South East Strategic Reservoir Option

Preliminary Environmental Information Report

Appendix 17.1 - Greenhouse gases data and assumptions

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1 Introduction

1.1.1 This appendix sets out the data, assumptions and limitations of the assessment undertaken for the purposes of assessing the likely significant effects on greenhouse gas (GHG) emissions that would arise from the construction and operation the Project.

1.1.2 This appendix is intended to be read alongside PEI Report Chapter 17: Greenhouse gases.

1.2 Assessment methodology

1.2.1 The methodology used for the GHG emissions assessment, including for the future baseline and the Project, is detailed in Section 17.4 of PEI Report Chapter 17: Greenhouse gases and is not duplicated here.

1.3 Assessment data, assumptions and limitations

1.3.1 The data and assumptions that support the GHG assessment are outlined in the following sections, alongside their respective limitations:

- Table 2-1 outlines the data, assumptions and limitations of the future baseline emissions assessment. Future baseline represents the environmental conditions that would exist in the absence of SESRO and aligns with the Project's programme, starting in 2027 and overlapping with the construction and operational assessment design life.
- Table 2-1 in Section 2 sets out the baseline data, assumptions and limitations used to inform the future baseline GHG emissions.
- Table 3-1 in Section 3 sets out the assessment data, assumptions and limitations associated with the GHG assessment of the construction and operation the Project.

1.3.2 Section 4 contains all supporting data tables supplementary to the information set out in Sections 2 and 3.

2 Baseline data, assumptions and limitations

2.1.1 Table 2-1 outlines the data, assumptions and limitations of the future baseline emissions assessment. Future baseline represents the environmental conditions that would exist in the absence of SESRO and aligns with the Project's programme, starting in 2027 and overlapping with the construction and operational assessment design life.

Table 2-1 GHG emissions baseline data, assumptions and limitations

Emissions module	Emission source	Baseline data	Limitations	Assumptions
Operation				
B2-B3 Maintenance and repair	Maintenance activities and embodied carbon in maintenance materials, including preventative and planned maintenance of buildings. Repair activities and embodied carbon in materials to repair damage over and above the regular maintenance regime for buildings.	Building areas obtained are: • Residential buildings – 2,479 m^2 • Retail buildings – 208 m^2 • Industrial buildings – 6,080 m^2 • Agricultural buildings – 9,819 m^2	Floor areas utilised were not from surveys, but instead from detailed analysis of maps.	The emission intensity of maintenance (B2) is 10 $kgCO_2e/m^2$ per 60 years, as per RICS (2024). The emission intensity of repair (B3) is 25% of maintenance (B2), as per RICS (2024). It is assumed that agricultural buildings have no maintenance and repair requirements.
	Maintenance and repair of roads	N/A	No data available to estimate maintenance and repair emissions associated with roads.	It is assumed for the future baseline that GHG emissions from maintenance and repair of roads are zero.
B4 Replacement	Embodied carbon in materials to replace road surfaces at the	Road lengths were obtained from Geographic Information System (GIS) data:	Road lengths utilised were not from surveys, but	Road surface asphalt within the study area is replaced in entirety

Emissions module	Emission source	Baseline data	Limitations	Assumptions
	end of their life expectancy.	• A-roads – 33,976 m • B-roads – 4,194 m • Local roads – 113,003 m	instead from detailed analysis of maps.	every 35 years, as per RICS (2024). One metre of road surface asphalt equates to 21.9 $kgCO_2e$ based on Arup's project experience. GHG impact of road surface replacement is assumed to spread equally over the study period.
	Embodied carbon in materials to replace solar PV panels at the end of their life expectancy.	Emissions were calculated based on the capacity of each solar farm as stated in section 2.11 of the Parameters and Assumptions document: • Landmead Solar Farm – 41 MW • Goose Willow Solar Farm + extension – 18.5 MW • Steventon Solar Farm – 10 MW	N/A	It is assumed that replacement of inverters will occur every 12 years from implementation in 2014. The embodied GHG emissions of inverters are assumed to be 200 $kgCO_2e/kW$, as per the Renewable Energy Hub UK (2025). Existing solar panels are assumed not to be replaced at the end of their design life in 2038 because the solar farm is scheduled for decommissioning in 2039.
	Embodied carbon in materials to replace building components at the end of their life expectancy	N/A	It is likely that there will be GHG emissions from the replacement of building components within the study area during the future baseline. However, due to the nature of the buildings (e.g. farmhouses, agricultural and industrial buildings) it is not possible to establish proportionate	It is assumed for the future baseline that GHG emissions from replacement of building components are zero.

Emissions module	Emission source	Baseline data	Limitations	Assumptions
			assumptions for replacement.	
B6 Operational energy use	Energy use associated with buildings.	Building areas obtained are: • Residential buildings – 2,479 m^2 • Retail buildings – 208 m^2 • Industrial buildings – 6,080 m^2 • Agricultural buildings – 9,819 m^2	No specific energy consumption data (e.g. metered information) was provided for the existing buildings within the draft Order limits.	Table 4-5 contains the energy intensities (kWh/m^2) assumed for the buildings. These are based on the values provided by the National Energy Efficiency Data-Framework (DESNZ, 2025) for domestic and non-domestic buildings. Emission factors ($kgCO_2e/kWh$) for electricity and natural gas were sourced from the DESNZ GHG Conversion Factors (UK GOV, 2024) and the DESNZ Green Book (2023) which can be seen in Table 4-8 and Table 4-10. These emission factors have been decarbonised assuming they follow the CCC's sector specific projections for residential and non-residential buildings (CCC, 2025) which can be found in Table 4-9. Transport and Distribution emissions related to grid electricity and well-tot-tank (WTT) factors for natural gas have been sourced from DESNZ GHG Conversion Factors (UK GOV, 2024) and can be found in Table 4-10. It is assumed that agricultural buildings have no operational energy requirements.

Emissions module	Emission source	Baseline data	Limitations	Assumptions
B8 User activities	Operational transport associated with personal and delivery vehicles for residential, agricultural, retail and industrial purposes.	Vehicle transport distances were produced based on Trip Rate Information Computer System (TRICS). These distances are shown in Table 4-12.	No specific vehicle movement data is available for the existing operations within the draft Order limits.	Trips for all land uses assumed to be made by car. For residential use, allowance is made on percentage car passenger based on the National Travel Survey (NTS) (DfT, 2024a) data. Industrial and agricultural trips are based on Trip Rate Information Computer System (TRICS) warehouse sites (no data available for agriculture), with retail trips based on TRICS non-food retail sites. Industrial and agricultural transport assume weekday trips only (260 days), retail buildings are assumed to be open all year except bank holiday (253 days) and residential weekend trips are assumed to be 65% of weekday trips. HGV trips are assumed to only be on weekdays only (260 days). Trip distance assumptions, and their source, for the baseline are shown in Table 4-14. These assumed distances were used to calculate the overall travel distances shown in Table 4-12. Emissions factors ($kgCO_2e/km$) were sourced from the DESNZ GHG Conversion Factors (UK GOV, 2024) for the relevant

Emissions module	Emission source	Baseline data	Limitations	Assumptions
				vehicle types which can be seen in Table 4-16. The energy use of electric vehicles (kWh/km) has also been sourced from the DESNZ GHG Conversion Factors (UK GOV, 2024) and can be found in Table 4-17. Car fleet mix projections have been sourced from the DfT TAG Data Book (DfT, 2024b) which can be seen in Table 4-18.
	Operational energy associated with cereal production on cropland.	Farming emissions were calculated using the area associated with cereal farming: 2,785.7 ha as provided in the draft Order limits.	No specific energy use data (e.g. fuel use) associated with the existing farming practices within the draft Order limits was available.	The GHG emissions factor used was 2,800 $kgCO_2e$/ha (Scottish Government, 2023) which represents whole-farm emissions including from cropping and fertiliser and manure use. The emissions factor was assumed to decarbonise in line with the agricultural sector Balanced Pathway decarbonisation trajectory published as part of the Climate Change Committee's (CCC's) Seventh Carbon Budget (CB7) analysis dataset (CCC, 2025), which can be seen in Table 4-21.
C1 Deconstruction	Emissions relating to the deconstruction and removal of existing solar PV	Emissions were calculated based on the capacity of each solar farm:	No specific deconstruction and removal activity data has been provided.	The deconstruction of the solar PV in 2040 was calculated using lifecycle analysis data from the National Renewable Energy Laboratory (2021). This figure of 5

Emissions module	Emission source	Baseline data	Limitations	Assumptions
		• Landmead Solar Farm – 41 MW • Goose Willow Solar Farm + extension – 18.5 MW • Steventon Solar Farm – 10 MW		gCO_2e/kWh was multiplied with the output of the solar farms per year, which was calculated by multiplying the capacity of each farm with their yearly PV electricity production near East Hanney, 996 kWh/kWp (European Commission, 2024).
D2 Exported utilities	Electricity exported to the national grid by Solar PV	Emissions were calculated based on the capacity of each solar farm: • Landmead Solar Farm – 41 MW • Goose Willow Solar Farm + extension – 18.5 MW • Steventon Solar Farm – 10 MW	N/A	It was assumed that all electricity generated by the solar PV panels is exported directly to the UK National Grid. The emissions savings were assumed to be equivalent to the GHG emissions associated with the “displaced” energy of the UK grid. The GHG intensity of the UK National Grid was assumed to align with the grid average industrial emissions factors in the DESNZ Green Book (2023), which can be seen in Table 4-8. It was assumed that all solar farms were installed in 2014 and there is a 0.5% efficiency degradation per year, with an additional 2% light-induced degradation which has only been added from the starting year. These solar farms will be operational until 2039 and will be deconstructed in 2040.

3 Assessment data, assumptions and limitations

3.1.1 Table 3-1 outlines the data, assumptions and limitations of the GHG assessment of the Project. The table sets out both construction and operational assumptions in terms of the source of information informing the GHG assessment, the carbon factors applied and any relevant limitations. Table 3-1 also presents assumptions regarding exported utilities (Module D2) with regards to energy.

Table 3-1 GHG emissions assessment data, assumptions and limitations

Emissions module	Emission source	Assessment data	Limitations	Assumptions
Construction				
A1-A3 Product stage	Extraction of raw materials, transportation to the manufacturer, and manufacture of construction materials and products: SESRO	Emissions were calculated based on the Bill of Quantities (BoQ) on an earlier design. The BoQ provided detailed material and product quantities and, where possible, specifications.	The assessment was intended to align with the Project parameters and assumptions as described in Chapter 2: Project description; however, at the time of analysis, an agreed BoQ had not yet been issued. As a result, a preliminary BoQ reflecting an earlier scheme design was used, with targeted uplifts applied to best reflect the latest design as described in Chapter 2: Project description.	The GHG emission factors assumed for the key construction materials are presented in Table 4-1 Key construction materials data and assumptions . Emission factors for footpaths, roads, bridges, drainage trenches, etc. have been quantified using the Arup Carbon Insights Platform. To align the early version of the BoQ with the Project as described in Chapter 2: Project description, targeted uplifts were applied to specific elements such as roads, rail siding and material handling area, towers, pumping station and public facilities to reflect anticipated design progression. Additionally, a 15% contingency factor was added to the overall estimate in line with RICS (2024). It should be noted that there is no standardised or established guidance for addressing uncertainty in carbon estimates for the water industry in a consistent manner. On this basis a 15% contingency factor, in line with the RICS guidance (RICS, 2024) has been applied to the GHG assessment for all lifecycle states and modules for a more conservative and reasonable assessment.
	Extraction of raw	Emissions were calculated based		Solar farm reprovision is constructed in 2030, immediately following the deconstruction of the existing solar farms in 2029.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
	materials, transportation to the manufacturer, and manufacture of construction materials and products: Reprovisioned solar	on the capacity of the reprovisioned solar: • Reprovisioned solar PV – 69.5 MW		The embodied GHG emissions of inverters are assumed to be 200 kgCO2e/kW, as per the Renewable Energy Hub UK (2025). The embodied GHG emissions of solar panels are assumed to be 615 $kgCO_2e/kW$, as per Etude (2021).
	Extraction of raw materials, transportation to the manufacturer, and manufacture of construction materials and products: T2ST WTW	Emissions were calculated based on an early design BoQ developed by the T2ST WTW team. The BoQ provided aggregate quantities of structural material and, where possible, specifications.	N/A	A1-A3 building benchmarks for internal finishes, Furniture, Fixtures and Equipment (FF&E), and services/MEP equipment added based on office benchmarks in Greater London Authority Whole Life Carbon Planning Guidance. A1-A3 for MEICA, water treatment equipment/processes and WTW site-wide elements were estimated based on Gate 2 capital carbon (A1-A5) information provided from Southern (based on Gate 2 Costs and Carbon report [Thames Water, 2022]), assuming 80% of A1-A3 attributed to A1-A3. The remaining 20% has been assumed allocated to A4 and A5, split equally between the two modules. A 15% contingency factor was added to the overall estimate in line with RICS (2024). The GHG emission factors assumed for the key construction materials are presented in Table 4-1 Key construction materials data and assumptions .

Emissions module	Emission source	Assessment data	Limitations	Assumptions
A4 Transport	Transport of construction materials and products to site: SESRO	Haulage distances for rail freight and HGVs were calculated for the Traffic and Transport assessment. Total HGV haulage distance and freight rail tonne-kilometers are shown in Table 4-2. For further details on the methodology employed for the Traffic and transport assessment, refer to PEI Report Chapter 12: Traffic and transport.	Haulage distances are based on assumptions. Haulage distances also include export of material off-site that would normally be accounted for under Module A5.	HGV distance assumed to be 66 miles per trip (one-way), taken from "Domestic road freight statistics, United Kingdom: 2023" (DfT, 2023). For rail freight, it is assumed all material goes to and from Avonmouth Docks, which has been assumed to be 100km away. Emissions factors ($kgCO_2e/km$) were sourced from the DESNZ GHG Conversion Factors (UK GOV, 2024) for the relevant vehicle types which can be seen in Table 4-16. Emissions factors for rail have been assumed to decarbonise in line with the rail subsector-specific Balanced Pathway decarbonisation trajectory published as part of the CCC's CB7 analysis dataset (CCC, 2025) (see Table 4-20).
	Transport of construction materials and products to site: T2ST WTW	Emissions were calculated based on the capital carbon assessment was based on design scope information from the T2ST	N/A	In the absence of detailed information for assessment of A4 and A5 emissions for the buildings, the A1-A3 emissions calculated above are assumed 80% of A1-A5, with the remaining 20% added to account for A4 and A5, divided equally between the modules.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
		WTW design team.		
A5 Construction and installation process	Fuel use in mobile plant and equipment: SESRO	The construction plant emissions were calculated using estimated construction plant fuel/electricity consumption. GHG emissions were estimated based on: • Information used in the Project's pre-planning feasibility GHG emissions report Assumptions regarding programme, power requirements, plant size, earthworks and logistics **Publicly Available Data**:	Fuel consumption rates for some equipment were approximated using similar models due to lack of direct data. Working hours and load factors are based on preliminary schedules and may vary seasonally. The model assumes medium fuel consumption with 30% idle time, which may not capture actual site conditions. Dewatering has been accounted for; however it is acknowledged that additional dewatering activities would be required across the construction compounds as the construction program develops. The intention is to account for these changes within the ES. The assessment does not currently include energy from potable water consumption during construction. This will be reported in the ES.	The estimate includes construction equipment powered by mineral diesel, with exceptions only for equipment mandated to be electric by design (e.g. Tunnel Boring Machine and Temporary Rail Head & Conveyor). Each activity was assigned: • Equipment type and quantity • Fuel type • Duration and schedule • Number of gangs • Load factor Equipment duty and quantity per activity are based on emerging design specifications. The key machine types identified were: a Tunnel Boring Machine, temporary rail head, dump trucks, dozers, excavators, rollers, graders, cranes, mixers, forklifts, light towers, and compound generators. Load factors are applied to reflect actual usage during activity durations. Idle time is assumed at 30% for fuel consumption calculations. No alternative fuels or technologies (e.g. HVO, EV, H_2) are considered in this scenario. Emissions factors obtained from the DESNZ GHG Conversion Factors (2024) for diesel (3.29 $kgCO_2e/L$) and DESNZ Green Book (2023) for electricity, which can be seen in Table 4-8.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
		• CAT Performance Handbook – Fuel consumption rates Construction activity was broken down into 4 phases: • Enabling Works • Main Earthworks • Permanent Facilities • Commissioning Material Handling was covered in all 4 phases.		
	Fuel use in mobile plant and equipment: T2ST WTW	Emissions were calculated based on capital carbon assessment and was based on design scope information from the T2ST WTW design team.	N/A	In the absence of detailed information for assessment of A4 and A5 emissions for the buildings, the A1-A3 emissions calculated above are assumed 80% of A1-A5, with the remaining 20% added to account for A4 and A5, divided equally between the modules.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
	Transport of construction workers to and from site: SESRO	The estimated distance travelled to the site during the construction period by construction workers is shown in Table 4-3. Worker transport emissions during construction (A5 emissions) were calculated using the total annual two-way distances of construction workers presented below in Table 4-3. For further details on the methodology employed for the Traffic and transport assessment, refer to Chapter 12: Traffic and transport.	Transport of construction workers to and from site during construction does not include staff and visitors, such consultants. Transport of construction workers does not include transport within the draft Order limits, only to and from the draft Order limits.	Distance travelled assumed to be 17 miles per trip (one-way), taken from "Workforce Mobility and Skills in the UK Construction Sector 2022" (CITB, 2023). It is assumed that there are 1,500 daily construction workers during the peak of the construction phase. These construction worker numbers vary over time depending on the overall SESRO construction stage. Other assumptions regarding construction worker transport can be seen in Chapter 12: Traffic and transport.
	Transport of	The transport distances for	No construction workers travel distances were provided.	Workers are assumed to travel the same distance as the SESRO workers.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
	construction workers to and from site: T2ST WTW	T2ST construction workers are presented below in Table 4-3. T2ST WTW construction worker transport was calculated by scaling down the SESRO construction worker transport distances based on the worker numbers for T2ST WTW and SESRO: • T2ST WTW– 200 construction workers • SESRO – 1500 construction workers		
	Transport and disposal of construction waste	N/A	The disposal and processing of demolition and construction waste has not been assessed due to data limitations at the PEI Report stage, however it will be reported in the ES.	N/A

Emissions module	Emission source	Assessment data	Limitations	Assumptions
			The transport of construction waste including demolition waste and exported topsoil has been included in the haulage distances accounted for under Module A4.	
Operation				
B1 In-use material emissions and removals	Land-uses (changes in GHG emissions from capture and release from plants and soils)	N/A	The assessment does not currently include GHG emissions changes from land use, specifically carbon capture and release by plants and soils. This is due to land-use types and areas not being finalised for the PEI Report stage. Further analysis will be conducted and reported in the ES to better understand the mitigation potential of the proposed habitats.	N/A
B2-B3 Maintenance and repair	Maintenance activities and embodied carbon in maintenance materials, including preventative and planned maintenanc	Results of A1-A5 estimation.	Estimated GHG emissions are based on assumptions as opposed to Project specific data on maintenance and repair works.	Emissions for Maintenance (B2) and Repair (B3) were calculated using the RICS Professional Standard (2024) which states that B2 emissions are equivalent to 1% of module A1-5 emissions and B3 emissions are equivalent to 25% of module B2 emissions over a 60 year period respectively.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
	e of buildings. Repair activities and embodied carbon in materials to repair damage over and above the regular maintenance regime for buildings.			
B4 Replacement	Activities and embodied carbon in materials to replace SESRO, T2ST WTW and recreational components at the end of their life expectancy.	SESRO emissions were calculated based on a preliminary Bill of Quantities (BoQ). The BoQ provided detailed material and product quantities and, where possible, specifications. T2ST WTW emissions were calculated based	The assessment was intended to align with the current Project design as described in Chapter 2: Project description; however, at the time of analysis, the BoQ had not yet been issued. As a result, a preliminary BoQ was used as the primary data source, with targeted uplifts applied to approximate scope and detail as described in Chapter 2: Project description.	The following replacement assumptions were assumed specifically for elements of the T2ST WTW based on alignment with Table 4-4, and also as recommended by the RICS (2024) guidance • building substructure/ superstructure: 50 years • building MEP: average 20 years • Building finishes: 20-25 years • Building FF&E: 10 years • WTW MEICA and water treatment equipment / processes: average 20 years • Pumping station withing the WTW: 120 years Component lifespans were agreed with Southern Water.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
		on an early design BoQ developed by the T2ST WTW team. The BoQ provided aggregate quantities of structural material and, where possible, specifications.		
	Activities and embodied carbon in materials to replace solar PV components at the end of their life expectancy.	Emissions were calculated based on the capacity of each type of solar: • Floating solar PV – 40 MW • Car port PV – 1 MW • Building PV – 0.4 MW	Limited information on future manufacturing efficiencies of solar panels.	It is assumed that replacement of inverters will occur every 15 years from implementation in 2040. The embodied GHG emissions of inverters are assumed to be 200 $kgCO_2e/kW$, as per the Renewable Energy Hub UK (2025). It is assumed that replacement of solar panels will occur every 30 years. Embodied GHG emissions of new solar panels are assumed to be 205 $kgCO_2e/kWp$ from 2050 (Etude, 2021).Deconstruction and waste processing of replaced solar panels is assumed to be 5 gCO_2e/kWh (NREL, 2021).
		Emissions were calculated based on the capacity of the reprovisioned solar:	Limited information on future manufacturing efficiencies of solar panels.	It is assumed that replacement of inverters will occur every 15 years from implementation in 2030. The embodied GHG emissions of inverters are assumed to be 200 kgCO2e/kW, as per the Renewable Energy Hub UK (2025). It is assumed that replacement of solar panels will occur every 30 years.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
		• Reprovisioned solar PV – 69.5 MW		Embodied GHG emissions of new solar panels are assumed to be 205 kgCO_2e/kWp from 2050 (Etude, 2021). Deconstruction and waste processing of replaced solar panels is assumed to be 5 gCO_2e/kWh (NREL, 2021).
B6 Operational energy use	Regulated and unregulated components of the Project's operational energy use, including energy use by members of the public.	The annual energy consumption for each Project component along with the energy splits of grid and renewable energy are provided in Table 4-6 and for each T2ST component in Table 4-7. It is assumed that T2ST will not have any renewable energy supply in this assessment.	Modelling has estimated the total energy demand that would be required over a typical year of operation and does not estimate energy demand on a detailed, year-by-year basis	The DESNZ Green Book (2023) factors (kgCO_2e/kWh) for industrial grid-based electricity consumption, which can be seen in Table 4-8, has been used to estimate GHG emissions. Transport and Distribution emissions related to grid electricity can be found in Table 4-10. Energy demand modelling assumptions can be seen in Table 4-11.
B8 User activities	Operational transport of staff and visitors	Vehicle transport distances for staff, visitors and deliveries were estimated based on the Gate 3 Main Report: 1.058 million visitors per annum.	No vehicle movement data is available for transport within the draft Order limits. Staff transport for T2ST WTW has not been accounted for in this assessment.	Emissions factors (kgCO_2e/km) were sourced from the DESNZ GHG Conversion Factors (UK GOV, 2024) for the relevant vehicle types which can be seen in Table 4-16. Fleet mix projections have been sourced from the DfT TAG Data Book (DfT, 2024b) which can be seen in Table 4-17, Table 4-18 and Table 4-19. Emissions factors for bus and rail have been assumed to decarbonize in line with the bus and rail subsector-specific Balanced Pathway decarbonisation trajectory published as part

Emissions module	Emission source	Assessment data	Limitations	Assumptions
		These distances are shown in Table 4-13 and Table 4-15.		of the CCC's CB7 analysis dataset (CCC, 2025) (see Table 4-20). Visitor transport distances have been calculated to be 25.7 miles on average. This was calculated using the Trip Rate Information Computer System (TRICS, 2025) and a maximum 90-minute commute time. Other assumptions regarding operational transport can be seen in Chapter 12: Traffic and transport.
	Transport, treatment and disposal of operational waste	N/A	The transportation and disposal of operational waste has not been assessed due to data limitations at the PEI Report stage, however an Operational Waste Management Plan will be submitted as part of the DCO which will include sufficient information to report on operational waste GHG emissions.	N/A
B8 Chemical consumption	Extraction of raw materials, transportation to the manufacturer, and manufacture of chemicals used during	Chemical quantities used for the T2ST WTW are shown in Table 4-22.	N/A	Emissions factors (kgCO_2e/kg) are presented in Table 4-23. These emission factors are the most up to date at the time of the assessment. T2ST WTW has a load factor of 60%.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
	operation: T2ST WTW			
D2 Exported utilities	Electricity exported to the national grid or by any other renewable energy sources	Annual energy producing for SESRO is estimated to be: • 40,157,708 kWh		It was assumed that all excess electricity generated by SESRO is exported directly to the UK National Grid. The emissions savings were assumed to be equivalent to the GHG emissions associated with the "displaced" energy of the UK grid. The GHG intensity of the UK National Grid was assumed to align with the grid average industrial emissions factors in the DESNZ Green Book (2023), which can be seen in Table 4-8.
	Electricity exported to the national grid by existing Solar PV	Emissions were calculated based on the capacity of each solar farm: • Landmead Solar Farm – 41 MW • Goose Willow Solar Farm + extension – 18.5 MW • Steventon Solar Farm – 10 MW	N/A	It was assumed that all electricity generated by the solar PV panels is exported directly to the UK National Grid. The emissions savings were assumed to be equivalent to the GHG emissions associated with the "displaced" energy of the UK grid. The GHG intensity of the UK National Grid was assumed to align with the grid average industrial emissions factors in the DESNZ Green Book (2023), which can be seen in Table 4-8. It was assumed that all solar farms were installed in 2014 and there is a 0.5% efficiency degradation per year, with an additional 2% light-induced degradation which has only been added from the starting year. It is assumed these solar farms are operational until 2029 and will be deconstructed in 2030.
	Electricity exported to the national grid by reprovisioned Solar PV	Emissions were calculated based on the capacity of the reprovisioned solar:	N/A	It was assumed that all electricity generated by the solar PV panels is exported directly to the UK National Grid. The emissions savings were assumed to be equivalent to the GHG emissions associated with the "displaced" energy of the UK grid.

Emissions module	Emission source	Assessment data	Limitations	Assumptions
		• Reprovisioned solar – 69.5 MW		The GHG intensity of the UK National Grid was assumed to align with the grid average industrial emissions factors in the DESNZ Green Book (2023), which can be seen in Table 4-8. It was assumed that all solar farms were installed in 2030 and there is a 0.5% efficiency degradation per year, with an additional 2% light-induced degradation which has only been added from the starting year, with an additional 2% light-induced degradation which has only been added from the starting year. It is assumed these solar farms are operational from 2030 until 2100.

4 Data tables

4.1 A1-A3 Product stage

Table 4-1 Key construction materials data and assumptions

4.1.1 shows the emission factors for key construction materials, along with examples of the Project's components they are used to represent.

Table 4-1 Key construction materials data and assumptions

Material	Assumption	Emissions factor	Source
In-situ concrete	CEM I - ranging from 8/10 MPa to 40/50 MPa as nominated. Generally 32/40 MPa for all structural elements.	213-382 $kgCO_2e/m^3$	ICE database v4.0
Steel reinforcement	UK CARES sector average with EAF production, in alignment with Gate 3	0.79 $kgCO_2e/kg$	UK CARES
Structural Steel	Hot-dip galvanized steel for structural framing and railway tracks	2.62 $kgCO_2e/kg$	ICE database v4.0
Imported Aggregate	Total quantity of imported aggregate for earthworks based on the SEQS v3. Blanket carbon factor based on a general UK mixture of land won, marine, secondary and recycled.	0.007 $kgCO_2e/kg$	ICE database v4.0
Rip rap	The rip rap for the reservoir embankment is assumed to be granite.	0.093 $kgCO_2e/kg$	IStructE (2025). The Structural Carbon Tool
Plastic pipework	Plastic pipework used for the air diffusion network and the pumping station. Diameters range from 225-450 mm.	10.64-28.14 $kgCO_2e/m$	ICE database v4.0 with conversions from National Highways Carbon Tool v2.7
Steel pipework	Steel pipework used for the pumping station, connection between the towers, river intake, etc. Diameters range from 300-3000 mm.	35.14-722.80 $kgCO_2e/m$	ICE database v4.0 with conversions from National Highways Carbon Tool v2.7

Material	Assumption	Emissions factor	Source
Concrete pipework	Concrete pipework for connection shaft. Diameter is 2400 mm.	536.15 $kgCO_2e/m$	ICE database v4.0 with conversions from National Highways Carbon Tool v2.7
Formwork	Formwork for towers and shafts is assumed to be wooden formwork with steel fixtures	20.900 $kgCO2e/m^2$	OneClick LCA database
Cement	Ordinary Portland cement assumed to fill annulus and overbreak for shafts and tunnels	0.840 $kgCO_2e$ /kg	ICE database v4.0
Geotextiles	Geotextiles used for example, for drainage and erosion protection of reservoir and stabilising mattress at the base of earthworks	2.403 $kgCO_2e/m^2$	ICE database v4.0 with conversions from National Highways Carbon Tool v2.7

4.2 A4 Construction material transport

4.2.1 Distances travelled by HGVs and via rail to move materials to and from site are included in Table 4-2.

Table 4-2 Total HGV and rail travel distance per year for transporting material to and from site

Year	Two-way HGV distance (km)	Two-way rail tonne-kilometers (tonne.km)
2027	2,526,020	0
2028	3,900,396	0
2029	3,135,960	0
2030	7,356,293	0
2031	6,715,293	0
2032	3,084,622	44,650,000
2033	4,397,039	84,270,000
2034	6,702,418	127,420,000
2035	8,074,863	127,300,000
2036	8,298,723	127,300,000
2037	7,743,500	127,300,000
2038	7,486,167	127,040,000
2039	3,330,529	76,000,000

Year	Two-way HGV distance (km)	Two-way rail tonne-kilometers (tonne.km)
2040	5,667,774	0
2041	4,790,522	0
2042	384,954	0

4.3 A5 Construction process

4.3.1 Worker transport emissions during construction (A5 emissions) were calculated using the total annual two-way distances of construction presented below in Table 4-3. The T2ST WTW transport distances were calculated by scaling down the SESRO distances proportionate to the T2ST WTW construction worker numbers (200) compared to SESRO's (1500). The annual distances correlate with more frequent travel during peak construction years.

Table 4-3 Annual construction worker transport data

Year	SESRO two-way distance (km)	T2ST WTW two-way distance (km)
2027	115,229	0
2028	200,524	0
2029	280,991	0
2030	351,641	0
2031	397,185	0
2032	445,787	0
2033	404,105	0
2034	416,497	55,533
2035	406,519	54,203
2036	375,620	50,083
2037	350,514	46,735
2038	294,670	39,289
2039	233,032	31,071
2040	131,161	17,488
2041	78,053	0
2042	8,690	0

4.4 B4 Replacement

4.4.1 Table 4-4 presents the design lives of key Project components, outlining which component's replacement emissions will need to be considered within the study period; all components with a design less than 57 years will need to be replaced according to the study period (2027 – 2100) assuming operation starts in 2043.

Table 4-4 Design Life of Key Project Components

Component	Design Life
Reservoir embankment	120 years
Pumping Station	120 years
River tunnel	120 years
Reservoir tunnels and towers	120 years
RSMH Facility (onsite parts)	10 years (due to temporary nature)
RMSH works interfacing permanently with Great Western Mainline	120 years
Recreational buildings	50 years
Concrete	120 years
Asphalt surfaced routes	Minimum 20 years
New roads (in line with DMRB): Pavement construction Road lighting Road drainage Road bridge structures and highways earthworks Replaceable structural components, including expansion joints, waterproofing systems, safety barriers, and parapets (in line with CD350 "The Design of Highway Structures")	 40 years 50 years 60 years 120 years 50 years

4.5 B6 Operational energy use

4.5.1 Table 4-5 presents the electricity and natural gas energy use intensities (EUIs) per building type. Values for domestic buildings are taken from the 'National Energy Efficiency Data-Framework (NEED): Summary of Analysis, Great Britain, 2025' (DESNZ, 2025) and values for non-domestic buildings from the 'The Non-Domestic National Energy Efficiency Data-Framework 2025 (England and Wales)' (DESNZ, 2025). Baseline operational energy use for buildings were calculated by multiplying the EUIs per building type by the UK grid electricity emissions factor for 2027 shown in Table 4-8 and the natural gas emission factor shown in Table 4-10. These emission factors are assumed to be decarbonised following the CCC's sector specific projections for residential and non-residential buildings (CCC, 2025) which are shown in Table 4-9. Transport and distribution factors for grid electricity and the well-to-tank (WTT) factor for natural gas can be found in Table 4-10.

Table 4-5 Annual energy use intensities assumed for buildings by type in 2025 (DESNZ, 2025).

Building type	Electricity	Gas
	kWh/m^2	
Industrial	26	53
Residential	26.68	106.28
Retail	108	194
Agricultural	0	0

4.5.2 The Project's operational energy use was calculated by multiplying annual grid energy demand per SESRO component shown in Table 4-6 by the UK grid electricity emissions factor shown in Table 4-8. Table 4-6 also shows the total energy demand per SESRO component and the renewable energy supply for each component. The number of EV charging points have been increased which has increased overall annual SESRO energy demand.

Table 4-6 Annual total, grid, and renewable energy demand (rounded to the nearest thousand kWh) per SESRO component

SESRO component	Total annual energy demand (kWh/year)	Annual average grid energy demand (kWh/year)	Annual energy demand supplied by renewables (kWh/year)
SESRO Ancillary Buildings	5,674,000	3,977,000	1,697,000
SESRO River Intake Pumps	4,669,000	3,273,000	1,396,000
EV Charging	2,358,000	1,653,000	705,000
SESRO Dewatering Pumps	1,887,000	1,323,000	564,000
SWOX to Farmoor Transfer Pumps	983,000	689,000	294,000
SESRO Recirculation Pumping	799,000	560,000	239,000
Lakes Cluster	494,000	346,000	148,000
Watersports Centre	180,000	126,000	54,000
Visitors Centre	144,000	101,000	43,000
Nature Education Centre	54,000	38,000	16,000
SESRO River Intake Screens	28,000	19,000	9,000

4.5.3 The T2ST operational energy use was calculated by multiplying annual grid energy demand per T2ST component shown in Table 4-7 by the UK grid electricity emissions factor shown in Table 4-8.

Table 4-7 Annual total, grid, and renewable energy demand (rounded to the nearest thousand kWh) per T2ST component

T2ST component	Total annual energy demand (kWh/year)	Annual average grid energy demand (kWh/year)	Annual energy demand supplied by renewables (kWh/year)
T2ST WTW	42,913,000	42,913,000	0
T2ST Transfer Pumps	104,000	104,000	0
T2ST Plantrooms	96,000	96,000	0

Table 4-8 DESNZ Green Book (2023) UK grid electricity emissions factors

Year	Domestic grid-average electricity emissions factor ($kgCO_2e/kWh$)	Commercial grid-average electricity emissions factor ($kgCO_2e/kWh$)	Industrial grid-average electricity emissions factor ($kgCO_2e/kWh$)
2027	0.073	0.072	0.070
2028	0.063	0.062	0.061
2029	0.054	0.053	0.052
2030	0.049	0.049	0.048
2031	0.042	0.041	0.040
2032	0.033	0.032	0.032
2033	0.026	0.025	0.025
2034	0.021	0.020	0.020
2035	0.020	0.020	0.019
2036	0.020	0.019	0.019
2037	0.018	0.018	0.018
2038	0.018	0.018	0.017
2039	0.017	0.017	0.016
2040	0.016	0.016	0.015
2041	0.015	0.015	0.015
2042	0.015	0.014	0.014
2043	0.009	0.009	0.009
2044	0.008	0.008	0.008

Year	Domestic grid-average electricity emissions factor ($kgCO_2e/kWh$)	Commercial grid-average electricity emissions factor ($kgCO_2e/kWh$)	Industrial grid-average electricity emissions factor ($kgCO_2e/kWh$)
2045	0.008	0.008	0.008
2046	0.008	0.008	0.007
2047	0.005	0.005	0.005
2048	0.005	0.005	0.005
2049	0.003	0.003	0.003
2050 - 2100	0.003	0.002	0.002

Table 4-9 Climate Change Committee's (CCC's) Seventh Carbon Budget (CB7) Residential buildings sector and Commercial buildings sub-sector decarbonisation balanced pathways.

Year	'Residential buildings' sector emissions as a percentage of 2025 emissions	'Commercial buildings' sub-sector emissions as a percentage of 2025 emissions
2027	97.7%	91%
2028	95.6%	93.5%
2029	92.8%	87.8%
2030	87.9%	79.8%
2031	83.7%	70.3%
2032	79.0%	59.6%
2033	72.9%	48.4%
2034	66.3%	41.8%
2035	59.7%	35.4%
2036	53.6%	29.4%
2037	47.4%	24.1%
2038	41.4%	20.5%
2039	35.4%	17.9%
2040	29.9%	15.8%
2041	24.5%	13.9%
2042	19.6%	12.2%
2043	15.1%	10.5%
2044	10.9%	8.8%
2045	7.2%	7.4%
2046	4.2%	6.1%

Year	‘Residential buildings’ sector emissions as a percentage of 2025 emissions	‘Commercial buildings’ sub-sector emissions as a percentage of 2025 emissions
2047	2.0%	4.9%
2048	1.1%	4.0%
2049	0.7%	3.1%
2050 - 2100	0.4%	2.3%

Table 4-10 Emission factors for natural gas and the transport and distribution of electricity (DESNZ, 2024)

Emission factor	Value
Natural gas	0.183 $kgCO_2e/kWh$
WTT – Natural gas	0.030 $kgCO_2e/kWh$
Transmission and distribution UK electricity	0.018 $kgCO_2e/kWh$

4.5.4 The main assumptions used for the Project’s operational energy demand model can be seen in Table 4-11.

Table 4-11 Project energy demand model assumptions

	Assumption
1	T2ST WTW energy demand is based on a load factor of 60%, i.e. ~72 Ml/d (peak flowrate at 120 Ml/d).
2	An energy demand mode was developed estimating both peak and annual energy demand for the Project’s current design as described in Chapter 2: Project description and early design information.
3	Energy demand was modelled assuming a median River Thames flowrate including a sensitivity check for dry and wet weather scenarios.
4	All significant energy users (SEUs) across the site were modelled, including: the reservoir’s mechanical equipment, plantrooms and facilities HVAC systems, pumping stations and ancillaries, transfer pumps and the T2ST WTW.
5	Energy demand covers all phases of the Project’s operational phase, including: power requirements during construction, the initial filling of the reservoir as well as standard operations where all energy-consuming equipment is active.
6	Beyond supplementing downstream water supply to London, the Project will also supplement the Swindon and Oxfordshire (SWOX) water resource zone and serve Southern Water through the T2ST WTW located onsite. These elements are accounted for in the energy demand model.

4.6 B8 User activities

4.6.1 Baseline user activity emissions from transport were calculated by multiplying annual vehicle travel distances per vehicle type, shown in Table 4-12, by vehicle emissions factors per km travelled, shown in Table 4-16. To account for future fuel mix changes, car and van fuel use split was obtained using the DfT TAG Book (2024b), shown in Table 4-17 Energy use from electric vehicles (kWh/km) (DESNZ, 2024)

Vehicle type	Battery electric vehicle (kWh/km)	Plug-in hybrid electric vehicle (kWh/km)
Car	0.210	0.066
Van	0.353	0.079

4.6.2 Table 4-18 and Table 4-19, respectively.

Table 4-12 Baseline vehicle trip generation summary data

Land-use type	Vehicle	Annual distances (km)
Industrial	Car	1,515,998
	HGV	1,314,187
Agricultural	Car	2,093,590
	HGV	1,815,014
Retail	Car	442,247
	HGV	32,831
Residential	Car	802,578
	HGV	10,139

4.6.3 For SESRO, user activity emissions from transport were calculated by multiplying annual vehicle travel distances per land-use type, shown in Table 4-13, by vehicle emissions factors per km travelled, shown in Table 4-16. To account for future fuel mix changes, car and van fuel use split was obtained using the DfT TAG Book (2024b), shown in Table 4-17 Energy use from electric vehicles (kWh/km) (DESNZ, 2024)

Vehicle type	Battery electric vehicle (kWh/km)	Plug-in hybrid electric vehicle (kWh/km)
Car	0.210	0.066
Van	0.353	0.079

4.6.4 Table 4-18 and Table 4-19, respectively. Future decarbonisation of rail and bus was accounted for by using the CCC's Balanced Pathway projections (2025), shown in Table 4-20.

Table 4-13 Assessment vehicle trip generation summary data

User	Vehicle	SESRO annual distances (km)
Deliveries and servicing	Van	125,529
Worker	Walking	2,897
	Cycling	20,921
	Bus	54,557
	Rail	54,718
	Motorcycle	4,345
	Car	687,027
Visitors	Walking	34,118
	Cycling	1,015,654
	Bus	4,595,309
	Rail	14,397,638
	Car	27,827,420

4.6.5 Trip distance assumptions, and their source, for the baseline are shown in Table 4-14. These assumed distances were used to calculate the overall travel distances shown in Table 4-12. It should be noted that the 2011 Census data was used instead of the latest 2021 Census data which was not representative due to the COVID-19 lockdown.

Table 4-14 Baseline trip length assumptions

User	Assumed distance per day (miles)	Assumption source
Industrial	11.9	Census 2011 data for the Vale of White Horse (ONS, 2021)
Agricultural	11.9	Census 2011 data for the Vale of White Horse (ONS, 2021)
Retail	11.9	Census 2011 data for the Vale of White Horse (ONS, 2021)
Residential	8.2	National Travel Survey: 2023 (DfT, 2024a)

4.6.6 Trip distance assumptions, and their source, for the baseline are shown in Table 4-15. These assumed distances were used to calculate the overall travel distances shown in Table 4-13.

Table 4-15 Assessment trip length assumptions

User	Assumed distance per person per day (miles)	Assumption source
Staff	11.9	Census 2011 data for the Vale of White Horse (ONS, 2021)
Deliveries	15 (10 deliveries per day)	Van Statistics: 2019 to 2020 (UK GOV, 2021)
Visitors	25.7	TRICS (2025)

4.6.7 Emissions from vehicles travelling to and from the study area in the baseline and Project were calculated using the emissions factors from the DESNZ emissions database (2024) shown in Table 4-16. For electric vehicles, scope 2 emissions are calculated by multiplying their energy use as shown in Table 4-17 with the electricity emission factors given by the DESNZ Green Book (2023) which are shown in Table 4-8. Future decarbonisation was accounted for by using the DfT TAG Databook (2024b) modal shift projections shown in Table 4-18 for cars and Table 4-19 for HGVs. For rail and bus transport, future decarbonisation has been accounted for by combining the emissions factor in Table 4-16 with the CCC's sector specific decarbonisation trajectories shown in Table 4-20. It should be noted that DfT does not model and project the decarbonisation and fuel switch of HGVs in its TAG databook.

Table 4-16 Vehicle emissions factors (Scope 1 and 3) (DESNZ, 2024)

Vehicle type	Diesel EF ($kgCO_2e/km$)		Petrol EF ($kgCO_2e/km$)		Electric (Battery) EF ($kgCO_2e/km$)		Electric (Plug-in hybrid) EF ($kgCO_2e/km$)	
	Scope 1	Scope 3 (WTT)	Scope 1	Scope 3 (WTT)	Scope 1	Scope 3 (WTT)	Scope 1	Scope 3 (WTT)
Car	0.170	0.041	0.165	0.046	0	0.004	0.094	0.001
Van	0.250	0.061	0.221	0.062	0	0.006	0.133	0.001
Bus	0.13 (per passenger.km)	0.032	N/A	N/A	N/A	N/A	N/A	N/A
Motorbike	N/A	N/A	0.114	0.030	N/A	N/A	N/A	N/A
HGV	0.873	0.212	N/A	N/A	N/A	N/A	N/A	N/A
Freight rail	0.03							

Table 4-17 Energy use from electric vehicles (kWh/km) (DESNZ, 2024)

Vehicle type	Battery electric vehicle (kWh/km)	Plug-in hybrid electric vehicle (kWh/km)
Car	0.210	0.066
Van	0.353	0.079

Table 4-18 DfT TAG Databook car modal shift projections

Year	Petrol	Diesel	Electric
2027	47%	30%	23%
2028	45%	27%	27%
2029	44%	25%	32%
2030	42%	22%	36%
2031	40%	20%	40%
2032	39%	18%	43%
2033	37%	16%	47%
2034	36%	15%	50%
2035	34%	13%	52%
2036	33%	12%	55%
2037	31%	12%	57%
2038	30%	11%	59%
2039	29%	10%	60%
2040	28%	10%	62%
2041	28%	9%	63%
2042	27%	9%	64%
2043	27%	9%	64%
2044	26%	9%	65%
2045	26%	9%	66%
2046	25%	8%	66%
2047	25%	8%	67%
2048	25%	8%	67%
2049	25%	8%	67%
2050-2100	24%	8%	67%

Table 4-19 DfT TAG Databook light goods vehicle (LGV) modal shift projections

Year	Petrol	Diesel	Electric
2027	2%	96%	2%
2028	2%	95%	3%
2029	2%	95%	4%
2030	2%	94%	5%
2031	2%	92%	6%

Year	Petrol	Diesel	Electric
2032	2%	90%	8%
2033	2%	88%	10%
2034	2%	85%	13%
2035	2%	83%	16%
2036	2%	80%	19%
2037	1%	77%	22%
2038	1%	74%	24%
2039	1%	72%	27%
2040	1%	69%	29%
2041	1%	68%	31%
2042	1%	66%	33%
2043	1%	64%	35%
2044	1%	62%	37%
2045	1%	60%	38%
2046	1%	59%	40%
2047	1%	58%	41%
2048	1%	57%	42%
2049	1%	55%	44%
2050-2100	1%	55%	45%

Table 4-20 Climate Change Committee's (CCC's) Seventh Carbon Budget (CB7) transport sector decarbonisation balanced pathway

Year	Rail sub-sector emissions as a percentage of 2025 emissions	Bus sub-sector emissions as a percentage of 2025 emissions
2027	98%	91%
2028	96%	86%
2029	95%	80%
2030	89%	74%
2031	87%	68%
2032	85%	62%
2033	84%	57%
2034	82%	51%
2035	39%	46%
2036	38%	41%

Year	Rail sub-sector emissions as a percentage of 2025 emissions	Bus sub-sector emissions as a percentage of 2025 emissions
2037	36%	36%
2038	35%	32%
2039	33%	27%
2040	20%	22%
2041	20%	18%
2042	19%	15%
2043	18%	12%
2044	18%	9%
2045	17%	7%
2046	16%	5%
2047	16%	4%
2048	15%	3%
2049	14%	3%
2050 - 2100	14%	2%

4.7 B8 Cereal production

4.7.1 When calculating emissions from farming activities (only cereal) within the study area for the baseline (note: SESRO farming activities will be included for ES), future decarbonisation was considered by decarbonising the annual cereal farming emissions factor, 2,800 tCO_2e/ha, to follow the CCC's balanced pathway (2025), shown in Table 4-21.

Table 4-21 Climate Change Committee's (CCC's) Seventh Carbon Budget (CB7) agriculture sector decarbonisation balanced pathway

Year	Agriculture sector emissions as a percentage of 2025 emissions
2027	95%
2028	92%
2029	87%
2030	83%
2031	80%
2032	76%
2033	73%
2034	70%
2035	68%
2036	67%

Year	Agriculture sector emissions as a percentage of 2025 emissions
2037	66%
2038	64%
2039	63%
2040	62%
2041	62%
2042	61%
2043	60%
2044	59%
2045	59%
2046	58%
2047	58%
2048	57%
2049	57%
2050 - 2100	56%

4.8 B8 Chemical consumption

4.8.1 Operational emissions relating to chemicals used for the T2ST WTW was calculated by multiplying annual chemicals used, shown in Table 4-22, by an emissions factor. The emissions factors sourced from the Carbon Accounting Workbook v18 (UK Water Industry Research, 2024) are shown in Table 4-23. It should also be noted that the chemical volumes in Table 4-22 represent the chemical concentrations delivered and used on site.

Table 4-22 Annual chemical consumption for T2ST WTW

Chemical	Use (kg/year) (based on a load factor of 60%, i.e. ~72 Ml/d)
Ferric Sulphate	164,784
Sodium Hypochlorite	206,298
Ortho-Phosphoric Acid	39,584
Polyelectrolyte	3,942
Liquid Oxygen	108,843
Sulphuric Acid	792,184
Sodium Hydroxide	264,015
Hydrogen Peroxide	52,812
Sodium Bisulphate	19,730

Table 4-23 Chemical production emissions factors

Chemical	Emission factor ($kgCO_2e/kg$)	Source
Ferric Sulphate	0.17	UKWIR Carbon Accounting Workbook (CAW) (2024)
Sodium Hypochlorite	0.92	UKWIR CAW (2024)
Polyelectrolyte	0.81	UKWIR CAW (2024)
Liquid Oxygen	0.41	Winnipeg (2012)
Sulphuric Acid	0.15	UKWIR CAW (2024)
Sodium Hydroxide	1.10	UKWIR CAW (2024)
Hydrogen Peroxide	1.14	UKWIR CAW (2024)
Sodium Bisulphite	0.42	UKWIR CAW (2024)
Other (average of above)	0.64	Combination of above

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Thames Water

It's everyone's water