

# Water Resources Planning Tables 2019

v15 - June 2018

All queries on the content of this workbook should be sent to:  
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**Environment  
Agency**



**Cyfoeth Naturiol Cymru  
Natural Resources Wales**

## Water resource zone information

<b>Company:</b>	Essex & Suffolk Water
<b>Resource Zone Name:</b>	Blyth
<b>Resource Zone Number:</b>	3
<b>Planning Scenario Name:</b>	Dry Year Annual Average
<b>Chosen Level of Service:</b>	Planned
<b>Base Year:</b>	2016/17
<b>Responsible Officer:</b>	William Robinson
<b>Version:</b>	Draft Final

Signed: William Robinson

Dated:

[Digital signature is acceptable]

## Key to cells

<input type="text"/>	Clear cells - indicate an input is required
<input style="background-color: yellow;" type="text"/>	Yellow shaded cells - indicates a formula.
<input style="background-color: lightblue;" type="text"/>	Blue shaded cells - indicate base year data.
<input style="background-color: lightgrey;" type="text"/>	Light grey shaded cells - indicate preceding years.
<input style="background-color: darkgrey;" type="text"/>	Dark grey cells - indicate that no data entry is required.

## Worksheet

- WRZ summary**
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- 2. BL Supply**
- 3. BL Demand**
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- 5. Feasible options**
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- 7. FP Supply**
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- 9. FP SDB**
- 10. Drought plan links**

## Content

- Supply-Demand Balance and components
- Baseline water resources
- Baseline water supplies
- Baseline demand
- Baseline supply demand balance
- Fixed and Variable costs, Net Present Value, AIC and AISC of all feasible options (confidential)
- High level costs of preferred options (Dry Year) - publicly available
- Final Planning water supplies (impact of Scenario options)
- Final Planning demand (impact of Scenario options)
- Final Planning supply demand balance
- Drought plan links

Summary graphs of water resources planning tables data

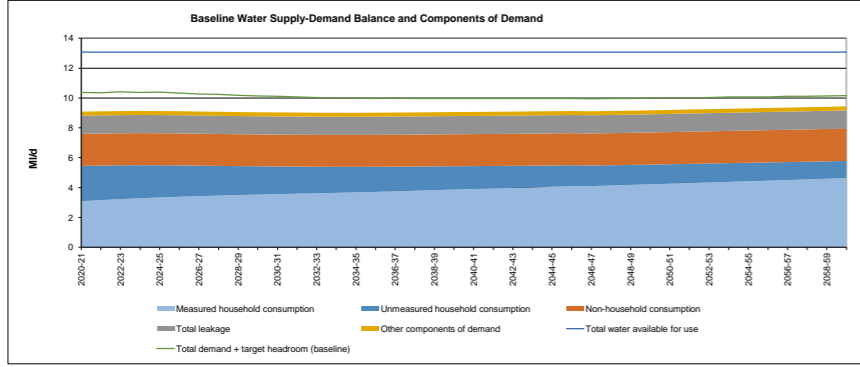
Essex & Suffolk Water

Blyth

DERIVATION	DESCRIPTION	UNITS	For info 2017-18	For info 2018-19	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60	
SUPPLY																																														
13BL	Total water available for use	M/d	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07		
13FP	Total water available for use	M/d	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	
DEMAND																																														
26BL	Unmeasured household consumption	M/d	2.60	2.55	2.49	2.42	2.37	2.32	2.27	2.21	2.16	2.10	2.05	1.99	1.94	1.89	1.86	1.82	1.78	1.75	1.71	1.68	1.65	1.62	1.59	1.57	1.54	1.51	1.48	1.46	1.43	1.40	1.38	1.36	1.34	1.32	1.30	1.29	1.27	1.26	1.24	1.22	1.20	1.18	1.17	1.15
26FP	Unmeasured household consumption	M/d	2.60	2.55	2.49	2.42	2.35	2.29	2.23	2.16	2.09	2.03	1.97	1.90	1.85	1.80	1.75	1.71	1.67	1.63	1.59	1.55	1.51	1.48	1.46	1.43	1.40	1.38	1.35	1.32	1.30	1.28	1.26	1.24	1.22	1.20	1.18	1.17	1.16	1.14	1.13	1.11	1.09	1.07	1.06	1.04
25BL	Measured household consumption	M/d	2.78	2.83	2.91	2.99	3.08	3.15	3.22	3.28	3.33	3.38	3.42	3.46	3.49	3.53	3.56	3.58	3.61	3.64	3.67	3.71	3.75	3.79	3.82	3.86	3.90	3.94	3.97	4.01	4.05	4.09	4.10	4.14	4.18	4.22	4.26	4.30	4.34	4.38	4.42	4.46	4.50	4.55	4.59	4.63
25FP	Measured household consumption	M/d	2.78	2.83	2.91	2.99	3.07	3.13	3.20	3.25	3.29	3.33	3.36	3.40	3.42	3.44	3.46	3.47	3.49	3.51	3.52	3.54	3.57	3.61	3.65	3.68	3.72	3.76	3.80	3.83	3.87	3.88	3.92	3.96	4.00	4.03	4.07	4.11	4.15	4.19	4.24	4.28	4.32	4.36	4.41	
23BL+24BL	Non-household consumption	M/d	2.48	2.18	2.15	2.15	2.15	2.14	2.15	2.15	2.15	2.14	2.14	2.14	2.13	2.13	2.13	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.15	2.15	2.15	2.15	2.15	2.15	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.17	2.17	2.17	
23FP+24FP	Non-household consumption	M/d	2.48	2.18	2.15	2.15	2.15	2.14	2.15	2.15	2.15	2.15	2.14	2.14	2.13	2.13	2.13	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.15	2.15	2.15	2.15	2.15	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.17	2.17	2.17	
40BL	Total leakage	M/d	1.50	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22		
40FP	Total leakage	M/d	1.50	1.22	1.22	1.22	1.17	1.13	1.09	1.05	1.00	0.98	0.96	0.94	0.92	0.90	0.89	0.87	0.85	0.83	0.81	0.80	0.78	0.76	0.75	0.73	0.72	0.70	0.69	0.67	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	
BL(23BL+26BL)+40	Other components of demand	M/d	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27		
FP(23FP+26FP)+40	Other components of demand	M/d	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27		
	Total demand + target headroom (baseline)	M/d	9.63	9.05	10.31	10.33	10.37	10.35	10.42	10.37	10.38	10.32	10.27	10.24	10.17	10.14	10.11	10.07	10.04	9.98	9.96	9.98	9.97	9.96	9.97	9.96	9.96	9.96	9.96	9.97	9.97	9.94	9.96	9.97	9.98	10.00	10.02	10.03	10.06	10.08	10.08	10.11	10.11	10.14	10.16	
	Total demand + target headroom (final plan)	M/d	9.63	9.05	10.31	10.33	10.30	10.22	10.23	10.11	10.06	9.97	9.87	9.80	9.69	9.63	9.56	9.48	9.41	9.35	9.29	9.23	9.20	9.16	9.14	9.13	9.11	9.10	9.08	9.07	9.06	9.06	9.04	9.06	9.07	9.08	9.10	9.12	9.14	9.17	9.18	9.19	9.21	9.22	9.25	9.27
SUPPLY-DEMAND BALANCE																																														
18BL	Target headroom	M/d	0.00	0.00	1.28	1.28	1.28	1.25	1.30	1.24	1.26	1.21	1.17	1.11	1.10	1.08	1.04	1.02	1.00	0.97	0.95	0.96	0.94	0.91	0.91	0.90	0.88	0.87	0.86	0.86	0.84	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.78	0.77	0.75	0.73	0.73	0.73		
16FP	Target headroom	M/d	0.00	0.00	1.28	1.28	1.28	1.25	1.30	1.24	1.26	1.21	1.17	1.11	1.10	1.08	1.04	1.02	1.00	0.97	0.95	0.96	0.94	0.91	0.91	0.90	0.88	0.87	0.86	0.86	0.84	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.78	0.77	0.75	0.73	0.73	0.73		
17BL	Available headroom	M/d	3.44	4.02	4.04	4.02	3.98	3.97	3.95	3.94	3.95	3.96	3.98	4.00	4.01	4.03	4.04	4.05	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06		
17FP	Available headroom	M/d	3.44	4.02	4.04	4.02	4.05	4.10	4.14	4.20	4.27	4.32	4.37	4.43	4.49	4.54	4.59	4.63	4.68	4.72	4.75	4.79	4.83	4.85	4.85	4.85	4.86	4.86	4.86	4.86	4.85	4.86	4.85	4.86	4.86	4.86	4.85	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	

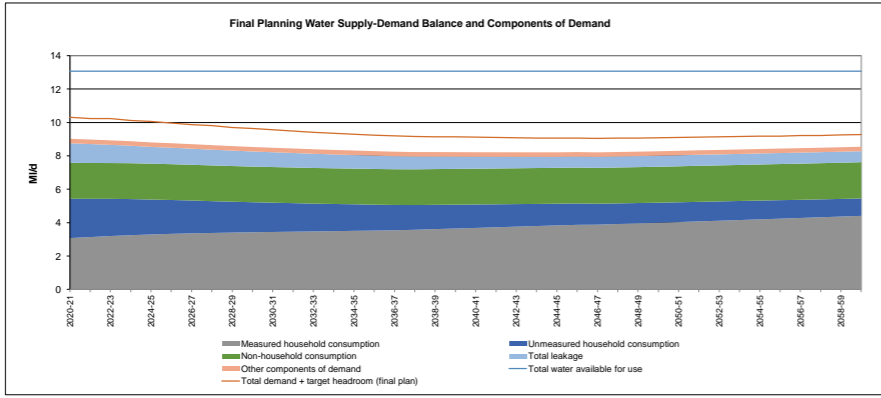
Baseline Supply-Demand Balance:

SDB (M/d)	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
SDB (M/d)	2.71	2.72	2.65	2.70	2.69	2.75	2.80	2.83	2.90	2.93	2.96	3.00	3.04	3.06	3.09	3.11	3.09	3.10	3.11	3.11	3.11	3.12	3.11	3.10	3.10	3.10	3.13	3.11	3.10	3.09	3.07	3.05	3.04	3.01	3.00	2.99	2.97	2.96	2.93	2.91



Final Planning Supply-Demand Balance:

SDB (M/d)	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
SDB (M/d)	2.77	2.85	2.84	2.96	3.01	3.11	3.20	3.27	3.38	3.44	3.51	3.59	3.66	3.72	3.78	3.84	3.87	3.91	3.93	3.94	3.96	3.98	3.99	4.00	4.01	4.01	4.03	4.01	4.00	3.99	3.97	3.95	3.94	3.91	3.89	3.89	3.86	3.85	3.82	3.80



Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

**Table 1: Baseline licences**

Row ref	Derivation	Licence number	Source name	Source type	Deployable output (MI/d)	Annual licensed quantity (MI/d)	Constraints on deployable output	Additional notes (if desired)
<b>All individual licences:</b>								
0.1BL	Sum (0.1BL+...)	-	-	-	10.44	3810.15	-	
-	Input	AN/035/0004/014/R01	Blyth Borehole 4	GW	3.11	1135.15	Annual average daily licence	
		7/35/03/*G/0072	Blyth Borehole 3	GW	2.273972603	830	Annual average daily licence	
		7/35/03/*G/0044	Blyth Borehole 2	GW	2.205479452	805	Annual average daily licence	
		7/35/02/*G/0082	Blyth Borehole 7	GW	2.849315068	1040	Annual average daily licence	
	Input							
<b>Grouped licences</b>								
0.2BL	Sum (0.2BL+...)	-	Total	-	4.23	-	-	
-	-	<b>Group #:</b>	<b>[Enter name of group]</b>	-	4.23	-	-	
-	Input	7/35/04/*G/0067	Blyth Boreholes 1, 5 & 6	GW	4.23	1545.60		
-	Input							
-	Input							
-	Input							
-	Input							
<b>Unused licences:</b>								
0.3BL	Sum (0.3BL+...)	-	-	-	0.00	91.00	-	
	Input	7/35/05/*G/0013	Blyth Borehole 8	GW	0.00	91.00	Non-potable supply (Club irrigation)	
-	Input							
<b>New licences (within current AMP):</b>								
0.4BL	Sum (0.4BL+...)	-	-	-	0.00	0.00	-	
	Input							
-	Input							

<b>Company:</b>	Essex & Suffolk Water
<b>Resource Zone Name:</b>	Blyth
<b>Resource Zone Number:</b>	3
<b>Planning Scenario Name:</b>	Dry Year Annual Average
<b>Chosen Level of Service:</b>	Planned

**README**

Table 2: Baseline supply

Row ref	Component	Derivation	Unit	decimal place	2016/17	For info 2017-18	For info 2018-19	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60	
15L	Raw water abstracted	input	Mt	2	9.04	9.04	9.04	9.04	8.49	8.50	8.51	8.52	8.52	8.51	8.49	8.47	8.46	8.44	8.43	8.42	8.42	8.42	8.42	8.42	8.43	8.44	8.46	8.47	8.48	8.49	8.50	8.52	8.53	8.54	8.53	8.55	8.57	8.60	8.62	8.66	8.68	8.70	8.73	8.76	8.79	8.81	8.84	8.87	
25L	Total raw water imported	sum(2.18L+2.28L+2.38L...)	Mt	2	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
3.18L+	Raw water imported from None	input	Mt	2	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38L	Total potable water imported	sum(3.18L+3.28L+3.38L...)	Mt	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.18L+	Total water imported from None	input	Mt	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
58L	Total raw water exported (raw water)	sum(5.18L+5.28L+...)	Mt	2	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
5.18L	Non potable water supplied to:	input	Mt	2	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04		
5.28L+	Raw water export to: None	input	Mt	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
68L	Total potable water exported	sum(6.18L+6.28L+6.38L...)	Mt	2	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	
6.18L+	Potable water export to: None	input	Mt	2	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	
-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
78L	Disposable Output (baseline pro)	sum(7.18L+7.28L+7.38L+7.48L...)	Mt	2	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	
88L	Reserve losses (changes to DO)	sum(8.18L+8.28L+8.38L...)	Mt	2	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	
8.18L	Change in DO due to climate res	input (reductions must be reported as neg)	Mt	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
8.28L	Reductions to reserve sustained	sum(8.28L sub components)	Mt	2	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20		
8.218L+	Total for the zone	input (zero or negative number)	Mt	2	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20		
-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
8.38L	Total other changes to DO	input (reductions must be reported as neg)	Mt	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
98L	Raw water losses, treatment and	input	Mt	2	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
108L	Discharge allowance	input	Mt	2	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88		

Company: Essex & Suffolk Water  
Resource Zone Name: Blyth  
Resource Zone Number: 3  
Planning Scenario Name: City Year Annual Average  
Chosen Level of Service: Planned



Table 4: Baseline supply demand balance

Item ref	Component	Derivation	Unit	Decimal places	2016/17	Est 2017-18	Est 2018-19	Est 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60		
118L	Distribution input	118L+218L+218L+218L+118L+118L+118L	M3	2	9.82	9.82	9.82	9.82	9.06	9.10	9.12	9.13	9.12	9.11	9.10	9.08	9.06	9.04	9.03	9.02	9.01	9.01	9.01	9.01	9.02	9.03	9.05	9.06	9.06	9.06	9.06	9.06	9.10	9.11	9.13	9.13	9.15	9.17	9.20	9.23	9.25	9.26	9.30	9.33	9.35	9.38	9.41	9.44		
128L	Water Available For Use (user sources)	128L+188L+188L+188L	M3	2	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	
138L	Water Input Available For Use	138L+138L+138L+138L+138L	M3	2	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87	19.87
148L	Target headroom (climate change component)	Input	M3	2	0.50	0.50	0.50	0.50	-0.02	-0.05	0.04	-0.03	0.03	0.01	0.02	0.02	0.00	0.03	0.02	0.03	0.02	0.01	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.03	0.04	0.05	0.03	0.04	0.05	0.05	0.05	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
158L	Target headroom (all other components)	Input	M3	2	0.00	0.00	0.00	0.00	1.30	1.30	1.28	1.27	1.28	1.28	1.18	1.16	1.11	1.08	1.05	1.02	1.00	0.98	0.97	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
168L	Target headroom	148L+158L	M3	2	0.50	0.50	0.50	0.50	1.28	1.25	1.30	1.24	1.28	1.21	1.17	1.17	1.11	1.10	1.08	1.04	1.02	1.00	0.97	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
178L	Available Headroom	138L-178L	M3	2	3.44	3.07	3.07	3.07	3.98	3.97	3.95	3.94	3.95	3.96	3.98	3.98	4.00	4.01	4.03	4.04	4.05	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	
188L	Supply Demand Balance	178L-188L	M3	2	3.44	3.07	3.07	3.07	2.71	2.72	2.65	2.70	2.69	2.75	2.80	2.83	2.90	2.93	2.96	3.00	3.04	3.06	3.08	3.11	3.09	3.10	3.11	3.10	3.11	3.11	3.12	3.11	3.10	3.10	3.13	3.11	3.10	3.07	3.05	3.04	3.01	3.00	2.99	2.97	2.96	2.93	2.91			

Company: Essex & Suffolk Water  
 Resource Zone Name: Blyth  
 Resource Zone Number:  
 Planning Scenario Name: Dry Year Annual Average  
 Chosen Level of Service: Planned

README

Table 3. Financial performance indicators		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030	
Indicator	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Revenue	€ million	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	
Operating Profit	€ million	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	
Net Profit	€ million	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Operating Profit Margin	%	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
Net Profit Margin	%	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
Operating Profit per Share	€	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.70	0.72	0.74	0.76	0.78	0.80	0.82	0.84	0.86	0.88	0.90	0.92	0.94	0.96	0.98		
Net Profit per Share	€	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50	0.51	0.52	0.53	0.54	0.55	
Operating Profit per Share	€	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.70	0.72	0.74	0.76	0.78	0.80	0.82	0.84	0.86	0.88	0.90	0.92	0.94	0.96	0.98		
Net Profit per Share	€	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50	0.51	0.52	0.53	0.54	0.55	

Table 4. Financial performance indicators		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030	
Indicator	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Revenue	€ million	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	
Operating Profit	€ million	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	
Net Profit	€ million	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Operating Profit Margin	%	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
Net Profit Margin	%	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
Operating Profit per Share	€	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.70	0.72	0.74	0.76	0.78	0.80	0.82	0.84	0.86	0.88	0.90	0.92	0.94	0.96	0.98		
Net Profit per Share	€	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50	0.51	0.52	0.53	0.54	0.55	
Operating Profit per Share	€	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.66	0.68	0.70	0.72	0.74	0.76	0.78	0.80	0.82	0.84	0.86	0.88	0.90	0.92	0.94	0.96	0.98		
Net Profit per Share	€	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50	0.51	0.52	0.53	0.54	0.55	





Table 7: Final planning water supply

Row Ref	Component	Derivation	Unit	Decimal places	2016/17	For Info 2017/18	For Info 2018/19	For Info 2019/20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
RP	Raw Water Abstracted	18	Mld	2	8.20	8.20	8.20	8.20	8.41	8.37	8.32	8.27	8.20	8.15	8.10	8.04	7.98	7.92	7.85	7.80	7.75	7.72	7.69	7.65	7.62	7.59	7.55	7.53	7.51	7.50	7.49	7.48	7.47	7.46	7.45	7.44	7.43	7.42	7.41	7.40	7.39	7.38	7.37	7.36	7.35	7.34	7.33	7.32	7.31	7.30	7.29	7.28	7.27	7.26	7.25	7.24	7.23	7.22	7.21	7.20	7.19	7.18	7.17	7.16	7.15	7.14	7.13	7.12	7.11	7.10	7.09	7.08	7.07	7.06	7.05	7.04	7.03	7.02	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.94	6.93	6.92	6.91	6.90	6.89	6.88	6.87	6.86	6.85	6.84	6.83	6.82	6.81	6.80	6.79	6.78	6.77	6.76	6.75	6.74	6.73	6.72	6.71	6.70	6.69	6.68	6.67	6.66	6.65	6.64	6.63	6.62	6.61	6.60	6.59	6.58	6.57	6.56	6.55	6.54	6.53	6.52	6.51	6.50	6.49	6.48	6.47	6.46	6.45	6.44	6.43	6.42	6.41	6.40	6.39	6.38	6.37	6.36	6.35	6.34	6.33	6.32	6.31	6.30	6.29	6.28	6.27	6.26	6.25	6.24	6.23	6.22	6.21	6.20	6.19	6.18	6.17	6.16	6.15	6.14	6.13	6.12	6.11	6.10	6.09	6.08	6.07	6.06	6.05	6.04	6.03	6.02	6.01	6.00	5.99	5.98	5.97	5.96	5.95	5.94	5.93	5.92	5.91	5.90	5.89	5.88	5.87	5.86	5.85	5.84	5.83	5.82	5.81	5.80	5.79	5.78	5.77	5.76	5.75	5.74	5.73	5.72	5.71	5.70	5.69	5.68	5.67	5.66	5.65	5.64	5.63	5.62	5.61	5.60	5.59	5.58	5.57	5.56	5.55	5.54	5.53	5.52	5.51	5.50	5.49	5.48	5.47	5.46	5.45	5.44	5.43	5.42	5.41	5.40	5.39	5.38	5.37	5.36	5.35	5.34	5.33	5.32	5.31	5.30	5.29	5.28	5.27	5.26	5.25	5.24	5.23	5.22	5.21	5.20	5.19	5.18	5.17	5.16	5.15	5.14	5.13	5.12	5.11	5.10	5.09	5.08	5.07	5.06	5.05	5.04	5.03	5.02	5.01	5.00	4.99	4.98	4.97	4.96	4.95	4.94	4.93	4.92	4.91	4.90	4.89	4.88	4.87	4.86	4.85	4.84	4.83	4.82	4.81	4.80	4.79	4.78	4.77	4.76	4.75	4.74	4.73	4.72	4.71	4.70	4.69	4.68	4.67	4.66	4.65	4.64	4.63	4.62	4.61	4.60	4.59	4.58	4.57	4.56	4.55	4.54	4.53	4.52	4.51	4.50	4.49	4.48	4.47	4.46	4.45	4.44	4.43	4.42	4.41	4.40	4.39	4.38	4.37	4.36	4.35	4.34	4.33	4.32	4.31	4.30	4.29	4.28	4.27	4.26	4.25	4.24	4.23	4.22	4.21	4.20	4.19	4.18	4.17	4.16	4.15	4.14	4.13	4.12	4.11	4.10	4.09	4.08	4.07	4.06	4.05	4.04	4.03	4.02	4.01	4.00	3.99	3.98	3.97	3.96	3.95	3.94	3.93	3.92	3.91	3.90	3.89	3.88	3.87	3.86	3.85	3.84	3.83	3.82	3.81	3.80	3.79	3.78	3.77	3.76	3.75	3.74	3.73	3.72	3.71	3.70	3.69	3.68	3.67	3.66	3.65	3.64	3.63	3.62	3.61	3.60	3.59	3.58	3.57	3.56	3.55	3.54	3.53	3.52	3.51	3.50	3.49	3.48	3.47	3.46	3.45	3.44	3.43	3.42	3.41	3.40	3.39	3.38	3.37	3.36	3.35	3.34	3.33	3.32	3.31	3.30	3.29	3.28	3.27	3.26	3.25	3.24	3.23	3.22	3.21	3.20	3.19	3.18	3.17	3.16	3.15	3.14	3.13	3.12	3.11	3.10	3.09	3.08	3.07	3.06	3.05	3.04	3.03	3.02	3.01	3.00	2.99	2.98	2.97	2.96	2.95	2.94	2.93	2.92	2.91	2.90	2.89	2.88	2.87	2.86	2.85	2.84	2.83	2.82	2.81	2.80	2.79	2.78	2.77	2.76	2.75	2.74	2.73	2.72	2.71	2.70	2.69	2.68	2.67	2.66	2.65	2.64	2.63	2.62	2.61	2.60	2.59	2.58	2.57	2.56	2.55	2.54	2.53	2.52	2.51	2.50	2.49	2.48	2.47	2.46	2.45	2.44	2.43	2.42	2.41	2.40	2.39	2.38	2.37	2.36	2.35	2.34	2.33	2.32	2.31	2.30	2.29	2.28	2.27	2.26	2.25	2.24	2.23	2.22	2.21	2.20	2.19	2.18	2.17	2.16	2.15	2.14	2.13	2.12	2.11	2.10	2.09	2.08	2.07	2.06	2.05	2.04	2.03	2.02	2.01	2.00	1.99	1.98	1.97	1.96	1.95	1.94	1.93	1.92	1.91	1.90	1.89	1.88	1.87	1.86	1.85	1.84	1.83	1.82	1.81	1.80	1.79	1.78	1.77	1.76	1.75	1.74	1.73	1.72	1.71	1.70	1.69	1.68	1.67	1.66	1.65	1.64	1.63	1.62	1.61	1.60	1.59	1.58	1.57	1.56	1.55	1.54	1.53	1.52	1.51	1.50	1.49	1.48	1.47	1.46	1.45	1.44	1.43	1.42	1.41	1.40	1.39	1.38	1.37	1.36	1.35	1.34	1.33	1.32	1.31	1.30	1.29	1.28	1.27	1.26	1.25	1.24	1.23	1.22	1.21	1.20	1.19	1.18	1.17	1.16	1.15	1.14	1.13	1.12	1.11	1.10	1.09	1.08	1.07	1.06	1.05	1.04	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.79	0.78	0.77	0.76	0.75	0.74	0.73	0.72	0.71	0.70	0.69	0.68	0.67	0.66	0.65	0.64	0.63	0.62	0.61	0.60	0.59	0.58	0.57	0.56	0.55	0.54	0.53	0.52	0.51	0.50	0.49	0.48	0.47	0.46	0.45	0.44	0.43	0.42	0.41	0.40	0.39	0.38	0.37	0.36	0.35	0.34	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.10	0.09	0.08	0.07	0.06	0.05	0.04	0.03	0.02	0.01	0.00	-0.01	-0.02	-0.03	-0.04	-0.05	-0.06	-0.07	-0.08	-0.09	-0.10	-0.11	-0.12	-0.13	-0.14	-0.15	-0.16	-0.17	-0.18	-0.19	-0.20	-0.21	-0.22	-0.23	-0.24	-0.25	-0.26	-0.27	-0.28	-0.29	-0.30	-0.31	-0.32	-0.33	-0.34	-0.35	-0.36	-0.37	-0.38	-0.39	-0.40	-0.41	-0.42	-0.43	-0.44	-0.45	-0.46	-0.47	-0.48	-0.49	-0.50	-0.51	-0.52	-0.53	-0.54	-0.55	-0.56	-0.57	-0.58	-0.59	-0.60	-0.61	-0.62	-0.63	-0.64	-0.65	-0.66	-0.67	-0.68	-0.69	-0.70	-0.71	-0.72	-0.73	-0.74	-0.75	-0.76	-0.77	-0.78	-0.79	-0.80	-0.81	-0.82	-0.83	-0.84	-0.85	-0.86	-0.87	-0.88	-0.89	-0.90	-0.91	-0.92	-0.93	-0.94	-0.95	-0.96	-0.97	-0.98	-0.99	-1.00	-1.01	-1.02	-1.03	-1.04	-1.05	-1.06	-1.07	-1.08	-1.09	-1.10	-1.11	-1.12	-1.13	-1.14	-1.15	-1.16	-1.17	-1.18	-1.19	-1.20	-1.21	-1.22	-1.23	-1.24	-1.25	-1.26	-1.27	-1.28	-1.29	-1.30	-1.31	-1.32	-1.33	-1.34	-1.35	-1.36	-1.37	-1.38	-1.39	-1.40	-1.41	-1.42	-1.43	-1.44	-1.45	-1.46	-1.47	-1.48	-1.49	-1.50	-1.51	-1.52	-1.53	-1.54	-1.55	-1.56	-1.57	-1.58	-1.59	-1.60	-1.61	-1.62	-1.63	-1.64	-1.65	-1.66	-1.67	-1.68	-1.69	-1.70	-1.71	-1.72	-1.73	-1.74	-1.75	-1.76	-1.77	-1.78	-1.79	-1.80	-1.81	-1.82	-1.83	-1.84	-1.85	-1.86	-1.87	-1.88	-1.89	-1.90	-1.91	-1.92	-1.93	-1.94	-1.95	-1.96	-1.97	-1.98	-1.99	-2.00	-2.01	-2.02	-2.03	-2.04	-2.05	-2.06	-2.07	-2.08	-2.09	-2.10	-2.11	-2.12	-2.13	-2.14	-2.15	-2.16	-2.17	-2.18	-2.19	-2.20	-2.21	-2.22	-2.23	-2.24	-2.25	-2.26	-2.27	-2.28	-2.29	-2.30	-2.31	-2.32	-2.33	-2.34	-2.35	-2.36	-2.37	-2.38	-2.39	-2.40	-2.41	-2.42	-2.43	-2.44	-2.45	-2.46	-2.47	-2.48	-2.49	-2.50	-2.51	-2.52	-2.53	-2.54	-2.55	-2.56	-2.57	-2.58	-2.59	-2.60	-2.61	-2.62	-2.63	-2.64	-2.65	-2.66	-2.67	-2.68	-2.69	-2.70	-2.71	-2.72	-2.73	-2.74	-2.75	-2.76	-2.77	-2.78	-2.79	-2.80	-2.81	-2.82	-2.83	-2.84	-2.85	-2.86	-2.87	-2.88	-2.89	-2.90	-2.91	-2.92	-2.93	-2.94	-2.95	-2.96	-2.97	-2.98	-2.99	-3.00	-3.01	-3.02	-3.03	-3.04	-3.05	-3.06	-3.07	-3.08	-3.09	-3.10	-3.11	-3.12	-3.13	-3.14	-3.15	-3.16	-3.17	-3.18	-3.19	-3.20	-3.21	-3.22	-3.23	-3.24	-3.25	-3.26	-3.27	-3.28	-3.29	-3.30	-3.31	-3.32	-3.33	-3.34	-3.35	-3.36	-3.37	-3.38	-3.39	-3.40	-3.41	-3.42	-3.43	-3.44	-3.45	-3.46	-3.47	-3.48	-3.49	-3.50	-3.51	-3.52	-3.53	-3.54	-3.55	-3.56	-3.57	-3.58	-3.59	-3.60	-3.61	-3.62	-3.63	-3.64	-3.65	-3.66	-3.67	-3.68	-3.69	-3.70	-3.71	-3.72	-3.73	-3.74	-3.75	-3.76	-3.77	-3.78	-3.79	-3.80	-3.81	-3.82	-3.83	-3.84	-3.85	-3.86	-3.87



Table 9: Final planning water supply

Row Ref	Component	Derivation	Unit	Decimal places	2016/17	For info 2017	For info 2018	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
11FP	Distribution Input	18FP+22FP+24FP+25FP+26FP+28FP+33FP+34FP	Ml/d	2	9.53	9.55	9.55	9.55	9.52	9.57	9.53	9.57	9.50	9.75	9.70	9.64	9.58	9.53	9.48	9.44	9.39	9.35	9.32	9.28	9.25	9.23	9.22	9.22	9.21	9.21	9.21	9.21	9.22	9.21	9.23	9.25	9.27	9.30	9.35	9.35	9.35	9.41	9.43	9.46	9.49	9.51	9.54	
12FP	Water Available For Use (see above)	18FP+22FP+24FP+25FP+26FP+28FP+33FP+34FP	Ml/d	2	13.51	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11		
13FP	Total Water Available For Use	12FP+14FP+15FP+16FP+17FP	Ml/d	2	13.51	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07		
14FP	Total treatment (scheme change) components	Input	Ml/d	2	0.58	0.50	0.52	0.51	-0.02	-0.05	0.04	-0.03	0.03	0.01	0.02	0.02	0.03	0.03	0.02	0.03	0.02	0.01	0.00	0.01	0.04	0.02	0.03	0.03	0.04	0.05	0.03	0.04	0.05	0.03	0.05	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05		
15FP	Total treatment (all other) components	Input	Ml/d	2	0.58	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50			
16FP	Total treatment	14FP+15FP	Ml/d	2	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50		
17FP	Available Headroom	13FP-14FP	Ml/d	2	3.44	4.02	4.50	4.02	4.05	4.10	4.14	4.20	4.27	4.32	4.37	4.43	4.49	4.54	4.59	4.63	4.68	4.72	4.75	4.79	4.83	4.85	4.85	4.85	4.86	4.86	4.86	4.86	4.85	4.85	4.84	4.82	4.80	4.77	4.74	4.72	4.69	4.66	4.64	4.61	4.58	4.55	4.53	
18FP	English Channel Balance	17FP-18FP	Ml/d	2	3.44	4.02	4.76	2.74	2.77	2.85	2.84	2.86	3.01	3.11	3.20	3.27	3.38	3.44	3.51	3.59	3.66	3.72	3.78	3.84	3.87	3.91	3.93	3.94	3.96	3.98	3.99	4.00	4.01	4.01	4.01	4.01	4.00	3.99	3.97	3.95	3.94	3.91	3.89	3.86	3.82	3.80		

Company: Essex & Suffolk Water  
 Resource Zone Name: BSW  
 Resource Zone Number: 3  
 Planning Scenario Name: Dry Year Annual Average  
 Classes Level of Service: Planned

Table 10: Drought plan links and Deployable Output Overview

10.1 Planning scenarios				10.2 Water resources management plan								10.3 Drought plan						10.4 Demand		
Drought Scenarios	Drought Description	Drought Severity	Plan in which scenario is used (highlights overlaps)		WRMP DO of Sources (not including drought measures)	WRMP Additional Yield from Drought Supply Measures (eg drought permits or orders)			WRMP Impact on DO of drought plan Demand Restrictions (eg TUBs)			WRMP DO Levels of Service	Drought Plan Additional Yield from Further Supply Measures (eg drought permits or orders)			Drought Plan Impact on DO of Further Demand Restrictions (eg TUBs)			Unrestricted Demand	Restricted Demand
			WRMP	Drought Plan		Description	Marginal Benefit (MI/d)	DO (MI/d)	Description	Marginal Benefit (MI/d)	DO (MI/d)		Description	Marginal Benefit (MI/d)	DO (MI/d)	Description	Marginal Benefit (MI/d)	DO (MI/d)		
Historic Droughts	1997	0.5% chance in any given year	Y	Y	14.7	None	N/A	14.7	Level 1 and 2 Demand Restrictions	Not known	14.7	14.7	Drought Plan Drought Actions	0.56	14.7	Level 1 and 2 Demand Restrictions	Not known	14.7	9.63	8.47
Additional Drought Scenarios	200	Severe Drought	Y	Y	14.7	None	N/A	14.7	Level 1 and 2 Demand Restrictions	Not known	14.7	14.7	Drought Plan Drought Actions	0.56	14.7	Level 1 and 2 Demand Restrictions	Not known	14.7	9.63	8.47

Reported DO for WRMP tables highlighted in yellow

### 10.5 Summary report

WRMP DO Overview	Drought Plan Overview
<p><b>DO Approach</b> - The Blyth WRZ only contains groundwater sources. The standard UKWIR methodology (1995) entitled "A Methodology for the Determination of Outputs for Groundwater Sources" was used to determine the DO of the groundwater sources. The regional groundwater model was used to determine the DO at groundwater sources during a 1 in 200-year drought scenario. This is outlined in sections 3.6 and 3.7 of the WRMP.</p> <p><b>LoS</b> - the planned levels of service for our customers are 1 in 20 years for temporary use bans, 1 in 50 years for drought order bans, and 1 in 250 years for pressure reduction.</p> <p><b>Constraint on DO</b> - our deployable output is licence-constrained.</p> <p><b>Critical Year</b> - our worst historical drought year in Suffolk is 1997.</p> <p><b>Data length &amp; quality</b> - The data length and quality varies between sources.</p> <p><b>Approach to drought severity</b> - estimation of drought severity was carried out using analysis of rainfall data and Tabony tables, outlined in section 2.9.1 of the WRMP.</p>	<p>The supply and demand side measures included within our Drought Plan are listed below, alongside their associated daily benefit (as a reduction in demand or increase in yield).</p>
Additional Drought Scenarios	Drought Supply Measures and Demand Restrictions Further Details
<p><b>Drought scenarios chosen and justification</b> - A severe (1 in 200 year) drought scenario was analysed for our groundwater sources using the regional groundwater model. This is outlined in section 3.7 of our WRMP.</p>	<p>Demand – Appeals for restraint – 7% demand reduction                      Demand – Temporary use ban – further 5% demand reduction                      Demand – Drought order ban – further 2% demand reduction                      Supply – Increase restricting daily quantity on Blyth Borehole 6 licence – 0.29MI/d benefit                      Supply – Reduction of compensation flows from Blyth Borehole 2 – up to 0.205MI/d benefit between July and October                      Supply – Tankering</p>
Impact on Supply Demand	
<p>We have not included any supply side drought measures in WRMP deployable output assessments, but demand side restrictions are taken into account. Only Level 1 and 2 demand restrictions were enforced our worst historic drought.</p>	
Demands	
<p>We have used the Dry Year Distribution Input figures for base year 2016/17 as the Unrestricted Demand. Restricted Demand is the Unrestricted Demand minus the 12% demand reduction from Level 1 and 2 restrictions.</p>	

**2.3 Making changes to the WRP tables**

Please see below slight changes to the WRP tables

Structure: no changes

Content: see below

Table	Row ref	Component	Derivaion	Unit	DP	What has been amended	Reasoning
2	7BL	Deployable Output (baseline profile with	sum(0.1BI+0.2BL+0.3BL+0.4BL)	MI/d	2	Formula has been removed, this row is Input from Supply data	DO is calculated for consistency on Supply calculations, DO is not sum of licences
9	11FP	Distribution Input	19FP+20FP+21FP+22FP+32FP+33FP+39FP	MI/d	2	Void SPL removed row 38 from calculation, NWL/ESW following UKWIR/NRA WR1 demand forecasting methodology, void usage which includes SPL is included in Water unbilled. So to	Consistency between WRP and water balance assumptions/calculations Following UKWIR/NRA WR1 demand forecasting methodology. Reflects WRMP report Void SPL ranges from 0.01% to 0.3% of DI
4	11BL	Distribution input	19BL+20BL+21BL+22BL+32BL+33BL+3	MI/d	2	As above	As above
8	30FP	Unmeasured Household - PCC	(26FP*1,000,000)/(52FP*1,000)	l/h/d	1	Formula amended to 1 decimal place rather than 0 as per table requirement New =ROUND((H10*1000000)/(H55*1000),1)	For consistency between BL/FB as well as complying with table requirements
8	29FP	Measured Household - PCC	(25FP*1,000,000)/(51FP*1,000)	l/h/d	1	As above	For consistency between BL/FB as well as complying with table requirements
2	8.21BL+	Total for the zone	Input (zero or negative number)	MI/d	2	Row reference	The row reference is a duplicate of 8.2 ie there are two 8.2's so one has been amended to 8.21 to enable an accurate data load of the tables.
7	1FP	Raw Water Abstracted	1BL	MI/d	2	FP should be different than = BP Input from Final Supply demand (DI for BL and FP are different) which means BL and FP raw water abstracted will be different figures	Final plan DI + raw water imports - raw water exports + process losses should = Final Plan Raw water abstracted
6	61.4	Change volume delivered to unmeasured households (input reductions as -ve)	-	MI/d	2	The volume associated in the row if consumption rather than the previous water delivered, changes made due to the version 15 including SPL to the water delivered figure	
6	61.3	Change volume delivered to measured households (input reductions as -ve)	-	MI/d	2	The volume associated in the row if consumption rather than the previous water delivered, changes made due to the version 15 including SPL to the water delivered figure	

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