	Arun Valley Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Storage (SNZ): River Adur Offline Reservoir (19.5Ml/d)	2046	7	No effect	n/a - No LSE	-	No AE I/C	Construction effects avoidable with best practice. Operation of Petworth GW and Horsham Recycling will affect flows in the River Arun as it passes the site; the precise effect cannot be precisely quantified (in part due to limited information on the effects of Petworth on surface water flows in the Rother) but if a precautionary position is assumed then the options i/c will (depending on the precise parameters of operation) reduce flows in the Arun by ~13.5Ml/d; this would be ~11.5% of Q95 flows in the Arun adjacent to the designated site, and ~0.6% of Q10 flows. As noted, however, Q95 flows per se are arguably of limited relevance to the site integrity, and although high flows in the river may impede discharges from the wetlands the hydrology of the wetlands is largely determined by groundwater inputs and subsequent interventionist management of the water levels in the ditch network; and, in any case, the impact of the options on high flows is negligible. Additional investigations will be required to confirm the precise operational parameters of the schemes including timing of implementation annually, but operational mitigation for flow impacts is likely to be achievable and so adverse i/c effects would not be anticipated. It should be noted that there is sufficient time to accurately characterise the effects of the options through additional design and investigation as the schemes are not required until 2039. NO additional effects from PW option.
SWS	Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d)	2058	0.3/DS	Uncertain	No AE	Operation of the scheme will reduce flows in the River Arun downstream of Horsham as a proportion of the WwTW discharge will be recovered. The Arun Valley SAC/SPA/Ramsar are functionally linked to the River Arun being a series of wet meadows which are periodically flooded/ inundated. However, evidence from ongoing studies indicates that the wetlands are not fundamentally supported fluvially (i.e. they are are not reliant / dependent on (for example) winter flooding from the Arun to maintain water levels), and whilst there may be some localised inputs from the river where sluices etc. are not operating correctly, the vast majority of the site is not supported by inward flows from the Arun but by groundwater or other surface water inputs from the catchment (i.e. the dominant direction of flow is from the wetlands to the river). High flows in the river may impede discharges from the wetlands, but the hydrology of the wetlands is largely determined by groundwater inputs and subsequent interventionist management of the water levels in the ditch network. The operation of the scheme will potentially reduce flows in the Arun by 9.5Ml/d, which be around 8% of the Q95 flow (lowest flows) in the Arun based on gauging flow data from the Rother at Hardham, Station No. 41009; and Arun at Pallingham, Station No. 41014 (note this is conservative). However, the impact on low flows within the river is not considered critical to the designated site integrity for the reasons noted above; at high (flood) flows (e.g. Q10) the maximum impact is around 0.4%, which is not considered likely to adversely affect the site habitats given the understood hydrological functioning of the site. On this basis, adverse operational effects would not be anticipated. Construction effects are all minor and avoidable with normal measures.	No AE I/C	
SWS	Groundwater (SNZ): New borehole at Petworth (4Ml/d)	2031	4.4/DS	Uncertain	No AE	The hydrological impact of the Petworth abstraction on the Arun Valley sites alone is considered to be negligible, particularly in relation to the dominant effect of groundwater supply to the designated sites and the active management of water levels within the sites; the predicted flow reductions in the Arun will not be of sufficient magnitude to adversely affect the site alone either directly or through secondary mechanisms such as via impacts on water quality. It is considered that there is sufficient confidence to enable a conclusion of no adverse effect on the integrity of the Arun Valley SPA, Arun Valley Ramsar and Arun Valley SAC to be drawn for the WRMP HRA in relation to this option, alone and in combination. Construction effects can be reliably avoided with established measures.	No AE I/C	
SWS	Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)	2029	DS/DS	Uncertain	No AE	The effects of the abstraction 'alone' will be very limited, and will not adversely affect the integrity of the site; this is principally because: •the effect of the abstraction on flows in the River Arun would be nominal (less than 1% at all except the lowest flows), and only if it is assumed that the entirety of the abstraction is expressed in river flows; and •although water from the River Arun enters the Arun valley sites, they are not understood to be fundamentally reliant on flooding (etc.) from the River Arun for maintenance of favourable condition for a range of reasons, including the role played by active water level management within the site and inputs of freshwater water from other sources (this is consistent with the position from the Pulborough Environmental WINEP investigations).	No AE I/C	
SWS	Groundwater (SNZ): Reinstate West Chiltington (3.1Ml/d)	2029	3.1/DS	Uncertain	No AE	The effects of the abstraction 'alone' will be negligible, and not adversely affect the integrity of the site; this is principally because •it is not considered possible for the abstraction to directly influence spring flows within the European sites and hence GWDTEs . •the effect of the abstraction on flows in the River Arun would be nominal (less than 1% at all except the lowest flows), and only if it is assumed that the entirety of the abstraction is expressed in river flows; •although water from the River Arun enters the Arun valley sites, they are not understood to be fundamentally reliant on flooding (etc.) from the River Arun for maintenance of favourable condition for a range of reasons, including the role played by active water level management within the site and inputs of freshwater water from other sources (this is consistent with the position from the Pulborough Basin WINEP investigations); and •there does not appear to be substantive connectivity between the River Stor and the designated sites (no sluices are noted in this section of the site based on the Pulborough Basin investigations).	No AE I/C	
SWS	Recycling (SNZ): Littlehampton WTW with river discharge (15Ml/d)	2031	1/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	1.6/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	1.1/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

SWS	Desalination (SWZ): Tidal River Arun	2046		4.6	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Desalination (SWZ): Tidal River Arun	2046		4.6	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (SNZ-SWZ): Pulborough to Worthing	2040	0.2/DS		No effect	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
PW	Slindon drought permit	2026		8.4	No effect	n/a - No LSE	0	No AE I/C

	Arun Valley SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Storage (SNZ): River Adur Offline Reservoir (19.5Ml/d)	2046	7	No effect	n/a - No LSE	-	No AE I/C	Assessment as per SWS i/c assessment; no additional effects from PW option.
SWS	Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d)	2058	0.3/DS	Uncertain	No AE	Operation of the scheme will reduce flows in the River Arun downstream of Horsham as a proportion of the WwTW discharge will be recovered. The Arun Valley SAC/SPA/Ramsar are functionally linked to the River Arun being a series of wet meadows which are periodically flooded/ inundated. However, evidence from ongoing studies indicates that the wetlands are not fundamentally supported fluvially (i.e. they are are not reliant / dependent on (for example) winter flooding from the Arun to maintain water levels), and whilst there may be some localised inputs from the river where sluices etc. are not operating correctly, the vast majority of the site is not supported by inward flows from the Arun but by groundwater or other surface water inputs from the catchment (i.e. the dominant direction of flow is from the wetlands to the river). High flows in the river may impede discharges from the wetlands, but the hydrology of the wetlands is largely determined by groundwater inputs and subsequent interventionist management of the water levels in the ditch network. The operation of the scheme will potentially reduce flows in the Arun by 9.5Ml/d, which be around 8% of the Q95 flow (lowest flows) in the Arun based on gauging flow data from the Rother at Hardham, Station No. 41009; and Arun at Pallingham, Station No. 41014 (note this is conservative). However, the impact on low flows within the river is not considered critical to the designated site integrity for the reasons noted above; at high (flood) flows (e.g. Q10) the maximum impact is around 0.4%, which is not considered likely to adversely affect the site habitats given the understood hydrological functioning of the site. It should also be noted that the qualifying features of the SAC are understood to be located in reedbeds some distance from the river. On this basis, adverse operational effects would not be anticipated. Construction effects are all minor and avoidable	No AE I/C	
SWS	Groundwater (SNZ): New borehole at Petworth (4Ml/d)	2031	4.9/DS	Uncertain	No AE	The hydrological impact of the Petworth abstraction on the Arun Valley sites alone is considered to be negligible, particularly in relation to the dominant effect of groundwater supply to the designated sites and the active management of water levels within the sites; the predicted flow reductions in the Arun will not be of sufficient magnitude to adversely affect the site alone either directly or through secondary mechanisms such as via impacts on water quality. It is considered that there is sufficient confidence to enable a conclusion of no adverse effect on the integrity of the Arun Valley SPA, Arun Valley Ramsar and Arun Valley SAC to be drawn for the WRMP HRA in relation to this option, alone and in combination. Construction effects can be reliably avoided with established measures.	No AE I/C	
SWS	Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)	2029	DS/DS	Uncertain	No AE	The effects of the abstraction 'alone' will be very limited, and will not adversely affect the integrity of the site; this is principally because: •the effect of the abstraction on flows in the River Arun would be nominal (less than 1% at all except the lowest flows), and only if it is assumed that the entirety of the abstraction is expressed in river flows; and •although water from the River Arun enters the Arun valley sites, they are not understood to be fundamentally reliant on flooding (etc.) from the River Arun for maintenance of favourable condition for a range of reasons, including the role played by active water level management within the site and inputs of freshwater water from other sources (this is consistent with the position from the Pulborough Environmental WINEP investigations).	No AE I/C	

SWS	Groundwater (SNZ): Reinstate West Chiltington (3.1Ml/d)	2029	3.1/DS		Uncertain	No AE	The effects of the abstraction 'alone' will be negligible, and not adversely affect the integrity of the site; this is principally because •it is not considered possible for the abstraction to directly influence spring flows within the European sites and hence GWDTEs . •the effect of the abstraction on flows in the River Arun would be nominal (less than 1% at all except the lowest flows), and only if it is assumed that the entirety of the abstraction is expressed in river flows; •although water from the River Arun enters the Arun valley sites, they are not understood to be fundamentally reliant on flooding (etc.) from the River Arun for maintenance of favourable condition for a range of reasons, including the role played by active water level management within the site and inputs of freshwater water from other sources (this is consistent with the position from the Pulborough Basin WINEP investigations); and •there does not appear to be substantive connectivity between the River Stor and the designated sites (no sluices are noted in this section of the site based on the Pulborough Basin investigations).	No AE I/C
SWS	Recycling (SNZ): Littlehampton WTW with river discharge (15Ml/d)	2031	1.2/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	1.7/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	1.3/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Desalination (SWZ): Tidal River	2046		4.6	No effect	n/a - No	-	No AE I/C
SWS	Desalination (SWZ): Tidal River	2046		4.6	No effect	n/a - No	-	No AE I/C
SWS	Interzonal transfer (SNZ-SWZ): Pulborough to Worthing	2040	0.2/DS		No effect	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
PW	Slindon drought permit	2026		8.4	No effect	n/a - No	0	No AE I/C

	Arun Valley SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Storage (SNZ): River Adur Offline Reservoir (19.5Ml/d)	2046		7 No effect	n/a - No LSE	-	No AE I/C	Assessment as per SWS i/c assessment; no additional effects from PW option.
SWS	Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d)	2058	0.3/DS	Uncertain	No AE	Operation of the scheme will reduce flows in the River Arun downstream of Horsham as a proportion of the WwTW discharge will be recovered. The Arun Valley SAC/SPA/Ramsar are functionally linked to the River Arun being a series of wet meadows which are periodically flooded/ inundated. However, evidence from ongoing studies indicates that the wetlands are not fundamentally supported fluvially (i.e. they are are not reliant / dependent on (for example) winter flooding from the Arun to maintain water levels), and whilst there may be some localised inputs from the river where sluices etc. are not operating correctly, the vast majority of the site is not supported by inward flows from the Arun but by groundwater or other surface water inputs from the catchment (i.e. the dominant direction of flow is from the wetlands to the river). High flows in the river may impede discharges from the wetlands, but the hydrology of the wetlands is largely determined by groundwater inputs and subsequent interventionist management of the water levels in the ditch network. The operation of the scheme will potentially reduce flows in the Arun by 9.5Ml/d, which be around 8% of the Q95 flow (lowest flows) in the Arun based on gauging flow data from the Rother at Hardham, Station No. 41009; and Arun at Pallingham, Station No. 41014 (note this is conservative). However, the impact on low flows within the river is not considered critical to the designated site integrity for the reasons noted above; at high (flood) flows (e.g. Q10) the maximum impact is around 0.4%, which is not considered likely to adversely affect the site habitats given the understood hydrological functioning of the site. On this basis, adverse operational effects would not be anticipated. Construction effects are all minor and avoidable with normal measures.	No AE I/C	
SWS	Groundwater (SNZ): New borehole at Petworth (4Ml/d)	2031	4.4/DS	Uncertain	No AE	The hydrological impact of the Petworth abstraction on the Arun Valley sites alone is considered to be negligible, particularly in relation to the dominant effect of groundwater supply to the designated sites and the active management of water levels within the sites; the predicted flow reductions in the Arun will not be of sufficient magnitude to adversely affect the site alone either directly or through secondary mechanisms such as via impacts on water quality. It is considered that there is sufficient confidence to enable a conclusion of no adverse effect on the integrity of the Arun Valley SPA, Arun Valley Ramsar and Arun Valley SAC to be drawn for the WRMP HRA in relation to this option, alone and in combination. Construction effects can be reliably avoided with established measures.	No AE I/C	

SWS	Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)	2029	DS/DS		Uncertain	No AE	The effects of the abstraction 'alone' will be very limited, and will not adversely affect the integrity of the site; this is principally because: •the effect of the abstraction on flows in the River Arun would be nominal (less than 1% at all except the lowest flows), and only if it is assumed that the entirety of the abstraction is expressed in river flows; and •although water from the River Arun enters the Arun valley sites, they are not understood to be fundamentally reliant on flooding (etc.) from the River Arun for maintenance of favourable condition for a range of reasons, including the role played by active water level management within the site and inputs of freshwater water from other sources (this is consistent with the position from the Pulborough Environmental WINEP investigations).	No AE I/C
SWS	Groundwater (SNZ): Reinstate West Chiltington (3.1Ml/d)	2029	3.1/DS		Uncertain	No AE	The effects of the abstraction 'alone' will be negligible, and not adversely affect the integrity of the site; this is principally because •it is not considered possible for the abstraction to directly influence spring flows within the European sites and hence GWDTEs . •the effect of the abstraction on flows in the River Arun would be nominal (less than 1% at all except the lowest flows), and only if it is assumed that the entirety of the abstraction is expressed in river flows; •although water from the River Arun enters the Arun valley sites, they are not understood to be fundamentally reliant on flooding (etc.) from the River Arun for maintenance of favourable condition for a range of reasons, including the role played by active water level management within the site and inputs of freshwater water from other sources (this is consistent with the position from the Pulborough Basin WINEP investigations); and •there does not appear to be substantive connectivity between the River Stor and the designated sites (no sluices are noted in this section of the site based on the Pulborough Basin investigations).	No AE I/C
SWS	Recycling (SNZ): Littlehampton WTW with river discharge (15Ml/d)	2031	1.1/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	1.7/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	1.1/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Desalination (SWZ): Tidal River Arun	2046		4.6	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Desalination (SWZ): Tidal River Arun	2046		4.6	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (SNZ-SWZ): Pulborough to Worthing	2040	0.2/DS		No effect	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
PW	Slindon drought permit	2026		8.4	No effect	n/a - No	0	No AE I/C

	Ashdown Forest SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): SES to SNZ (10Ml/d)	2034	6.8	No effect	n/a - No LSE	-	No LSE I/C	Not affected by any SW options so no i/c effects with SWS WRMP.
SEW	New Company Transfer: RZ2 to RZ7 Transfer - Cottage Hill to Bewl (5 Ml/d)	2040	5.5	No	n/a - No LSE	-	No LSE I/C	
SEW	New Bulk Supply: SESW Outwood to SEW Whitely Hill	2049	8.5	No	n/a - No LSE	-	No LSE I/C	

	Ashdown Forest SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): SES to SNZ (10Ml/d)	2034	6.8	No effect	n/a - No LSE	-	No LSE I/C	Not affected by any SW options so no i/c effects with SWS WRMP.
SEW	New Company Transfer: RZ2 to RZ7 Transfer - Cottage Hill to Bewl (5 Ml/d)	2040	5.5	No	n/a - No LSE	-	No LSE I/C	
SEW	New Bulk Supply: SESW Outwood to SEW Whitely Hill	2049	8.5	No	n/a - No LSE	-	No LSE I/C	

	Aston Rowant SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA	0	0	8.1	0	0		0 No LSE I/C	Not affected by any SW options so no i/c effects with SWS WRMP.

	Benfleet and Southend Marshes Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	8.5	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Only exposed to SWS options; i/c assessment as per SWS i/c (Appendix F)
SWS	Desalination (KME): Isle of Sheppey	2046	8.5	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	8.5	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	8.5	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

	Benfleet and Southend Marshes SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	8.5	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Not affected by any SW options so no i/c effects with SWS WRMP.
SWS	Desalination (KME): Isle of Sheppey	2046	8.5	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	8.5	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	8.5	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

	Blean Complex SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	7.5	No effect	n/a - No LSE	-	No AE I/C	Not affected by any SW options so no i/c effects with SWS WRMP.
SWS	Desalination (KTZ): East Thanet	2041	7.5	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)	2026	9.8	No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	0	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	2.3	No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	0	No effect	n/a - No LSE	-	No AE I/C	
SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	1.8	Effects Uncertain	No AE	Subject to site-specific investigation and measures to avoid /mitigate any potential hydrological efects identified.	No AE I/C	
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	0.3	Effects Uncertain	No AE	Subject to measures to avoid /mitigate any potential hydrological efects identified and construction best practice measures to control potential localised construction impacts due to proximity/presence of a potential hydrological link.	No AE I/C	
SEW	Reculver Desalination (30Ml/d Option)	2044	1.3	No	n/a - No LSE	-	No AE I/C	

SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	1.5	No	n/a - No LSE	-		No AE I/C	
SEW	New Bulk Supply: SWS Wingham to SEW Canterbury (Broad Oak)	2051	2.4	No	n/a - No LSE	-		No AE I/C	
SEW	RZ8 Sub-Zonal Scheme - Thanington to Godmersham	2038	3.9	No	n/a - No LSE	-		No AE I/C	

	Briddlesford Copses SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
SWS	Recycling (IOW): Sandown (8.5Ml/d)	2031	3.6	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.		No AE I/C	Only potentially exposed to construction effects from one option; options not coincident; effects avoidable with established measures
SWS	Groundwater (IOW): New boreholes at Newchurch (LGS)	2037	2.7	No effect	n/a - No LSE	-		No AE I/C	
SWS	Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)	2040	6	No effect	n/a - No LSE	-		No AE I/C	
PW	Farlington increased treatment capacity	2047	19	No effect		0	0	No AE I/C	
PW	Farlington increased treatment capacity 2	2049	19	No effect		0	0	No AE I/C	

	Burnham Beeches SAC	Year		Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
AFF		0	0	4.4	0	0		0	No AE I/C	Only potentially exposed to construction effects from one option; options not coincident; effects avoidable with established measures
AFF		0	0	7.6	0	0		0	No AE I/C	
AFF		0	0	8.9	0	0		0	No AE I/C	

	Butser Hill SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	4.4	No effect	n/a - No LSE	-		No AE I/C	Only potentially exposed to construction effects from one option; effects avoidable with established measures
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	8	No effect	n/a - No LSE	-		No AE I/C	
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	8.8	No effect	n/a - No LSE	-		No AE I/C	
SWS	Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)	2029	DS	No effect	n/a - No LSE	-		No AE I/C	
SWS	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Water (60Ml/d)	2035	8.9	No effect	n/a - No LSE	-		No AE I/C	
PW	HT to Lower Itchen Spur to Hoadshill (20 Ml/d)	2051	12.3	No effect		0	0	No AE I/C	

	Cannock Chase SAC	Year		Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
THA		0	0	7.4	0	0		0	No AE I/C	Not exposed to effects from any SW options

	Cannock Extension Canal SAC	Year		Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
THA		0	0	0	0	0		0	No AE I/C	Not exposed to effects from any SW options

	Castle Hill SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
SWS	Treatment capacity (SWZ): Pulborough winter transfer stage 1 (2Ml/d)	2041	7.1	No effect	n/a - No LSE	-		No LSE I/C	No LSE alone; no risk of i/c effects (construction only; site not exposed (distance, no pathways for site-derived pollutants))

SWS	Interzonal transfer (SWZ-SBZ): Pulborough winter transfer stage 2 (4Ml/d)	2041	7.1	No effect	n/a - No LSE	-	No LSE	I/C
SWS	Bulk import (SBZ): SEW to Rottingdean (20Ml/d)	2066	1.1	No effect	n/a - No LSE	-	No LSE	I/C
SWS	Groundwater (SBZ): Lewes Road (3.5Ml/d)	2031	4.2	No effect	n/a - No LSE	-	No LSE	I/C
SWS	Interzonal transfer (SBZ-SWZ): Brighton to Worthing	2041	1.8	No effect	n/a - No LSE	-	No LSE	I/C
SEW	RZ2 Sub-Zonal Scheme - Poverty Bottom & Underhills Deficits	2031	7.4	No	n/a - No LSE	-	No LSE	I/C

	Chichester and Langstone Harbours Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	3.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C The European sites associated with Langstone Harbour (i.e. Chichester and Langstone Harbours SPA / Ramsar, Solent and Isle of Wight Lagoons SAC, Solent Maritime SAC) are close to the Portsmouth Water Recycling option (SWS) and the Increased Treatment Capacity at Farlington options (PW), although the PW HRA concludes no
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	0/DS	Uncertain*	No AE	This option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.	No AE	I/C LSE for the Farlington schemes and no AE for the Lavant booster. The available evidence for the Portsmouth Water recycling scheme suggests that the zone of environmental change for the operational effects will not overlap with these sites (since the discharge is via the Eastney LSO to the Solent). No AE in combination would therefore be expected.
SWS	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Water (60Ml/d)	2035	0/DS	Uncertain	No AE	This option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.	No AE	I/C
PW	Farlington increased treatment capacity	2047	0.9	No effect	0		0	No AE I/C
PW	Farlington increased treatment capacity 2	2049	0.9	No LSE	0		0	No AE I/C
PW	Lavant Booster	2035	3	Yes	No AE	No changes in the groundwater table are expected as part of the option. There will be no increase in abstraction. Construction best practice measures to control localised impacts from dust, vehicle emissions and other potential sources of pollution are required due to the hydrological connectivity to the European site.	No AE	I/C
PW	HT to Racton via Farlington 20Ml/d	2046	0.9	No effect	0		0	No AE I/C
PW	HT to Lower Itchen Spur to Hoadshill (20 Ml/d)	2051	12	No effect	0		0	No AE I/C

	Chichester and Langstone Harbours SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	3.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C The European sites associated with Langstone Harbour (i.e. Chichester and Langstone Harbours SPA / Ramsar, Solent and Isle of Wight Lagoons SAC, Solent Maritime SAC) are close to the Portsmouth Water Recycling option (SWS) and the Increased Treatment

SWS	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Water (60Ml/d)	2035	0/DS	Uncertain	No AE	This option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.	No AE I/C	Capacity at Farlington options (PW), although the PW HRA concludes no LSE for the Farlington schemes and no AE for the Lavant booster. The available evidence for the Portsmouth Water recycling scheme suggests that the zone of environmental change for the operational effects will not overlap with these sites (since the discharge is via the Eastney LSO to the Solent). No AE in combination would therefore be expected.
PW	Farlington increased treatment capacity	2047	0.9	No effect		0	0 No AE I/C		
PW	Farlington increased treatment capacity 2	2049	0.9	No LSE		0	0 No AE I/C		
PW	Lavant Booster	2035	3	Yes	No AE	No changes in the groundwater table are expected as part of the option. There will be no increase in abstraction. Construction best practice measures to control localised impacts from dust, vehicle emissions and other	No AE I/C		
PW	HT to Racton via Farlington 20Ml/d	2046	0.9	No effect		0	0 No AE I/C		

	Chilterns Beechwoods SAC	Year		Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA		0	0	2.1	0	0		0 No AE I/C	Not exposed to effects from any SW options
THA		0	0	2.5	0	0		0 No AE I/C	
AFF		0	0	0.6	0	0		0 No AE I/C	
AFF		0	0	9.7	0	0		0 No AE I/C	

	Cothill Fen SAC	Year		Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040		6.1	No effect	n/a - No LSE		0 No LSE I/C	Not exposed to effects from SW option so no LSE i/c with SWS options; NOTE: i/c effects of TW options subject to review, but TW HRA suggests no i/c effects on this site
THA		0	0	0.1	0	0		0 No LSE I/C	
THA		0	0	1.8	0	0		0 No LSE I/C	
THA		0	0	5.4	0	0		0 No LSE I/C	
THA		0	0	9.4	0	0		0 No LSE I/C	
THA		0	0	1.8	0	0		0 No LSE I/C	

	Dover to Kingsdown Cliffs SAC	Year		Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
AFF		0	0	0.8	0	0		0 No AE I/C	Not exposed to effects from any SW options
AFF		0	0	2.6	0	0		0 No AE I/C	

	Duncton to Bignor Escarpment SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d)	2058	5.8	No effect	n/a - No LSE	-	No AE I/C	Assessment as per SWS i/c assessment; no additional effects from PW option.

SWS	Groundwater (SNZ): New borehole at Petworth (4Ml/d)	2031	3.6	No effect	n/a - No LSE	-		No AE I/C
SWS	Recycling (SNZ): Littlehampton WTW with river discharge (15Ml/d)	2031	1.2	No effect	n/a - No LSE	-		No AE I/C
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	3.4	No effect	n/a - No LSE	-		No AE I/C
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	0	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.		No AE I/C
SWS	Desalination (SWZ): Tidal River Arun	2046	7.4	No effect	n/a - No LSE	-		No AE I/C
SWS	Desalination (SWZ): Tidal River Arun	2046	7.4	No effect	n/a - No LSE	-		No AE I/C
SWS	Interzonal transfer (SNZ-SWZ): Pulborough to Worthing	2040	5.2	No effect	n/a - No LSE	-		No AE I/C
PW	Slindon drought permit	2026	4.7	No effect		0	0	No AE I/C

	Dungeness SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (SHZ): Reconfigure Rye Wells (1.5Ml/d)	2036	10.6/DS	No effect	n/a - No LSE	-	No AE I/C	Potentially exposed to construction effects only from options within catchment; potential effects may be temporally coincident but can be avoided in any case with normal measures.
SWS	Bulk export (SHZ): Rye to SEW RZ8	2050	2.6/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Recycling (SHZ): Hastings to Darwell (15.3Ml/d)	2051	16.8/DS	No effect	n/a - No LSE	-	No AE I/C	
SEW	New Bulk Supply: SWS Brede to SEW RZ8 (10 Ml/d)	2050	2.5	Effects Uncertain	No AE	Construction best practice measures due to the presence of a hydrological link.	No AE I/C	

	Dungeness, Romney Marsh and Rye Bay Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (SHZ): Reconfigure Rye Wells (1.5Ml/d)	2036	7.2/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Potentially exposed to construction effects only from options within catchment; potential effects may be temporally coincident but can be avoided in any case with normal measures.
SWS	Bulk export (SHZ): Rye to SEW RZ8	2050	2/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Recycling (SHZ): Hastings to Darwell (15.3Ml/d)	2051	12.4/DS	Uncertain*	No AE	Pipeline will cross Combe Haven watercourse upstream of Combe Haven SSSI. With regard to construction effects, the SSSI citation notes that "The whole site, but particularly the reed bed, is valuable for breeding, wintering and passage birds" and it is possible that some waterbirds associated with the Ramsar may periodically utilise this site also (although it seems unlikely to provide habitat etc. that is critical to the functional integrity of the Ramsar or the waterbird populations (given the widespread availability of similar wetland habitats within the Ramsar); however, potential effects on the SSSI can be avoided with normal measures. Residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SEW	New Bulk Supply: SWS Brede to SEW RZ8 (10 Ml/d)	2050	1.9	Effects Uncertain	No AE	Construction best practice measures due to the presence of a hydrological link and assessment to determine the presence of funtionally linked land and subsequent measures to reduce potential impacts to an acceptable level.	No AE I/C	

	Dungeness, Romney Marsh and Rye Bay SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (SHZ): Reconfigure Rye Wells (1.5Ml/d)	2036	7.2/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Potentially exposed to construction effects only from options within catchment; potential effects may be temporally coincident but can be avoided in any case with normal measures.
SWS	Bulk export (SHZ): Rye to SEW RZ8	2050	2/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Recycling (SHZ): Hastings to Darwell (15.3Ml/d)	2051	1.4/DS	Uncertain*	No AE	Pipeline will cross Combe Haven watercourse upstream of Combe Haven SSSI; the watercourse then discharges to the marine / offshore component of this SPA, which covers foraging areas used by breeding tern species from the Dungeness Peninsula. The scheme will use water sourced from effluent otherwise discharged to sea via an LSO within the marine boundary of the SPA. With regard to construction effects, the SSSI citation notes that "The whole site, but particularly the reed bed, is valuable for breeding, wintering and passage birds" and it is possible that some waterbirds associated with the SPA may periodically utilise this site also (although it seems unlikely to provide habitat etc. that is critical to the functional integrity of the SPA or the waterbird populations (given the widespread availability of similar wetland habitats within the SPA); however, potential effects on the SSSI and the marine components of the SPA due to construction can be avoided with normal measures. With regard to operation, the option will use water sourced from effluent otherwise discharged to sea via an LSO within the marine boundary of the SPA. There will be no discharges of hypersaline brine or similar (in practice the recovery process results in a discharge that is slightly more saline (e.g. at Budd's Farm the saline concentration typically doubles from 3-5g/l to 6-10 g/l, but this is substantially below the salinity of seawater (~35g)); the total load of pollutants (e.g. nitrates) discharged through the LSO will remain the same, although concentrations may increase slightly; however, this will be inconsequential given the nature of the receiving waters (open sea) and the consequent dispersal (hence limited area affected). Furthermore, the seabird features of the SPA that will utilise this area will have a low sensitivity to the type and magnitude of change, given the area potentially impacted versus the total available habitat. Residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SEW	New Bulk Supply: SWS Brede to SEW RZ8 (10 Ml/d)	2050	1.9	Effects Uncertain	No AE	Construction best practice measures due to the presence of a hydrological link and assessment to determine the presence of funtionally linked land and subsequent measures to reduce potential impacts to an acceptable level.	No AE I/C	

	East Hampshire Hangers SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)	2029	DS	No effect	n/a - No LSE	-	No AE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP.
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	2	No effect	n/a - No LSE	-	No AE I/C	
SEW	RZ4 Sub-Zonal Scheme - Greywell to Swaineshill	2031	6.4	No	n/a - No LSE	-	No AE I/C	
SEW	RZ4 Sub-Zonal Scheme - Ewshot to Itchel	2031	9.4	No	n/a - No LSE	-	No AE I/C	
SEW	RZ5 Sub-Zonal Scheme - Oakhanger to Alton	2031	4.3	No	n/a - No LSE	-	No AE I/C	

	Ebernoe Common SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d)	2058	9.3	No effect	n/a - No LSE	-	No AE I/C	Potentially exposed to construction effects only; some construction may be temporally coincident but adverse effects can self-evidently be avoided with normal best practice.
SWS	Groundwater (SNZ): New borehole at Petworth (4Ml/d)	2031	5.7	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Recycling (SNZ): Littlehampton WTW with river discharge (15Ml/d)	2031	7.7	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	5.1	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	9	No effect	n/a - No LSE	-		No AE I/C	
SWS	Interzonal transfer (SNZ-SWZ): Pulborough to Worthing	2040	9.6	No effect	n/a - No LSE	-		No AE I/C	
SEW	RZ4 Sub-Zonal Scheme - Ewshot to Itchel	2031	26.7	No	n/a - No LSE	-		No AE I/C	
SEW	RZ5 Sub-Zonal Scheme - Oakhanger to Alton	2031	28.1	No	n/a - No LSE	-		No AE I/C	
PW	Slindon drought permit	2026	16.6	No effect		0	0	No AE I/C	
PW	Lavant Booster	2035	23.2	No effect		0	0	No AE I/C	

	Emer Bog SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (HSE): PWC Source A to Lower Itchen WSW (21Ml/d)	2032	6.2	No effect	n/a - No LSE	-	No AE I/C	Only exposed to SWS options; i/c assessment as per SWS i/c (Appendix F)
SWS	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)	2031	5.7	No effect	n/a - No LSE	-	No AE I/C	
SWS	Groundwater (HRZ): Remove constraints at Kings Sombourne (2.5Ml/d)	2031	9.9	No effect	n/a - No LSE		No AE I/C	
SWS	Groundwater (HSW): Test MAR (5.5Ml/d)	2036	6.9	No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026	3.3	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	6	No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031	9.7	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (HSE-HWZ): Lower Itchen WSW to Yew Hill bi-directional (74Ml/d)	2031	6	No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d)	2031	9.3	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040	5.7	No effect	n/a - No LSE		0 No AE I/C	

	Ensor`s Pool SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA	0	0	1.1	0	0		0 No AE I/C	Not exposed to effects from any SW options

	Epping Forest SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA	0	0	9.7	0	0		0 No AE I/C	Not exposed to effects from any SW options

	Essex Estuaries SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	8.6	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	This site is considered unlikely to be adversely affected by any option alone; the zones of environmental change associated with the operation of the desalination options (i.e. saline plumes etc.) will not coincide geographically for additive effects to occur at the site, and synergistic effects will not occur.
SWS	Desalination (KME): Isle of Sheppey	2046	8.6	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

SWS	Desalination (KME): Isle of Sheppey	2046	8.6	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	8.6	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

	Fens Pools SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA	0	0	4.1	0	0	0	No AE I/C	Not exposed to effects from any SW options

	Folkestone to Etchinghill Escarpment SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
AFF	0	0	6.9	0	0	0	No AE I/C	Not exposed to effects from any SW options
AFF	0	0	8.2	0	0	0	No AE I/C	
AFF	0	0	9.6	0	0	0	No AE I/C	

	Foulness (Mid-Essex Coast Phase 5) Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	8.8	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	This site is considered unlikely to be adversely affected by any option alone; the zones of environmental change associated with the operation of the desalination options (i.e. saline plumes etc.) will not coincide geographically for additive effects to occur at the site, and synergistic effects will not occur.
SWS	Desalination (KME): Isle of Sheppey	2046	8.8	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	8.8	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	8.8	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

	Foulness (Mid-Essex Coast Phase 5) SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	8.8	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	This site is considered unlikely to be adversely affected by any option alone; the zones of environmental change associated with the operation of the desalination options (i.e. saline plumes etc.) will not coincide geographically for additive effects to occur at the site, and synergistic effects will not occur.
SWS	Desalination (KME): Isle of Sheppey	2046	8.8	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	8.8	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	8.8	Uncertain*	No AE	Adverse effects alone will not occur (distance to site; construction effects avoidable with normal measures; environmental changes associated with operation very unlikely to extend to the site); residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

	Hackpen Hill SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA	0	0	9.2	0	0	0	No AE I/C	Not exposed to effects from any SW options
THA	0	0	9.2	0	0	0	No AE I/C	

	Hartslock Wood SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA	0	0	2.8	0	0		0 No AE I/C	Not exposed to effects from any SW options

	Hastings Cliffs SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (SHZ): Reconfigure Rye Wells (1.5Ml/d)	2036	7.5	No effect	n/a - No LSE	-	No AE I/C	Assessment as per SWS i/c assessment; no additional effects from PW option.
SWS	Bulk export (SHZ): Rye to SEW RZ8	2050	5.9	No effect	n/a - No LSE	-	No AE I/C	
SWS	Recycling (SHZ): Hastings to Darwell (15.3Ml/d)	2051	6.4	No effect	n/a - No LSE	-	No AE I/C	
SEW	New Bulk Supply: SWS Brede to SEW RZ8 (10 Ml/d)	2050	6	No	n/a - No LSE	-	No AE I/C	

	Isle of Wight Downs SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Recycling (IOW): Sandown (8.5Ml/d)	2031	4.3	No effect	n/a - No LSE	-	No LSE I/C	Only exposed to SWS options; i/c assessment as per SWS i/c (Appendix F)
SWS	Groundwater (IOW): New boreholes at Newchurch (LGS)	2037	7.6	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)	2040	4.4	No effect	n/a - No LSE	-	No LSE I/C	

	Kennet and Lambourn Floodplain SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (HKZ): Remove constraints at Newbury to increase yield (1.2Ml/d)	2028	3.9	No effect	n/a - No LSE	-	No AE I/C	Potential effects from SWS option avoidable with established measures; NOTE: i/c effects of TW options subject to review, but TW HRA suggests no i/c effects on this site
SWS	Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10Ml/d)	2050	8.2	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040	0.2	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
THA	0	0	0.1	0	0		0 No AE I/C	

	Kennet Valley Alderwoods SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (HKZ): Remove constraints at Newbury to increase yield (1.2Ml/d)	2028	3.3	No effect	n/a - No LSE	-	No AE I/C	Potential effects from SWS option avoidable with established measures; NOTE: i/c effects of TW options subject to review, but TW HRA suggests no i/c effects on this site
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040	0.3	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
THA	0	0	0.6	0	0		0 No AE I/C	

	Kingley Vale SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	9.7	No effect	n/a - No LSE	-	No AE I/C	Assessment as per SWS i/c assessment; no additional effects from PW option.
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	0.1	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	8.6	No effect	n/a - No LSE	-	No AE I/C	

SWS	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Water (60Ml/d)	2035	8.6	No effect	n/a - No LSE	-		No AE I/C	
PW	Slindon drought permit	2026	13	No effect		0	0	No AE I/C	
PW	Lavant Booster	2035	2.4	No LSE		0	0	No AE I/C	

	Lee Valley Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA	0	0	6.2	0	0	0	No AE I/C	Not exposed to effects from any SW options
AFF	0	0	1.1	0	0	0	No AE I/C	
AFF	0	0	5.4	0	0	0	No AE I/C	
AFF	0	0	6.5	0	0	0	No AE I/C	
AFF	0	0	9.6	0	0	0	No AE I/C	

	Lee Valley SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA	0	0	6.2	0	0	0	No AE I/C	Not exposed to effects from any SW options
AFF	0	0	1.1	0	0	0	No AE I/C	
AFF	0	0	5.4	0	0	0	No AE I/C	
AFF	0	0	6.5	0	0	0	No AE I/C	
AFF	0	0	9.6	0	0	0	No AE I/C	

	Lewes Downs SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SBZ): SEW to Rottingdean (20Ml/d)	2066	0.2	No effect	n/a - No LSE	-	No LSE I/C	Assessment as per SWS i/c assessment; no additional effects from SEW option.
SWS	Interzonal transfer (SBZ-SWZ): Brighton to Worthing	2041	5.1	No effect	n/a - No LSE	-	No LSE I/C	
SEW	RZ2 Sub-Zonal Scheme - Poverty Bottom & Underhills Deficits	2031	0.4	No	n/a - No LSE	-	No LSE I/C	

	Little Wittenham SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA	0	0	7	0	0	0	No AE I/C	Not exposed to effects from any SW options
THA	0	0	7.1	0	0	0	No AE I/C	
THA	0	0	7	0	0	0	No AE I/C	

	Lydden and Temple Ewell Downs SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)	2026	6.9	No effect	n/a - No LSE	-	No LSE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP; NOTE, AFW HRA subject to review however HRA indicates no AEIC on this site.
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	9.4	No effect	n/a - No LSE	-	No LSE I/C	
SEW	New Bulk Supply: SWS Wingham to SEW Canterbury (Broad Oak)	2051	9.3	No	n/a - No LSE	-	No LSE I/C	
AFF	0	0	2.1	0	0	0	No LSE I/C	

AFF	0	0	3.9	0	0	0	No LSE	I/C
AFF	0	0	4.3	0	0	0	No LSE	I/C
AFF	0	0	5.1	0	0	0	No LSE	I/C

	Margate and Long Sands SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	1.3	LSE	No AE*	Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. In summary, the outfall for the plant is likely to be located in or close to this site (although location outside the site will be possible). The interest features of the site are likely to have a low sensitivity to both construction and operation, being essentially low-diversity highly-mobile sandbank habitats that will be resilient to short-term perturbance associated with construction; the environmental changes associated with operation effects are likely to be limited in spatial extent (based on other desalination schemes), and the features will have a low sensitivity to this. There are inevitably some uncertainties due that can only be resolved with detailed design (e.g. sediment deposition and hydrodynamics may be affected if the pipeline is not buried), but these appear avoidable or mitigatable, such that adverse effects on integrity do not appear to be an unavoidable outcome of the option.	No AE I/C*	Construction within site is likely for the East Thanet scheme, and possible for Reculver. Outfalls and pipelines may be located in the site (which may affect sediment etc dynamics locally), and operational discharges from both desalination options will likely be measurable within the site and may overlap. However, the site and features will have a low sensitivity to environmental changes associated with these aspects, and adverse effects in combination would not be expected; however, there are residual uncertainties due to the proximity of these options hence risk of spatially coincident in combination effects that cannot be resolved with the available data.
SWS	Desalination (KTZ): East Thanet	2041	1.3	LSE	No AE*	Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. In summary, the outfall for the plant is likely to be located in or close to this site (although location outside the site will be possible) although construction of this will have been completed under option THA20. The environmental changes associated with operation effects are likely to be limited in spatial extent (based on other desalination schemes), and the features will have a low sensitivity to this. There are inevitably some uncertainties due that can only be resolved with detailed design (e.g. sediment deposition and hydrodynamics may be affected if the pipeline is not buried), but these appear avoidable or mitigatable, such that adverse effects on integrity do not appear to be an unavoidable outcome of the option.	No AE I/C*	
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	4.7	No effect	n/a - No LSE	-	No AE I/C*	
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	8.5	No effect	n/a - No LSE	-	No AE I/C*	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	4.7	No effect	n/a - No LSE	-	No AE I/C*	
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	6.4	No	n/a - No LSE	-	No AE I/C*	

	Medway Estuary and Marshes Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Storage (SHZ): Raising Bewl Reservoir 0.4m (3Ml/d)	2061	DS/DS	No effect	n/a - No LSE	-	No AE I/C*	Assessment as per SWS i/c assessment; no additional effects from SEW options.
SWS	Desalination (KME): Isle of Sheppey	2046	0/DS	LSE	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*	
SWS	Desalination (KME): Isle of Sheppey	2046	0/DS	LSE	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*	

SWS	Desalination (KME): Isle of Sheppey	2046 0/DS	LSE	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SWS	Recycling (KMW): Medway WTW to lake (14Ml/d)	2031 10.4/DS	Uncertain	No AE	Adverse construction effects alone will not occur (clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects). With regard to operation, the scheme will reduce non-saline inputs from the River Medway into the Medway estuary; the impact of a 12.8 Ml/d reduction on Q95 flows (i.e. the impact when flows in the river are near their lowest) to the the estuary (based on flows at Allington Locks plus DWF inputs from Medway WTW and other inputs) will be no greater than 7.2%. The change in flows, and some aspects of the operational discharges, has the potential to alter water quality and salinity in the tidal sections of the River Medway (although there will be a reduced WwTW loading to the estuary due to the removal of 12.8Ml/d of DWF discharge). However, the location of this 'maximum' impact is approximately 20km upstream of the closest point of the Medway Estuary and Marshes SPA/Ramsar, which will be overwhelmingly influenced by tidal dynamics and local non-saline inputs from the local catchment, rather than non-saline inputs from the River Medway. As a result the magnitude of the environmental change is expected to be too small to adversely affect the SPA/Ramsar site or its qualifying features.	No AE I/C*
SWS	Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d)	2031 2.8/DS	Uncertain*	No AE	This option was assessed as having No Adverse Effects at WRMP19 and there have been no substantive amendments in either the scheme or the environmental baseline to alter this conclusion. In summary, the net effect of the scheme operation would be to reduce non-saline inputs to Milton Creek from Sittingbourne WwTW by ~7.5Mld; discharges from the WwTW are likely to form a significant component of the non-saline flows in this creek (the permitted discharge of recycled water is ~118Ml/d) and the volumes recovered through recycling will typically be a small proportion of this (note, a proportion of this water would still enter the Swale and hence potentially the Medway via the paper mill post-process discharge, although the paper-making process will to some extent be consumptive). The principal issues for the Medway Estuary and Marshes SPA/Ramsar are the potential effects on Milton Creek as 'functional habitat'; however, Milton Creek will be of low value in this regard as (a) it is a constrained creek / channel in a high-disturbance urban / industrial area that will inherently have a low attractiveness for the qualifying features (assuming there are no dominating non-natural attractants) and (b) is substantially lower value than the extensive areas of equivalent mud-flat and creek habitat available in the SPA/Ramsar; it is therefore very unlikely that the creek is critical to the functional integrity of the site, and environmental changes in this location would not be expected to adversely affect these sites.	No AE I/C*
SWS	Asset enhancement (KMW): Remove network constraint at Longfield (13Ml/d)	2026 7.1/DS	No effect	n/a - No LSE	-	No AE I/C*
SWS	Desalination (KME): Isle of Sheppey	2046 0/DS	LSE	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SEW	Groundwater Licence Trade - Folkestone Beds Abstraction, Halling	2040 9.1	No	n/a - No LSE	-	No AE I/C*
SEW	RZ8 Sub-Zonal Scheme - Hollingbourne to Warren Street reinforcement	2039 9.1	No	n/a - No LSE	-	No AE I/C*
SWS	Recycling (SHZ): Tonbridge to Bewl (5.7Ml/d)	2036 DS/DS	No effect	n/a - No LSE	-	No AE I/C*

	Medway Estuary and Marshes SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Storage (SHZ): Raising Bewl Reservoir 0.4m (3Ml/d)	2061	DS/DS	No effect	n/a - No LSE	-	No AE I/C*	Assessment as per SWS i/c assessment; no additional effects from SEW options.

SWS	Desalination (KME): Isle of Sheppey	2046 0/DS	LSE	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SWS	Desalination (KME): Isle of Sheppey	2046 0/DS	LSE	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SWS	Desalination (KME): Isle of Sheppey	2046 0/DS	LSE	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SWS	Recycling (KMW): Medway WTW to lake (14Ml/d)	2031 10.4/DS	Uncertain	No AE	Adverse construction effects alone will not occur (clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects). With regard to operation, the scheme will reduce non-saline inputs from the River Medway into the Medway estuary; the impact of a 12.8 Ml/d reduction on Q95 flows (i.e. the impact when flows in the river are near their lowest) to the the estuary (based on flows at Allington Locks plus DWF inputs from Medway WTW and other inputs) will be no greater than 7.2%. The change in flows, and some aspects of the operational discharges, has the potential to alter water quality and salinity in the tidal sections of the River Medway (although there will be a reduced WwTW loading to the estuary due to the removal of 12.8Ml/d of DWF discharge). However, the location of this 'maximum' impact is approximately 20km upstream of the closest point of the Medway Estuary and Marshes SPA/Ramsar, which will be overwhelmingly influenced by tidal dynamics and local non-saline inputs from the local catchment, rather than non-saline inputs from the River Medway. As a result the magnitude of the environmental change is expected to be too small to adversely affect the SPA/Ramsar site or its qualifying features.	No AE I/C*
SWS	Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d)	2031 2.8/DS	Uncertain*	No AE	This option was assessed as having No Adverse Effects at WRMP19 and there have been no substantive amendments in either the scheme or the environmental baseline to alter this conclusion. In summary, the net effect of the scheme operation would be to reduce non-saline inputs to Milton Creek from Sittingbourne WwTW by ~7.5Mld; discharges from the WwTW are likely to form a significant component of the non-saline flows in this creek (the permitted discharge of recycled water is ~118Ml/d) and the volumes recovered through recycling will typically be a small proportion of this (note, a proportion of this water would still enter the Swale and hence potentially the Medway via the paper mill post-process discharge, although the paper-making process will to some extent be consumptive). The principal issues for the Medway Estuary and Marshes SPA/Ramsar are the potential effects on Milton Creek as 'functional habitat'; however, Milton Creek will be of low value in this regard as (a) it is a constrained creek / channel in a high-disturbance urban / industrial area that will inherently have a low attractiveness for the qualifying features (assuming there are no dominating non-natural attractants) and (b) is substantially lower value than the extensive areas of equivalent mud-flat and creek habitat available in the SPA/Ramsar; it is therefore very unlikely that the creek is critical to the functional integrity of the site, and environmental changes in this location would not be expected to adversely affect these sites.	No AE I/C*
SWS	Asset enhancement (KMW): Remove network constraint at Longfield (13Ml/d)	2026 7.1/DS	No effect	n/a - No LSE	-	No AE I/C*
SWS	Desalination (KME): Isle of Sheppey	2046 0/DS	LSE	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SEW	Groundwater Licence Trade - Folkestone Beds Abstraction, Halling	2040 9.1	No	n/a - No LSE	-	No AE I/C*

SEW	RZ8 Sub-Zonal Scheme - Hollingbourne to Warren Street reinforcement	2039		9.1	No	n/a - No LSE	-	No AE I/C*
SWS	Recycling (SHZ): Tonbridge to Bewl (5.7Ml/d)	2036	DS/DS		No effect	n/a - No LSE	-	No AE I/C*

	Mole Gap to Reigate Escarpment SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): SES to SNZ (10Ml/d)	2034	9.6	No effect	n/a - No LSE	-	No LSE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP
SEW	New Bulk Supply: SESW to SEW RZ1 Transfer - Bough Beech to Riverhill SR (10 Ml/d)	2039	24.5	No	n/a - No LSE	-	No LSE I/C	
SEW	New Bulk Supply: SESW Outwood to SEW Whitely Hill	2049	9.5	No	n/a - No LSE	-	No LSE I/C	

	Mottisfont Bats SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)	2031	2.9	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Only exposed to SWS options; i/c assessment as per SWS i/c (Appendix F)
SWS	Groundwater (HRZ): Remove constraints at Kings Sombourne (2.5Ml/d)	2031	1.9	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026	7.1	No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031	8	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

	New Forest SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)	2031	8.5	No effect	n/a - No LSE	-	No LSE I/C	Not affected by SWS options; note, may be exposed to BW options but no risk of i/c effects with SW WRMP.
SWS	Groundwater (HSW): Test MAR (5.5Ml/d)	2036	4.9	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026	6.2	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031	7.9	No effect	n/a - No LSE	-	No LSE I/C	

	North Downs Woodlands SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	7.2	No effect	n/a - No LSE	-	No LSE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP
SWS	Desalination (KME): Isle of Sheppey	2046	7.2	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	7.2	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Desalination (KMW): Thames Estuary	2040	5.3	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Desalination (KMW): Thames Estuary	2040	5.3	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Recycling (KMW): Medway WTW to lake (14Ml/d)	2031	3.2	No effect	n/a - No LSE	-	No LSE I/C	

SWS	Asset enhancement (KMW): Remove network constraint at Longfield (13Ml/d)	2026	3.9	No effect	n/a - No LSE	-	No LSE I/C
SWS	Groundwater (KME): Recommission Gravesend (2.7Ml/d)	2031	7.9	No effect	n/a - No LSE	-	No LSE I/C
SWS	Desalination (KME): Isle of Sheppey	2046	7.2	No effect	n/a - No LSE	-	No LSE I/C
SEW	Groundwater Licence Trade - Folkestone Beds Abstraction, Halling	2040	1.3	No	n/a - No LSE	-	No LSE I/C
SEW	RZ6 Zonal Scheme - Reinforcement to Halling Reservoir	2040	0.3	No	n/a - No LSE	-	No LSE I/C
SEW	New Company Transfer: RZ1 to RZ6 Transfer - Blackhurst to Medway (4 Ml/d)	2040	4.9	No	n/a - No LSE	-	No LSE I/C
SEW	RZ6 Sub-Zonal Scheme - Reconfigure Southern Maidstone	2038	8.1	No	n/a - No LSE	-	No LSE I/C
SEW	RZ6 Sub-Zonal Scheme - Hermitage to Linton ring main	2039	8.1	No	n/a - No LSE	-	No LSE I/C
SEW	RZ7 Sub-Zonal Scheme - Paddock Wood to Beech	2040	8.3	No	n/a - No LSE	-	No LSE I/C
SEW	RZ8 Sub-Zonal Scheme - Hollingbourne to Warren Street reinforcement	2039	7.6	No	n/a - No LSE	-	No LSE I/C

	Outer Thames Estuary SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	0/DS	LSE	No AE*	Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. In summary, the outfall for the plant will be located in this site. The qualifying features of the site may be vulnerable to construction disturbance (although this is clearly avoidable with normal measures) or through impacts on the supporting habitats (i.e. sandbanks over which they forage). However, the sandbank supporting habitats are likely to have a low sensitivity to both construction and operation, being essentially low-diversity highly-mobile sandbank habitats that will be resilient to short-term perturbance associated with construction; the environmental changes associated with operation effects are likely to be limited in spatial extent (based on other desalination schemes), and the features will have a low sensitivity to this. The extent of any effects will also be very small (arguably inconsequential) in relation to the size of the site. There are inevitably some uncertainties due to the long timescales that can only be resolved with detailed design (e.g. sediment deposition and hydrodynamics may be affected if the pipeline is not buried), but these appear avoidable or mitigatable, such that adverse effects on integrity do not appear to be an unavoidable outcome of the option.	No AE I/C*	Construction within this site is likely for the East Thanet scheme and Reculver. Outfalls and pipelines will be located in the site (which may affect sediment etc dynamics locally), and operational discharges from both desalination options will likely be measurable within the site and may overlap. The effects of the IoS desalination option are very unlikely to overlap with the other options and will not directly affect the site. However, the SPA and its features will have a low sensitivity to environmental changes associated with these aspects, and adverse effects in combination would not be expected; however, there are residual uncertainties due to the proximity of these options hence risk of spatially coincident in combination effects that cannot be resolved with the available data.
SWS	Desalination (KTZ): East Thanet	2041	0/DS	LSE	No AE	Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. In summary, the outfall for the plant will be located in this site, although construction of this will have been completed under option THA20. The qualifying features of the site will not be particularly exposed or sensitive to construction noise (etc) in the terrestrial environment. The sandbank supporting habitats are likely to have a low sensitivity to operation, being essentially low-diversity highly-mobile sandbank habitats; the environmental changes associated with operation effects are likely to be limited in spatial extent (based on other desalination schemes), and the features will have a low sensitivity to this. The extent of any effects will also be very small (arguably inconsequential) in relation to the size of the site. There are inevitably some uncertainties due to the long timescales that can only be resolved with detailed design (e.g. sediment deposition and hydrodynamics may be affected if the pipeline is not buried), but these appear avoidable or mitigatable, such that adverse effects on integrity do not appear to be an unavoidable outcome of the option.	No AE I/C*	
SWS	Desalination (KME): Isle of Sheppey	2046	2.5	Uncertain	No AE	Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes; site interest features likely to have a low sensitivity and exposure to the anticipated magnitude of environmental change associated with operation, assuming appropriate siting of outfall and operational parameters in relation to discharges. Construction effects unlikely and avoidable with established measures.	No AE I/C*	
SWS	Desalination (KME): Isle of Sheppey	2046	2.5	Uncertain	No AE	Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes; site interest features likely to have a low sensitivity and exposure to the anticipated magnitude of environmental change associated with operation, assuming appropriate siting of outfall and operational parameters in relation to discharges. Construction effects unlikely and avoidable with established measures.	No AE I/C*	

SWS	Desalination (KME): Isle of Sheppey	2046	2.5	Uncertain	No AE	Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes; site interest features likely to have a low sensitivity and exposure to the anticipated magnitude of environmental change associated with operation, assuming appropriate siting of outfall and operational parameters in relation to discharges. Construction effects unlikely and avoidable with established measures.	No AE I/C*
SWS	Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d)	2031	8.9	No effect	n/a - No LSE	-	No AE I/C*
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040 3.6/DS		No effect	n/a - No LSE	-	No AE I/C*
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	6.1	No effect	n/a - No LSE	-	No AE I/C*
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026 3.6/DS		No effect	n/a - No LSE	-	No AE I/C*
SWS	Desalination (KME): Isle of Sheppey	2046	2.5	Uncertain	No AE	Adverse effects almost certainly avoidable based on proxy data and evidence from similar sites / schemes; site interest features likely to have a low sensitivity and exposure to the anticipated magnitude of environmental change associated with operation, assuming appropriate siting of outfall and operational parameters in relation to discharges. Construction effects unlikely and avoidable with established measures.	No AE I/C*
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	4.9	No	n/a - No LSE	-	No AE I/C*
SEW	Reculver Desalination (30Ml/d Option)	2044	0	Yes	No AE	Subject to further assessment/modelling to consider extent of physical hydrodynamic impacts, e.g. scour, and affects on prey species of qualifying features of brine discharge. Sensitive design, avoidance, mitigation and construciton best practice also required to minimise impacts to an acceptable level.	No AE I/C*
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	0.6	Effects Uncertain	No AE	Subject to further assessment/survey to determine whether any land within the footprint of the pipeline works could be functionally linked to the SPA and mitigation measures put in place to minimise impacts to an acceptable level.	No AE I/C*

	Oxford Meadows SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA		0	0	0.4	0	0	0 No AE I/C	Not exposed to effects from any SW options
THA		0	0	0.9	0	0	0 No AE I/C	
THA		0	0	4.7	0	0	0 No AE I/C	

	Pagham Harbour Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	9.4	No effect	n/a - No LSE	-	No LSE I/C	No LSE alone; no risk of i/c effects (site / feature not exposed to construction effects (distance, no pathways for site-derived pollutants, mobile feature population will not be functionally reliant on habitats affected option); no additive effects from options.

	Pagham Harbour SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	9.4	No effect	n/a - No LSE	-	No LSE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP
PW	Lavant Booster	2035	10	No effect		0	0 No LSE I/C	

	Parkgate Down SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)	2026	6	No effect	n/a - No LSE	-	No LSE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP; NOTE, AFW HRA subject to review however HRA indicates no AEIC on this site.
AFF		0	0	3.9	0	0	0 No LSE I/C	
AFF		0	0	5.8	0	0	0 No LSE I/C	

	Peter`s Pit SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KMW): Thames	2040	10	No effect	n/a - No	-	No LSE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP
SWS	Desalination (KMW): Thames	2040	10	No effect	n/a - No	-	No LSE I/C	

SWS	Recycling (KMW): Medway WTW to lake (14Ml/d)	2031		1.4	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Asset enhancement (KMW): Remove network constraint at Longfield (13Ml/d)	2026		6.6	No effect	n/a - No LSE	-	No LSE I/C	
SEW	Groundwater Licence Trade - Folkestone Beds Abstraction, Halling	2040		2	No	n/a - No LSE	-	No LSE I/C	
SEW	RZ6 Zonal Scheme - Reinforcement to Halling Reservoir	2040		2.4	No	n/a - No LSE	-	No LSE I/C	
SEW	New Company Transfer: RZ1 to RZ6 Transfer - Blackhurst to Medway (4 Ml/d)	2040		6.9	No	n/a - No LSE	-	No LSE I/C	
SEW	RZ6 Sub-Zonal Scheme - Hermitage to Linton ring main	2039		6.3	No	n/a - No LSE	-	No LSE I/C	

	Pevensey Levels Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Recycling (SHZ): Hastings to Darwell (15.3Ml/d)	2051	4.7/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Only exposed to SWS options; i/c assessment as per SWS i/c (Appendix F)

	Pevensey Levels SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Recycling (SHZ): Hastings to Darwell (15.3Ml/d)	2051	4.7/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Only exposed to SWS options; i/c assessment as per SWS i/c (Appendix F)

	Portsmouth Harbour Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040		8.8	No effect	n/a - No LSE	-	No AE I/C	The operation of these options will not coincide spatially to affect these sites; the distance and small-scale of any 'alone' effects (relatively to the site size) also ensures that adverse effects on mobile features using different areas of the site will not occur.
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	1.7/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Water (60Ml/d)	2035		5.4	Uncertain	No AE	This option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.	No AE I/C	
PW	Farlington increased treatment capacity	2047		3.5	No effect		0	0	No AE I/C
PW	Farlington increased treatment capacity 2	2049		3.5	No LSE		0	0	No AE I/C
PW	Lavant Booster	2035		10	No effect		0	0	No AE I/C
PW	HT to Lower Itchen Spur to Hoadshill (20 Ml/d)	2051		3.9	No effect		0	0	No AE I/C

	Portsmouth Harbour SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040		8.8	No effect	n/a - No LSE	-	No AE I/C	The operation of these options will not coincide spatially to affect these sites; the distance and small-scale of any 'alone' effects (relatively to the site size) also ensures that adverse effects on mobile features using different areas of the site will not occur.
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	1.7/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

SWS	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Water (60Ml/d)	2035	5.4	Uncertain	No AE	This option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.		No AE I/C	
PW	Farlington increased treatment capacity	2047	3.5	No effect		0		0	No AE I/C
PW	Farlington increased treatment capacity 2	2049	3.5	No LSE		0		0	No AE I/C
PW	HT to Lower Itchen Spur to Hoadshill (20 Ml/d)	2051	3.9	No effect		0		0	No AE I/C

	Queendown Warren SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	4.2	No effect	n/a - No LSE	-		No LSE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP
SWS	Desalination (KME): Isle of Sheppey	2046	4.2	No effect	n/a - No LSE	-		No LSE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	4.2	No effect	n/a - No LSE	-		No LSE I/C	
SWS	Recycling (KMW): Medway WTW to lake (14Ml/d)	2031	10	No effect	n/a - No LSE	-		No LSE I/C	
SWS	Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d)	2031	4.9	No effect	n/a - No LSE	-		No LSE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	4.2	No effect	n/a - No LSE	-		No LSE I/C	
SEW	RZ8 Sub-Zonal Scheme - Hollingbourne to Warren Street reinforcement	2039	7.5	No	n/a - No LSE	-		No LSE I/C	

	Richmond Park SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
THA		0	0	1.2	0	0		0	No AE I/C Not exposed to effects from any SW options
THA		0	0	1.4	0	0		0	No AE I/C
THA		0	0	3	0	0		0	No AE I/C
THA		0	0	7	0	0		0	No AE I/C
AFF		0	0	7.4	0	0		0	No AE I/C
AFF		0	0	8.3	0	0		0	No AE I/C
AFF		0	0	9.1	0	0		0	No AE I/C

	River Itchen SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
SWS	Bulk import (HSE): PWC Source A to Lower Itchen WSW (21Ml/d)	2032	0/DS	LSE	No AE	Pipeline will cross site but effects avoidable with established measures		No AE I/C	Only exposed to SWS options; i/c assessment as per SWS i/c (Appendix F)
SWS	Groundwater (HSW): Test MAR (5.5Ml/d)	2036	8.4	No effect	n/a - No LSE	-		No AE I/C	
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026	9.9	No effect	n/a - No LSE	-		No AE I/C	

SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	0/DS	Uncertain*	No AE	This option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.	No AE I/C
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031	0.4/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HSE-HWZ): Lower Itchen WSW to Yew Hill bi-directional (74Ml/d)	2031	0.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d)	2031	3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040	0.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C

	River Lambourn SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (HKZ): Remove constraints at Newbury to increase yield (1.2Ml/d)	2028	5.4	No effect	n/a - No LSE	-	No AE I/C	Effects from one SWS option avoidable with established measures therefore no i/c effects with SWS WRMP likely; NOTE, TW HRA subject to review however HRA indicates no AEIC on this site.
SWS	Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10Ml/d)	2050	9.9	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040	DS/DS	LSE	No AE	Pipeline will cross site but effects avoidable with established measures	No AE I/C	
THA		0	0	1	0	0	0 No AE I/C	

	River Mease SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA		0	0	6.4	0	0	0 No AE I/C	Not exposed to effects from any SW options

	Rook Clift SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)	2029	DS	No effect	n/a - No LSE	-	No AE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP. No additional effects from PW option.
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	5.1	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	8	No effect	n/a - No LSE	-	No AE I/C	
PW	Lavant Booster	2035	10	No effect	0	0	No AE I/C	

	Sandwich Bay SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	2.9	No effect	n/a - No LSE	-	No LSE I/C	No LSE from any SWS options alone so i/c effects with the SWS WRMP cannot occur; SEW HRA suggests no effects on site, therefore no in combination effects.
SWS	Desalination (KTZ): East Thanet	2041	2.9	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)	2026	9.5/DS	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	2.9/DS	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	9.7/DS	No effect	n/a - No LSE	-	No LSE I/C	

SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	2.9/DS	No effect	n/a - No LSE	-		No LSE I/C	
SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	7.2	No	n/a - No LSE	-		No LSE I/C	
SEW	New Bulk Supply: SWS Wingham to SEW Canterbury (Broad Oak)	2051	9.7	No	n/a - No LSE	-		No LSE I/C	
AFF	0	0	1.9	0	0		0	No LSE I/C	

	Shortheath Common SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SEW	RZ4 Sub-Zonal Scheme - Greywell to Swaineshill	2031	9	No	n/a - No LSE	-	No LSE I/C	No effects from SWS options therefore no i/c effects with SWS WRMP
SEW	RZ5 Sub-Zonal Scheme - Oakhanger to Alton	2031	6.7	No	n/a - No LSE	-	No LSE I/C	

	Singleton and Cocking Tunnels SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	5.6	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Potentially exposed to construction effects only; effects alone can be avoided in any case with normal measures; no additional effects from SEW options based on HRA.
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	4.5	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SEW	RZ5 Sub-Zonal Scheme - Oakhanger to Alton	2031	27.4	No	n/a - No LSE	-	No AE I/C	
PW	Farlington increased treatment capacity	2047	20	No effect	0		0	No AE I/C	
PW	Farlington increased treatment capacity 2	2049	20	No effect	0		0	No AE I/C	
PW	Slindon drought permit	2026	9.8	No effect	0		0	No AE I/C	
PW	Lavant Booster	2035	8.5	No effect	0		0	No AE I/C	

	Solent and Dorset Coast SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (HSE): PWC Source A to Lower Itchen WSW (21Ml/d)	2032	1.5/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	This site is an ultimate down-catchment receptor for a number of options, although the interest and qualifying features of the site have a low sensitivity to construction in most terrestrial habitats, and construction-related in combination effects can be avoided with normal project-level measures. No additional effects from PW or BW options (NOTE: BW options not available for listing in this table).
SWS	Recycling (IOW): Sandown (8.5Ml/d)	2031	0.8/DS	Uncertain*	No AE	This site will have a low exposure to potential environmental changes in the Yar due to its location and the dominance of marine influences. Construction effects can be avoided with established measures; environmental changes associated with operational are expected to be effectively nil as (a) recycled water in the Yar will be treated to an approriate standard and used on a put and take basis, and (b) discharges from the outfall (the existing Sandown WwTW LSO) into the English Channel will have a marginally higher salinity (only relative to existing discharges; salinity will be substantiall less than seawater) and higher concentrations of some nutrient (etc.) determinands as a result of reduced discharge volumes (total nutrient load will not change), although this discharge will be to a high dispersal environment and so quickly attenuated (far-field effects from a large 'plume' would not therefore be anticipated).	No AE I/C	
SWS	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)	2031	11.9/DS	No effect	n/a - No LSE	-	No AE I/C	

SWS	Groundwater (HAZ): Recommission Chilbolton (0.5Ml/d)	2073 DS/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Groundwater (HRZ): Remove constraints at Kings Sombourne (2.5Ml/d)	2031 DS/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Groundwater (HSW): Test MAR (5.5Ml/d)	2036 2/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026 7.1/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Groundwater (IOW): New boreholes at Newchurch (LGS) (1.9Ml/d)	2037 3.8/DS		No effect	n/a - No LSE	-	No AE I/C
SWS	Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)	2040 5.1/DS		No effect	n/a - No LSE	-	No AE I/C
SWS	Recycling (SNZ): Littlehampton WTW with river discharge (15Ml/d)	2031	3.2	No effect	n/a - No LSE	-	No AE I/C
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040 7.9/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Desalination (SWZ): Tidal River Arun	2046	1.2	Uncertain	No AE	The likely location of the discharge is located in the English Channel in a high-dispersion environment, over 4km from the boundary of the site; as the site was recently designated to cover those foraging areas critical for breeding terns associated with the Solent harbour sites, it is reasonable to conclude that (a) the boundary of the site accurately reflects the core areas of functional habitat associated with the breeding sites and (b) that areas outside this boundary do not provide core areas of feeding habitat. As a result adverse effects from operation would not be expected. Construction effects are avoidable with normal measures.	No AE I/C
SWS	Desalination (SWZ): Tidal River Arun	2046	1.2	Uncertain	No AE	The likely location of the discharge is located in the English Channel in a high-dispersion environment, over 4km from the boundary of the site; as the site was recently designated to cover those foraging areas critical for breeding terns associated with the Solent harbour sites, it is reasonable to conclude that (a) the boundary of the site accurately reflects the core areas of functional habitat associated with the breeding sites and (b) that areas outside this boundary do not provide core areas of feeding habitat. As a result adverse effects from operation would not be expected. Construction effects are avoidable with normal measures.	No AE I/C
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035 1.7/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031 4.5/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HSE-HWZ): Lower Itchen WSW to Yew Hill bi-directional (74Ml/d)	2031 8.4/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d)	2031 14.2/DS		Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Bulk import (HKZ): T2ST to HKZ (5Ml/d)	2049 DS		No effect	n/a - No LSE		0 No AE I/C
SWS	Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10Ml/d)	2050 DS		No effect	n/a - No LSE	-	No AE I/C

SWS	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Water (60Ml/d)	2035	3.5	Uncertain	No AE	This option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.	No AE I/C	
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040	8.6/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
PW	Farlington increased treatment capacity	2047	2.5	No effect		0	0 No AE I/C	
PW	Farlington increased treatment capacity 2	2049	2.5	No LSE		0	0 No AE I/C	
PW	Slindon drought permit	2026	8.9	No effect		0	0 No AE I/C	

	Solent and Isle of Wight Lagoons SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Recycling (IOW): Sandown (8.5Ml/d)	2031	4/DS	Uncertain*	No AE	This site will have a low exposure to low magnitude environmental changes in the Yar. Construction effects can be avoided with established measures. Environmental changes associated with operational are expected to be negligible and not adverse as (a) recycled water in the Yar will be treated to an approriate standard and used on a put and take basis in the river above the boundary of this site; (b) the connectivity of the Yar with Brading Marshes SSSI (hence terrestrial components of Solent and Southampton Water SPA/Ramsar and Solent and Isle of Wight Lagoons SAC) is low, and evidence suggests that the interest features of the SPA/Ramsar and SAC associated with Brading Marshes are not fundamentally reliant on flows within the Yar due to the separation of the river from the marshes and the direct management of water levels across the marshes. (sluices etc.); and (c) the discharges from the outfall (the existing Sandown WwTW LSO) will be to a high dispersal environment and so quickly attenuated (far-field effects from a large 'plume' would not therefore be anticipated for this site).	No AE I/C	The lagoon feature that is theoretically exposed to options proposed by more than one water company is the lagoon adjacent to Langstone harbour (those associated with Bembridge Harbour (IoW) are only potentially affected by SWS options, which are address in the within-plan in combination section). However, the HRA of the Farlington increased treatment capacity options has concluded that there are no pathways for effects, and the Budd Farm recycling option will have no adverse effects on this lagoon, based on the Gate 2 data. No AE in combination would therefore be expected.
SWS	Groundwater (IOW): New boreholes at Newchurch (LGS) (1.9Ml/d)	2037	6.5/DS	Uncertain	No AE	This option proposes replacing all three boreholes so that the site can operate to its licensed capacity (currently operating at 1.5Ml/d instead of 6Ml/d). The abstraction is from the Newchurch Lower Greensand boreholes and not from the existing Newchurch Chalk Well and Adit. Effects on flows in Yar due to GW drawdown cannot be accurately stated due to absence of detailed groundwater modelling for the source, but are likely to be small as much of the baseflow in the Yar is from the chalk rather than the Lower Greensand; there is an Non-Deterioration investigation timetabled to complete in 2027 that is likely to confirm this. Flows from the Yar into Bembridge harbour are managed by a sluice, and effects on the marine components of the SPA/Ramsar are expected to be nominal in relation to the dominance of tidal influence in the harbour. With regard to the Brading Marshes components of the SPA/Ramsar, these are below sea level so are protected from seawater inundation by the seawall and tidal gates at the end of the Yar; water levels in Brading Marshes are are largely controlled through direct management (sluices etc.) with some inundation occurring when the river is tidally locked, and are so not directly dependent on flows etc. within the Yar. Any effects of the option on water-supply to Brading Marshes will therefore be very small, and substantially moderated in any case by the interventionist water level management of the marshes and by other surface water and rainfall inputs to the marshes. As noted, there is likely to be little / no exposure to operational effects due to location / relationship of the lagoon network adjacent to Brading Marshes and Bembridge Harbour relative to Yar (in summary, two of the lagoons are seawater-dominated, and essentially have salinities similar to seawater. The other two lagoons receive freshwater input from Brading Marshes and are hence brackish or low-salinity, but the water levels in Brading Marshes are largely controlled through direct management (sluices etc.) with some inundation occurring when the river is tidally locked, and so not directly dependent on flows etc. within the Yar. As a	No AE I/C	
SWS	Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)	2040	10.1/DS	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	7.1	No effect	n/a - No LSE	-	No AE I/C	

SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	2.2	No effect	n/a - No LSE	-	No AE I/C
SWS	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Water (60Ml/d)	2035	3.1	Uncertain	n/a - No LSE	-	No AE I/C
PW	Farlington increased treatment capacity	2047	2.1	No effect	0	0	No AE I/C
PW	Farlington increased treatment capacity 2	2049	2.1	No LSE	0	0	No AE I/C
PW	HT to Lower Itchen Spur to Hoadshill (20 Ml/d)	2051	12	No effect	0	0	No AE I/C

	Solent and Southampton Water Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (HSE): PWC Source A to Lower Itchen WSW (21Ml/d)	2032	3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	This site is the downstream receptor for a number of schemes that may result in environmental changes associated with construction; however, the majority of these schemes are unlikely to occur in the same timescale, and effects can be reliably avoided with established measures. The operation of these options will not coincide spatially to affect these sites; the distance and small-scale of any 'alone' effects (relatively to the site size) also ensures that adverse effects on mobile features using different areas of the site will not occur. Note that the BW options are not available for listing in this table, but will not operate in combination.
SWS	Recycling (IOW): Sandown (8.5Ml/d)	2031	1.7/DS	Uncertain*	No AE	This site will have a low exposure to low magnitude environmental changes in the Yar. Construction effects can be avoided with established measures. Environmental changes associated with operational are expected to be negligible and not adverse as (a) recycled water in the Yar will be treated to an approriate standard and used on a put and take basis in the river above the boundary of this site; (b) the connectivity of the Yar with Brading Marshes SSSI (hence terrestrial components of Solent and Southampton Water SPA/Ramsar and Solent and Isle of Wight Lagoons SAC) is low, and evidence suggests that the interest features of the SPA/Ramsar and SAC associated with Brading Marshes are not fundamentally reliant on flows within the Yar due to the separation of the river from the marshes and the direct management of water levels across the marshes. (sluices etc.); and (c) the discharges from the outfall (the existing Sandown WwTW LSO) will be to a high dispersal environment and so quickly attenuated (far-field effects from a large 'plume' would not therefore be anticipated for this site).	No AE I/C	
SWS	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)	2031	10/DS	No effect	n/a - No LSE	-	No AE I/C	
SWS	Groundwater (HAZ): Recommission Chilbolton (0.5Ml/d)	2073	DS/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Groundwater (HRZ): Remove constraints at Kings Sombourne (2.5Ml/d)	2031	DS/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Groundwater (HSW): Test MAR (5.5Ml/d)	2036	0.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026	5.1/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	

SWS	Groundwater (IOW): New boreholes at Newchurch (LGS) (1.9Ml/d)	2037	4.2/DS	Uncertain	No AE	This option proposes replacing all three boreholes so that the site can operate to its licensed capacity (currently operating at 1.5Ml/d instead of 6Ml/d). The abstraction is from the Newchurch Lower Greensand boreholes and not from the existing Newchurch Chalk Well and Adit. Effects on flows in Yar due to GW drawdown cannot be accurately stated due to absence of detailed groundwater modelling for the source, but are likely to be small as much of the baseflow in the Yar is from the chalk rather than the Lower Greensand; there is an Non-Deterioration investigation timetabled to complete in 2027 that is likely to confirm this. Flows from the Yar into Bembridge harbour are managed by a sluice, and effects on the marine components of the SPA/Ramsar are expected to be nominal in relation to the dominance of tidal influence in the harbour. With regard to the Brading Marshes components of the SPA/Ramsar, these are below sea level so are protected from seawater inundation by the seawall and tidal gates at the end of the Yar; water levels in Brading Marshes are are largely controlled through direct management (sluices etc.) with some inundation occurring when the river is tidally locked, and are so not directly dependent on flows etc. within the Yar. Any effects of the option on water-supply to Brading Marshes will therefore be very small, and substantially moderated in any case by the interventionist water level management of the marshes and by other surface water and rainfall inputs to the marshes. As a result, adverse effects are not anticipated as a result of operation.	No AE I/C
SWS	Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)	2040	7.8/DS	No effect	n/a - No LSE	-	No AE I/C
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	3.2/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031	3.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HSE-HWZ): Lower Itchen WSW to Yew Hill bi-directional (74Ml/d)	2031	10.7/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d)	2031	16.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Bulk import (HKZ): T2ST to HKZ (5Ml/d)	2049	DS	No effect	n/a - No LSE		0 No AE I/C
SWS	Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10Ml/d)	2050	DS	No effect	n/a - No LSE	-	No AE I/C
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040	DS/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
PW	HT to Lower Itchen Spur to Hoadshill (20 Ml/d)	2051	5.5	No effect	0		0 No AE I/C

	Solent and Southampton Water SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (HSE): PWC Source A to Lower Itchen WSW (21Ml/d)	2032	3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	This site is the downstream receptor for a number of schemes that may result in environmental changes associated with construction; however, the majority of these schemes are unlikely to occur in the same timescale, and effects can be reliably avoided with established measures. The operation of these options will not coincide spatially to affect these sites; the distance and small-scale of any 'alone' effects (relatively to the site size) also ensures that adverse effects on mobile features using different areas of the site will not occur. Note that the BW options are not available for listing in this table, but will not operate in combination.
SWS	Recycling (IOW): Sandown (8.5Ml/d)	2031	1.7/DS	Uncertain*	No AE	This site will have a low exposure to low magnitude environmental changes in the Yar. Construction effects can be avoided with established measures. Environmental changes associated with operational are expected to be negligible and not adverse as (a) recycled water in the Yar will be treated to an approriate standard and used on a put and take basis in the river above the boundary of this site; (b) the connectivity of the Yar with Brading Marshes SSSI (hence terrestrial components of Solent and Southampton Water SPA/Ramsar and Solent and Isle of Wight Lagoons SAC) is low, and evidence suggests that the interest features of the SPA/Ramsar and SAC associated with Brading Marshes are not fundamentally reliant on flows within the Yar due to the separation of the river from the marshes and the direct management of water levels across the marshes. (sluices etc.); and (c) the discharges from the outfall (the existing Sandown WwTW LSO) will be to a high dispersal environment and so quickly attenuated (far-field effects from a large 'plume' would not therefore be anticipated for this site).	No AE I/C	

SWS	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)	2031	10/DS	No effect	n/a - No LSE	-	No AE I/C
SWS	Groundwater (HAZ): Recommission Chilbolton (0.5Ml/d)	2073	DS/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Groundwater (HRZ): Remove constraints at Kings Sombourne (2.5Ml/d)	2031	DS/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Groundwater (HSW): Test MAR (5.5Ml/d)	2036	0.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026	5.2/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Groundwater (IOW): New boreholes at Newchurch (LGS) (1.9Ml/d)	2037	4.2/DS	Uncertain	No AE	This option proposes replacing all three boreholes so that the site can operate to its licensed capacity (currently operating at 1.5Ml/d instead of 6Ml/d). The abstraction is from the Newchurch Lower Greensand boreholes and not from the existing Newchurch Chalk Well and Adit. Effects on flows in Yar due to GW drawdown cannot be accurately stated due to absence of detailed groundwater modelling for the source, but are likely to be small as much of the baseflow in the Yar is from the chalk rather than the Lower Greensand; there is an Non-Deterioration investigation timetabled to complete in 2027 that is likely to confirm this. Flows from the Yar into Bembridge harbour are managed by a sluice, and effects on the marine components of the SPA/Ramsar are expected to be nominal in relation to the dominance of tidal influence in the harbour. With regard to the Brading Marshes components of the SPA/Ramsar, these are below sea level so are protected from seawater inundation by the seawall and tidal gates at the end of the Yar; water levels in Brading Marshes are are largely controlled through direct management (sluices etc.) with some inundation occurring when the river is tidally locked, and are so not directly dependent on flows etc. within the Yar. Any effects of the option on water-supply to Brading Marshes will therefore be very small, and substantially moderated in any case by the interventionist water level management of the marshes and by other surface water and rainfall inputs to the marshes. As a result, adverse effects are not anticipated as a result of operation.	No AE I/C
SWS	Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)	2040	7.8/DS	No effect	n/a - No LSE	-	No AE I/C
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	3.2/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031	3.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HSE-HWZ): Lower Itchen WSW to Yew Hill bi-directional (74Ml/d)	2031	10.7/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d)	2031	16.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
SWS	Bulk import (HKZ): T2ST to HKZ (5Ml/d)	2049	DS	No effect	n/a - No LSE	0	No AE I/C
SWS	Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10Ml/d)	2050	DS	No effect	n/a - No LSE	-	No AE I/C
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040	DS/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C
PW	HT to Lower Itchen Spur to Hoadshill (20 Ml/d)	2051	5.5	No effect		0	0 No AE I/C

	Solent Maritime SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (HSE): PWC Source A to Lower Itchen WSW (21Ml/d)	2032	5.7/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	This site is the downstream receptor for a number of schemes that may result in environmental changes associated with construction; however, the majority of these schemes are unlikely to occur in the same timescale, and effects can be reliably avoided with established measures. The operation of these options will not coincide spatially to affect these sites; the distance and small-scale of any 'alone' effects (relatively to the site size) also ensures that adverse effects on mobile features using different areas of the site will not occur. Note that the BW options are not available for listing in this table, but will not operate in combination.
SWS	Recycling (IOW): Sandown (8.5Ml/d)	2031	6.4	No effect	n/a - No LSE	-	No AE I/C	
SWS	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)	2031	10.6/DS	No effect	n/a - No LSE	-	No AE I/C	
SWS	Groundwater (HAZ): Recommission Chilbolton (0.5Ml/d)	2073	DS/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Groundwater (HRZ): Remove constraints at Kings Sombourne (2.5Ml/d)	2031	DS/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Groundwater (HSW): Test MAR (5.5Ml/d)	2036	1/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026	5.8/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Groundwater (IOW): New boreholes at Newchurch (LGS)	2037	6.9	No effect	n/a - No LSE	-	No AE I/C	
SWS	Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)	2040	8.4	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	3.3/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Bulk import (HSE): Havant Thicket Reservoir to Lower Itchen WSW (90Ml/d)	2035	0/DS	Uncertain*	No AE	This option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.	No AE I/C	
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031	3.4/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (HSE-HWZ): Lower Itchen WSW to Yew Hill bi-directional (74Ml/d)	2031	12/DS	Uncertain*	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (HWZ-HAZ): Winchester to Andover bi-directional (15Ml/d)	2031	16.7/DS	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (HKZ): T2ST to HKZ (5Ml/d)	2049	DS	No effect	n/a - No LSE		0 No AE I/C	
SWS	Interzonal transfer (HAZ-HKZ): Andover to Kingsclere bi-directional (10Ml/d)	2050	DS	No effect	n/a - No LSE	-	No AE I/C	
SWS	Recycling (HSE): Recharge of Havant Thicket from recycled water from Portsmouth Water (60Ml/d)	2035	0/DS	Uncertain	No AE	This option has been subject to project level design and investigations through the SRO gated process, which provides the best-available environmental data and assessment for the option (see https://www.southernwater.co.uk/media/5424/gate-2-annex-3-havant-thicket-technical-redacted.pdf). In summary, these assessments have concluded that adverse effects will not occur as a result of the option, subject to the implementation of mitigation measures identified through the SRO gated process, and the HRA of the WRMP necessarily reflects this.	No AE I/C	
SWS	Bulk import (HWZ): T2ST to Yew Hill (95Ml/d)	2040	DS/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
PW	Farlington increased treatment capacity	2047	1.1	No effect		0	0 No AE I/C	

PW	Farlington increased treatment capacity 2	2049	1.1	No LSE		0	0	No AE I/C
PW	Lavant Booster	2035	3	Yes	No AE	No changes in the groundwater table are expected as part of the option. There will be no increase in abstraction. Construction best practice measures to control localised impacts from dust, vehicle emissions and other		No AE I/C
PW	HT to Racton via Farlington 20Ml/d	2046	1.1	No effect		0	0	No AE I/C
PW	HT to Lower Itchen Spur to Hoadshill (20 Ml/d)	2051	5.5	No effect		0	0	No AE I/C

	South West London Waterbodies Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA		0	0	0	0	0	0 No AE I/C	Not exposed to effects from any SW options
THA		0	0	4.7	0	0	0 No AE I/C	
THA		0	0	5.2	0	0	0 No AE I/C	
THA		0	0	5.4	0	0	0 No AE I/C	
AFF		0	0	0.3	0	0	0 No AE I/C	
AFF		0	0	1.4	0	0	0 No AE I/C	
AFF		0	0	1.5	0	0	0 No AE I/C	
AFF		0	0	4.3	0	0	0 No AE I/C	
AFF		0	0	4.4	0	0	0 No AE I/C	
AFF		0	0	4.6	0	0	0 No AE I/C	
AFF		0	0	4.8	0	0	0 No AE I/C	

	South West London Waterbodies SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA		0	0	0	0	0	0 No AE I/C	Not exposed to effects from any SW options
THA		0	0	4.7	0	0	0 No AE I/C	
THA		0	0	5.2	0	0	0 No AE I/C	
THA		0	0	5.4	0	0	0 No AE I/C	
AFF		0	0	0.3	0	0	0 No AE I/C	
AFF		0	0	1.4	0	0	0 No AE I/C	
AFF		0	0	1.5	0	0	0 No AE I/C	
AFF		0	0	4.3	0	0	0 No AE I/C	
AFF		0	0	4.3	0	0	0 No AE I/C	
AFF		0	0	4.6	0	0	0 No AE I/C	
AFF		0	0	4.8	0	0	0 No AE I/C	

	South Wight Maritime SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Recycling (IOW): Sandown (8.5Ml/d)	2031	0.9	Uncertain	No AE	This site will have a low exposure to potential environmental changes in the Yar due to its location and the dominance of marine influences. Construction effects can be avoided with established measures; environmental changes associated with operational are expected to be effectively nil as (a) recycled water in the Yar will be treated to an approriate standard and used on a put and take basis, and (b) discharges from the outfall (the existing Sandown WwTW LSO) into the English Channel will have a marginally higher salinity (only relative to existing discharges; salinity will be substantiall less than seawater) and higher concentrations of some nutrient (etc.) determinands as a result of reduced discharge volumes (total nutrient load will not change), although this discharge will be to a high dispersal environment and so quickly attenuated (far-field effects from a large 'plume' would not therefore be anticipated).	No AE I/C	Only exposed to SWS options; i/c assessment as per SWS i/c (Appendix F)

SWS	Groundwater (IOW): New boreholes at Newchurch (LGS)	2037	3.9	No effect	n/a - No LSE	-	No AE I/C	
SWS	Groundwater (IOW): New borehole at Eastern Yar3 (1.5Ml/d)	2040	4.4	No effect	n/a - No LSE	-	No AE I/C	

	Stodmarsh Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	5.7	No effect	n/a - No LSE	-	No AE I/C	This site or its features is only potentially exposed to construction effects from SWS and SEW options; these effects can be avoided with established measures so unavoidable i/c effects would not be expected.
SWS	Desalination (KTZ): East Thanet	2041	5.7	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)	2026	5.9	No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	0.4	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	0.4/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	0.4	No effect	n/a - No LSE	-	No AE I/C	
SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	2.1	Effects Uncertain	No AE	Subject to further assessment/survey to determine whether any land within the footprint of the pipeline works could be functionally linked to the SPA and mitigation measures put in place to minimise impacts to an acceptable level.	No AE I/C	
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	1.5	Effects Uncertain	No AE	Construction best practice measures to control potential localised construction impacts due to the presence of a potential hydrological link.	No AE I/C	
SEW	Reculver Desalination (30Ml/d Option)	2044	4	No	n/a - No LSE	-	No AE I/C	
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	4.1	No	n/a - No LSE	-	No AE I/C	
SEW	New Bulk Supply: SWS near Canterbury to SEW Canterbury (Broad Oak)	2051	0.3	Effects Uncertain	0	This is a post-2050 option, so we have not taken it to AA in the report.	No AE I/C	
SEW	RZ8 Sub-Zonal Scheme - Thanington to Godmersham	2038	8.2	No	n/a - No LSE	-	No AE I/C	

	Stodmarsh SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	5.3	No effect	n/a - No	-	No AE I/C	This site or its features is only potentially exposed to construction effects from SWS and SEW options; these effects can be avoided with established measures so unavoidable i/c effects would not be expected.
SWS	Desalination (KTZ): East Thanet	2041	5.3	No effect	n/a - No	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)	2026	5.9	No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	0.3	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	0.4/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	0.3	No effect	n/a - No LSE	-	No AE I/C	
SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	2.1	No	n/a - No LSE	-	No AE I/C	
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	1.5	Effects Uncertain	No AE	Construction best practice measures to control potential localised construction impacts due to the presence of a potential hydrological link.	No AE I/C	
SEW	Reculver Desalination (30Ml/d Option)	2044	4	No	n/a - No LSE	-	No AE I/C	
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	4.1	No	n/a - No LSE	-	No AE I/C	

SEW	New Bulk Supply: SWS near Canterbury to SEW Canterbury (Broad Oak)	2051	0.3	Effects Uncertain		0 This is a post-2050 option, so we have not taken it to AA in the report.	No AE I/C	
SEW	RZ8 Sub-Zonal Scheme - Thanington to Godmersham	2038	8.2	No	n/a - No LSE	-	No AE I/C	

	Stodmarsh SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	5.7	Uncertain	No AE	Adverse effects alone will not occur; qualifying features of the SPA will not make substantive use of the coastal habitats of the Thanet Coast and Sandwich Bay SPA/Ramsar based on typical habitat preferences; some of the terrestrial wetland habitats near Birchington (hence potentially affected by the transfer to Fleete) may be periodically used by species associated with Stodmarsh, but these areas are unlikely to be critical to the functional integrity of Stodmarsh SPA and effects will be temporary during construction and avoidable with established measures (e.g. timing works). Residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	This site or its features is only potentially exposed to construction effects from SWS and SEW options; these effects can be avoided with established measures so unavoidable i/c effects would not be expected.
SWS	Desalination (KTZ): East Thanet	2041	5.7	Uncertain	No AE	Adverse effects alone will not occur; qualifying features of the SPA will not make substantive use of the coastal habitats of the Thanet Coast and Sandwich Bay SPA/Ramsar based on typical habitat preferences; some of the terrestrial wetland habitats near Birchington (hence potentially affected by the transfer to Fleete) may be periodically used by species associated with Stodmarsh, but these areas are unlikely to be critical to the functional integrity of Stodmarsh SPA and effects will be temporary during construction and avoidable with established measures (e.g. timing works). Residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)	2026	5.9	No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	0.5	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	0.5/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	0.5	No effect	n/a - No LSE	-	No AE I/C	
SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	2.1	Effects Uncertain	No AE	Subject to further assessment/survey to determine whether any land within the footprint of the pipeline works could be functionally linked to the SPA and mitigation measures put in place to minimise impacts to an acceptable level.	No AE I/C	
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	1.5	Effects Uncertain	No AE	Construction best practice measures to control potential localised construction impacts due to the presence of a potential hydrological link.	No AE I/C	
SEW	Reculver Desalination (30Ml/d Option)	2044	4	No	n/a - No LSE	-	No AE I/C	
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	4.1	No	n/a - No LSE	-	No AE I/C	
SEW	New Bulk Supply: SWS near Canterbury to SEW Canterbury (Broad Oak)	2051	0.3	Effects Uncertain		0 This is a post-2050 option, so we have not taken it to AA in the report.	No AE I/C	
SEW	RZ8 Sub-Zonal Scheme - Thanington to Godmersham	2038	8.2	No	n/a - No LSE	-	No AE I/C	

	Tankerton Slopes and Swalecliffe SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	4.1	No effect	n/a - No LSE	-	No LSE I/C	No LSE alone; no risk of i/c effects (site / feature not exposed to construction effects (distance, no pathways for site-derived pollutants, mobile features sedentary / limited to site) or effects from operation (distance, feature characteristics).
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	5.8	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	4.1	No effect	n/a - No LSE	-	No LSE I/C	

SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	5.2	No	n/a - No LSE	-		No LSE I/C	
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	4.4	No	n/a - No LSE	-		No LSE I/C	
SEW	Reculver Desalination (30Ml/d Option)	2044	6.7	No	n/a - No LSE	-		No LSE I/C	
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	6.9	No	n/a - No LSE	-		No LSE I/C	
SEW	New Bulk Supply: SWS near Canterbury to SEW Canterbury (Broad Oak)	2051	6	No	n/a - No LSE	-		No LSE I/C	

	Thames Basin Heaths SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
SEW	RZ4 Sub-Zonal Scheme - Greywell to Swaineshill	2031	7.1	No	n/a - No LSE	-		No AE I/C	Not exposed to effects from any SW options
SEW	RZ4 Sub-Zonal Scheme - Ewshot to Itchel	2031	0.5	Effects Uncertain	0	This is a zonal scheme, so we have not taken it to AA in the report.		No AE I/C	
SEW	RZ4 Sub-Zonal Scheme - Greywell to Whitedown	2032	7	No	n/a - No LSE	-		No AE I/C	
THA	0	0	0	0	0		0	No AE I/C	
THA	0	0	0.3	0	0		0	No AE I/C	
THA	0	0	7.2	0	0		0	No AE I/C	
AFF	0	0	7.3	0	0		0	No AE I/C	
AFF	0	0	7.3	0	0		0	No AE I/C	
AFF	0	0	7.3	0	0		0	No AE I/C	

	Thames Estuary and Marshes Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	1.8	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*	Assessment as per SWS i/c assessment (Appendix F); SEW option will not introduce additonal impact pathways (licence trade only).
SWS	Desalination (KME): Isle of Sheppey	2046	1.8	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*	
SWS	Desalination (KME): Isle of Sheppey	2046	1.8	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*	

SWS	Desalination (KMW): Thames Estuary	2040	3.8/DS	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SWS	Desalination (KMW): Thames Estuary	2040	3.8/DS	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SWS	Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d)	2031	9.9	No effect	n/a - No LSE	-	No AE I/C*
SWS	Bulk import (SNZ): SES to SNZ (10Ml/d)	2034	DS/DS	No effect	n/a - No LSE	-	No AE I/C*
SWS	Asset enhancement (KMW): Remove network constraint at Longfield (13Ml/d)	2026	2.9/DS	No effect	n/a - No LSE	-	No AE I/C*
SWS	Groundwater (KME): Recommission Gravesend (2.7Ml/d)	2031	2.1	Uncertain	No AE*	Adverse effects alone are not expected as a result of the Groundwater (KME): Recommission Gravesend (2.7Ml/d) scheme given the small scale of the abstraction and the likely low exposure of estuarine habitats in this area to alterations in flows of local streams, the North Kent Marshes are subject to WINEP investigations that will provide an evidence base for assessment at the project level.	No AE I/C*
SWS	Desalination (KME): Isle of Sheppey	2046	1.8	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SEW	Groundwater Licence Trade - Folkestone Beds Abstraction, Halling	2040	8	No	n/a - No LSE	-	No AE I/C*

	Thames Estuary and Marshes SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	1.9	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*	Assessment as per SWS i/c assessment (Appendix F); SEW option will not introduce additonal impact pathways (licence trade only).
SWS	Desalination (KME): Isle of Sheppey	2046	1.9	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*	
SWS	Desalination (KME): Isle of Sheppey	2046	1.9	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*	

SWS	Desalination (KMW): Thames Estuary	2040	5.2/DS	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SWS	Desalination (KMW): Thames Estuary	2040	5.2/DS	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SWS	Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d)	2031	10	No effect	n/a - No LSE	-	No AE I/C*
SWS	Bulk import (SNZ): SES to SNZ (10Ml/d)	2034	DS/DS	No effect	n/a - No LSE	-	No AE I/C*
SWS	Asset enhancement (KMW): Remove network constraint at Longfield (13Ml/d)	2026	4.4/DS	No effect	n/a - No LSE	-	No AE I/C*
SWS	Groundwater (KME): Recommission Gravesend (2.7Ml/d)	2031	3.3	Uncertain	No AE*	Adverse effects alone are not expected as a result of the Groundwater (KME): Recommission Gravesend (2.7Ml/d) scheme given the small scale of the abstraction and the likely low exposure of estuarine habitats in this area to alterations in flows of local streams, the North Kent Marshes are subject to WINEP investigations that will provide an evidence base for assessment at the project level.	No AE I/C*
SWS	Desalination (KME): Isle of Sheppey	2046	1.9	Uncertain	No AE*	Adverse effects likely avoidable based on proxy data and evidence from similar sites / schemes, although there are residual uncertainties that cannot be resolved at the plan level. The operation of the scheme may affect the supporting habitats of the qualifying features, although evidence from elsewhere indicates that the zone of environmental change will be small (a would be expected to extend to the site), and could be minimised further by appropriate location of the outfall (taking account of local hydrodynamics) and operational practice. Construction effects are avoidable with normal measures.	No AE I/C*
SEW	Groundwater Licence Trade - Folkestone Beds Abstraction, Halling	2040	9.2	No	n/a - No LSE	-	No AE I/C*

	Thanet Coast and Sandwich Bay Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	0/DS	LSE	No AE	Adverse effects alone will not occur (construction effects clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective i.e. it will be possible to avoid direct effects on this site with directional drill or similar, and other construction effects can be managed/avoided)); operational effects will not occur, based on the likely distance to the outfall location and consequent low exposure / sensitivity of qualifying features or supporting habitats to the likely magnitude of environmental change; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Two options (Thanet Desal and Reculver Desal) will require outfalls that will need to cross the Thanet Coast SAC and Thanet Coast and Sandwich Bay SPA / Ramsar (substantive direct effects therefore possible, hence identified here, but construction impacts likely avoidable with engineering solutions). Unlikely to be affected by operation given the outfall location offshore and nature / magnitude of the discharges (compare with operational effects from other LSO discharges). In combination effects expected to be avodiable therefore.
SWS	Desalination (KTZ): East Thanet	2041	0/DS	LSE	No AE	Adverse effects alone will not occur (construction of outfall completed under Option THA20; effects from construction at the desal plant avoidable with normal measures e.g. timing works); operational effects will not occur, based on the likely distance to the outfall location and consequent low exposure / sensitivity of qualifying features or supporting habitats to the likely magnitude of environmental change; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)	2026	7.6/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	2.9/DS	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	5.6/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	2.9/DS	No effect	n/a - No LSE	-	No AE I/C	

SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	5	Effects Uncertain	No AE	Subject to further assessment/survey to determine whether any land within the footprint of the pipeline works could be functionally linked to the SPA and mitigation measures put in place to minimise impacts to an acceptable level.	No AE I/C	
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	4.4	No	n/a - No LSE	-	No AE I/C	
SEW	Reculver Desalination (30Ml/d Option)	2044	0	Yes	No AE	Subject to further assessment/modelling to consider extent of physical hydrodynamic impacts, e.g. scour, and affects on prey species of qualifying features of brine discharge. Sensitive design, avoidance, mitigation and construciton best practice also required to minimise impacts to an acceptable level.	No AE I/C	
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	0.3	Effects Uncertain	No AE	Subject to further assessment/survey to determine whether any land within the footprint of the pipeline works could be functionally linked to the SPA and mitigation measures put in place to minimise impacts to an acceptable level.	No AE I/C	
SEW	New Bulk Supply: SWS near Canterbury to SEW Canterbury (Broad Oak)	2051	6	No	n/a - No LSE	-	No AE I/C	
AFF	0	0	1.6	0	0	0	No AE I/C	

Thanet Coast and Sandwich Bay SPA		Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	0/DS	LSE	No AE	Adverse effects alone will not occur (construction effects clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective i.e. it will be possible to avoid direct effects on this site with directional drill or similar, and other construction effects can be managed/avoided)); operational effects will not occur, based on the likely distance to the outfall location and consequent low exposure / sensitivity of qualifying features or supporting habitats to the likely magnitude of environmental change; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	Two options (Thanet Desal and Reculver Desal) will require outfalls that will need to cross the Thanet Coast SAC and Thanet Coast and Sandwich Bay SPA / Ramsar (substantive direct effects therefore possible, hence identified here, but construction impacts likely avoidable with engineering solutions). Unlikely to be affected by operation given the outfall location offshore and nature / magnitude of the discharges (compare with operational effects from other LSO discharges). In combination effects expected to be avodiable therefore.
SWS	Desalination (KTZ): East Thanet	2041	0/DS	LSE	No AE	Adverse effects alone will not occur (construction of outfall completed under Option THA20; effects from construction at the desal plant avoidable with normal measures e.g. timing works); operational effects will not occur, based on the likely distance to the outfall location and consequent low exposure / sensitivity of qualifying features or supporting habitats to the likely magnitude of environmental change; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Bulk import (KTZ): SEW Kingston to Near Canterbury (2Ml/d)	2026	9.9/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	2.9/DS	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	5.6/DS	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE I/C	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	2.9/DS	No effect	n/a - No LSE	-	No AE I/C	
SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	5	Effects Uncertain	No AE	Subject to further assessment/survey to determine whether any land within the footprint of the pipeline works could be functionally linked to the SPA and mitigation measures put in place to minimise impacts to an acceptable level.	No AE I/C	
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	4.4	No	n/a - No LSE	-	No AE I/C	
SEW	Reculver Desalination (30Ml/d Option)	2044	0	Yes	No AE	Subject to further assessment/modelling to consider extent of physical hydrodynamic impacts, e.g. scour, and affects on prey species of qualifying features of brine discharge. Sensitive design, avoidance, mitigation and construciton best practice also required to minimise impacts to an acceptable level.	No AE I/C	
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	0.3	Effects Uncertain	No AE	Subject to further assessment/survey to determine whether any land within the footprint of the pipeline works could be functionally linked to the SPA and mitigation measures put in place to minimise impacts to an acceptable level.	No AE I/C	

SEW	New Bulk Supply: SWS near Canterbury to SEW Canterbury (Broad Oak)	2051		6	No	n/a - No LSE	-	No AE	I/C
AFF		0	0	1.9	0	0	0	No AE	I/C

	Thanet Coast SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KTZ): East Thanet	2041	0.3/DS	LSE	No AE	Adverse effects alone will not occur (construction effects clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective i.e. it will be possible to avoid direct effects on this site with directional drill or similar, and other construction effects can be managed/avoided); operational effects will not occur, based on the likely distance to the outfall location; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C Two options (Thanet Desal and Reculver Desal) will require outfalls that will need to cross the Thanet Coast SAC and Thanet Coast and Sandwich Bay SPA / Ramsar (substantive direct effects therefore possible, hence identified here, but construction impacts likely avoidable with engineering solutions). Unlikely to be affected by operation given the outfall location offshore and nature / magnitude of the discharges (compare with operational effects from other LSO discharges). In combination effects expected to be avodiable therefore.
SWS	Desalination (KTZ): East Thanet	2041	0.3/DS	LSE	No AE	Adverse effects alone will not occur (construction completed under Option THA20); operational effects will not occur, based on the likely distance to the outfall location; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	2.9/DS	No effect	n/a - No LSE	-	No AE	I/C
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	2.9/DS	No effect	n/a - No LSE	-	No AE	I/C
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036		9.3	No	n/a - No LSE	-	No AE I/C
SEW	Reculver Desalination (30Ml/d Option)	2044		3.6	No	n/a - No LSE	-	No AE I/C
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044		4.6	No	n/a - No LSE	-	No AE I/C

	The Mens SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Recycling (SNZ): Horsham with storage at Pulborough (6.8Ml/d)	2058	3.7	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C Potentially exposed to construction effects only; most schemes not temporally coincident and effects alone can be avoided in any case with normal measures. No additional effects from PW or SEW optons, so no i/c effects expected.
SWS	Groundwater (SNZ): New borehole at Petworth (4Ml/d)	2031	2.3	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C
SWS	Groundwater (SNZ): Reinstate West Chiltington (3.1Ml/d)	2029	8.3	No effect	n/a - No LSE	-	No AE	I/C
SWS	Recycling (SNZ): Littlehampton WTW with river discharge (15Ml/d)	2031	3.6	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	3.6	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C
SWS	Bulk import (SNZ): Havant Thicket Reservoir to Pulborough (50Ml/d)	2040	3.9	Uncertain*	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C
SWS	Interzonal transfer (SNZ-SWZ): Pulborough to Worthing	2040	4.3	No effect	No AE	Adverse effects alone will not occur (no pathways, magnitude of change too small, etc.) or are clearly avoidable with scheme-level measures that are known to be available, achievable and likely to be effective; residual effects after mitigation (etc.) likely to be nil or very small, so low risk of i/c effects.	No AE	I/C
SEW	New Bulk Supply: SESW Outwood to SEW Whitely Hill	2049	28.5	No	n/a - No LSE	-	No AE	I/C
PW	Slindon drought permit	2026	14.6	No effect		0	0	No AE I/C
PW	Lavant Booster	2035	24.7	No effect		0	0	No AE I/C

	The New Forest Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary

SWS	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)	2031	8.5	No effect	n/a - No LSE	-	No LSE I/C	Not affected by SWS options; note, may be exposed to BW options but no risk of i/c effects with SW WRMP.
SWS	Groundwater (HSW): Test MAR (5.5Ml/d)	2036	4.9	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026	6.2	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031	7.9	No effect	n/a - No LSE	-	No LSE I/C	

	The New Forest SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Bulk import (HSE): PWC Source A to Lower Itchen WSW (21Ml/d)	2032	10	No effect	n/a - No LSE	-	No LSE I/C	Not affected by SWS options; note, may be exposed to BW options but no risk of i/c effects with SW WRMP.
SWS	Groundwater (HRZ): New boreholes at Romsey (4.8Ml/d)	2031	8.2	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Groundwater (HSW): Test MAR (5.5Ml/d)	2036	3.4	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Interzonal transfer (HRZ-HSW): Romsey Town and Test valve (3.1Ml/d)	2026	5.7	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Interzonal transfer (HSE-HSW): Yew Hill WSW to River Test WSW bi-directional (60Ml/d)	2031	6.6	No effect	n/a - No LSE	-	No LSE I/C	

	The Swale Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Desalination (KME): Isle of Sheppey	2046	0	Uncertain	No AE	The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.	No AE I/C	The zones of environmental change for the operation of these options will not overlap due to the nature and location of the Swale relative to the options. No coincident effects will occur as the residual alone effects will not interact. Construction effects all avoidable with established measures so no i/c effects with SEW options.
SWS	Desalination (KME): Isle of Sheppey	2046	0/DS	LSE	No AE	The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	0	Uncertain	No AE	The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.	No AE I/C	

SWS	Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d)	2031	0.1/DS	LSE	No AE*	This option was assessed as having No Adverse Effects at WRMP19 and there have been no substantive amendments in either the scheme or the environmental baseline to alter this conclusion. In summary, the net effect of the scheme operation would be to reduce non-saline inputs to Milton Creek from Sittingbourne WwTW by ~7.5Mld; discharges from the WwTW are likely to form a significant component of the non-saline flows in this creek (the permitted discharge of recycled water is ~118Ml/d) and the volumes recovered through recycling will typically be a small proportion of this (note, a proportion of this water would still enter the Swale via the paper mill post-process discharge, although the paper-making process will to some extent be consumptive). The principal issues for The Swale SPA/Ramsar are the potential effects on Milton Creek as 'functional habitat'; and the small reduction in non-saline inputs to The Swale via Milton Creek (note, all potential construction effects can be avoided with established measures). With regard to functional habitat, Milton Creek will be of low value in this regard as (a) it is a constrained creek / channel in a high-disturbance urban / industrial area that will inherently have a low attractiveness for the qualifying features (assuming there are no dominating non-natural attractants) and (b) is substantially lower value than the extensive areas of equivalent mud-flat and creek habitat available in the SPA/Ramsar; it is therefore very unlikely that the creek is critical to the functional integrity of the site, and environmental changes in this location would not be expected to adversely affect these sites. With regard to effects on habitats in The Swale itself, the possibility of localised and minor changes to the invertebrate fauna of The Swale as a result of reductions in non-saline inputs around the confluence with Milton Creek cannot be excluded; however, the reduction of ~7.5Ml/d will be small relative to the inputs from the creek (from the WwTW and surface water catchment in Sittingbourne), and likely inconsequential in relation to the tidal turnover and dominance of saline inputs; furthermore, any minor and localised shifts in biotope would not fundamentally alter the value of the area to the qualifying features; however, aspects of this can only be confirmed with the benefit of project-level survey and modelling, hence	No AE I/C
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	2.5/DS	No effect	n/a - No LSE	-	No AE I/C
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	7.5	No effect	n/a - No LSE	-	No AE I/C
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	2.5/DS	No effect	n/a - No LSE	-	No AE I/C
SWS	Desalination (KME): Isle of Sheppey	2046	0	Uncertain	No AE	The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.	No AE I/C
SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	6.6	Effects Uncertain	No AE	Subject to further assessment/survey to determine whether any land within the footprint of the pipeline works could be functionally linked to the SPA and mitigation measures put in place to minimise impacts to an acceptable level.	No AE I/C
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	4.6	No	n/a - No LSE	-	No AE I/C
SEW	Reculver Desalination (30Ml/d Option)	2044	9.7	No	n/a - No LSE	-	No AE I/C
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	9.6	No	n/a - No LSE	-	No AE I/C
SEW	New Bulk Supply: SWS near Canterbury to SEW Canterbury (Broad Oak)	2051	7.6	No	n/a - No LSE	-	No AE I/C
SEW	RZ8 Sub-Zonal Scheme - Hollingbourne to Warren Street reinforcement	2039	6.7	No	n/a - No LSE	-	No AE I/C
SEW	RZ8 Sub-Zonal Scheme - Thanington to Godmersham	2038	9.4	No	n/a - No LSE	-	No AE I/C

	The Swale SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary

SWS	Desalination (KME): Isle of Sheppey	2046	0 Uncertain	No AE	The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.	No AE I/C	The zones of environmental change for the operation of these options will not overlap due to the nature and location of the Swale relative to the options. No coincident effects will occur as the residual alone effects will not interact. Construction effects all avoidable with established measures so no i/c effects with SEW options.
SWS	Desalination (KME): Isle of Sheppey	2046 0/DS	LSE	No AE	The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	0 Uncertain	No AE	The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.	No AE I/C	
SWS	Recycling (KME): Sittingbourne industrial water reuse (7.5Ml/d)	2031 0.1/DS	LSE	No AE*	This option was assessed as having No Adverse Effects at WRMP19 and there have been no substantive amendments in either the scheme or the environmental baseline to alter this conclusion. In summary, the net effect of the scheme operation would be to reduce non-saline inputs to Milton Creek from Sittingbourne WwTW by ~7.5Mld; discharges from the WwTW are likely to form a significant component of the non-saline flows in this creek (the permitted discharge of recycled water is ~118Ml/d) and the volumes recovered through recycling will typically be a small proportion of this (note, a proportion of this water would still enter the Swale via the paper mill post-process discharge, although the paper-making process will to some extent be consumptive). The principal issues for The Swale SPA/Ramsar are the potential effects on Milton Creek as 'functional habitat'; and the small reduction in non-saline inputs to The Swale via Milton Creek (note, all potential construction effects can be avoided with established measures). With regard to functional habitat, Milton Creek will be of low value in this regard as (a) it is a constrained creek / channel in a high-disturbance urban / industrial area that will inherently have a low attractiveness for the qualifying features (assuming there are no dominating non-natural attractants) and (b) is substantially lower value than the extensive areas of equivalent mud-flat and creek habitat available in the SPA/Ramsar; it is therefore very unlikely that the creek is critical to the functional integrity of the site, and environmental changes in this location would not be expected to adversely affect these sites. With regard to effects on habitats in The Swale itself, the possibility of localised and minor changes to the invertebrate fauna of The Swale as a result of reductions in non-saline inputs around the confluence with Milton Creek cannot be excluded; however, the reduction of ~7.5Ml/d will be small relative to the inputs from the creek (from the WwTW and surface water catchment in Sittingbourne), and likely inconsequential in relation to the tidal turnover and dominance of saline inputs; furthermore, any minor and localised shifts in biotope would not fundamentally alter the value of the area to the qualifying features; however, aspects of this can only be confirmed with the benefit of project-level survey and modelling, hence	No AE I/C	
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040 2.5/DS	No effect	n/a - No LSE	-	No AE I/C	
SWS	Bulk import (KTZ): SEW Canterbury to Near Canterbury (20Ml/d)	2050	7.5 No effect	n/a - No LSE	-	No AE I/C	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026 2.5/DS	No effect	n/a - No LSE	-	No AE I/C	
SWS	Desalination (KME): Isle of Sheppey	2046	0 Uncertain	No AE	The Swale will have a low exposure to operational effects due to its location relative to the outfall, and adverse effects on the site habitats would not be expected; the mobile features of the site may be exposed to operational effects when utilising the Medway Estuary and Marshes SPA/Ramsar, depending on the precise location and operational parameters of the outfall / intake; however, this can be located further from these sites if required, and operation of the desal plant would be intermittent and operational parameters could be defined to minimise environmental changes further. With regard to construction, adverse effects on the Swale habitats or species can be avoided with established measures.	No AE I/C	

SEW	Broad Oak Reservoir - 36mAOD - 5,126 Ml	2036	6.6	Effects Uncertain	No AE	Subject to further assessment/survey to determine whether any land within the footprint of the pipeline works could be functionally linked to the SPA and mitigation measures put in place to minimise impacts to an acceptable level.	No AE I/C	
SEW	RZ8 Zonal Scheme - [RES-31] – Distribute water from Broad Oak to Blean SR	2036	4.6	No	n/a - No LSE	-	No AE I/C	
SEW	Reculver Desalination (30Ml/d Option)	2044	9.7	No	n/a - No LSE	-	No AE I/C	
SEW	RZ8 Zonal Scheme - Transfer of water from Littlehampton WTW	2044	9.6	No	n/a - No LSE	-	No AE I/C	
SEW	New Bulk Supply: SWS near Canterbury to SEW Canterbury (Broad Oak)	2051	7.6	No	n/a - No LSE	-	No AE I/C	
SEW	RZ8 Sub-Zonal Scheme - Hollingbourne to Warren Street reinforcement	2039	6.7	No	n/a - No LSE	-	No AE I/C	
SEW	RZ8 Sub-Zonal Scheme - Thanington to Godmersham	2038	8.4	No	n/a - No LSE	-	No AE I/C	

	Thursley and Ockley Bog	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA		0	0	6	0	0	0 No AE I/C	Only theoretically exposed to one SWS option that cannot be assessed at the plan level (WR-FARM); note TW data not currently included in this table but options will not affect this site based on HRA.

	Thursley, Ash, Pirbright and Chobham SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SEW	RZ4 Sub-Zonal Scheme - Ewshot to Itchel	2031	7.6	No	n/a - No LSE	-	No AE I/C	Only theoretically exposed to one SWS option that cannot be assessed at the plan level (WR-FARM); note TW data not currently included in this table but options will not affect this site based on HRA.
THA		0	0	0.1	0	0	0 No AE I/C	
THA		0	0	1.2	0	0	0 No AE I/C	
AFF		0	0	7.3	0	0	0 No AE I/C	
AFF		0	0	7.3	0	0	0 No AE I/C	
AFF		0	0	7.3	0	0	0 No AE I/C	

	Thursley, Hankley and Frensham Commons (Wealden Heaths Phase 1) SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SEW	RZ4 Sub-Zonal Scheme - Ewshot to Itchel	2031	9.1	No	n/a - No LSE	-	No AE I/C	Only theoretically exposed to one SWS option that cannot be assessed at the plan level (WR-FARM); note TW data not currently included in this table but options will not affect this site based on HRA.

THA		0	0	4.9	0	0		0	No AE I/C

	Upper Nene Valley Gravel Pits Ramsar	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
AFF		0	0	7.8	0	0	0 No AE I/C	Not exposed to effects from any SW options

	Upper Nene Valley Gravel Pits SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
AFF		0	0	7.8	0	0	0 No AE I/C	Not exposed to effects from any SW options

	Wealden Heaths Phase 2 SPA	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)	2029	DS	No effect	n/a - No LSE	-	No AE I/C	Not affected by any SW options. Note TW data not currently included in this table but options will not affect this site based on HRA.
SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	4.9	No effect	n/a - No LSE	-	No AE I/C	
SEW	RZ4 Sub-Zonal Scheme - Greywell to Swaineshill	2031	9	No	n/a - No LSE	-	No AE I/C	
SEW	RZ5 Sub-Zonal Scheme - Oakhanger to Alton	2031	8.1	No	n/a - No LSE	-	No AE I/C	
THA		0	0	9.8	0	0	0 No AE I/C	

	Wimbledon Common SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA		0	0	3.9	0	0	0 No AE I/C	Not exposed to effects from any SW options
THA		0	0	4.2	0	0	0 No AE I/C	
THA		0	0	6.6	0	0	0 No AE I/C	
THA		0	0	9.9	0	0	0 No AE I/C	

	Windsor Forest and Great Park SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
THA		0	0	9	0	0	0 No AE I/C	Not exposed to effects from any SW options
THA		0	0	9	0	0	0 No AE I/C	

	Woolmer Forest SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Groundwater (SNZ): Petersfield refurbishment (1.6Ml/d)	2029	DS	No effect	n/a - No LSE	-	No AE I/C	Only exposed to SWS options; i/c assessment as per SWS i/c (Appendix F)

SWS	Bulk import (SNZ): SEW RZ5 to Pulborough	2040	7.1	No effect	n/a - No LSE	-		No AE I/C	

	Wormley Hoddesdonpark Woods SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary		I/C concl.	I/C Summary
AFF		0	0	0	0	0	0	No AE I/C	Not exposed to effects from any SW options
AFF		0	0	8	0	0	0	No AE I/C	
AFF		0	0	9.2	0	0	0	No AE I/C	
AFF		0	0	9.5	0	0	0	No AE I/C	

	Wye and Crundale Downs SAC	Year	Dist(km)	Scr. concl.	AA concl.	AA Summary	I/C concl.	I/C Summary
SWS	Interzonal transfer (KTZ-KME): Utilise full existing transfer capacity (9Ml/d)	2040	8.1	No effect	n/a - No LSE	-	No LSE I/C	No effects from SWS options so no i/c risk with SWS WRMP.
SWS	Bulk export (SHZ): Rye to SEW RZ8	2050	9.6	No effect	n/a - No LSE	-	No LSE I/C	
SWS	Interzonal transfer (KME-KTZ): KME-KTZ bi-directional (15.8Ml/d)	2026	8.1	No effect	n/a - No LSE	-	No LSE I/C	
SEW	New Bulk Supply: SWS Brede to SEW RZ8 (10 Ml/d)	2050	9.6	No	n/a - No LSE	-	No LSE I/C	
SEW	RZ8 Sub-Zonal Scheme - Thanington to Godmersham	2038	1.1	No	n/a - No LSE	-	No LSE I/C	