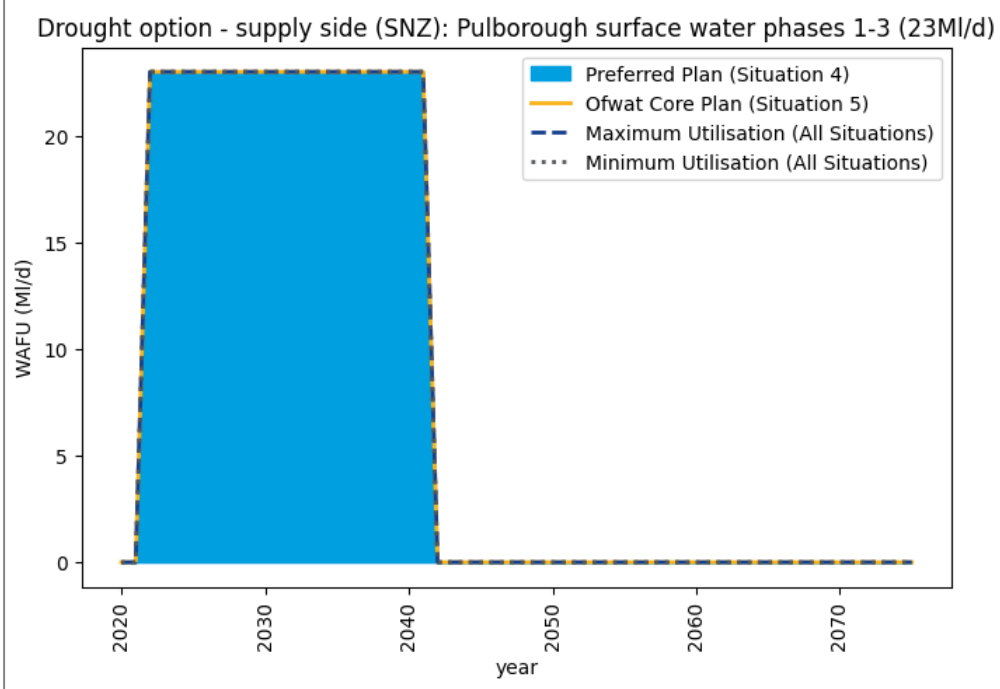
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-7.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (SNZ): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex North
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.11
DO 1:500 Peak [Ml/d]	0.11
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.11
Maximum annual utilisation [Ml/d]	0.11
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

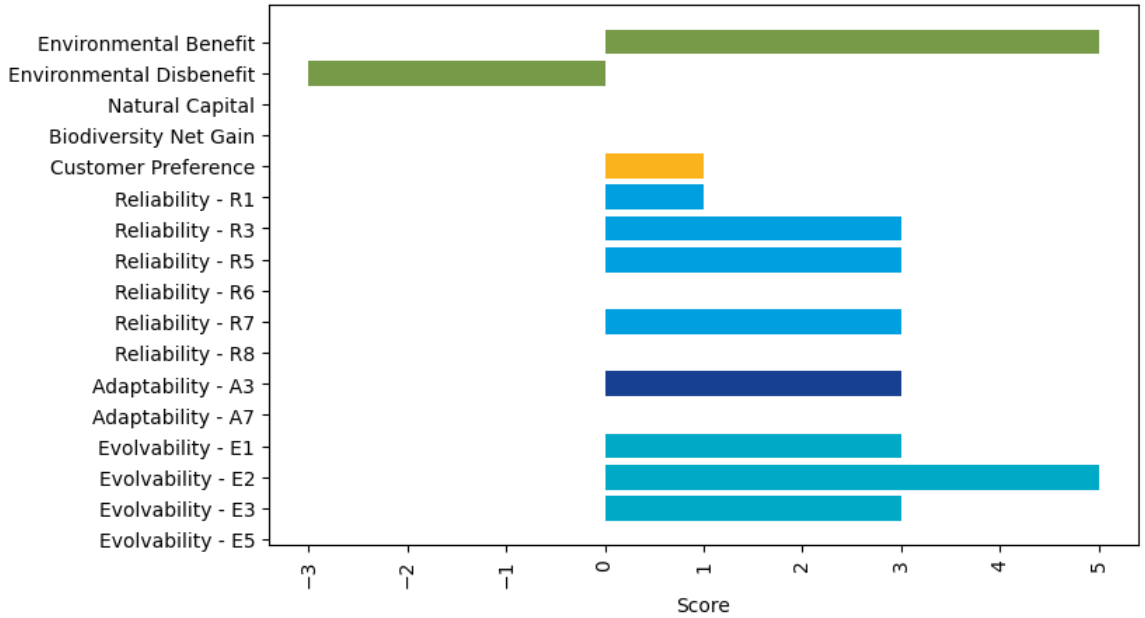
Other

Metric	

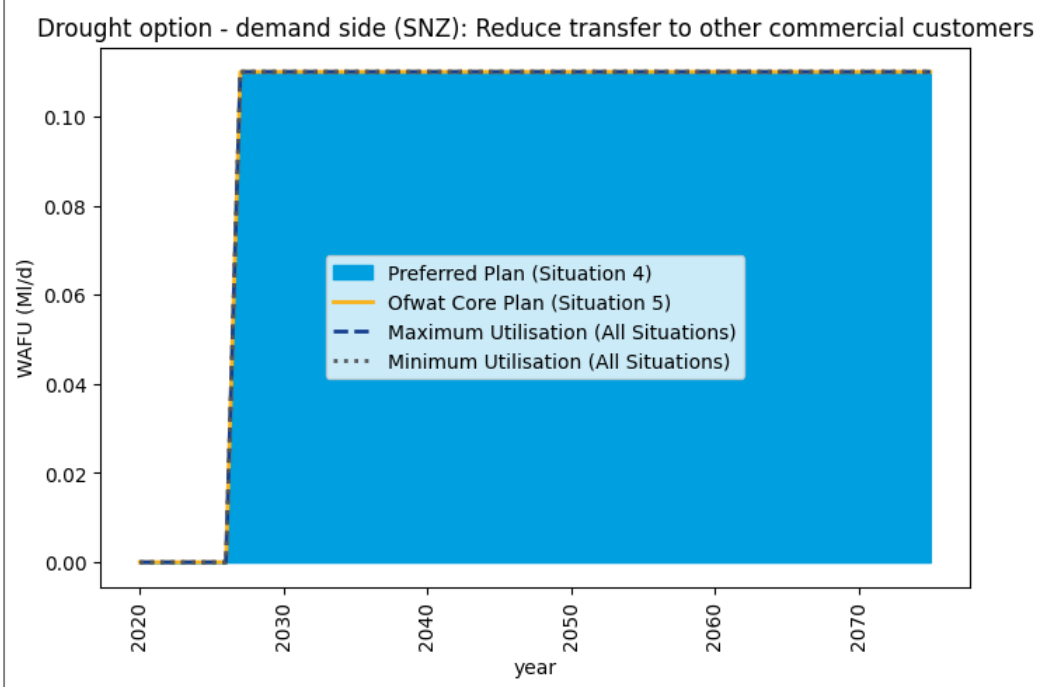
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Storage (TMS): SESRO 15OMm3 (SWS 30%)
Source of Supply and main operational features	
Area over which option is to be implemented	
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	15
Earliest start date	SWS line 48 or Table 4
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	SWS output 'supply-demand
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	Annex on demand measures
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	
Links and constraints	
Constituent WRSE Option IDs	
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	
Flexibility	
Scalability and modularity [Best Value Metric]	
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	70.91
Maximum annual utilisation [Ml/d]	81.30
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	921.82
Financing Cost [£m]	1,600.13
Opex [£m]	93.39
Embodied Carbon [tCo2e]	157,340.23
Average operational carbon emissions [tCo2e/yr]	9.78
Total Carbon Cost [£m]	59.70
Average Incremental Cost (AIC) [p/m3]	102.45

Other

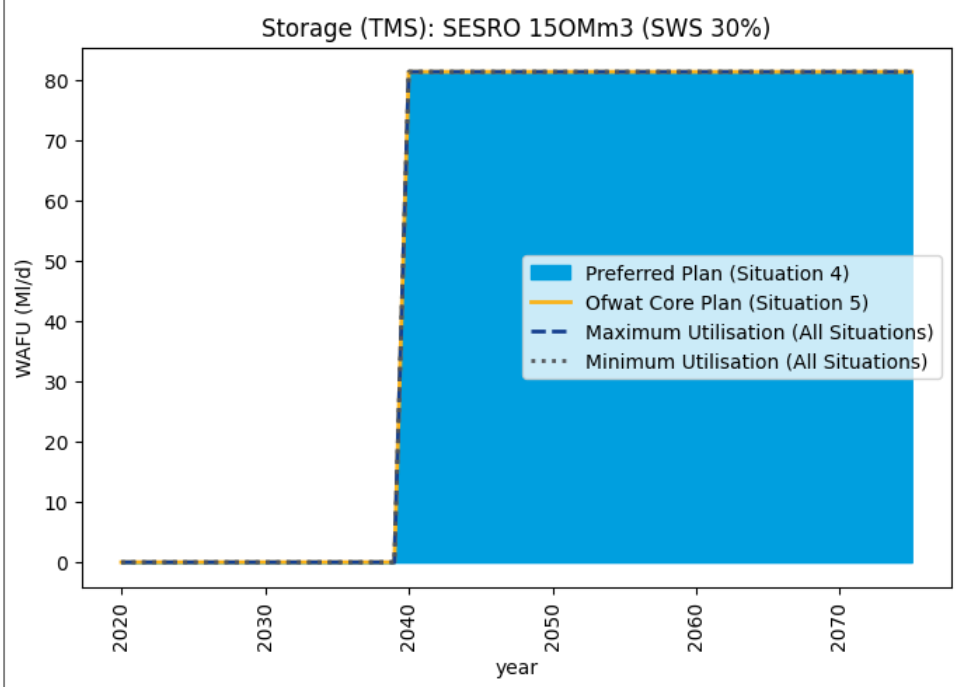
Metric	

Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	
Resilience: Evolvability E2 – Intervention lead times	
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot

Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (SWZ): Tidal River Arun (20Ml/d) Phase 2
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Worthing
Dependencies	After one of: Desalination (SWZ): Tidal River Arun (10Ml/d), Desalination (SWZ): Tidal River Arun (20Ml/d) - Construction

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	20
DO 1:200 Peak [Ml/d]	20
DO 1:500 Average [Ml/d]	20
DO 1:500 Peak [Ml/d]	20
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	01/04/2037
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	18.61
Maximum annual utilisation [Ml/d]	20.00
Environment	
SEA benefit effect	2.00
SEA negative effect	-37.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-100.29

Financial and Cost Information

Metric	
Capex [£m]	550.35
Financing Cost [£m]	706.00
Opex [£m]	393.94
Embodied Carbon [tCo2e]	37,113.71
Average operational carbon emissions [tCo2e/yr]	464.13
Total Carbon Cost [£m]	40.00
Average Incremental Cost (AIC) [p/m3]	210.12

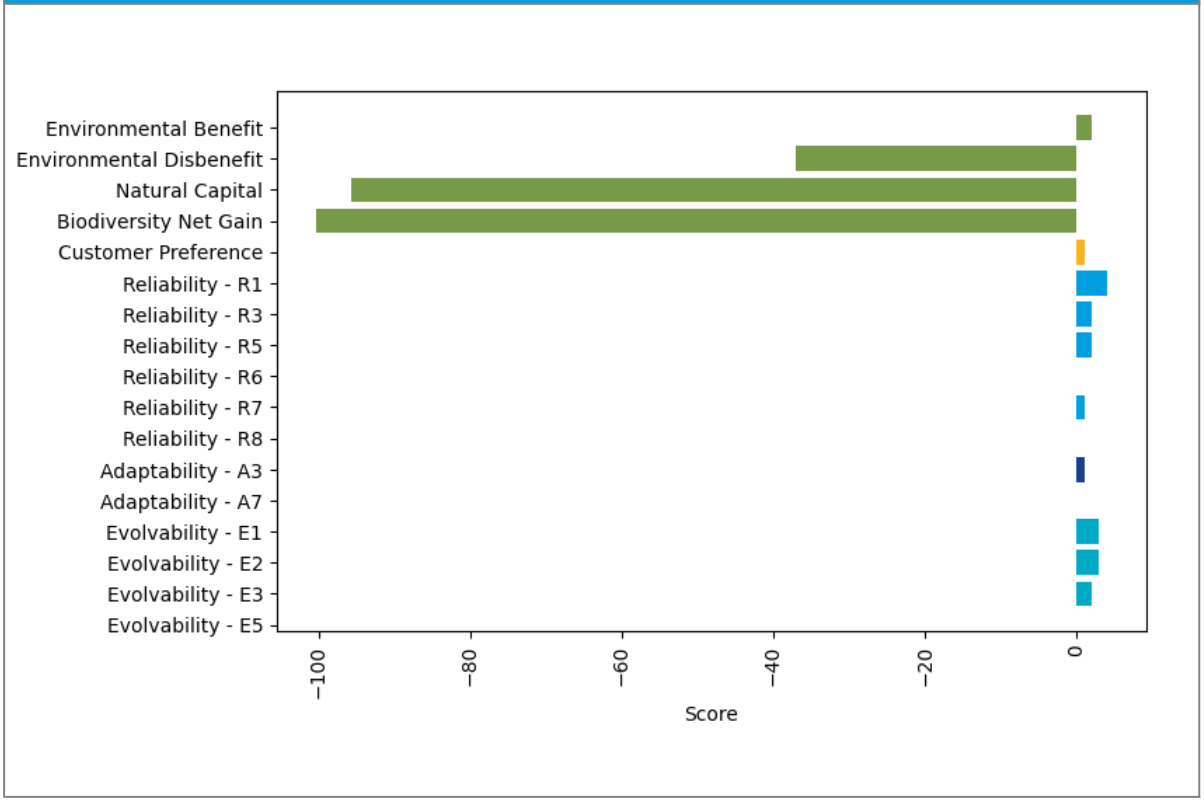
Other

Metric	

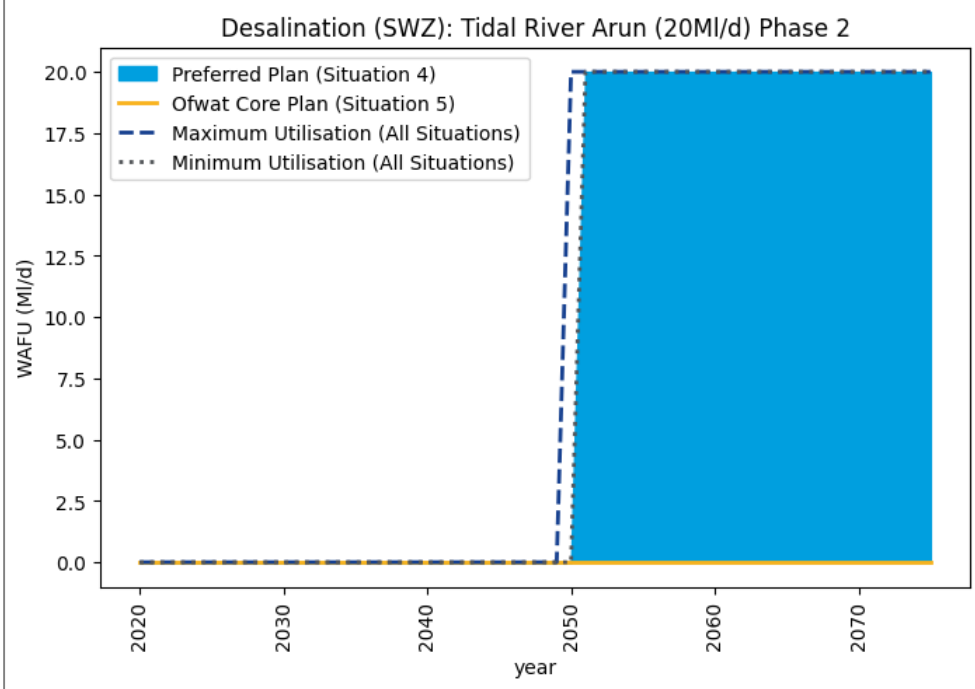
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-37.00
Environmental: Natural Capital	-95.64
Environmental: Biodiversity Net Gain	-100.29
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	3
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Desalination (SWZ): Tidal River Arun (10Ml/d)
Source of Supply and main operational features	This option proposes a desalination plant to treat estuarine water from the tidal River Arun to supply treated water to the Sussex Worthing WRZ. The water would be used during drought conditions to meet demand in Sussex Worthing WRZ. There is a bi-directional transfer between Sussex Worthing WRZ and Sussex North WRZ which means this option could provide additional benefit to Sussex North WRZ. Land adjacent to Littlehampton WwTW has the greatest potential for a new desalination site because of the existing land use, the availability of services (access roads, power etc.) and the potential savings if it is possible to use the Littlehampton WwTWs existing long-sea outfall.
Area over which option is to be implemented	Sussex Worthing
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	10
DO 1:200 Peak [Ml/d]	10
DO 1:500 Average [Ml/d]	10
DO 1:500 Peak [Ml/d]	10
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	10
Earliest start date	01/04/2037
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	4.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.01
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	3.47
Maximum annual utilisation [Ml/d]	8.34
Environment	
SEA benefit effect	2.00
SEA negative effect	-31.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-72.02

Financial and Cost Information

Metric	
Capex [£m]	394.47
Financing Cost [£m]	490.69
Opex [£m]	209.91
Embodied Carbon [tCo2e]	21,530.26
Average operational carbon emissions [tCo2e/yr]	107.33

Total Carbon Cost [£m]	22.91
Average Incremental Cost (AIC) [p/m3]	289.13

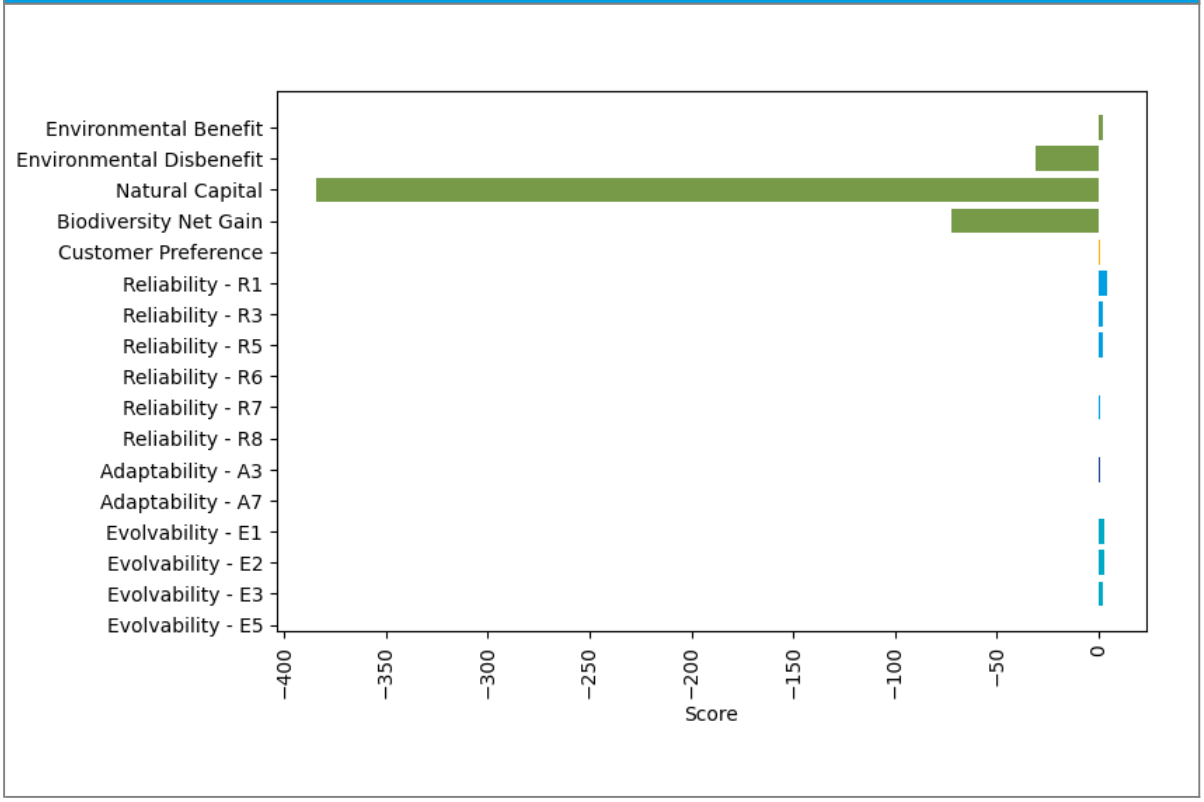
Other

Metric	

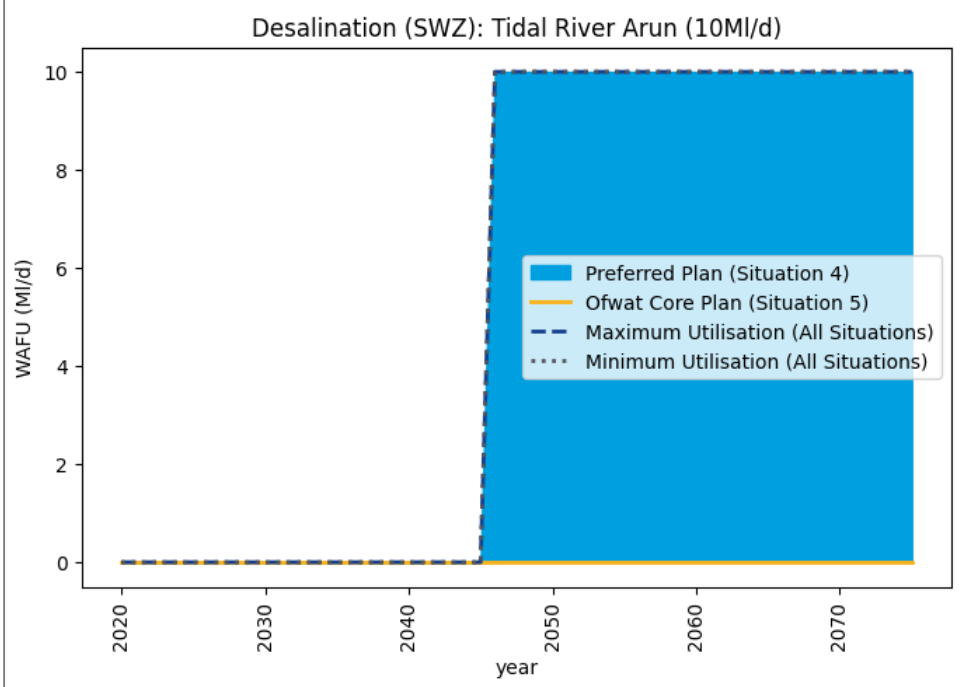
Best Value Metrics

Metric	
Environmental: Environmental Benefit	2.00
Environmental: Environmental Disbenefit	-31.00
Environmental: Natural Capital	-384.21
Environmental: Biodiversity Net Gain	-72.02
Social: Customer Preference	1.01
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	4.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	2.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	1
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	1
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	3
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Treatment capacity (SWZ): Pulborough winter transfer stage 1 (2Ml/d)
Source of Supply and main operational features	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 providing the additional 2Mld of water to Sussex 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.
Area over which option is to be implemented	Sussex Worthing
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	2
DO 1:200 Peak [Ml/d]	2
DO 1:500 Average [Ml/d]	2
DO 1:500 Peak [Ml/d]	2
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	3
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	2
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	2.00
Maximum annual utilisation [Ml/d]	2.00
Environment	
SEA benefit effect	3.00
SEA negative effect	-29.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-109.07

Financial and Cost Information

Metric	
Capex [£m]	39.30
Financing Cost [£m]	52.28
Opex [£m]	21.44
Embodied Carbon [tCo2e]	3,182.91
Average operational carbon emissions [tCo2e/yr]	15.99
Total Carbon Cost [£m]	1.86
Average Incremental Cost (AIC) [p/m3]	135.89

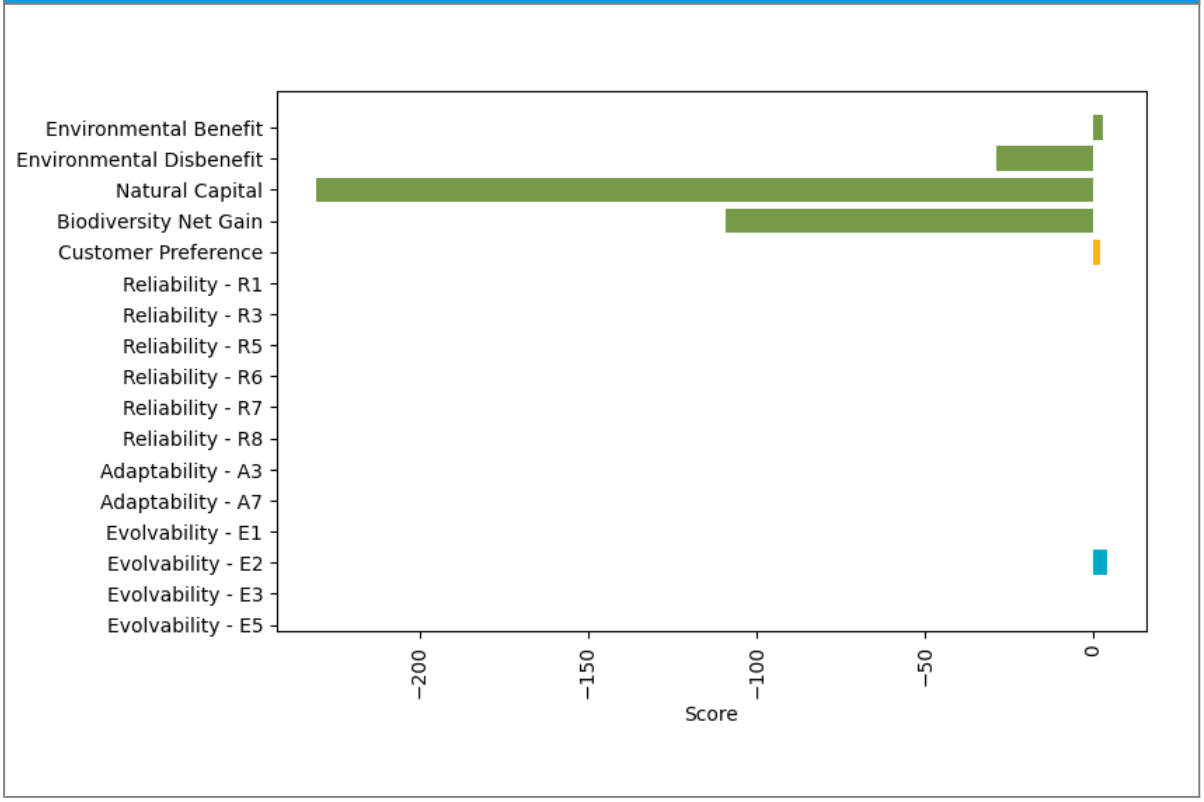
Other

Metric	

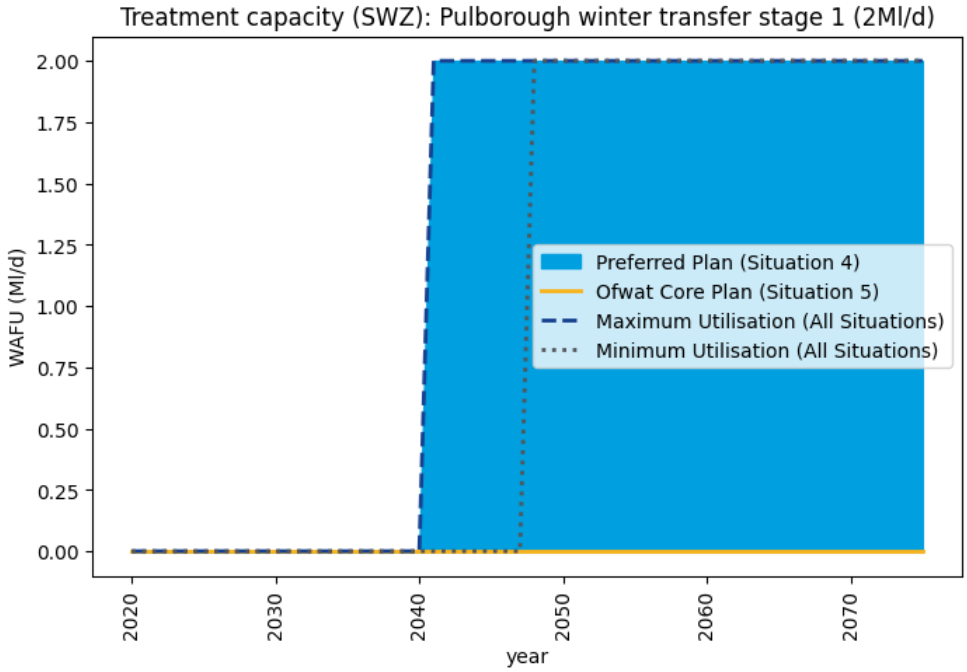
Best Value Metrics

Metric	
Environmental: Environmental Benefit	3.00
Environmental: Environmental Disbenefit	-29.00
Environmental: Natural Capital	-230.74
Environmental: Biodiversity Net Gain	-109.07
Social: Customer Preference	2.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	4
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (SNZ-SWZ): Pulborough to Worthing (30Ml/d)
Source of Supply and main operational features	Interzonal transfer (SNZ-SWZ): Pulborough WSW to Worthing (30Ml/d)
Area over which option is to be implemented	Sussex Worthing
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	12.41
Maximum annual utilisation [Ml/d]	23.98
Environment	
SEA benefit effect	4.00
SEA negative effect	-29.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-78.32

Financial and Cost Information

Metric	
Capex [£m]	42.84
Financing Cost [£m]	77.17
Opex [£m]	107.34
Embodied Carbon [tCo2e]	7,568.17
Average operational carbon emissions [tCo2e/yr]	23.28
Total Carbon Cost [£m]	4.29
Average Incremental Cost (AIC) [p/m3]	23.92

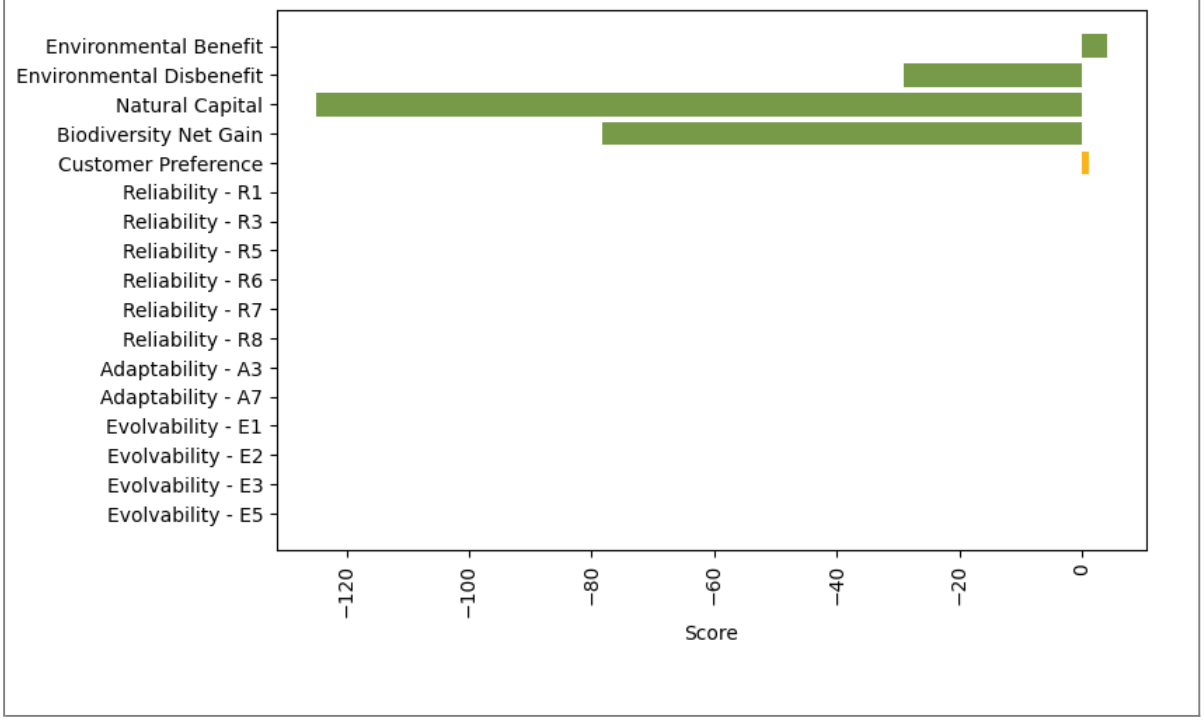
Other

Metric	

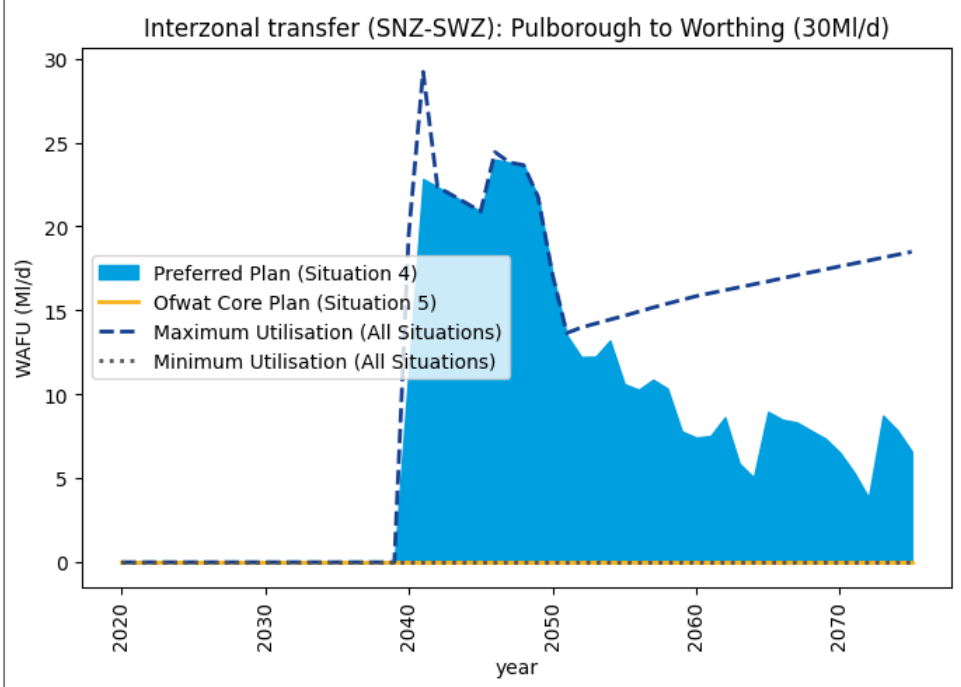
Best Value Metrics

Metric	
Environmental: Environmental Benefit	4.00
Environmental: Environmental Disbenefit	-29.00
Environmental: Natural Capital	-124.89
Environmental: Biodiversity Net Gain	-78.32
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - supply side (SWZ): East Worthing (2.5Ml/d)
Source of Supply and main operational features	East Worthing Drought permit order (2025 onwards). Increase abstraction licence daily limit from 4.5Ml/d to 7.0Ml/d between October and December inclusive
Area over which option is to be implemented	Sussex Worthing
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	2.5
DO 1:200 Peak [Ml/d]	0
DO 1:500 Average [Ml/d]	2.5
DO 1:500 Peak [Ml/d]	0
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	2
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	2.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	2
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	1.25
Maximum annual utilisation [Ml/d]	
Environment	
SEA benefit effect	1.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	11.25
Financing Cost [£m]	23.16
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	0.64
Total Carbon Cost [£m]	0.01
Average Incremental Cost (AIC) [p/m3]	59.03

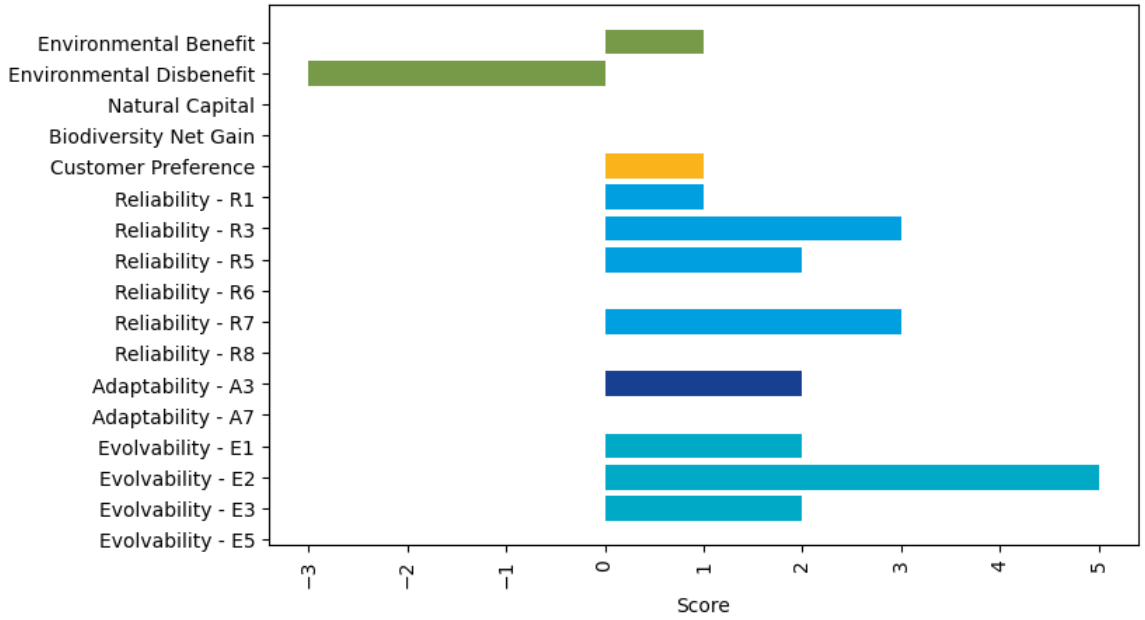
Other

Metric	

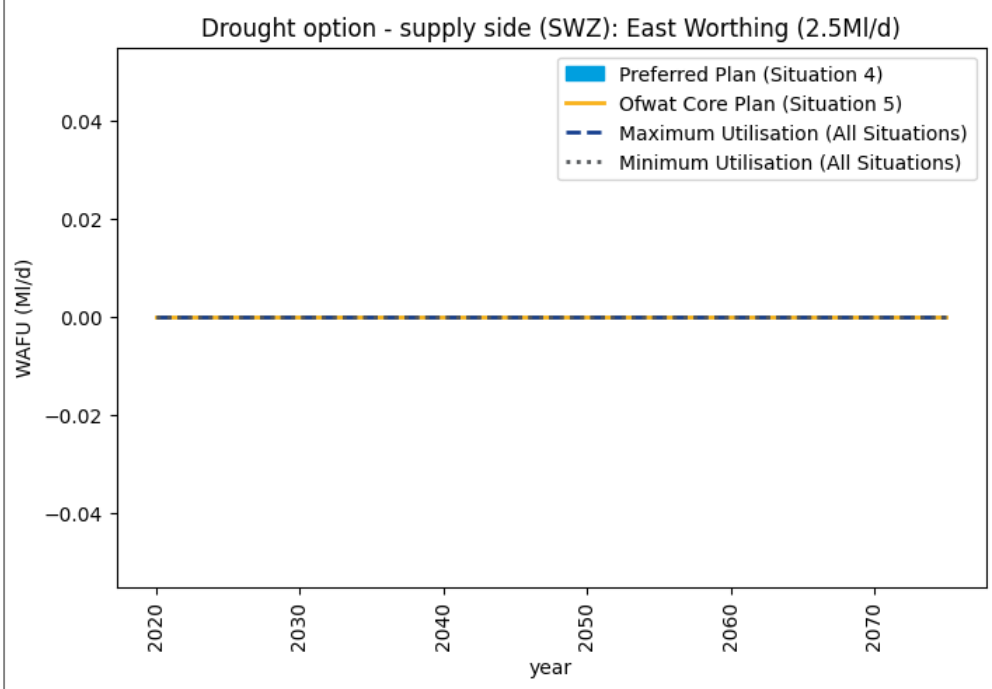
Best Value Metrics

Metric	
Environmental: Environmental Benefit	1.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	2
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	2
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	2
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	2
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side (SWZ): Reduce transfer to other commercial customers
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Worthing
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	0.07
DO 1:500 Peak [Ml/d]	0.07
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	1
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.07
Maximum annual utilisation [Ml/d]	0.07
Environment	
SEA benefit effect	5.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

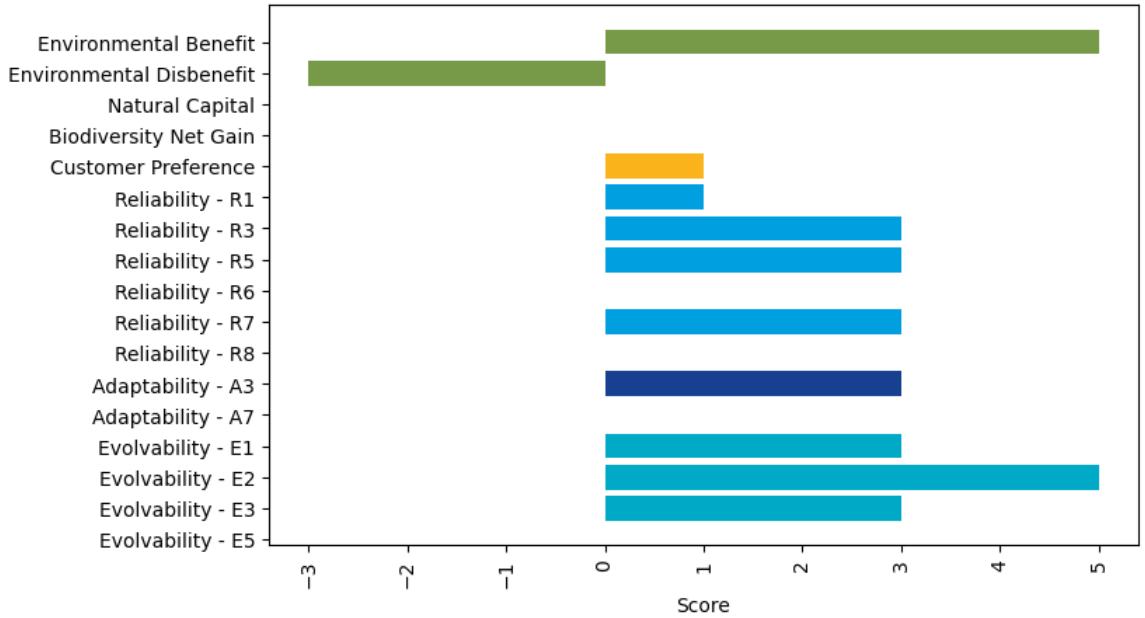
Other

Metric	

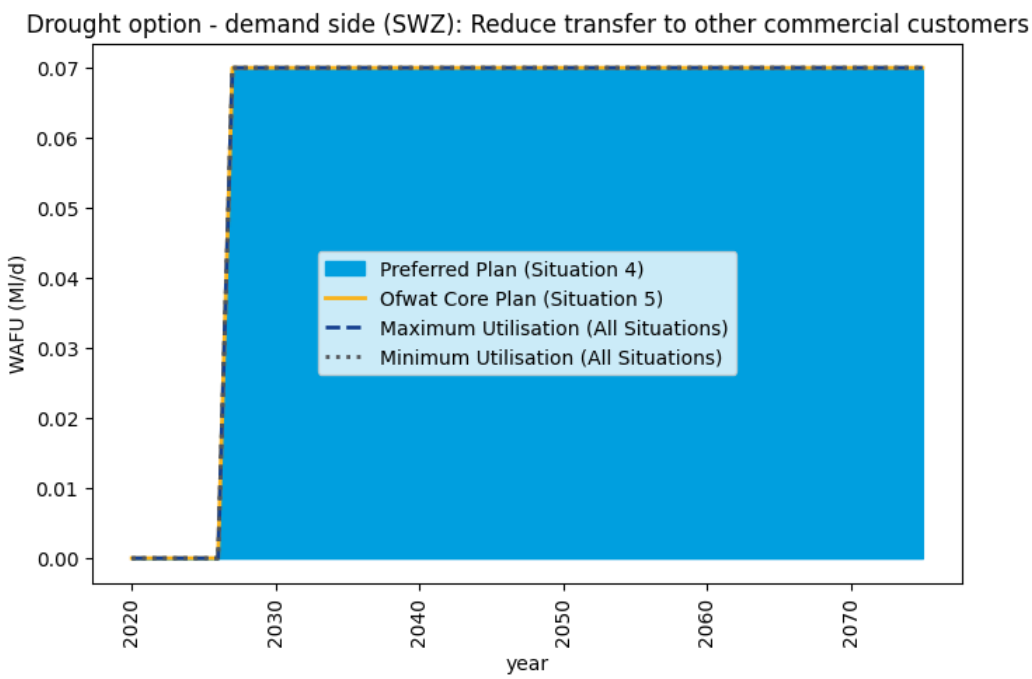
Best Value Metrics

Metric	
Environmental: Environmental Benefit	5.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (HWZ): SESRO and/or STT to Yew Hill (120Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Hampshire Winchester
Dependencies	After one of: Bulk import (HSW): SESRO and/or STT to Test WSW - raw (80Ml/d), Bulk import (HSW): SESRO and/or STT to Test WSW - raw (50Ml/d), Bulk import (HSW): SESRO and/or STT to Test WSW - raw (200Ml/d), Bulk import (HSW): SESRO and/or STT to Test WSW - raw (120Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (80 Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (50 Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (200 Ml/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (120 Ml/d), Bulk import (HWZ): SESRO and/or STT to Yew Hill - Planning & Development After: Bulk import (HWZ): SESRO and/or STT to Yew Hill - Planning & Development

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	5
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	57.24
Maximum annual utilisation [Ml/d]	64.06
Environment	
SEA benefit effect	9.00
SEA negative effect	-44.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	-218.96

Financial and Cost Information

Metric	
Capex [£m]	1,100.42
Financing Cost [£m]	1,923.34
Opex [£m]	1,096.99

Embodied Carbon [tCo2e]	172,892.58
Average operational carbon emissions [tCo2e/yr]	1,971.41
Total Carbon Cost [£m]	182.15
Average Incremental Cost (AIC) [p/m3]	127.19

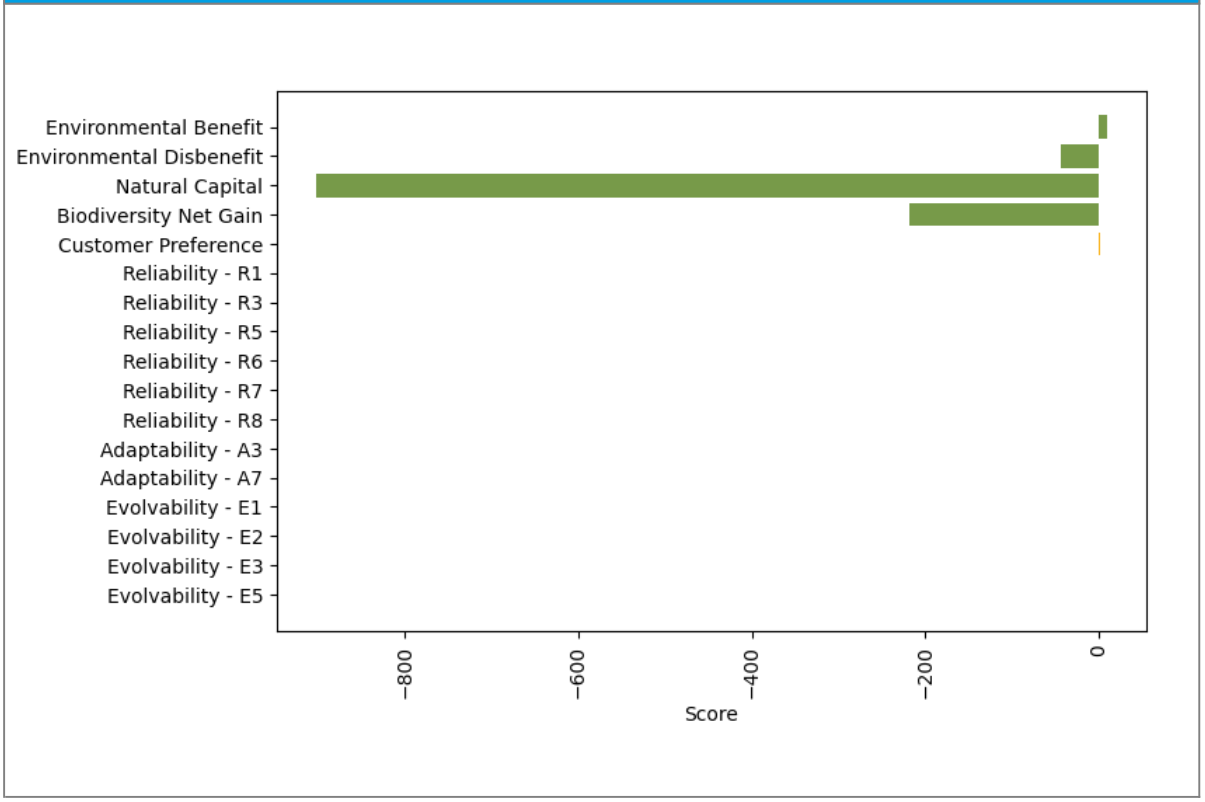
Other

Metric	

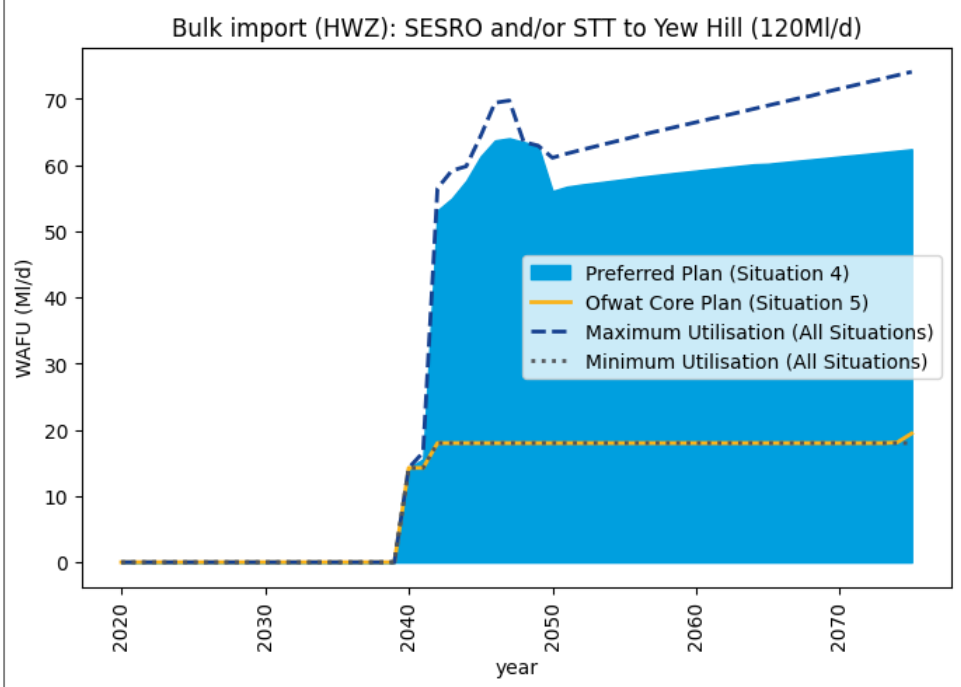
Best Value Metrics

Metric	
Environmental: Environmental Benefit	9.00
Environmental: Environmental Disbenefit	-44.00
Environmental: Natural Capital	-901.80
Environmental: Biodiversity Net Gain	-218.96
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Bulk import (HWZ): SESRO and/or STT to Yew Hill - Planning & Development
Source of Supply and main operational features	
Area over which option is to be implemented	SWOX
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	7
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	101.92
Financing Cost [£m]	223.94
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

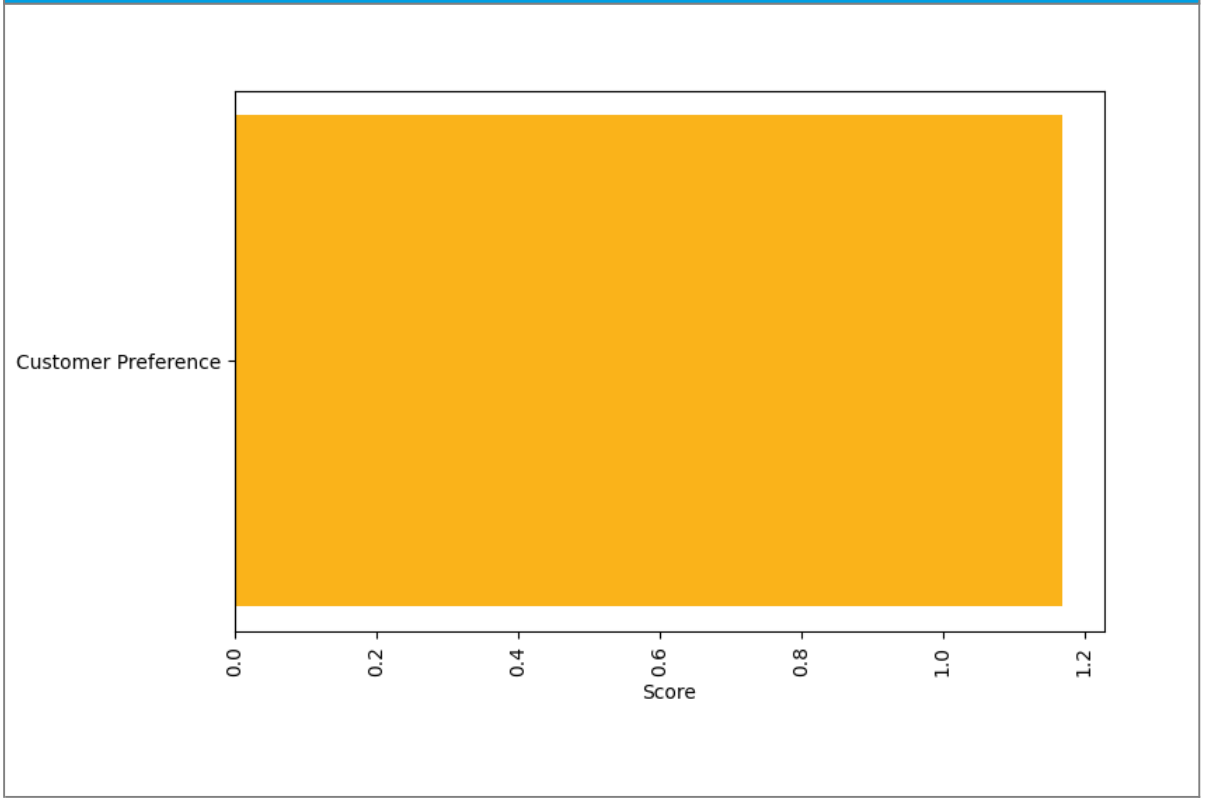
Other

Metric	

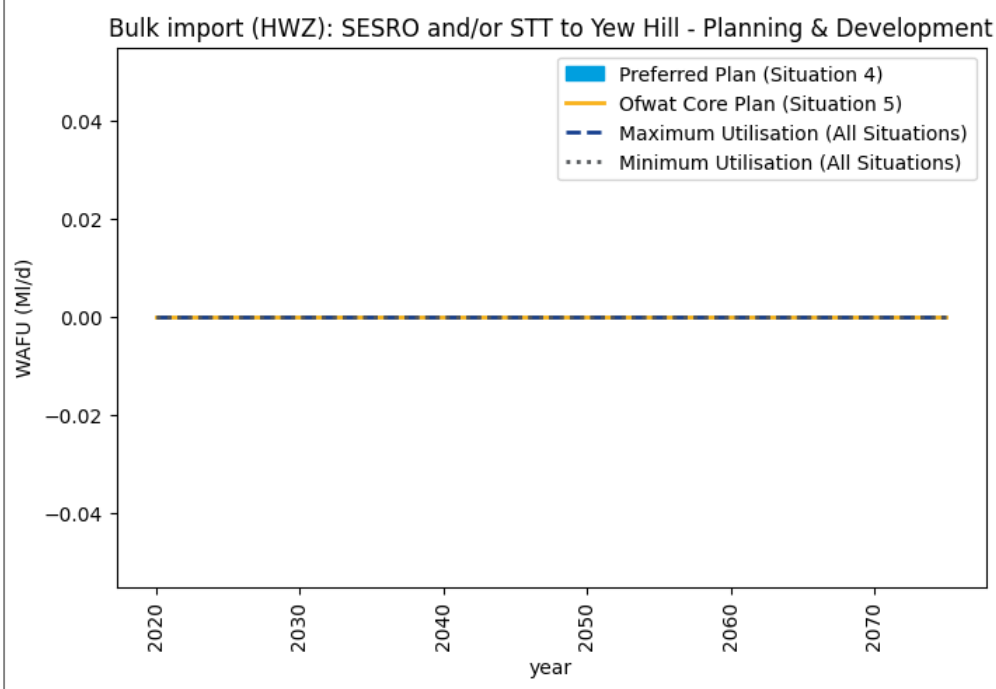
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	
Resilience: Evolvability E2 – Intervention lead times	
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side: TUBs
Source of Supply and main operational features	
Area over which option is to be implemented	Company Wide
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	7.69
Maximum annual utilisation [Ml/d]	7.74
Environment	
SEA benefit effect	4.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

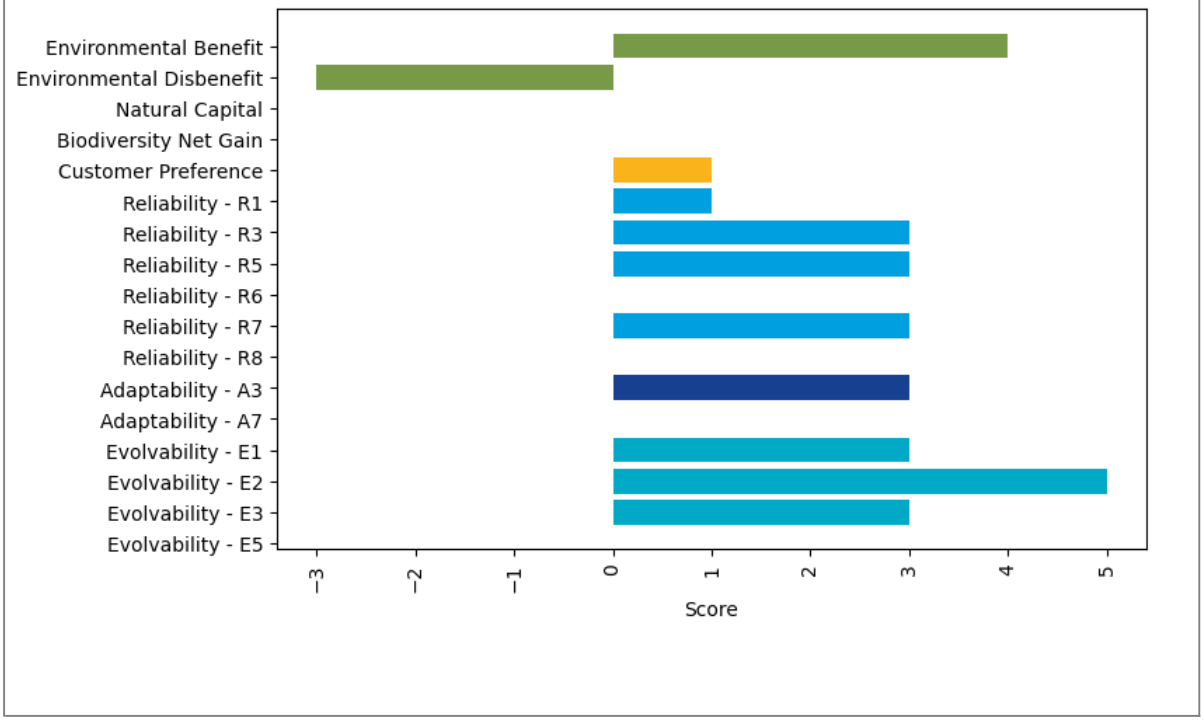
Other

Metric	

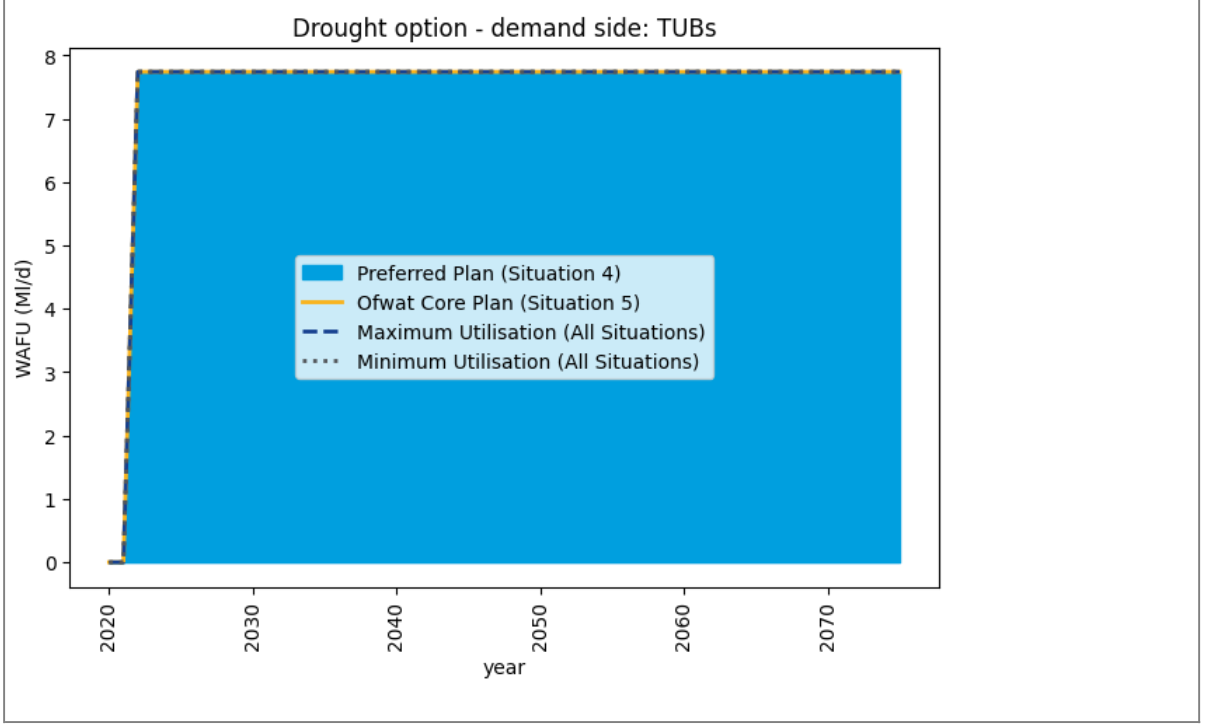
Best Value Metrics

Metric	
Environmental: Environmental Benefit	4.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Drought option - demand side: NEUBs
Source of Supply and main operational features	
Area over which option is to be implemented	Company Wide
Dependencies	After: Drought option - demand side: TUBs

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	1.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	3.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1
Flexibility	
Scalability and modularity [Best Value Metric]	3
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	15.10
Maximum annual utilisation [Ml/d]	15.21
Environment	
SEA benefit effect	4.00
SEA negative effect	-3.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	-
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

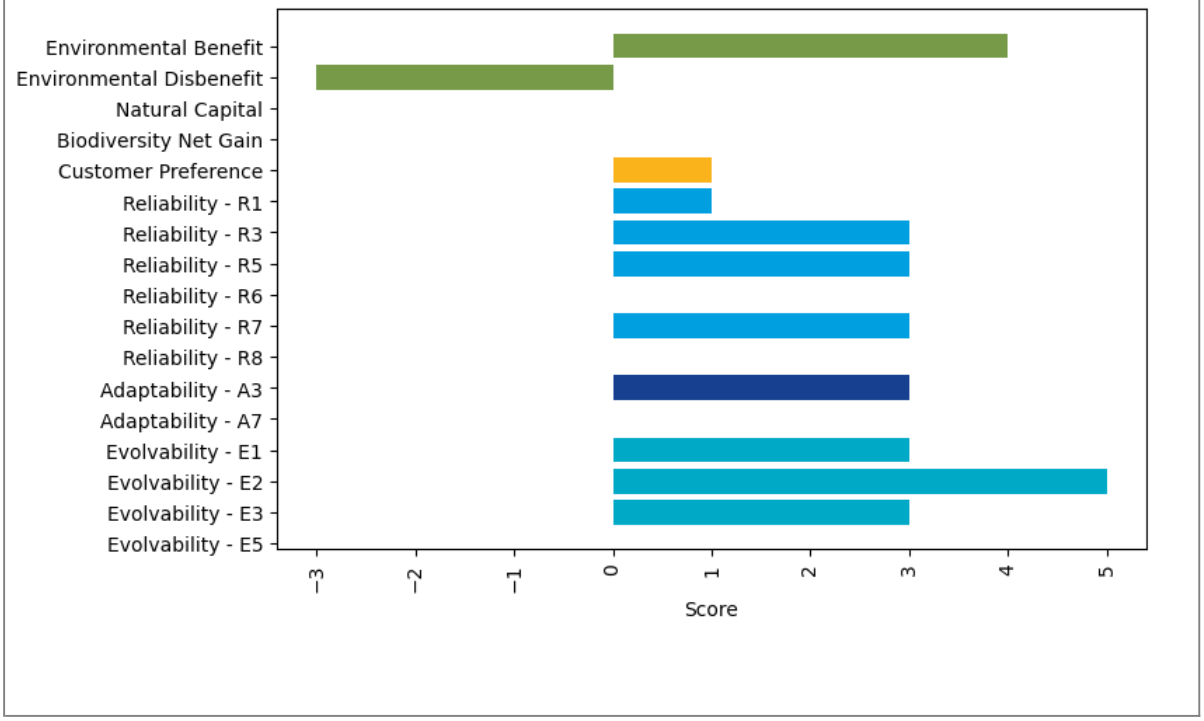
Other

Metric	

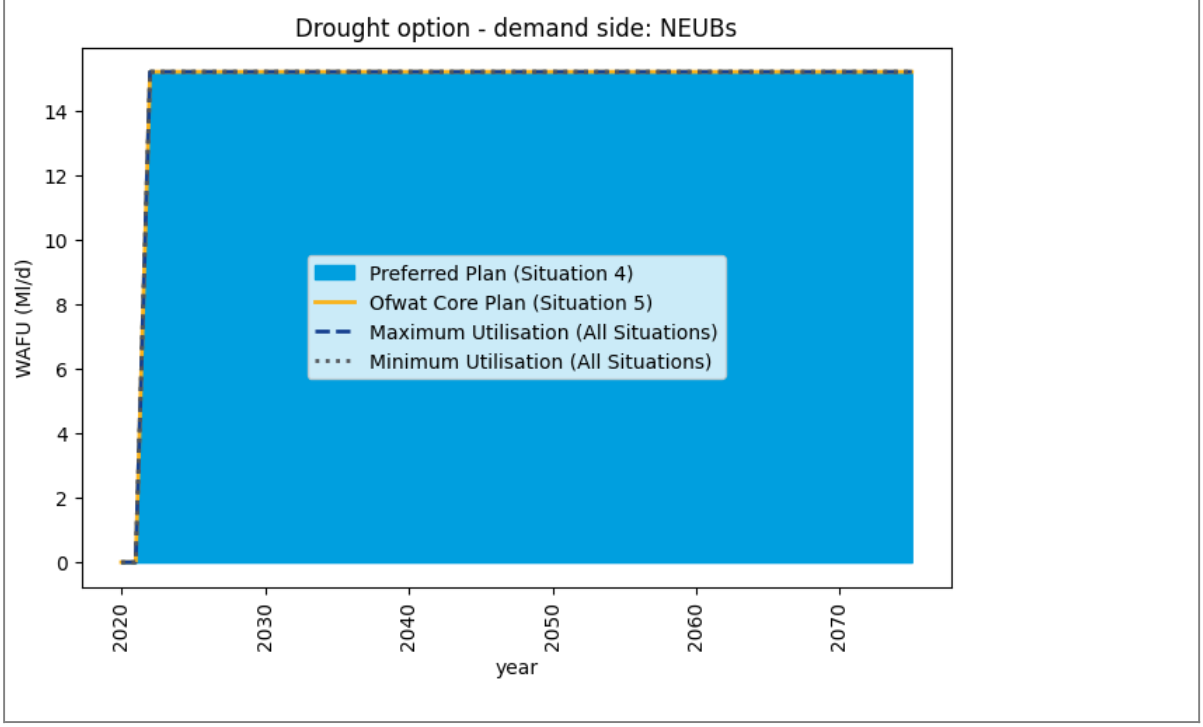
Best Value Metrics

Metric	
Environmental: Environmental Benefit	4.00
Environmental: Environmental Disbenefit	-3.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.00
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	1.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	3.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	3
Resilience: Reliability R6 – Capacity of catchment services	
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	3
Resilience: Reliability R8 – Improvements to soil health	
Resilience: Adaptability A3 – Operational complexity and flexibility	3
Resilience: Adaptability A7 – Customer engagement with demand restrictions	
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	3
Resilience: Evolvability E2 – Intervention lead times	5
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	3
Resilience: Evolvability E5 – Collaborative landscape management	

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (SWZ-SBZ): V6 valve - existing (17Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Brighton
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	17
DO 1:200 Peak [Ml/d]	17
DO 1:500 Average [Ml/d]	17
DO 1:500 Peak [Ml/d]	17
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	11.52
Maximum annual utilisation [Ml/d]	17.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

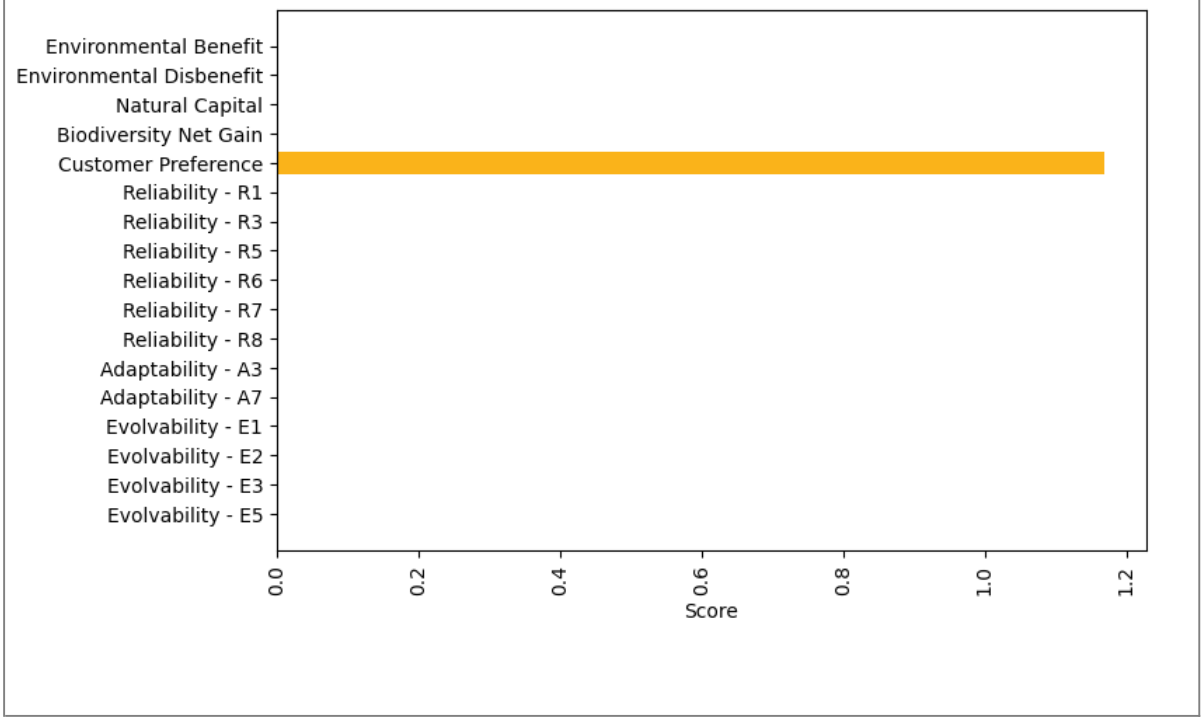
Other

Metric	

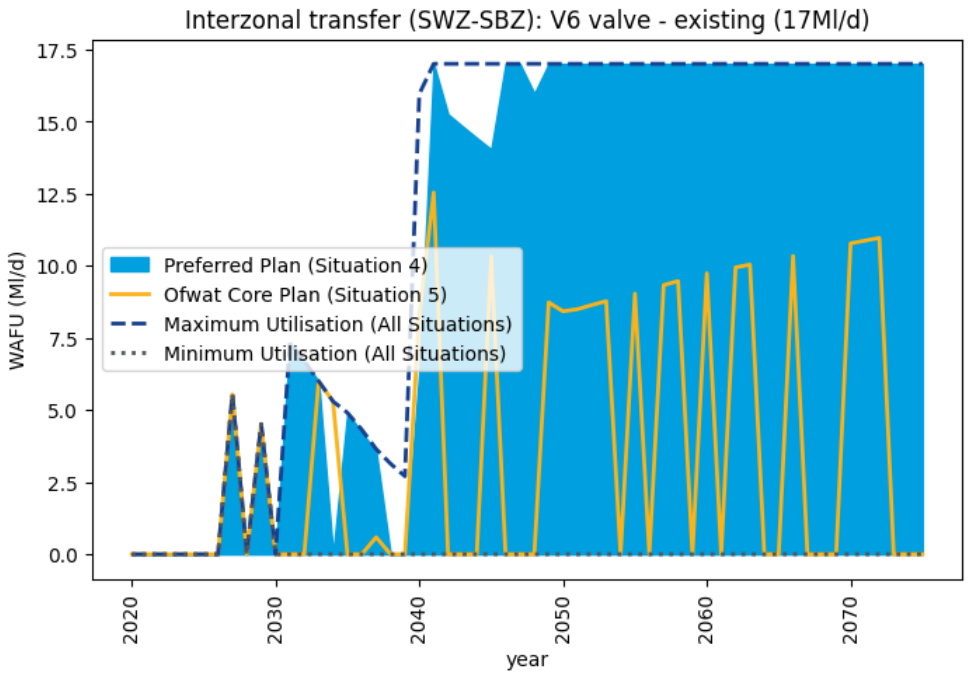
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (SWZ-SBZ): V6 valve additional capacity (13Ml/d)
Source of Supply and main operational features	Interzonal transfer (SWZ-SBZ): V6 valve additional capacity (13Ml/d)
Area over which option is to be implemented	Sussex Brighton
Dependencies	After: Interzonal transfer (SWZ-SBZ): V6 valve - existing (17Ml/d)

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	13
DO 1:200 Peak [Ml/d]	13
DO 1:500 Average [Ml/d]	13
DO 1:500 Peak [Ml/d]	13
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	8.90
Maximum annual utilisation [Ml/d]	13.00
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

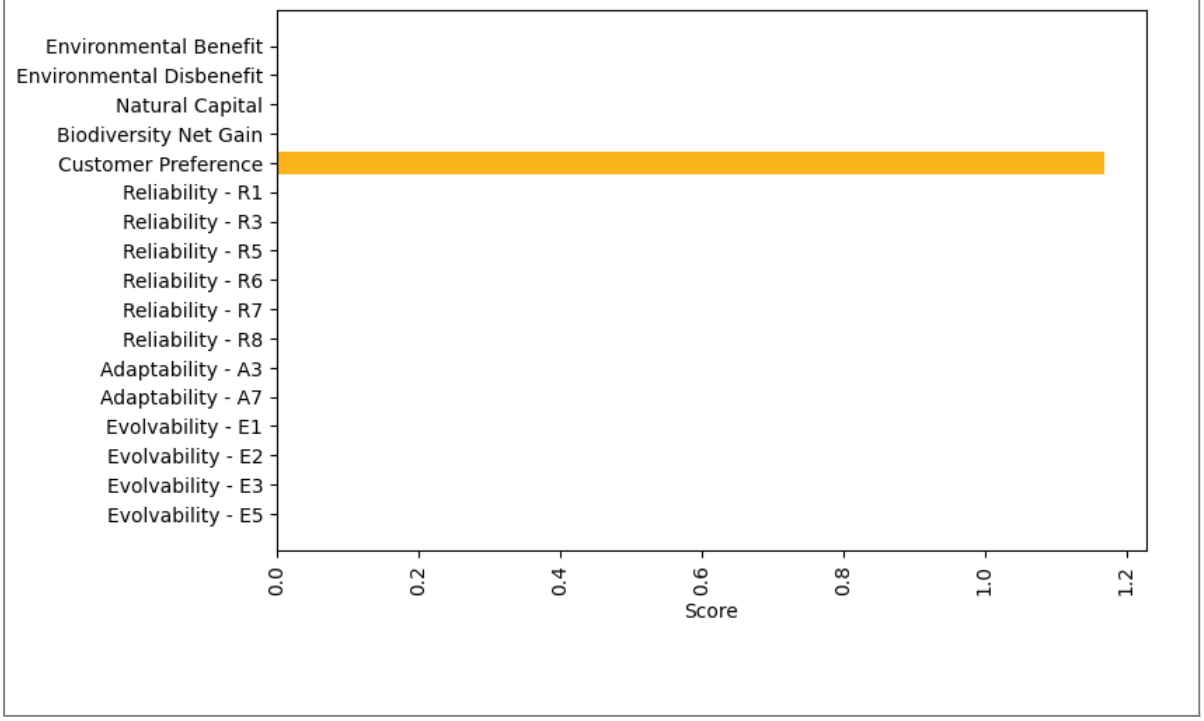
Other

Metric	

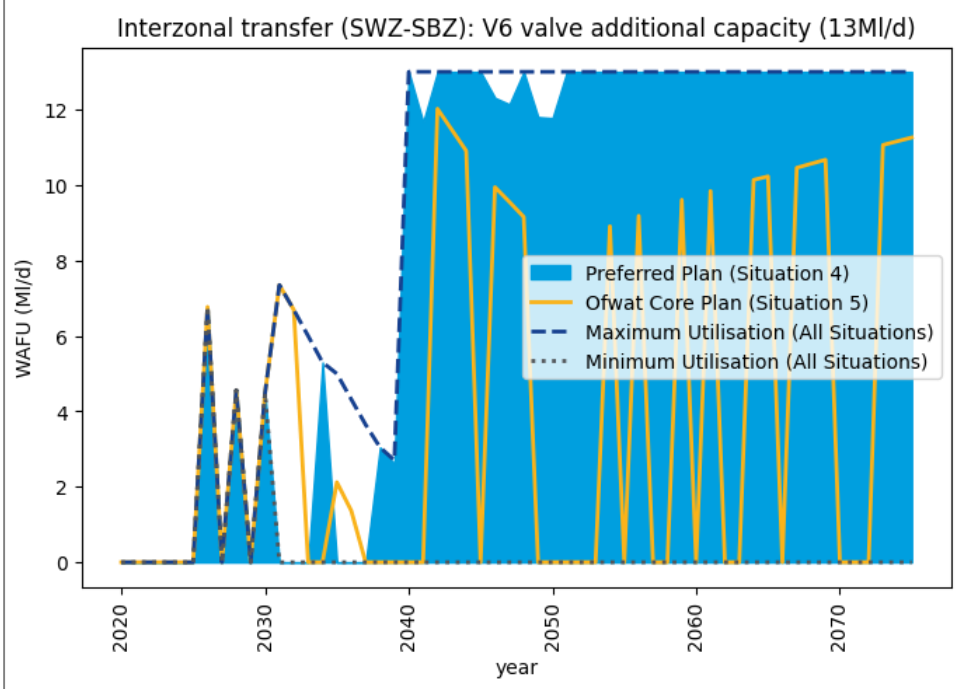
Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (SNZ-SHZ): Weir Wood Reservoir to SHZ
Source of Supply and main operational features	
Area over which option is to be implemented	Sussex Hastings
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	
DO 1:200 Peak [Ml/d]	
DO 1:500 Average [Ml/d]	
DO 1:500 Peak [Ml/d]	
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.17
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	0.00
Maximum annual utilisation [Ml/d]	0.00
Environment	
SEA benefit effect	
SEA negative effect	
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.12
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

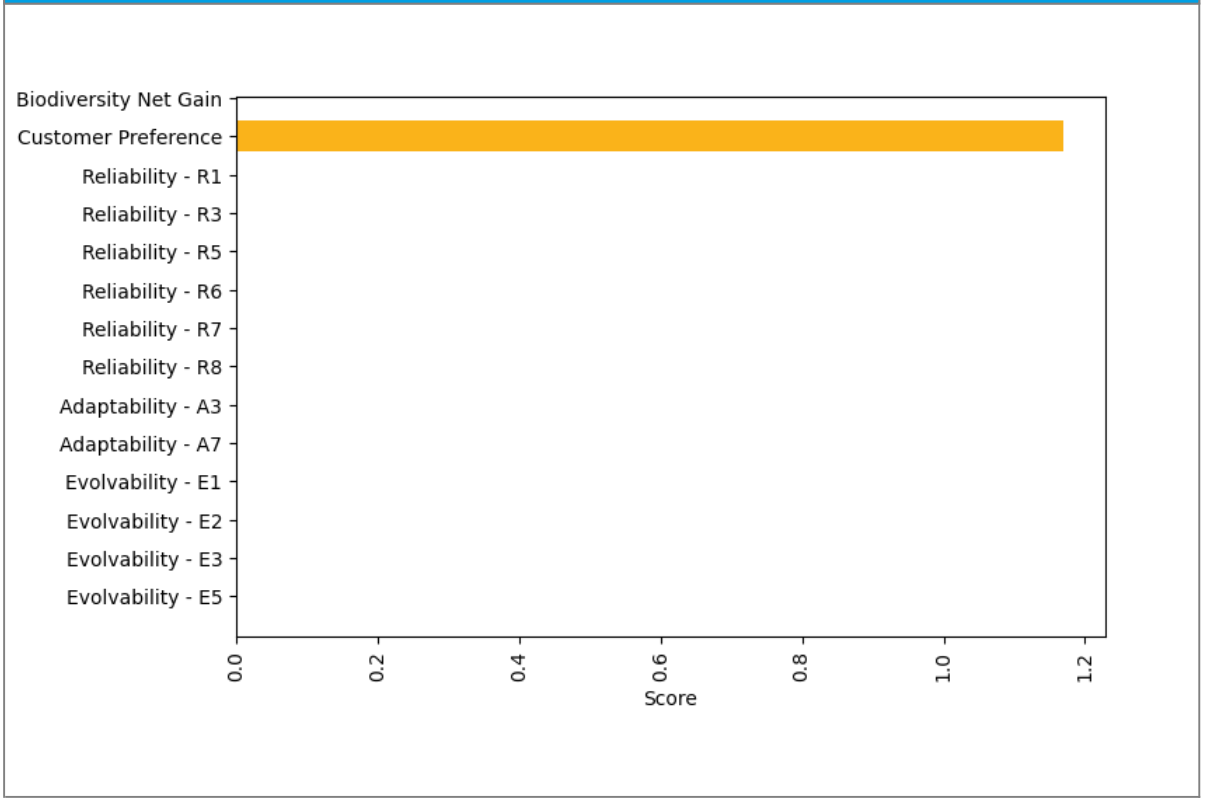
Other

Metric	

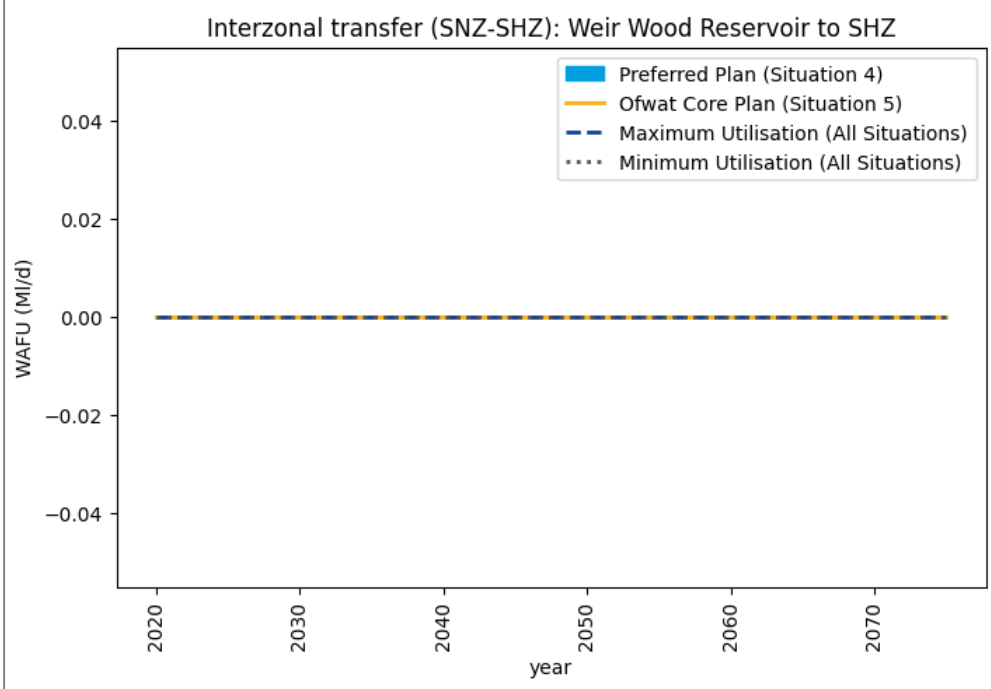
Best Value Metrics

Metric	
Environmental: Environmental Benefit	
Environmental: Environmental Disbenefit	
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.17
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot



Option Fact File

Description

Supply and Transfer Options	
Name	Interzonal transfer (HSW-IOW): Cross-Solent main existing (18Ml/d)
Source of Supply and main operational features	
Area over which option is to be implemented	Isle of Wight
Dependencies	

Key Facts

Metric	
Deployable Output (DO)	
A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the option) or water saved over 80 years. The benefit of a demand side option should be based on a dry year	
DO 1:200 Average [Ml/d]	18
DO 1:200 Peak [Ml/d]	18
DO 1:500 Average [Ml/d]	18
DO 1:500 Peak [Ml/d]	18
Lead in time	
An estimate of the lead-in time needed to investigate and implement the option	
Investigation time [Years]	0
Earliest start date	
Risk and uncertainty with option	
An assessment of the risks and uncertainty associated with the option	
General - Ml/d risk [Best Value Metric]	0.00
General - text	
Impact of Climate Change on yield	
Environment (inc INNS)	
Customer behaviour	
Drinking Water Safety	
A drinking water safety plan assessing the risks to drinking water quality	
SWS 'catchment raw water quality risks' [Best Value Metric]	0.00
Links and constraints	
Constituent WRSE Option IDs	Redacted
Constraints specific to the option	
Customer support	
Customer Preference [Best Value Metric]	1.03
Flexibility	
Scalability and modularity [Best Value Metric]	0
A description of how the option will be utilised and the impact on operating costs and carbon costs	
Expected annual utilisation [Ml/d]	6.73
Maximum annual utilisation [Ml/d]	15.54
Environment	
SEA benefit effect	0.00
SEA negative effect	0.00
WFD Assessment [Y/N]	
Risk of non compliance against WFD Objectives?	
HRA assessment [Y/N]	
Appropriate Assessment Required [Y/N]	
Contribution to biodiversity	

Financial and Cost Information

Metric	
Capex [£m]	-
Financing Cost [£m]	-
Opex [£m]	0.01
Embodied Carbon [tCo2e]	-
Average operational carbon emissions [tCo2e/yr]	-
Total Carbon Cost [£m]	-
Average Incremental Cost (AIC) [p/m3]	-

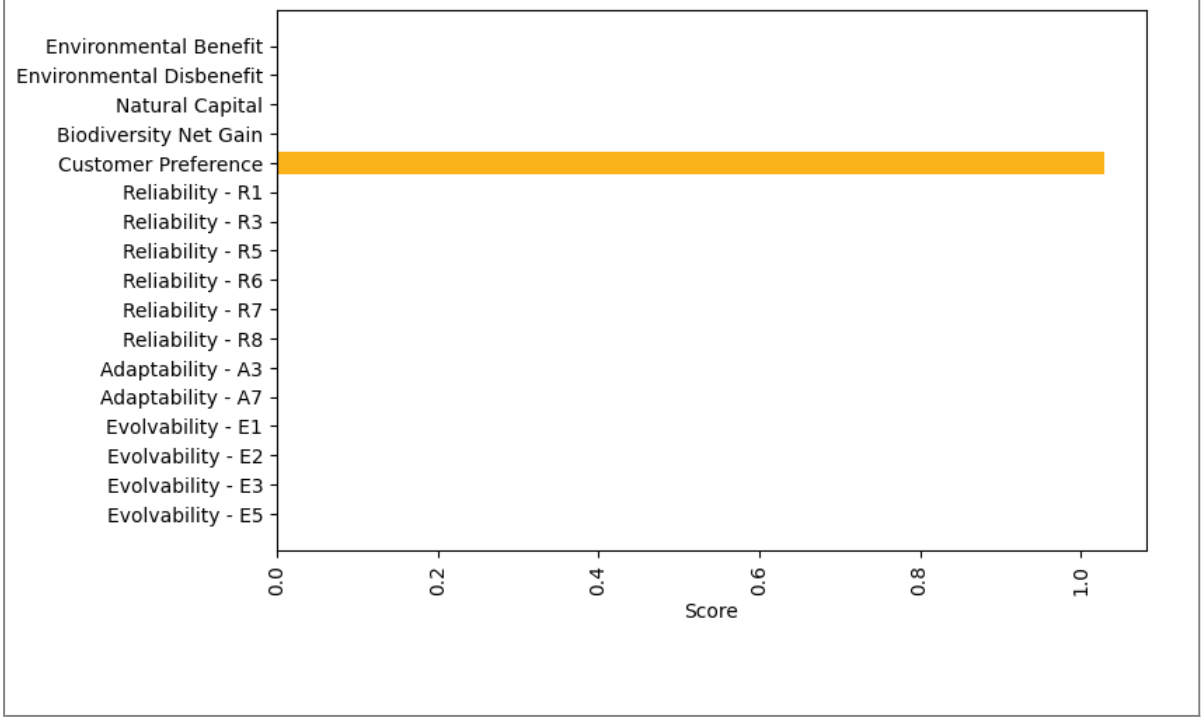
Other

Metric	

Best Value Metrics

Metric	
Environmental: Environmental Benefit	0.00
Environmental: Environmental Disbenefit	0.00
Environmental: Natural Capital	
Environmental: Biodiversity Net Gain	
Social: Customer Preference	1.03
Resilience: Reliability R1 – Uncertainty of option supply/demand benefit	0.00
Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards	0.00
Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)	0
Resilience: Reliability R6 – Capacity of catchment services	0
Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks	0
Resilience: Reliability R8 – Improvements to soil health	0
Resilience: Adaptability A3 – Operational complexity and flexibility	0
Resilience: Adaptability A7 – Customer engagement with demand restrictions	0
Resilience: Evolvability E1 – Scalability and modularity of proposed changes	0
Resilience: Evolvability E2 – Intervention lead times	0
Resilience: Evolvability E3 – Reliance on external bodies to deliver changes	0
Resilience: Evolvability E5 – Collaborative landscape management	0

Best Value Metric Plot



Time Series Plot