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

Submission date: May 2025





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#### 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**

# 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 [MI/d] | 0.1 |
|-------------------------|-----|
| DO 1:200 Peak [MI/d]    | 0.1 |
| DO 1:500 Average [Ml/d] | 0.1 |
| DO 1:500 Peak [MI/d]    | 0.1 |

#### 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 - MI/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 ValueMetric]                             | 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        |

| Ocalability and modularity [Best value Metho]        |      |
|--|------|
| A description of how the option will be utilised and |      |
| the impact on operating costs and carbon costs       |      |
| Expected annual utilisation [Ml/d]                   |      |
| Maximum annual utilisation [MI/d]                    | 0.00 |
| Environment  |      |
| SEA benefit effect                                   |      |
| 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                         |      |

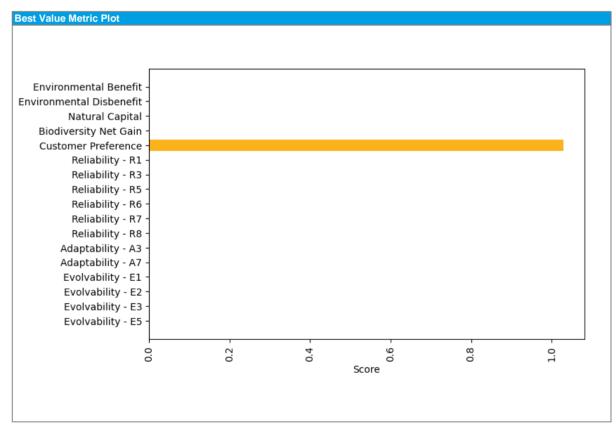
#### **Financial and Cost Information**

| 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]           | - |

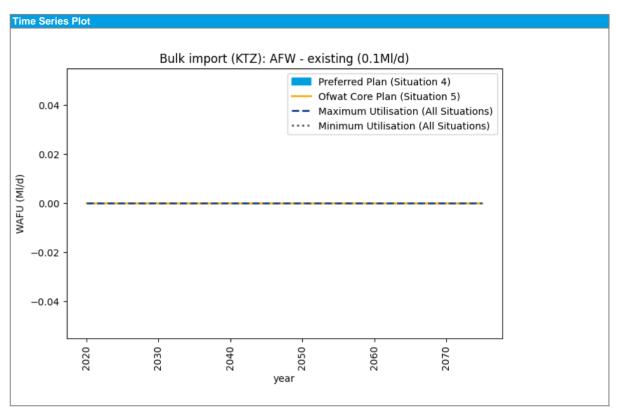
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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    |









#### 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**

| 4 | atri. |
|---|-------|

## 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 [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/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 - MI/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]

[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]  | 0        |
| A description of how the option will be utilised and the impact on operating costs and carbon costs |          |
| Expected annual utilisation [MI/d]  | 3.29     |
| Maximum annual utilisation [MI/d]   | 15.70    |
| Environment   |          |
| SEA benefit effect  |          |

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]           | -    |

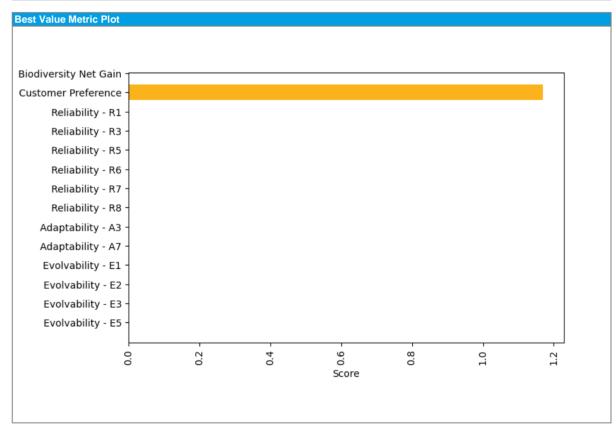
#### Other

| I | Metric |  |
|---|--------|--|
| Г |        |  |

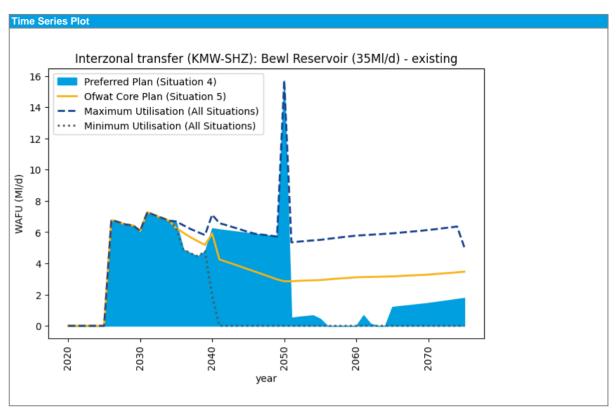
0.00



| 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    |









#### 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)                                      |  |
| 1 7 7   |  |
| option) or water saved over 80 years.                       | supply demand balance or demand saving (based on the capacity of the |
| The benefit of a demand side option should be base          | ed on a dry year   |
| DO 1:200 Average [MI/d]                                     | 5  |
| DO 1:200 Peak [MI/d]  | 5  |
| DO 1:500 Average [MI/d]                                     | 5  |
| DO 1:500 Peak [MI/d]  | 5  |
| Lead in time  |  |
| An estimate of the lead-in time needed to investigate       | te 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 - MI/d risk [Best Value Metric]                     | 0.00   |
| General - text  | 0.00   |
| 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  | 4.47   |
| 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 [MI/d]                          | 0.00   |
| Maximum annual utilisation [MI/d]                           | 0.00   |
| Environment   | 0.00   |
| SEA benefit effect  | 1.00   |
| SEA perient effect  | -9.00  |
| WFD Assessment [Y/N]  | -9.00  |
| Risk of non compliance against WFD Objectives?              |  |
| HRA assessment [Y/N]  |  |
| Appropriate Assessment Required [Y/N]                       |  |
| Contribution to biodiversity                                |  |
| Contribution to blodiversity                                |  |

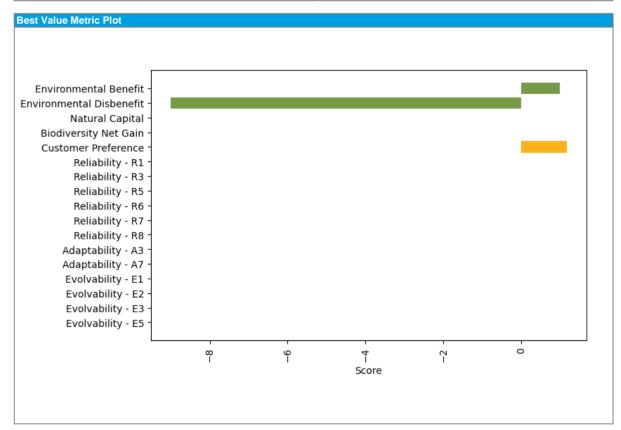
## Financial and Cost Information

| 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]                          |          |
| Average Incremental Cost (AIC) [p/m3]           | 12.63    |

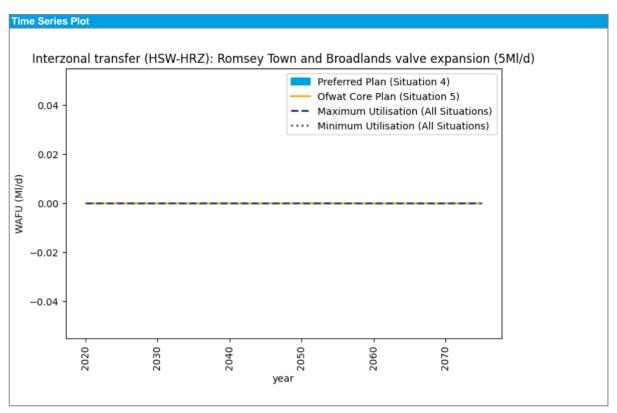
Other Metric



| 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     |









#### 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) |

| Vov Foots   |  |  |
|---|--|--|
| Key Facts Metric  |  |  |
|   |  |  |
| Deployable Output (DO)  |  |  |
|   | 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 [MI/d]   | 5  |  |
| DO 1:200 Peak [MI/d]  | 5  |  |
| DO 1:500 Average [MI/d]   | 5  |  |
| DO 1:500 Peak [MI/d]  | 5  |  |
| Lead in time  |  |  |
| An estimate of the lead-in time needed to investigate             | te 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 - MI/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 ValueMetric]  | 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 [MI/d]                                | 3.13   |  |
| Maximum annual utilisation [MI/d]                                 | 5.00   |  |
| Environment   |  |  |
| SEA benefit effect  | 1.00   |  |
| SEA negative effect   | -9.00  |  |
| WFD Assessment [Y/N]  | 3.00   |  |
| Risk of non compliance against WFD Objectives?                    |  |  |
| HRA assessment [Y/N]  |  |  |
| Appropriate Assessment Required [Y/N]                             |  |  |
| Contribution to biodiversity                                      |  |  |
| Continuation to biodiversity                                      |  |  |

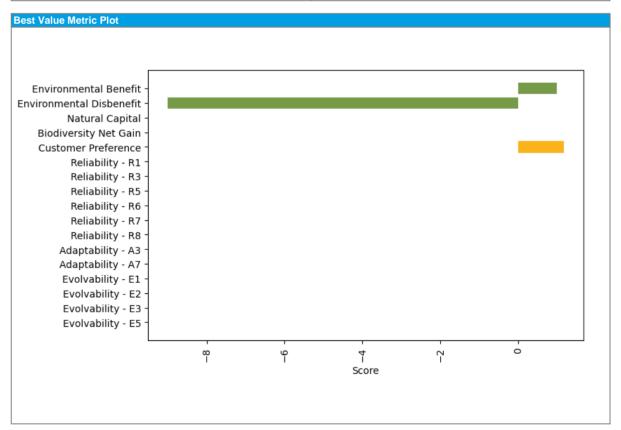
## Financial and Cost Information

| 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 |

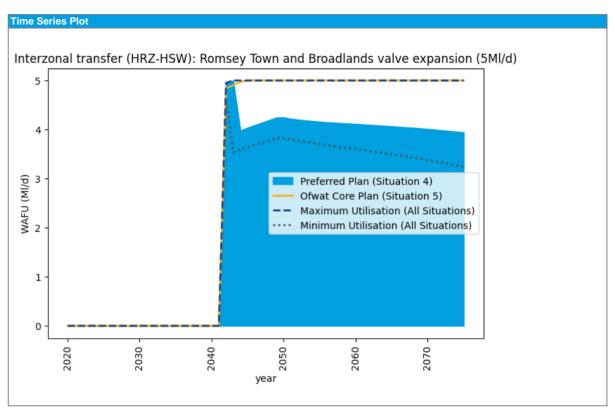
Other Metric



| 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     |









#### 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**

| 4 | atri. |
|---|-------|

# 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/d]    |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

SEA benefit effect SEA negative effect WFD Assessment [Y/N]

Contribution to biodiversity

| 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 - MI/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 [MI/d]                   | 0.00                   |
| Maximum annual utilisation [MI/d]                    | 0.00                   |

#### **Financial and Cost Information**

Risk of non compliance against WFD Objectives?

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

| 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]           | -    |

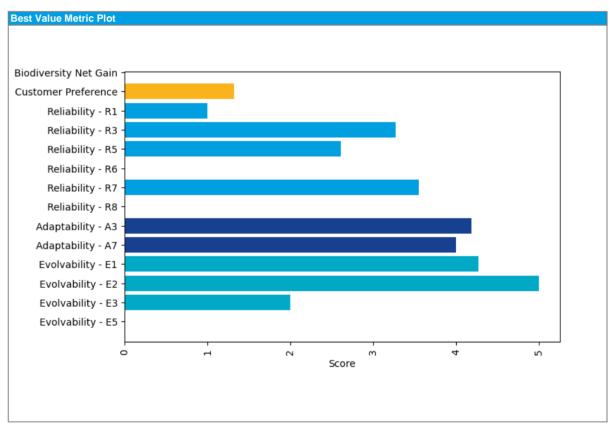
#### Other

Environment

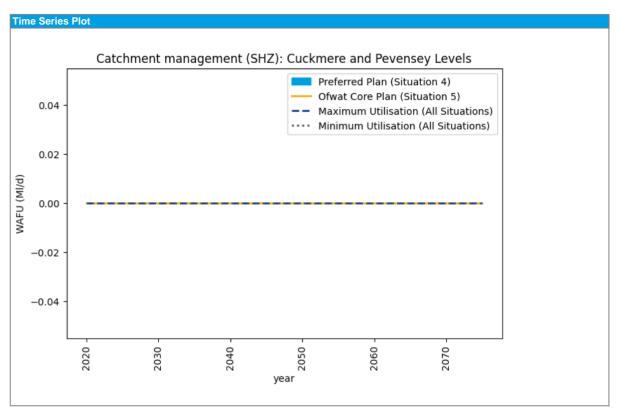
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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 |









#### 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**

# 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/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 - MI/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 o | drinking water quality |
| SWS 'catchment raw water quality risks'               |                        |
| [Best Value Metric]                                   | 3.22                   |
| Links and constraints                                 |                        |
|   |                        |
| Constituent WRSE Option IDs                           | Redacted               |
| 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 [MI/d]                    | 0.00                   |
| Maximum annual utilisation [MI/d]                     | 0.00                   |
| Environment   |                        |
| SEA benefit effect                                    |                        |
| SEA negative effect                                   |                        |
| WFD Assessment [Y/N]                                  |                        |
| Risk of non compliance against WFD Objectives?        |                        |
| HPA accomment [V/N]                                   |                        |

#### **Financial and Cost Information**

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

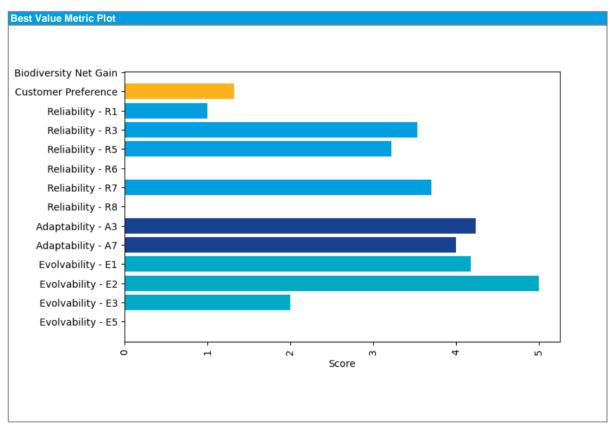
Contribution to biodiversity

| 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]           | -    |

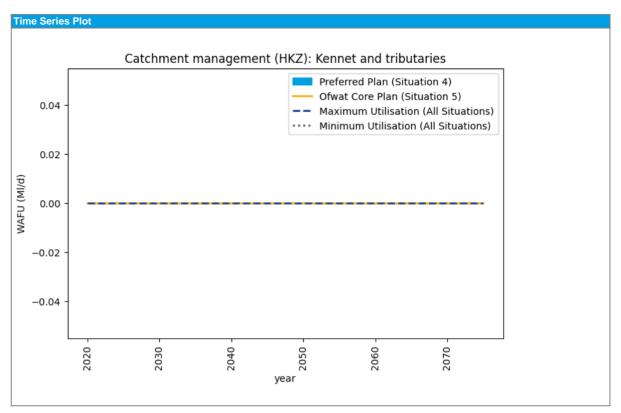
| Metric |  |
|--------|--|
|        |  |



| 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 |









#### 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**

| 4 | atri. |
|---|-------|

# 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/d]    |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| Earliest start date                                  | 01/04/2026             |
|--|------------------------|
| Risk and uncertainty with option                     |                        |
| An assessment of the risks and uncertainty           |                        |
| associated with the option                           |                        |
| General - MI/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               |
| 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 [MI/d]                   |                        |
| Maximum annual utilisation [MI/d]                    | 0.00                   |
| Environment  |                        |
| SEA benefit effect                                   |                        |
| SEA negative effect                                  |                        |
| WFD Assessment [Y/N]                                 |                        |
| Risk of non compliance against WFD Objectives?       |                        |
| HPA accomment [V/N]                                  |                        |

#### **Financial and Cost Information**

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

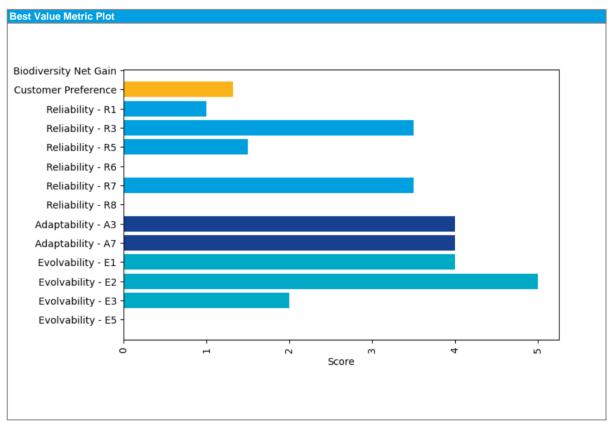
Contribution to biodiversity

| 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]           | -    |

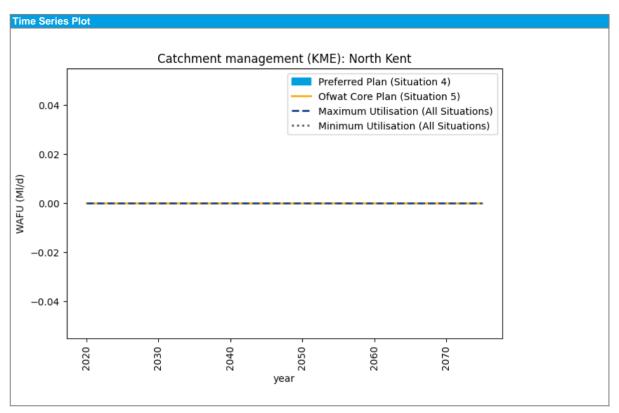
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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 |









#### 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**

# 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 [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/d]    |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

SEA benefit effect SEA negative effect WFD Assessment [Y/N]

Contribution to biodiversity

| 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 - MI/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 ValueMetric]                                   | 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 [MI/d]                   | 0.00                   |
| Maximum annual utilisation [MI/d]                    | 0.00                   |

#### **Financial and Cost Information**

Risk of non compliance against WFD Objectives?

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

Environment

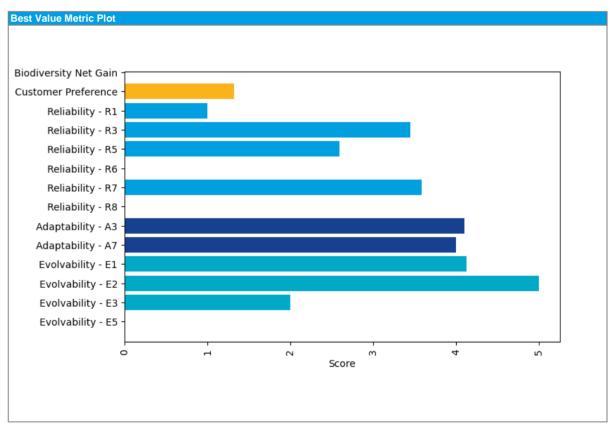
| Metric  |      |
|---|------|
| Capex [£m]                                      | 2.25 |
| Financing Cost [£m]                             | 3.87 |
| Opex [£m]                                       | -    |
| Embodied Carbon [tCo2e]                         | -    |
| Average operational carbon emissions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

#### Other

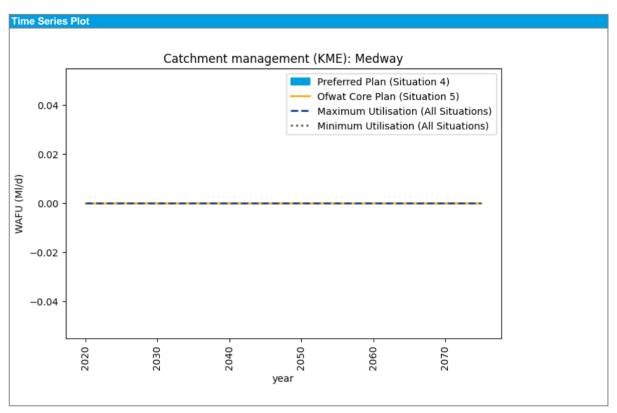
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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 |









#### 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**

| 4 | atri. |
|---|-------|

## 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/d]    |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

Contribution to biodiversity

| Earliest start date                                  | 01/04/2026             |
|--|------------------------|
| Risk and uncertainty with option                     |                        |
| An assessment of the risks and uncertainty           |                        |
| associated with the option                           |                        |
| General - MI/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 ValueMetric]                                   | 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 [MI/d]                   | 0.00                   |
| Maximum annual utilisation [MI/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                         | 1                      |

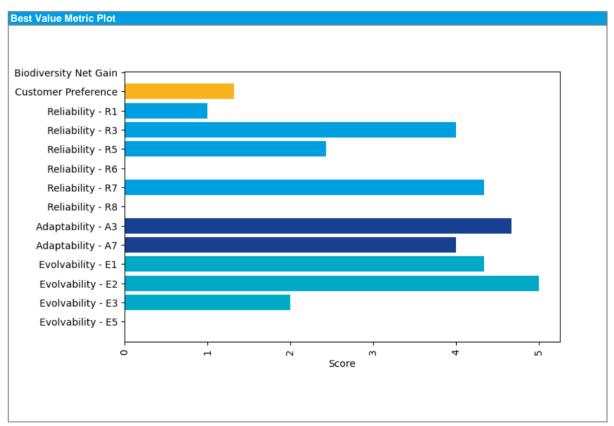
#### **Financial and Cost Information**

| 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]           | -    |

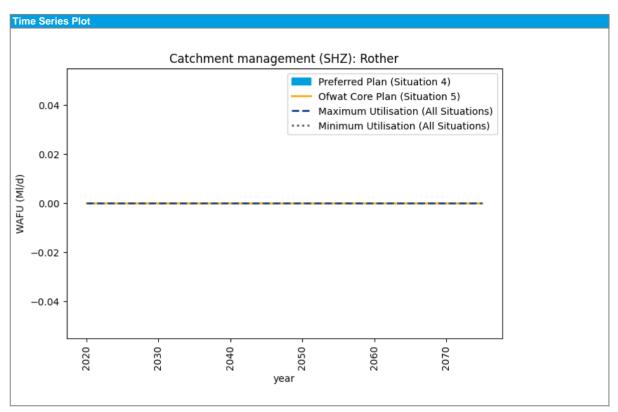
| Metric |  |
|--------|--|
|        |  |



| 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 |









#### 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**

## 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 [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/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 - MI/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 [MI/d]  | 0.00     |
| Maximum annual utilisation [Ml/d]   | 0.00     |
| Environment   |          |
| SEA benefit effect  |          |

| Expected annual utilisation [Mi/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                   |      |

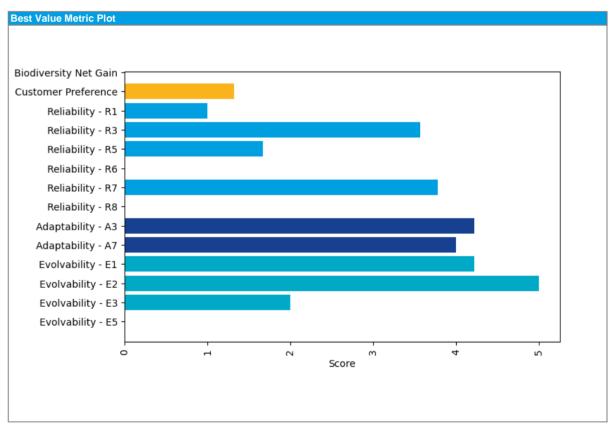
#### **Financial and Cost Information**

| 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]           | -     |

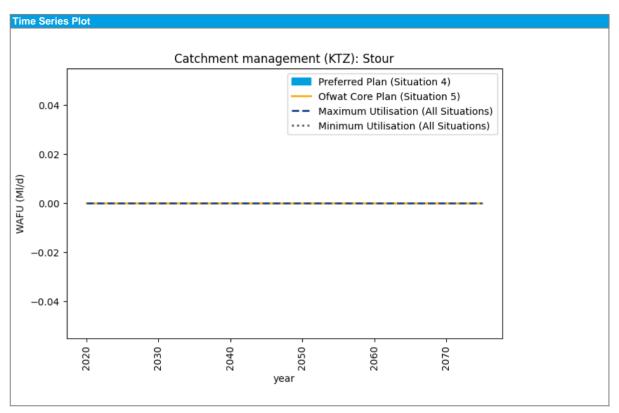
| Metric |  |
|--------|--|
|        |  |



| 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 |









04/04/2027

-109.07

#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Interzonal transfer (SWZ-SBZ): Pulborough winter transfer stage 2 (4MI/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**

### 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 [MI/d] | 3 |
|-------------------------|---|
| DO 1:200 Peak [MI/d]    | 3 |
| DO 1:500 Average [MI/d] | 3 |
| DO 1:500 Peak [MI/d]    | 3 |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| Earliest start date                        | 01/04/2027 |
|--|------------|
| Risk and uncertainty with option           |            |
| An assessment of the risks and uncertainty |            |
| associated with the option                 |            |
| General - MI/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]

[Best Value Metric] 0.00

| _ini | KS | and | const | traint | s |
|------|----|-----|-------|--------|---|
|      |    |     |       |        |   |

| 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        |

| Scalability and modulanty [best value wether         |        |
|--|--------|
| A description of how the option will be utilised and |        |
| the impact on operating costs and carbon costs       |        |
| Expected annual utilisation [MI/d]                   | 1.07   |
| Maximum annual utilisation [MI/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

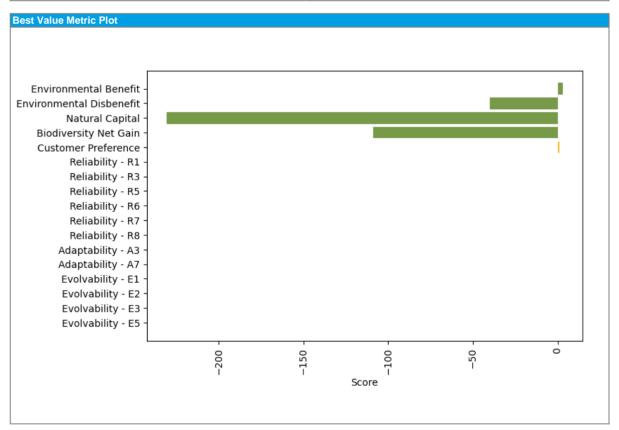
Financial and Cost Information

| Metric  |          |
|---|----------|
| Capex [£m]                                      | 27.24    |
| Financing Cost [£m]                             |          |
| 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    |

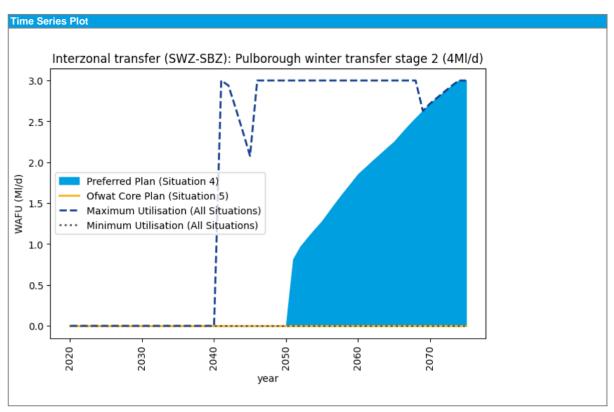
| Metric |  |
|--------|--|
|        |  |



| 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       |









#### Description

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

#### Key Facts

# 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 [MI/d]    |   |
| DO 1:500 Average [Ml/d] |   |
| DO 1:500 Peak [MI/d]    | Ī |

#### Lead in time

Links and constraints

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 - MI/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'                               |                        |
|   |                        |

| · | Constituent WRSE Option IDs |
|---|-----------------------------|
| 4 | 0 1 1 1 10 10 11            |

Constraints specific to the option

Customer support

Customer Preference [Best Value Metric]

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 [M/d] 3.43

| Expected affilial diffication [M/d]            | 0.45  |  |  |
|--|-------|--|--|
| Maximum annual utilisation [MI/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                   |       |  |  |
|  |       |  |  |

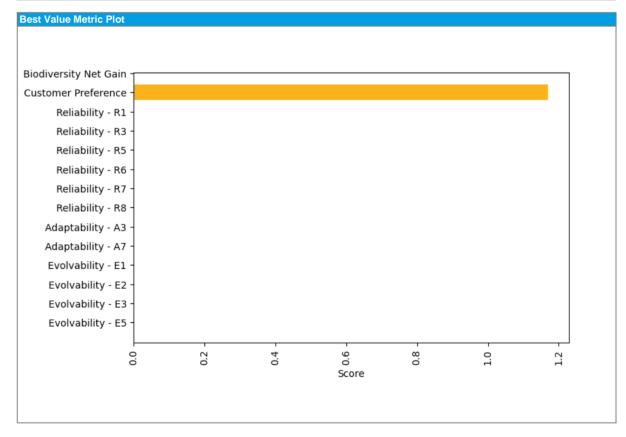
#### **Financial and Cost Information**

| I mancial 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  |

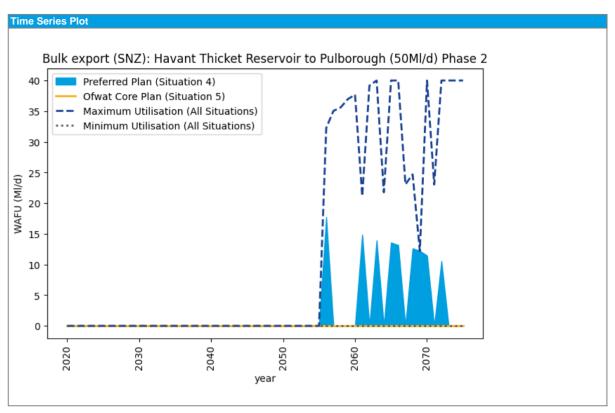
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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    |









#### 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  |
|  | 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 & |
| Dependencies                                   | Development  |

#### Key Facts

#### 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

| The benefit of a demand side option should be based on a dry year |  |
|---|--|
| DO 1:200 Average [MI/d]   |  |
| DO 1:200 Peak [MI/d]  |  |
| DO 1:500 Average [MI/d]   |  |
| DO 1:500 Peak [MI/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 - MI/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]

water quality risks'
[Best ValueMetric] 0.00

#### Links and constraints

| Constituent WRSE Option IDs | Redacte |
|-----------------------------|---------|
|                             |         |

## 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

| ct on operating costs and carbon costs |      |
|--|------|
| Expected annual utilisation [MI/d]     | 4.48 |
| Maximum annual utilisation [MI/d]      | 4.57 |
|  |      |

| Maximum annual utilisation [Mi/u]              | 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**

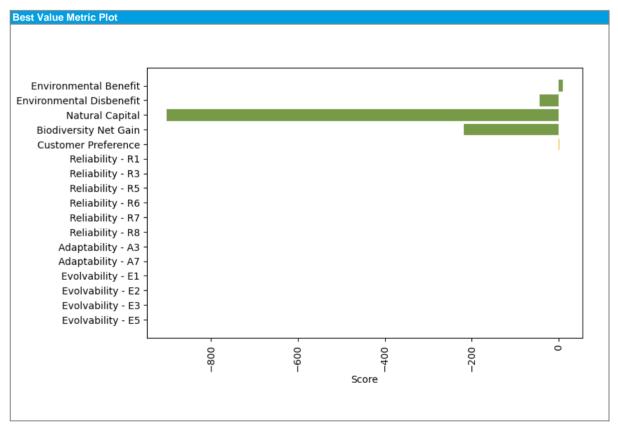
| Metric |            |       |
|--------|------------|-------|
|        | Capex [£m] | 31.90 |

| 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    |

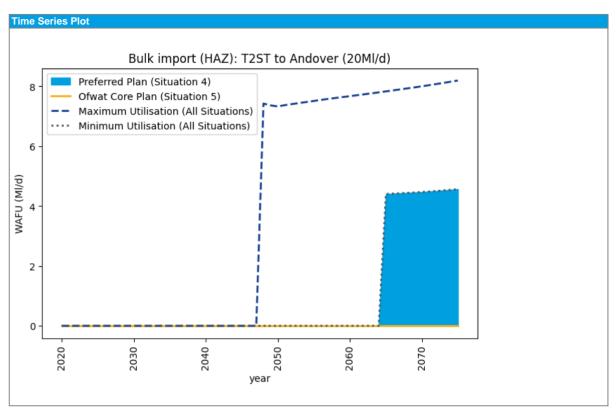
| Metric |  |  |  |  |
|--------|--|--|--|--|
|        |  |  |  |  |



| 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       |









#### Description

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

#### **Key Facts**

#### 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

| The bottom of a domaina olde option enough be based on a dry your |      |
|---|------|
| DO 1:200 Average [MI/d]   |      |
| DO 1:200 Peak [MI/d]  |      |
| DO 1:500 Average [MI/d]   | 0.03 |
| DO 1:500 Peak [MI/d]  | 0.03 |

#### 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 - MI/d risk [Best Value Metric]    | 1.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |
| Environment (inc INNS)                     |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Customer behaviour

SWS 'catchment raw water quality risks'
[Best Value Metric]

Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints enecific to the option |          |

#### Customer support

| - action of plant                       | 41 |
|---|----|
| 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

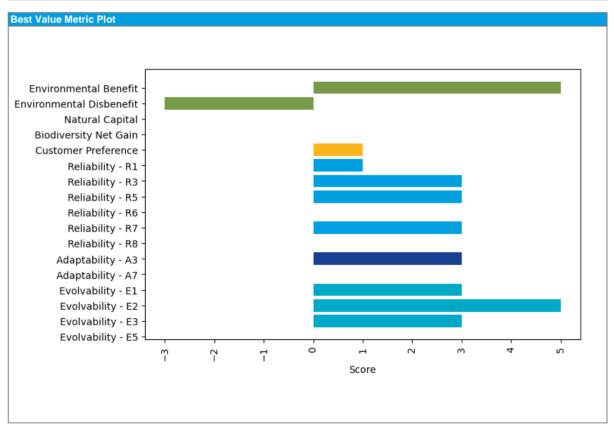
| Financial and Cost information                  |   |
|---|---|
| Metric  |   |
| Capex [£m]                                      | - |
| Financing Cost [£m]                             | - |
| Opex [£m]                                       | - |
| Embodied Carbon [tCo2e]                         |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

#### Other

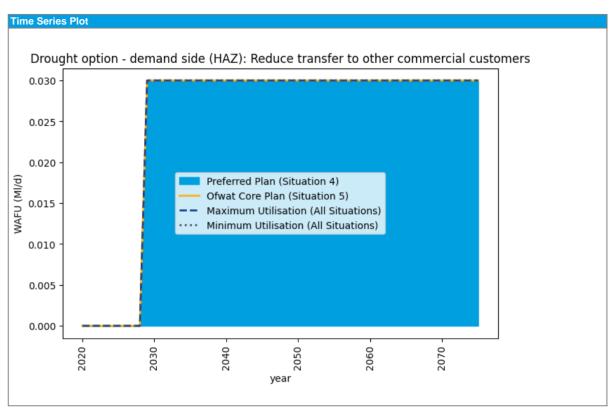
| Other |        |  |
|-------|--------|--|
|       | Matria |  |
|       | Metric |  |
|       |        |  |
|       |        |  |



| 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                              |       |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Groundwater (HKZ): Remove constraints at Newbury to increase yield (1.2MI/d)  |
|  | 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 |
| Source of Supply and main operational features | 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.                   |  |
| opilion, or mater cureu ever or yearer                  |  |
| The benefit of a demand side option should be bas       | sed on a dry year  |
| DO 1:200 Average [MI/d]                                 | * *  |
| DO 1:200 Peak [MI/d]                                    |  |
| DO 1:500 Average [MI/d]                                 |  |
| DO 1:500 Peak [MI/d]                                    |  |
| Lead in time  | 1.   |
|   | As and invalous at the continu                                       |
| An estimate of the lead-in time needed to investigate   | ite and implement the option   |
| Investigation time [Years]                              |  |
| Earliest start date                                     | I .  |
|   | 01/04/202  |
| Risk and uncertainty with option                        |  |
| An assessment of the risks and uncertainty              |  |
| associated with the option                              | 5.0  |
| General - MI/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     |  |
| SWS 'catchment raw water quality risks'                 |  |
| [Best Value Metric]                                     | 0.00   |
| Links and constraints                                   |  |
|   |  |
| Constituent WRSE Option IDs                             | Redacte  |
| Constituent WKSE Option ibs                             | Redacted   |
|   |  |
| Constraints specific to the option                      |  |
| Customer support  |  |
| Customer Preference [Best Value Metric]                 | 1.4  |
| 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 [MI/d]                      |  |
| Maximum annual utilisation [MI/d]                       | I .  |
| Environment   | <u> </u>   |
| SEA benefit effect                                      |  |
| SEA negative effect                                     |  |
| WFD Assessment [Y/N]                                    | I .  |
| Risk of non compliance against WFD Objectives?          | I .  |
| HRA assessment [Y/N]                                    |  |
| Appropriate Assessment Required [Y/N]                   |  |
| Contribution to biodiversity                            |  |
| Contribution to blourversity                            |  |

#### Financial and Cost Information

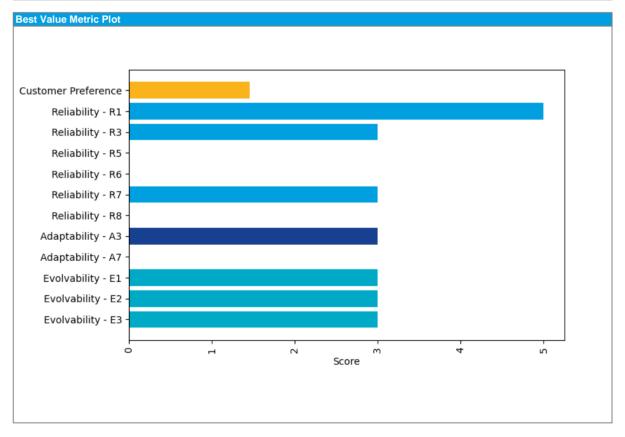
| Metric              |      |
|---------------------|------|
| Capex [£m]          | -    |
| Financing Cost [£m] | -    |
| Opex [£m]           | 8.52 |

| 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 |

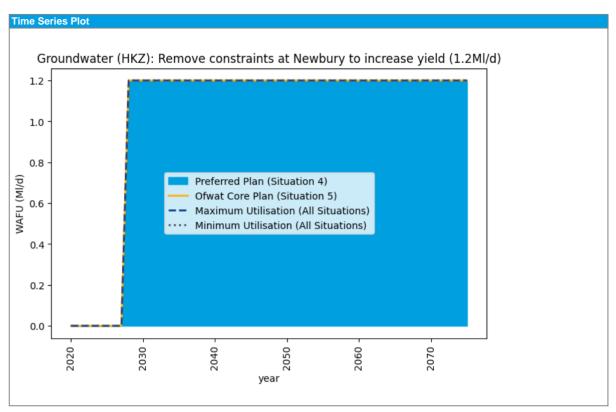
| Other |        |  |
|-------|--------|--|
|       | Motrio |  |
|       | Metric |  |
|       |        |  |
|       |        |  |



| 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                              |      |









#### Description

| Supply and Transfer Options                    |  |  |
|--|--|--|
| Name   | Bulk import (HKZ): T2ST to HKZ (5MI/d)   |  |
| Source of Supply and main operational features |  |  |
| Area over which option is to be implemented    | Hampshire Kingsclere   |  |
|  | 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 & |  |
| Dependencies                                   | Development  |  |

#### **Key Facts**

#### 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

| The benefit of a demand side option should be based on a dry year |  |
|---|--|
| DO 1:200 Average [MI/d]   |  |
| DO 1:200 Peak [MI/d]  |  |
| DO 1:500 Average [MI/d]   |  |
| DO 1:500 Peak [MI/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 - MI/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

| Lin | ks | and | cons | stra | ints |
|-----|----|-----|------|------|------|
|     |    |     |      |      |      |

Constituent WRSE Option IDs Redacted Constraints specific to the option

| Custom | er            | su | ppo | rτ |
|--------|---------------|----|-----|----|
|        | $\overline{}$ |    |     |    |

Environment

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 [MI/d] 3 10 5.00 Maximum annual utilisation [MI/d]

### SEA benefit effect 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**

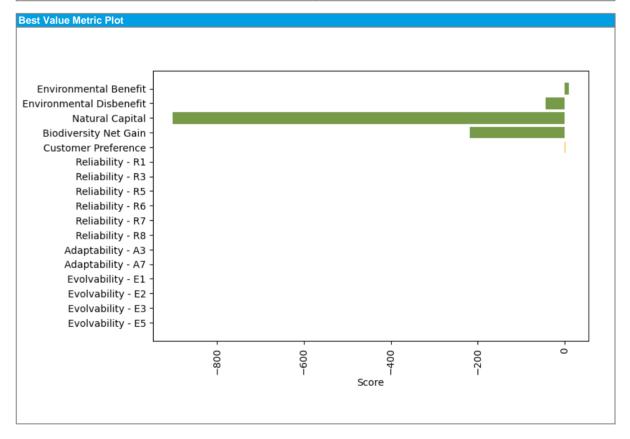
| Metric     |       |
|------------|-------|
| Capex [£m] | 15.18 |

| 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  |

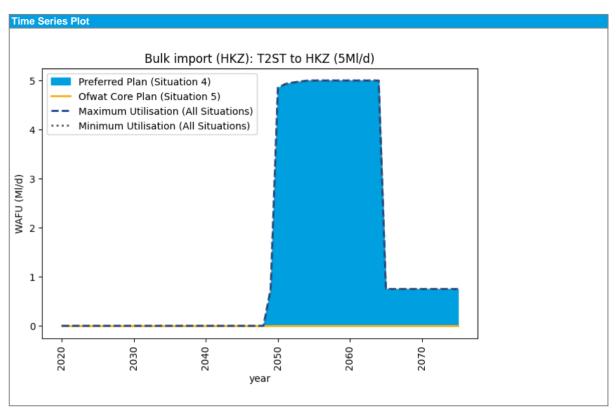
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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       |









#### Description

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

#### **Key Facts**

| <br>-4 |  |
|--------|--|

#### 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 yea

|   | The benefit of a demand side option should be based on a dry year |  |
|---|---|--|
|   | DO 1:200 Average [MI/d]   |  |
|   | DO 1:200 Peak [MI/d]  |  |
| DO 1:200 Peak [MI/d]  DO 1:500 Average [MI/d]  DO 1:500 Peak [MI/d] | DO 1:500 Average [MI/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 - MI/d risk [Best Value Metric]    | 1.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Scalability and modularity [Best Value Metric]

Environment (inc INNS)
Customer behaviour

SWS 'catchment raw water quality risks' [Best ValueMetric]

Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |
| tomor cupport                      |          |

#### Customer support

| The state of the s | 1 |
|--|---|
| Customer Preference [Best Value Metric] 1  |   |
| Flexibility  |   |

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

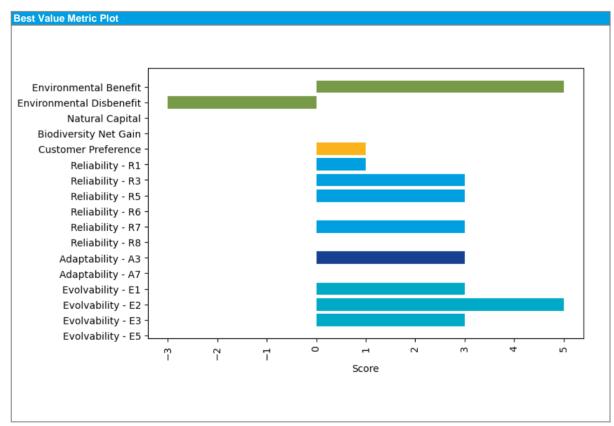
| Financial and Cost information                  |   |
|---|---|
| Metric  |   |
| Capex [£m]                                      | - |
| Financing Cost [£m]                             | - |
| Opex [£m]                                       | - |
| Embodied Carbon [tCo2e]                         |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

#### Other

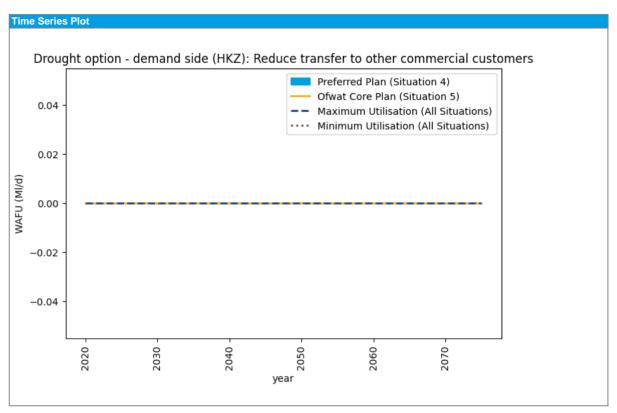
| Matrix Matrix |        |  |
|---------------|--------|--|
|               |        |  |
|               | metric |  |
|               |        |  |
|               |        |  |



| 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                              |       |









#### 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**

| 4 | atri. |
|---|-------|

### 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 [MI/d] |     |
|-------------------------|-----|
| DO 1:200 Peak [MI/d]    |     |
| DO 1:500 Average [MI/d] | 2.5 |
| DO 1:500 Peak [MI/d]    | 2.5 |
| 1 1 1 1                 |     |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option Investigation time [Years]

| Earliest start date                        | 01/04/2028 |
|--|------------|
| Risk and uncertainty with option           |            |
| An assessment of the risks and uncertainty |            |
| associated with the option                 |            |
| General - MI/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

Contribution to biodiversity

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 [MI/d]                   | 2.50     |
| Maximum annual utilisation [MI/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]                |          |
|  |          |

#### **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  |

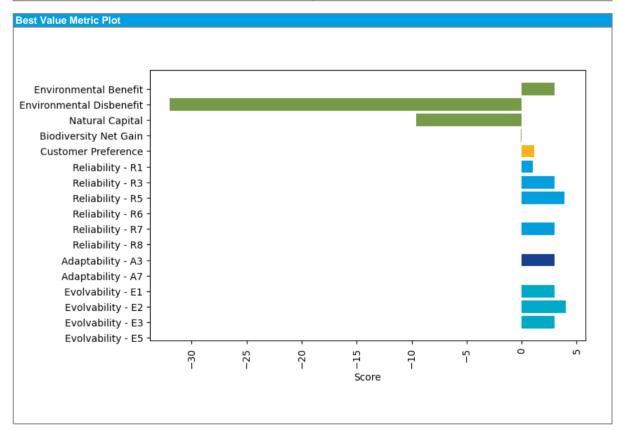
#### Other

| Metric |  |  |
|--------|--|--|
|        |  |  |

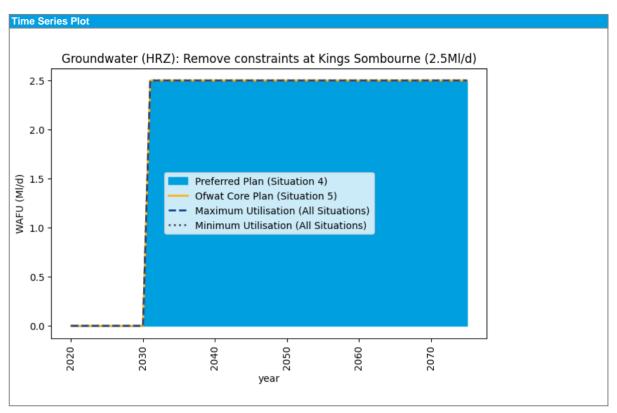
-0.06



| 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                              |             |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)                              |
|  | 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 4.8MI/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       |
| Source of Supply and main operational features | and require new pipelines to connect to WSW.                                      |
| Area over which option is to be implemented    | Hampshire Rural   |
| Dependencies                                   |   |

#### **Key Facts**

#### 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 [MI/d] | 4.8 |
| DO 1:200 Peak [MI/d]    | 4.8 |
| DO 1:500 Average [MI/d] | 4.8 |
| DO 1:500 Peak [MI/d]    | 4.8 |

#### 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 - MI/d risk [Best Value Metric] 1.00  General - text  Impact of Climate Change on yield  Environment (inc INNS)  Customer behaviour | 1                                       | -          |
|--|---|------------|
| An assessment of the risks and uncertainty associated with the option  General - MI/d risk [Best Value Metric] 1.00  General - text  Impact of Climate Change on yield  Environment (inc INNS)   | Earliest start date                     | 01/04/2030 |
| associated with the option  General - MI/d risk [Best Value Metric] 1.00  General - text  Impact of Climate Change on yield  Environment (inc INNS)  | Risk and uncertainty with option        |            |
| General - text Impact of Climate Change on yield Environment (inc INNS)  |   |            |
| Impact of Climate Change on yield Environment (inc INNS)   | General - MI/d risk [Best Value Metric] | 1.00       |
| Environment (inc INNS)   | General - text                          |            |
|  | Impact of Climate Change on yield       |            |
| Customer behaviour   | 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]

[Best Value Metric] 0.00

| Links | and | cons | stra | ints |
|-------|-----|------|------|------|

| Redacted | Constituent WRSE Option IDs        |
|----------|------------------------------------|
|          | Constraints specific to the option |

## Customer support Customer P

| 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]

Maximum annual utilisation [Ml/d]

Environment

| Maximum annual utilisation [MI/d] | 4.80   |
|-----------------------------------|--------|
|                                   |        |
| SEA benefit effect                | 2.00   |
| SEA negative effect               | -26.00 |
| WFD Assessment [Y/N]              |        |
| polipace against WED Objectives?  |        |

Risk of non compliance against WFD Objectives?

HRA assessment [Y/N]

Appropriate Assessment Required [Y/N]

Contribution to biodiversity

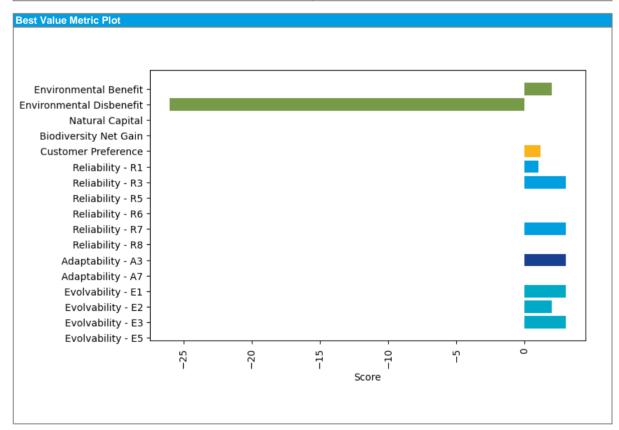
#### Financial and Cost Information

| 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    |

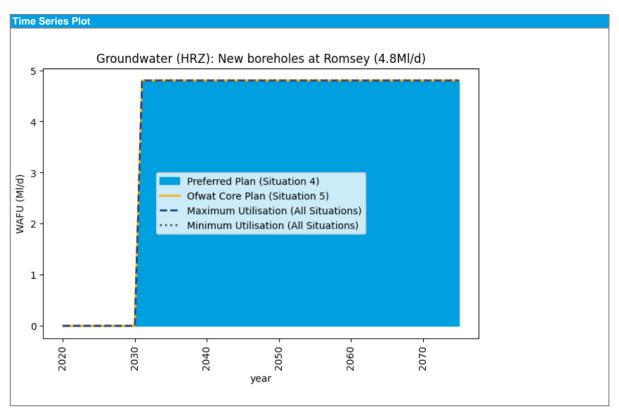
|--|



| 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                              |        |









#### Description

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

#### **Key Facts**

| 8.6 |  |
|-----|--|

#### 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 yea

| The benefit of a demand side option should be based on a dry year |   |
|---|---|
| DO 1:200 Average [MI/d]   |   |
| DO 1:200 Peak [MI/d]  |   |
| DO 1:500 Average [MI/d] 0   | l |
| DO 1:500 Peak [MI/d] 0  | l |

#### 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 - MI/d risk [Best Value Metric]                               | 1.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Scalability and modularity [Best Value Metric]

Environment (inc INNS)
Customer behaviour

SWS 'catchment raw water quality risks' [Best Value Metric]

Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |
| tomor support                      |          |

#### Customer support

| - married and provide the control of |   |
|--|---|
| Customer Preference [Best Value Metric]  | 1 |
| Flexibility  |   |

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

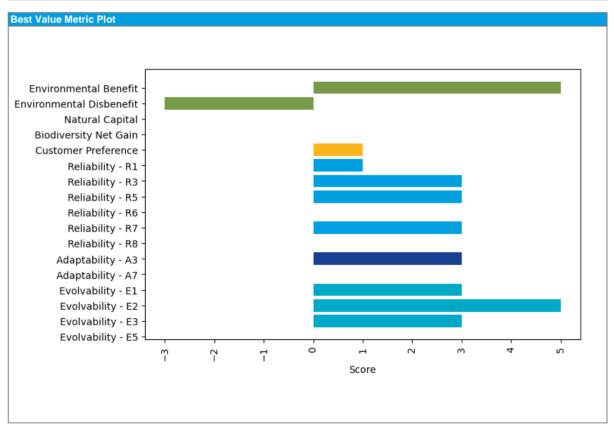
Financial and Cost Information

| 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]           | - |

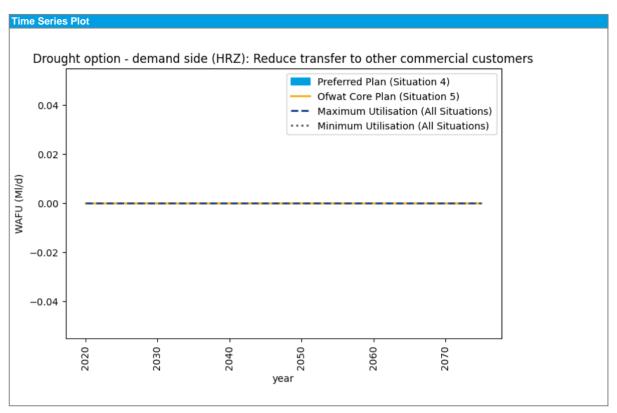
#### Other



| Metric  |       |
|---|-------|
| 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                              |       |









01/04/2029

1.17

#### Description

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

#### **Key Facts**

| 8.6 |  |
|-----|--|

#### 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

| ·                       | 7.7 |
|-------------------------|-----|
| DO 1:200 Average [Ml/d] | 21  |
| DO 1:200 Peak [MI/d]    | 21  |
| DO 1:500 Average [MI/d] | 21  |
| DO 1:500 Peak [MI/d]    | 21  |

#### 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 - MI/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]

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 [MI/d]                   | 0.00 |

| Maximum annual utilisation [MI/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 |
|  |         |

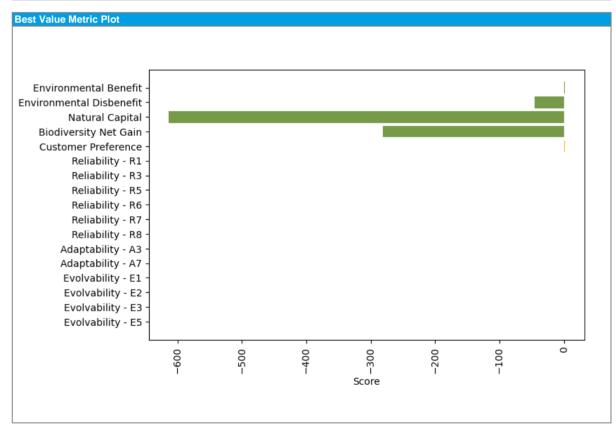
#### Financial and Cost Information

| i manolar and oost miormation                   |       |
|---|-------|
| 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  |

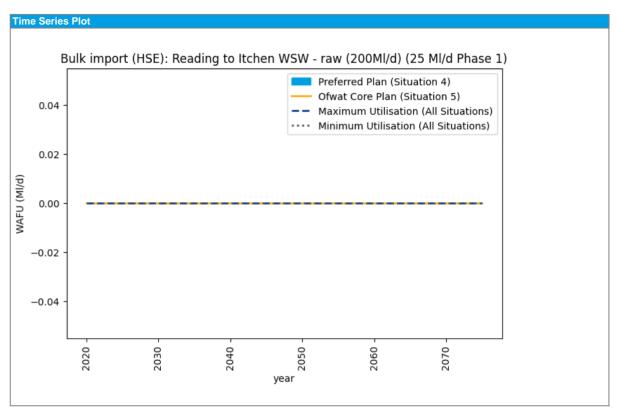
| Metric |  |
|--------|--|
|        |  |



| 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       |









#### 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**

| 4 | atri. |
|---|-------|

## 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 [MI/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 - MI/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]

| 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 [MI/d]  | 77.05    |
| Maximum annual utilisation [MI/d]   | 90.00    |

| 1  |       |
|--|-------|
| Maximum annual utilisation [MI/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**

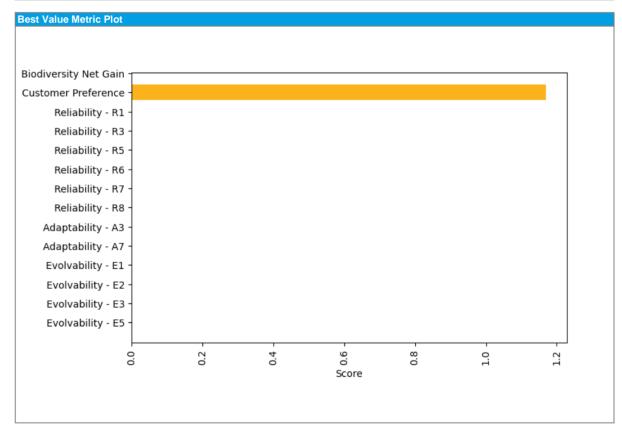
| Metric  |        |
|---|--------|
| Capex [£m]                                      | 417.86 |
| Financing Cost [£m]                             | 495.49 |
| Opex [£m]                                       | 0.05   |
| Embodied Carbon [tCo2e]                         | -      |
| Average operational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

#### Other

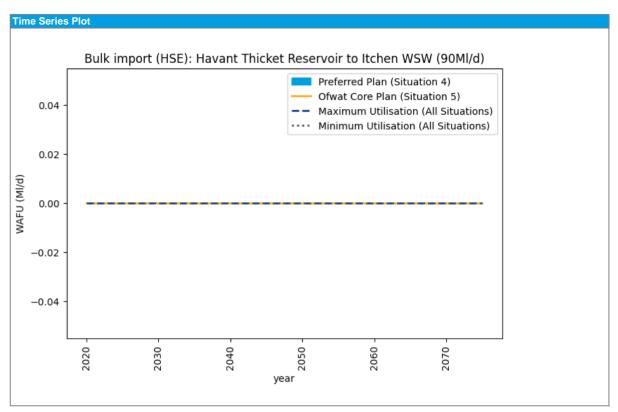
| I | Metric |  |
|---|--------|--|
| Г |        |  |



| 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    |









#### Description

| Supply and Transfer Options                    |  |
|--|--|
| Name   | Drought option - supply side (HSE): Lower Itchen                             |
|  | 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   |
| Source of Supply and main operational features | from 194Mld to 150Mld as measured at Riverside Park gauging station          |
| Area over which option is to be implemented    | Southampton East   |
|  | 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)   |
| Dependencies                                   | (2026-2051)  |

## **Key Facts**

| М |  |  |
|---|--|--|
|   |  |  |
|   |  |  |

## 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 [MI/d]    | 38    |
| DO 1:500 Average [MI/d] | 38    |
| DO 1:500 Peak [MI/d]    | 38    |

#### 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 - MI/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]

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 [MI/d] 2.70

Maximum annual utilisation [MI/d] 27.89

Environment

| Maximum annual utilisation [MI/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 |

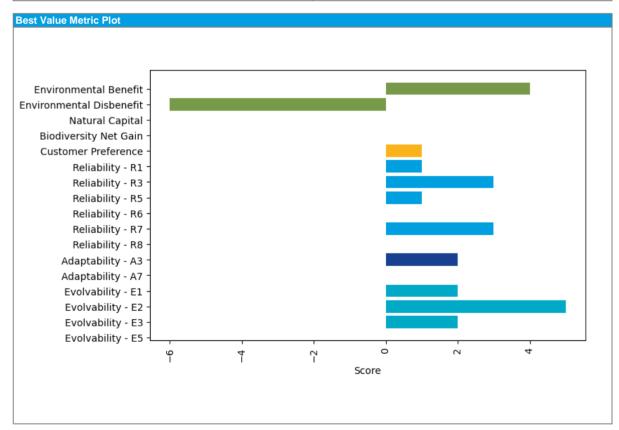
| Total Carbon Cost [£m]                | 0.24 |
|---------------------------------------|------|
| Average Incremental Cost (AIC) [p/m3] | 5.94 |

#### Other

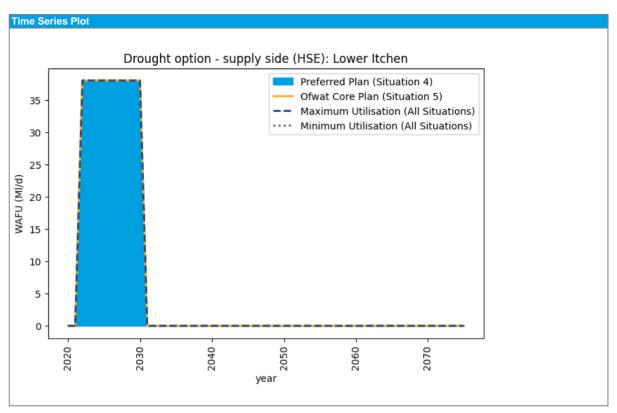
| Metric |  |
|--------|--|
|        |  |



| 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                              |       |









#### Description

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

## Key Facts

#### 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

| The benefit of a definant olde option enough be baced on a dry year |       |
|---|-------|
| DO 1:200 Average [MI/d]   | 14.37 |
| DO 1:200 Peak [MI/d]  | 15.37 |
| DO 1:500 Average [MI/d]   | 4.87  |
| DO 1:500 Peak [MI/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

| Risk and uncertainty with option                                      |      |
|---|------|
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/d risk [Best Value Metric]                               | 1.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |
| Customer behaviour  |      |

## Drinking Water Safety

| Diffiking Water Ourcey   |  |  |
|--|--|--|
| A drinking water safety plan assessing the risks to drinking water quality |  |  |
| 1.00   |  |  |
|  |  |  |
| Redacted   |  |  |
|  |  |  |
|  |  |  |
| 1  |  |  |
|  |  |  |
| 2  |  |  |
|  |  |  |
| 0.00   |  |  |
| 0.00   |  |  |
|  |  |  |
| 2.00   |  |  |
| -36.00   |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

#### **Financial and Cost Information**

Appropriate Assessment Required [Y/N]

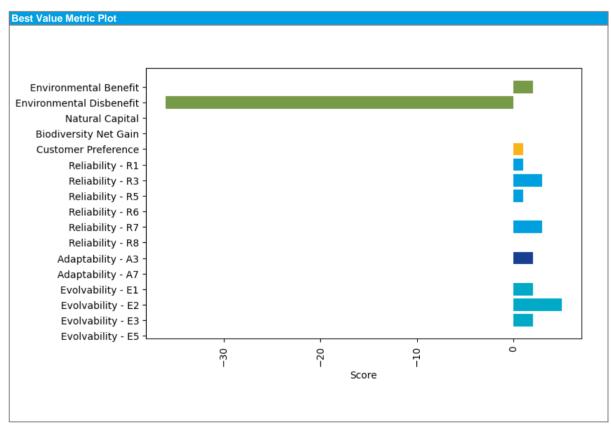
Contribution to biodiversity

| i mandar and oost miormation                    |      |
|---|------|
| 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 |

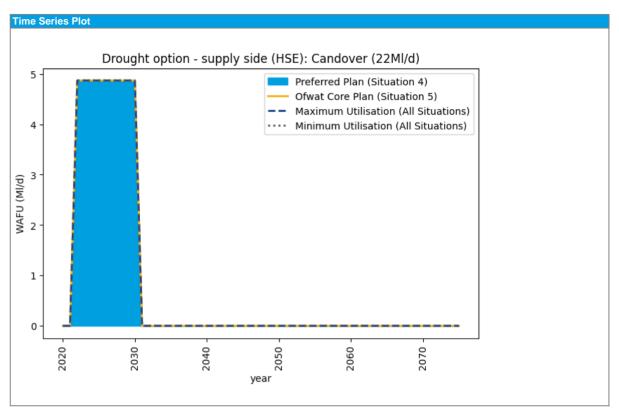
|        | Average Incremental Cost (AIC) [p/m3] | 10.53 |
|--------|---------------------------------------|-------|
| Other  |                                       |       |
| Metric |                                       |       |
|        |                                       |       |



| 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                              |        |









01/04/2030

-1.00

#### Description

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

#### **Key Facts**

#### 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 [MI/d] | 14.37 |  |
|-------------------------|-------|--|
| DO 1:200 Peak [MI/d]    | 15.37 |  |
| DO 1:500 Average [MI/d] | 4.87  |  |
| DO 1:500 Peak [MI/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

| Risk and uncertainty with option           |      |
|--|------|
| An assessment of the risks and uncertainty |      |
| associated with the option                 |      |
| General - MI/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]

Links and constraints

| Constituent WRSE Option IDs             | Redacted |
|---|----------|
| Constraints specific to the option      |          |
| stomer support                          |          |
| Customer Preference [Best Value Metric] | 1        |

Cust

| 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 [MI/d]                   | 0.43 |
| Maximum annual utilisation [MI/d]                    | 4.87 |

Maximum annual utilisation [MI/d]

| 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

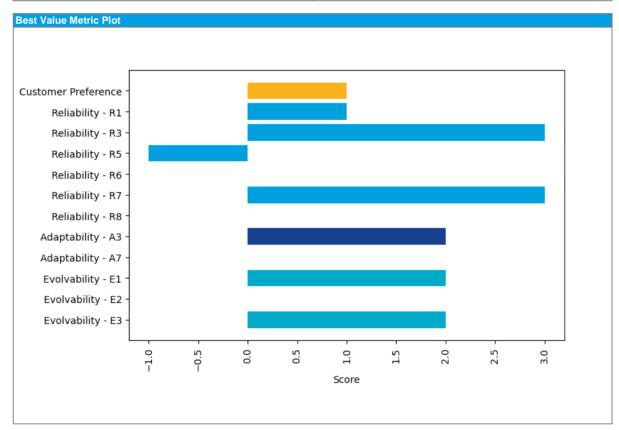
| i manetar and oost miormation                   |       |
|---|-------|
| Metric  |       |
| Capex [£m]                                      | -     |
| Financing Cost [£m]                             | -     |
| Opex [£m]                                       | 0.75  |
| Embodied Carbon [tCo2e] 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

#### Other

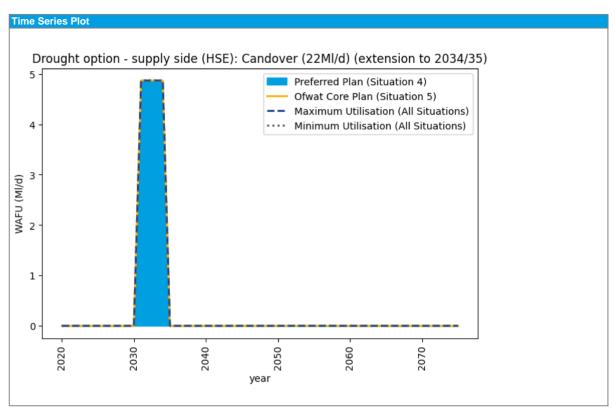
| Metric |  |
|--------|--|
|        |  |



| 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                              |  |









#### Description

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

#### **Key Facts**

#### 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

| The bottom of a domaina side option should be based on a dry year |     |
|---|-----|
| DO 1:200 Average [MI/d]   |     |
| DO 1:200 Peak [MI/d]  |     |
| DO 1:500 Average [MI/d]   | 0.2 |
| DO 1:500 Peak [MI/d]  | 0.2 |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]|

Earliest start date

Customer behaviour

| Risk and uncertainty with option                                      |      |  |
|---|------|--|
| An assessment of the risks and uncertainty associated with the option |      |  |
| General - MI/d risk [Best Value Metric]                               | 1.00 |  |
| General - text  |      |  |
| Impact of Climate Change on yield                                     |      |  |
| Environment (inc INNS)  |      |  |

#### **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]

A description of how the option will be utilised and the impact on operating costs and carbon costs

Expected annual utilisation [MI/d]

Maximum annual utilisation [MI/d]

Financial and Cost Information

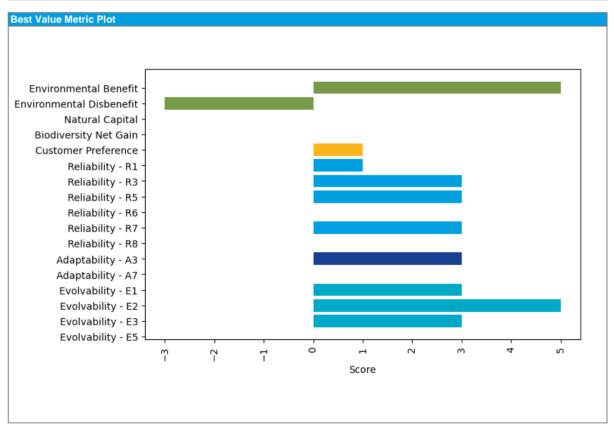
| Financial and Cost information                  |   |
|---|---|
| Metric  |   |
| Capex [£m]                                      | - |
| Financing Cost [£m]                             | - |
| Opex [£m]                                       | - |
| Embodied Carbon [tCo2e]                         |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

#### Other

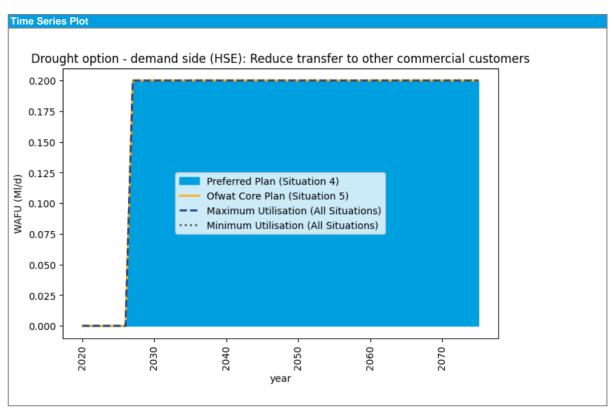
| Metric |  |
|--------|--|
|        |  |



| 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                              |       |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Groundwater (HSW): Test MAR (5.5Ml/d) - Construction                              |
|  | 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.                                    |
| Source of Supply and main operational features |   |
| Area over which option is to be implemented    | Southampton West  |
| Dependencies                                   | After: Groundwater (HSW): Test MAR (5.5Ml/d) - Planning & Development             |

#### **Key Facts**

#### 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 [MI/d] | 5.5 |
|-------------------------|-----|
| DO 1:200 Peak [MI/d]    | 5.5 |
| DO 1:500 Average [MI/d] | 5.5 |
| DO 1:500 Peak [MI/d]    | 5.5 |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| 3   |            |
|---|------------|
| Earliest start date   | 01/04/2035 |
| Risk and uncertainty with option                                      |            |
| An assessment of the risks and uncertainty associated with the option |            |
| General - MI/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 ValueMetric]

v water quality risks'
[Best Value Metric] 2.00

#### Links and constraints

| 1 | Redacte | Constituent WRSE Option IDs        |
|---|---------|------------------------------------|
| 1 |         | Constraints specific to the option |

# Customer support Customer Preference [Best Value Metric] Flexibility

Appropriate Assessment Required [Y/N]

Contribution to biodiversity

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 [MI/d] 4.68

Maximum annual utilisation [MI/d] 5.50

| Maximum annual utilisation [MI/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]                           |        |

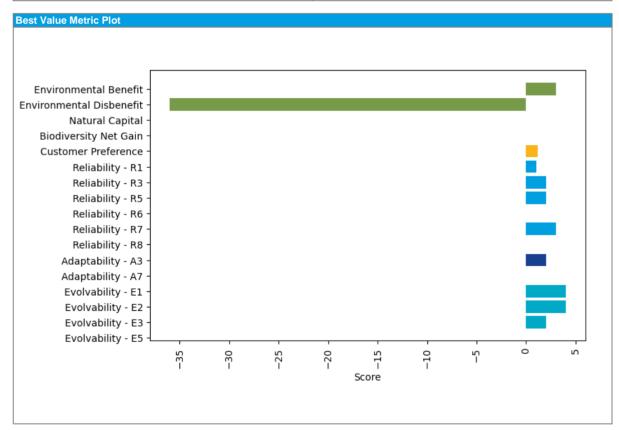
#### **Financial and Cost Information**

| Metric  |          |
|---|----------|
|   | 10.10    |
| Capex [£m]                                      |          |
| 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    |

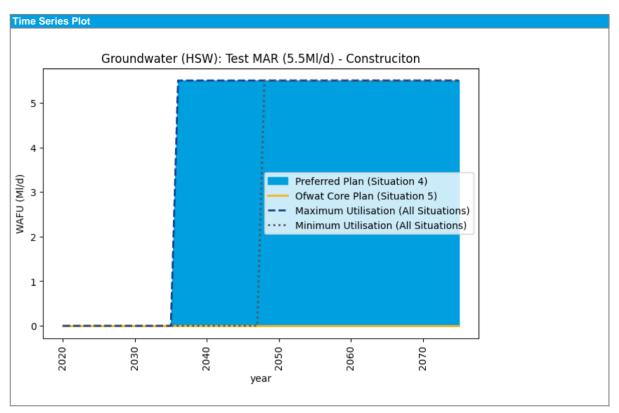
| ther  |  |  |
|-------|--|--|
| etric |  |  |



| 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                              |        |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Groundwater (HSW): Test MAR (5.5Ml/d) - Planning & Development                    |
|  | 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                 |
| Source of Supply and main operational features | scheme development.   |
| Area over which option is to be implemented    | Southampton West  |
| Dependencies                                   |   |

#### **Key Facts**

#### 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

| the beliefit of a definant side option should be base | a on a dry year |
|---|-----------------|
| DO 1:200 Average [MI/d]                               |                 |
| DO 1:200 Peak [Ml/d]                                  |                 |
| DO 1:500 Average [MI/d]                               |                 |
| DO 1:500 Peak [Ml/d]                                  |                 |
| and in time   |                 |

#### 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 - MI/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 ValueMetric]

[Best Value Metric] 0.00

## Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
|                                    |          |
| Constraints specific to the option |          |
| Customer support                   |          |

| Castonia. Cappert                                    |      |
|--|------|
| 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 [MI/d]                    | 0.00 |

# Environment SEA benefit eff

| 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                   |  |

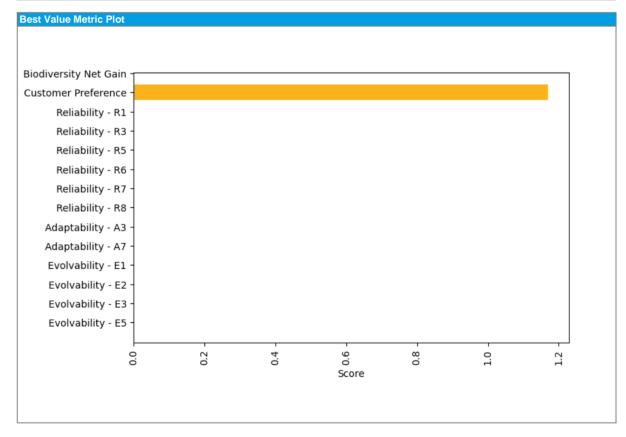
## Financial and Cost Information

| 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]           | -    |

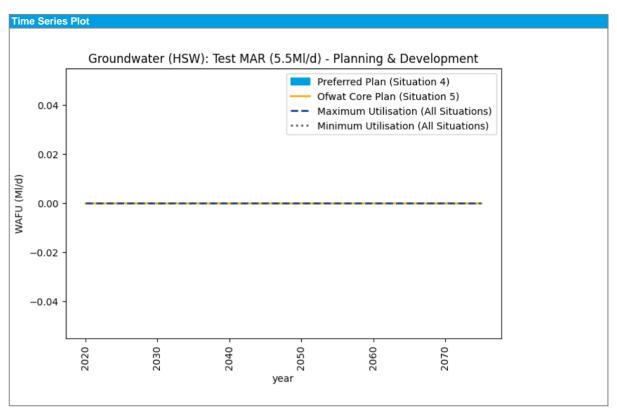
| Other  |  |
|--------|--|
| Metric |  |
|        |  |



| 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    |









#### Description

| Supply and Transfer Options                                      |  |  |
|--|--|--|
| Name Drought option - supply side (HSW): River Test Order (80Ml/ |  |  |
| 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 Southan              |  |  |
| 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 [MI/d]    | 0  |
| DO 1:500 Average [Ml/d] | 80 |
| DO 1:500 Peak [MI/d]    | 80 |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option Investigation time [Years]

Earliest start date

Customer behaviour

| Risk and uncertainty with option |   |      |
|----------------------------------|---|------|
|                                  | An assessment of the risks and uncertainty associated with the option |      |
|                                  | General - MI/d risk [Best Value Metric]                               | 1.00 |
|                                  | General - text  |      |
|                                  | Impact of Climate Change on yield                                     |      |
|                                  | Environment (inc INNS)  |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Constraints specific to the option

SWS 'catchment raw water quality risks [Best Value Metric]

## Links and constraints

Constituent WRSE Option IDs Redacted

## **Customer support**

Customer Preference [Best Value Metric]

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 [MI/d] 16.22 Maximum annual utilisation [MI/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  |

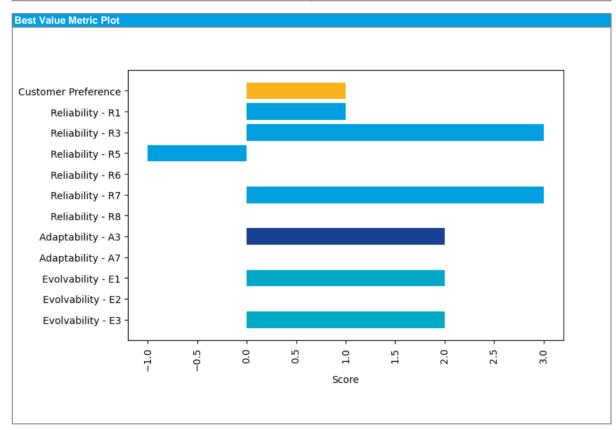
#### Other

| Metric |  |
|--------|--|
|        |  |

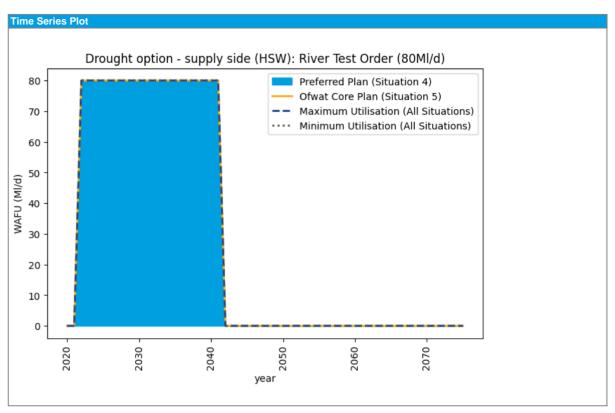
-1.00



| 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                              |









#### 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 Peak [MI/d]    | 80 |
|-------------------------|----|
| DO 1:500 Average [MI/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                        |      |
|--|------|
| Risk and uncertainty with option           |      |
| An assessment of the risks and uncertainty |      |
| associated with the option                 |      |
| General - MI/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

Contribution to biodiversity

SWS 'catchment raw water quality risks' [Best Value Metric]

[Best Value Metric]

| 1.2.1 |     | constraints |
|-------|-----|-------------|
| 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]

SEA negative effect

WFD Assessment [Y/N]

Risk of non compliance against WFD Objectives?

HRA assessment [Y/N]

Appropriate Assessment Required [Y/N]

#### **Financial and Cost Information**

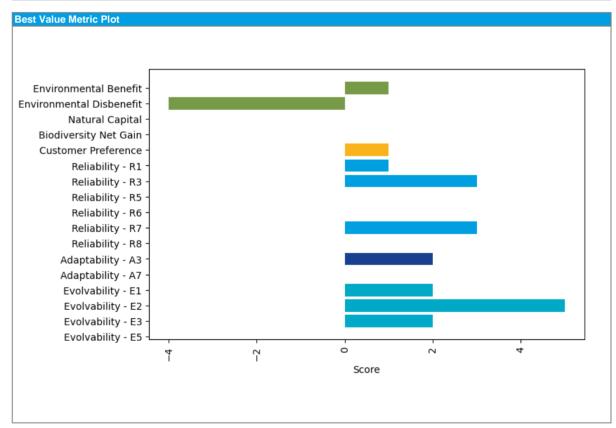
| Metric  |       |
|---|-------|
| Capex [£m]                                      | 12.00 |
| Financing Cost [£m]                             | 25.23 |
| Opex [£m]                                       | 1.04  |
| Embodied Carbon [tCo2e]                         | -     |
| Average operational carbon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

#### Other

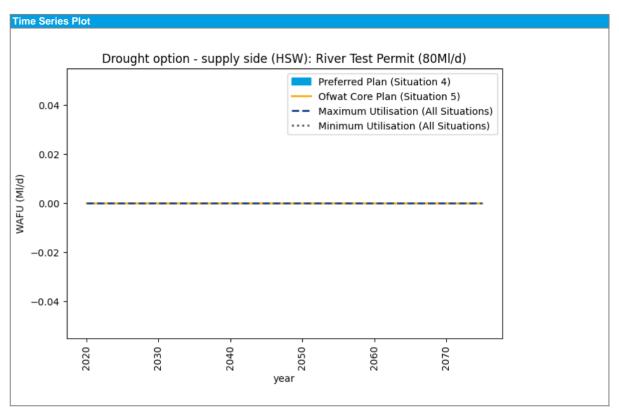
| Metric |  |  |
|--------|--|--|
| ſ      |  |  |



| 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                              |       |









01/04/2030

#### Description

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

#### **Key Facts**

| N / |  |
|-----|--|

#### 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 [MI/d]    | 80  |
| DO 1:500 Average [MI/d] | 0   |
| DO 1:500 Peak [MI/d]    | 0   |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Earliest start date

Investigation time [Years]

| Risk and uncertainty with option           |      |
|--|------|
| An assessment of the risks and uncertainty |      |
| associated with the option                 |      |
| General - MI/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

Customer

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |
| r 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 [MI/d] 0.00 Maximum annual utilisation [MI/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**

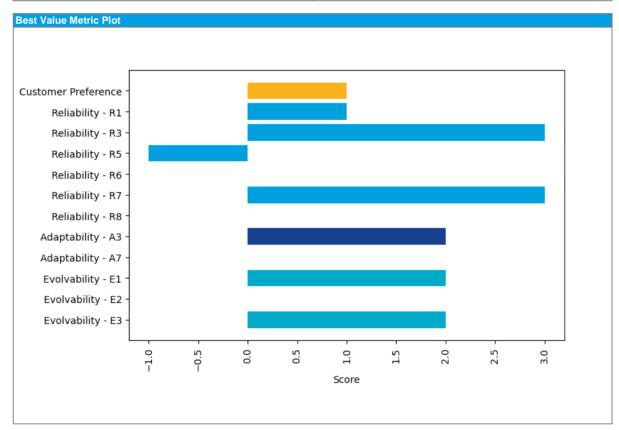
| i manorar and ocot miormation                   |      |
|---|------|
| Metric  |      |
| Capex [£m]                                      |      |
| Financing Cost [£m]                             | 6.39 |
| Opex [£m]                                       | 0.26 |
| Embodied Carbon [tCo2e]       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

#### Other

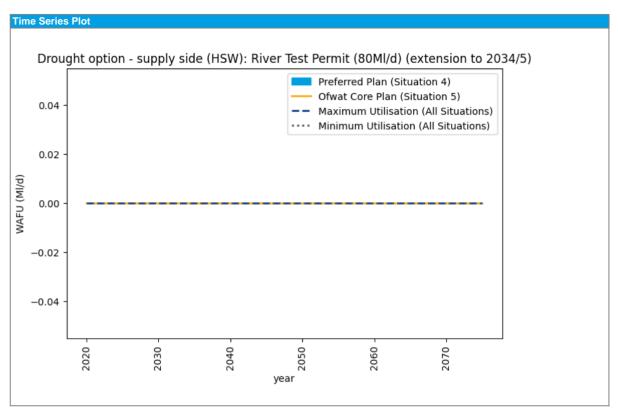
| Other  |  |
|--------|--|
| Matria |  |
| Metric |  |
|        |  |
|        |  |



| 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                              |  |









#### Description

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

#### **Key Facts**

| 8.6 |  |
|-----|--|

#### 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

| The benefit of a demand side option should be based on a dry year |        |
|---|--------|
| DO 1:200 Average [MI/d]   | $\neg$ |
| DO 1:200 Peak [MI/d]  |        |
| DO 1:500 Average [MI/d] 0.0                                       | 07     |
| DO 1:500 Peak [MI/d] 0.0  | 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 - MI/d risk [Best Value Metric]    | 1.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |
| Environment (inc INNS)                     |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

SWS 'catchment raw water quality risks'
[Best Value Metric]

Customer behaviour

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 [MI/d]                   | 0.07 |
| Maximum annual utilisation [MI/d]                    | 0.07 |
| Environment  |      |
| SEA benefit effect                                   | 5.00 |

| 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

| 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]           | - |

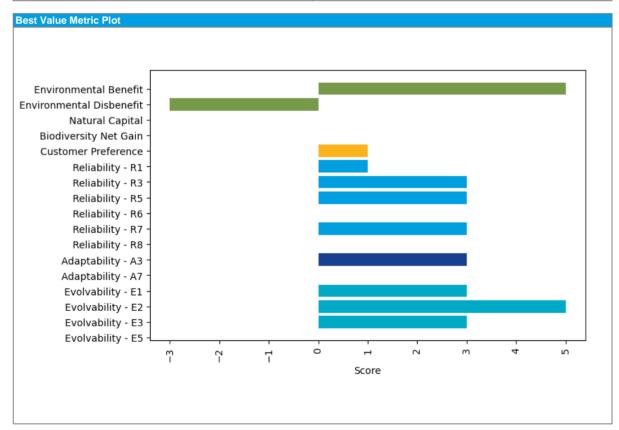
#### Other

| Metric |  |
|--------|--|
|        |  |

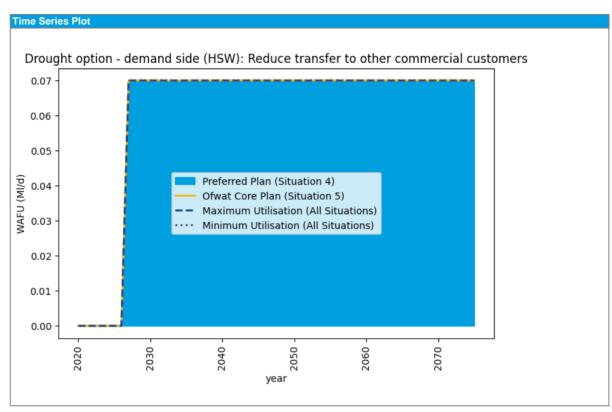
3.00



| 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                              |       |









Redacted

1.17

-22.46

#### 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**

| 4 | atri. |
|---|-------|

#### 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 [MI/d] |    |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    |    |
| DO 1:500 Average [MI/d] | 45 |
| DO 1:500 Peak [MI/d]    | 45 |
| 1 11 11                 |    |

#### 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 - MI/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]

[Best Value Metric] 1.00

| Links and constraints       |   |
|-----------------------------|---|
|                             | T |
| Constituent WRSE Option IDs | s |

Constraints specific to the option

| outering support                                     |
|--|
| Customer Preference [Best Value Metric]              |
| Flexibility  |
| Scalability and modularity [Best Value Metric]       |
| A description of how the option will be utilised and |

Contribution to biodiversity

the impact on operating costs and carbon costs

Expected annual utilisation [MI/d] 4.00

Maximum annual utilisation [MI/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]

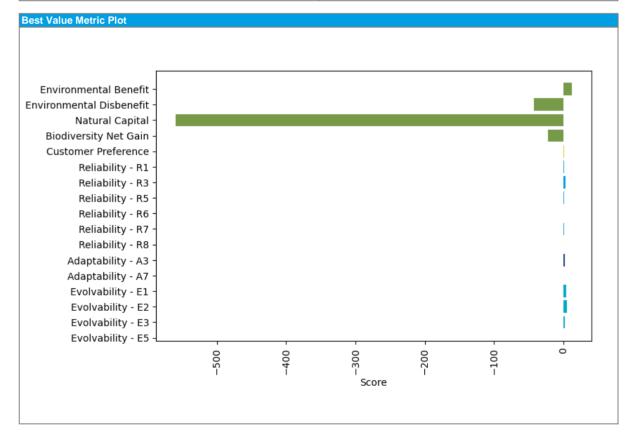
Financial and Cost Information

| Metric  |           |
|---|-----------|
| Capex [£m]                                      | 8.60      |
| Financing Cost [£m]                             |           |
| 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    |

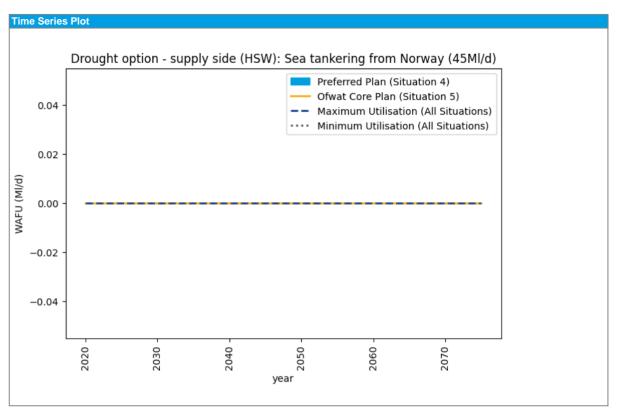
| I | Metric |  |
|---|--------|--|
| Г |        |  |



| 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                              |         |









0.00

#### Description

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

#### **Key Facts**

# 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 [MI/d    | 24    |
| DO 1:500 Average [Ml/d | 24    |
| DO 1:500 Peak [MI/d    | 24    |

#### 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 - MI/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]

[Best Value Metric]

| inks and constrain | nts |
|--------------------|-----|
|--------------------|-----|

| 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 [MI/d]   | 24.00    |  |
| Environment   |          |  |

| Maximum annual utilisation [MI/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                   |       |
|  |       |

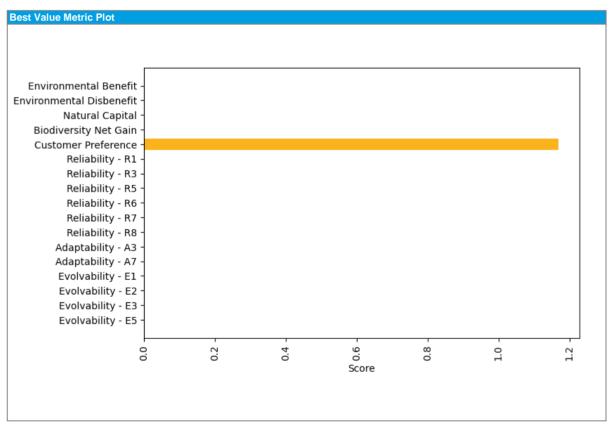
# Financial and Cost Information

| 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]           | -    |

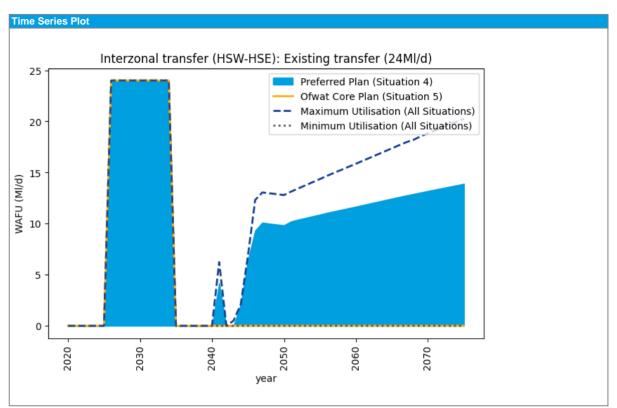
| Metric |  |
|--------|--|
|        |  |



| 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    |









#### Description

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

#### **Key Facts**

| 8.6 |  |
|-----|--|

#### 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 [MI/d] | 90 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 90 |
| DO 1:500 Average [MI/d] | 90 |
| DO 1:500 Peak [MI/d]    | 90 |

#### 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 - MI/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

1.17

01/04/2034

### Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |

#### Customer support Customer Preference [Best Value Metric]

| 1 lexibility   |       |
|--|-------|
| 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 [MI/d]                   | 20.00 |

# Expected annual utilisation [MI/d] Maximum annual utilisation [MI/d]

| Maximum armaar utilisation [im/u] |  | 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 |

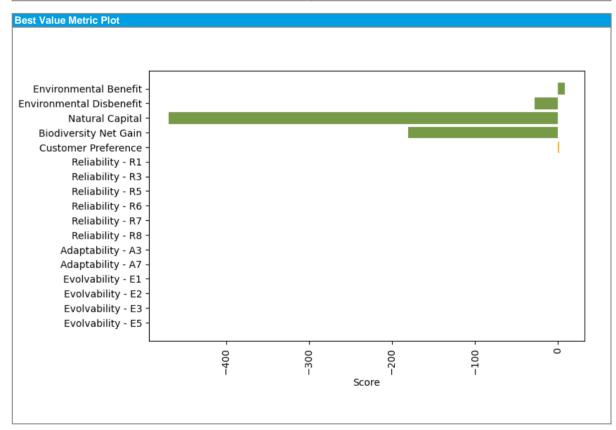
#### **Financial and Cost Information**

| i manolar and oost miormation |   |           |
|-------------------------------|---|-----------|
|                               | 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     |

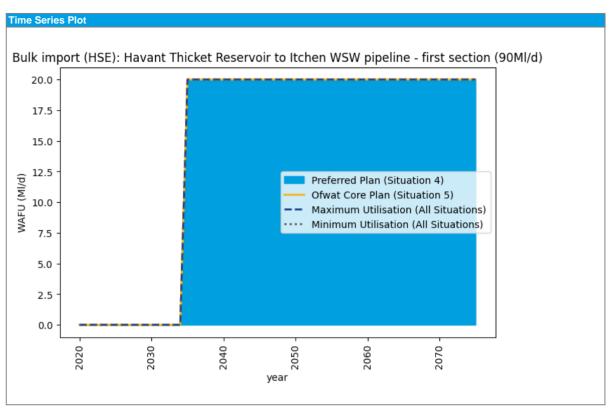
| Other |        |  |
|-------|--------|--|
|       | Matria |  |
|       | Metric |  |
|       |        |  |
|       |        |  |



| 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       |









#### Description

| Supply and Transfer Options                    |   |  |
|--|---|--|
|  | Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-     |  |
| Name   | directional (60Ml/d)  |  |
| Source of Supply and main operational features |   |  |
| Area over which option is to be implemented    | Hampshire Winchester  |  |
|  | Bidirectional Version: Interzonal transfer (HWZ-HSW): Yew Hill WSW to |  |
| Dependencies                                   | 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 th |  |
|                        | 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 [MI/d]    | 60 |
| DO 1:500 Average [MI/d] | 60 |
| DO 1:500 Peak [MI/d]    | 60 |

#### 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 - MI/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]

| inks | and | const | raints |
|------|-----|-------|--------|
|      |     |       |        |

| Redacted | Constituent WRSE Option IDs        |
|----------|------------------------------------|
|          | Constraints specific to the option |

| outomor outport                                |     |
|--|-----|
| 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 [MI/d] 0.47 Maximum annual utilisation [MI/d] 17.65

Environment

Contribution to biodiversity

| 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 [V/N]          |        |

#### **Financial and Cost Information**

| The state of the s |           |  |
|--|-----------|--|
| 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

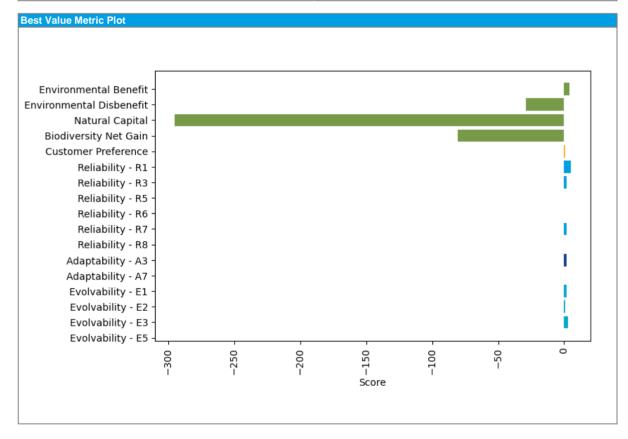
| B.C Audio |  |  |
|-----------|--|--|
| Metric    |  |  |
|           |  |  |
|           |  |  |
|           |  |  |

0.00

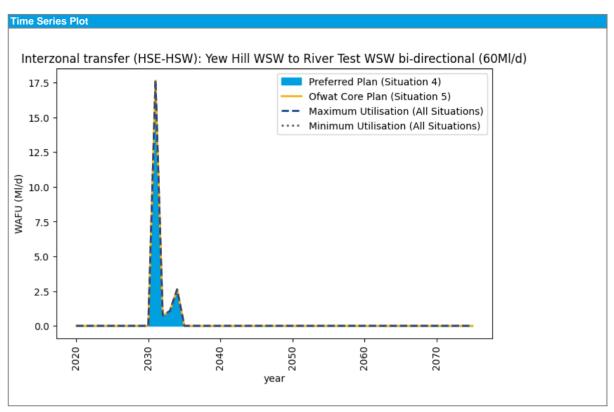
-80.81



| 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                              |         |









#### Description

| Supply and Transfer Options                    |  |  |
|--|--|--|
| Name   | Interzonal transfer (HWZ-HSW): Yew Hill WSW to River Test WSW bidirectional (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

| 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 [MI/d] | 60 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 60 |
| DO 1:500 Average [MI/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]

| Earliest start date   |      |
|---|------|
| Risk and uncertainty with option                                      |      |
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/d risk [Best Value Metric]                               | 5.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Maximum annual utilisation [MI/d]

Contribution to biodiversity

Customer behaviour

SWS 'catchment raw water quality risks'
[Best Value Metric]

Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
|                                    |          |
| Constraints specific to the option |          |
| Customer support                   |          |

Сι

| 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 [MI/d]                   | 31.25 |

| 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]          |        |

Financial and Cost Information

| i manciai and cost imormation                   |       |
|---|-------|
| 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

| B.C Audio |  |  |
|-----------|--|--|
| Metric    |  |  |
|           |  |  |
|           |  |  |
|           |  |  |

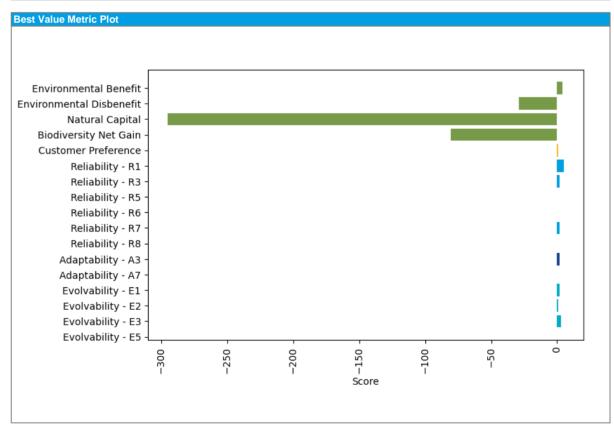
0.00

47.45

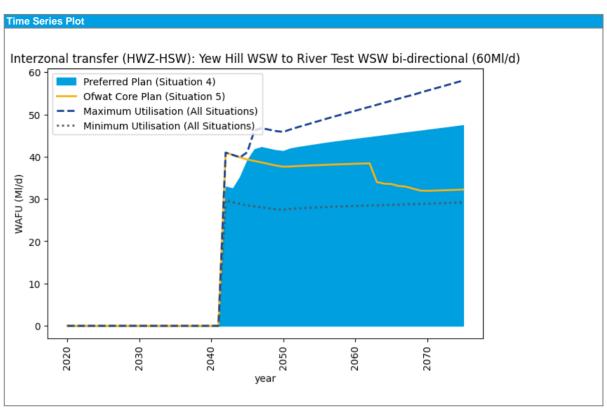
-80.81



| 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                              |         |









#### Description

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

#### **Key Facts**

| 8.6 |  |
|-----|--|

# 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

| The benefit of a demand side option should be bas | ca on a dry year |
|---|------------------|
| DO 1:200 Average [MI/d]                           |                  |
| DO 1:200 Peak [MI/d]                              |                  |
| DO 1:500 Average [Ml/d]                           | 0.05             |
| DO 1:500 Peak [MI/d]                              | 0.05             |
|   |                  |

#### 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 - MI/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]

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

| 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

| 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]           | - |

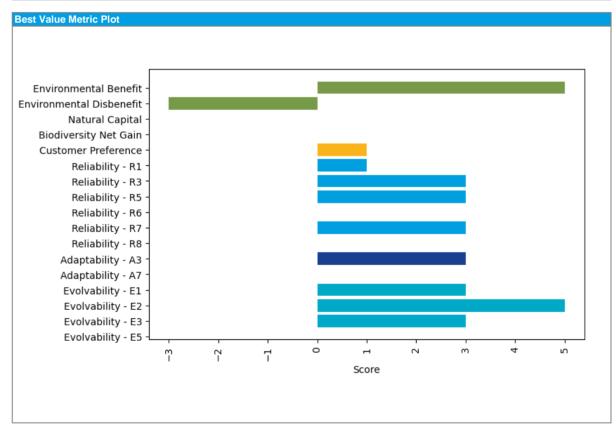
#### Other

| Other  |  |  |
|--------|--|--|
| Motric |  |  |
| Wettic |  |  |
|        |  |  |
|        |  |  |

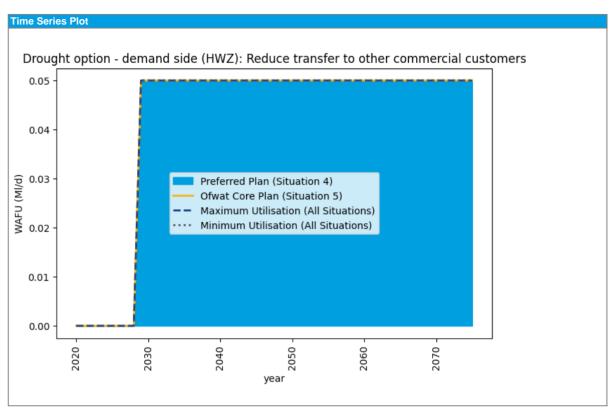
3.00



| 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                              |       |









# Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)                 |
|  | 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  |
| Source of Supply and main operational features | resilience within the augmentation well field.                            |
| Area over which option is to be implemented    | Isle of Wight   |
| Dependencies                                   |   |

| Key Facts  |   |
|--|---|
| Metric Metric  |   |
|  |   |
| Deployable Output (DO)   |   |
| A profile of the deployable output, contribution to the supply demand balance or dem   | nand 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 [MI/d]   |   |
| DO 1:500 Average [MI/d]  | 0   |
| DO 1:500 Peak [MI/d]   | 0   |
| Lead in time   |   |
| An estimate of the lead-in time needed to investigate and implement the option   |   |
| January Tarana and Tar |   |
| Investigation time [Years]   | 4   |
| Earliest start date  |   |
| Risk and uncertainty with option   |   |
| An assessment of the risks and uncertainty   |   |
| associated with the option   |   |
| General - MI/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  | 0.00                                      |
| Liliks allu collstrallits  |   |
|  |   |
| 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 [MI/d]   | 0.00                                      |
| Maximum annual utilisation [MI/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]   |   |
| HRA assessment [Y/N] Appropriate Assessment Required [Y/N]   |   |

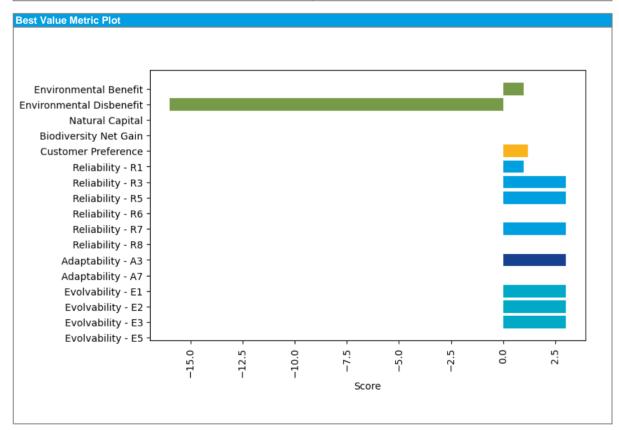
#### Financial and Cost Information

| 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]           | -      |

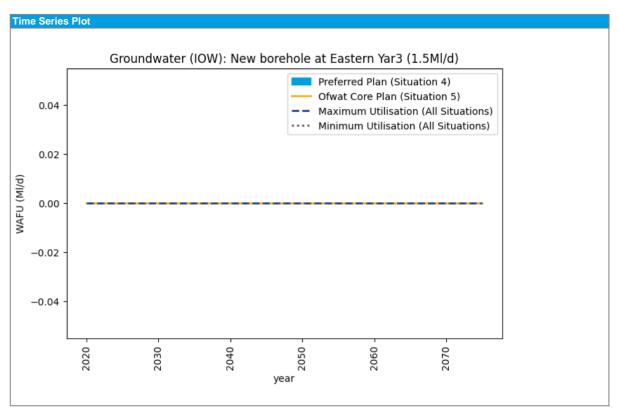
| Metric |  |
|--------|--|
|        |  |



| 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                              |        |









# Description

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

| Key Facts  |  |
|--|--|
| Metric   |  |
|  |  |
| Deployable Output (DO)   |  |
|  | supply demand balance or demand saving (based on the capacity of the |
| option) or water saved over 80 years.                              |  |
| TI 1 60 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                          |  |
| The benefit of a demand side option should be bas                  | * *  |
| DO 1:200 Average [Ml/d]  | 1.95   |
| DO 1:200 Peak [Ml/d]   | 1.95   |
| DO 1:500 Average [Ml/d]<br>DO 1:500 Peak [Ml/d]                    |  |
| Lead in time   | 1.90   |
|  |  |
| An estimate of the lead-in time needed to investiga                | te 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 - MI/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 ValueMetric]   | 0.00   |
| Links and constraints  |  |
|  |  |
| Constituent WRSE Option IDs  | Redacted   |
| Condition Who Copion Bo  | roduciou   |
|  |  |
| 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]                                 | 1.95   |
| Maximum annual utilisation [MI/d]                                  | 1.95   |
| Environment  |  |
| SEA benefit effect   |  |
| 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 |  |
| Contribution to biodiversity                                       |  |

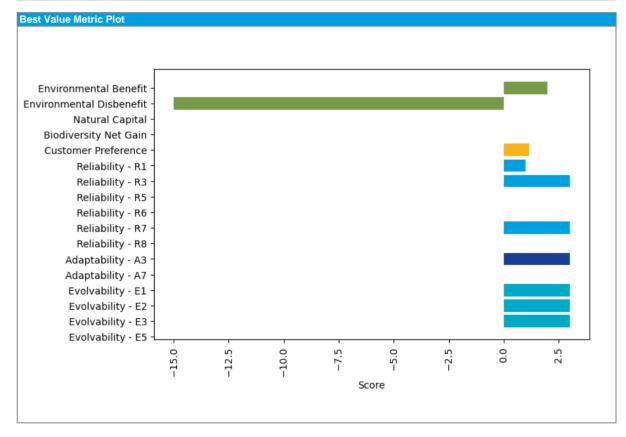
#### Financial and Cost Information

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

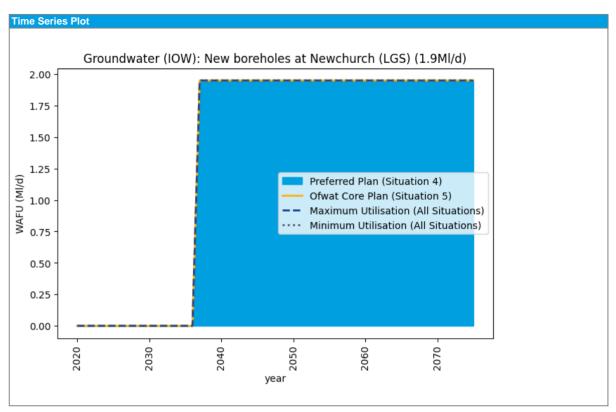
| Metric |  |
|--------|--|
|        |  |



| 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                              |        |









#### Description

| Supply and Transfer Options                    |  |
|--|--|
| Name   | Recycling (IOW): Sandown (8.5Ml/d)   |
|  | 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. |
| Source of Supply and main operational features |  |
| Area over which option is to be implemented    | Isle of Wight  |
| Dependencies                                   |  |

| Dependencies   |   |
|--|---|
| Key Facts  |   |
| Metric   |   |
| Deployable Output (DO)   |   |
|  | augusts demand halance as demand coving (based on the conseits of the |
|  | supply demand balance or demand saving (based on the capacity of the  |
| option) or water saved over 80 years.                                |   |
| The beautiful at a demand side anti-up the old be been               | ad an admirisa  |
| The benefit of a demand side option should be bas                    |   |
| DO 1:200 Average [MI/d]  |   |
| DO 1:200 Peak [MI/d]   | 8.5   |
| DO 1:500 Average [MI/d]  |   |
| DO 1:500 Peak [MI/d]   | 8.5   |
| Lead in time   |   |
| An estimate of the lead-in time needed to investiga                  | te and implement the option   |
| Investigation time [Years]   | 6   |
| Earliest start date  |   |
| Risk and uncertainty with option                                     | <u> </u>  |
| An assessment of the risks and uncertainty                           |   |
| associated with the option   |   |
| General - MI/d risk [Best Value Metric]                              | 4.00  |
| General - text   | 4.00  |
| Impact of Climate Change on yield                                    |   |
| Environment (inc INNS)   |   |
| Customer behaviour   |   |
| Drinking Water Safety  |   |
|  | drinking water quality  |
| A drinking water safety plan assessing the risks to                  |   |
| SWS 'catchment raw water quality risks'<br>[Best Value Metric]       | 1.00  |
| Links and constraints  | 1.00  |
| Links and constraints  |   |
|  |   |
| Constituent WRSE Option IDs  | Redacted  |
|  |   |
| Constraints and office to the option                                 |   |
| Constraints specific to the option  Customer support                 |   |
| Customer Preference [Best Value Metric]                              | 1.15  |
| Flexibility  | 1.15  |
|  | 3   |
| 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                       | 0.00  |
| Expected annual utilisation [MI/d]                                   | 6.82  |
| Maximum annual utilisation [MI/d]                                    | 8.50  |
| Environment  |   |
| SEA benefit effect   |   |
| SEA negative effect  | -29.00  |
|  |   |
| WFD Assessment [Y/N]   |   |
| Risk of non compliance against WFD Objectives?                       |   |
| Risk of non compliance against WFD Objectives?  HRA assessment [Y/N] |   |
| Risk of non compliance against WFD Objectives?                       |   |

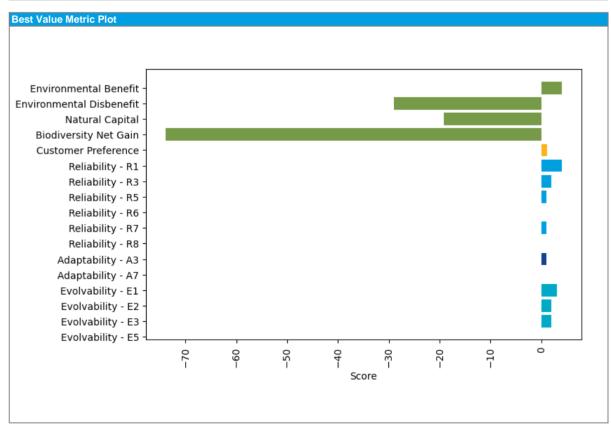
# **Financial and Cost Information**

| 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    |

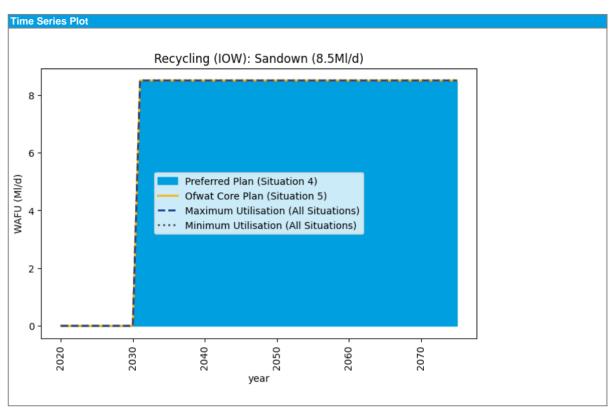
Metric



| 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                              |        |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Drought option - supply side (IOW): Caul Bourne (1.5Ml/d)                   |
|  | 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     |
| Source of Supply and main operational features | (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)

| 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 base      | ed on a dry year   |
| DO 1:200 Average [Ml/d]                                 |  |
| DO 1:200 Peak [MI/d]                                    | 1.4  |
| DO 1:500 Average [MI/d]                                 | 1.4  |
| DO 1:500 Peak [MI/d]                                    | 1.4  |
| Lead in time  |  |
| An estimate of the lead-in time needed to investigate   | te 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 - MI/d risk [Best Value Metric]                 | 1.0  |
| General - text  |  |
| Impact of Climate Change on yield                       |  |
| Environment (inc INNS)                                  |  |
| Customer behaviour                                      |  |
| Drinking Water Safety                                   |  |
|   |  |

| drinking water quality |
|------------------------|
| 0.00                   |
|                        |
| Redacted               |
|                        |
|                        |
| 1                      |
|                        |
| 2                      |
|                        |
|                        |
|                        |
| 0.00                   |
|                        |
|                        |
| -7.00                  |
|                        |
|                        |
|                        |
|                        |
|                        |

#### **Financial and Cost Information**

Contribution to biodiversity

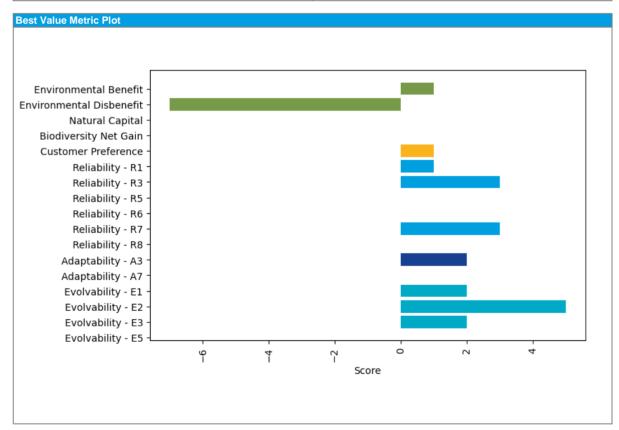
| i manciai and cost imormation                   |        |
|---|--------|
| Metric  |        |
| Capex [£m]                                      | 12.00  |
| Financing Cost [£m]                             | 25.23  |
| Opex [£m]                                       | 1.49   |
| Embodied Carbon [tCo2e]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

| $\overline{}$ | 4 | h | _ |   |
|---------------|---|---|---|---|
| u             | u | н | u | т |

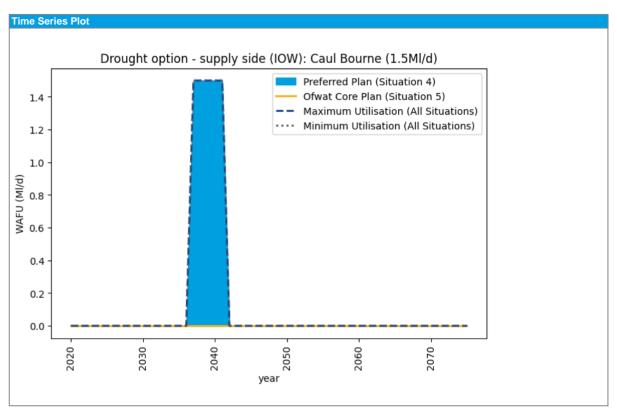
| Metric |   |  |
|--------|---|--|
|        | 1 |  |
|        |   |  |



| 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                              |       |









#### Description

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

#### **Key Facts**

| 8.6 | -4 |  |
|-----|----|--|

#### 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

| 1 |  |
|---|--|
| 1 |  |
| 1 |  |
| 1 |  |

#### 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 - MI/d risk [Best Value Metric]                               | 0.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Environment (inc INNS)
Customer behaviour

SWS 'catchment raw water quality risks'
[Best ValueMetric]

Links and constraints

Constituent WRSE Option IDs Redacted

Constraints specific to the option

# Customer support

Customer Preference [Best Value Metric]
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

| i manciai ana oost imormation                   |        |
|---|--------|
| 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 |

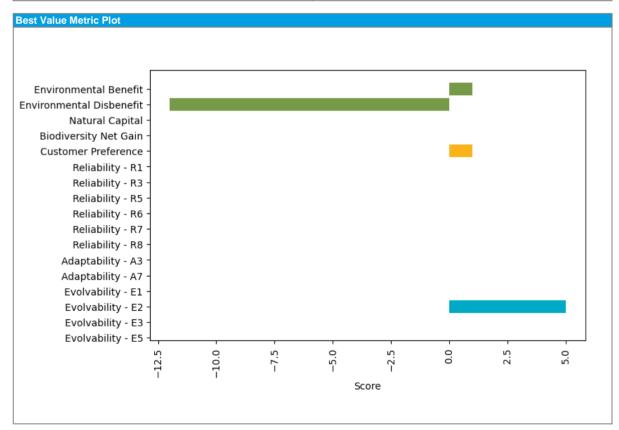
#### Other

| Metric |  |
|--------|--|
|        |  |

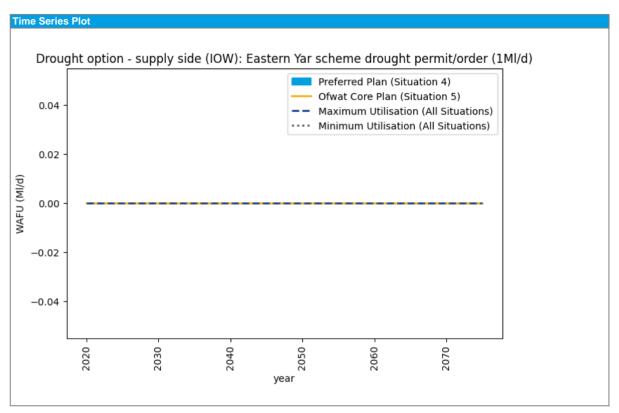
0.00



| 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                              |        |









#### Description

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

#### **Key Facts**

| 0.0 | -4 |  |
|-----|----|--|

#### 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

| The benefit of a demand side option should be be | oca on a dry your |
|--|-------------------|
| DO 1:200 Average [MI/o                           |                   |
| DO 1:200 Peak [MI/o                              |                   |
| DO 1:500 Average [MI/o                           | 0.07              |
| DO 1:500 Peak [MI/o                              | 0.07              |

#### 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 - MI/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

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best Value Metric]

atric] 3.00

#### Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |

# Customer support

| ***                                     |   |
|---|---|
| Customer Preference [Best Value Metric] | 1 |
| lexibility                              |   |

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 [MI/d]

Maximum annual utilisation [MI/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]

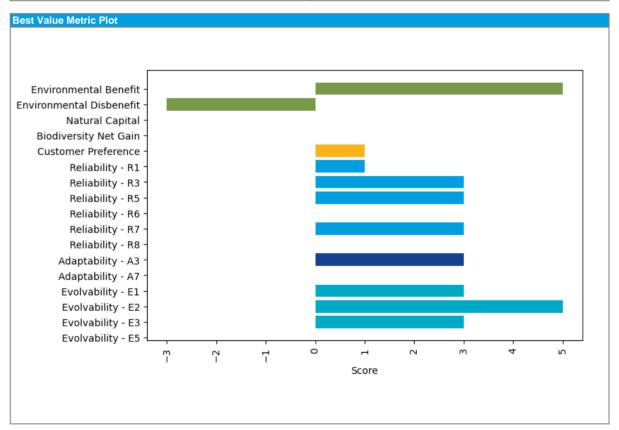
Financial and Cost Information

| 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]           | - |

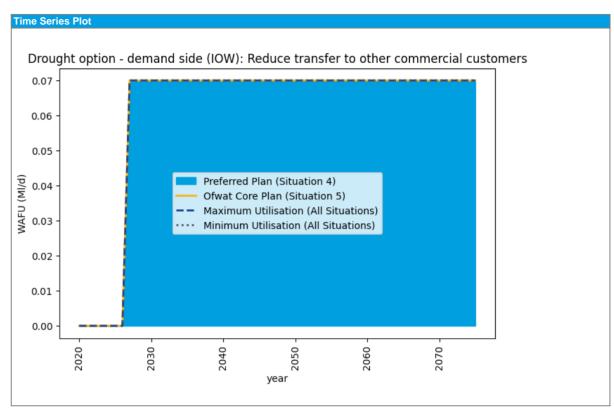
| Other  |  |
|--------|--|
| Motric |  |
| Menic  |  |
|        |  |
|        |  |



| 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                              |       |









01/04/2037

#### 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   |
|  | After one of: Desalination (KME): Isle of Sheppey (20MI/d) - Construction, |
| Dependencies                                   | Desalination (KME): Isle of Sheppey (10MI/d)                               |

#### **Key Facts**

| 8.6 | -4 |  |
|-----|----|--|

#### 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 [MI/d] | 10 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 10 |
| DO 1:500 Average [MI/d] | 10 |
| DO 1:500 Peak [MI/d]    | 10 |
|                         |    |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Earliest start date

Investigation time [Years]

| Risk and uncertainty with option           |      |
|--|------|
| An assessment of the risks and uncertainty |      |
| associated with the option                 |      |
| General - MI/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**

| The state of the s |      |
|--|------|
| 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 [MI/d] 8.01 Maximum annual utilisation [MI/d] 10.00 Environment

SEA negative effect

SEA benefit effect 2.00 -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

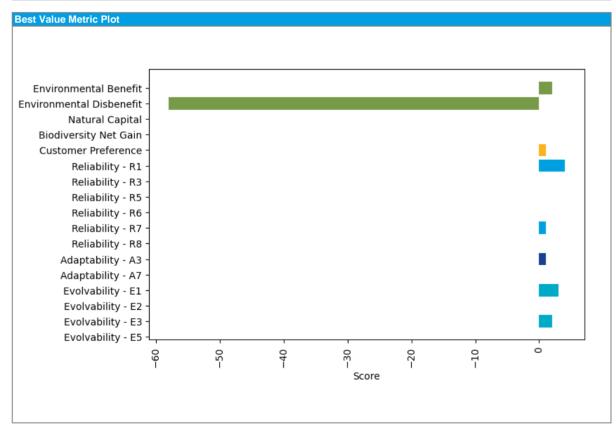
#### **Financial and Cost Information**

| i manorar and ocot miorination                  |           |
|---|-----------|
| 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    |

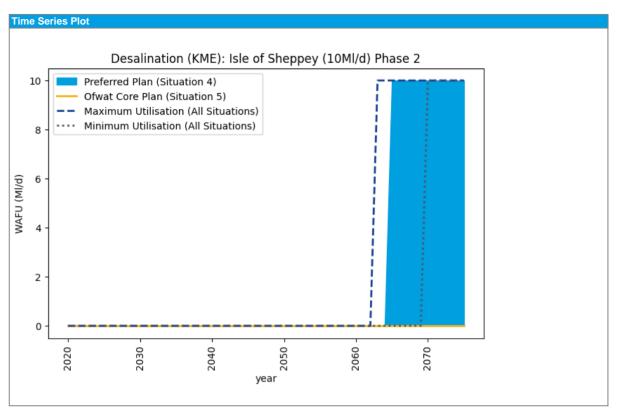
| Other  |  |
|--------|--|
| Matria |  |
| Metric |  |
|        |  |
|        |  |



| 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                              |        |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Desalination (KME): Isle of Sheppey (20Ml/d) - Construction   |
|  | 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 |
| Source of Supply and main operational features | 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 Eas   |
| Dependencies                                   | After: Desalination (KME): Isle of Sheppey (20Ml/d) - Planning & Developmen   |

| 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 bas       | ed on a dry year   |
| DO 1:200 Average [MI/d]                                 | • •  |
| DO 1:200 Peak [MI/d]                                    |  |
| DO 1:500 Average [MI/d]                                 |  |
| DO 1:500 Peak [MI/d]                                    |  |
| Lead in time  |  |
| An estimate of the lead-in time needed to investiga     | te and implement the option  |
| Investigation time [Years]                              |  |
| Earliest start date                                     |  |
| Risk and uncertainty with option                        | 1 011011233  |
| An assessment of the risks and uncertainty              |  |
| associated with the option                              |  |
| General - MI/d risk [Best Value Metric]                 | 4.0  |
| 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                                   |  |
| Elino and conocialito                                   |  |
| Constituent WRSE Option IDs                             | Redacted   |
|   |  |
| Constraints specific to the option                      |  |
| Customer support  |  |
| Customer Preference [Best Value Metric]                 | 1.0  |
| 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 [MI/d]                      |  |
| Maximum annual utilisation [MI/d]                       | 20.00  |
| Environment   |  |
| SEA benefit effect                                      |  |
| SEA negative effect                                     | -57.0  |
| WFD Assessment [Y/N]                                    |  |
| Risk of non compliance against WFD Objectives?          |  |
| HRA assessment [Y/N]                                    |  |
| Appropriate Assessment Required [Y/N]                   |  |
| , ippropriate / toooconiont resquires [ 1/11]           |  |

#### **Financial and Cost Information**

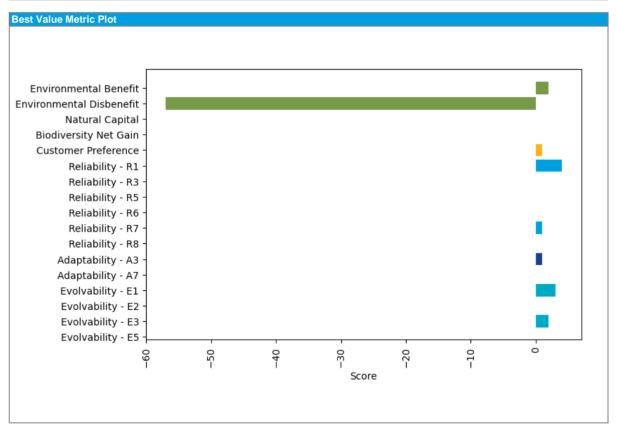
| Metric                  |           |
|-------------------------|-----------|
| Capex [£m]              | 565.56    |
| Financing Cost [£m]     | 730.56    |
| Opex [£m]               | 402.83    |
| Embodied Carbon [tCo2e] | 54,849.11 |

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

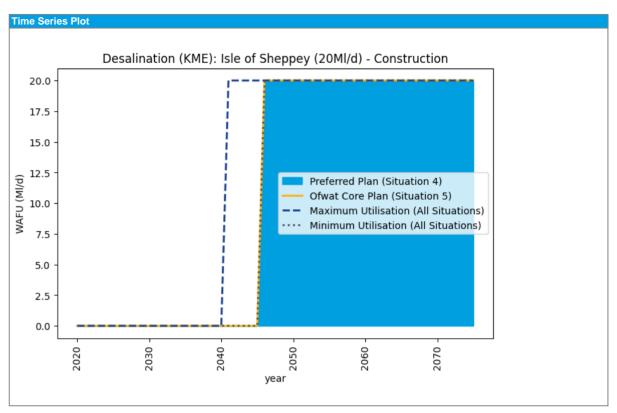
| Metric |  |
|--------|--|
|        |  |



| 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                              |        |









#### 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**

### 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/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 - MI/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 ValueMetric]                                  | 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 [MI/d]  | 0.00     |
| Maximum annual utilisation [MI/d]   | 0.00     |
| Environment   |          |
| SEA benefit effect  |          |

| ion [Ml/d]  0.0 | Expected annual utilisation [MI/d]             |
|-----------------|--|
| ion [MI/d] 0.0  | Maximum annual utilisation [MI/d]              |
|                 | Environment                                    |
| efit effect     | SEA benefit effect                             |
| tive effect     | SEA negative effect                            |
| nent [Y/N]      | WFD Assessment [Y/N]                           |
| ojectives?      | Risk of non compliance against WFD Objectives? |
| nent [Y/N]      | HRA assessment [Y/N]                           |
| ired [Y/N]      | Appropriate Assessment Required [Y/N]          |
| odiversity      | Contribution to biodiversity                   |

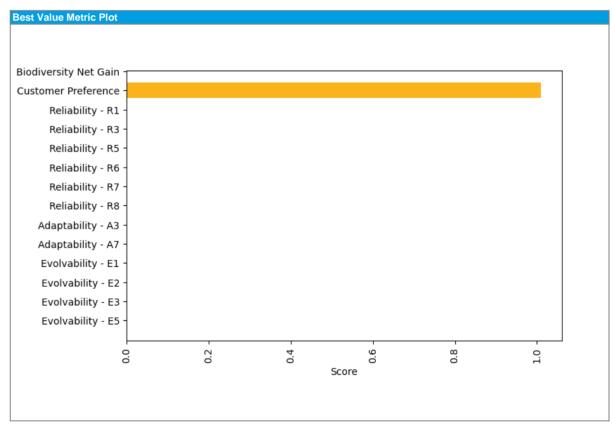
#### **Financial and Cost Information**

| 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]           | -     |

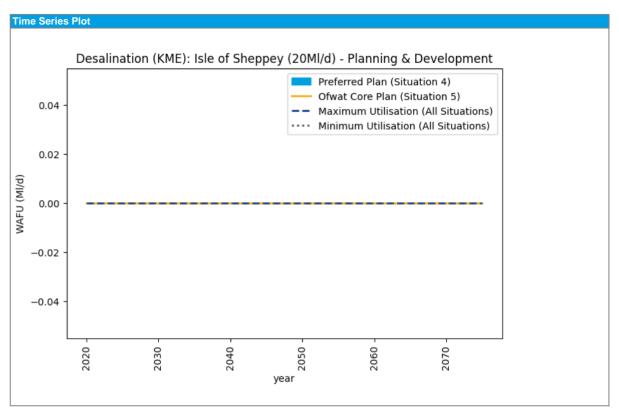
|   | Metric |  |  |
|---|--------|--|--|
| ſ |        |  |  |



| 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                              |  |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Groundwater (KME): Recommission Gravesend (2.7Ml/d)   |
|  | 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:  |
| Source of Supply and main operational features | 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 bas       | ed on a dry year   |
| DO 1:200 Average [MI/d]                                 | 2.65   |
| DO 1:200 Peak [MI/d]                                    | 2.65   |
| DO 1:500 Average [MI/d]                                 | 2.65   |
| DO 1:500 Peak [MI/d]                                    | 2.65   |
| Lead in time  |  |
| An estimate of the lead-in time needed to investiga     | te and implement the ontion  |
| 7 th obtiniate of the load in time headed to invodiga   | to 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 - MI/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'                 | 3 1 9  |
| [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   | 1011   |
| Scalability and modularity [Best Value Metric]          | 3  |
| A description of how the option will be utilised and    | <u> </u>   |
| the impact on operating costs and carbon costs          |  |
| Expected annual utilisation [MI/d]                      | 2.63   |
| Maximum annual utilisation [MI/d]                       | 2.65   |
| waxiiituiti aitituai utiii5ati011 [ivii/u]              | 2.00   |

#### Financial and Cost Information

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

Environment

|   | Metric              |      |
|---|---------------------|------|
| ľ | Capex [£m]          | 1.34 |
|   | Financing Cost [£m] | 2.09 |
| Ì | Opex [£m]           | 8.04 |

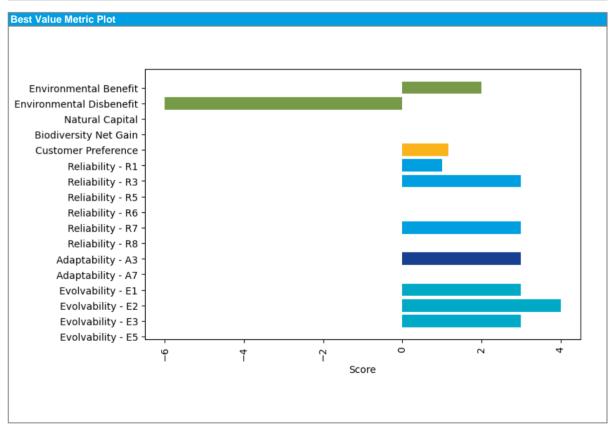
2.00 -6.00

| 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 |

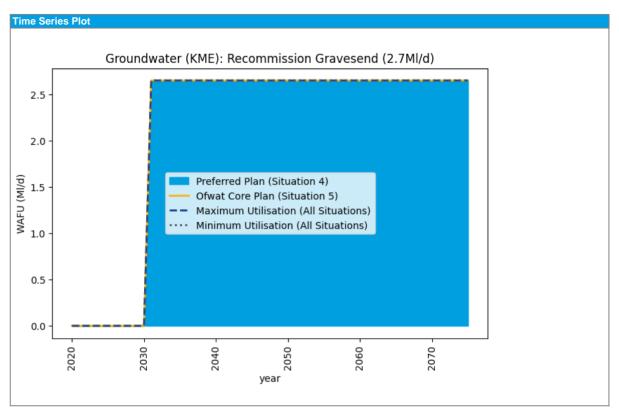
| Matria |  |  |
|--------|--|--|
| Metric |  |  |
|        |  |  |
|        |  |  |
|        |  |  |



| 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                              |       |









### Description

| Supply and Transfer Options  |  |
|--|--|
| Name Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d) |  |
|  | 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              |
| Source of Supply and main operational features                       | existing outfall.  |
| Area over which option is to be implemented                          | Kent Medway East   |
| Dependencies   |  |

| Key Foots  |  |
|--|--|
| Key Facts Metric                                     |  |
|  |  |
| Deployable Output (DO)                               |  |
|  | 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 bas    |  |
| DO 1:200 Average [Ml/d]                              |  |
| DO 1:200 Peak [Ml/d]                                 |  |
| DO 1:500 Average [MI/d]                              |  |
| DO 1:500 Peak [MI/d]                                 | 7.5  |
| Lead in time   |  |
| An estimate of the lead-in time needed to investiga  | te 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 - MI/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'              | ŭ , ,  |
| [Best Value Metric]                                  |  |
| Links and constraints                                |  |
|  |  |
|  |  |
| Constituent WRSE Option IDs                          | Redacted   |
|  |  |
| Constraints specific to the option                   |  |
| Customer support                                     |  |
| Customer Preference [Best Value Metric]              | 1.15   |
| Flexibility  | 1.10   |
| 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 [MI/d]                   | 6.30   |
| Maximum annual utilisation [MI/d]                    |  |
| Environment  | 1.50   |
| SEA benefit effect                                   | 1.00   |
|  |  |
| SEA negative effect<br>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   |

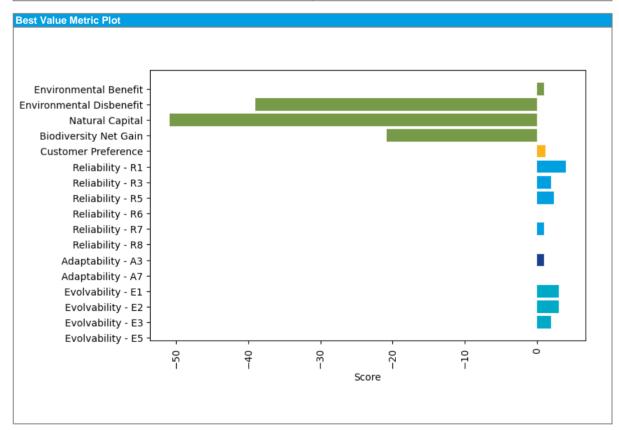
#### Financial and Cost Information

| 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    |

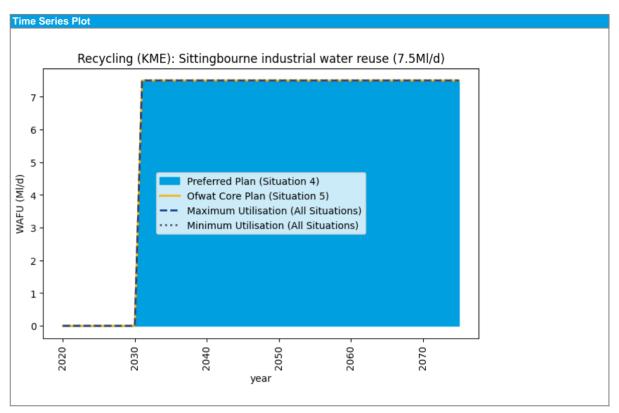
| Metric |  |
|--------|--|
|        |  |



| 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                              |             |









#### Description

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

#### **Key Facts**

| 0.0 | -4 |  |
|-----|----|--|

#### 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

| The bollon of a demand side option should be based on a dry year |     |  |
|--|-----|--|
| DO 1:200 Average [MI/d]  |     |  |
| DO 1:200 Peak [MI/d]   |     |  |
| DO 1:500 Average [MI/d]  | 0.1 |  |
| DO 1:500 Peak [MI/d]   | 0.1 |  |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]
Earliest start date

| lisk and uncertainty with option                                      |      |  |
|---|------|--|
| An assessment of the risks and uncertainty associated with the option |      |  |
| General - MI/d risk [Best Value Metric]                               | 1.00 |  |
| General - text  |      |  |
| Impact of Climate Change on yield                                     |      |  |
| Environment (inc INNS)  |      |  |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Contribution to biodiversity

Scalability and modularity [Best Value Metric]

Customer behaviour

SWS 'catchment raw water quality risks'
[Best Value Metric]

Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |
|                                    | ·        |

# Customer support

| and the state of t |  |
|--|--|
| Customer Preference [Best Value Metric] 1  |  |
| Flexibility  |  |

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

Financial and Cost Information

| 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]           | - |  |

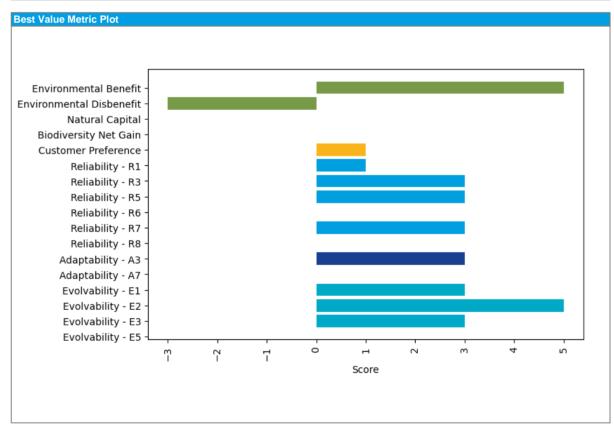
#### Other

| Other  |  |
|--------|--|
| Matria |  |
| Metric |  |
|        |  |
|        |  |

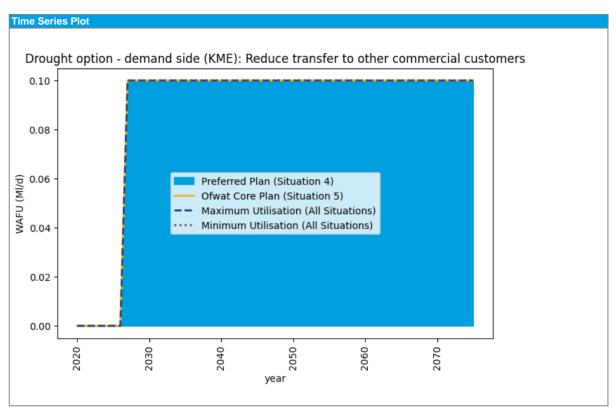
3.00



| 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                              |       |









#### 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 (20MI/d) - Construction, Desalination (KMW): Thames Estuary (10MI/d) - Construction   |

#### **Key Facts**

#### 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 [MI/d] | 20 |  |
|-------------------------|----|--|
| DO 1:200 Peak [Ml/d]    | 20 |  |
| DO 1:500 Average [MI/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]

| - 1 | 3   | -          |
|-----|---|------------|
| ľ   | Earliest start date   | 01/04/2039 |
|     | Risk and uncertainty with option                                      |            |
|     | An assessment of the risks and uncertainty associated with the option |            |
| ľ   | General - MI/d risk [Best Value Metric]                               | 4.00       |
| ľ   | General - text  |            |
| ľ   | Impact of Climate Change on yield                                     |            |
| ľ   | Environment (inc INNS)  |            |
| ſ   | Customer behaviour  |            |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best Value Metric]

water quality risks'
[Best Value Metric] 0.00

| I | Lin | ks | and | cons | stra | aint | S |
|---|-----|----|-----|------|------|------|---|
|   |     |    |     |      |      |      |   |

| Redacted | 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       |

| 1       | and impact on operating cools and carbon cools |
|---------|--|
| ] 19.22 | Expected annual utilisation [MI/d]             |
| 20.00   | Maximum annual utilisation [MI/d]              |
|         | Environment                                    |
| t 5.00  | SEA benefit effect                             |
| -46.00  | SEA negative effect                            |
|         | WFD Assessment [Y/N]                           |
| ?       | Risk of non compliance against WFD Objectives? |
|         | HRA assessment [Y/N]                           |
|         | Appropriate Assessment Required [Y/N]          |

## 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    |

1.01

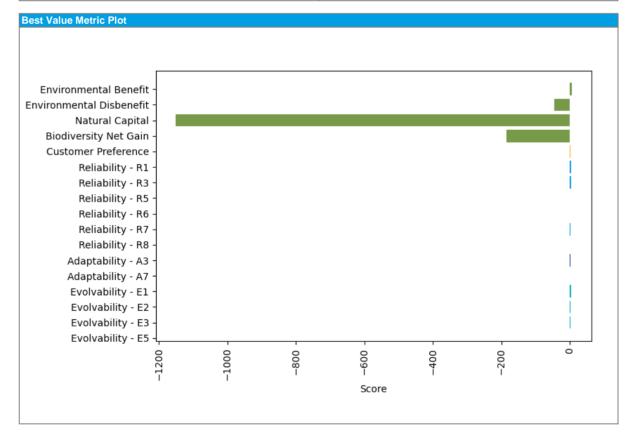
-184.41

| Ot | her |  |
|----|-----|--|
|    |     |  |

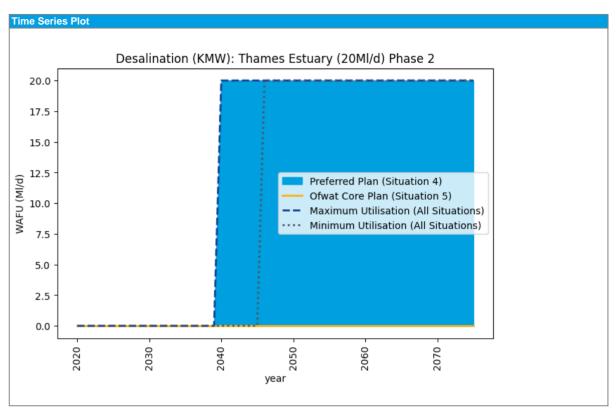
Metric



| 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                              |          |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Desalination (KMW): Thames Estuary (20Ml/d) - Construction                    |
|  | 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 |
| Source of Supply and main operational features | the Kent Medway WRZ.  |
| Area over which option is to be implemented    | Kent Medway West  |
|  | After: Desalination (KMW): Thames Estuary (20Ml/d) - Planning &               |
| Dependencies                                   | Development   |

### Key Facts

| 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 bas       | ed on a dry year   |
| DO 1:200 Average [MI/d]                                 | 2  |
| DO 1:200 Peak [MI/d]                                    |  |
| DO 1:500 Average [MI/d]                                 |  |
| DO 1:500 Peak [MI/d]                                    | 2  |
| Lead in time  |  |
| An estimate of the lead-in time needed to investiga     | te and implement the option  |
|   |  |
| Investigation time [Years]                              |  |
| Earliest start date                                     | 01/04/2039   |
| Risk and uncertainty with option                        |  |
| An assessment of the risks and uncertainty              |  |
| associated with the option                              |  |
| General - MI/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]                                     | 0.00   |
| Links and constraints                                   |  |
|   |  |
| Constituent WRSE Option IDs                             | Redacte  |
| Constituent WK3E Option ibs                             | Redacte  |
|   |  |
| Constraints specific to the option                      |  |
| Customer support  |  |
|   |  |

#### **Financial and Cost Information**

Customer Preference [Best Value Metric]

Expected annual utilisation [MI/d]

Maximum annual utilisation [MI/d]

SEA benefit effect

SEA negative effect

WFD Assessment [Y/N]

Contribution to biodiversity

Scalability and modularity [Best Value Metric]
A description of how the option will be utilised and the impact on operating costs and carbon costs

Risk of non compliance against WFD Objectives?

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

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

Other

Environment

1.01

19.11

20.00

5.00

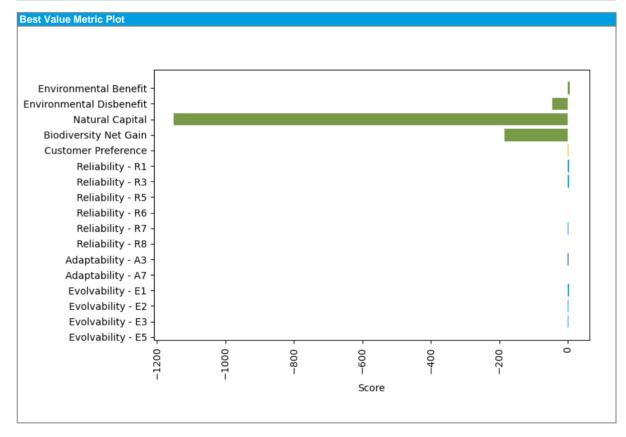
46.00

-184.41

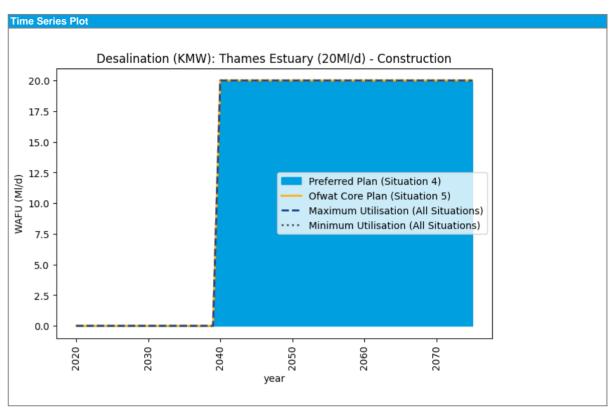
| Metric |  |
|--------|--|
|        |  |



| 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                              |          |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Desalination (KMW): Thames Estuary (20Ml/d) - Planning & Development          |
|  | 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 |
| Source of Supply and main operational features | the Kent Medway WRZs. This sub option covers plant development.               |
| Area over which option is to be implemented    | Kent Medway West  |
| Dependencies                                   |   |

# Key Facts

| 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 bas       | ed on a dry year   |
| DO 1:200 Average [MI/d]                                 |  |
| DO 1:200 Peak [MI/d]                                    |  |
| DO 1:500 Average [MI/d]                                 |  |
| DO 1:500 Peak [MI/d]                                    |  |
| Lead in time  |  |
| An estimate of the lead-in time needed to investiga     | te and implement the ontion  |
| 7 th obtained of the load in time headed to invodige    | to 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 - MI/d risk [Best Value Metric]                 | 0.0  |
| 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 ValueMetric]                                      | 0.0  |
| Links and constraints                                   |  |
|   |  |
|   |  |
| Constituent WRSE Option IDs                             | Redacted   |
|   |  |
| Constraints specific to the option                      |  |
| Customer support  |  |
| Customer Preference [Best Value Metric]                 | 1.0  |
| Flexibility   | 1.0  |
| 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 [MI/d]                      |  |
| Maximum annual utilisation [Ml/d]                       |  |
| Environment   | 0.00   |
| Environment   |  |

# Financial and Cost Information

WFD Assessment [Y/N]
Risk of non compliance against WFD Objectives?
HRA assessment [Y/N]

Appropriate Assessment Required [Y/N]

Contribution to biodiversity

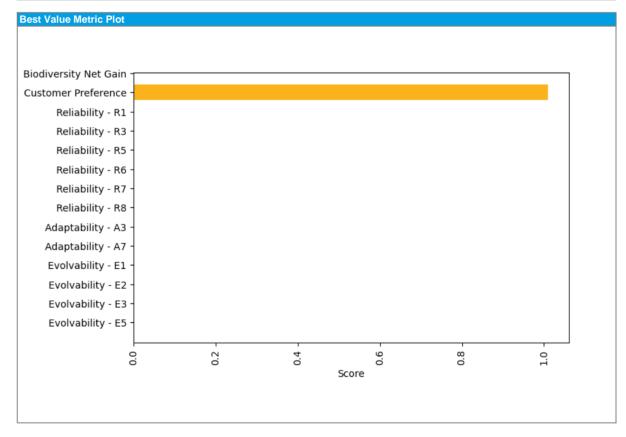
SEA benefit effect SEA negative effect

| Financial and Cost miorination                  |       |  |
|---|-------|--|
| 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]           | -     |  |

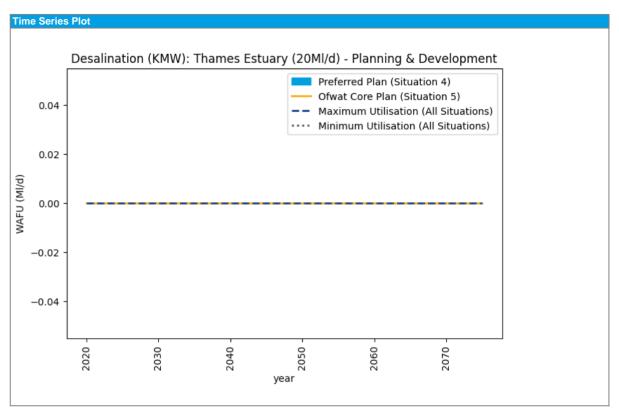
| Metric |  |
|--------|--|
|        |  |



| 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    |









#### 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**

| 4 | atri. |
|---|-------|

# 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/d]    |

# Lead in time

An estimate of the lead-in time needed to investigate and implement the option Investigation time [Years]

| Earliest start date                                 | 01/04/2054             |
|---|------------------------|
| Risk and uncertainty with option                    |                        |
| An assessment of the risks and uncertainty          |                        |
| associated with the option                          |                        |
| General - MI/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 |
| 01410   |                        |

SWS 'catchment raw water quality risks' [Best Value Metric] 0.00

| _in | ks | and | cons | traints |
|-----|----|-----|------|---------|
|     |    |     |      |         |

| 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 [MI/d]  | 0.00     |
| Maximum annual utilisation [MI/d]   | 0.00     |
| Environment   |          |
| SEA benefit effect  |          |
| SEA negative effect   |          |

| iviaximum annuai utilisation [ivii/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                   |      |

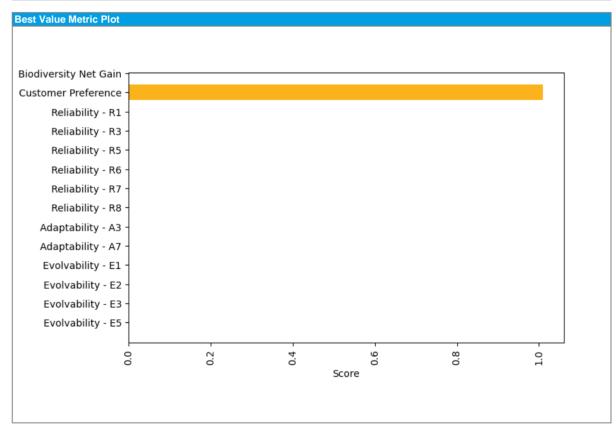
# **Financial and Cost Information**

| 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]           | -    |

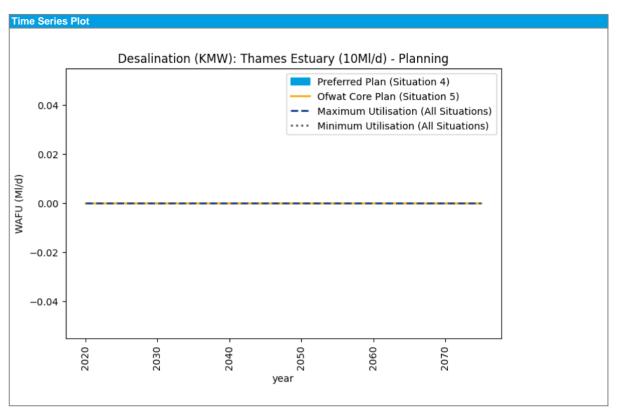
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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    |









#### 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 18MId 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**

# 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 [MI/d] | 14 |
|-------------------------|----|
| DO 1:200 Peak [MI/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]
Earliest start date

| Risk and uncertainty with option           |      |
|--|------|
| An assessment of the risks and uncertainty |      |
| associated with the option                 |      |
| General - MI/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

adularity [Past Value Matria]

SWS 'catchment raw water quality risks'
[Best Value Metric]

Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |
| cupport                            |          |

#### Customer support Customer Preference [Best Value Metric]

Flexibility

| Scalability and modulanty [best value Metho]         | 3     |
|--|-------|
| A description of how the option will be utilised and |       |
| the impact on operating costs and carbon costs       |       |
| Expected annual utilisation [MI/d]                   | 10.61 |
| Maximum annual utilisation [MI/d]                    | 14.00 |

Maximum annual utilisation [MI/d]

|  | 1      |
|--|--------|
| 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

| i manciai ana cost imormation                   |           |  |
|---|-----------|--|
| 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

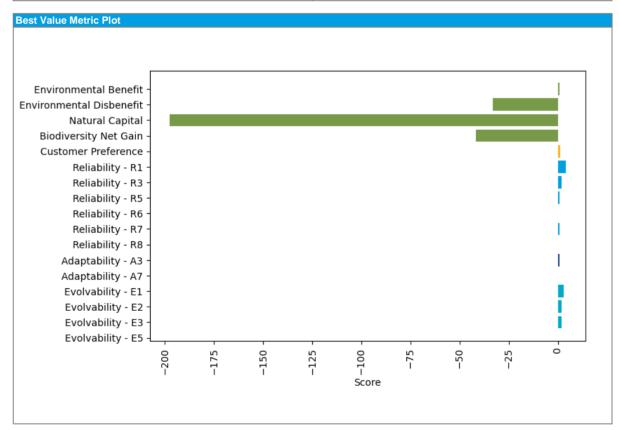
| Metric |  |
|--------|--|
|        |  |

1.00

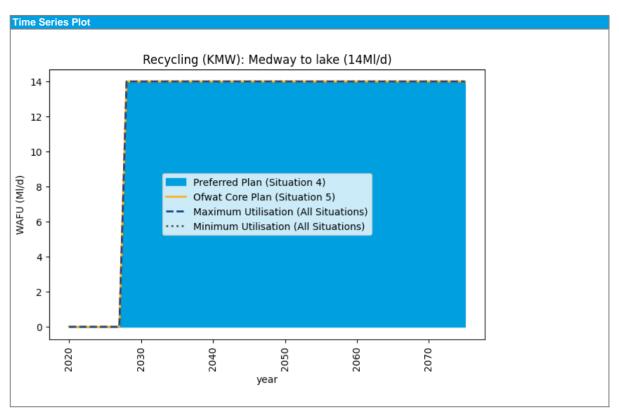
1.15



| 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                              |         |









# Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Storage (SHZ): Raising Bewl Reservoir 0.4m (3Ml/d)                            |
|  | 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                                  |
| Source of Supply and main operational features | 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 | 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 [MI/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 - MI/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 ValueMetric]   | 3.57     |
| Links and constraints  |          |
| Constituent WDSF Ontion IDe  | Redacted |
| 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 [MI/d]   | 3.00     |
| Maximum annual utilisation [Ml/d]  | 3.00     |
| Environment  |          |
| SEA benefit effect   | 2.00     |
|  | -30.00   |
| SEA negative effect  |          |
| SEA negative effect WFD Assessment [Y/N]   |          |
| WFD Assessment [Y/N]   |          |
| WFD Assessment [Y/N] Risk of non compliance against WFD Objectives?  |          |
| WFD Assessment [Y/N]   |          |

#### Financial and Cost Information

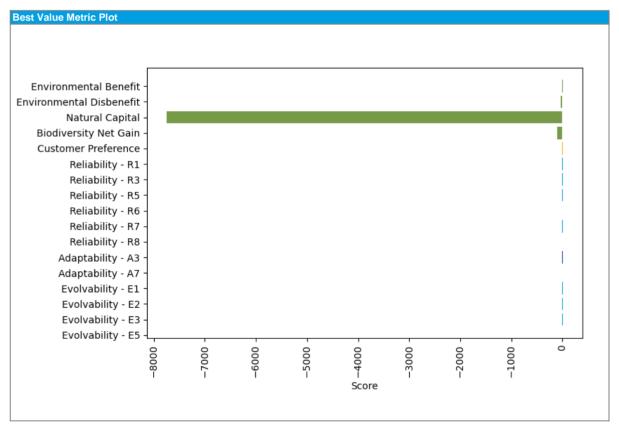
| Financial and Cost Information                  |        |  |
|---|--------|--|
| Metric  |        |  |
| Capex [£m]                                      | 97.24  |  |
| Financing Cost [£m]                             | 183.05 |  |
| Opex [£m]                                       |        |  |
| Embodied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

Other

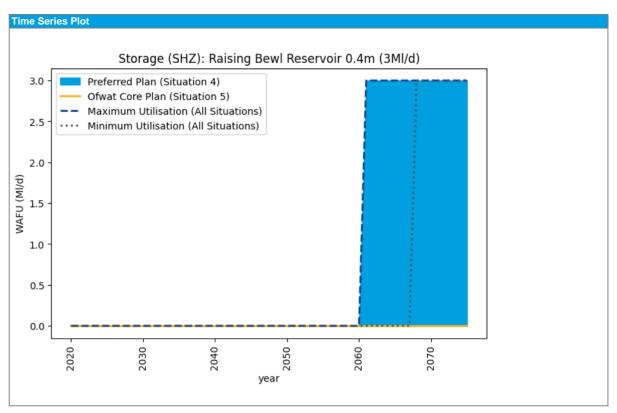
| Metric |  |
|--------|--|
|        |  |



| 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                              |             |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Drought option - supply side (KMW): River Medway Scheme 1-4 (17Ml/d)      |
|  | 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  |
| Source of Supply and main operational features | severity and timing of each drought.                                      |
| Area over which option is to be implemented    | Kent Medway West  |
| Dependencies                                   |   |

| 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0              |  |
|--|--|
| Key Facts  |  |
| Metric   |  |
| Deployable Output (DO)                               |  |
|  |  |
|  | supply demand balance or demand saving (based on the capacity of the |
| option) or water saved over 80 years.                |  |
| T  |  |
| The benefit of a demand side option should be bas    |  |
| DO 1:200 Average [Ml/d]                              |  |
| DO 1:200 Peak [Ml/d]                                 | 17   |
| DO 1:500 Average [Ml/d]                              |  |
| DO 1:500 Peak [MI/d]                                 | 17   |
| Lead in time   |  |
| An estimate of the lead-in time needed to investiga  | te 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 - MI/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   |
| Condition Wite Option Bo                             | rtoddolod  |
|  |  |
| Constraints specific to the option                   |  |
| Customer support                                     |  |
| Customer Preference [Best Value Metric]              | 1  |
| 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 [MI/d]                   | 5.09   |
| Maximum annual utilisation [MI/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                         |  |

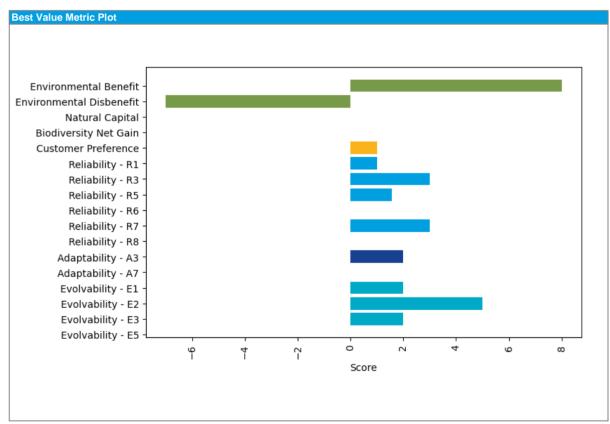
#### Financial and Cost Information

| 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 |

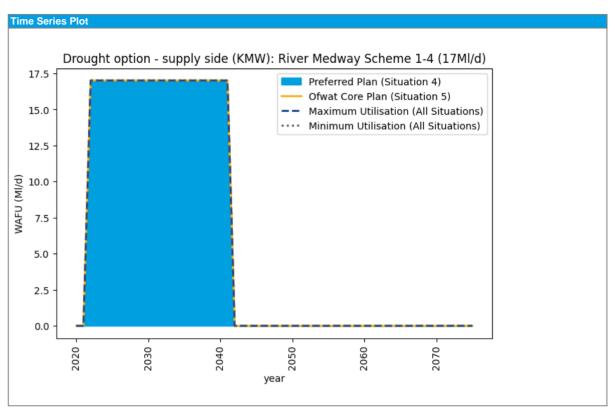
| Metric |  |
|--------|--|
|        |  |



| 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                              |             |









#### Description

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

#### **Key Facts**

| 8.6 |  |
|-----|--|

# 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

| The benefit of a demand side option should be based on a dry year |   |
|---|---|
| DO 1:200 Average [MI/d]   | 7 |
| DO 1:200 Peak [MI/d]  | ٦ |
| DO 1:500 Average [MI/d] 0.09                                      | 9 |
| DO 1:500 Peak [Ml/d] 0.09   | 9 |
|   |   |

#### 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 - MI/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]

Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |
| istomor support                    |          |

| Constraints specific to the option                   |   |
|--|---|
| Customer support                                     |   |
| Customer Preference [Best Value Metric] 1            | 1 |
| Flexibility  |   |
| Scalability and modularity [Best Value Metric] 3     | 3 |
| A description of how the option will be utilised and | 7 |
| the impact on operating costs and carbon costs       |   |

| Expected annual utilisation [MI/d] | 0.09 |
|------------------------------------|------|
| Maximum annual utilisation [MI/d]  | 0.09 |
| Environment                        |      |
| OF A 1                             | 5.00 |

| 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

| 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]           | - |

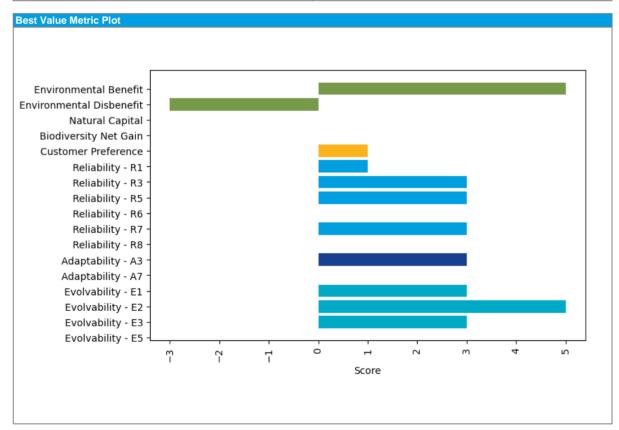
#### Other

| Metric |  |
|--------|--|
|        |  |

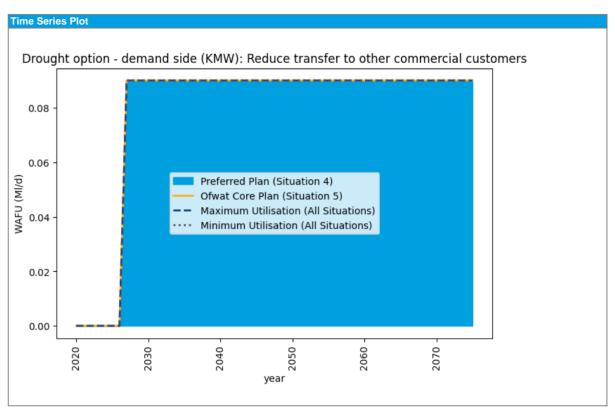
3.00



| 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                              |       |









#### 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**

# 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

| DC | 1:200 Average [MI/d] | 44.7 |
|----|----------------------|------|
|    | DO 1:200 Peak [MI/d] | 44.7 |
| DC | 1:500 Average [MI/d] | 44.7 |
|    | DO 1:500 Peak [MI/d] | 44.7 |

# 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 - MI/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

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best ValueMetric]

[Best Value Metric]

| [Desi value weille]   | 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 [MI/d]  | 27.25    |  |
| Maximum annual utilisation [MI/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]   |          |  |
|   |          |  |

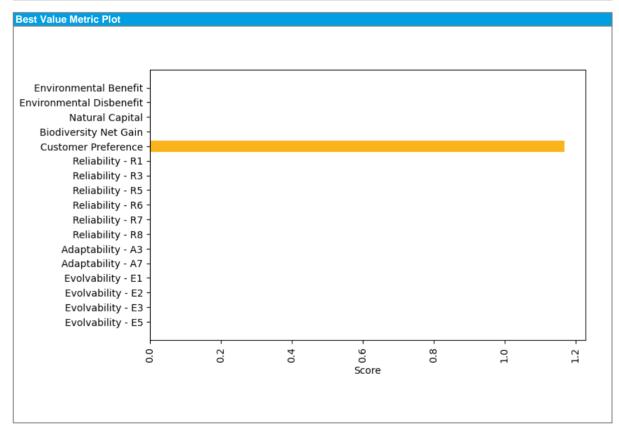
# **Financial and Cost Information**

| 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]           | -    |

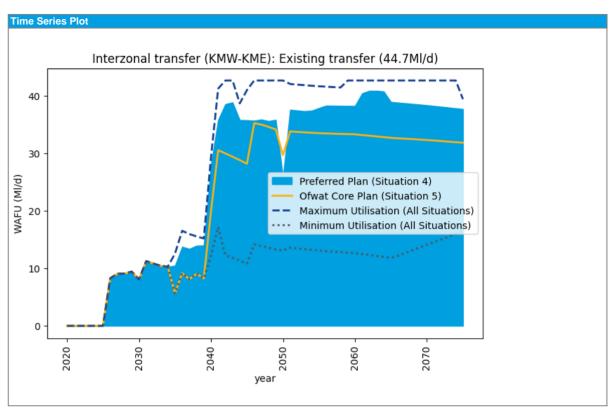
| Metric |  |
|--------|--|
|        |  |



| 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    |









#### Description

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

#### Key Facts Metric

Deployable Output (DO)

Links and constraints

| 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 bas                     | ed on a dry year   |
| DO 1:200 Average [MI/d]   | · ·  |
| DO 1:200 Peak [MI/d]  | Ç  |
| DO 1:500 Average [MI/d]   | g  |
| DO 1:500 Peak [MI/d]  | g  |
| Lead in time  |  |
| An estimate of the lead-in time needed to investiga                   | <u> </u>   |
| Investigation time [Years]  |  |
| Earliest start date   | 01/04/2027   |
| Risk and uncertainty with option                                      |  |
| An assessment of the risks and uncertainty associated with the option |  |
| General - MI/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]

Contribution to biodiversity

| 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 [MI/d]                   | 0.02     |
| Maximum annual utilisation [MI/d]                    | 1.00     |

| iviaximum amuai uliiisalion [ivii/u]           | 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]          |        |

#### **Financial and Cost Information**

| I manoral and ooot 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

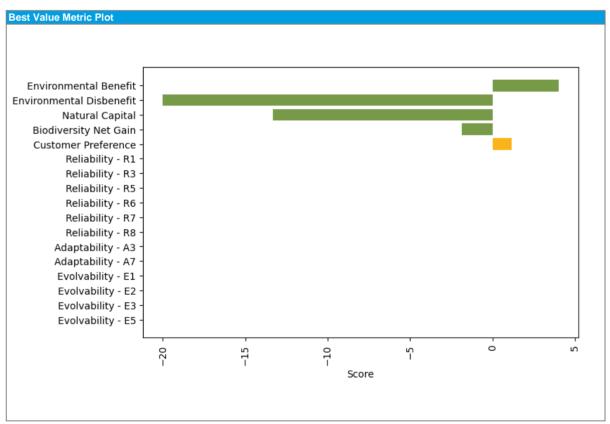
| Metric |  |
|--------|--|
|        |  |

0.00

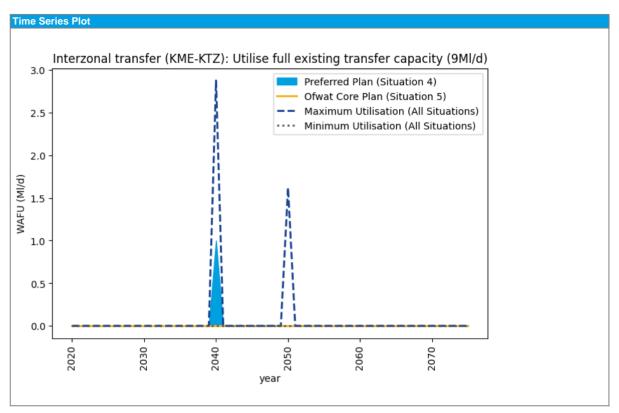
-1.85



| 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      |









#### 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   |
|  | Bidirectional Version: Interzonal transfer (KME-KTZ): Utilise full existing    |
| Dependencies                                   | transfer capacity (9MI/d)  |

# Key Facts

# 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 [MI/d] | 9   |
| DO 1:200 Peak [MI/d]    | 9   |
| DO 1:500 Average [Ml/d] | 9   |
| DO 1:500 Peak [MI/d]    | 9   |

#### 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 - MI/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

1.17

20.00

01/04/2027

# Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |

#### **Customer support** Customer Preference [Best Value Metric]

| 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 [MI/d] 0.00 Maximum annual utilisation [MI/d] 0.00 Environment 4.00

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 -1.85

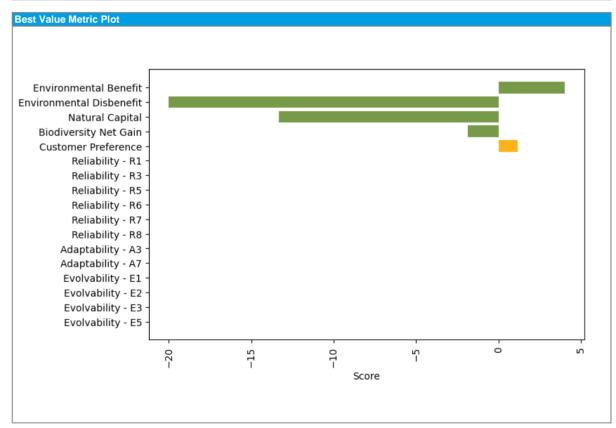
#### **Financial and Cost Information**

| i manerar and oost imormation                   |       |
|---|-------|
| 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 |

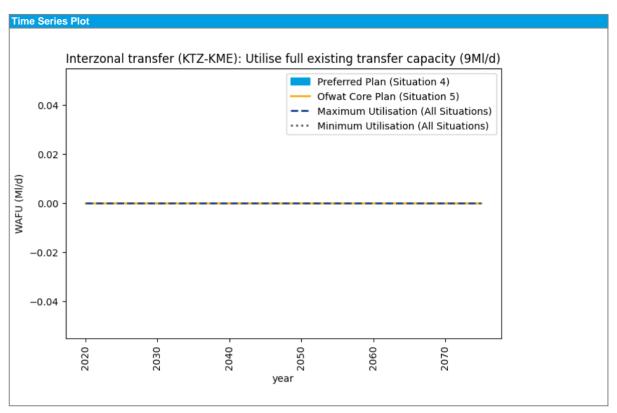
| Metric |  |
|--------|--|
|        |  |



| 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      |









#### Description

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

#### **Key Facts**

#### 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

| The benefit of a demand olde option enedia be based on a dry your |     |  |
|---|-----|--|
| DO 1:200 Average [MI/d]   |     |  |
| DO 1:200 Peak [MI/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]
Earliest start date

| Risk and uncertainty with option           |      |
|--|------|
| An assessment of the risks and uncertainty |      |
| associated with the option                 |      |
| General - MI/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]

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

| 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 |  |

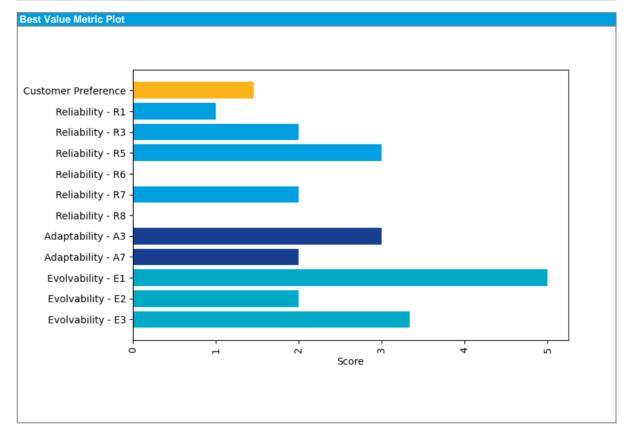
#### Other

| Metric |  |
|--------|--|
|        |  |

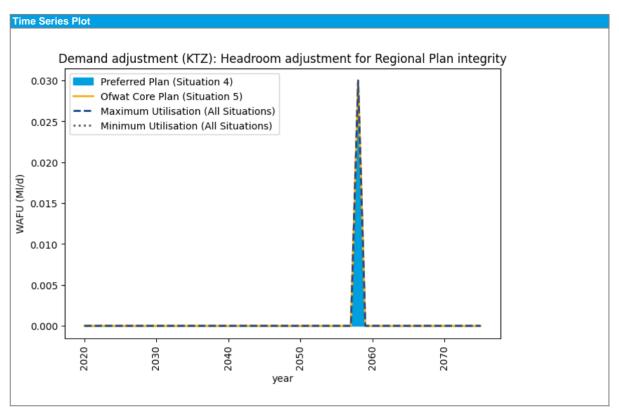
3.00



| 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                              |             |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Desalination (KTZ): East Thanet (20Ml/d) - Construction                               |
|  | This option proposes a 20MI/d desalination plant constructed near to the              |
| Source of Supply and main operational features | 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              |

A profile of the deployable output, contribution to the supply demand balance or demand saving (based on the capacity of the

# Key Facts Metric

Deployable Output (DO)

| option) or water saved over 80 years.                                 |                             |
|---|-----------------------------|
| The benefit of a demand side option should be bas                     | ed on a dry year            |
| DO 1:200 Average [MI/d]   | 20                          |
| DO 1:200 Peak [MI/d]  | 20                          |
| DO 1:500 Average [MI/d]   | 20                          |
| DO 1:500 Peak [MI/d]  | 20                          |
| Lead in time  |                             |
| An estimate of the lead-in time needed to investiga                   | te and implement the option |
| Investigation time [Years]  |                             |
| Earliest start date   |                             |
| Risk and uncertainty with option                                      | 01/04/2001                  |
|   |                             |
| An assessment of the risks and uncertainty associated with the option |                             |
| General - MI/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                   |                             |
| CMC 'cotobment row water quality ricks'                               |                             |

| SWS 'catchment raw water quality risks' [Best ValueMetric]  | 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 [MI/d]  | 17.58    |
| Maximum annual utilisation [MI/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**

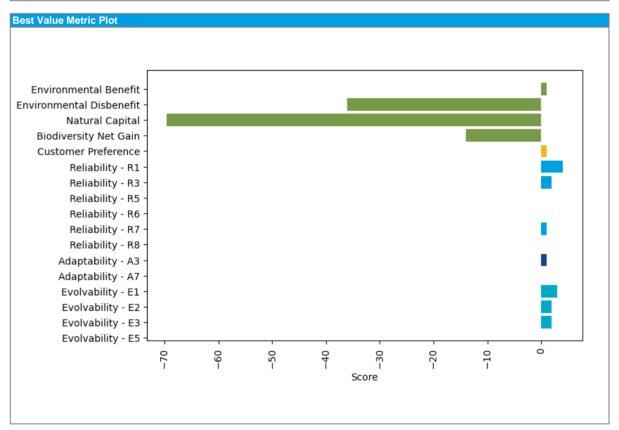
| i manciai and cost imormation                   |           |
|---|-----------|
| Metric  |           |
| Capex [£m]                                      | 689.84    |
| Financing Cost [£m]                             | 891.56    |
| Opex [£m]                                       | 403.32    |
| Embodied 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    |

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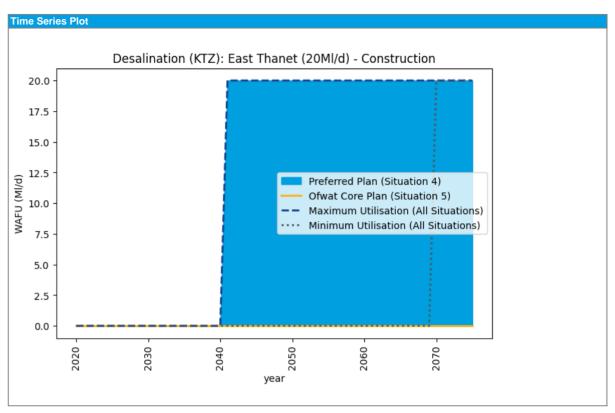
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| Metric  |     |  |
|         |     |  |
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|         | I . |  |



| 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                              |        |









#### 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**

| 4 | atri. |
|---|-------|

# 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/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 - MI/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 ValueMetric]                                  | 0.00                   |
| Links and constraints                               |                        |
|   |                        |

| Links and constraints                   |          |
|---|----------|
| Constituent WRSE Option IDs             | Redacted |
| Constraints specific to the option      |          |
| Customer support                        |          |
| Customer Preference [Best Value Metric] | 1.01     |
| Flexibility                             |          |

| 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 [MI/d]  |      |
| 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  |      |
| Contribution to blockversity  |      |

# **Financial and Cost Information**

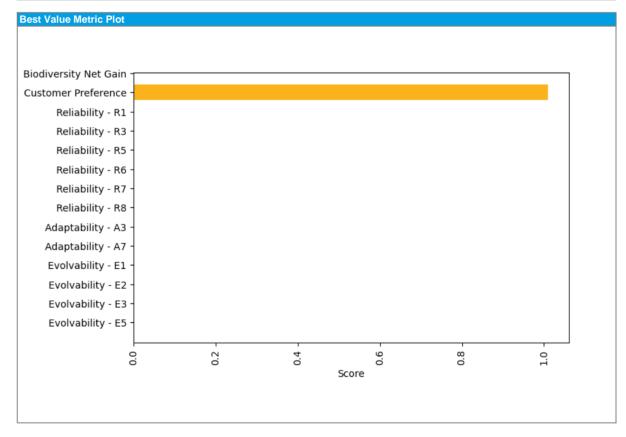
| Metric  |       |
|---|-------|
| Capex [£m]                                      | 15.68 |
| Financing Cost [£m]                             | 35.41 |
| Opex [£m]                                       | -     |
| Embodied Carbon [tCo2e]                         | -     |
| Average operational carbon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

#### Other

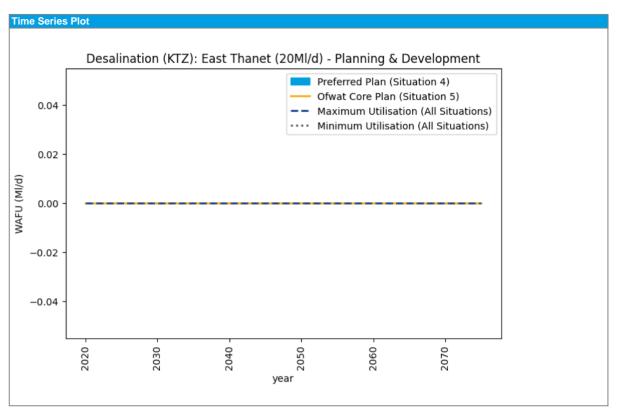
|   | Metric |  |
|---|--------|--|
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| Metric  |   |
|---|---|
| Environmental: Environmental Benefit  |   |
| Environmental: Environmental Disbenefit   |   |
| Environmental: Natural Capital  |   |
| Environmental: Biodiversity Net Gain  |   |
| Social: Customer Preference   | , |
| Resilience: Reliability R1 – Uncertainty of option supply/demand benefit                      | C |
| 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                              |   |









#### 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**

# 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 | [MI/d] |
|------------------|--------|
| DO 1:200 Peak    | [MI/d] |
| DO 1:500 Average | [MI/d] |
| DO 1:500 Peak    | [MI/d] |

# Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| Earliest start date                        | 01/04/2049 |
|--|------------|
| Risk and uncertainty with option           |            |
| An assessment of the risks and uncertainty |            |
| associated with the option                 |            |
| General - MI/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

Constituent WRSE Option IDs

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best ValueMetric]

| _inks | and | constraints |
|-------|-----|-------------|
|       |     |             |
|       |     |             |

Constraints specific to the option ustomer support

| 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 |      |

| A description of now the option will be utilised and |        |
|--|--------|
| the impact on operating costs and carbon costs       |        |
| Expected annual utilisation [MI/d]                   | 0.00   |
| Maximum annual utilisation [MI/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]                |        |

Financial and Cost Information

| Metric  |          |
|---|----------|
| Capex [£m]                                      | 39.13    |
| Financing Cost [£m]                             |          |
| 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

|   | etric |  |
|---|-------|--|
| ſ |       |  |

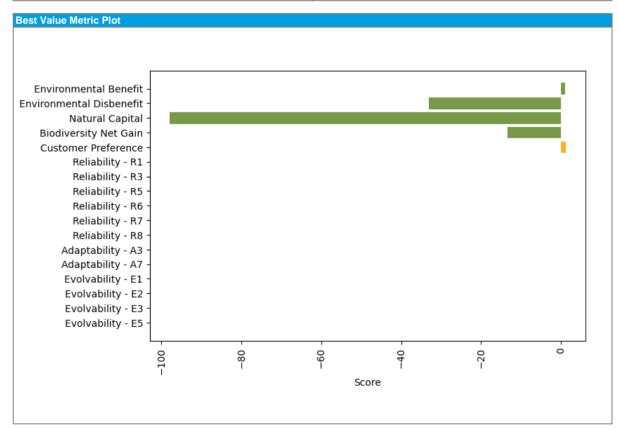
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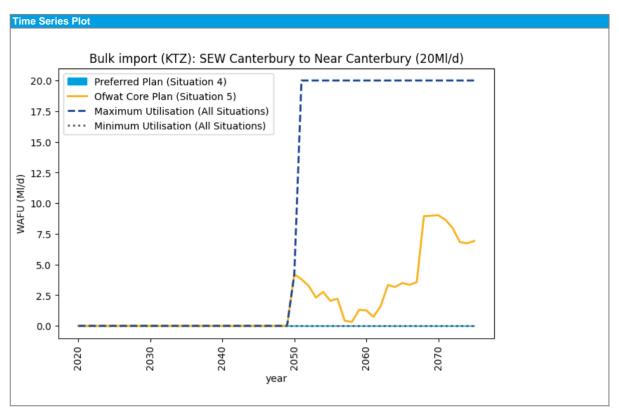
-13.35



| 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      |









#### Description

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

#### **Key Facts**

| 8.6 |  |
|-----|--|

# 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

| The bollone of a dollhard clad option chould be baced on a dry year |     |
|---|-----|
| DO 1:200 Average [MI/d]   |     |
| DO 1:200 Peak [MI/d]  |     |
| DO 1:500 Average [MI/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]
Earliest start date

| Risk and uncertainty with option                                      |      |
|---|------|
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/d risk [Best Value Metric]                               | 1.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Contribution to biodiversity

Customer behaviour

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 |

| 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 [MI/d]                    | 0.10 |
|  |      |

| Maximum annual utilisation [ivii/u]            | 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]          |       |

Financial and Cost Information

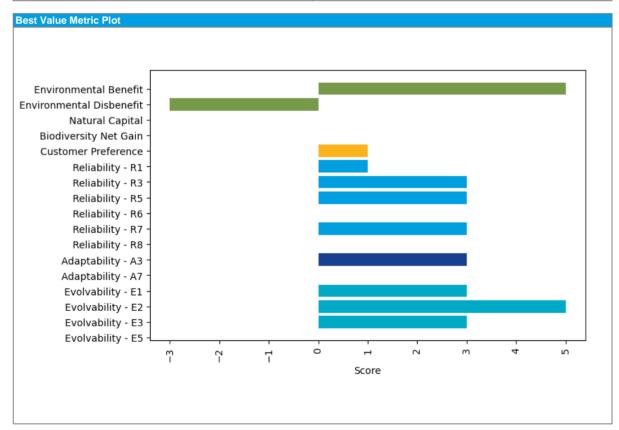
| Financial and Cost information                  |   |
|---|---|
| Metric  |   |
| Capex [£m]                                      | - |
| Financing Cost [£m]                             | - |
| Opex [£m]                                       | - |
| Embodied Carbon [tCo2e]                         |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

## Other

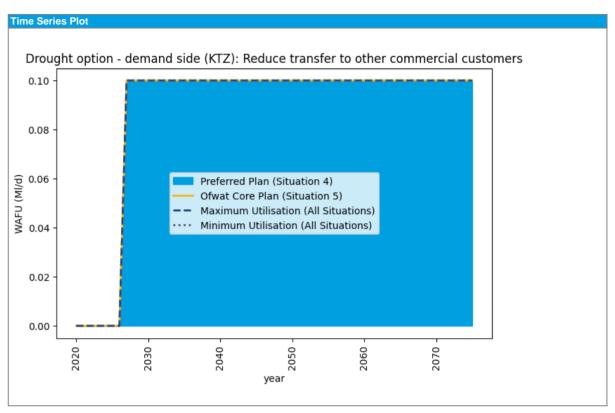
| Variation of the Control of the Cont |        |  |
|--|--------|--|
|  |        |  |
|  | Metric |  |
|  |        |  |
|  |        |  |



| 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                              |       |









## Description

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

# Key Facts

# 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 [MI/d] | 14 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 14 |
| DO 1:500 Average [MI/d] | 14 |
| DO 1:500 Peak [MI/d]    | 14 |

#### 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 - MI/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 [MI/d] 9.87 Maximum annual utilisation [MI/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

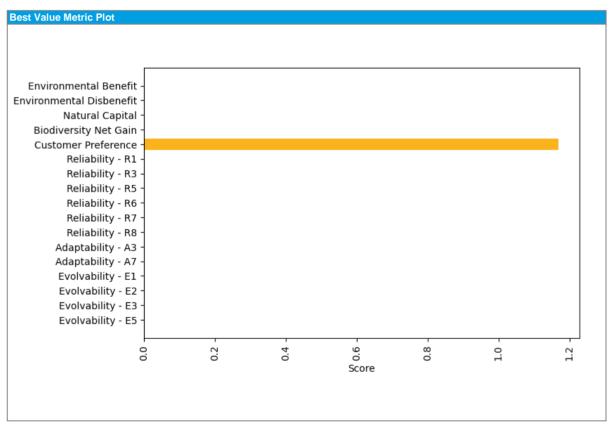
| Financial and Cost information                  |      |
|---|------|
| Metric  |      |
| Capex [£m]                                      | -    |
| Financing Cost [£m]                             | -    |
| Opex [£m]                                       | 0.01 |
| Embodied Carbon [tCo2e]       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

# Other

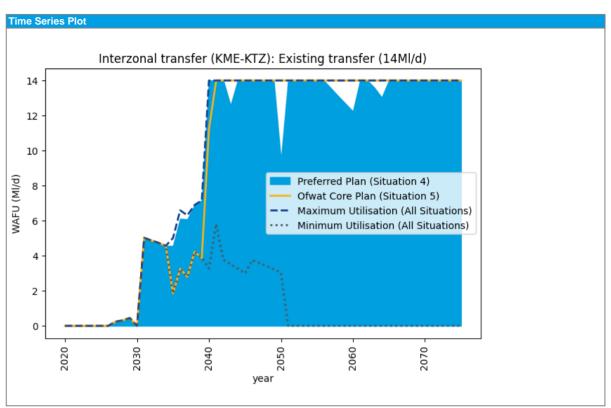
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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    |









#### Description

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

#### **Key Facts**

| 8.6 | -4 |  |  |
|-----|----|--|--|

#### 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 [MI/d] | 14 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 14 |
| DO 1:500 Average [Ml/d] | 14 |
| DO 1:500 Peak [MI/d]    | 14 |

#### 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 - MI/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]

Links and constraints

| Redacted | Constituent WRSE Option IDs        |
|----------|------------------------------------|
|          | Constraints specific to the option |

# Customer support

| - and a second s |      |
|--|------|
| 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

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

| 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]           | -    |

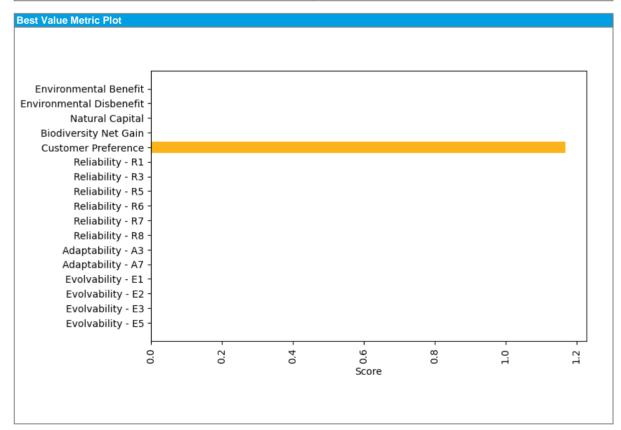
## Other

| Metric |  |
|--------|--|
|        |  |

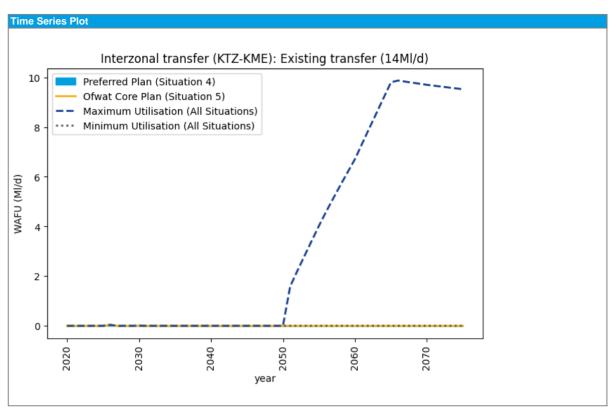
0.00



| 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    |









## 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**

# 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 [MI/d] | 7.5 |
|-------------------------|-----|
| DO 1:200 Peak [MI/d]    | 7.5 |
| DO 1:500 Average [MI/d] | 7.5 |
| DO 1:500 Peak [MI/d]    | 7.5 |

# Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| 3   |      |
|---|------|
| Earliest start date   |      |
| Risk and uncertainty with option                                      |      |
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/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

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best Value Metric] 0.00

| inks and constrain | ts |
|--------------------|----|
|--------------------|----|

| Constituent WRSE Option IDs             | Redacted |
|---|----------|
| Constraints specific to the option      |          |
| Customer support                        |          |
| Customer Preference [Best Value Metric] | 1.17     |
| Flexibility                             |          |
| 0 1133 1 11 3 10 11/1 14 13 1           |          |

| 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 [MI/d]                   | 0.52 |
| Maximum annual utilisation [MI/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]                |      |

# **Financial and Cost Information**

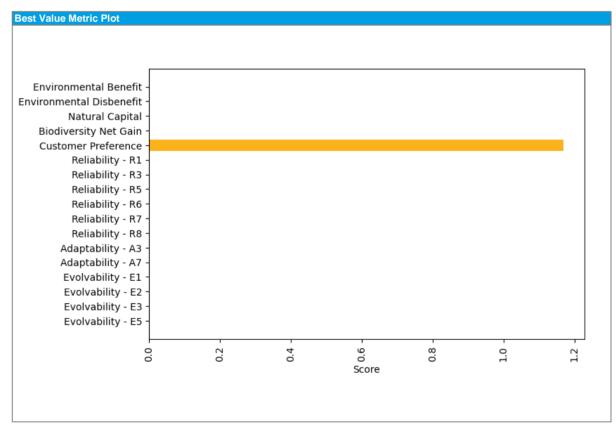
| Metric  |      |
|---|------|
| Capex [£m]                                      | -    |
| Financing Cost [£m]                             | -    |
| Opex [£m]                                       | 0.00 |
| Embodied Carbon [tCo2e]                         | -    |
| Average operational carbon emissions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

### Other

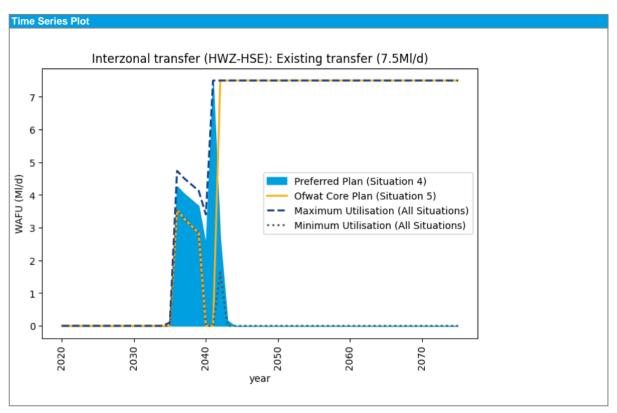
|   | Metric |  |  |
|---|--------|--|--|
| ſ |        |  |  |



| 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    |









#### Description

| Supply and Transfer Options                    |  |
|--|--|
|  | Interzonal transfer (HSE-HWZ): Itchen WSW to Yew Hill WSW bi-directional |
| Name   | (74MI/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   |
|  | Bidirectional Version: Interzonal transfer (HWZ-HSE): Itchen WSW to Yew  |
| Dependencies                                   | Hill WSW bi-directional (74Ml/d)   |

# Key Facts

| De | ploya | ble | Out | put | (DO) |
|----|-------|-----|-----|-----|------|
|    | 411   | 4   |     |     |      |

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 [MI/d] | 74 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 74 |
| DO 1:500 Average [MI/d] | 74 |
| DO 1:500 Peak [MI/d]    | 74 |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

Earliest start date

Customer behaviour

| Risk and uncertainty with option                                      |      |
|---|------|
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/d risk [Best Value Metric]                               | 0.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

## **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]

Scalability 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 [MI/d]

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]                          |           |
| Average Incremental Cost (AIC) [p/m3]           | 16.57     |

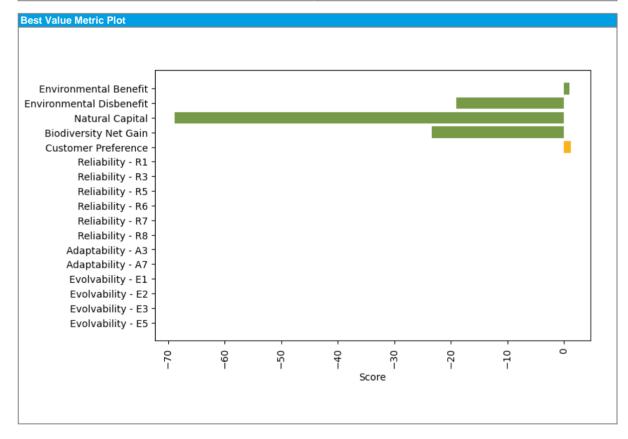
#### Other

| Metric |  |  |  |  |
|--------|--|--|--|--|
|        |  |  |  |  |
|        |  |  |  |  |
|        |  |  |  |  |
|        |  |  |  |  |

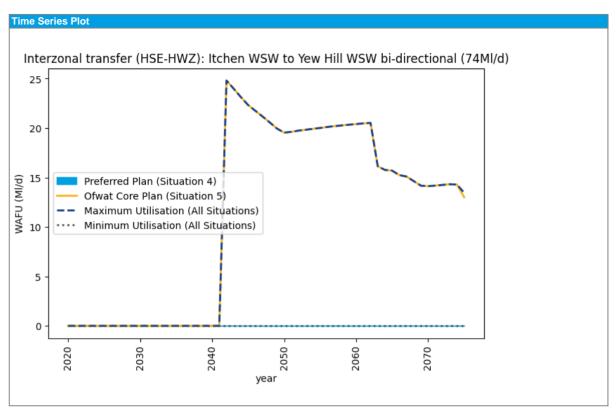
1.17



| 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      |









#### Description

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

# Key Facts

| Deployable Output (DO)           |
|----------------------------------|
| A profile of the deployable outr |

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 [MI/d] | 74 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 74 |
| DO 1:500 Average [MI/d] | 74 |
| DO 1:500 Peak [MI/d]    | 74 |

#### 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 - MI/d risk [Best Value Metric]                               | 0.00 |  |
| General - text  |      |  |
| Impact of Climate Change on yield                                     |      |  |

## **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Environment (inc INNS)
Customer behaviour

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] 1.17

lexibility

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 [MI/d]

O.56

Maximum annual utilisation [MI/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?

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   |

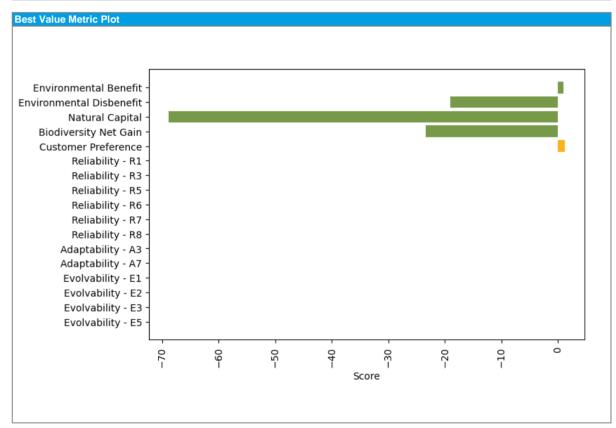
#### Other

| Metric |  |
|--------|--|
|        |  |

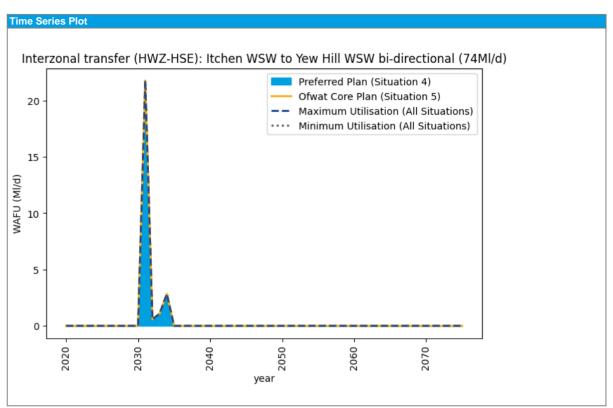
0.00



| 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      |









# 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  |
|  | 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  |
| Dependencies                                   | bi-directional (15Ml/d)  |

| <u>'</u>   |  |
|--|--|
| Key Facts  |  |
| Metric   |  |
| Deployable Output (DO)                               |  |
| ,  | supply demand balance or demand saving (based on the capacity of the |
| option) or water saved over 80 years.                | supply demand balance of demand saving (based on the capacity of the |
| option) of water saved over 60 years.                |  |
| The handit of a demand side entire should be been    |  |
| The benefit of a demand side option should be bas    |  |
| DO 1:200 Average [MI/d]                              |  |
| DO 1:200 Peak [Ml/d]                                 |  |
| DO 1:500 Average [Ml/d]                              |  |
| DO 1:500 Peak [MI/d]                                 | 15   |
| Lead in time   |  |
| An estimate of the lead-in time needed to investiga  | te 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 - MI/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]                                  |  |
| Links and constraints                                | 0.00   |
| zimo ana conociamo                                   |  |
|  |  |
| Constituent WRSE Option IDs                          | Redacted   |
| ·  |  |
| Constraints appoific to the option                   |  |
| Constraints specific to the option                   |  |
| Customer support                                     | 4.47   |
| 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 [MI/d]                   | 1.47   |
| Maximum annual utilisation [MI/d]                    | 7.24   |
| 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                         | -37.64   |
| Contribution to blodiversity                         | -57.04   |

### Financial and Cost Information

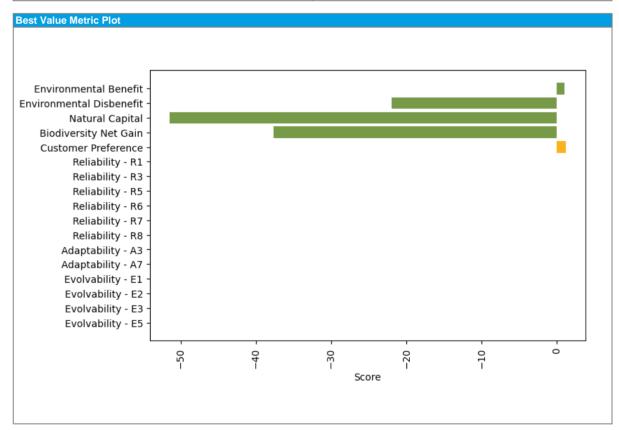
| Financial and Cost information                  |           |
|---|-----------|
| Metric  |           |
| Capex [£m]                                      | 92.68     |
| Financing Cost [£m]                             | 129.94    |
| Opex [£m]                                       | 58.36     |
| Embodied 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

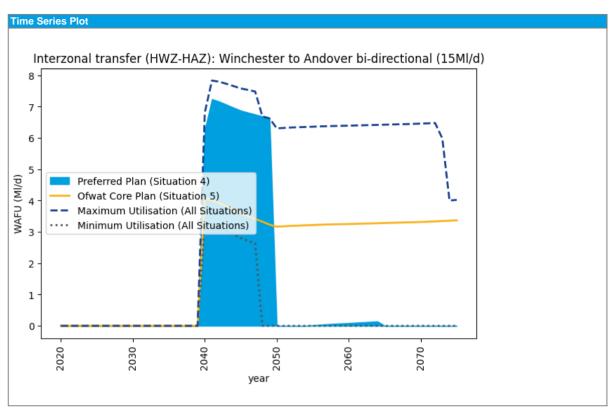
| Metric |  |
|--------|--|
|        |  |



| 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      |









#### Description

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

# Key Facts

| W | eur | ٠ |  |  |  |
|---|-----|---|--|--|--|
|   |     |   |  |  |  |

# 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 [MI/d] | 15 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 15 |
| DO 1:500 Average [MI/d] | 15 |
| DO 1:500 Peak [MI/d]    | 15 |

#### 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 - MI/d risk [Best Value Metric]                               | 0.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |

# Drinking Water Safety

A drinking water safety plan assessing the risks to drinking water quality

Environment (inc INNS)
Customer behaviour

SWS 'catchment raw water quality risks'
[Best Value Metric] 0.00

# Links and constraints

Constituent WRSE Option IDs Redacted

Constraints specific to the option

Constraints specific to the option

Customer Support

Customer Preference [Best Value Metric]

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 [MI/d]

Environment

SEA benefit effect
SEA negative effect

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**

| i manoiai ana occi imormation                   |       |
|---|-------|
| 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 |  |  |
|--------|--|--|
|        |  |  |
|        |  |  |

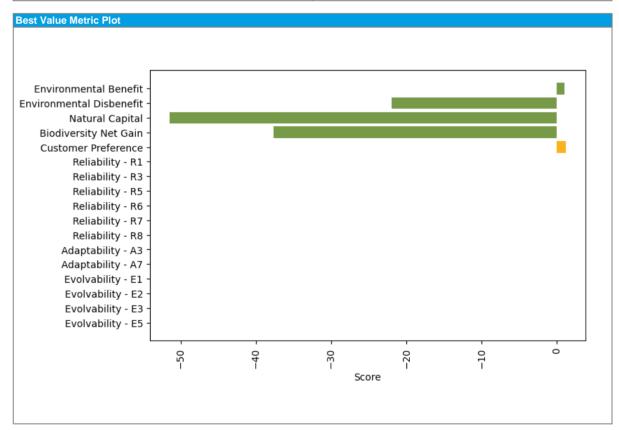
1.17

0.00

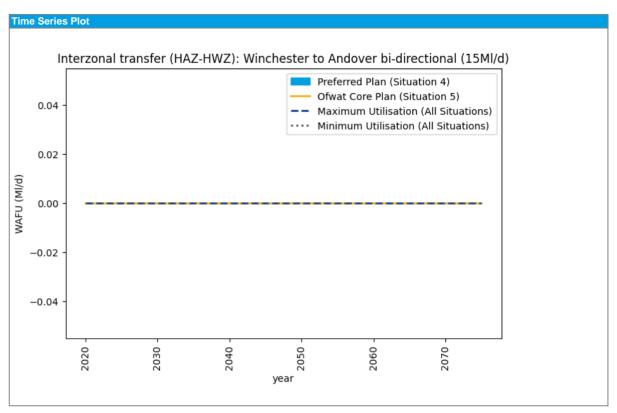
1.00



| 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      |









# Description

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

| Key Facts  |  |
|--|--|
| Metric   |  |
|  |  |
| Deployable Output (DO)                               |  |
|  | 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 bas    | * *  |
| DO 1:200 Average [MI/d]                              | 10   |
| DO 1:200 Peak [MI/d]                                 | 10   |
| DO 1:500 Average [MI/d]                              | 10   |
| DO 1:500 Peak [MI/d]                                 | 10   |
| Lead in time   |  |
| An estimate of the lead-in time needed to investiga  | te 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 - MI/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 ValueMetric]                                   | 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 [MI/d]                   | 0.00   |
| Maximum annual utilisation [MI/d]                    |  |
| Environment  | 0.00   |
| SEA benefit effect                                   | 1.00   |
| SEA negative effect                                  | -19.00   |
| WFD Assessment [Y/N]                                 | -13.00   |
| Risk of non compliance against WFD Objectives?       |  |
| HRA assessment [Y/N]                                 |  |
| Appropriate Assessment Required [Y/N]                |  |
| Contribution to biodiversity                         | -48.93   |
| Contribution to biodiversity                         | -40.93   |

### Financial and Cost Information

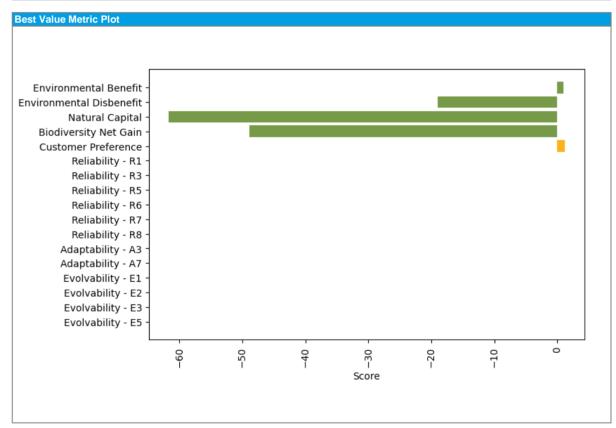
| Financial and Cost Information                  |           |
|---|-----------|
| Metric  |           |
| Capex [£m]                                      | 67.38     |
| Financing Cost [£m]                             | 94.54     |
| Opex [£m]                                       | 41.51     |
| Embodied 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

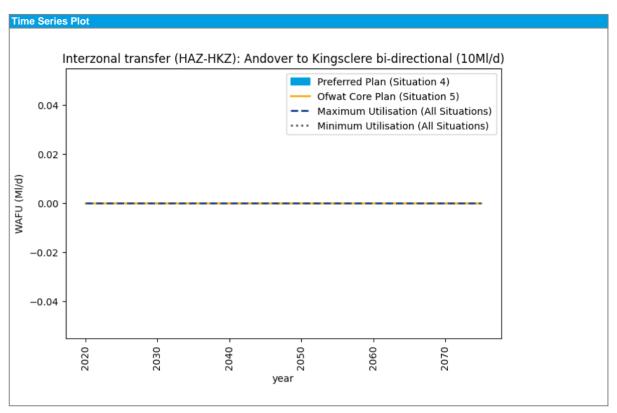
| Metric |  |
|--------|--|
|        |  |



| 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      |









# Description

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

| 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1             |  |
|--|--|
| Key Facts  |  |
| Metric   |  |
|  |  |
| Deployable Output (DO)                               |  |
|  | 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 bas    | * *  |
| DO 1:200 Average [Ml/d]                              | 10   |
| DO 1:200 Peak [MI/d]                                 | 10   |
| DO 1:500 Average [Ml/d]                              | 10   |
| DO 1:500 Peak [MI/d]                                 | 10   |
| Lead in time   |  |
| An estimate of the lead-in time needed to investiga  | te 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 - MI/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'              | 0 1 7  |
| [Best ValueMetric]                                   | 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 [MI/d]                   | 4.82   |
| Maximum annual utilisation [MI/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

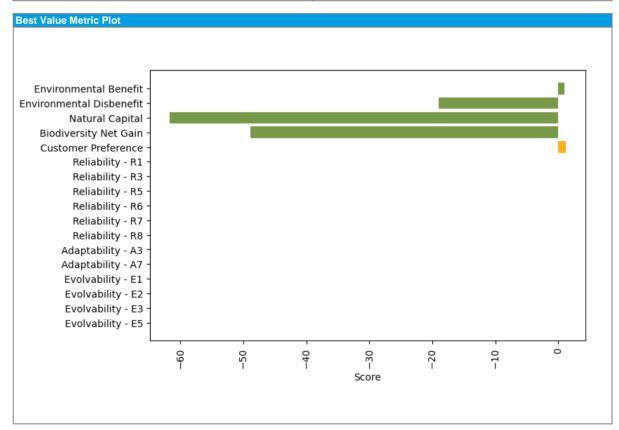
| i manoiai ana oost miormation                   |       |
|---|-------|
| Metric  |       |
| Capex [£m]                                      | -     |
| Financing Cost [£m]                             | -     |
| Opex [£m]                                       | 28.19 |
| Embodied Carbon [tCo2e] 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

# Other

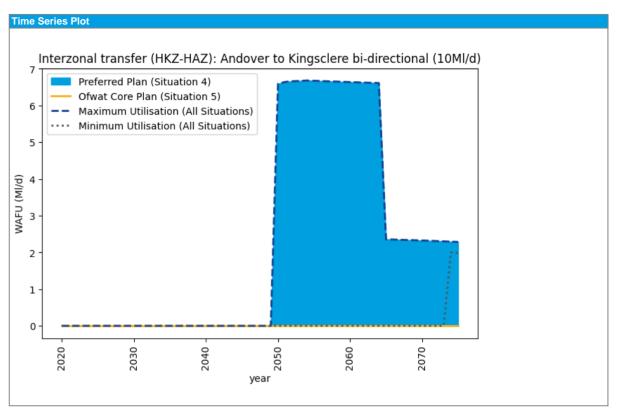
| Metric |  |
|--------|--|
|        |  |



| 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      |









### 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**

# 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/d]    |

# Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Contribution to biodiversity

| Investigation time [Years]                           |                        |
|--|------------------------|
| Earliest start date                                  | 01/04/2026             |
| Risk and uncertainty with option                     |                        |
| An assessment of the risks and uncertainty           |                        |
| associated with the option                           |                        |
| General - MI/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                                |                        |
|  |                        |
| 0 44 400000 44 40                                    |                        |
| 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 [MI/d]                   | 0.00                   |
| Maximum annual utilisation [MI/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**

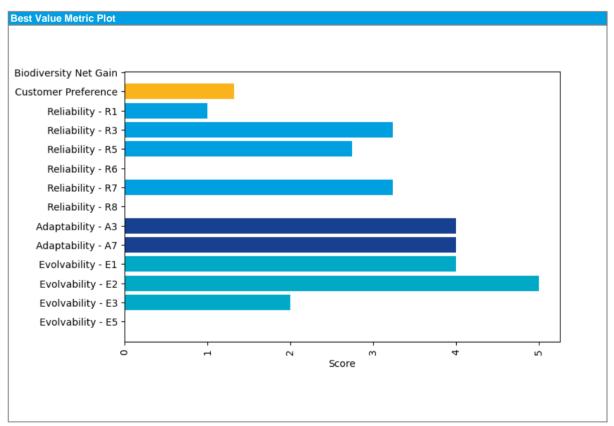
| Metric  |       |
|---|-------|
| Capex [£m]                                      | 5.85  |
| Financing Cost [£m]                             | 11.34 |
| Opex [£m]                                       | -     |
| Embodied Carbon [tCo2e]                         | -     |
| Average operational carbon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

### Other

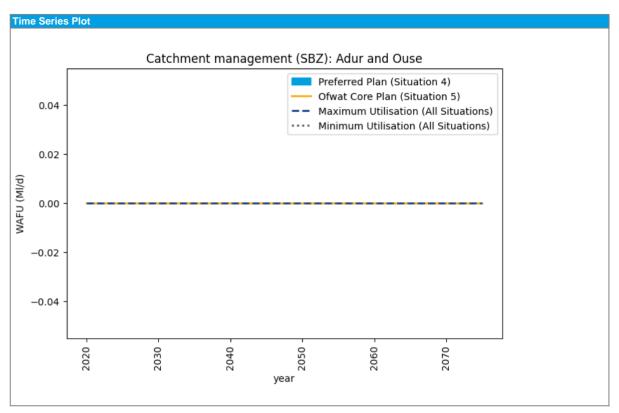
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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 |









### 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**

| 4 | atri. |
|---|-------|

# 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

Expected annual utilisation [Ml/d]
Maximum annual utilisation [Ml/d]

Risk of non compliance against WFD Objectives?

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

SEA benefit effect SEA negative effect WFD Assessment [Y/N]

Contribution to biodiversity

| DO 1:200 Average [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/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 - MI/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 |                        |
| Everante de appundantial estimation [MI/d]  | 0.00                   |

# **Financial and Cost Information**

Environment

| 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]           | -    |

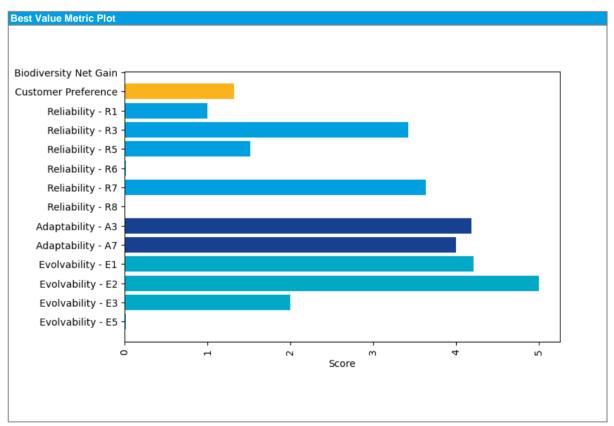
#### Other

| Metric |  |  |
|--------|--|--|
|        |  |  |

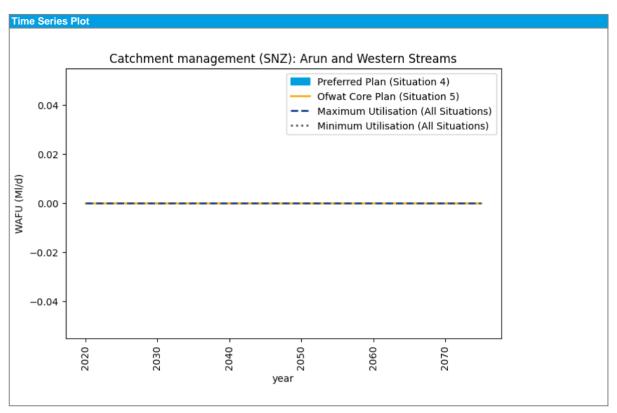
0.00



| 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 |









### 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**

# 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 [MI/d] | 30 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 30 |
| DO 1:500 Average [Ml/d] | 30 |
| DO 1:500 Peak [MI/d]    | 30 |

# 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 - MI/d risk [Best Value Metric]    | 0.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |
| Environment (inc INNS)                     |      |
| Customer hehaviour                         |      |

# Drinking Water Safety

A drinking water safety plan assessing the risks to drinking water quality

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best Value Metric]

| Link | s and | d con | strai | nts |
|------|-------|-------|-------|-----|

| 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 [MI/d]  | 2.63     |
| Maximum annual utilisation [MI/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]   |          |
|   |          |

# **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]           | -    |

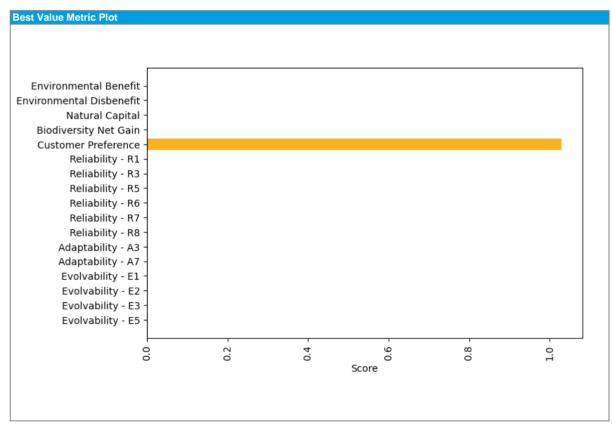
### Other

|   | Metric |  |  |  |  |
|---|--------|--|--|--|--|
| ſ |        |  |  |  |  |

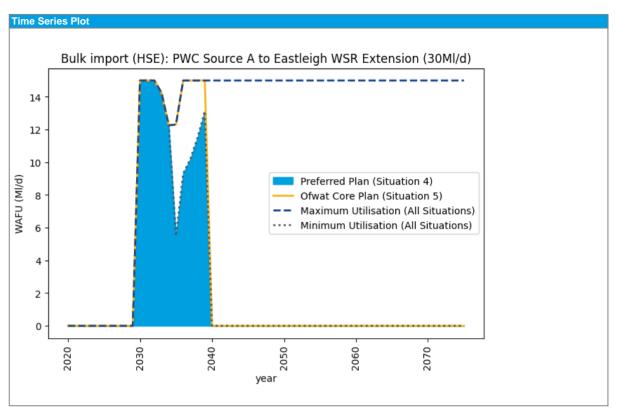
0.00



| 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    |









### 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 N                                      | orth |
| Dependencies                                   |   |      |

#### **Key Facts**

| 4 | atri. |
|---|-------|

# 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 [MI/d] | 15 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 15 |
| DO 1:500 Average [MI/d] | 15 |
| DO 1:500 Peak [MI/d]    | 15 |

# 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 - MI/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]

[Best Value Metric]

| Lin | ks a | and | con | stra | nts |
|-----|------|-----|-----|------|-----|
|     |      |     |     |      |     |

| 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 applied utilisation [MI/d]                  | 0.00     |

| the impact on operating costs and carbon costs |      |
|--|------|
| Expected annual utilisation [MI/d]             | 0.00 |
| Maximum annual utilisation [MI/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]           | - |

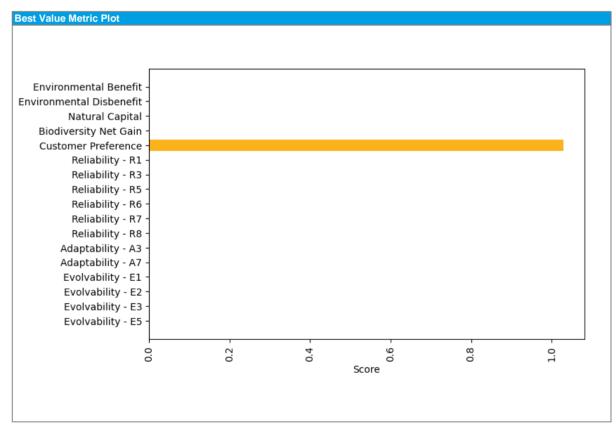
### Other

| Metric |  |
|--------|--|
|        |  |

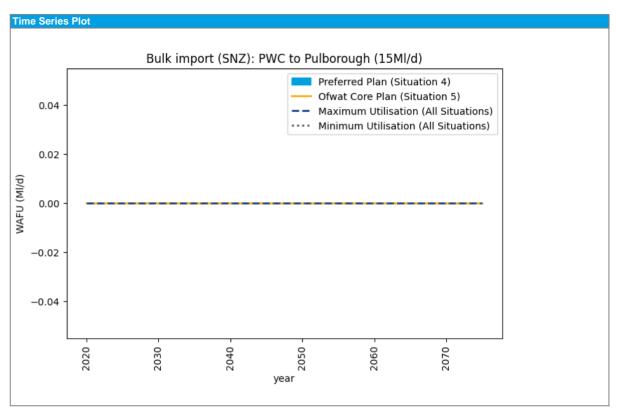
0.00



| 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    |









### 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**

# 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 [MI/d | [9] |
|------------------------|-----|
| DO 1:200 Peak [MI/d    | 15  |
| DO 1:500 Average [Ml/d | 15  |
| DO 1:500 Peak [MI/d    | 15  |

### Lead in time

An estimate of the lead-in time needed to investigate and implement the option Investigation time [Years]

| Lainest start date                         |      |
|--|------|
| Risk and uncertainty with option           |      |
| An assessment of the risks and uncertainty |      |
| associated with the option                 |      |
| General - MI/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]

| _ini | KS | an | d ( | CO | ns | tra | un | ts |
|------|----|----|-----|----|----|-----|----|----|
|      |    |    |     |    |    |     |    |    |

| Constituent WRSE Option IDs             | Redacted |
|---|----------|
|   |          |
| Constraints specific to the option      |          |
| Customer support                        |          |
| Customer Preference [Best Value Metric] | 1.03     |

| 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 [MI/d]                   | 4.93  |
| Maximum annual utilisation [MI/d]                    | 15.00 |

| Expected annual utilisation [MI/d]             | 4.93  |
|--|-------|
| Maximum annual utilisation [Ml/d]              | 15.00 |
| Environment                                    |       |
| SEA benefit effect                             | 0.00  |
| 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]                                       | 0.01 |
| Embodied Carbon [tCo2e]                         | -    |
| Average operational carbon emissions [tCo2e/yr] | -    |
| Total Carbon Cost [£m]                          | -    |
| Average Incremental Cost (AIC) [p/m3]           | -    |

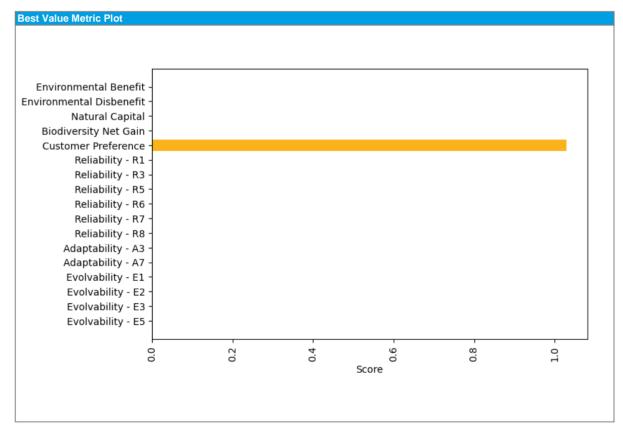
### Other

| Metric |  |
|--------|--|
|        |  |

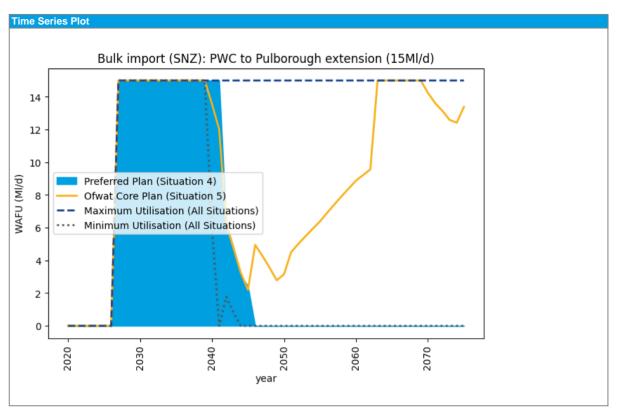
0.00



| 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    |









01/04/2020

### Description

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

#### **Key Facts**

| 4 | atri. |
|---|-------|

# 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 [MI/d] DO 1:200 Peak [MI/d] |    |
|--|----|
|  |    |
| DO 1:500 Average [MI/d]                      |    |
| DO 1:500 Peak [MI/d]                         | 21 |

# Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| Lattiest start date                        | 01/04/2029 |
|--|------------|
| Risk and uncertainty with option           |            |
| An assessment of the risks and uncertainty |            |
| associated with the option                 |            |
| General - MI/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]

[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 [MI/d]                   | 21.00    |
| Maximum annual utilisation [MI/d]                    | 21.00    |
| Environment  |          |
| SEA benefit effect                                   | 1.00     |
|  |          |

| OE/ Contont on out                             | 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

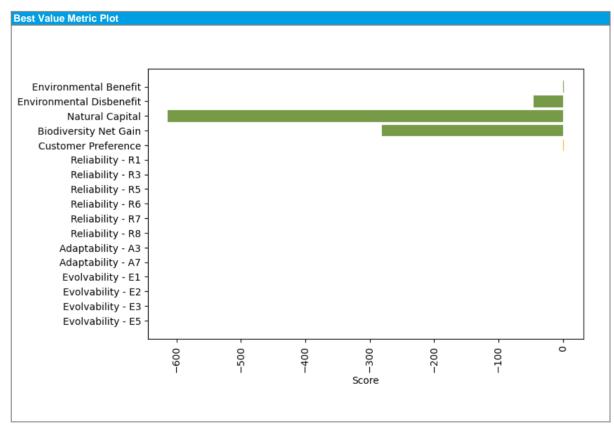
| Metric  |          |
|---|----------|
| Capex [£m]                                      | 17.73    |
| Financing Cost [£m]                             |          |
| Opex [£m]                                       | 37.15    |
| Embodied Carbon [tCo2e]                         | 6,954.28 |
| Average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

### Other

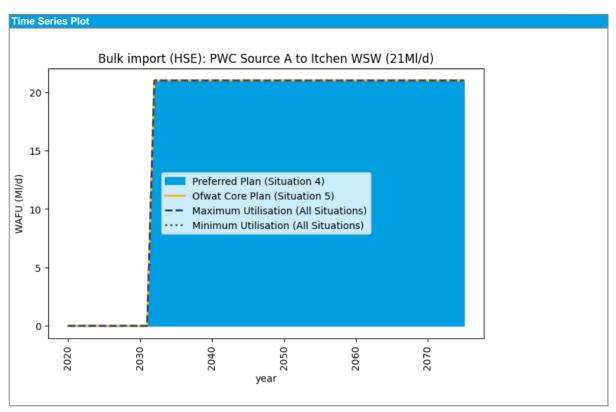
|   | Metric |  |
|---|--------|--|
| ſ |        |  |



| 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       |









### Description

| Supply and Transfer Options                    |  |
|--|--|
| Name   | Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Harbour (60Ml/d) |
|  | 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.                              |
| Source of Supply and main operational features | Replaces SRO B4.   |
| Area over which option is to be implemented    | Portsmouth   |
| Dependencies                                   |  |

| 1   |  |
|---|--|
| Key Facts   |  |
| Metric  |  |
| Deployable Output (DO)                                |  |
| ,   | aumply demand belongs or demand on ing /based on the conscity of the |
| option) or water saved over 80 years.                 | supply demand balance or demand saving (based on the capacity of the |
| option) of water saved over 80 years.                 |  |
| The honefit of a demand side entire about he has      |  |
| The benefit of a demand side option should be bas     | * *  |
| DO 1:200 Average [MI/d]                               | 60   |
| DO 1:200 Peak [Ml/d]                                  | 60   |
| DO 1:500 Average [MI/d]                               | 60   |
| DO 1:500 Peak [Ml/d]                                  | 60   |
| Lead in time  |  |
| An estimate of the lead-in time needed to investigate | te 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 - MI/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   |
| Constituent WKSL Option ibs                           | Neudoleu   |
|   |  |
| 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 [MI/d]                    | 52.86  |
| Maximum annual utilisation [MI/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

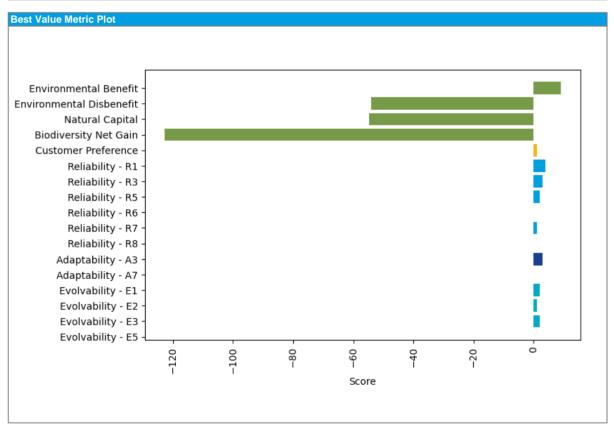
| Metric  |           |
|---|-----------|
| Capex [£m]                                      | 293.72    |
| Financing Cost [£m]                             | 383.60    |
| Opex [£m]                                       | 395.18    |
| Embodied Carbon [tCo2e]                         | 74,182.10 |
| Average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

# Other

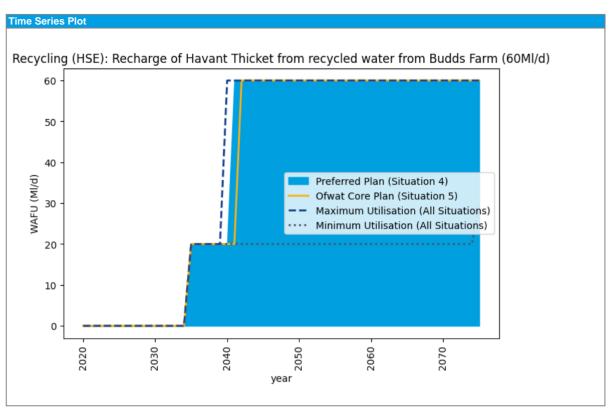
| Metric |  |
|--------|--|
|        |  |



| 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                              |         |









# 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.                   | 3(   |
| 1 ' '   |  |
| The benefit of a demand side option should be bas       | ed on a dry year   |
| DO 1:200 Average [MI/d]                                 | 3.1  |
| DO 1:200 Peak [MI/d]                                    | 3.1  |
| DO 1:500 Average [MI/d]                                 | 3.1  |
| DO 1:500 Peak [MI/d]                                    | 3.1  |
| Lead in time  |  |
| An estimate of the lead-in time needed to investiga     | to and implement the ention  |
| An estimate of the lead-in time fleeded to investiga    | te and implement the option  |
| Investigation time [Years]                              | 0  |
| Earliest start date                                     | 01/04/2024   |
| Risk and uncertainty with option                        | 01/01/2021   |
| An assessment of the risks and uncertainty              |  |
| associated with the option                              |  |
| General - MI/d risk [Best Value Metric]                 | 0.00   |
| General - text  | 0.00   |
| 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'                 | water quanty   |
| [Best Value Metric]                                     | 0.00   |
| Links and constraints                                   | 0.00   |
| Links and constraints                                   |  |
|   |  |
| Constituent WRSE Option IDs                             | Redacted   |
|   |  |
|   |  |
| Constraints specific to the option                      |  |
| Customer support  | 4.00   |
| 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          | 0.00   |
| Expected annual utilisation [Ml/d]                      | 0.00   |
| Maximum annual utilisation [MI/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

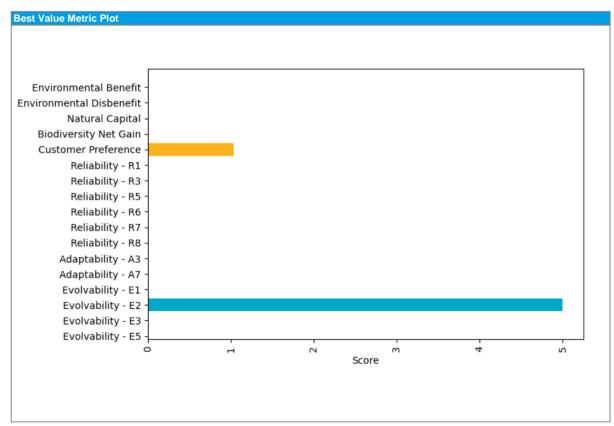
| Metric  |      |
|---|------|
| Capex [£m]                                      | -    |
| Financing Cost [£m]                             | -    |
| Opex [£m]                                       | 0.03 |
| Embodied Carbon [tCo2e]                         | -    |
| Average operational carbon emissions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

# Other Metric

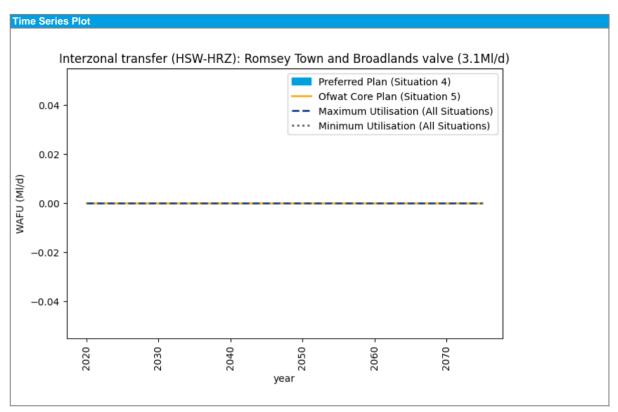
 $Interzonal\,transfer\,(HSW\text{-}HRZ)\text{: }Romsey\,Town\,and\,Broadlands\,valve\,(3.1MI/d)$ 



| 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                              |      |









#### 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)                                |  |
|   |  |
| option) or water saved over 80 years.                 | supply demand balance or demand saving (based on the capacity of the |
| The benefit of a demand side option should be base    | ed on a dry year   |
| DO 1:200 Average [MI/d]                               | 3.1  |
| DO 1:200 Peak [MI/d]                                  | 3.1  |
| DO 1:500 Average [MI/d]                               | 3.1  |
| DO 1:500 Peak [MI/d]                                  | 3.1  |
| Lead in time  |  |
| An estimate of the lead-in time needed to investigate | te and implement the option  |
| Investigation time [Years]                            | 0  |
| Earliest start date                                   | 01/04/2024   |
| Risk and uncertainty with option                      | 01/01/2021   |
| An assessment of the risks and uncertainty            |  |
| associated with the option                            |  |
| General - MI/d risk [Best Value Metric]               | 0.00   |
| General - text  | 0.00   |
| 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'               | arriving water quality   |
| [Best Value Metric]                                   | 0.00   |
| Links and constraints                                 | 0.00   |
| Elliko alia collottalitto                             |  |
| 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 [MI/d]                    | 2.91   |
| Maximum annual utilisation [MI/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                          |  |
| 2 2 13 21041101011)                                   |  |

### Financial and Cost Information

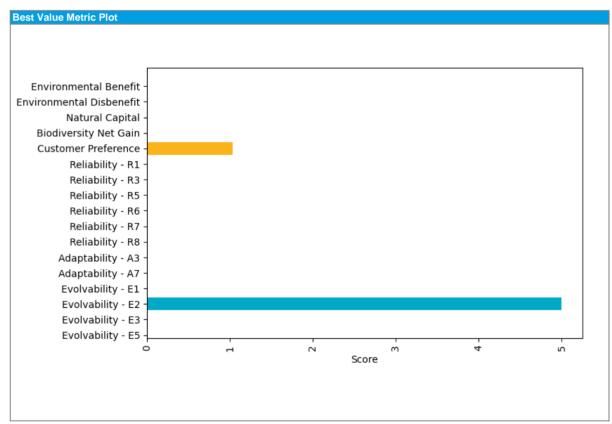
| Metric  |      |
|---|------|
| Capex [£m]                                      | -    |
| Financing Cost [£m]                             | -    |
| Opex [£m]                                       | 0.00 |
| Embodied Carbon [tCo2e]                         | -    |
| Average operational carbon emissions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

# Other Metric

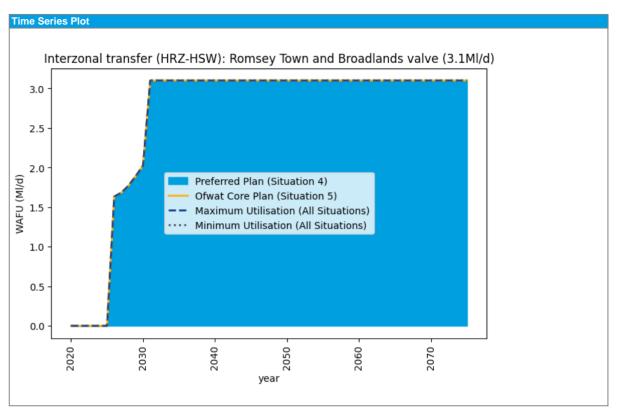
Interzonal transfer (HRZ-HSW): Romsey Town and Broadlands valve (3.1Ml/d)



| 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                              |      |









#### Description

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

# Key Facts

| П | Den | lova | hle | Outn | i i f | (D | $\overline{\Omega}$ |
|---|-----|------|-----|------|-------|----|---------------------|

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 [MI/d]    | 15 |
| DO 1:500 Average [MI/d] | 15 |
| DO 1:500 Peak [MI/d]    | 15 |

#### 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 - MI/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

0.00 [Best Value Metric]

### Links and constraints

Constituent WRSE Option IDs Constraints specific to the option **Customer support** Customer Preference [Best Value Metric] 1.03

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 [MI/d]

Environment SEA benefit effect

Maximum annual utilisation [MI/d]

Contribution to biodiversity

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]

Financial and Cost Information

| i manciai 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

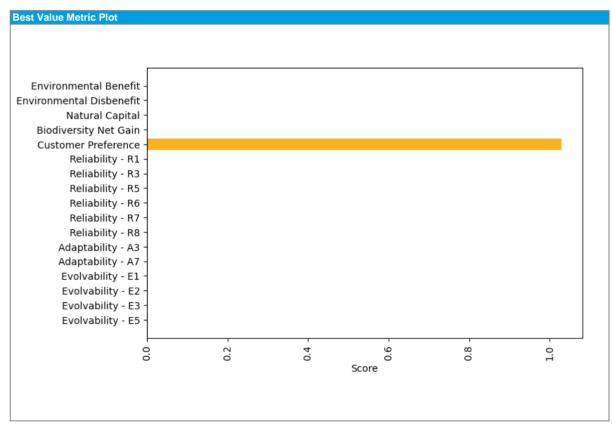
| Metric |  |
|--------|--|
|        |  |

Redacted

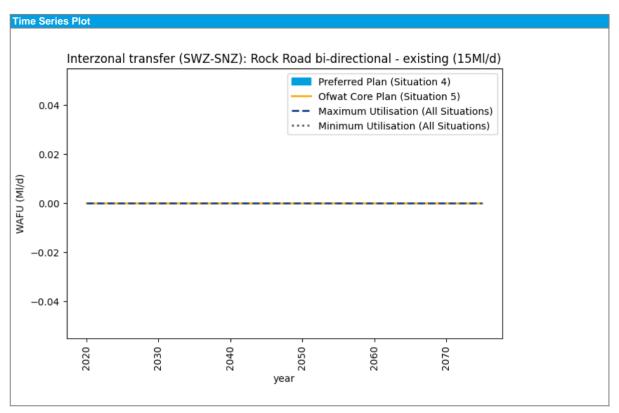
0.00



| 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    |









#### Description

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

# Key Facts

| Metric      |   |      |
|-------------|---|------|
| Danlassahla | 0 | (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 [MI/d]    | 15 |
| DO 1:500 Average [MI/d] | 15 |
| DO 1:500 Peak [MI/d]    | 15 |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option Investigation time [Years]

Earliest start date

Customer behaviour

| Risk and uncertainty with option                                      |      |
|---|------|
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/d risk [Best Value Metric]                               | 0.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Contribution to biodiversity

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

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 [MI/d] 12.62 Maximum annual utilisation [MI/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]

Financial and Cost Information

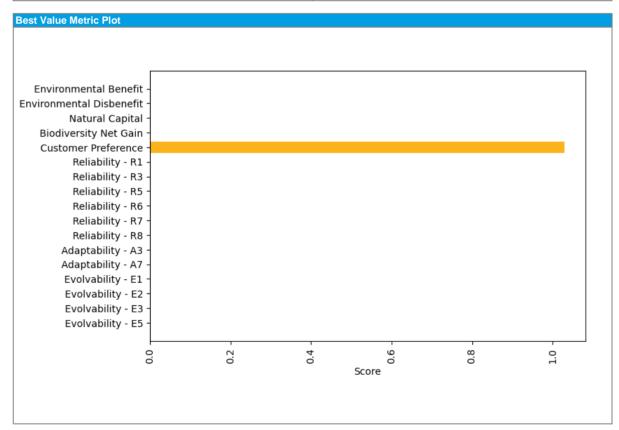
| i manciai and cost information                  |      |
|---|------|
| Metric  |      |
| Capex [£m]                                      | -    |
| Financing Cost [£m]                             | -    |
| Opex [£m]                                       | 0.01 |
| Embodied Carbon [tCo2e]       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

#### Other

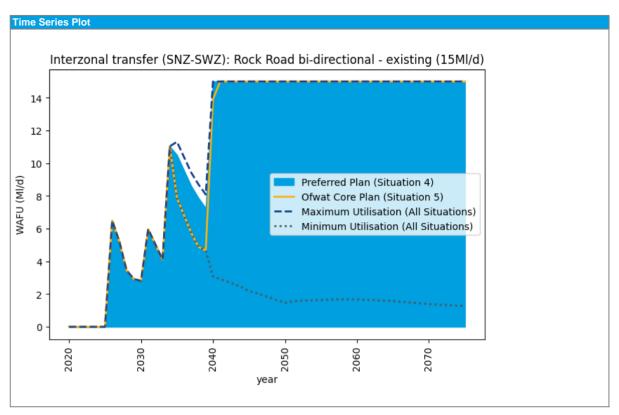
| Metric |  |
|--------|--|
|        |  |



| 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    |









#### 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**

#### 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/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 - MI/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

Contribution to biodiversity

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 [MI/d] 0.00

Maximum annual utilisation [MI/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]

**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

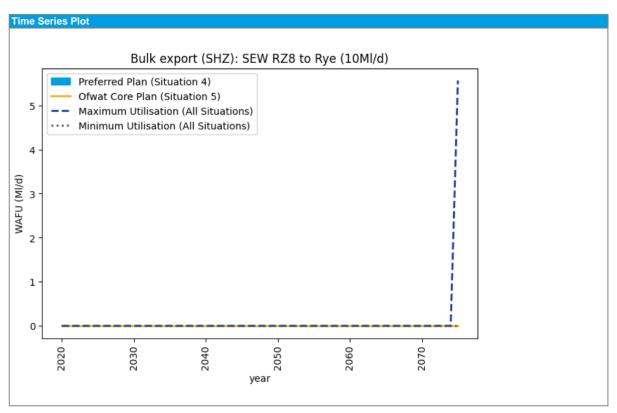
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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 |  |  |
|------------------------|--|--|
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#### 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**

# 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 [MI/d] | 1.1 |
|--|-------------------------|-----|
|  | DO 1:200 Peak [MI/d]    | 1.1 |
|  | DO 1:500 Average [MI/d] | 1.1 |
|  | DO 1:500 Peak [MI/d]    | 1.1 |

#### 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 - MI/d risk [Best Value Metric]    | 0.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |
| Environment (inc INNS)                     |      |
| Customer habouteur                         |      |

#### Drinking Water Safety

A drinking water safety plan assessing the risks to drinking water quality

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best Value Metric] 0.00

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|-----|----|-----|-------|------|---|
|     |    |     |       |      |   |

| 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        |

| Coalability and modalanty [Boot value Mothe]  |      |
|---|------|
| A description of how the option will be utilised and the impact on operating costs and carbon costs |      |
| Expected annual utilisation [MI/d]  | 0.96 |
| Maximum annual utilisation [MI/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]   |      |

#### **Financial and Cost Information**

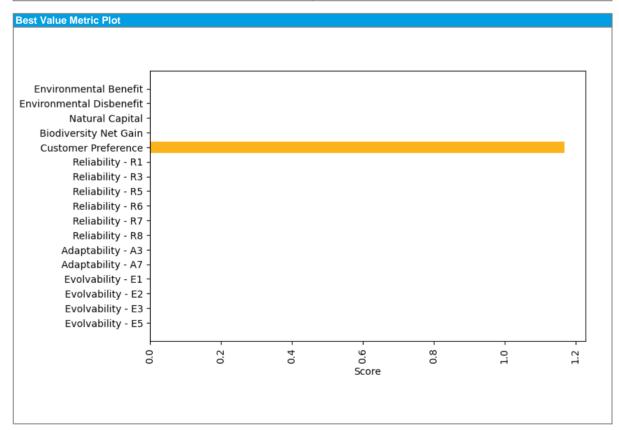
| Metric  |      |
|---|------|
| Capex [£m]                                      | -    |
| Financing Cost [£m]                             | -    |
| Opex [£m]                                       | 0.00 |
| Embodied Carbon [tCo2e]                         |      |
| Average operational carbon emissions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

#### Other

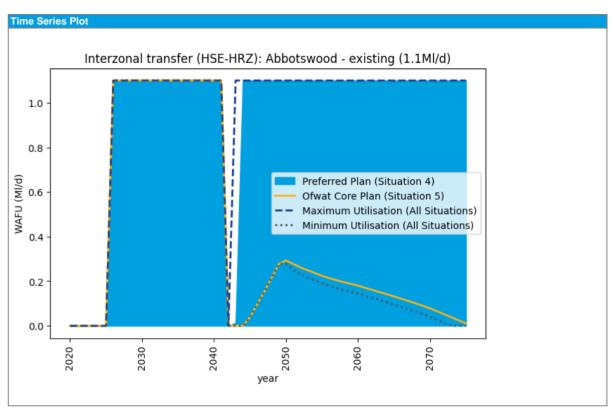
| Metric |  |
|--------|--|
|        |  |



| 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    |









#### 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**

# 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 Peak [MI/d]    | 3.5 |
|-------------------------|-----|
| DO 1:500 Average [MI/d] | 3.5 |
| DO 1:500 Peak [MI/d]    | 3.5 |

#### 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 - MI/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]

Appropriate Assessment Required [Y/N]

Contribution to biodiversity

| 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 [MI/d]             |                                   |      |
|  | Maximum annual utilisation [MI/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]                           |                                   |      |

#### **Financial and Cost Information**

| Metric  |          |
|---|----------|
| Capex [£m]                                      | 57.04    |
| Financing Cost [£m]                             |          |
| 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    |

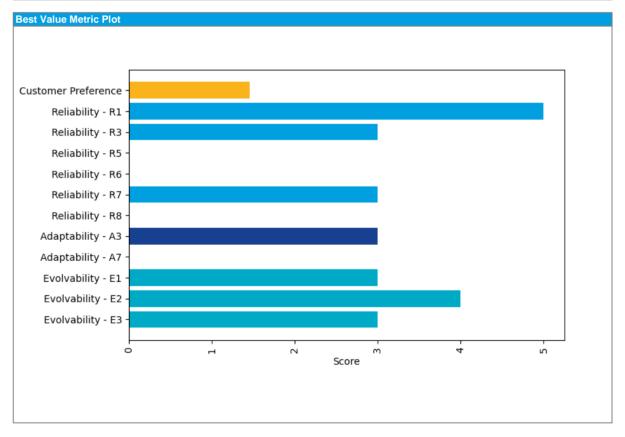
#### Other

| Metric |  |  |  |  |
|--------|--|--|--|--|
|        |  |  |  |  |

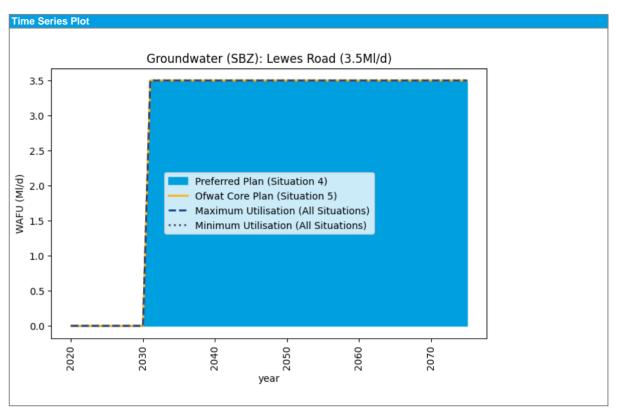
0.00



| 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                              |  |









#### Description

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

# Key Facts Metric

| - 1 |      |       |        |      |
|-----|------|-------|--------|------|
| П   | Denk | wahla | 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 [MI/d]    |  |
| DO 1:500 Average [Ml/d] |  |
| DO 1:500 Peak [MI/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 - MI/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

Contribution to biodiversity

| SWS 'catchment raw water quality risks' |  |
|---|--|
| [Best ValueMetric]                      |  |

0.00

### Links and constraints

| Redacted | Constituent WRSE Option IDs        |
|----------|------------------------------------|
|          | Constraints specific to the option |

### Customer support

Customer Preference [Best Value Metric] 1.17

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 [MI/d] Maximum annual utilisation [MI/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 [V/N]          |        |

#### **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     |

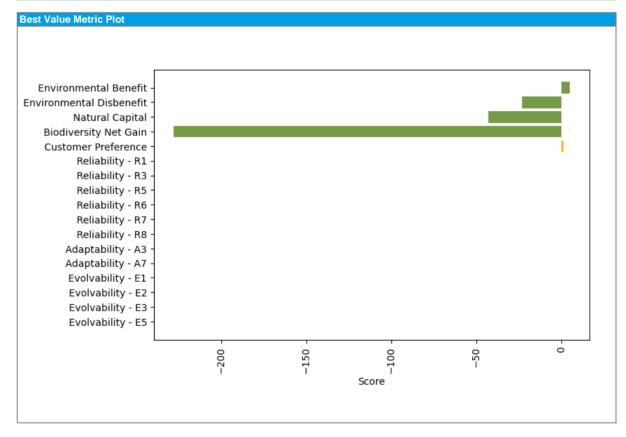
#### Other

| Metric |  |   |  |  |
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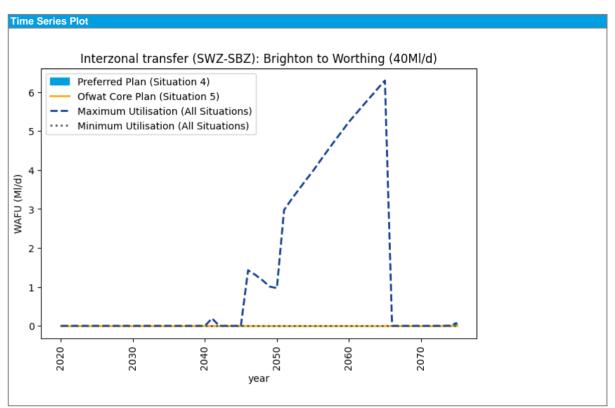
-227.92



| 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       |









#### Description

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

# Key Facts

Deployable Output (DO)

|   | 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 bas   | ed on a dry year   |
| DO 1:200 Average [MI/d]                             |  |
| DO 1:200 Peak [MI/d]                                |  |
| DO 1:500 Average [MI/d]                             |  |
| DO 1:500 Peak [MI/d]                                |  |
| Lead in time  |  |
| An estimate of the lead-in time needed to investiga | te 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 - MI/d risk [Best Value Metric]             | 0.0  |
| General - text                                      |  |

# Drinking Water Safety A drinking water safety plan assessing the risks to drinking water quality

Constituent WRSE Option IDs

Contribution to biodiversity

Impact of Climate Change on yield Environment (inc INNS) Customer behaviour

SWS 'catchment raw water quality risks'
[Best Value Metric]

# Links and constraints

|                  | 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 [MI/d] 0.00

Maximum annual utilisation [MI/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]          |        |

#### Financial and Cost Information

| i manciai 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 |  |     |  |
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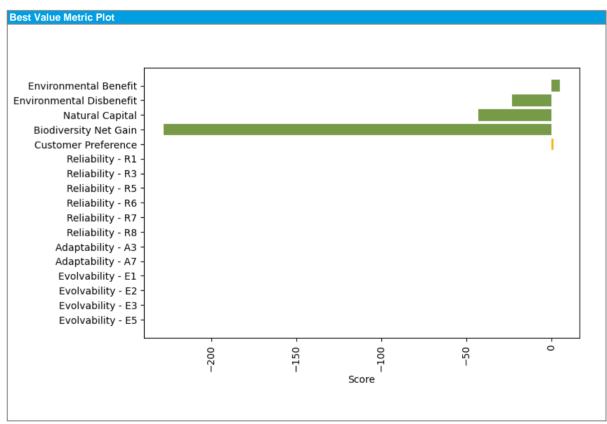
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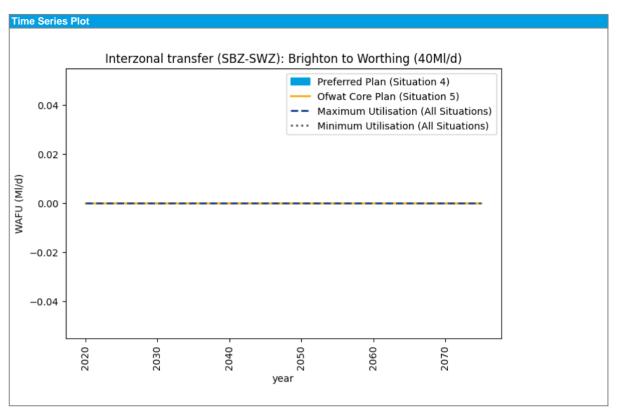
-227.92



| 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       |









#### Description

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

#### **Key Facts**

#### 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

| 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] 0.10   |  |
|   |  |

#### 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 - MI/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

Scalability and modularity [Best Value Metric]

SWS 'catchment raw water quality risks'
[Best Value Metric]

Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |

# Customer support

|   | 4 |
|---|---|
| Customer Preference [Best Value Metric] 1 | 1 |
| Flexibility                               | 1 |

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

| Financial and Cost morniation                   |   |
|---|---|
| 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]           | - |

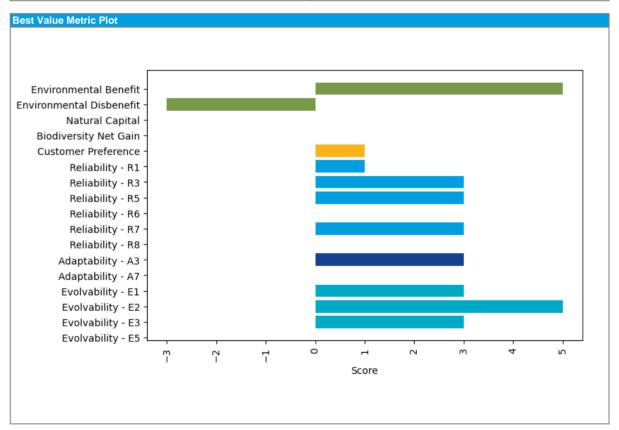
#### Other

| Other   |  |
|---------|--|
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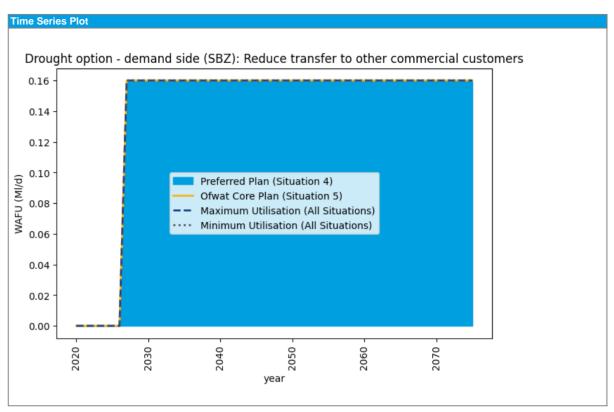
3.00



| 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                              |       |









#### Description

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

#### **Key Facts**

| 4 | atri. |
|---|-------|

#### 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/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 - MI/d risk [Best Value Metric]    | 0.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |
| Environment (inc INNS)                     |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Contribution to biodiversity

Customer behaviour

SWS 'catchment raw water quality risks' [Best Value Metric]

[Best Value Metric] 0.00

| Links | and | constraints |  |
|-------|-----|-------------|--|
|       |     |             |  |
|       |     |             |  |

Constituent WRSE Option IDs

Constraints specific to the option

ustomer support

Customer Professore [Part Value Matrial]

| 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 [MI/d]                   |      |
| Maximum annual utilisation [MI/d]                    | 4.00 |
| Environment  |      |

Maximum annual utilisation [MI/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]

#### **Financial and Cost Information**

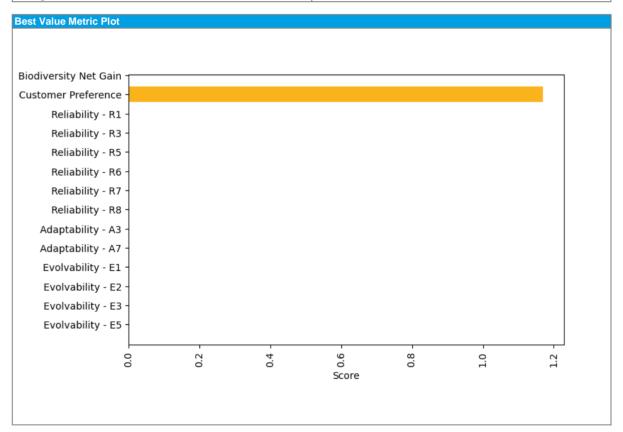
| Metric  |      |
|---|------|
| Capex [£m]                                      | -    |
| Financing Cost [£m]                             | -    |
| Opex [£m]                                       | 0.00 |
| Embodied Carbon [tCo2e]                         | -    |
| Average operational carbon emissions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

#### Other

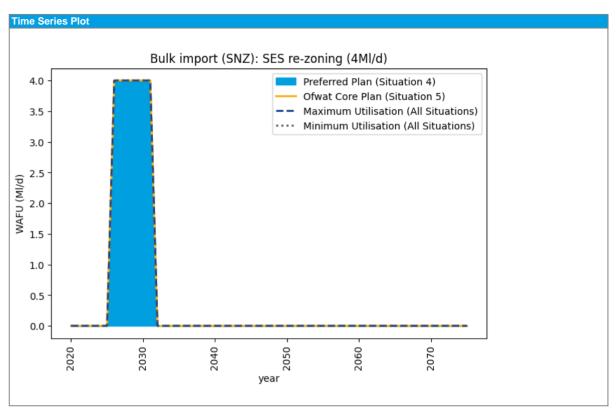
|   | Metric |  |
|---|--------|--|
| Γ |        |  |



| Metric  |    |
|---|----|
| Environmental: Environmental Benefit  |    |
| Environmental: Environmental Disbenefit   |    |
| Environmental: Natural Capital  |    |
| Environmental: Biodiversity Net Gain  |    |
| Social: Customer Preference   | 1. |
| Resilience: Reliability R1 – Uncertainty of option supply/demand benefit                      | 0. |
| Resilience: Reliability R3 – Risk of failure of planned service due to other physical hazards | 0. |
| 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                              |    |









01/04/2025

Redacted

#### Description

| Supply and Transfer Options                    |  |  |
|--|--|--|
| Name   | Bulk import (KTZ): SEW Kingston to Near Canterbury (2MI/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 [MI/d] | 2 |
|-------------------------|---|
| DO 1:200 Peak [MI/d]    | 2 |
| DO 1:500 Average [MI/d] | 2 |
| DO 1:500 Peak [MI/d]    | 2 |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| Laillest start date   | 01/04/2023 |
|---|------------|
| Risk and uncertainty with option                                      |            |
| An assessment of the risks and uncertainty associated with the option |            |
| General - MI/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

Constituent WRSE Option IDs

SWS 'catchment raw water quality risks' [Best Value Metric]

[Best ValueMetric] 0.00

| Links | and | constraints |
|-------|-----|-------------|
|       |     |             |

| Constraints specific to the option |  |
|------------------------------------|--|
| Customer support                   |  |
|                                    |  |

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 [MI/d] 0.78

Maximum annual utilisation [MI/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?

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**

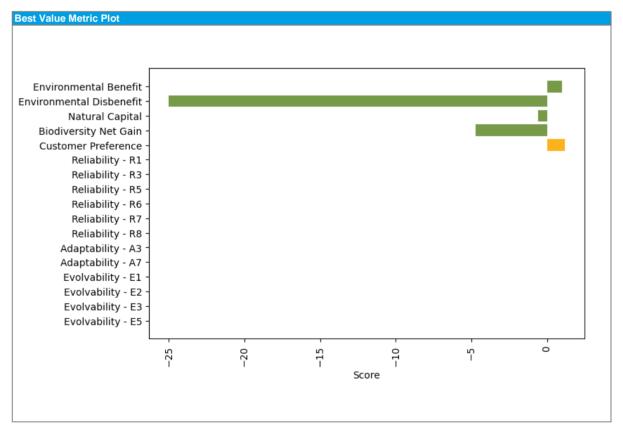
| Metric  |      |
|---|------|
| Capex [£m]                                      | -    |
| Financing Cost [£m]                             | -    |
| Opex [£m]                                       | 0.00 |
| Embodied Carbon [tCo2e]                         | -    |
| Average operational carbon emissions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

#### Other

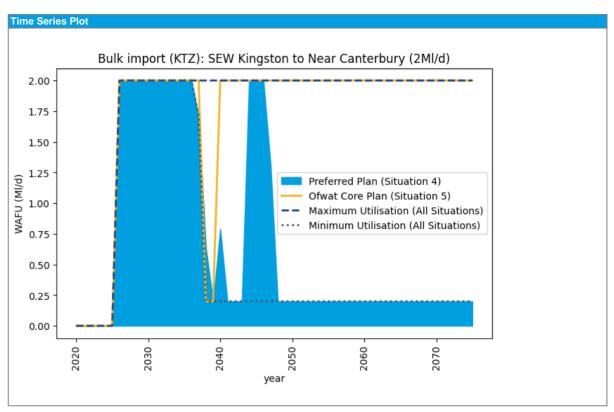
| Metric |  |  |
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| Metric  |        |
|---|--------|
| Environmental: Environmental Benefit  | 1.00   |
| Environmental: Environmental Disbenefit   | -25.00 |
| Environmental: Natural Capital  | -0.57  |
| Environmental: Biodiversity Net Gain  | -4.73  |
| 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      |









#### Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Groundwater (SHZ): Reconfigure Rye Wells (1.5Ml/d)                          |
|  | 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    |
| Source of Supply and main operational features | WSW on site and no further treatment is required.                           |
| Area over which option is to be implemented    | Sussex Hastings   |
| Dependencies                                   |   |

#### **Key Facts**

#### 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 [MI/d] | 1.5 |
| DO 1:200 Peak [MI/d]    | 1.5 |
| DO 1:500 Average [MI/d] | 1.5 |
| DO 1:500 Peak [MI/d]    | 1.5 |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

Earliest start date

Customer behaviour

| Risk and uncertainty with option                                      |      |
|---|------|
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/d risk [Best Value Metric]                               | 1.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

#### **Drinking Water Safety**

Links and constraints

A drinking water safety plan assessing the risks to drinking water quality

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best Value Metric] 0.00

| 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 [MI/d]

Maximum annual utilisation [MI/d]

1.50

Maximum annual utilisation [MI/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**

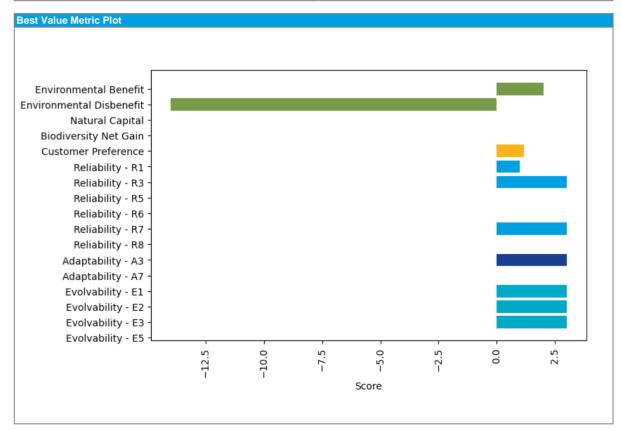
| Metric  |        |
|---|--------|
|   |        |
| Capex [£m]                                      | 3.53   |
| Financing Cost [£m]                             | 4.99   |
| Opex [£m]                                       | 6.92   |
| Embodied Carbon [tCo2e]                         | 463.30 |
| Average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

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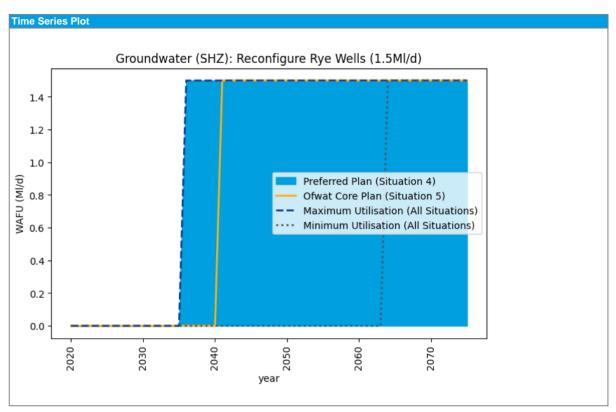
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| Metric  |        |
|---|--------|
| Environmental: Environmental Benefit  | 2.00   |
| Environmental: Environmental Disbenefit   | -14.00 |
| Environmental: Natural Capital  |        |
| Environmental: Biodiversity Net Gain  |        |
| Social: 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                              |        |









#### Description

| Supply and Transfer Options                 |   |
|---|---|
| Name  | Recycling (SHZ): Hastings to Darwell (15.3Ml/d)   |
|   | 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

# 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

| · ·                     | 7.7  |
|-------------------------|------|
| DO 1:200 Average [MI/d] | 15.3 |
| DO 1:200 Peak [MI/d]    | 15.3 |
| DO 1:500 Average [Ml/d] | 15.3 |
| DO 1:500 Peak [MI/d]    | 15.3 |
|                         |      |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option Investigation time [Years]

Earliest start date

Customer behaviour

| Risk and uncertainty with option                                      |      |
|---|------|
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/d risk [Best Value Metric]                               | 4.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

**Drinking Water Safety** 

A drinking water safety plan assessing the risks to drinking water quality

Constituent WRSE Option IDs

Contribution to biodiversity

SWS 'catchment raw water quality risks

2.71 [Best Value Metric]

| -IIIIV2 | anu | COHSU | aiiits |
|---------|-----|-------|--------|
|         |     |       |        |

Constraints specific to the option **Customer support** 1.15

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 [MI/d] 15.30

Maximum annual utilisation [MI/d] Environment

SEA benefit effect 2.00 -31.00 SEA negative effect WFD Assessment [Y/N] Risk of non compliance against WFD Objectives? HRA assessment [Y/N] Appropriate Assessment Required [Y/N]

**Financial and Cost Information** 

| i manorar and ocot miorination                  |           |
|---|-----------|
| 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

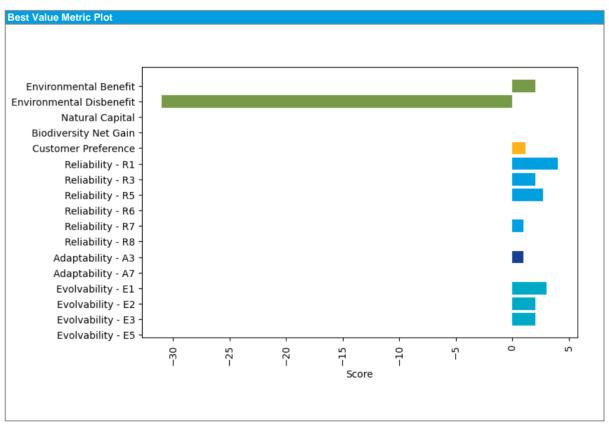
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| Metric  |     |  |
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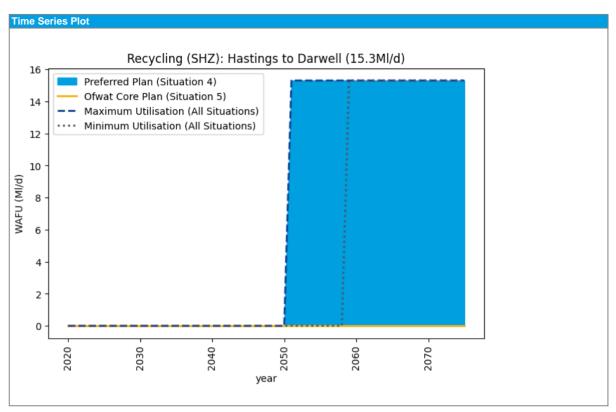
15.30



| 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                              |             |









#### 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**

# 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 [MI/d] |
| DO 1:500 Peak [MI/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 - MI/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]

[Best Value Metric] 0.00

|  | inks | 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 [MI/d]  | 0.00     |
| Maximum annual utilisation [MI/d]   | 0.00     |
| Environment   |          |
| SEA benefit effect  |          |
| SEA negative effect   |          |

| Maximum annual utilisation [MI/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**

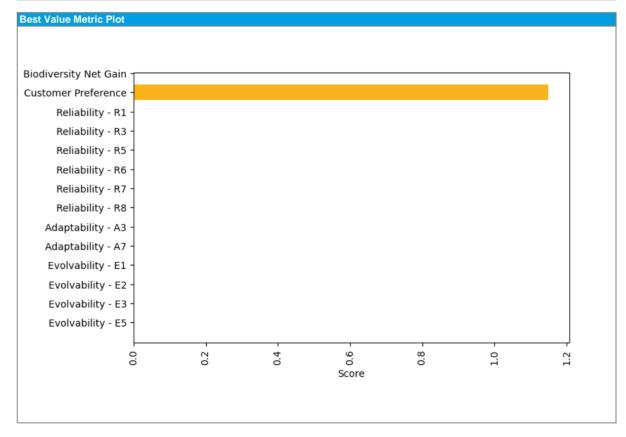
| Metric  |      |
|---|------|
| Capex [£m]                                      | 0.99 |
| Financing Cost [£m]                             | 2.29 |
| Opex [£m]                                       | -    |
| Embodied Carbon [tCo2e]                         | -    |
| Average operational carbon emissions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

#### Other

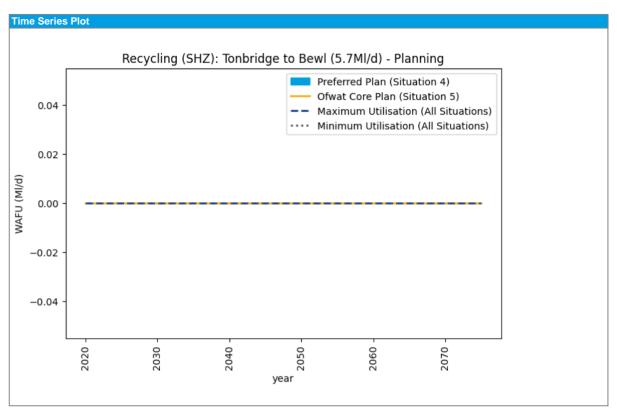
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|---|--------|--|
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| Metric  |      |
|---|------|
| Environmental: Environmental Benefit  |      |
| Environmental: Environmental Disbenefit   |      |
| Environmental: Natural Capital  |      |
| 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    |









#### 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**

| 4 | atri. |
|---|-------|

# 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/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 - MI/d risk [Best Value Metric]                               | 0.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |
| Customer hehaviour  |      |

### Drinking Water Safety

A drinking water safety plan assessing the risks to drinking water quality

SWS 'catchment raw water quality risks'
[Best Value Metric]

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

Contribution to biodiversity

| _ini | ks | and | cons | traint | S |
|------|----|-----|------|--------|---|
|      |    |     |      |        |   |

| Liliks 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 [MI/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?  |          |
|   |          |

### **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]           | - |

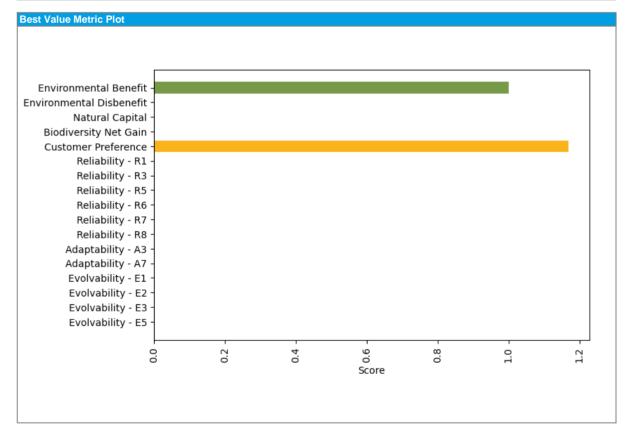
#### Other

| Metric |  |  |
|--------|--|--|
| ſ      |  |  |

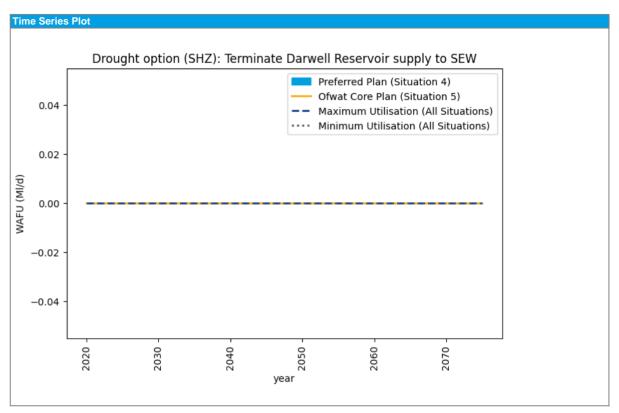
0.00



| 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    |









#### Description

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

#### **Key Facts**

#### 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

| The benefit of a demand side option should be based on a dry year |      |
|---|------|
| DO 1:200 Average [MI/d]   |      |
| DO 1:200 Peak [MI/d]  |      |
| DO 1:500 Average [Ml/d]   | 0.05 |
| DO 1:500 Peak [MI/d]  | 0.05 |
|   |      |

#### 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 - MI/d risk [Best Value Metric]                               | 1.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

SWS 'catchment raw water quality risks'

[Best Value Metric]

Customer behaviour

Links and constraints

| Redacted | Constituent WRSE Option IDs        |
|----------|------------------------------------|
|          | Constraints specific to the option |

# Customer support

| A STATE OF THE PARTY.                   |   |
|---|---|
| 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 [MI/d] 0.05

Maximum annual utilisation [MI/d] 0.05

Financial and Cost Information

| 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]           | - |

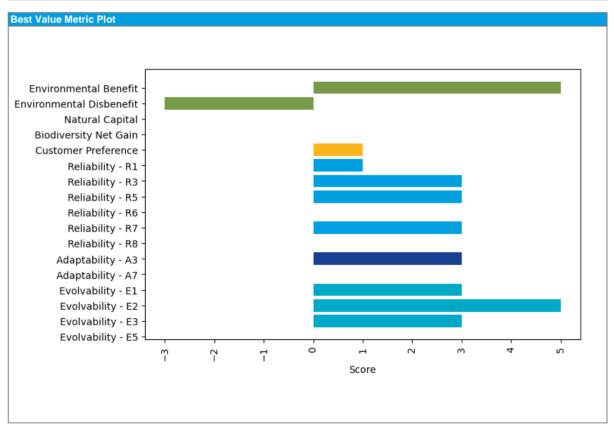
#### Other

| Other  |        |  |
|--------|--------|--|
| Matria |        |  |
|        | Wetric |  |
|        |        |  |
|        |        |  |

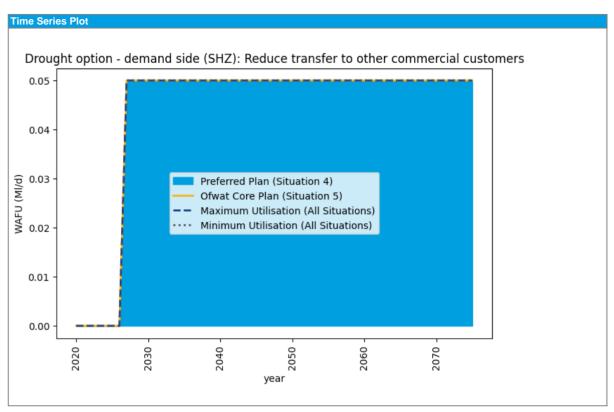
3.00



| 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                              |       |









#### 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**

# 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 [MI/d] |      |  |
|-------------------------|------|--|
| DO 1:200 Peak [Ml/d]    |      |  |
| DO 1:500 Average [MI/d] |      |  |
| DO 1:500 Peak [MI/d]    | 1.96 |  |

### 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 - MI/d risk [Best Value Metric]    | 1.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |
| Environment (inc INNS)                     |      |
| Customor hohaviour                         |      |

### Drinking Water Safety

A drinking water safety plan assessing the risks to drinking water quality

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best Value Metric] 0.00

| _ini | KS a | and | cons | train | ts |
|------|------|-----|------|-------|----|
|      |      |     |      |       |    |

| 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 [MI/d]  | 1.60     |
| Maximum annual utilisation [MI/d]   | 1.60     |

| Maximum annual utilisation [MI/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**

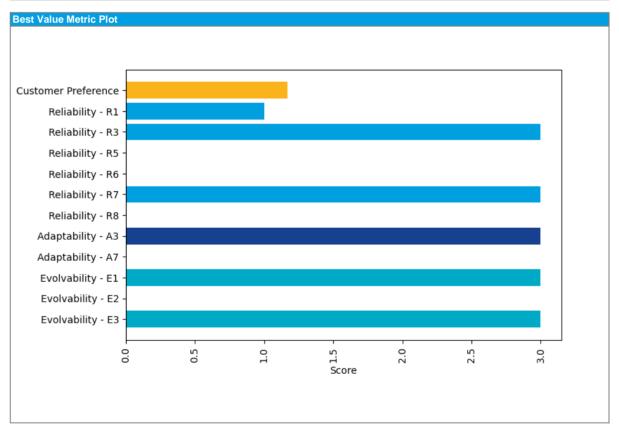
| Metric  |   |
|---|---|
| Capex [£m]                                      | - |
| Financing Cost [£m]                             | - |
| Opex [£m]                                       | - |
| Embodied Carbon [tCo2e]                         | - |
| Average operational carbon emissions [tCo2e/yr] |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

#### Other

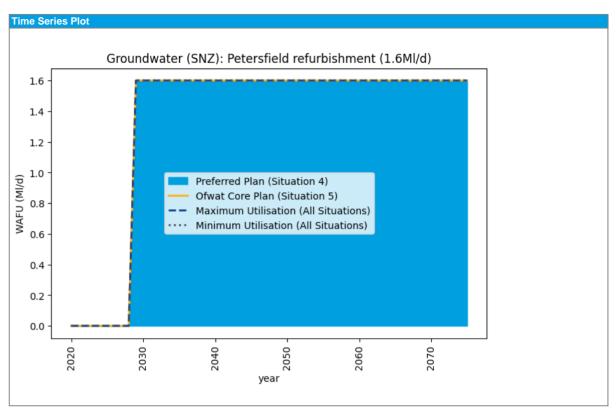
| Metric |  |  |
|--------|--|--|
| ſ      |  |  |



| 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                              |  |









#### 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**

# 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/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 - MI/d risk [Best Value Metric]                               | 1.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |
| Customer hehaviour  |      |

### 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 |          |  |  |

| A description of now the option will be utilised and |      |
|--|------|
| the impact on operating costs and carbon costs       |      |
| Expected annual utilisation [MI/d]                   |      |
| Maximum annual utilisation [MI/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**

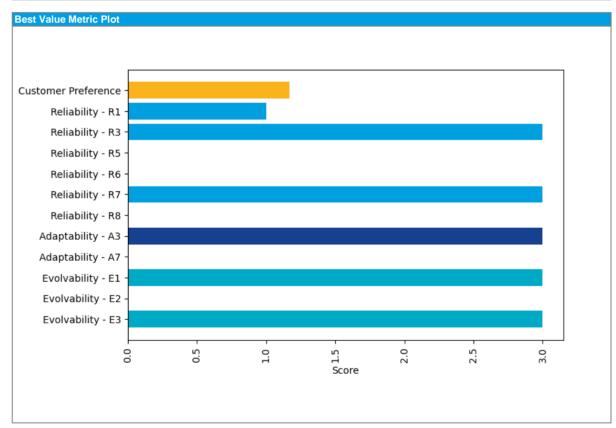
| Metric  |   |
|---|---|
| Capex [£m]                                      | - |
| Financing Cost [£m]                             | - |
| Opex [£m]                                       | - |
| Embodied Carbon [tCo2e]                         | - |
| Average operational carbon emissions [tCo2e/yr] |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

#### Other

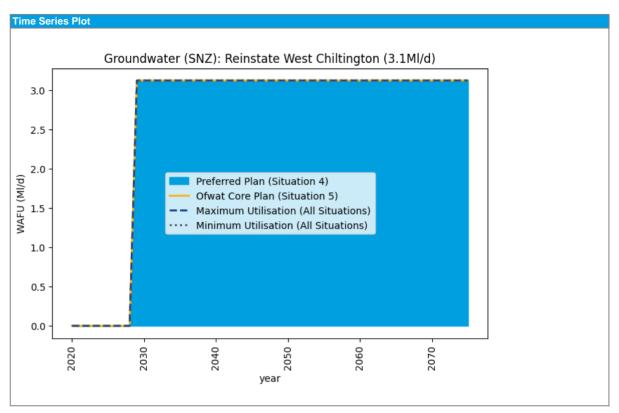
| Metric |  |
|--------|--|
|        |  |



| 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                              |  |









#### Description

| Supply and Transfer Options  |  |  |
|--|--|--|
| Name   | Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d)  |  |
| Course of Course and assistant for the state of the state | 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 |  |
| Source of Supply and main operational features   | 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 deman | nd saving (based on the capacity of the |
| option) or water saved over 80 years.  | g (                                     |
|  |   |
| The benefit of a demand side option should be based on a dry year                      |   |
| DO 1:200 Average [MI/d]  | 6.                                      |
| DO 1:200 Peak [MI/d]   | 6.                                      |
| DO 1:500 Average [MI/d]  | 6.                                      |
| DO 1:500 Peak [MI/d]   | 6.1                                     |
| Lead in time   |   |
| An estimate of the lead-in time needed to investigate and implement the option         |   |
| 741 Commate of the lead in time needed to investigate and implement the option         |   |
| Investigation time [Years]   |   |
| Earliest start date  | <u> </u>                                |
| Risk and uncertainty with option   |   |
| An assessment of the risks and uncertainty   |   |
| associated with the option   |   |
| General - MI/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  | 1.10                                    |
| 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 [MI/d]   | 6.80                                    |
| Maximum annual utilisation [MI/d]  | 6.80                                    |
| Environment  | 0.00                                    |
| SEA benefit effect   | 1.00                                    |
| SEA negative effect  | -33.0                                   |
| WFD Assessment [Y/N]   | -33.0                                   |
| Risk of non compliance against WFD Objectives?   |   |
| HRA assessment [Y/N]   |   |

### **Financial and Cost Information**

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]
Contribution to biodiversity

| 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 |

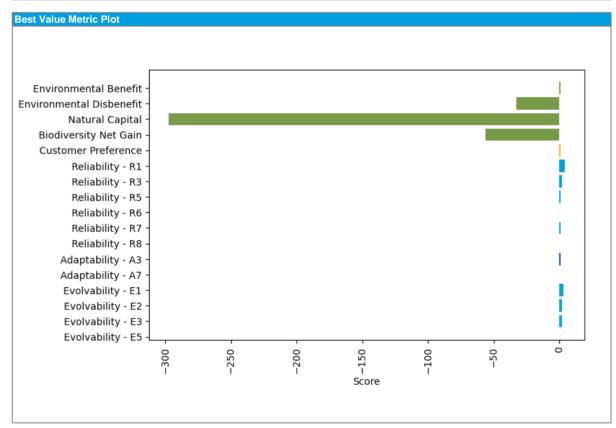
# Other Metric

-56.41

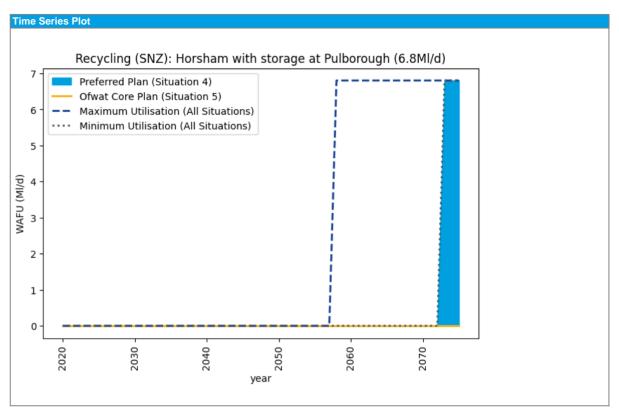
Recycling (SNZ): Horsham with storage at Pulborough (6.8MI/d)



| 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                              |         |









#### Description

| Supply and Transfer Options Name               | Recycling (SNZ): Littlehampton with direct river discharge (15Ml/d)       |
|--|---|
| 110110   | 2 0 1 7   |
|  | 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.          |
| Source of Supply and main operational features |   |
| Area over which option is to be implemented    | Sussex North  |
| Dependencies                                   |   |

| 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 bas                    | ed on a dry year   |
| DO 1:200 Average [MI/d]  | 14.96  |
| DO 1:200 Peak [MI/d]   | 14.96  |
| DO 1:500 Average [MI/d]  | 14.96  |
| DO 1:500 Peak [MI/d]   | 14.96  |
| Lead in time   |  |
| An estimate of the lead-in time needed to investiga                  | te and implement the ontion  |
| 7 th commute of the load in time heeded to invodiga                  | to and imploment 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 - MI/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  | 1.10   |
| 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 [MI/d]                                   |  |
| Maximum annual utilisation [MI/d]                                    | 14.96  |
| Environment  | 14.30  |
| SEA benefit effect   | 2.00   |
| SEA penefit effect   |  |
| WFD Assessment [Y/N]   |  |
|  |  |
| Risk of non compliance against WFD Objectives?  HRA assessment [Y/N] |  |
|  |  |
| Appropriate Assessment Required [Y/N] Contribution to biodiversity   |  |
| Contribution to blodiversity   | -186.87  |

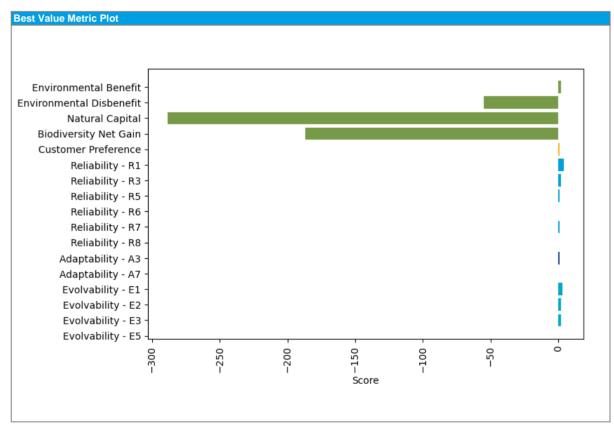
### **Financial and Cost Information**

| Metric  |           |
|---|-----------|
| Capex [£m]                                      |           |
| 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    |

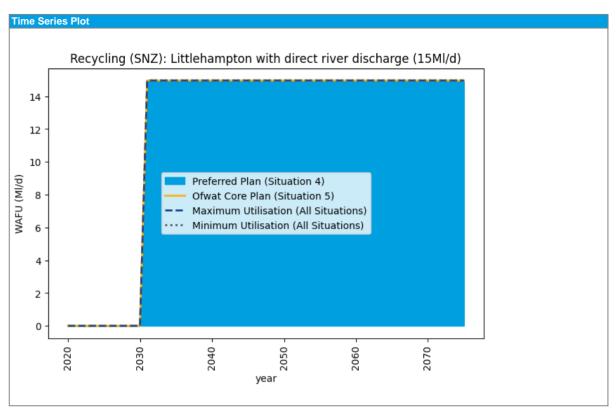
Metric



| 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                              |         |









#### Description

| Supply and Transfer Options                    |  |
|--|--|
| Name   | Groundwater (SNZ): New borehole at Petworth (4MI/d)                      |
|  | 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.          |
| Source of Supply and main operational features | 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 bas  | ed on a dry year   |
| DO 1:200 Average [MI/d]  |  |
| DO 1:200 Peak [MI/d]   |  |
| DO 1:500 Average [MI/d]  |  |
| DO 1:500 Peak [MI/d]   |  |
| Lead in time   |  |
| An estimate of the lead-in time needed to investiga  | te and implement the option  |
| and the second s |  |
| Investigation time [Years]   |  |
| Earliest start date  |  |
| Risk and uncertainty with option   |  |
| An assessment of the risks and uncertainty   |  |
| associated with the option   |  |
| General - MI/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  | Redacte  |
| Constituent WRSE Option IDS  | Redacte  |
|  |  |
| Constraints specific to the option   |  |
| Customer support   |  |
| Customer Preference [Best Value Metric]  | 1.40   |
| 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   |  |
| Eveneted enguel utilization [MI/d]   | 2.01   |

### **Financial and Cost Information**

Environment

Expected annual utilisation [Ml/d] Maximum annual utilisation [Ml/d]

Risk of non compliance against WFD Objectives?

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]
Contribution to biodiversity

SEA benefit effect

SEA negative effect

WFD Assessment [Y/N]

| Metric  |        |
|---|--------|
| Capex [£m]                                      |        |
| 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

3.91 4.00

1.00

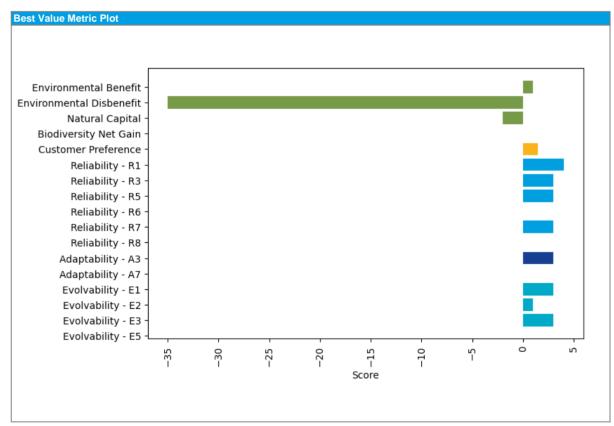
-35.00

-0.02

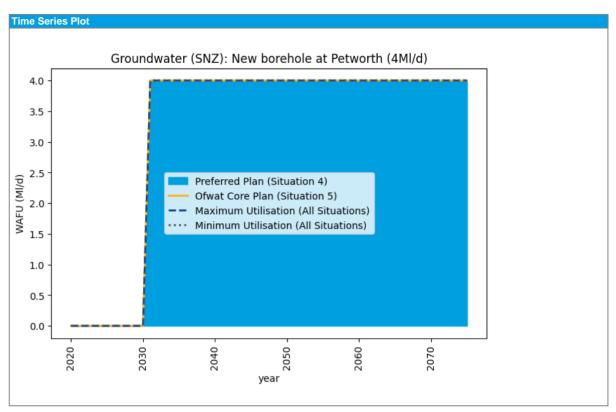
Groundwater (SNZ): New borehole at Petworth (4MI/d)



| 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                              |        |









01/04/2039

2.00

# Description

| Supply and Transfer Options                    |   |
|--|---|
| Name   | Storage (SNZ): River Adur Offline Reservoir (19.5MI/d) - Construction   |
|  | 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 |
| Source of Supply and main operational features | 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**

# 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

| ·                       | 7 7  |
|-------------------------|------|
| DO 1:200 Average [MI/d] | 19.5 |
| DO 1:200 Peak [MI/d]    | 19.5 |
| DO 1:500 Average [MI/d] | 19.5 |
| DO 1:500 Peak [MI/d]    | 19.5 |

#### 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 - MI/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]

| Links | and | con | stra | ints |
|-------|-----|-----|------|------|

| Redacted | Constituent WRSE Option IDs        |
|----------|------------------------------------|
|          | Constraints specific to the option |

# Customer support

| L | outsiner support                               |      |
|---|--|------|
| ſ | Customer Preference [Best Value Metric]        | 1.26 |
|   | Flexibility                                    |      |
| ſ | 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 [MI/d]

19.50 Maximum annual utilisation [MI/d] 19.50 Environment

SEA benefit effect SEA negative effect

6.00 -35.00 WFD Assessment [Y/N] Risk of non compliance against WFD Objectives? HRA assessment [Y/N] Appropriate Assessment Required [Y/N] 73.53 Contribution to biodiversity

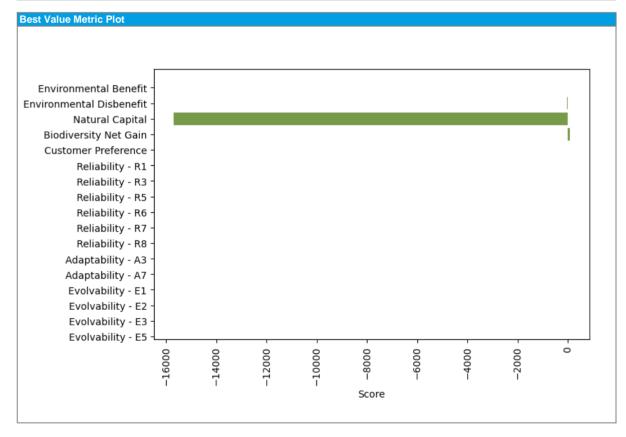
#### **Financial and Cost Information**

| 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    |

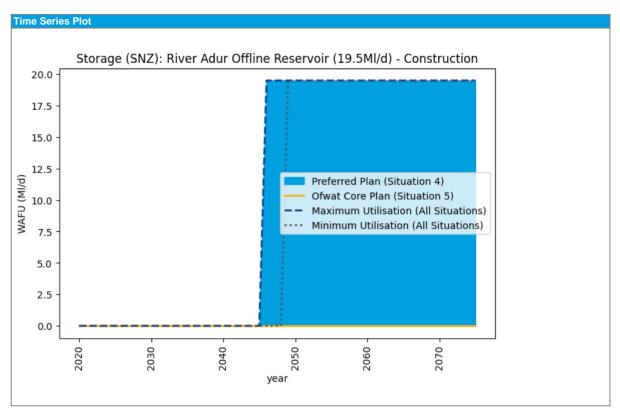
| ther   |  |  |
|--------|--|--|
| letric |  |  |



| 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                              |           |









# 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**

# 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/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 - MI/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]

[Best Value Metric]

| 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 [MI/d]  | 0.00     |
| Maximum annual utilisation [MI/d]   | 0.00     |

| Maximum annual utilisation [MI/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]           | -     |

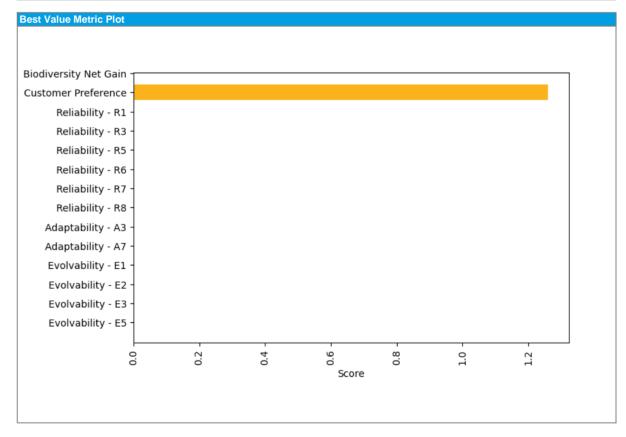
# Other

| Metric |  |
|--------|--|
|        |  |

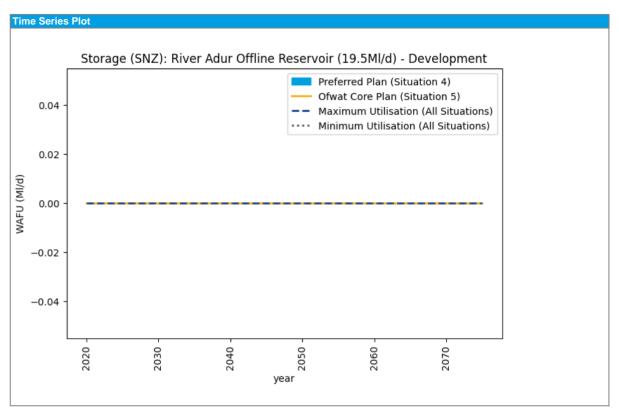
0.00



| 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    |









# Description

| Supply and Transfer Options                    |  |  |  |
|--|--|--|--|
| Name   | Storage (SNZ): River Adur Offline Reservoir (19.5Ml/d) - Planning            |  |  |
|  | 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 |  |  |
| Source of Supply and main operational features | 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**

| 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 [MI/d]    |   |
| DO 1:500 Average [MI/d] |   |
| DO 1:500 Peak [MI/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 - MI/d risk [Best Value Metric]                               | 0.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |
| Customer hehaviour  |      |

# **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best ValueMetric] 0.00

# Links and constraints

| Constituent WRSE Option IDs        | Redacted |
|------------------------------------|----------|
| Constraints specific to the option |          |

# Customer support

| A CONTRACT OF THE CONTRACT OF |      |
|---|------|
| 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 applied utilization [MI/d]   | 0.00 |

| Expected arrival utilisation [ivii/u]          | 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                   |      |
|  |      |

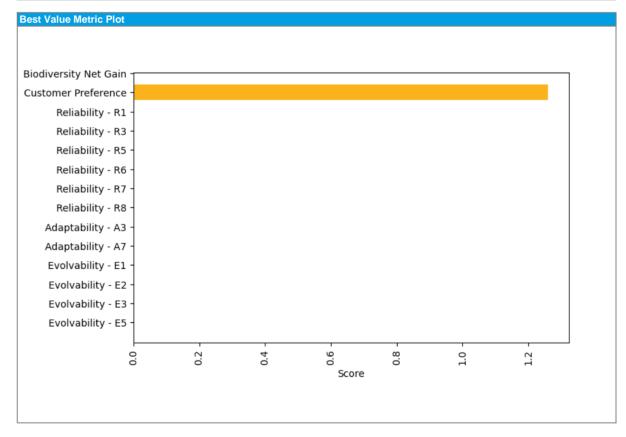
# **Financial and Cost Information**

| 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]           | -    |

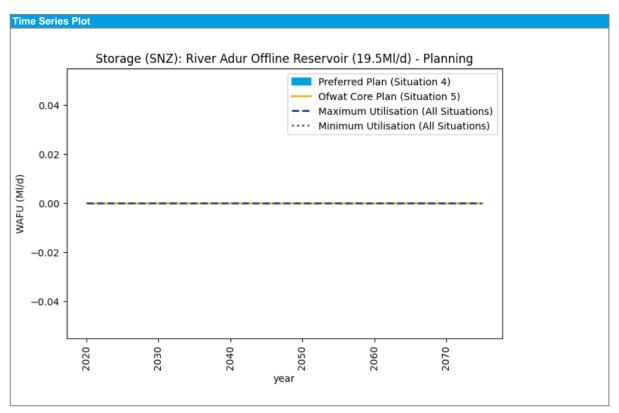
| Metric |  |
|--------|--|
|        |  |



| 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    |









# Description

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

# **Key Facts**

|  | -4 |  |
|--|----|--|

# 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

| benefit of a demand side option should be based on a dry year |  |
|---|--|
| DO 1:200 Average [MI/d]                                       |  |
| DO 1:200 Peak [MI/d]  |  |
| DO 1:500 Average [Ml/d]                                       |  |
| DO 1:500 Peak [MI/d]  |  |
|   |  |

# Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| Earliest start date                                   | 01/04/2035             |
|---|------------------------|
| Risk and uncertainty with option                      |                        |
| An assessment of the risks and uncertainty            |                        |
| associated with the option                            |                        |
| General - MI/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 d | drinking water quality |
| SWS 'catchment raw water quality risks'               |                        |
| [Best Value Metric]                                   | 0.00                   |
| Links and constraints                                 |                        |
|   |                        |

| 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 [MI/d]                   | 15.36    |
| Maximum annual utilisation [MI/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]                                 |          |
| A '  |          |

Appropriate Assessment Required [Y/N]

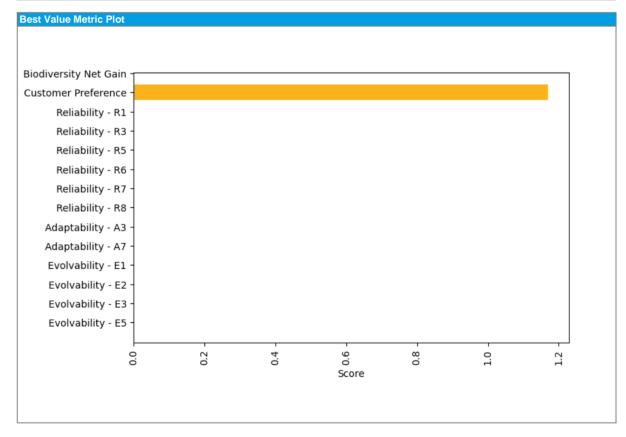
Contribution to biodiversity

| 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]           | -         |  |

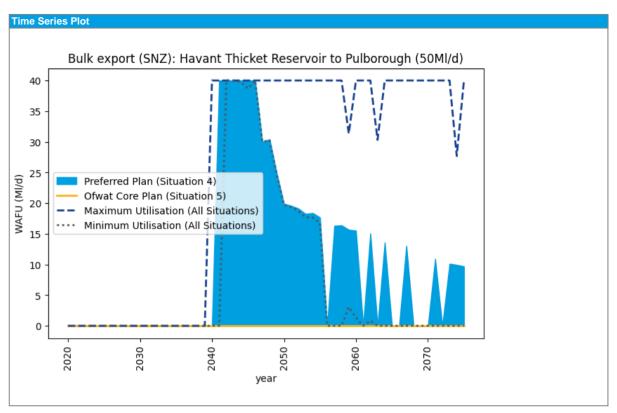
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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    |









Redacted

# 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**

# 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/d]    |

# Lead in time

An estimate of the lead-in time needed to investigate and implement the option Investigation time [Years]

| Earliest start date                        | 01/04/2035 |
|--|------------|
| Risk and uncertainty with option           |            |
| An assessment of the risks and uncertainty |            |
| associated with the option                 |            |
| General - MI/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

Constituent WRSE Option IDs

SWS 'catchment raw water quality risks'
[Best Value Metric]

0.00

| L | .ın | ks | and | constraints |  |
|---|-----|----|-----|-------------|--|
|   |     |    |     |             |  |
|   |     |    |     |             |  |

| Constraints specific to the option |  |
|------------------------------------|--|
| Customer support                   |  |
|                                    |  |

| 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 [MI/d]             | 10.00  |
|  | Maximum annual utilisation [MI/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? |        |
|  | LIDA   |        |

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N] -136.32 Contribution to biodiversity

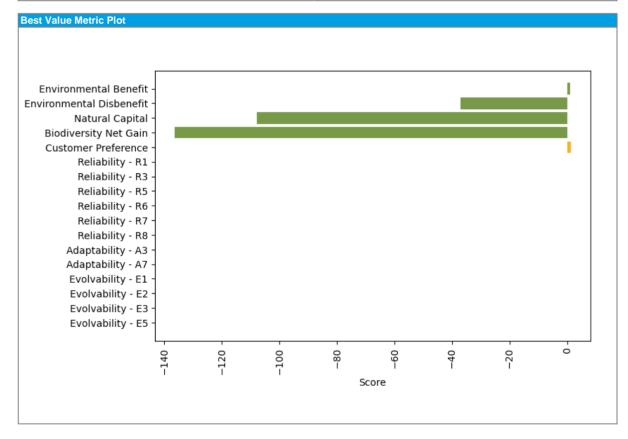
# **Financial and Cost Information**

| 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    |

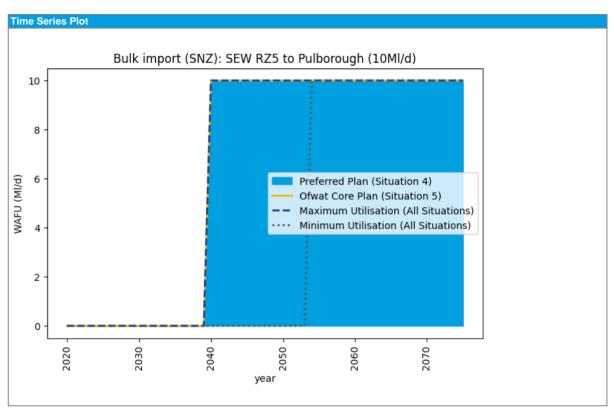
| Metric |  |  |
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| Metric  |         |
|---|---------|
| Environmental: Environmental Benefit  | 1.00    |
| Environmental: Environmental Disbenefit   | -37.00  |
| Environmental: Natural Capital  | -107.89 |
| Environmental: Biodiversity Net Gain  | -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       |









01/04/2033

-14.00

# 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 (10MI/d) |
| Area over which option is to be implemented    | Sussex North                           |
| Dependencies                                   |  |

#### **Key Facts**

# Deployable Output (DO)

Risk and uncertainty with option

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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/d]    |

# Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

Earliest start date

SEA benefit effect SEA negative effect

WFD Assessment [Y/N]

Contribution to biodiversity

| An assessment of the risks and uncertainty           |                        |
|--|------------------------|
| associated with the option                           |                        |
| General - MI/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 ValueMetric]                                   | 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 [MI/d]                   | 10.00                  |
| Maximum annual utilisation [MI/d]                    | 10.00                  |
|  | ·                      |

# **Financial and Cost Information**

Risk of non compliance against WFD Objectives?

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

| 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    |

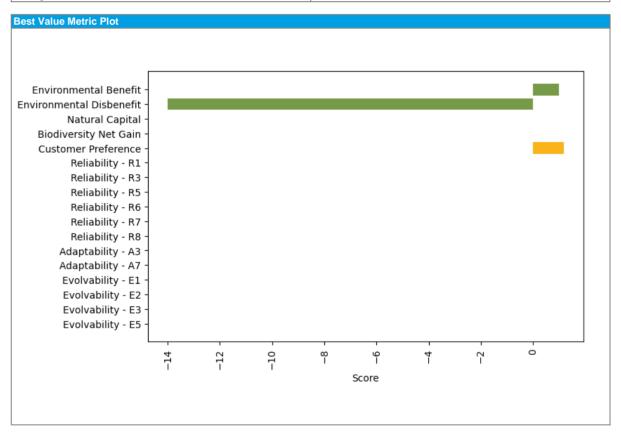
### Other

Environment

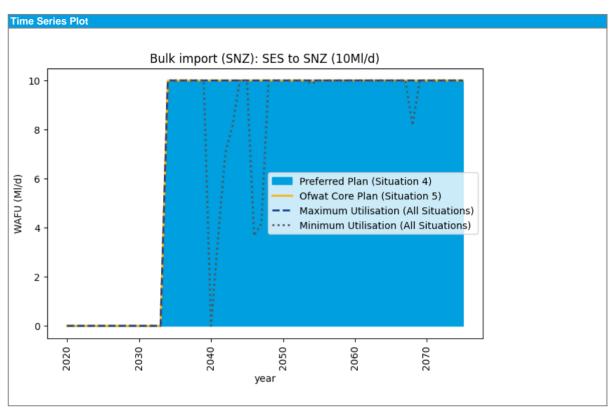
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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      |









#### 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

| 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 [MI/d] | 15.37 |
|-------------------------|-------|
| DO 1:200 Peak [MI/d]    | 15.37 |
| DO 1:500 Average [Ml/d] | 4.87  |
| DO 1:500 Peak [MI/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

Customer behaviour

| Risk and uncertainty with option                                      |      |
|---|------|
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/d risk [Best Value Metric]                               | 1.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

# **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Constituent WRSE Option IDs

Contribution to biodiversity

SWS 'catchment raw water quality risks

2.00 [Best Value Metric]

# Links and constraints

| Constraints specific to the option |  |
|------------------------------------|--|
| istomer support                    |  |

# Сι

Environment

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 [MI/d] 5 98 Maximum annual utilisation [MI/d] 23.00

SEA benefit effect

-7.00 SEA negative effect WFD Assessment [Y/N] Risk of non compliance against WFD Objectives? HRA assessment [Y/N] Appropriate Assessment Required [Y/N]

**Financial and Cost Information** 

| i manorar and door milormation                  |       |  |
|---|-------|--|
| 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

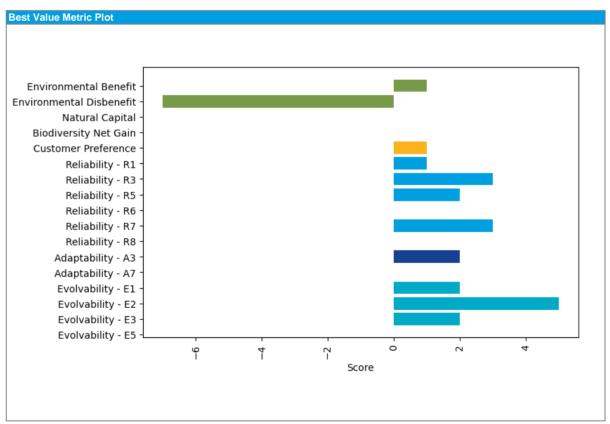
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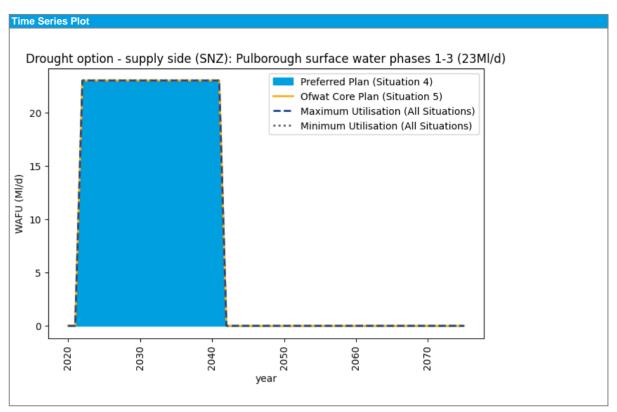
1.00



| 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                              |       |









# Description

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

# **Key Facts**

| 8.6 |  |
|-----|--|

# 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

| The benefit of a demand olde option endula be based on a dry year |      |
|---|------|
| DO 1:200 Average [MI/d]   |      |
| DO 1:200 Peak [MI/d]  |      |
| DO 1:500 Average [MI/d]   | 0.11 |
| DO 1:500 Peak [MI/d]  | 0.11 |

# 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 - MI/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]

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       |          |

| A description of now the option will be dillised and | 1     |
|--|-------|
| the impact on operating costs and carbon costs       |       |
| Expected annual utilisation [Ml/d]                   | 0.11  |
| Maximum annual utilisation [MI/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]                                 |       |

Financial and Cost Information

| Financial and Cost morniation                   |   |
|---|---|
| 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

| Other  |  |
|--------|--|
| Matria |  |
| Metric |  |
|        |  |
|        |  |

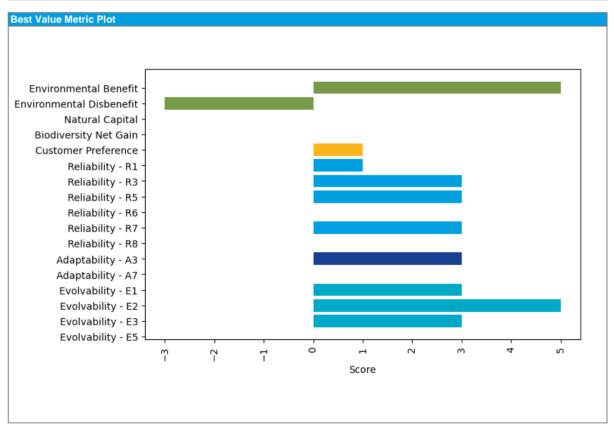
Appropriate Assessment Required [Y/N]

Contribution to biodiversity

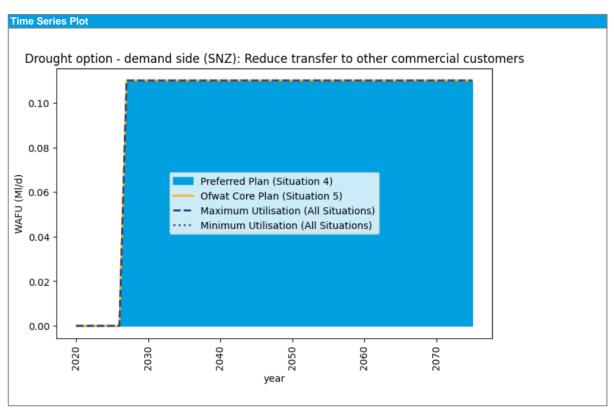
3.00



| 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                              |       |









15

# Description

| Supply and Transfer Options                    |                                       |
|--|---------------------------------------|
| Name   | Storage (TMS): SESRO 150Mm3 (SWS 30%) |
| Source of Supply and main operational features |                                       |
| Area over which option is to be implemented    |                                       |
| Dependencies                                   |                                       |

#### **Key Facts**

# 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/d]    |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option Investigation time [Years]

| 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 - MI/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'             |                           |
| [Rest Value Metric]                                 |                           |

# Links and constraints

Constituent WRSE Option IDs

Constraints specific to the option

# Customer support

Customer Preference [Best Value Metric]

# 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 [MI/d]
Maximum annual utilisation [MI/d] 70.91 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]                          |            |
| Average Incremental Cost (AIC) [p/m3]           | 102.45     |

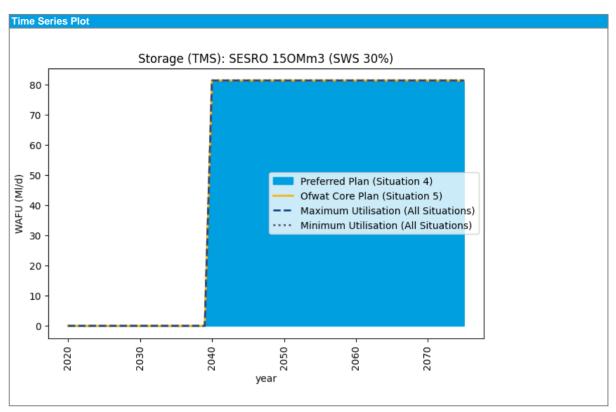
| Metric |  |
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| Metric  |  |
|---|--|
| Environmental: Environmental Benefit  |  |
| Environmental: Environmental Disbenefit   |  |
| Environmental: Natural Capital  |  |
| Environmental: Biodiversity Net Gain  |  |
| Social: Customer Preference   |  |
| 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 |  |  |
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|                        |  |  |
|                        |  |  |
|                        |  |  |







#### 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   |
|  | After one of: Desalination (SWZ): Tidal River Arun (10Ml/d), Desalination |
| Dependencies                                   | (SWZ): Tidal River Arun (20MI/d) - Construction                           |

#### **Key Facts**

| 0.0 | -4 |  |  |
|-----|----|--|--|

# 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 [MI/d] | 20  |
| DO 1:200 Peak [MI/d]    | 20  |
| DO 1:500 Average [MI/d] | 20  |
| DO 1:500 Peak [MI/d]    | 20  |

#### 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 - MI/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

2.00

-100.29

01/04/2037

# Links and constraints

Constituent WRSE Option IDs Redacted Constraints specific to the option

# Customer support

1.01 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 [MI/d] 18.61 Maximum annual utilisation [MI/d] 20.00 Environment

SEA benefit effect SEA negative effect WFD Assessment [Y/N]

Contribution to biodiversity

-37.00 Risk of non compliance against WFD Objectives? HRA assessment [Y/N] Appropriate Assessment Required [Y/N]

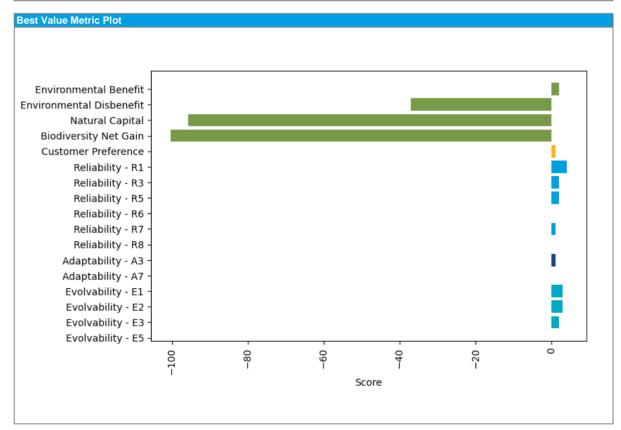
**Financial and Cost Information** 

| i manerar and oost imormation                   |           |
|---|-----------|
| 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    |

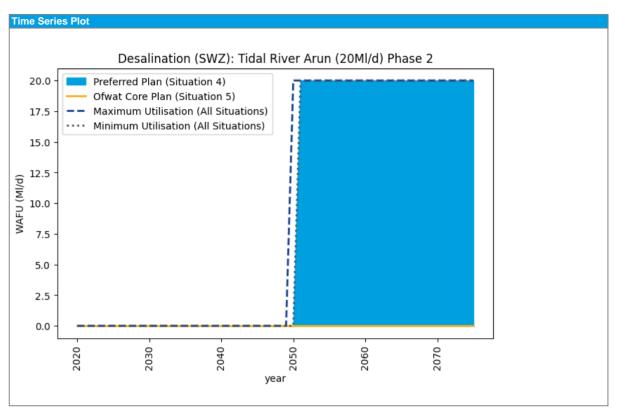
| Metric |  |
|--------|--|
|        |  |



| 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                              |         |









# 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**

# 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 [MI/d] | 10 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 10 |
| DO 1:500 Average [MI/d] | 10 |
| DO 1:500 Peak [MI/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 - MI/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 | v water quality risks' |  |
|-----|---------------|------------------------|--|
|     |               | [Best Value Metric]    |  |

| [best value wether]         | 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                             |      |
| C =   =                                 | 2    |

| 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 [MI/d]                   | 3.47 |
| Maximum annual utilisation [MI/d]                    | 8.34 |

| Maximum annual utilisation [Mi/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**

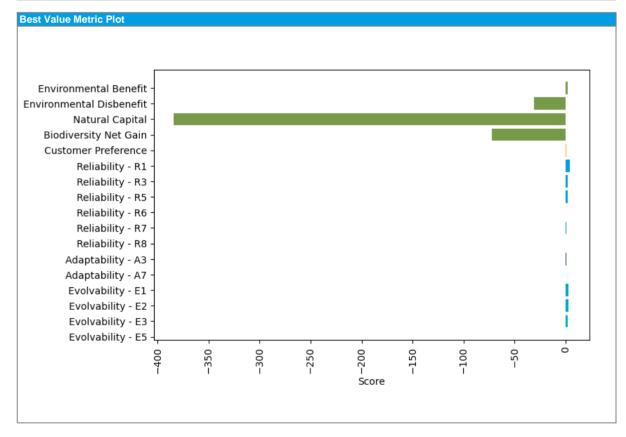
| Metric  |           |
|---|-----------|
| Capex [£m]                                      | 394.47    |
| Financing Cost [£m]                             | 490.69    |
| Opex [£m]                                       | 209.91    |
| Embodied Carbon [tCo2e]                         | 21,530.26 |
| Average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

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

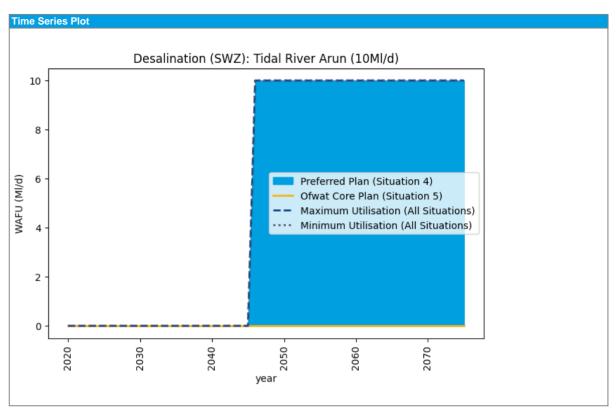
| Metric |  |
|--------|--|
|        |  |



| 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                              |         |









#### Description

| Supply and Transfer Options                    |  |
|--|--|
| Name   | Treatment capacity (SWZ): Pulborough winter transfer stage 1 (2MI/d)   |
|  | 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 2MId 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. |
| Source of Supply and main operational features |  |
| Area over which option is to be implemented    | Sussex Worthing  |
| Dependencies                                   |  |

#### **Key Facts**

# 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 [MI/d] | 2 |
|-------------------------|---|
| DO 1:200 Peak [MI/d]    | 2 |
| DO 1:500 Average [MI/d] | 2 |
| DO 1:500 Peak [MI/d]    | 2 |

#### 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 - MI/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]

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 2 00

Expected annual utilisation [MI/d] Maximum annual utilisation [MI/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]

**Financial and Cost Information** 

Appropriate Assessment Required [Y/N]

Contribution to biodiversity

| 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   |

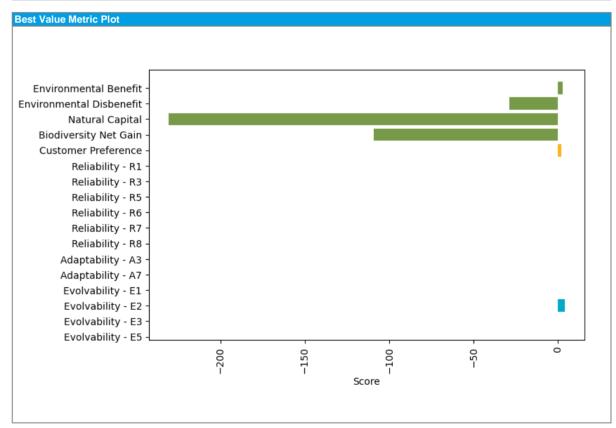
-109.07

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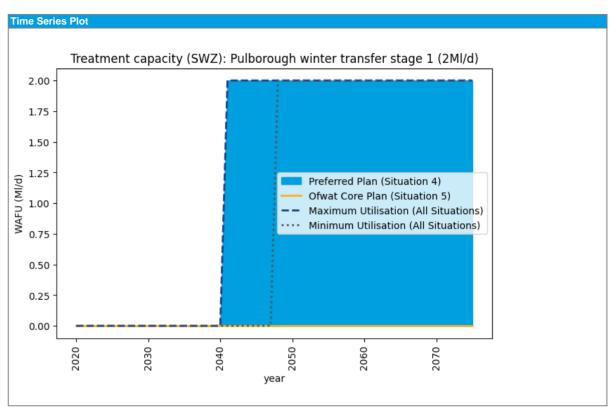
Metric



| 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                              |         |









#### 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**

# 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/d]    |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| Edilicst start date   |      |
|---|------|
| Risk and uncertainty with option                                      |      |
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/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]

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

Contribution to biodiversity

[Best Value Metric] 0.00

| _ini | KS | and | cons | strai | nts |
|------|----|-----|------|-------|-----|
|      |    |     |      |       |     |

| 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 [MI/d]  | 12.41    |
| Maximum annual utilisation [MI/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?  |          |

### **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] |          |
| Total Carbon Cost [£m]                          | 4.29     |
| Average Incremental Cost (AIC) [p/m3]           | 23.92    |

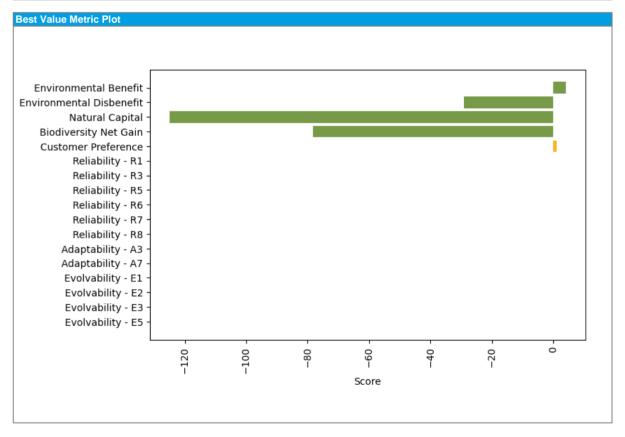
#### Other

| Metric |  |
|--------|--|
|        |  |

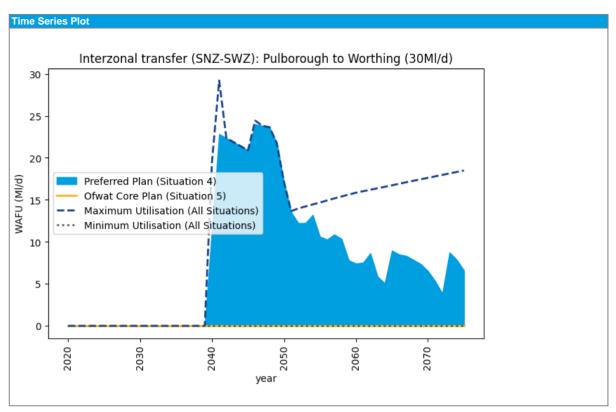
-78.32



| 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       |









#### Description

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

# Key Facts

# 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 [MI/d] | 2.5 |
|-------------------------|-----|
| DO 1:200 Peak [MI/d]    | 0   |
| DO 1:500 Average [MI/d] | 2.5 |
| DO 1:500 Peak [MI/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

| Risk and uncertainty with option                                      |      |
|---|------|
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/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

Contribution to biodiversity

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]

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 [MI/d] 1.25 Maximum annual utilisation [MI/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]          |       |

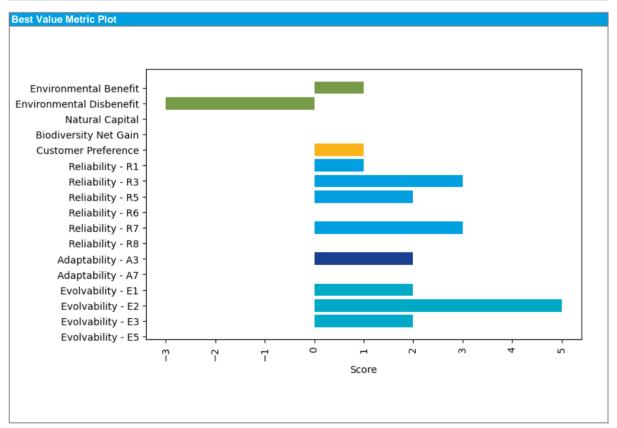
**Financial and Cost Information** 

| i indirorar arra occi imorrination              |       |
|---|-------|
| 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 |

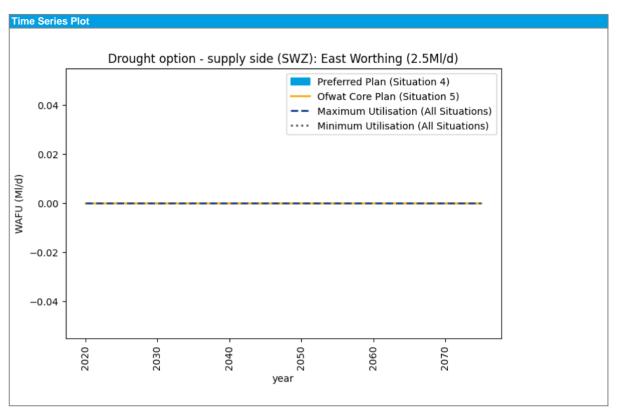
| Metric |   |  |
|--------|---|--|
|        | 1 |  |
|        |   |  |



| 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                              |       |









#### Description

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

### **Key Facts**

| 8.6 |  |  |
|-----|--|--|

# 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

| The belief of a demand dide option chedia be bac | od on a dry your |
|--|------------------|
| DO 1:200 Average [MI/d]                          |                  |
| DO 1:200 Peak [MI/d]                             |                  |
| DO 1:500 Average [MI/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]

|  | ·    |
|--|------|
| Earliest start date                        |      |
| Risk and uncertainty with option           |      |
| An assessment of the risks and uncertainty |      |
| associated with the option                 |      |
| General - MI/d risk [Best Value Metric]    | 1.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |
| Environment (inc INNS)                     |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

adularity [Past Value Matria]

Contribution to biodiversity

Customer behaviour

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        |

Flexibility

| Scalability and modulanty [best value wether]        | 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 [MI/d]                    | 0.07 |
| 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]

Financial and Cost Information

| 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

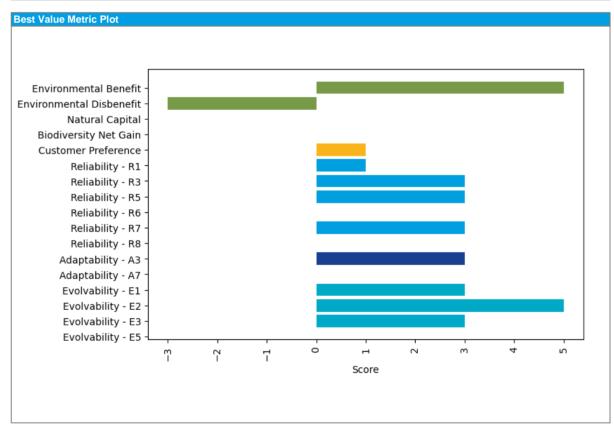
| Metric |  |
|--------|--|
|        |  |

3.00

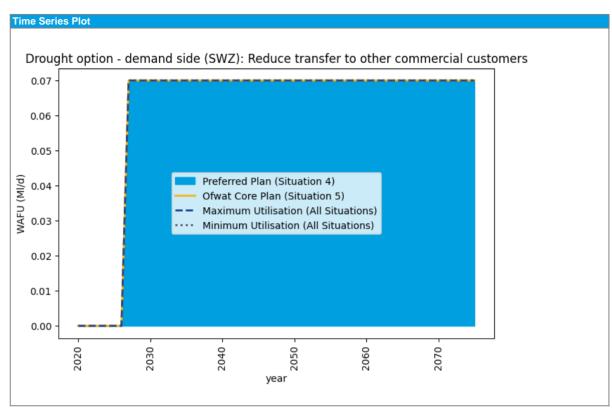
-3.00



| 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                              |       |









#### 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   |
|  | 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 |
|  | MI/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (50     |
|  | MI/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (200    |
|  | MI/d), Bulk import (HSE): SESRO and/or STT to Itchen WSW - raw (120    |
|  | MI/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 &    |
| Dependencies                                   | Development  |

#### **Key Facts**

|  | ш |  |
|--|---|--|
|  |   |  |
|  |   |  |

# 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [MI/d] |
| DO 1:500 Peak [MI/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 - MI/d risk [Best Value Metric]    | 0.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |
| Environment (inc INNS)                     |      |

# Drinking Water Safety

Links and constraints

A drinking water safety plan assessing the risks to drinking water quality

Customer behaviour

SWS 'catchment raw water quality risks'
[Best Value Metric]

| k | Redacte | Constituent WRSE Option IDs        |
|---|---------|------------------------------------|
| 7 |         | 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 [MI/d] 57.24

Maximum annual utilisation [MI/d] 64.06

| [1.1.7]         | Expedica armaar ameaticii [iiii/a]             |
|-----------------|--|
| [MI/d] 64.06    | Maximum annual utilisation [MI/d]              |
|                 | Environment                                    |
|                 | SEA benefit effect                             |
| effect -44.00   | SEA negative effect                            |
|                 | WFD Assessment [Y/N]                           |
| tives?          | Risk of non compliance against WFD Objectives? |
| [Y/N]           | HRA assessment [Y/N]                           |
|                 | Appropriate Assessment Required [Y/N]          |
| rersity -218.96 | Contribution to biodiversity                   |

#### Financial and Cost Information

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

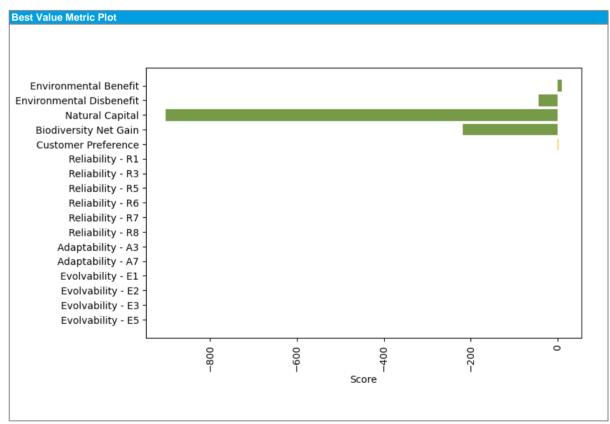
0.00

| 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     |

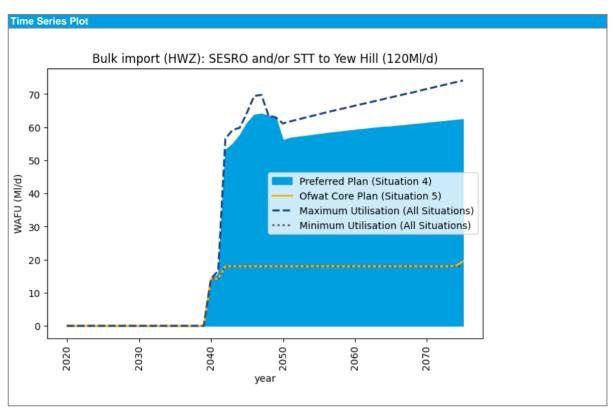
| • |  |  |
|---|--|--|
|   | Matria   |  |
|   | Metric Control of the |  |
|   |  |  |
|   |  |  |
|   |  |  |



| 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       |









#### Description

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

# Key Facts

#### 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

| The bollone of a dollaria dide option enough be based on a dry your |  |
|---|--|
| DO 1:200 Average [MI/d]   |  |
| DO 1:200 Peak [MI/d]  |  |
| DO 1:500 Average [MI/d]   |  |
| DO 1:500 Peak [MI/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 - MI/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        |  |
|------------------------------------|--|
| Constraints enacific to the antion |  |

# Customer support

Environment

| 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 [MI/d]

Expected annual utilisation [MI/d] 0.00

Maximum annual utilisation [MI/d] 0.00

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

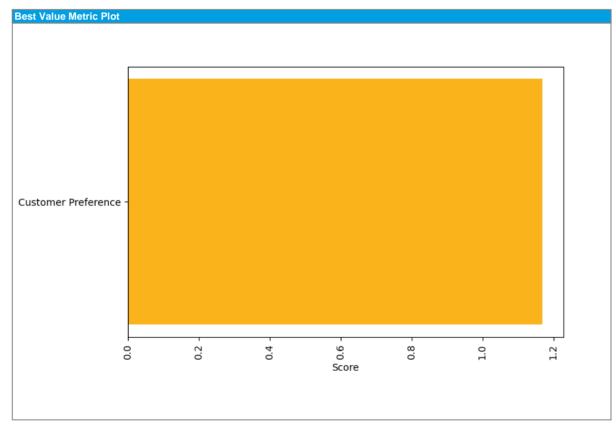
#### Financial and Cost Information

| i manorar and dost miorination                  |        |  |
|---|--------|--|
| 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]           | -      |  |

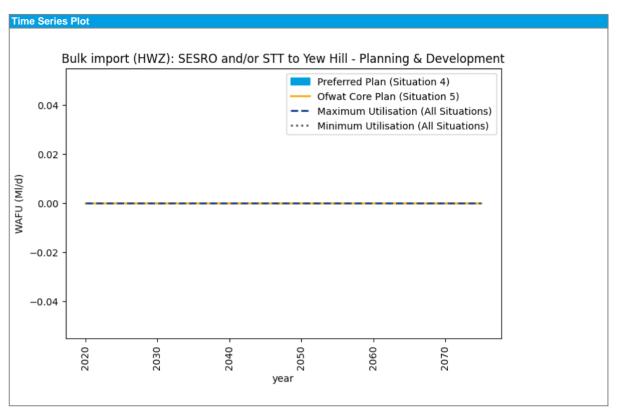
| Metric |  |
|--------|--|
|        |  |



| Metric  |   |
|---|---|
| Environmental: Environmental Benefit  | T |
| Environmental: Environmental Disbenefit   | İ |
| Environmental: Natural Capital  | I |
| 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 | I |
| Resilience: Reliability R5 – Catchment/raw water quality risks (incl. climate change)         |   |
| Resilience: Reliability R6 – Capacity of catchment services                                   | Ī |
| Resilience: Reliability R7 – Risk of failure of planned service due to exceptional shocks     |   |
| Resilience: Reliability R8 – Improvements to soil health                                      | 1 |
| 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   | 1 |
| Resilience: Evolvability E3 – Reliance on external bodies to deliver changes                  |   |
| Resilience: Evolvability E5 – Collaborative landscape management                              | _ |









#### 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**

# 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 [MI/d] |
|-------------------------|
| DO 1:200 Peak [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/d]    |

#### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

Earliest start date

Customer behaviour

| Risk and uncertainty with option                                      |      |
|---|------|
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/d risk [Best Value Metric]                               | 1.00 |
|   |      |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

#### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

SWS 'catchment raw water quality risks'
[Best Value Metric]

[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]
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 [MI/d]  | 7.69  |
| Maximum annual utilisation [MI/d]   | 7.74  |
| Environment   |       |
| SEA benefit effect  | 4.00  |
| SEA negative effect   | -3.00 |
| WFD Assessment [Y/N]  |       |

SEA negative effect -3.0

WFD Assessment [Y/N]

Risk of non compliance against WFD Objectives?

HRA assessment [Y/N]

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]
Contribution to biodiversity

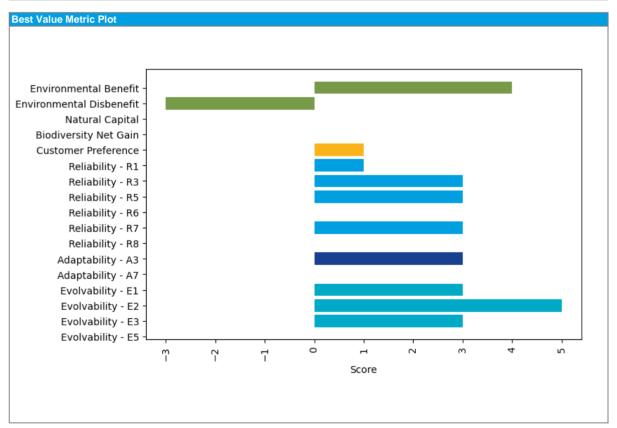
### **Financial and Cost Information**

| 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]           | - |

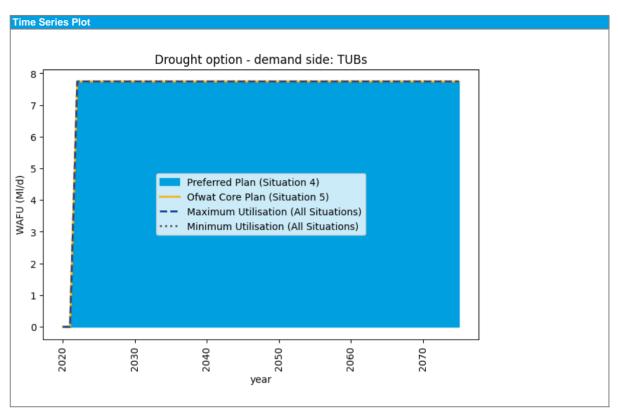
| Metric |  |
|--------|--|
|        |  |



| 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                              |       |









#### 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**

# 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/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 - MI/d risk [Best Value Metric]                               | 1.00 |
| General - text  |      |
| Impact of Climate Change on yield                                     |      |
| Environment (inc INNS)  |      |

### **Drinking Water Safety**

A drinking water safety plan assessing the risks to drinking water quality

Contribution to biodiversity

Customer behaviour

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best Value Metric] 3.00

| Lin | ks | and | cons | traints |
|-----|----|-----|------|---------|
|     |    |     |      |         |

| 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        |

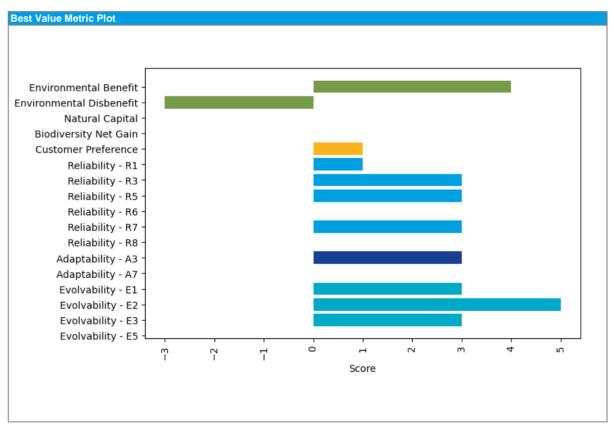
| A description of how the option will be utilised and |       |  |
|--|-------|--|
| the impact on operating costs and carbon costs       |       |  |
| Expected annual utilisation [MI/d]                   | 15.10 |  |
| Maximum annual utilisation [MI/d]                    | 15.21 |  |
| Environment  |       |  |
| SEA benefit effect                                   |       |  |
| SEA negative effect                                  | -3.00 |  |
| WFD Assessment [Y/N]                                 |       |  |
| Risk of non compliance against WFD Objectives?       |       |  |
| HRA assessment [Y/N]                                 |       |  |
| Appropriate Assessment Required [V/N]                |       |  |

| 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]           | - |  |

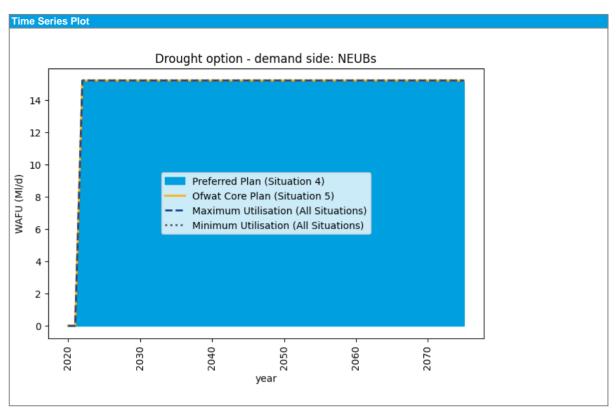
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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                              |       |









#### Description

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

#### **Key Facts**

# 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 [MI/d] | 17 |
|-------------------------|----|
| DO 1:200 Peak [Ml/d]    | 17 |
| DO 1:500 Average [MI/d] | 17 |
| DO 1:500 Peak [MI/d]    | 17 |

### 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 - MI/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

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best ValueMetric]

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 [MI/d]  | 11.52    |
| Maximum annual utilisation [MI/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]   |          |
|   |          |

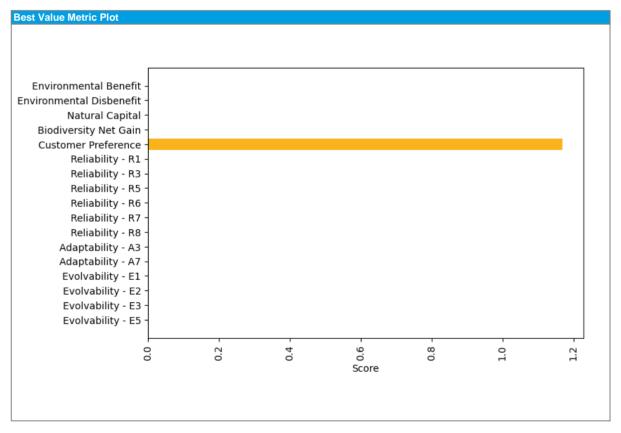
### **Financial and Cost Information**

| 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]           | -    |

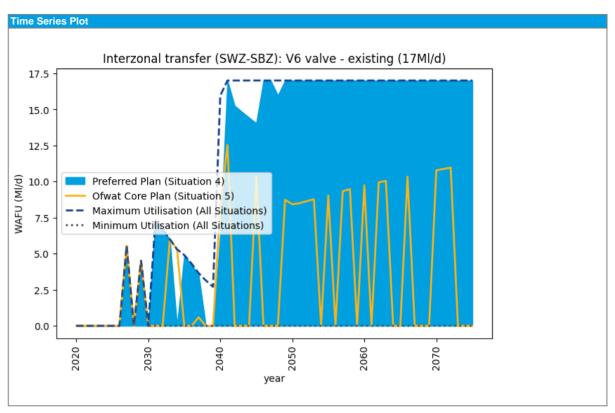
| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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    |









0.00

#### 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 (13MI/d) |
| Area over which option is to be implemented    | Sussex Brighton  |
| Dependencies                                   | After: Interzonal transfer (SWZ-SBZ): V6 valve - existing (17Ml/d)   |

#### **Key Facts**

# 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 [MI/d] | 13 |
|-------------------------|----|
| DO 1:200 Peak [MI/d]    | 13 |
| DO 1:500 Average [Ml/d] | 13 |
| DO 1:500 Peak [MI/d]    | 13 |

### Lead in time

An estimate of the lead-in time needed to investigate and implement the option

Investigation time [Years]

| Latilest start date   |      |
|---|------|
| Risk and uncertainty with option                                      |      |
| An assessment of the risks and uncertainty associated with the option |      |
| General - MI/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]

HRA assessment [Y/N]
Appropriate Assessment Required [Y/N]

Contribution to biodiversity

[Best Value Metric]

| inks and constra | ints |
|------------------|------|
|------------------|------|

| 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 [MI/d]                   |          |  |
| Maximum annual utilisation [MI/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?       |          |  |
| 115.4  |          |  |

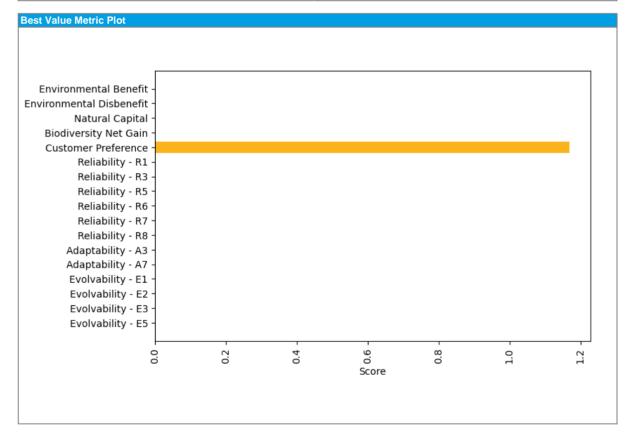
# Financial and Cost Information

| 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]           | -    |

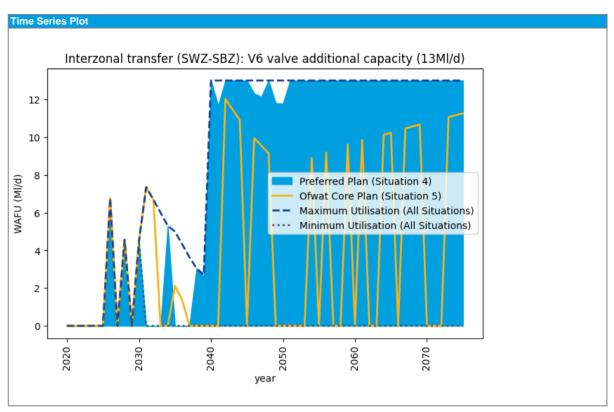
| Metric |  |
|--------|--|
|        |  |



| 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    |









#### 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**

### 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 [MI/d]    |
| DO 1:500 Average [Ml/d] |
| DO 1:500 Peak [MI/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 - MI/d risk [Best Value Metric]    | 0.00 |
| General - text                             |      |
| Impact of Climate Change on yield          |      |
| Environment (inc INNS)                     |      |
| Customer hehaviour                         |      |

### Drinking Water Safety

A drinking water safety plan assessing the risks to drinking water quality

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best Value Metric] 0.00

| Lin | ks a | and | cons | traın | ts |
|-----|------|-----|------|-------|----|
|     |      |     |      |       |    |

| 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 [MI/d]             | 0.00 |
| Maximum annual utilisation [MI/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]          |      |

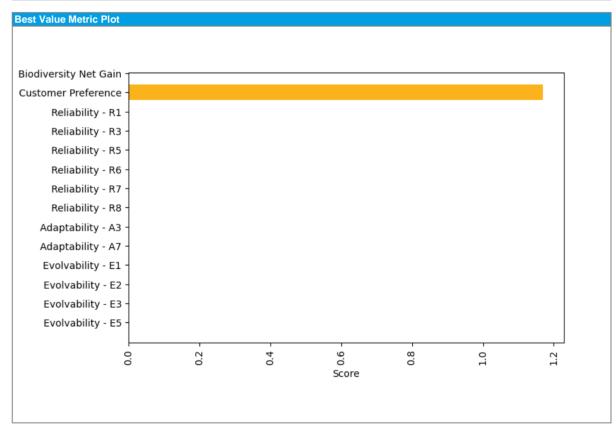
Financial and Cost Information

| 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]           | -    |

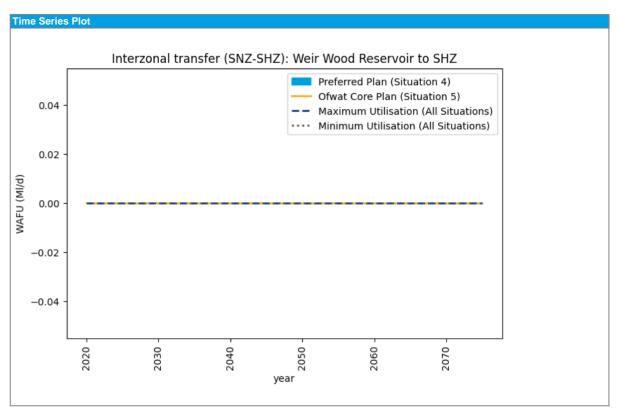
| Metric |  |
|--------|--|
|        |  |



| 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    |









0.00

#### 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**

| 4 | atri. |
|---|-------|

# 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 [MI/d]    | 18 |
| DO 1:500 Average [MI/d] | 18 |
| DO 1:500 Peak [MI/d]    | 18 |

#### 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 - MI/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

Contribution to biodiversity

SWS 'catchment raw water quality risks'
[Best Value Metric]

[Best Value Metric]

# Links and constraints

| LITIKS AND CONSTITUTES  |          |  |  |  |
|---|----------|--|--|--|
| 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 [MI/d]  | 6.73     |  |  |  |
| Maximum annual utilisation [MI/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]   |          |  |  |  |
|   |          |  |  |  |

### **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]           | -    |

| Metric |  |  |
|--------|--|--|
|        |  |  |



| 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    |

