Vale of White Horse Local Plan 2031 Part 1 Examination

Statement of Common Ground

between

Vale of White Horse District Council;

Environment Agency;

and

Thames Water

September 2015

1.0 Introduction

1.1 This Statement of Common Ground has been prepared jointly between the Vale of White Horse District Council, the Environment Agency and Thames Water, hereafter referred to as 'all parties'. It sets out confirmed matters of agreement in relation to Stage 1 of the Local Plan Examination, and more specifically it sets out the current position and matters of agreement regarding water resources and supply and wastewater treatment and collection. This Statement will assist the Inspector during the Examination of both Stage 1 and Stage 2 of the Local Plan.

1.2 There are potentially other matters the Council, the Environment Agency and Thames Water agree on however these will be considered at Stage 2 of the Examination within respective Statements of Common Ground. Therefore for the avoidance of doubt, this SoCG is not intended to cover all Stage 2 Examination matters.

2.0 Background

2.1 The Council have made every effort throughout the preparation of the Local Plan Part 1 to ensure the Plan provides a robust, strategic framework for the effective delivery of sustainable development. Throughout this process the Council have continuously engage with the Environment Agency and Thames Water including joint working on policy, strategic allocations and specific evidence base studies and ensuring the Plan implements national policy appropriately.

2.2 All parties have jointly developed the evidence base on water for the Local Plan, mainly the Water Cycle Study. The Water Cycle Study has been used to inform the preparation of policy and reflects the most up to date position and consensus of these matters.

3.0 Duty to Cooperate / Collaborative Working

3.1 As evidenced within the Statement of Compliance with the Duty to Cooperate and the Duty to Cooperate Topic Paper 1, the Council have continuously engaged with the Environment Agency and Thames Water. All parties are committed to continuous working on water supply and quality related matters. This is essential to ensure these matters are taken into account as growth within the district proceeds.

4.0 Stage 1 Local Plan Examination Matters

4.1 All parties agree the Council have discharged its duty to cooperate, with respect to water and those matters relating to Stage 1 of the Local Plan Examination.

4.2 All parties agree the Council's approach to preparing the Local Plan in two parts, with Local Plan Part 1 addressing strategic policies and sites is appropriate to ensure timely delivery of growth and infrastructure in the district.

4.3 The housing requirement proposed within Local Plan 2031 Part 1 meets the district's full objectively assessed housing needs as assessed within the Oxfordshire Strategic Housing Market Assessment 2014. All parties agree the level of housing proposed can be accommodated within the district in relation to water infrastructure in the short term, as assessed within the Water Cycle Study. For the longer term, additional water resource infrastructure is likely to be required.

4.4 All parties agree the Water Cycle Study has satisfactorily demonstrated that, subject to the planning and delivery of necessary infrastructure upgrades, there are no factors in relation to

water infrastructure that would prevent the delivery of the overarching spatial strategy, as defined within Core Policy 3.

4.5 The Local Plan Part 1 Core Policy 2 sets out the Council's approach to dealing with unmet need within Oxfordshire. It ensures the Council will work collaboratively to address potential overspill of unmet need from other parts of the housing market area in a timely and effective manner. The Environment Agency and Thames Water are fully aware of this approach and will continue to work with the Council in addressing any potential unmet need.

4.6 All parties agree on the Council's approach to undertaking the SA incorporating SEA and agree that the SA has tested all reasonable alternatives in regards to the overarching spatial strategy of the Local Plan Part 1.

5.0 Stage 2 Local Plan Examination Matters

5.1 All parties agree the Updated Water Cycle Study Report, September 2015 provides a robust, up to date evidence base assessing the environmental and physical demands of the proposed growth on water resources and supply and wastewater collection and treatment and identifies opportunities for more sustainable planning and improvements so proposals don't exceed the existing water cycle capacity.

5.2 All parties agree the Water Cycle Study should be reviewed as and when further information becomes available.

Water Resources and Supply

5.3 The Water Cycle Study Report published in November 2014, concluded for water supply and resources, there was insufficient evidence to confirm that the planned growth could be met. At that time, Thames Water's Water Resources Management Plan 2015-2040 (WRMP14) had not modelled the housing needs identified through the Oxfordshire Strategic Housing Market Assessment 2014.

5.4 Subsequent to November 2014 Water Cycle Study Report, Thames Water have reviewed the growth projections in the Swindon and Oxfordshire (SWOX) Water Resource Zone (WRZ) and all parties agree that Thames Water will be able to maintain the security of supply in the SWOX WRZ in the short term (5 year period to 2020). Thames Water have agreed with the Environment Agency that it will review its position on an annual basis published within its Annual Review. The parties therefore agree there is sufficient water resources to meet planned growth within the district within environmental limits in the short term, and that an appropriate mechanism is in place to monitor the situation and implement actions if necessary, as outlined in the position statement.

5.5 Thames Water will publish its next draft of the WRMP in spring 2018 covering the 25 year period from 2020 to2045. Thames Water will review population and property growth forecasts as part of this process through liaising with local authorities. This review will allow the latest projections to be accommodated in Thames Water's draft WRMP19 for 2020 – 2045.

5.6 For the longer term, additional water resource infrastructure will be required. Thames Water is currently assessing suitable options and this will form part of its draft WRMP19 which will be published in Spring 2018 for public consultation. This is reflected within the updated Water Cycle Study Report September 2015 and at Appendix 2 which provides further detail and agreement on the planned resources for the district.

5.7 The Water Cycle Study has indicated that there may be certain constraints at certain locations in the water supply network in which all parties agree the likely phasing of development will be

required to align the occupation of development and delivery of water network infrastructure, taking into consideration sufficient time to design and build the water supply reinforcement infrastructure. These reinforcements are the responsibility of Thames Water.

5.8 All parties agree Core Policy 40 is effective, justified and in accordance with national policy through providing a robust strategic policy ensuring development responds to the pressures from climate change subject to the following proposed modification being taken forward and supporting text amended accordingly. In response to the assessment of water supply and resources, the Water Cycle Study Report September 2015 recommends the Local Plan 2015 Part 1 should include a requirement for new developments to provide higher water efficiency standards in ensuring there is sufficient water resources available. The proposed modification is included within Appendix 1.

5.9 The updated Water Cycle Study Report September 2015 and the proposed modification above, resolve the Environment Agency's soundness concerns regarding Core Policy 40.

5.10 It is agreed Core Policy 7 will ensure development contributes to ensuring the provision of the necessary infrastructure requirements, including water supply infrastructure, in a timely manner and in accordance with the NPPF.

Wastewater Treatment and Collection

5.11 The Water Cycle Study Report September 2015 lists a number of the proposed sites that will necessitate an upgrade to the sewerage network to ensure that there is sufficient hydraulic capacity of the sewerage network to cater for the growth being proposed. All parties agree, it is not possible to identify the precise waste water infrastructure needs that will arise from the level and distribution of residential development proposed due to the complexities of sewerage networks and sewage treatment works. However, it is agreed that in relation to sewage treatment Thames Water will have sufficient time to upgrade its sewage treatment works to cater for the growth envisaged in the Plan. It is also agreed that in relation to the sewerage network that where network constraints are identified developers will be requested to provide detailed drainage strategies to establish the appropriate drainage infrastructure to support their development planning application. The delivery of the drainage strategy and any necessary infrastructure network reinforcements, can be controlled via appropriate drainage planning conditions.

5.12 The Water Cycle Study Report September 2015 lists a number of sewage treatment works that will require upgrades to ensure the growth can be accommodated. Through its business planning process Thames Water are appraising any necessary future sewage treatment works upgrades to ensure there is sufficient treatment headroom for the growth envisaged in the Plan.

5.13 All parties agree that when taking into account Best Available Technology (BAT), infrastructure upgrades can ensure there is no Water Framework Directive (WFD) class boundary deterioration, in accordance with the WFD objectives, as outlined in Sections 5 and 9 of the Water Cycle Study Report September 2015.

5.14 All parties agree when taking into account the conservative Water Quality Assessment results, and the infrastructure upgrades (with the additional habitat restoration put forward within the RBMP) that growth would not prevent the receiving waterbody from reaching GES, in line with the overarching objectives of the WFD. As outlined in Section 9 of Water Cycle Study Report September 2015.

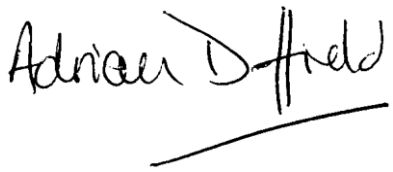
5.15 It is agreed Core Policy 7 will ensure development contributes to the provision of the necessary infrastructure requirements, including wastewater collection and treatment infrastructure, in a timely manner and in accordance with the NPPF.

6.0 Conclusion

6.1 All parties agree the Submission Infrastructure Delivery Plan (IDP) appropriately addresses the impact of growth from the emerging Vale of White Horse Local Plan 2031 Part 1. The IDP supports Core Policy 7 of the Local Plan 2031 Part 1, which requires development to provide or contribute towards appropriate infrastructure.

Signatures

Signed on behalf of Vale of White Horse District Council



18/09/2015

Adrian Duffield
Head of Planning

Date

Signed on behalf of Environment Agency

[redacted]

18/09/2015

David Griggs
Planning Advisor

Date

Signed on behalf of Thames Water

[redacted]

18/09/2015

Mark Mathews
Town Planning Manager

Date

Appendix 1: Agreed Modification between the Parties

Proposed Modification to Core Policy 40 and supporting text

Add additional criteria to Policy as follows:

vii New developments shall be designed to a water efficiency standard of 110 litres/head/day (l/h/d) for new homes.

Amend Paragraph 6.1.1 as follows:

The Housing Standards Review has indicated that the Government will put less emphasis in the Code for Sustainable Homes and will instead set equivalent standards through Building Regulations. Therefore, the Council does not set policy standards for the Code for Sustainable Homes. However, Government policy does still allow councils to choose to apply a local standard for water efficiency in advance of national standards. As the Vale is in an area of water stress, the Council are applying a higher standard for water efficiency, as recommended within the Water Cycle Study. ~~will apply a higher standard for this matter in the Local Plan 2031 Part 2.~~

Appendix 2: Assessment of revised housing growth projections in Oxfordshire in the context of water resources

Thames Water and Environment Agency Position Statement. August 2015

1. Introduction

The Oxfordshire Strategic Housing Market Assessment (SHMA)[1] was published in March 2014 and sets out the objectively assessed need (OAN) for new housing development in Oxfordshire in the period 2011 to 2031. The Oxfordshire authorities reviewed the assessment and considered the capacity of different areas to accommodate development. Individual authorities are taking forward this information in reviewing and developing their Local Plans. When planning future housing development, local authorities consider a wide range of factors including whether there are sufficient water resources to meet future need.

Thames Water (TW) supplies the majority of Oxfordshire, Swindon and parts of neighbouring authority areas with water and wastewater services. For water resources planning, TW calls this area the Swindon and Oxfordshire (SWOX) Water Resource Zone (WRZ).

This note outlines the current water resources position in the SWOX WRZ and discusses the availability of water resources in the zone to accommodate future housing growth forecasts.

The note is structured as follows:

- Section 2 sets out background information including the statutory and regulatory framework for water resources planning, the components of a plan and specific concepts in water resource planning that are relevant to this note;
- Section 3 presents further information on the SWOX WRZ including the demand forecasts and the baseline water resources position in the zone;
- Section 4 discusses the OAN figures published by the Oxfordshire local authorities and consideration of the revised forecasts in terms of the current water resources available;
- Section 5 sets out the annual review process and potential actions to provide additional resource if required; and
- Section 6 details the agreement between Thames Water (TW) and the Environment Agency (EA) to this note.

2. Water resources planning

2.1 Statutory and regulatory framework

Water companies in England and Wales are required to produce a Water Resources Management Plan (WRMP) every five years which sets out how the company intends to maintain the balance between supply and demand for water over a 25 year period in their supply area. In August 2014 TW published its plan which covers the 25-year period from 2015

[1] Regional SHMA are required by the National Planning Policy Framework to help local planning authorities understand how many new homes will be needed in the period 2011 – 2031. The Oxfordshire Strategic Housing Market Assessment was prepared by GL Hearn Limited and published in March 2014.

to 2040, called WRMP14[2]. In producing the plan TW complied with legal requirements[3] and the Water Resources Planning Guideline (WRPG)[4].

[2] WRMP14 published August 2014 following approval from the Secretary of State for Environment, Food and Rural Affairs www.thameswater.co.uk/wrmp

[3] Sections 37A to 37D of the Water Industry Act 1991, (as amended by the Water Act 2003).

[4] WRPG is a non-statutory guideline produced by Defra, Welsh Government, Ofwat and Environment Agency and provides a framework for water companies to follow in preparing their WRMPs

2.2 Water Resource Zones

For planning purposes, the TW supply area is divided into six Water Resources Zones (WRZs)[5] as presented in Figure 1. The largest WRZ is London, which covers the Greater London area, followed by Swindon and Oxfordshire (SWOX).

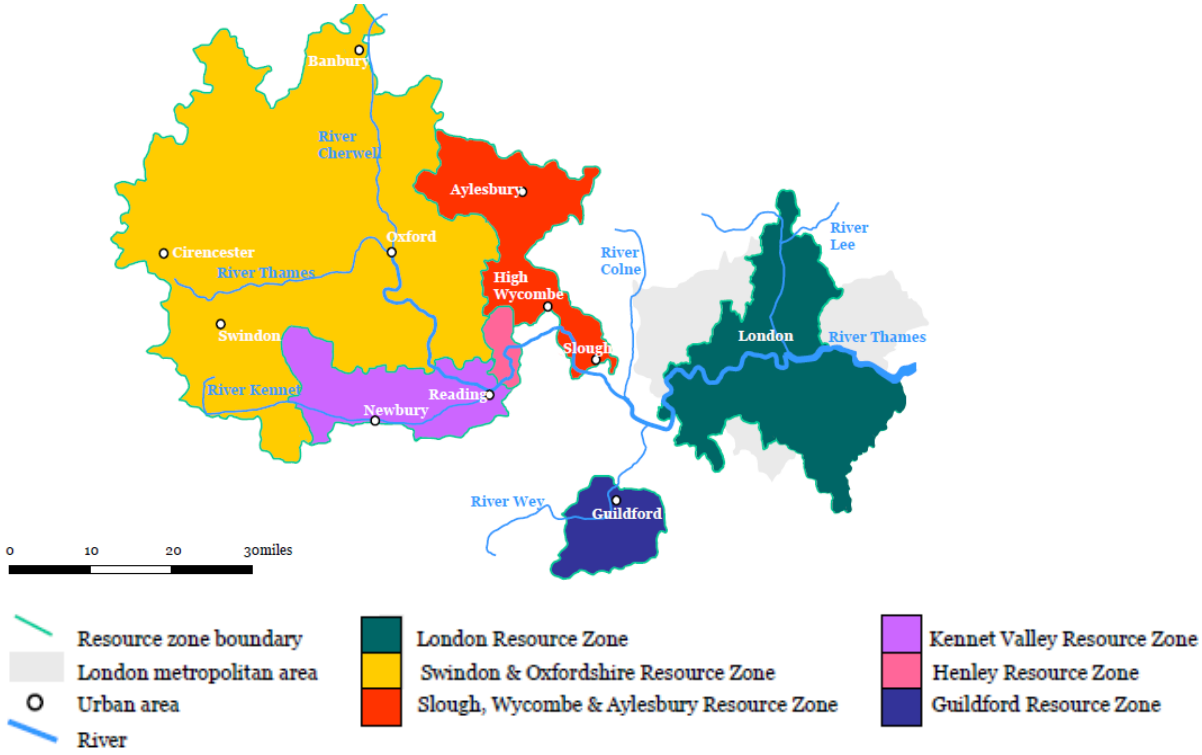


Figure 1 – Thames Water supply area showing Water Resource Zones

2.3 Components of a WRMP

The purpose of the WRMP is to ensure there are sufficient water resources to meet the demand for water. It comprises a number of component parts as summarised below. The relevant sections of TW's WRMP14 are signposted for further information.

- Baseline forecast of demand: This describes how much water customers will need now and in the future, considering factors such as climate change and population growth. (WRMP14 Section 3). Demand forecasts are produced for different scenarios:
    - The 'Dry Year Annual Average' scenario (DYAA): this is the forecast for a dry year (a period of low rainfall) where there are no constraints on demand.
    - The 'Average Day Peak Week' scenario (ADPW): this describes the average daily demand during the peak week for water demand.

[5] A WRZ is the standard geographical unit for water resources planning and is defined by the EA as *"The largest possible zone in which all resources, including external transfers, can be shared and hence the zone in which all customers experience the same risk of supply failure from a resource shortfall."*

- Baseline forecast of supply: This describes how much water is available for use now and how this may change in the future due to factors such as climate change and sustainability reductions[6]. (WRMP14 Section 4)

- Headroom: This is an allowance for uncertainty and includes uncertainties associated with forecasts as well as specific aspects such as the impact of climate change. (WRMP14 Section 5)

- Baseline supply demand balance: This is an estimate of the water resource position for each zone produced by comparing the baseline demand plus headroom, and baseline supply. This identifies if there is a surplus or deficit of water in the zone for each year of the 25 year planning period. (WRMP14 Section 6)

- Where a deficit is identified, options to manage demand and provide additional supply are assessed, and a preferred programme of options is proposed, taking account of a range of factors including cost, environmental impacts, views of customers and wider strategic priorities. (WRMP14 Sections 7-9)

- Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA): These assessments are undertaken to ensure consideration of potential impacts on the environment and on sites designated for conservation value. (WRMP14 Section 8 and Appendices B & C)

3. **SWOX Water Resource Zone**

The SWOX WRZ supplies the majority of Oxfordshire, Swindon and parts of neighbouring authority areas. This section outlines the forecasts for growth used in forecasting demand for water in the zone, and the baseline supply demand balance.

3.1 Population and property growth projections

The WRPG (Sections 4.2.2 and 4.2.3) sets out the methodology for companies to follow in preparing population and property growth projections for water resources planning. TW followed the requirements of the WRPG in preparing population and property growth projections for WRMP14. The approach is summarised below. The detailed information is presented in WRMP14 (Section 3 and Appendix E).

TW participated in a collaborative project with other water companies as part of which an independent consultancy, Experian, was contracted to undertake the preparation of property and population projections. Experian collated data to produce three different projections. These were:

- Plan-based (using information provided by local authorities)
- Trend-based (using the latest information from official statistics)
- Most Likely (Experian's best view on likely outcomes based on information available)

TW used the plan-based projections taking account of the best available information from local authorities at the time. The approach was supported by the EA.

In addition, an analysis of hidden and transient populations was completed by independent consultants, Edge Analytics, (April 2013) which was added to the plan-based projections.

[6] Where abstraction of water is determined to have a detrimental effect of the environment the EA can amend abstraction licences to reduce the amount of water that can be abstracted from a source. The volume of resource change is termed a sustainability reduction.

Table 1 presents cumulative forecasts for new housing in the SWOX WRZ starting from 2011/2012 base position[7].

Year	2014/15	2019/20	2024/25	2029/30	2034/35	2039/40
Forecast number of new houses ('000)	15.0	41.7	62.6	75.8	87.2	99.2

Table 1: Cumulative housing growth projections in SWOX WRZ as presented in WRMP14

3.2 Baseline supply demand position in SWOX WRZ

Taking account of the baseline demand, headroom and supply forecast for SWOX WRZ, TW determined the baseline supply demand position for the zone. This shows that there is a deficit forecast under dry year annual average conditions from 2024/25 to the end of the planning period of 15 Ml/d as shown in Figure 2. There is also a deficit forecast under peak conditions from 2019/20 to the end of the planning period growing to 32 Ml/d by 2040 as shown in Figure 3.

As the deficit forecast under the peak conditions occurs earliest and is the larger of the two, this is taken as the main investment driver for planning. However in developing the preferred programme both planning scenarios and their respective deficits are considered.

Figure 2: SWOX WRZ Baseline supply demand position (DYAA)

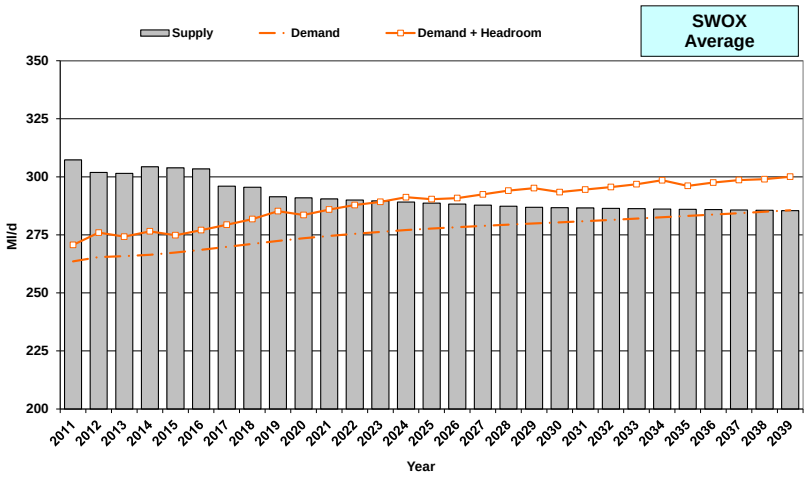
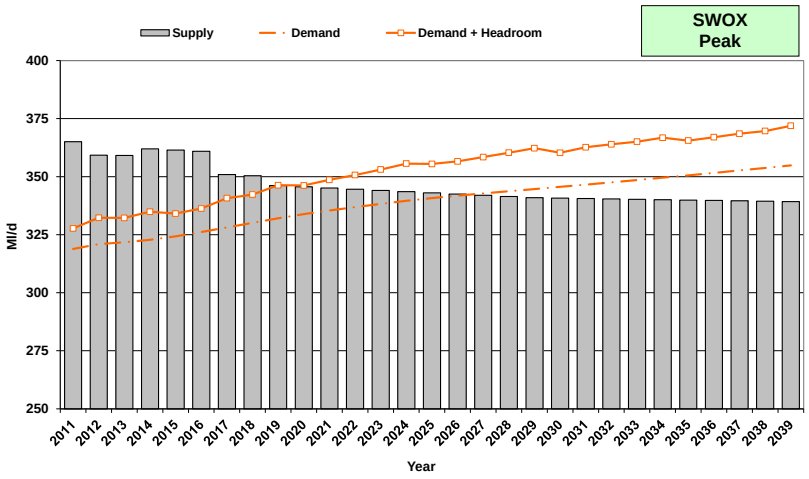


Figure 3: SWOX WRZ Baseline supply demand position (DYCP)

[7] WRMP14 Appendix A WRP6a FP Customers, Row 45.1FP



3.3 Programme of measures in SWOX WRZ

The programme of measures to balance supply and demand in SWOX WRZ during both dry year annual average and peak period focus mainly on demand management. It involves leakage reduction, and the rollout progressive metering to households from 2020, installing over 82,000 smart meters in the 10 year period to 2030, supported by a comprehensive water efficiency programme. At the end of the planning period a transfer from SWA WRZ is proposed. The programme is summarised in Table 2.

	Delivery date and supply demand benefit (Ml/d)				
	2015-2020	2020-2025	2025-2030	2030-2035	2035-2040
Leakage reduction	-	0.6	1.0	0.3	**-**
Progressive meters • 62,828 households in 2020-25, • 19,703 households in 2025-30 **Optant meters (included in baseline forecast)** (AMP6: 19,859, AMP7: 21,381, AMP8: 6,406)	1.6	8.6	4.3	0.9	1.3
Water Efficiency*	0.0	3.3	0.3	-2.1	-0.8
Tariffs and behaviour change**	0.2	8.2	1.3	0.2	0.2
Transfer from SWA WRZ					2.3

***There is a decay in savings from water efficiency savings over time mainly in regard to the effectiveness of products. ****This element includes both the impact of tariffs and the ongoing impacts of behaviour change brought about by building developers installing low water use fittings and the government encouraging water conservation.

Table 2 Programme of measures in SWOX WRZ from 2015-2040

4. Revised housing growth forecasts in Oxfordshire

4.1 Revisions to growth forecasts

Since TW collected data from local authorities to prepare WRMP14, several local authorities have updated population and housing growth forecasts and published revised data. The housing growth projections taking account of information presented in the Oxfordshire Strategic Housing Market Assessment (SHMA) indicate a growth across the area of between 128,860 and 129,160 new properties over approximately the next 15 years. The data for the housing growth, reproduced from the Vale of White Horse DC Water Cycle Study, is presented in Appendix 1.

The growth forecasts were reviewed by the EA and adjusted to align with the boundaries of TW's SWOX WRZ. The revised data are presented in Table 3 and reflect forecast growth within the whole of SWOX WRZ. These data indicate growth across the area of 137,366 new properties over the next 15 years[8].

	VoWH DC Water Cycle Study (WCS)	EA assumptions	Number of new properties forecast SWOX WRZ
Oxfordshire	100,060 by 2031	Not all Oxfordshire is in SWOX WRZ. Assumed 12% of South Oxfordshire is in Henley WRZ	98,030
Swindon	22,000 by 2026	Data extrapolated to 2031 plus developments at Moredon Bridge and Ridgeway Farm are included.	28,603
Cotswold	6,800-7,100	89% of Cotswold assumed to be in SWOX WRZ	6,141
Wiltshire		27% of East Wilts = 1,509 and 22% of North Wilts = 2,432	3,941
Berkshire		9.2%	651
Total			137,366

Table 3: EA analysis of forecast housing growth, adjusted from the Water Cycle Study, to align with SWOX WRZ boundaries.

The forecasts TW used in WRMP14 presented an increase in the number of new properties of 75,800 in SWOX WRZ between 2011 and 2029/30. This is a difference of approximately 61,500 properties between TW WRMP14 forecasts and the revised growth projections apportioned to WRZs by the EA for the area based on the Oxfordshire local authorities' housing trajectory data.

4.2 Sufficiency of water resources

Figure 4 shows the WRMP14 final ADPW supply demand balance in SWOX WRZ for the period from 2015/16 – 2024/25 which shows a decrease in the supply demand balance over the period, to a minimum of approximately 2 Ml/d in 2019/20. The supply demand position is

[8] Note these figures are approximate as there are assumptions around where the development will take place and variations in the timeframe of forecasts and therefore some data has been extrapolated.

represented as the blue line in the Figure 4. This reduction is driven mainly by reductions in available resource due to sustainability reductions and climate change forecasts.

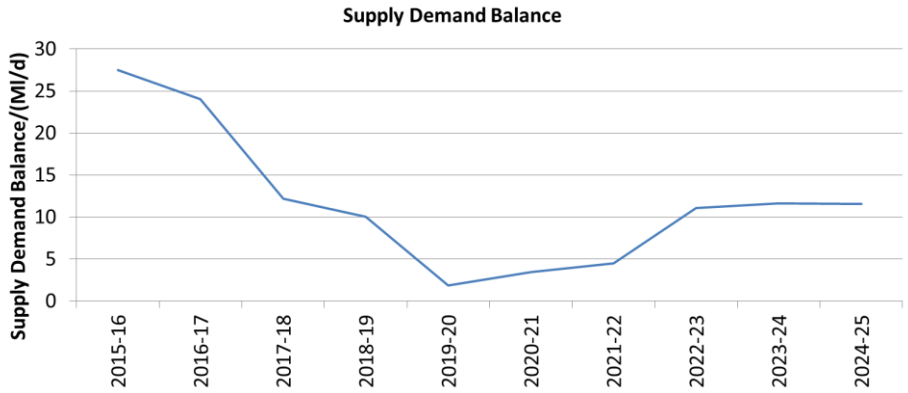


Figure 4: WRMP14 final ADPW Supply demand balance for SWOX WRZ from 2015 to 2025

Figure 5 shows the effect of climate change and sustainability reductions on the supply demand position over the 5 year period from 2015 to 2020. The blue line shows the supply demand forecast ie surplus resource and the columns show the reasons for the changes in resource between the years with climate change shown as a red box and the sustainability reductions at Childrey Warren and Axford and Ogbourne shown as purple and green boxes respectively.

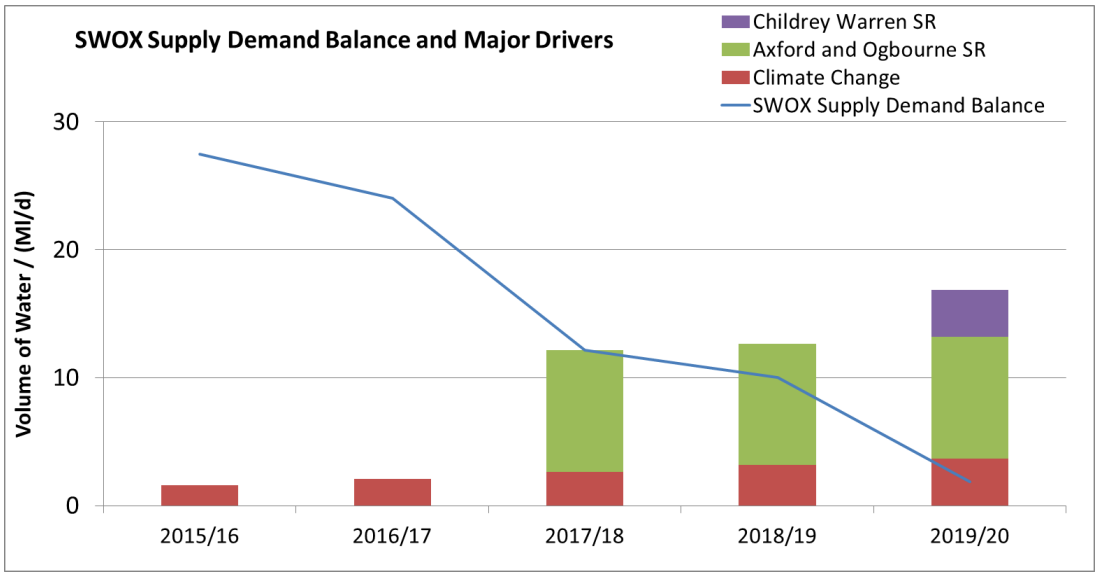


Figure 5: WRMP14 final ADPW Supply demand balance in SWOX WRZ and the major drivers.

Based on assumptions for occupancy and average per capita consumption[9], the surplus of 2 Ml/d is calculated to accommodate an additional level of growth of approximately 4,800 properties. This is explained in Appendix 2.

In addition there is an allowance in target headroom[10] for SWOX WRZ at the end of the first 5 year period to 2019/20 of approximately 6 Ml/d which would accommodate approximately an additional 14,400 properties. Therefore the combined effect of the forecast surplus plus target headroom could accommodate growth of approximately an additional 19,200

[9] Assumption for occupancy = 2.3 and per capita consumption of 180 l/h/d from Appendix A WRP Tables SWOX DYCP WRP6 and WRP 6a

[10] Target headroom: A buffer for uncertainty relating to supply and demand forecasts

properties in the next 5 years in SWOX WRZ, however, there would be a higher level of risk if other forecasts were an underestimate.

5. Annual review and mitigation plan

TW has shown that an additional 19,200 additional properties could be accommodated in the SWOX WRZ over the next 5 years taking account of the surplus resources and the headroom assessment. The SHMA housing figures establish an objectively assessed need for which local authorities must plan effectively to meet. Assuming approximately 61,500 additional properties are planned over the next 15 years, then proportioning this data in three 5 year periods it can be assumed that approximately 20,500 new properties will be built in each 5 year period. TW considers that this growth projection could be accommodated in the SWOX WRZ over the next 5 year period, as detailed in sections 5.1 and 5.2) .

It is recognised that there is a high level of uncertainty associated with growth projections, this is illustrated in Figure 6 which shows the range of uncertainty around the WRMP14 central growth projection.

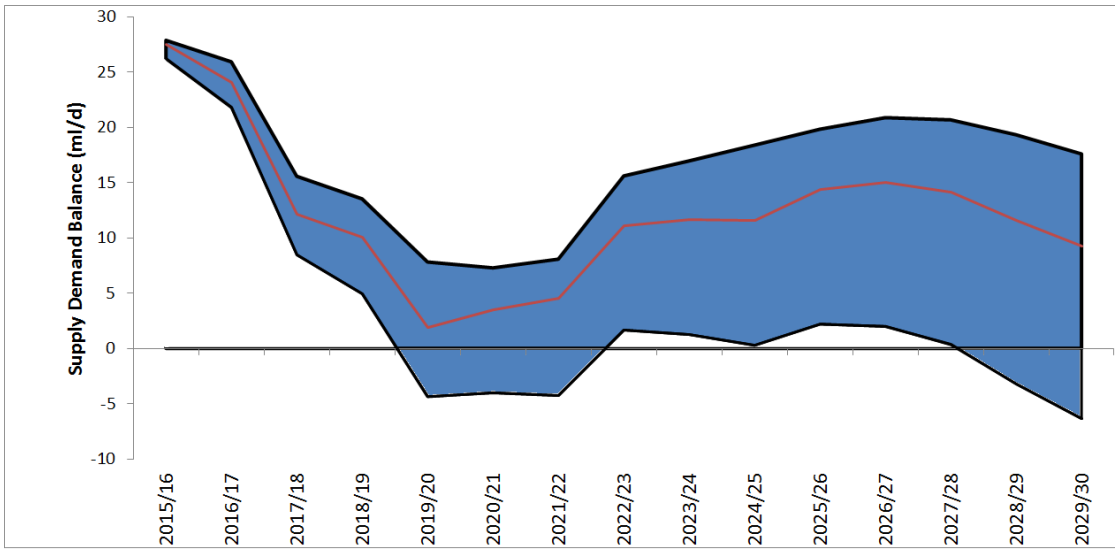


Figure 6 High and low range for SWOX WRZ supply demand balance considering headroom and revised housing projections

The blue area in Figure 6 represents the possible range of demand scenarios based on a high and low level of new households and a high and low target headroom benefit. Where the blue area extends below the '0' line on the chart this represents a risk of a supply demand deficit.

The SHMA growth projections supply-demand assessment is very high level and there are important factors to consider such as the profile of the development, the actual consumption per household, future changes to resource availability, impact of climate change etc. TW has therefore agreed with the EA to monitor and review the population and property growth data on an annual basis as part of the statutory annual review process of the WRMP and implement actions as necessary. Furthermore TW recognises there is significant pressure on water resources in this area, and the wider Thames supply area, in the future and a full and detailed review will be undertaken for WRMP19.

5.1 Annual review

TW has a statutory obligation to review performance of the measures and programme outlined in WRMP14 annually, to report this to the EA and Defra. TW also publishes the

output on the TW website. The annual review process provides an opportunity to formally review population and housing growth forecasts against actual outturn data in the context of water resources and identify and enact additional measures as needed to maintain security of water supply. This statutory process provides a clear mechanism to review the situation and enact mitigation measures if these are deemed necessary to ensure security of supply.

5.2 Short term mitigation measures

TW has identified potential supply options which could be introduced with a short lead time to provide additional supply prior to 2020 if this is required. These options are enhancements to groundwater schemes at Bibury and Ashton Keynes, implemented within existing licence conditions. These schemes are estimated to provide an additional 3.6 Ml/d and 1 Ml/d respectively, equivalent to sufficient water for a further 11k households. Further information on each of the schemes is provided below.

- Bibury: This is an existing licensed abstraction source and no changes would be required to the volume of the licence. The scheme involves lowering pumps to abstract groundwater. Test pumping is planned for December 2015, which will confirm logistical details and the resource benefit. Further work is required on the scope and programme, including a review following completion of the test pumping, but the approximate lead time for the scheme is 6 months from successful completion of test pumping.
- Ashton Keynes: This is an existing licensed abstraction source and no changes would be required to the volume of the licence. There are a number of assessments required for this scheme including water quality (turbidity), hydrogeological assessment of the boreholes and operational test pumping, these are planned to start in Autumn 2015, subject to the resolution of current operational pump performance and water quality issues. The lead time for the scheme, assuming all the tests are positive is approximately 12 months.

In addition, demand management activity, comprising progressive metering, water efficiency and leakage reduction, scheduled to be started from 2020[11] could be advanced bringing forward additional resource benefit.

5.3 Medium to longer term planning

In line with the statutory timeline TW will review and update the WRMP every 5 years. TW will publish the Water Resources Management Plan covering the 25-year period from 2020-2045 in spring 2018 for public consultation (WRMP19) and will consult stakeholders in advance of this in the development of the plan. In preparing this document TW will review population and property growth forecasts and liaise with local authorities to ensure these forecasts are as accurate and aligned as possible. This review will allow updated projections to be accommodated in forward plans.

6. Summary

TW and the EA have reviewed the growth projections in WRMP14, the revised growth projections released since WRMP14 including within the Oxfordshire SHMA, the profile of these projections, the current water resource position in SWOX WRZ and potential mitigating

[11] In the WRMP14 the demand management activity was planned to start from 2020 in SWOX WRZ as prior to this date the zone had surplus water and therefore there was no driver to deliver additional activity.

actions which could be implemented in the next 5 years. Both parties recognise that the housing growth figures presented in the SHMA represent the OAN that the Oxfordshire local authorities will need to plan to deliver through their respective Local Plans. Both parties are confident that with the annual review process and the mitigating measures that have been identified TW will be able maintain the security of supply in SWOX WRZ in the next 5 years to 2020.

Appendix 1

Projections for housing growth

The data for the housing growth reproduced from the Vale of White Horse DC Water Cycle Study is presented in Table A1.

Area	Forecast (properties)	Source
Oxfordshire	100,060 (2011-31)	2014 Strategic Market Housing Assessment (SHMA) for Oxfordshire (http://www.southoxon.gov.uk/news/2014/2014-03/countys-new-housing-market-assessment
Swindon	22,000 (2011-26)	2012 pre-submission Local Plan (http://www.swindon.gov.uk/ep/ep-planning/forwardplaning/ep-planning-localdev/Documents/Local%20Plan%20Pre-Submission%20draft.pdf)
Cotswold District	6,800 – 7,100 (2011-31)	Local Plan Consultation Paper: Preferred Development Strategy May 2013 (http://consult.cotswold.gov.uk/portal/fp/local_plan_2011-2031/development_strategy?pointId=s1365512025054#section-s1365512025054)
TOTAL	Approx 129,000	

Table A1: Summary of forecast housing growth within SWOX WRZ

Appendix 2

The calculation to estimate the number of houses that can be developed assuming a specified volume of available water resource is explained below.

Average Household Use = Forecast PCC * Average Occupancy

Available Water / Average Household Use = No of households that can be developed while mainintaing supply demand balance

Using the above equations we can calculate that each additional one megalitre of surplus can support an additional 2,415 housholds.

Average Household Use = 2.3 * 180 = 414 litres/household/day

1,000,000/414 = 2,415