

Technical Note

Assessment of capacity at Water Treatment Works serving Stratford-on-Avon District

Note: This is desktop assessment provided by Severn Trent Water using readily available information and it has not been subjected to detailed hydraulic analysis.

General comment regarding water treatment capacity:

Whilst water treatment works may not have sufficient spare capacity to accept the levels of development being proposed in its catchment area this does not necessarily mean that development cannot take place. Under Section 94 of the Water Industry Act 1991, sewerage undertakers have an obligation to provide additional treatment capacity as and when required. Where necessary the undertakers will discuss any discharge consent implications with the Environment Agency.

Water Treatment Works	Current population equivalent	Current / observed dry weather flow (m3/d)	Current DWF Consent (m3/d)	Estimated headroom based on current quality performance (RAG)	Estimated spare hydraulic capacity	
					Population equivalent	Dwellings @ 2.4 persons/dwelling
Alcester WTW	8,637	2425	3150	Significant	4,531	1,888
Bidford on Avon WTW	7,760	1556	1870	Minimal	1,963	818
Butlers Marston WTW	640	181	190	Limited	56	23
Cherington WTW	1,458	353	365	Significant	75	31
Claverdon WTW	908	216	250	Significant	213	89
Ettington Works WTW	1,058	142	460	Limited	1,988	828
Fenny Compton WTW	797	120	251	Significant	819	341
Gaydon WTW	390	51	110	Limited	369	154
Ilmington WTW	715	147	210	Significant	394	164

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					Population equivalent	Dwellings @ 2.4 persons/dwelling
Southam Itchen Bank WTW	15,597	2494	2881	Limited	2,419	1,008
Kineton WTW	2,244	436	750	Limited	1,963	818
Lighthorne WTW	345	98	120	Significant	138	57
Lighthorne Heath WTW	857	113	193	Significant	500	208
Long Compton WTW	857	167	165	Limited	0	0
Long Marston WTW	2,213	479	835	Minimal	2,225	927
Moreton Morrell WTW	480	113	148	Significant	219	91
Northend WTW	407	73	120	Significant	294	122
Oxhill Works WTW	446	69	130	Significant	381	159
Preston on Stour WTW	533	95	140	Significant	281	117
Redditch - Spennall WTW	77,011	22162	27500	Limited	33,363	13,901
Shipston - Fell Mill WTW	7,958	1450	1697	Significant	1,544	643
Stratford - Milcote WTW	32,897	9377	13110	Limited	23,331	9,721
Temple Herdewycke WTW						
Tysoe WTW	1,020	173	181	Significant	50	21
Warwick - Longbridge WTW	122,721	32131	36000	Limited	24,181	10,076
Wellesbourne WTW	6,323	1462	1559	Limited	606	253
Wootton Wawen WTW	4,111	1547	2200	Significant	4,081	1,701

Explanatory Notes:

The Estimated Headroom is based on quality performance – this gives a RAG risk status based on the amount of load that can be treated at the works before there are compliance issues relating to the impact of discharging to the watercourse. This relates to the efficiency of the works, ie. the hydraulic capacity may be able to be treated within consent but the impact on the watercourse may be high.

The Estimated spare hydraulic dwellings – this is a volumetric output unrelated to the quality performance. This is the number of additional dwellings that can be added to the catchment within the current consent. There is not a risk rating on this as the risk will depend on the number of dwellings which are proposed to be added to the catchment. It should be borne in mind that this spare capacity will also likely need to account for the allocated development in the adopted Local Plan (Core Strategy) and commitments (including those in neighbouring local authority areas in relation to Sperrall WTW for Redditch and Longbridge WTW for Warwick). Therefore the dwelling capacity available for the reserve sites will be lower for some catchments.

Regarding Itchen Bank – based on the headroom calculations there is spare capacity within the catchment (ie. Southam, Long Itchington, Bishops Itchington and Harbury) for only 1008 additional dwellings over and above what has already been committed. Beyond this figure improvement works will be required.

The Severn Trent Water team that plans for sewage treatment improvement works is already aware of the risk at this treatment works and is considering the best way forward to increase capacity and the timescales for doing so through the next Asset Management Period (AMP) cycle and beyond. The objective of AMP7 (2020-2015) is to increase capacity such that the works can accommodate additional flow and load from allocations identified in the current Core Strategy and other development commitments.

Any additional sites that are identified as reserve housing sites in the Site Allocations Plan and in the review of the Core Strategy review will likely need additional significant improvements.

The following WTWs are close to headroom capacity based on the anticipated growth to their catchment:

- Longbridge (taking into account additional growth in Warwick District area)
- Wellesbourne
- Long Compton

Each of these Works have schemes in place to provide additional capacity and quality improvements in AMP7.