

love every drop
anglianwater 

Revised Draft WRMP24
Technical Document

Water Resource Zone summaries



August 2023

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1. Introduction

1.1 About our company

Anlian Water is the largest water and wastewater company in England and Wales geographically, covering 20% of the land area. We operate in the East of England, the driest region in the UK, receiving two-thirds of the national average rainfall each year; that's approximately 600mm. Our region has over 3,300km of rivers and is home to the UK's only wetland national park, the Norfolk Broads. Between 2011 and 2021, our region experienced the highest population increase in England. Despite this, we are still putting less water into our network than we did in 1989.

1.2 Planning for the long term

Our company Purpose is ***“to bring environmental and social prosperity to the region we serve through our commitment to Love Every Drop”***.

This purpose is at the heart of our business, having been enshrined in our Articles of Association in 2019. Central to delivering this purpose is planning for the long term; one of the strategic planning frameworks we use to achieve this is the Water Resources Management Plan (WRMP), which details how we will ensure resilient water supplies to our customers over the next 25 years. A WRMP looks for low regret investments for our region, giving flexibility to adapt to future challenges and opportunities such as technological advances, climate change, demand variations, and abstraction reductions.

1.3 What is a Water Resources Management Plan

We produce a WRMP every five years. It is a statutory document that sets out how a sustainable and secure supply of clean drinking water will be maintained for our customers. Crucially it takes a long-term view over 25 years, allowing us to plan an affordable, sustainable pathway that provides benefit to our customers, society and the environment.

Our previous WRMP, WRMP19, had an ambitious twin track strategy, combining an industry leading smart meter roll out and leakage ambition with a strategic pipeline across our region, bringing water from areas of surplus to areas of deficit.

This WRMP focusses on the period 2025 to 2050, and is known as WRMP24. We have developed it by following the Water Resources Planning Guideline (WRPG), as well as other relevant guidance, in order to meet statutory requirements.

1.4 Developing our WRMP

Our WRMP24 has been progressed following processes detailed in the WRPG. We start by determining the extent of the challenges we face between 2025 and 2050.

We achieve this by developing forecasts to establish the amount of water available to use (supply forecast) and the amount of water needed (demand forecast) in our region.

When these forecasts are combined, a baseline supply-demand balance is created. This tells us whether we have a surplus of water or a deficit, establishing our water needs for the planning period. An appraisal for both demand management options and supply-side options is undertaken.

We environmentally assess both demand management and supply-side options so we can understand their potential environmental impacts and what could be put in place to mitigate them.

The next step is for the water savings associated with the chosen demand management options to be added into our baseline supply-demand balance to determine if our region's water needs are met. If the demand management options savings do not solve the need, supply-side options are added into the modelling process and solution development.

1.5 Best value plan

To ensure we developed the right solution for our region's water needs, we have focussed on 'best value'. To us, best value is looking beyond cost and seeking to deliver a benefit to customers and society, as well as the environment, whilst listening and acting on the views of our customers and stakeholders.

1.6 Our revised draft WRMP24

Our best value plan, the revised draft WRMP24, has been produced following a public consultation on our draft WRMP24. This consultation ran from December 2022 to March 2023.

1.7 Strategic context of the revised draft WRMP24

Our revised draft WRMP24 aligns with our Purpose, as well as internal and external strategic plans and initiatives. We have worked collaboratively with internal and external stakeholders, regulators and other water abstractors to achieve this.

1.8 Guide to our draft WRMP24 submission

Our final submission comprises a non-technical customer and stakeholder summary, our main report and nine technical supporting documents and non-technical supporting documents.

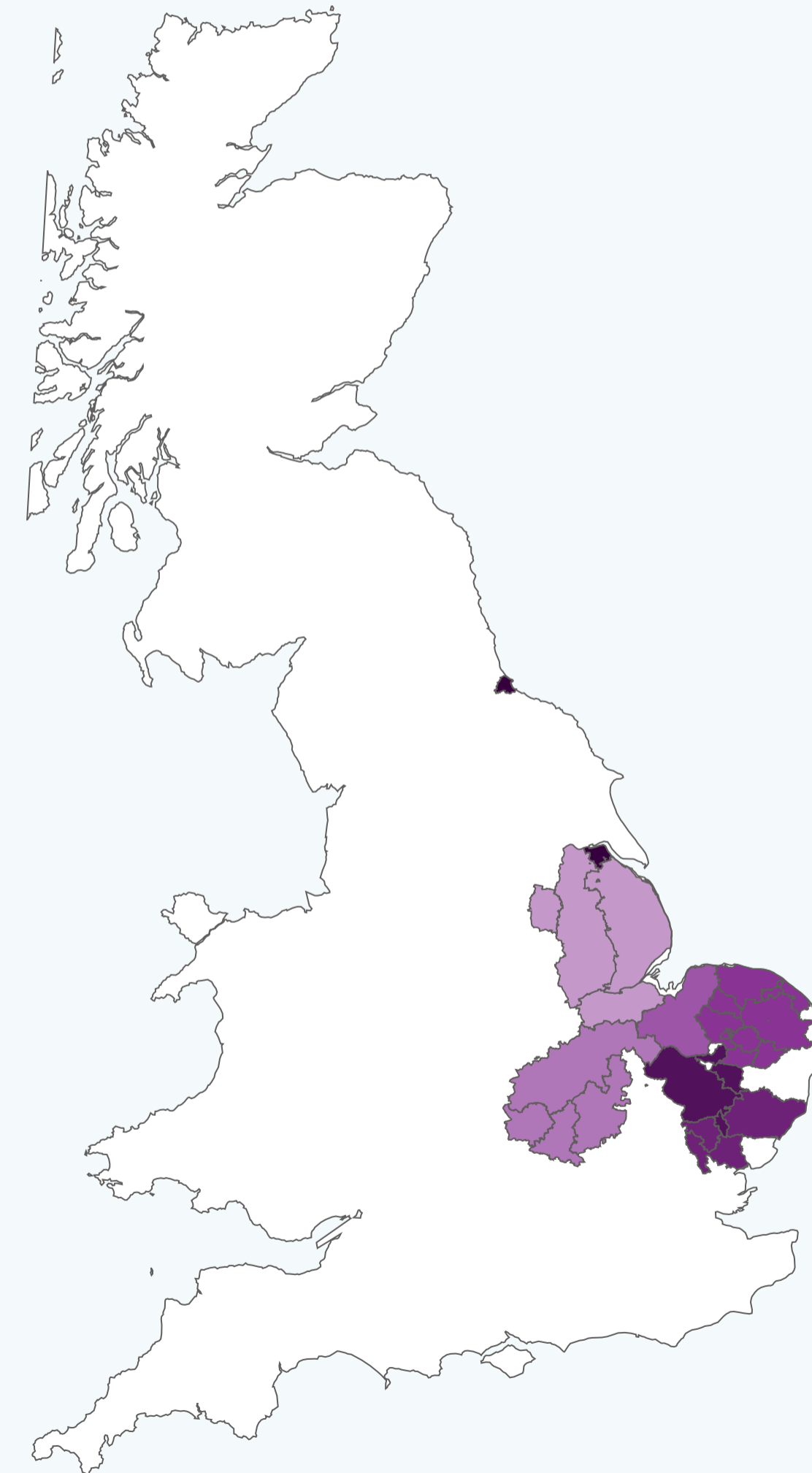
Introduction

1.9 This report is concerned with the WRMP24 water resource zone summaries non-technical supporting document. The report summarises key supply and demand data for the 27 Water Resource Zones (WRZs) characterised in the WRMP24.

These WRZs have been grouped by region according to our problem characterisation analysis.

Resource Zone	Area
Suffolk Ixworth	Cambridgshire & West Suffolk
Suffolk Sudbury	Cambridgshire & West Suffolk
Suffolk Thetford	Cambridgshire & West Suffolk
Suffolk West & Cambs	Cambridgshire & West Suffolk
Essex Central	East Suffolk & Essex
Essex South	East Suffolk & Essex
Suffolk East	East Suffolk & Essex
Fenland	Fenland
Hartlepool	Hartlepool
Lincolnshire Bourne	Lincolnshire & Nottinghamshire
Lincolnshire Central	Lincolnshire & Nottinghamshire
Lincolnshire East	Lincolnshire & Nottinghamshire
Lincolnshire Retford and Gainsborough	Lincolnshire & Nottinghamshire
Norfolk Aylsham	Norfolk
Norfolk Bradenham	Norfolk
Norfolk East Dereham	Norfolk
Norfolk East Harling	Norfolk
Norfolk Happisburgh	Norfolk
Norfolk Harleston	Norfolk
Norfolk North Coast	Norfolk
Norfolk Norwich & the Broads	Norfolk
Norfolk Wymondham	Norfolk
Ruthamford Central	Ruthamford
Ruthamford North	Ruthamford
Ruthamford South	Ruthamford
Ruthamford West	Ruthamford

Anglian Water WRMP24 water resource zones



2. Strategic Overview

Norfolk

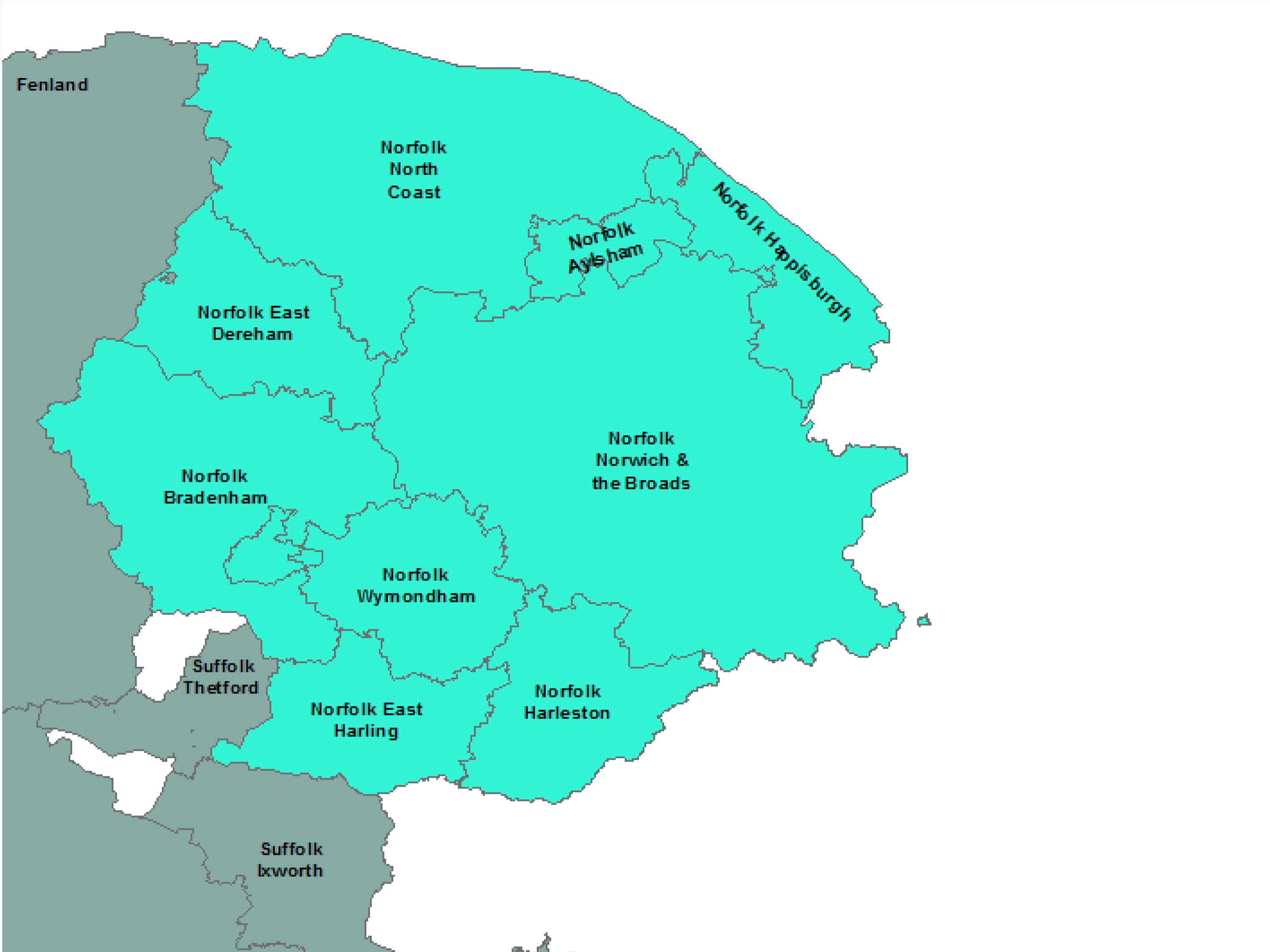
2.1 Strategic risk and issues

Norfolk experiences deficits in the baseline scenario because of growth. The area is vulnerable to extreme drought (particularly in Norwich and the Broads WRZ, because of Heigham surface water abstraction on the River Wensum). There is potential for sustainability reductions to increase baseline scenario deficits in Environmental Destination scenarios. Vulnerable catchments include:

- Broadland Rivers
- Can and Ely Ouse

Options in this area include connecting to the strategic grid, water reuse and desalination.

Figure 1 Problem Characterisation Area



Choose area

Cambridgeshire & West Suffolk	Fenland	Lincolnshire & Nottinghamshire	Ruthamford
East Suffolk & Essex	Hartlepool	Norfolk	



3. Deployable Output summary DYAA

Norfolk Aylsham

3.1 Resource Zone geography: Norfolk Aylsham:

The Norfolk Aylsham WRZ covers an area of 77 sq. km and lies along the North Norfolk coastline. It is supplied from groundwater abstractions in the Norfolk Chalk aquifer.

3.2

Baseline deployable output (including 1:500 drought): 5.1 MI/d

Deployable output reductions

Restoring sustainable abstraction (recent actual average): -0.1 MI/d

Reductions to achieve environmental destination (BAU+): 0.0 MI/d by 2030.

Climate change: 0.0 MI/d by 2050.

Baseline deployable output reduces by a total of -0.1 MI/d by 2050 a reduction of 2.4%.

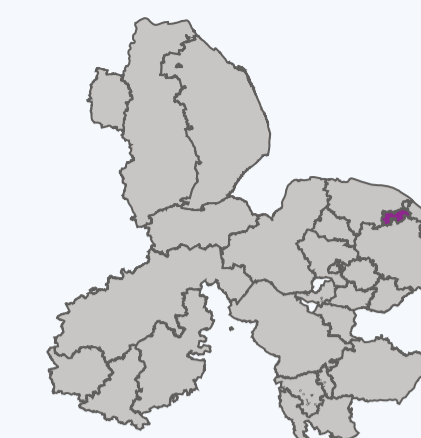
Table 3: supply characteristics (all values are MI/d)

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
DO pre forecast changes	5.1	5.1	5.1	5.1	5.1
Change in DO due to climate change	0.0	0.0	0.0	0.0	0.0
DO reductions to restore sustainable abstraction	0.0	-0.1	-0.1	-0.1	-0.1
DO reductions for Environmental Destination	0.0	0.0	0.0	0.0	0.0
Change in DO from drought measures	0.0	0.0	0.0	0.0	0.0
Final DO	5.1	5.0	5.0	5.0	5.0
Raw water losses (-ve)	-0.2	-0.2	-0.2	-0.2	-0.2
Outage Allowance (-ve)	0.0	0.0	0.0	0.0	0.0
WAFU (own sources)	4.8	4.7	4.7	4.7	4.7
Net Transfers	0.0	0.3	0.3	0.3	0.3
Other benefits	0.00	0.85	0.85	0.85	0.85
Total Water Available for Use	4.8	5.8	5.8	5.8	5.8

3.3 The baseline Deployable Output data presented in this section represents the Environment Agency’s preferred sustainability reduction licence cap scenario. This includes recent actual average caps to time limited licences in 2022-24 and caps to all other permanent licences by 2030. The impact of 1:500 drought resilience has also been applied from 2025 rather than the preferred scenario of 2039/2040. These factors apply to the baseline forecast only. For the final plan forecast we have applied our best value scenario for licence caps, which was developed following an iterative process to deliver licence caps as early as possible. The transition to 1:500 drought resilience occurs in 2039/40 in the final plan forecast. Further information is available in the WRMP24 Decision Making technical supporting document, section 6.



4. Population & Housing



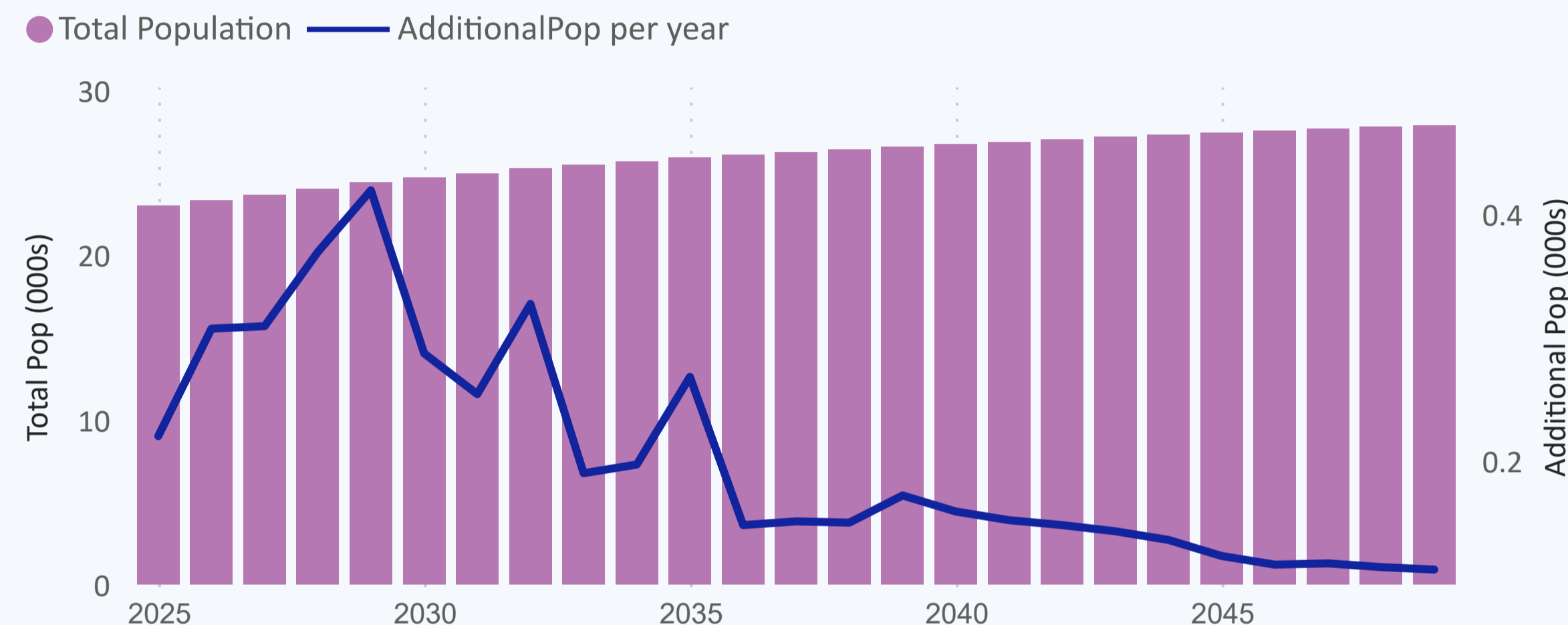
Norfolk Aylsham

4.1 Over the WRMP period, population in **Norfolk Aylsham** is set to increase from **23013** in 2025 to **27881** in 2049-50 - this is an increase of **21.2 %** over the 25 years.

Table 4a: Population totals (cumulative) by AMP

Year	Total Population (000s)
2029-30 (end of AMP8)	24.417
2034-35 (end of AMP9)	25.672
2039-40 (end of AMP10)	26.561
2044-45 (end of AMP11)	27.299
2049-50 (end of AMP12)	27.881

Figure 2: Total Resource Zone Population

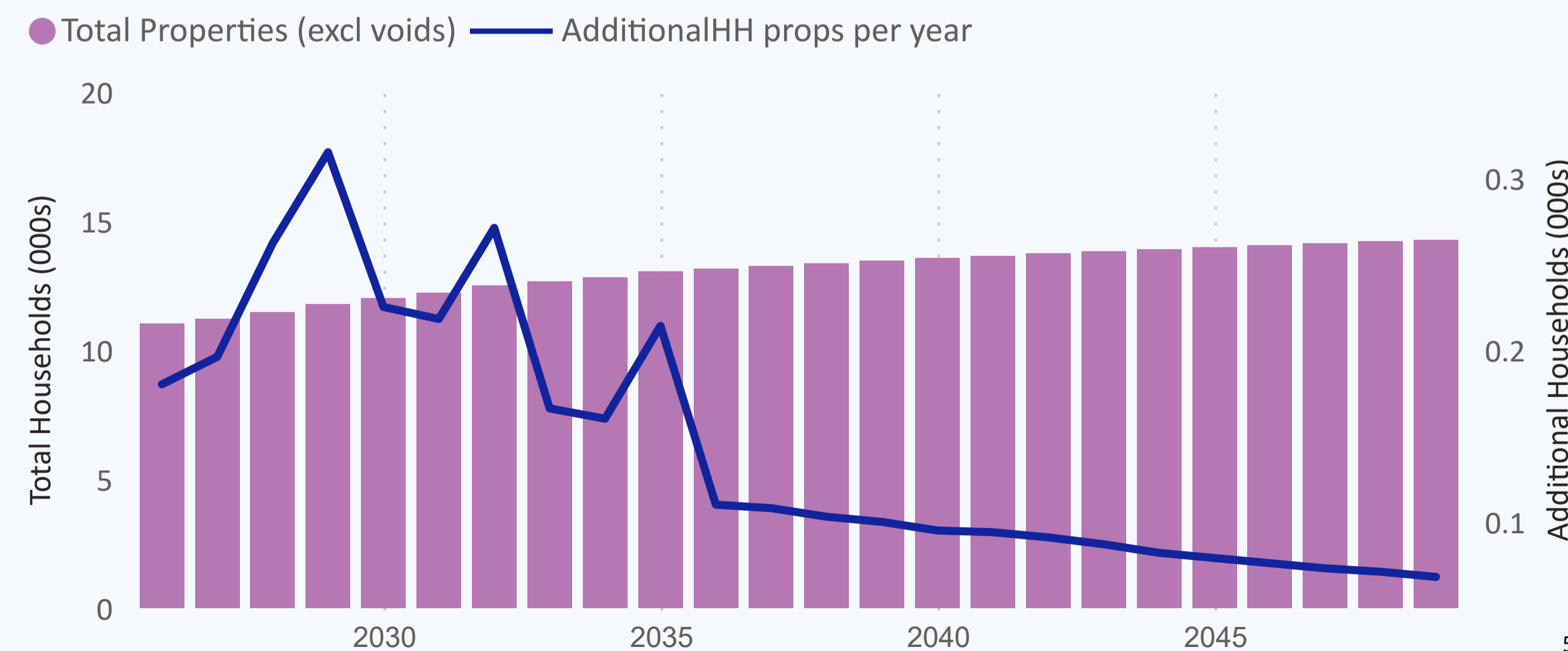


4.2 Over the WRMP period, property numbers in **Norfolk Aylsham** are set to increase from **10837** in 2025 to **14281** in 2049-50 - this is an increase of **31.8 %** over the 25 years.

Table 4b: Property totals (cumulative) by AMP

Year	Total Properties-excl voids (000s)
2029-30 (end of AMP8)	11.790
2034-35 (end of AMP9)	12.830
2039-40 (end of AMP10)	13.465
2044-45 (end of AMP11)	13.914
2049-50 (end of AMP12)	14.281

Figure 3: Total Resource Zone Properties (excl. voids)





5. Baseline Supply Demand Balance DYAA

Norfolk Aylsham

Norfolk Aylsham



Figure 4: Norfolk Aylsham baseline supply demand balance to 2050 for Dry Year Annual Average conditions

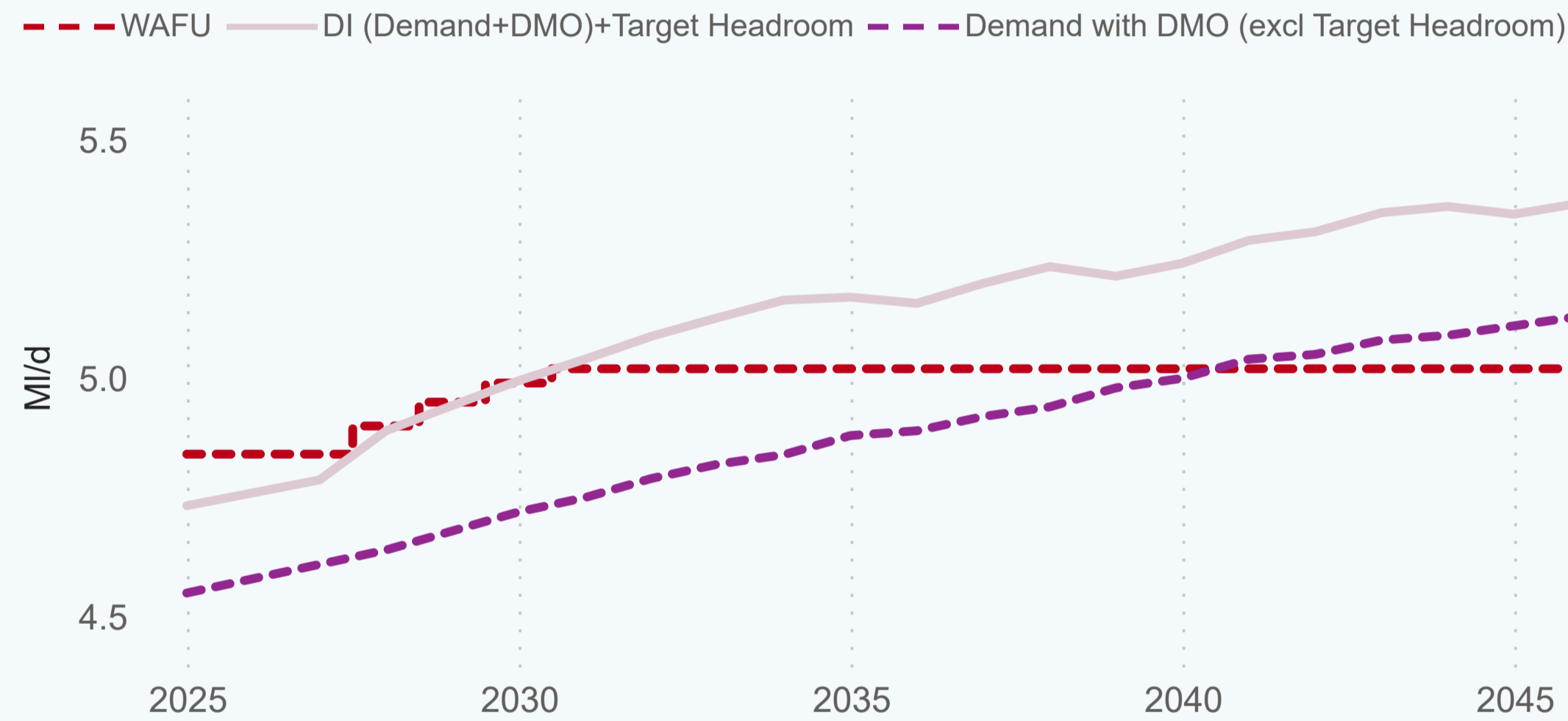


Table 5a: Baseline supply demand balance 2025 - 2050 for DYAA conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	4.8	4.8	4.7	4.7	4.7	4.7
Net Transfers	0.0	0.1	0.3	0.3	0.3	0.3
Total Water Available For Use	4.8	5.0	5.0	5.0	5.0	5.0
Distribution Input	4.6	4.7	4.8	5.0	5.1	5.2
Target Headroom	0.2	0.3	0.3	0.2	0.3	0.2
Supply Demand Balance	0.1	0.0	-0.1	-0.2	-0.3	-0.4

Table 5b: Baseline demand forecast (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.8	3.0	3.3	3.5	3.6	3.7
Water delivered unmeasured household	0.4	0.2	0.1	0.0	0.0	0.0
Total Leakage	0.6	0.6	0.6	0.6	0.6	0.6
Water delivered measured non-household	0.8	0.8	0.8	0.8	0.8	0.8
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	4.6	4.7	4.8	5.0	5.1	5.2

5.1 DYAA BL supply demand summary: Norfolk Aylsham

Baseline Supply Demand Balance: This zone is expected to go into deficit by 2030 (under the preferred baseline scenario - as described in section 3.3).

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 3.1 MI/d in 2025 to 3.7 MI/d in 2050, a percentage change of 18.8 %.
- Baseline Leakage: is forecast to change from 0.6 MI/d in 2025 to 0.6 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 0.8 MI/d to 0.8 MI/d.
- Baseline Distribution Input: is expected to change from 4.6 MI/d to 5.2 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).

6. Baseline Supply Demand Balance DYCP

Norfolk Aylsham

Norfolk Aylsham

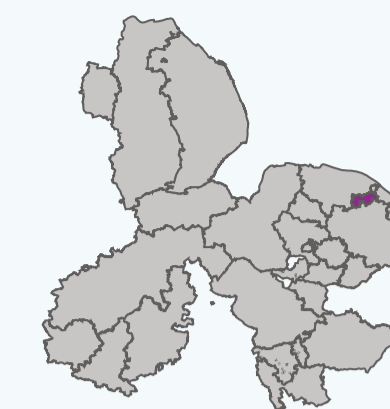


Figure 5: Norfolk Aylsham baseline supply demand balance to 2050 for Dry Year Critical Period conditions

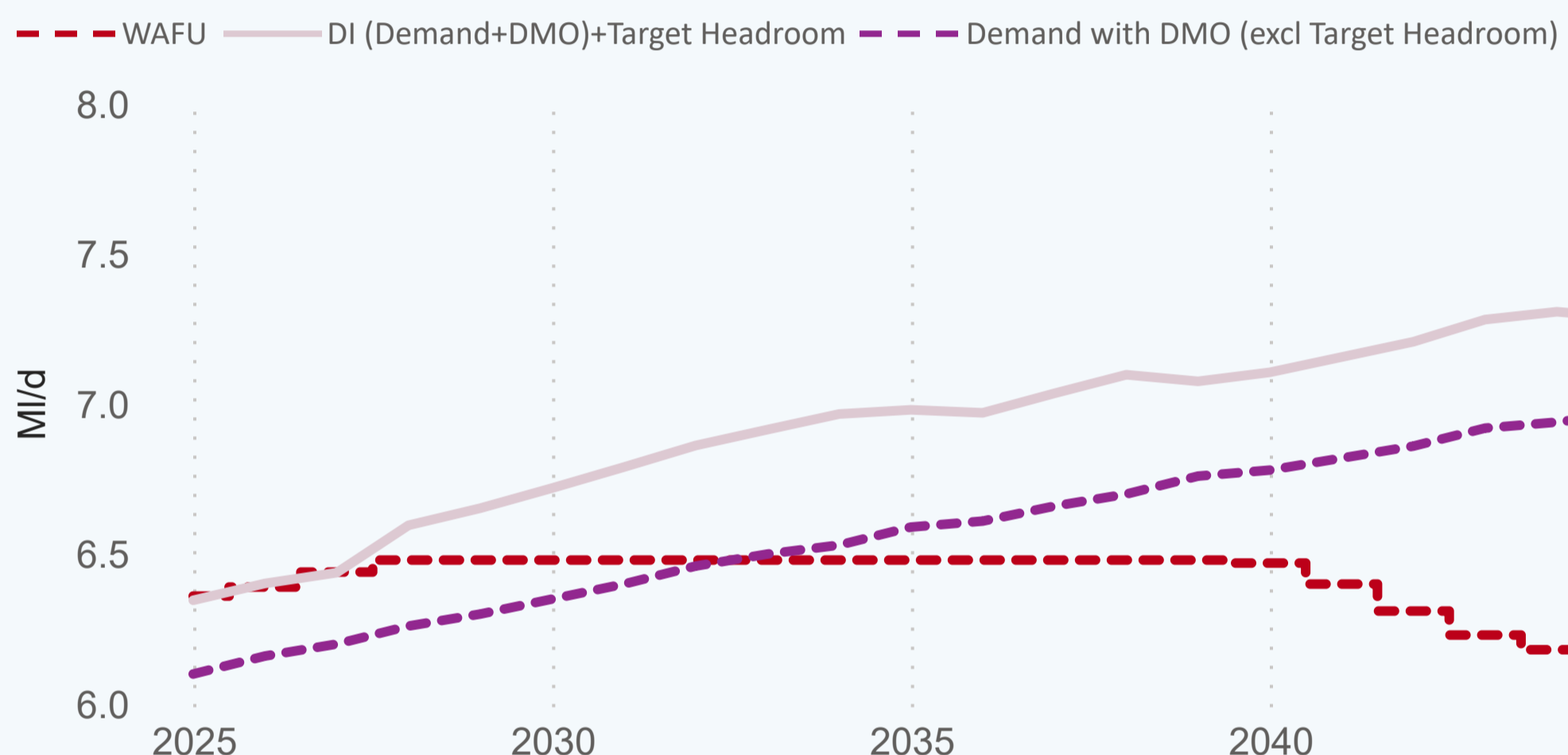


Table 6b: Baseline demand forecast with DYCP conditions (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	4.0	4.3	4.7	5.1	5.3	5.4
Water delivered unmeasured household	0.5	0.4	0.2	0.1	0.0	0.0
Total Leakage	0.6	0.6	0.6	0.6	0.6	0.6
Water delivered measured non-household	1.0	1.0	1.0	1.0	1.0	1.0
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	6.1	6.3	6.5	6.8	6.9	7.1

Table 6a: Baseline supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	6.2	6.2	6.2	6.2	6.2	6.2
Net Transfers	0.2	0.3	0.3	0.3	0.0	0.0
Total Water Available For Use	6.4	6.5	6.5	6.5	6.2	6.2
Distribution Input	6.1	6.3	6.5	6.8	6.9	7.1
Target Headroom	0.2	0.4	0.4	0.3	0.4	0.3
Supply Demand Balance	0.0	-0.2	-0.5	-0.6	-1.1	-1.2

6.1 DYCP BL supply demand summary: Norfolk Aylsham

Baseline Supply Demand balance: This zone will go into deficit immediately

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 4.5 MI/d in 2025 to 5.4 MI/d in 2050, a percentage change of 20.9 %.
- Baseline Leakage: is forecast to change from 0.6 MI/d in 2025 to 0.6 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 1.0 MI/d to 1.0 MI/d.
- Baseline Distribution Input: is expected to change from 6.1 MI/d to 7.1 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).



7. Demand forecast and PCC



Norfolk Aylsham

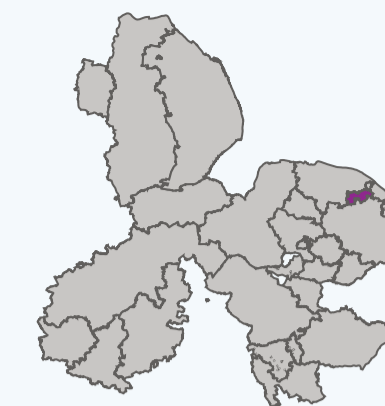


Figure 6: Norfolk Aylsham DYAA DI with and without demand management strategy

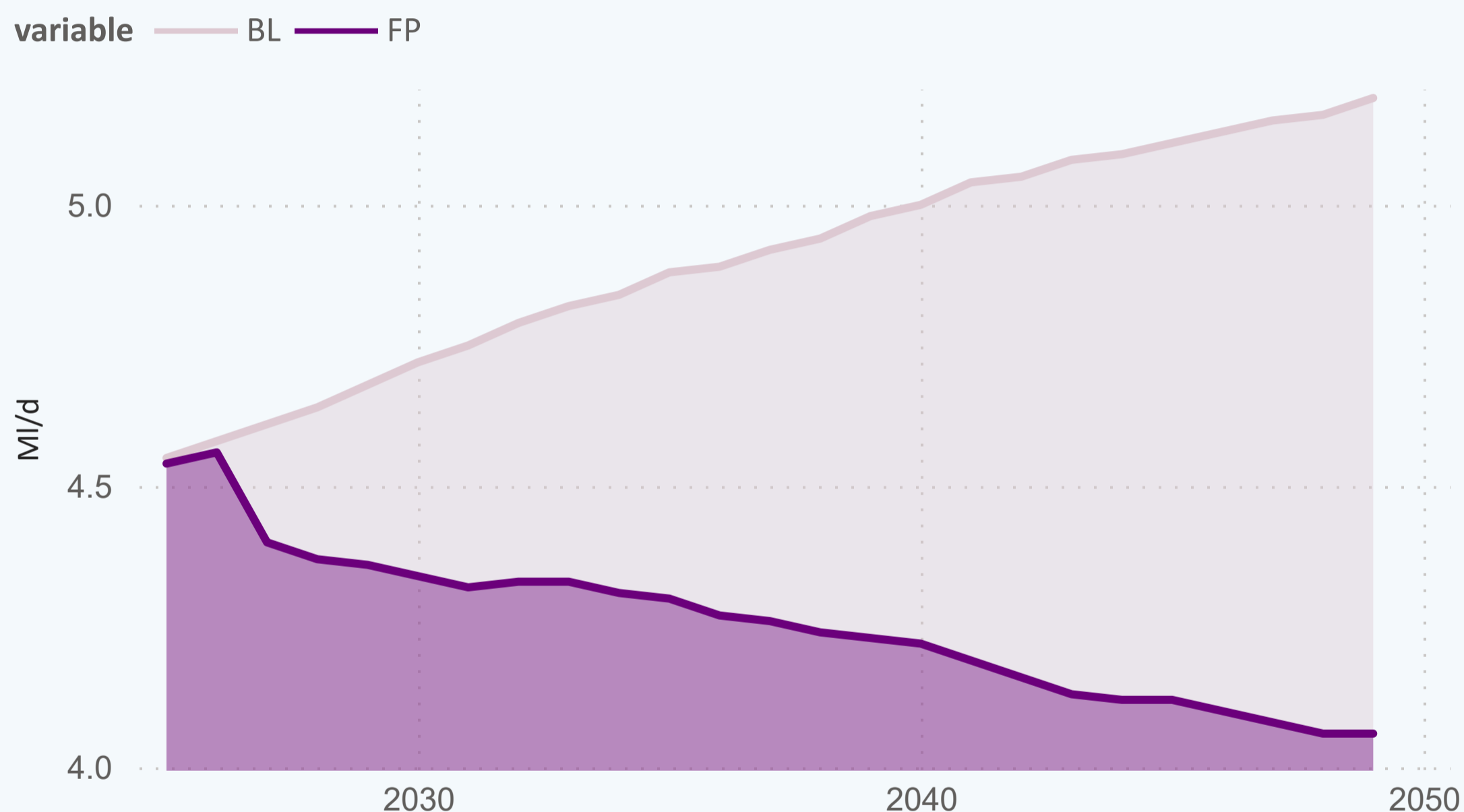


Table 7a: Demand - baseline and final plan

variable	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL	4.7	4.8	5.0	5.1	5.2
FP	4.4	4.3	4.2	4.1	4.1

7.2 Demand Norfolk Aylsham (see Table 7a)

Baseline demand is expected to increase from 4.6 (MI/d) in 2025 to 5.2 (MI/d) in 2050. With demand management options in place, demand is expected to be 4.1 (MI/d).

7.1 PCC Norfolk Aylsham (see Table 7b)

Per Capita Consumption (PCC) in the base year 2025/26 is 122.6 (l/h/d) measured and 215.3 (l/h/d) unmeasured.

The weighted average PCC (l/h/d) comes in at 128.6 (l/h/d) in 2025/26. This is forecast to fall to 100.4 (l/h/d) in the Final Plan forecast as demand management option savings are realised and customers switch from unmeasured to measured status

Table 7b: DMO strategy Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL demand forecast(DYAA)	126.1	125.4	126.1	126.0	126.3
FP demand forecast(DYAA)	116.7	111.4	106.5	102.2	100.4
% change BL to FP	-7.5%	-11.2%	-15.5%	-18.9%	-20.5%

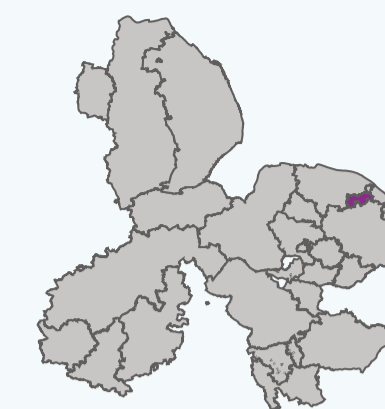




8. Demand management options



Norfolk Aylsham



8.1 Regional overview:

Across the entirety of the Anglian Water region our demand management strategy will comprise three strongly interlinked programs:

Water metering program:

- We intend to complete our current smart meter rollout which will replace our entire meter stock over 10 years (2 AMPs), noting that 1.1M smart meters will be installed across Anglian Water by 2025. The information resulting from 'smart metering' will help inform our customers regarding their water usage and will assist in our ability to influence this behaviour. It will also help with our ability to detect leakage, significantly reducing plumbing losses and customer supply pipe leaks.

Leakage reduction

- Our aim is to reduce leakage by more than 45MI/d from 2025 to 2050 across the whole Anglian Water area, building upon our ambitious program of leakage reduction in AMP7 (14% reduction of more than 27MI/d across the region by 2025).

Water efficiency measures

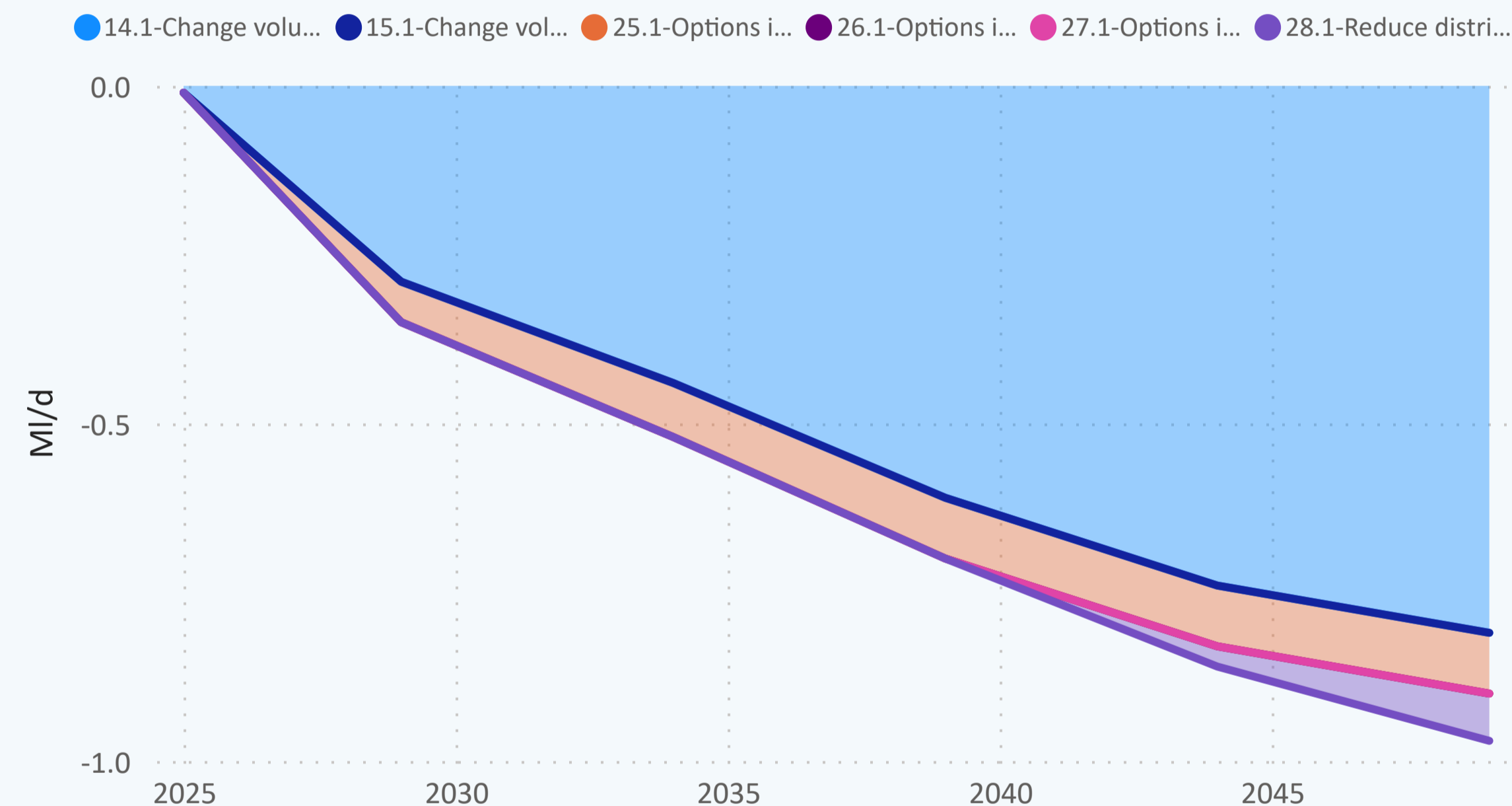
- New technologies and interventions will help promote the careful use of water. Additional water efficiency programs will include: the promotion of 'Smart' devices; further development of our Multi-utility web-portal; garden advice; support for vulnerable customers with plumbing loss and cspl; Community reward schemes. As part of our revised draft WRMP24 we have developed and included 'water efficiency visits' and leakage reduction measures for our Non-Household customers.

Table 8: DMO strategy Final Plan for Norfolk Aylsham

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
14.1-Change volume delivered to measured households(-ve)	-0.3	-0.4	-0.6	-0.7	-0.8
15.1-Change volume delivered to unmeasured households(-ve)	0.0	0.0	0.0	0.0	0.0
25.1-Options impacting on measured Household - USPL (-ve)	-0.1	-0.1	-0.1	-0.1	-0.1
26.1-Options impacting on unmeasured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
27.1-Options impacting on Void properties - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
28.1-Reduce distribution losses (-ve)	0.0	0.0	0.0	0.0	-0.1

Figure 7: DMO strategy Final Plan for Norfolk Aylsham

For full chart key see table below





9. Final Plan Supply Demand Balance DYAA

Norfolk Aylsham

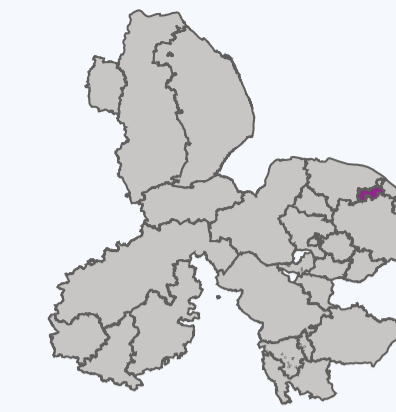


Figure 8: Norfolk Aylsham final plan SDB to 2050 for Dry Year Annual Average conditions

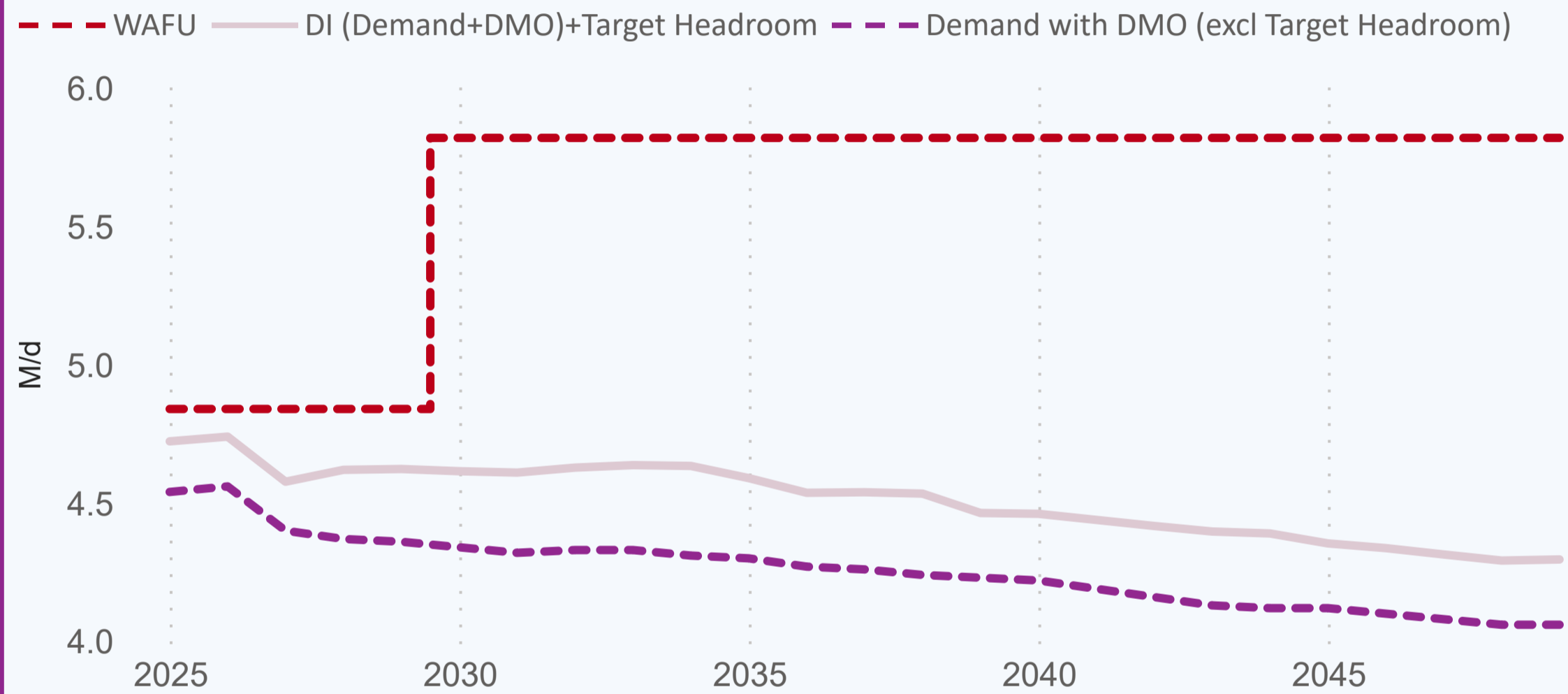


Table 9a: final plan SDB to 2050 for Dry Year conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	4.8	4.8	5.6	5.6	5.6	5.6
Net Transfers	0.0	0.0	0.3	0.3	0.3	0.3
Total Water Available For Use	4.8	4.8	5.8	5.8	5.8	5.8
Distribution Input	4.5	4.4	4.3	4.2	4.1	4.1
Target Headroom	0.2	0.3	0.3	0.2	0.3	0.2
Supply Demand Balance	0.1	0.2	1.2	1.4	1.4	1.5

Table 9b: Final Plan demand forecast for DYAA conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.8	2.7	2.8	2.9	2.9	2.9
Water delivered unmeasured household	0.4	0.2	0.1	0.0	0.0	0.0
Total Leakage	0.6	0.5	0.5	0.5	0.5	0.5
Water delivered measured non-household	0.8	0.8	0.7	0.7	0.6	0.6
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	4.5	4.4	4.3	4.2	4.1	4.1

9.1 DYAA FP supply demand summary: Norfolk Aylsham

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 3.1 MI/d in 2025 to 2.9 MI/d in 2050, a percentage change of -6.7 %.
- Final Plan Leakage is forecast to change from 0.6 MI/d in 2025 to 0.5 MI/d by 2050.
- Final Plan Non-Household demand is expected to change from 0.8 MI/d to 0.6 MI/d.
- Final Plan Distribution Input is expected to change from 4.5 MI/d to 4.1 MI/d by 2050.



10. Final Plan Supply Demand Balance DYCP

Norfolk Aylsham

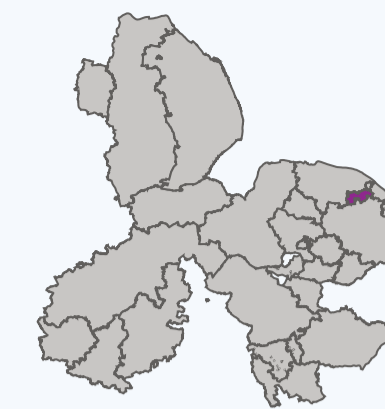


Figure 9: Norfolk Aylsham baseline supply demand balance to 2050 for Dry Year Critical Period conditions

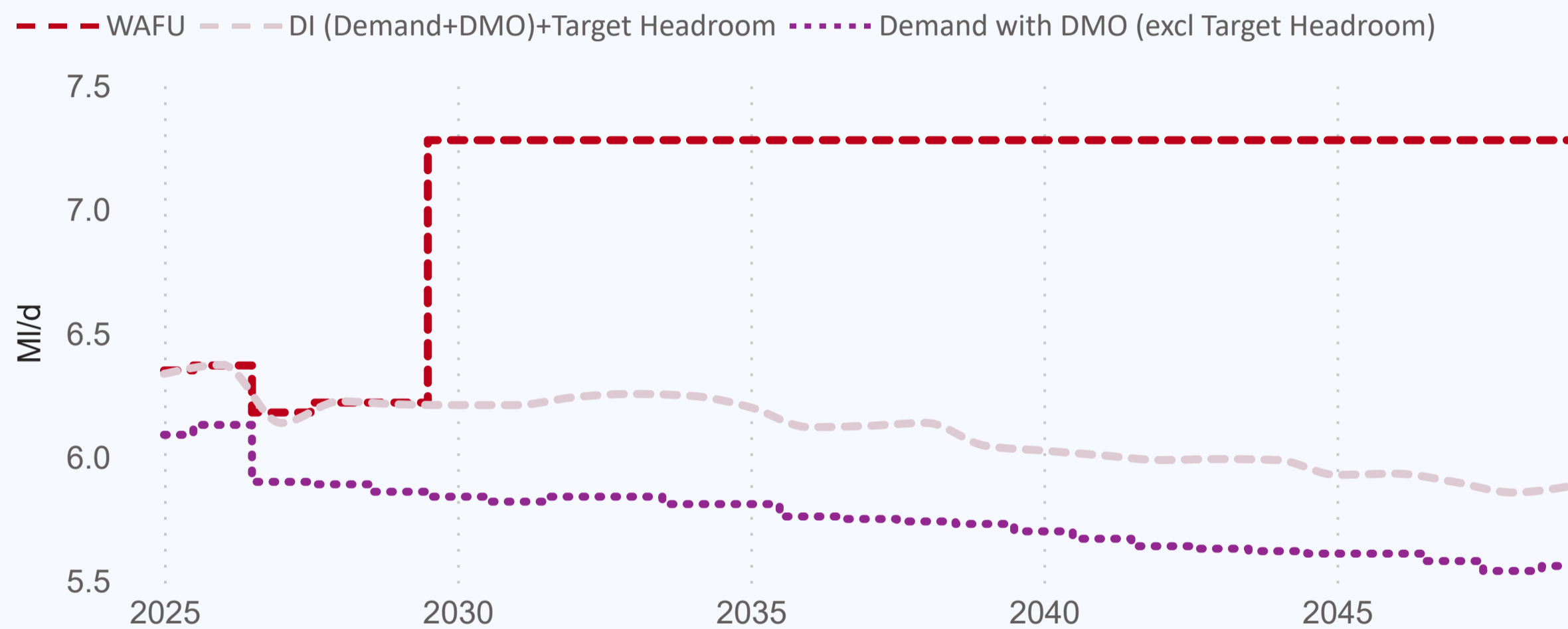


Table 10b: Final Plan demand forecast for DYCP conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	4.0	3.9	4.1	4.2	4.2	4.3
Water delivered unmeasured household	0.5	0.4	0.2	0.1	0.0	0.0
Total Leakage	0.6	0.5	0.5	0.5	0.5	0.5
Water delivered measured non-household	1.0	1.0	0.9	0.8	0.8	0.7
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	6.1	5.9	5.8	5.7	5.6	5.6

Table 10a: Final Plan supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	6.2	6.2	7.0	7.0	7.0	7.0
Net Transfers	0.2	0.0	0.3	0.3	0.3	0.3
Total Water Available For Use	6.4	6.2	7.3	7.3	7.3	7.3
Distribution Input	6.1	5.9	5.8	5.7	5.6	5.6
Target Headroom	0.2	0.4	0.4	0.3	0.4	0.3
Supply Demand Balance	0.0	0.0	1.0	1.2	1.3	1.4

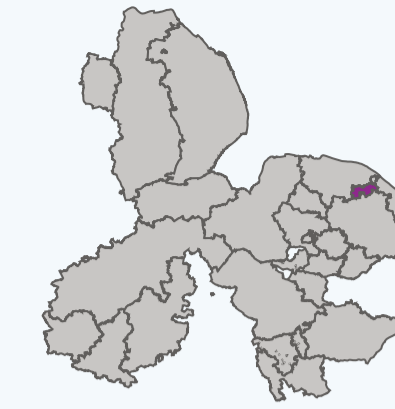
10.1 DYCP BL supply demand summary: Norfolk Aylsham

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 4.5 MI/d in 2025 to 4.3 MI/d in 2050, a percentage change of -4.5 %.
- Final Plan Leakage: is forecast to change from 0.6 MI/d in 2025 to 0.5 MI/d by 2050
- Final Plan Non-Household demand: is expected to change from 1.0 MI/d to 0.7 MI/d.
- Final Plan Distribution Input: is expected to change from 6.1 MI/d to 5.6 MI/d by 2050.



11. Supply Side Strategy



Norfolk Aylsham

Table 11a: Total Water Available for use Baseline and Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
WAFU - BL	5.0	5.0	5.0	5.0	5.0
WAFU - FP	4.8	5.8	5.8	5.8	5.8

11.1 Supply side strategy options.

For details on the feasible options list for Norfolk Aylsham WRZ please refer to the Supply-Side Option Development technical supporting document.

Figure 10 Water Available for Use (WAFU) - baseline (BL) and final plan (FP)

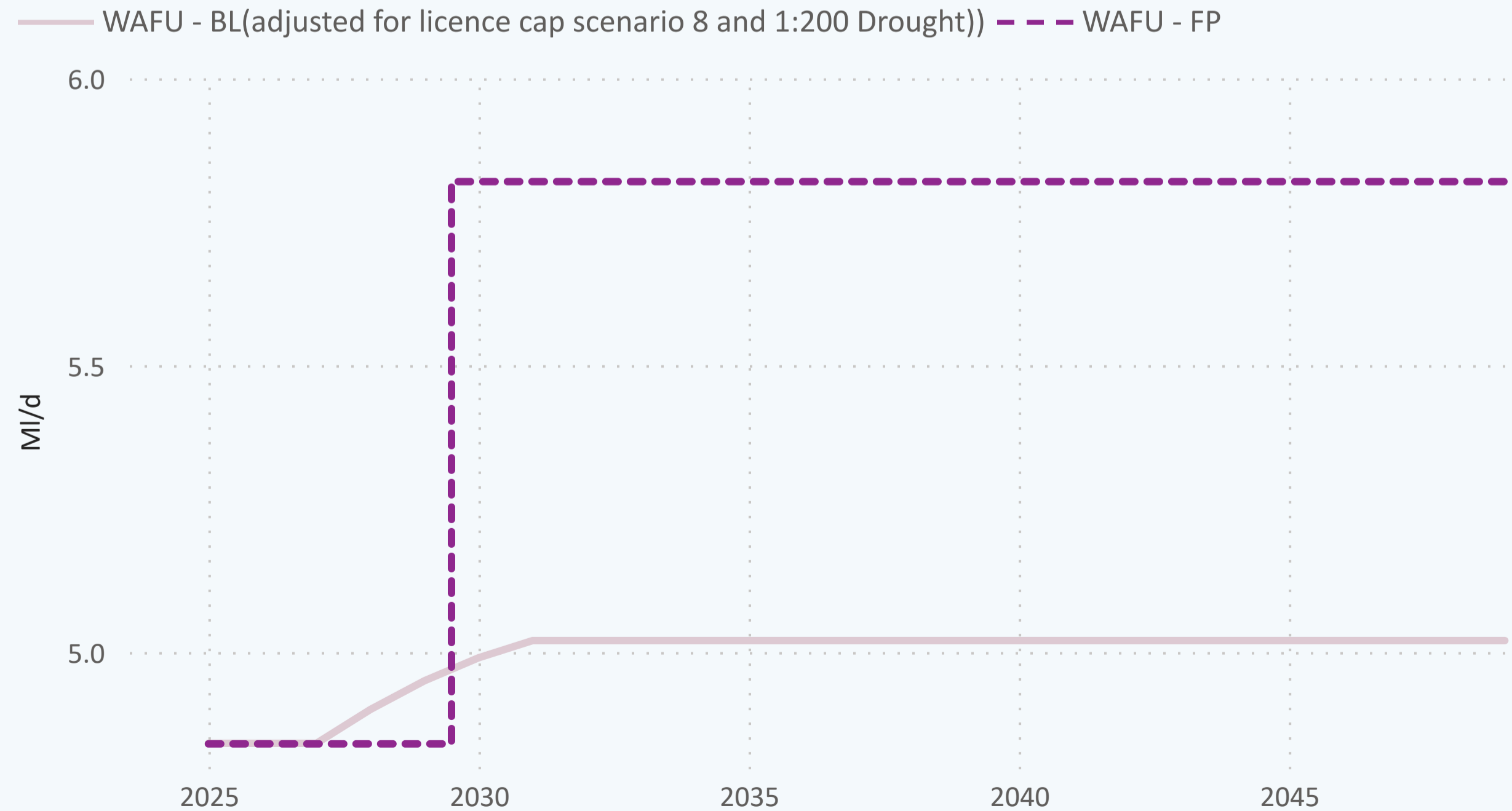


Table 11b: Preferred supply side options

Option ID	First Option Name
EI07	Adjustment to existing potable water import
NAY1	Norwich and the Broads to Aylsham potable transfer (3 MI/d)
NAY4	Norfolk Aylsham WTW backwash water recovery
NAY5	Norfolk Aylsham WTW backwash water recovery



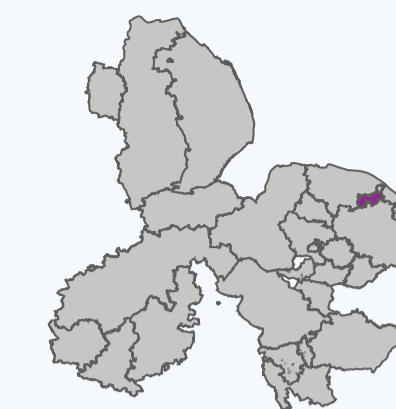


12. Non-Household consumption

Norfolk Aylsham



Norfolk Aylsham

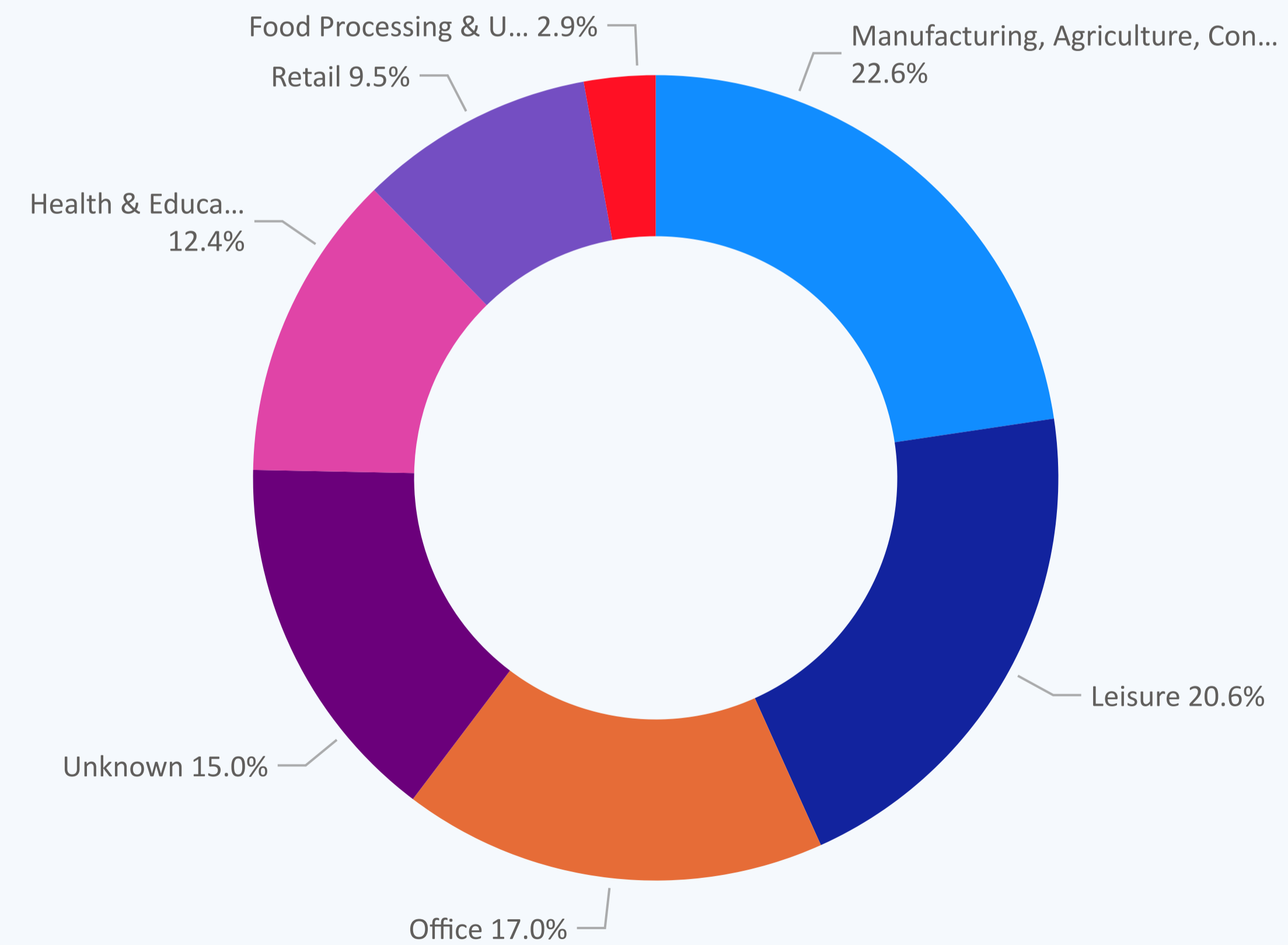
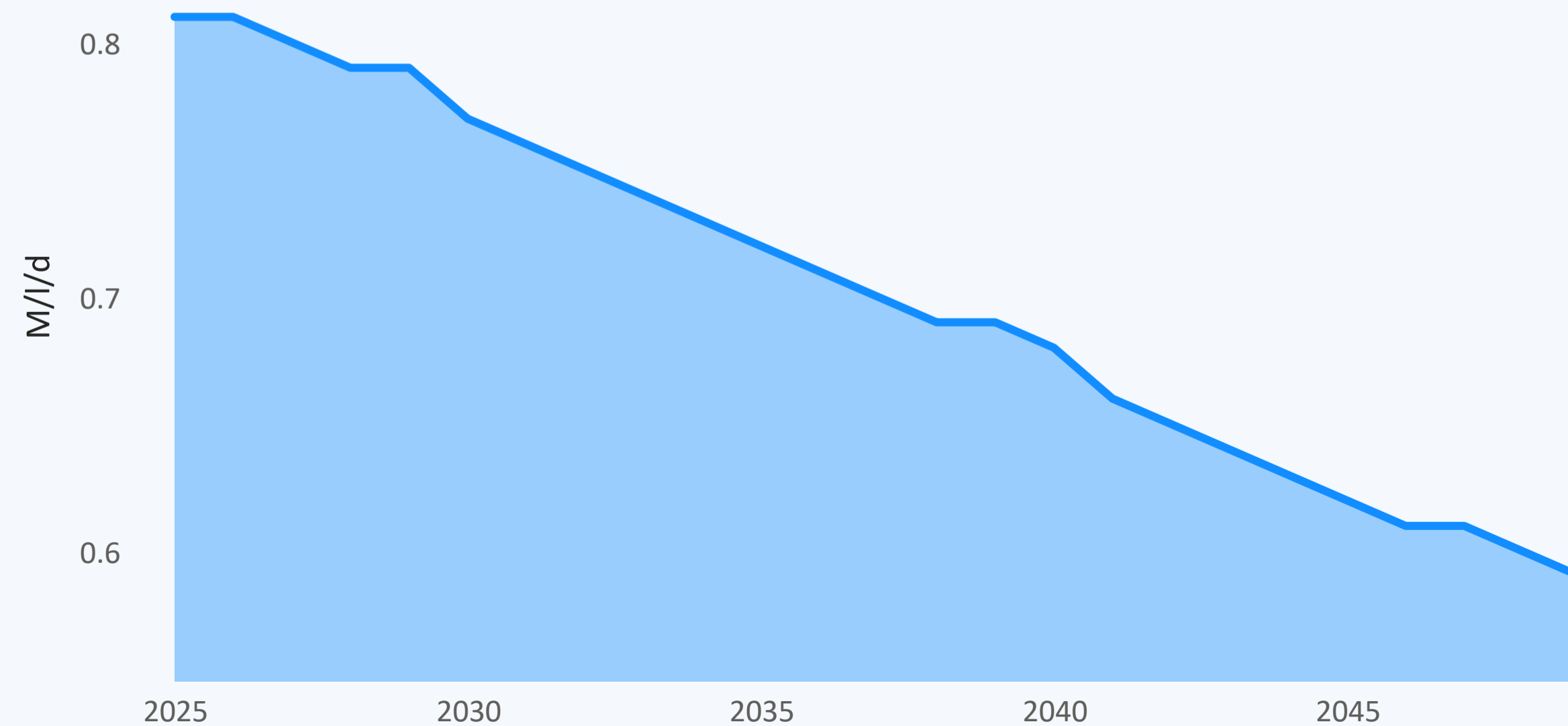


12.1 Non-Household demand Norfolk Aylsham

In 2025, 0.8 MI/d of Non-Household demand (measured and unmeasured) is expected. In 2049 it is expected to be 0.6 MI/d, which is a -27.16% change between the years.

Figure 12: % Non-Household modelled sectors within resource zone

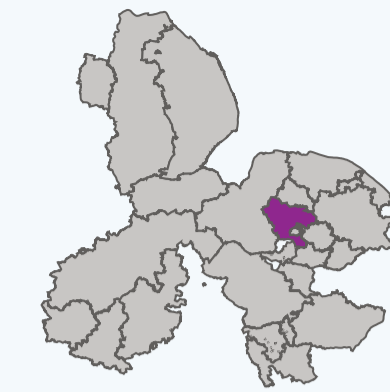
Figure 11: Non-Household demand forecast 2025-2050



3. Deployable Output summary

DYAA

Norfolk Bradenham



3.1 Resource Zone geography: Norfolk Bradenham:

The Norfolk Bradenham WRZ covers an area of 480 sq. km and it sits in the centre of East Anglia. Water is supplied from groundwater abstractions from the Norfolk Chalk aquifer.

3.2

Baseline deployable output (including 1:500 drought): *9.5 MI/d*

Deployable output reductions

Restoring sustainable abstraction (recent actual average): *-1.3 MI/d*

Reductions to achieve environmental destination (BAU+): *-3.8 MI/d* by 2036.

Climate change: *0.0 MI/d* by 2050.

Baseline deployable output reduces by a total of *-5.1 MI/d* by 2050 a reduction of 53.9%.

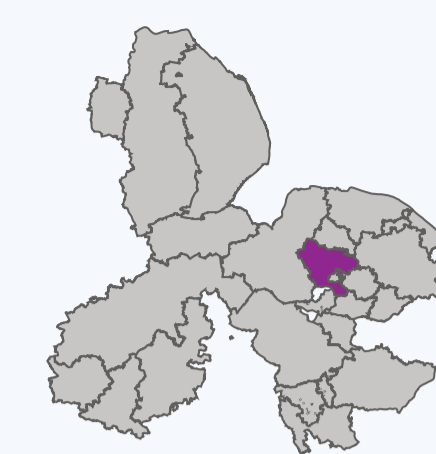
Table 3: supply characteristics (all values are MI/d)

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
DO pre forecast changes	9.5	9.5	9.5	9.5	9.5
Change in DO due to climate change	0.0	0.0	0.0	0.0	0.0
DO reductions to restore sustainable abstraction	-1.3	-1.3	-1.3	-1.3	-1.3
DO reductions for Environmental Destination	0.0	0.0	-3.8	-3.8	-3.8
Change in DO from drought measures	0.0	0.0	0.0	0.0	0.0
Final DO	8.2	8.2	4.4	4.4	4.4
Raw water losses (-ve)	-0.5	-0.5	-0.5	-0.5	-0.5
Outage Allowance (-ve)	-0.1	-0.1	-0.1	-0.1	-0.1
WAFU (own sources)	7.6	7.6	3.8	3.8	3.8
Net Transfers	-0.2	1.0	4.5	4.4	4.1
Other benefits	1.29	0.20	0.20	0.20	0.20
Total Water Available for Use	8.8	8.8	8.5	8.4	8.1

3.3 The baseline Deployable Output data presented in this section represents the Environment Agency's preferred sustainability reduction licence cap scenario. This includes recent actual average caps to time limited licences in 2022-24 and caps to all other permanent licences by 2030. The impact of 1:500 drought resilience has also been applied from 2025 rather than the preferred scenario of 2039/2040. These factors apply to the baseline forecast only. For the final plan forecast we have applied our best value scenario for licence caps, which was developed following an iterative process to deliver licence caps as early as possible. The transition to 1:500 drought resilience occurs in 2039/40 in the final plan forecast. Further information is available in the WRMP24 Decision Making technical supporting document, section 6.



4. Population & Housing



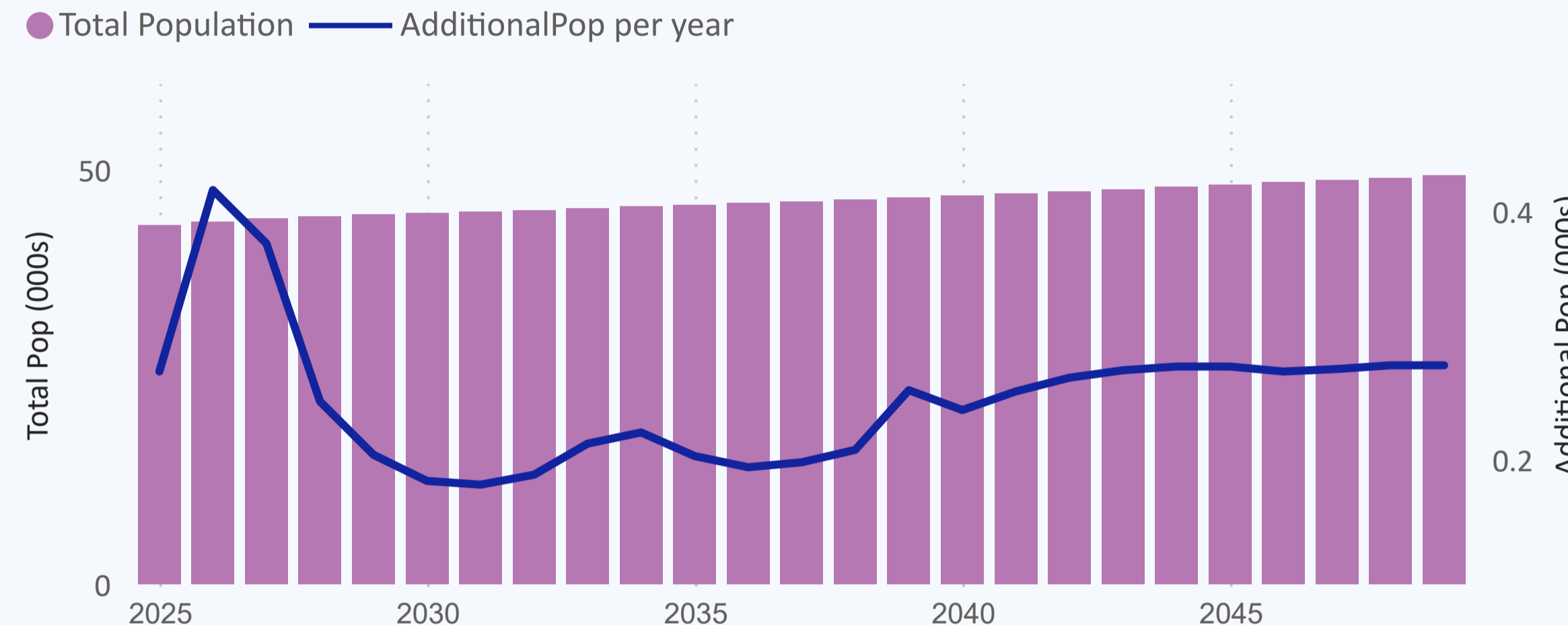
Norfolk Bradenham

4.1 Over the WRMP period, population in **Norfolk Bradenham** is set to increase from **43336** in 2025 to **49302** in 2049-50 - this is an increase of **13.8 %** over the 25 years.

Table 4a: Population totals (cumulative) by AMP

Year	Total Population (000s)
2029-30 (end of AMP8)	44.578
2034-35 (end of AMP9)	45.564
2039-40 (end of AMP10)	46.623
2044-45 (end of AMP11)	47.931
2049-50 (end of AMP12)	49.302

Figure 2: Total Resource Zone Population

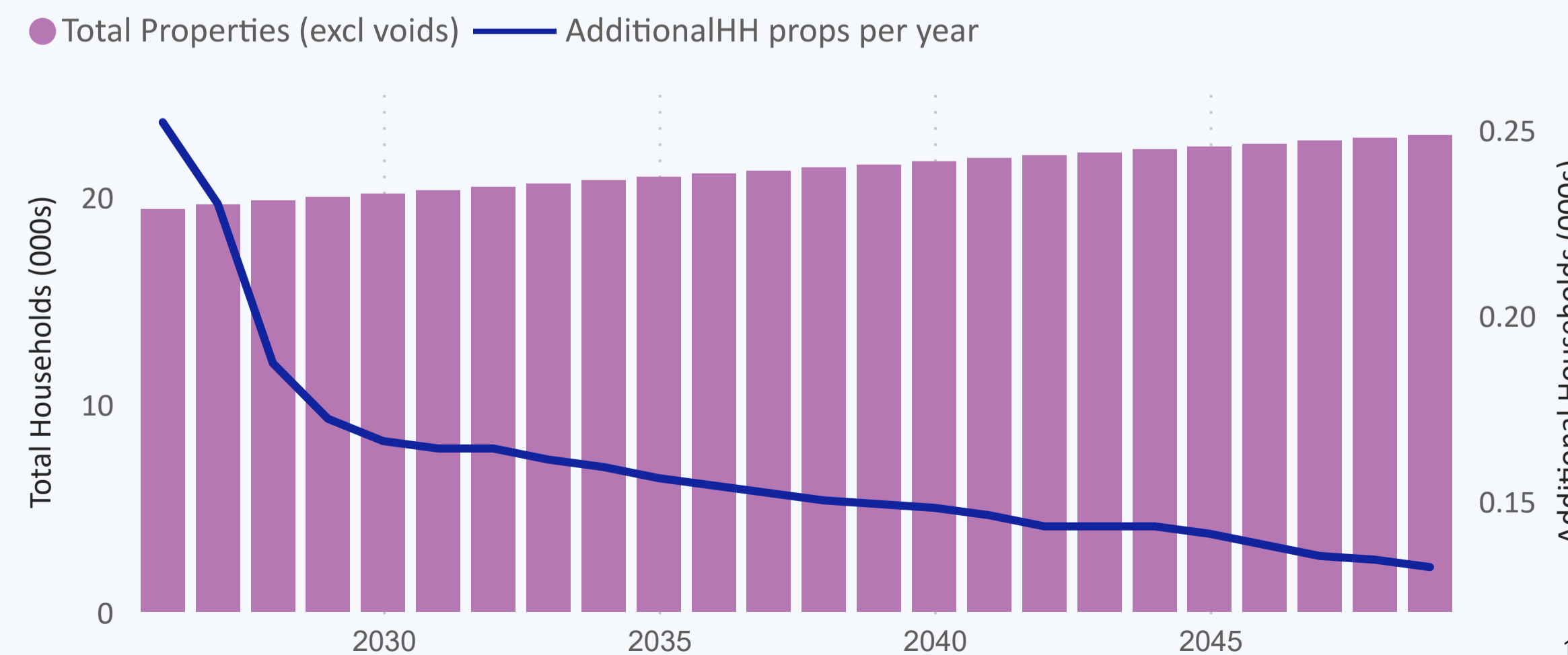


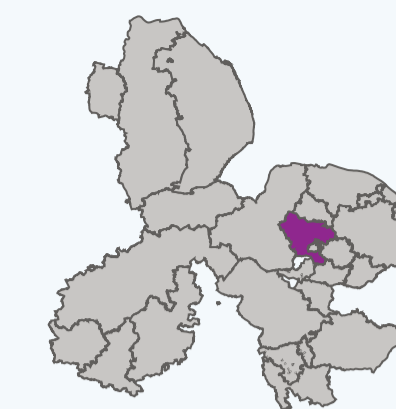
4.2 Over the WRMP period, property numbers in **Norfolk Bradenham** are set to increase from **19129** in 2025 to **22948** in 2049-50 - this is an increase of **20.0 %** over the 25 years.

Table 4b: Property totals (cumulative) by AMP

Year	Total Properties-excl voids (000s)
2029-30 (end of AMP8)	19.970
2034-35 (end of AMP9)	20.784
2039-40 (end of AMP10)	21.545
2044-45 (end of AMP11)	22.268
2049-50 (end of AMP12)	22.948

Figure 3: Total Resource Zone Properties (excl. voids)





5. Baseline Supply Demand Balance DYAA

Norfolk Bradenham

Figure 4: Norfolk Bradenham baseline supply demand balance to 2050 for Dry Year Annual Average conditions

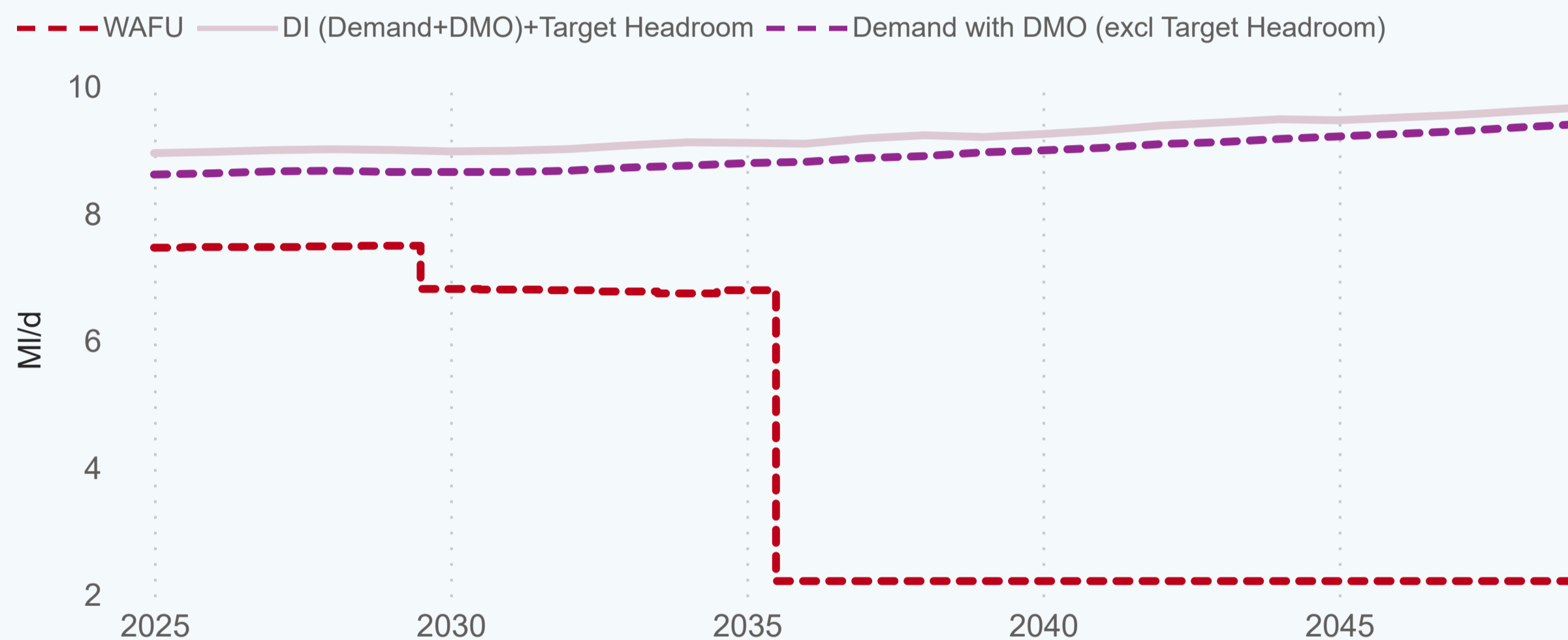


Table 5a: Baseline supply demand balance 2025 - 2050 for DYAA conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	7.6	7.6	7.6	3.8	3.8	3.8
Net Transfers	-0.2	-0.2	-0.9	-1.6	-1.6	-1.6
Total Water Available For Use	7.5	7.5	6.7	2.2	2.2	2.2
Distribution Input	8.6	8.7	8.8	9.0	9.2	9.4
Target Headroom	0.3	0.3	0.4	0.2	0.3	0.3
Supply Demand Balance	-1.5	-1.5	-2.4	-7.0	-7.3	-7.4

Table 5b: Baseline demand forecast (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	4.7	4.8	5.0	5.2	5.5	5.7
Water delivered unmeasured household	0.8	0.7	0.5	0.4	0.4	0.3
Total Leakage	1.7	1.6	1.6	1.6	1.7	1.6
Water delivered measured non-household	1.5	1.6	1.6	1.6	1.7	1.8
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	8.6	8.7	8.8	9.0	9.2	9.4

5.1 DYAA BL supply demand summary: Norfolk Bradenham

Baseline Supply Demand Balance: This zone is expected to go into deficit by 2025 (under the preferred baseline scenario - as described in section 3.3).

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 5.4 MI/d in 2025 to 6.0 MI/d in 2050, a percentage change of 10.1 %.
- Baseline Leakage: is forecast to change from 1.7 MI/d in 2025 to 1.6 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 1.5 MI/d to 1.8 MI/d.
- Baseline Distribution Input: is expected to change from 8.6 MI/d to 9.4 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).

6. Baseline Supply Demand Balance DYCP

Norfolk Bradenham

Norfolk Bradenham

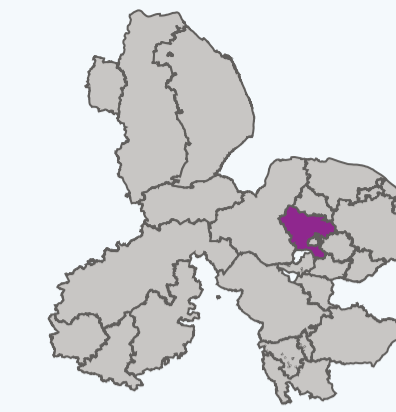


Figure 5: Norfolk Bradenham baseline supply demand balance to 2050 for Dry Year Critical Period conditions

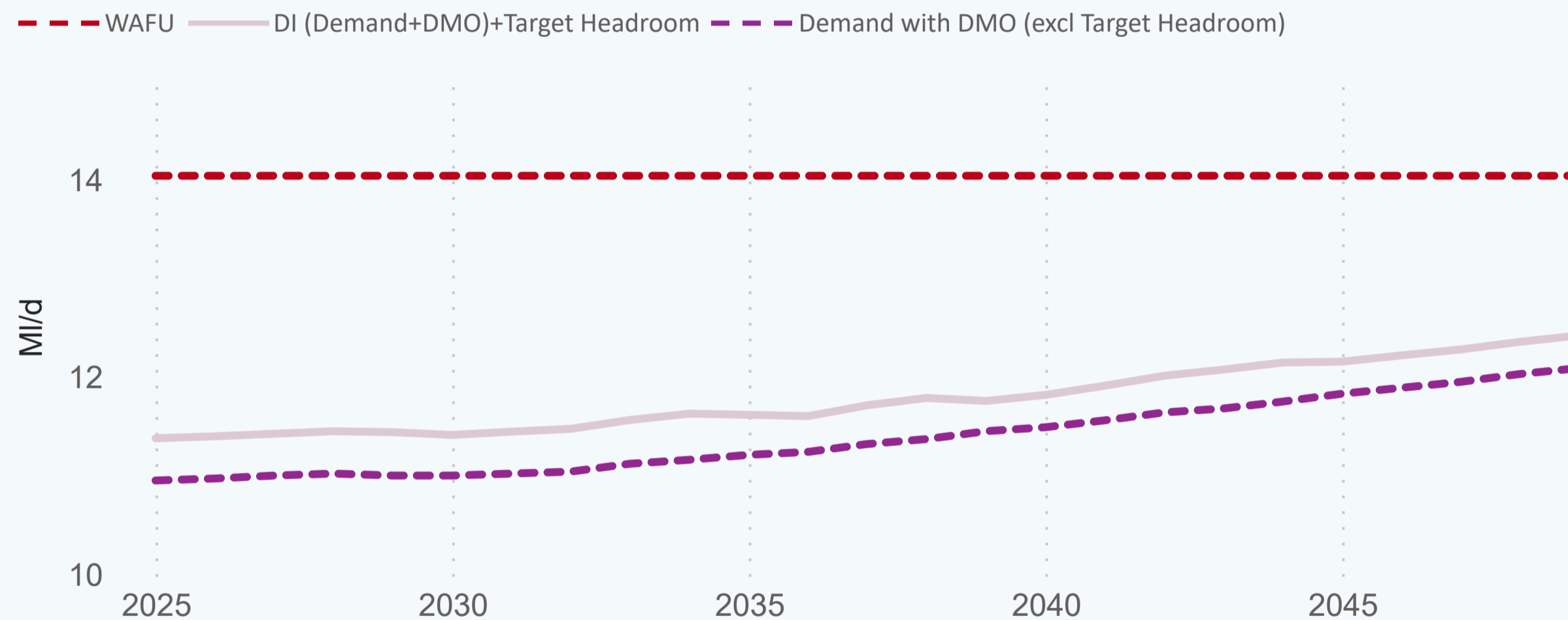


Table 6b: Baseline demand forecast with DYCP conditions (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	6.2	6.4	6.6	7.0	7.4	7.6
Water delivered unmeasured household	1.1	0.9	0.7	0.6	0.5	0.5
Total Leakage	1.7	1.6	1.6	1.6	1.7	1.6
Water delivered measured non-household	2.0	2.1	2.1	2.2	2.3	2.3
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	11.0	11.0	11.2	11.5	11.8	12.1

Table 6a: Baseline supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	14.0	14.0	14.0	14.0	14.0	14.0
Net Transfers	0.0	0.0	0.0	0.0	0.0	0.0
Total Water Available For Use	14.0	14.0	14.0	14.0	14.0	14.0
Distribution Input	11.0	11.0	11.2	11.5	11.8	12.1
Target Headroom	0.4	0.4	0.5	0.3	0.4	0.3
Supply Demand Balance	2.7	2.6	2.4	2.3	1.9	1.6

6.1 DYCP BL supply demand summary: Norfolk Bradenham

Baseline Supply Demand balance: This zone is not expected to go into deficit

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 7.3 MI/d in 2025 to 8.1 MI/d in 2050, a percentage change of 11.4 %.
- Baseline Leakage: is forecast to change from 1.7 MI/d in 2025 to 1.6 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 2.0 MI/d to 2.3 MI/d.
- Baseline Distribution Input: is expected to change from 11.0 MI/d to 12.1 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).

7. Demand forecast and PCC

Norfolk Bradenham

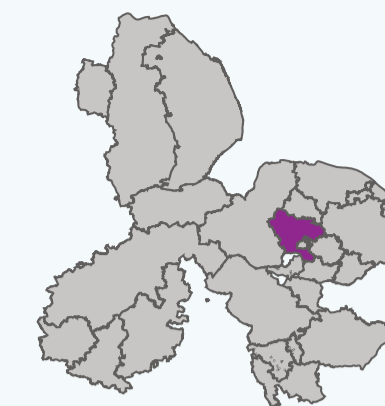


Figure 6: Norfolk Bradenham DYAA DI with and without demand management strategy

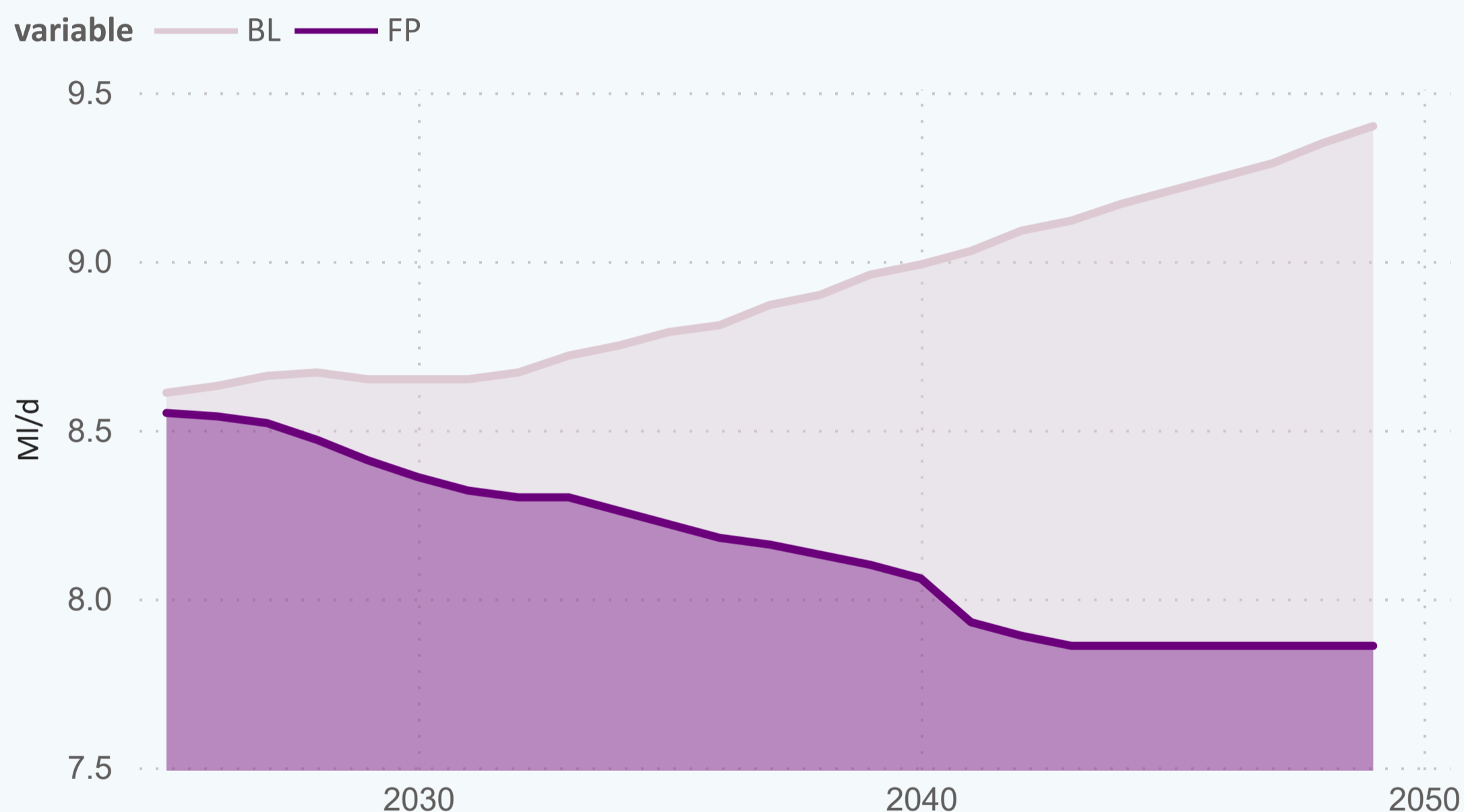


Table 7a: Demand - baseline and final plan

variable	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL	8.7	8.8	9.0	9.2	9.4
FP	8.4	8.3	8.1	7.9	7.9

7.2 Demand Norfolk Bradenham (see Table 7a)

Baseline demand is expected to increase from 8.6 (MI/d) in 2025 to 9.4 (MI/d) in 2050. With demand management options in place, demand is expected to be 7.9 (MI/d).

7.1 PCC Norfolk Bradenham (see Table 7b)

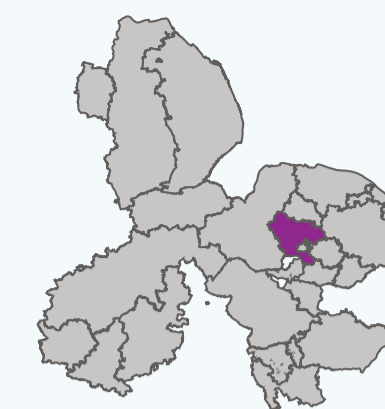
Per Capita Consumption (PCC) in the base year 2025/26 is 112.2 (l/h/d) measured and 186.2 (l/h/d) unmeasured.

The weighted average PCC (l/h/d) comes in at 118.8 (l/h/d) in 2025/26. This is forecast to fall to 97.6 (l/h/d) in the Final Plan forecast as demand management option savings are realised and customers switch from unmeasured to measured status

Table 7b: DMO strategy Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL demand forecast(DYAA)	116.4	115.2	116.0	115.8	116.2
FP demand forecast(DYAA)	113.5	109.1	104.0	99.1	97.6
% change BL to FP	-2.5%	-5.3%	-10.4%	-14.4%	-16.1%

8. Demand management options



Norfolk Bradenham

8.1 Regional overview:

Across the entirety of the Anglian Water region our demand management strategy will comprise three strongly interlinked programs:

Water metering program:

- We intend to complete our current smart meter rollout which will replace our entire meter stock over 10 years (2 AMPs), noting that 1.1M smart meters will be installed across Anglian Water by 2025. The information resulting from 'smart metering' will help inform our customers regarding their water usage and will assist in our ability to influence this behaviour. It will also help with our ability to detect leakage, significantly reducing plumbing losses and customer supply pipe leaks.

Leakage reduction

- Our aim is to reduce leakage by more than 45MI/d from 2025 to 2050 across the whole Anglian Water area, building upon our ambitious program of leakage reduction in AMP7 (14% reduction of more than 27MI/d across the region by 2025).

Water efficiency measures

- New technologies and interventions will help promote the careful use of water. Additional water efficiency programs will include: the promotion of 'Smart' devices; further development of our Multi-utility web-portal; garden advice; support for vulnerable customers with plumbing loss and cspl; Community reward schemes. As part of our revised draft WRMP24 we have developed and included 'water efficiency visits' and leakage reduction measures for our Non-Household customers.

Figure 7: DMO strategy Final Plan for Norfolk Bradenham

For full chart key see table below

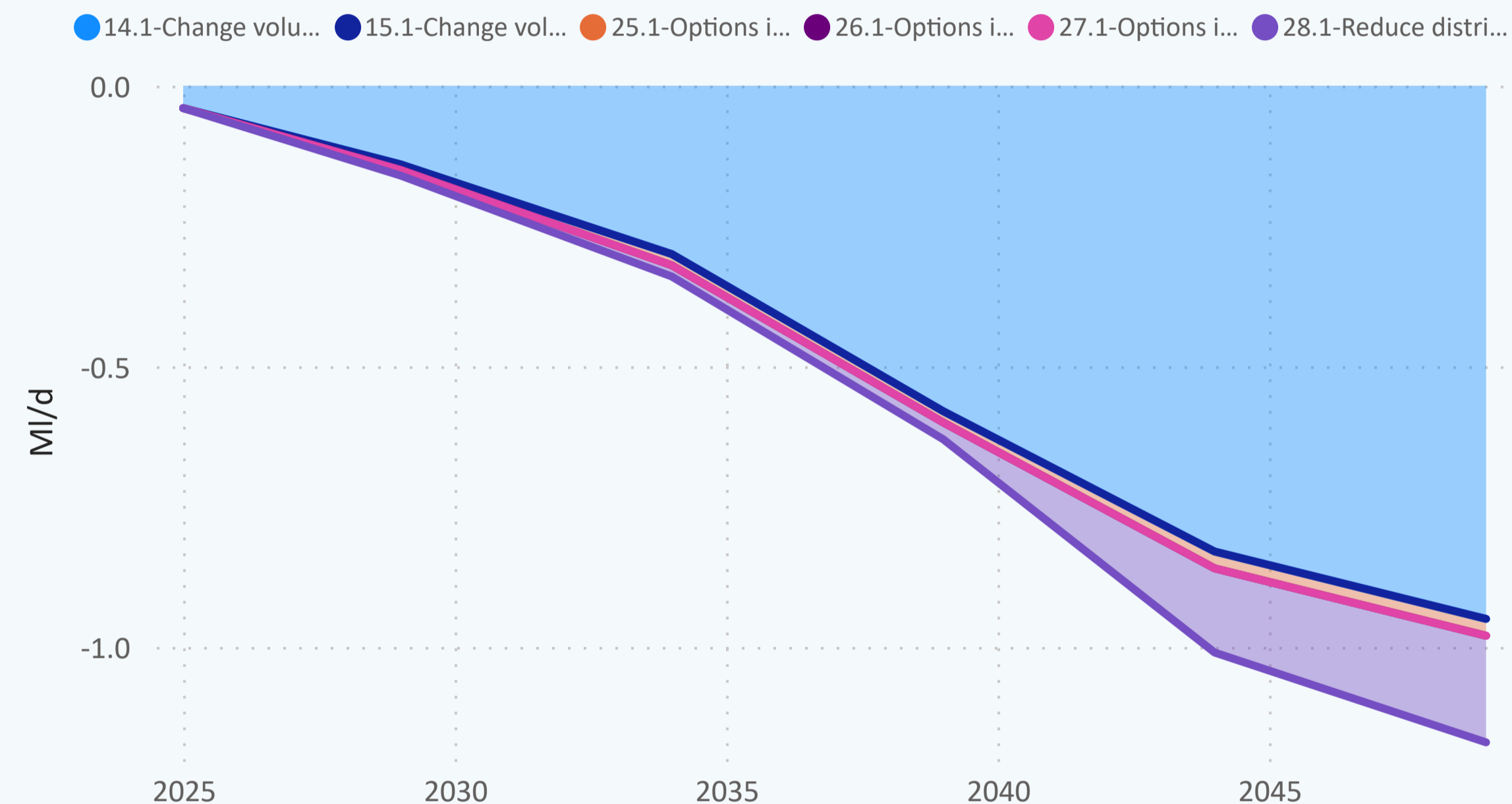
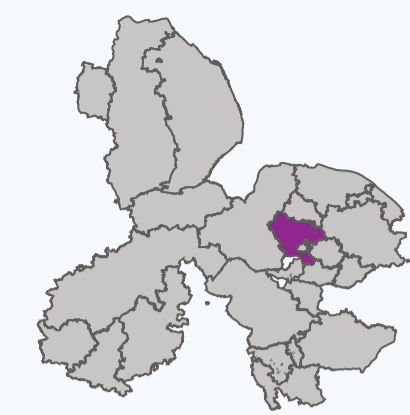


Table 8: DMO strategy Final Plan for Norfolk Bradenham

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
14.1-Change volume delivered to measured households(-ve)	-0.1	-0.3	-0.6	-0.8	-1.0
15.1-Change volume delivered to unmeasured households(-ve)	0.0	0.0	0.0	0.0	0.0
25.1-Options impacting on measured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
26.1-Options impacting on unmeasured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
27.1-Options impacting on Void properties - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
28.1-Reduce distribution losses (-ve)	0.0	0.0	0.0	-0.2	-0.2



9. Final Plan Supply Demand Balance DYAA

Norfolk Bradenham

Figure 8: Norfolk Bradenham final plan SDB to 2050 for Dry Year Annual Average conditions

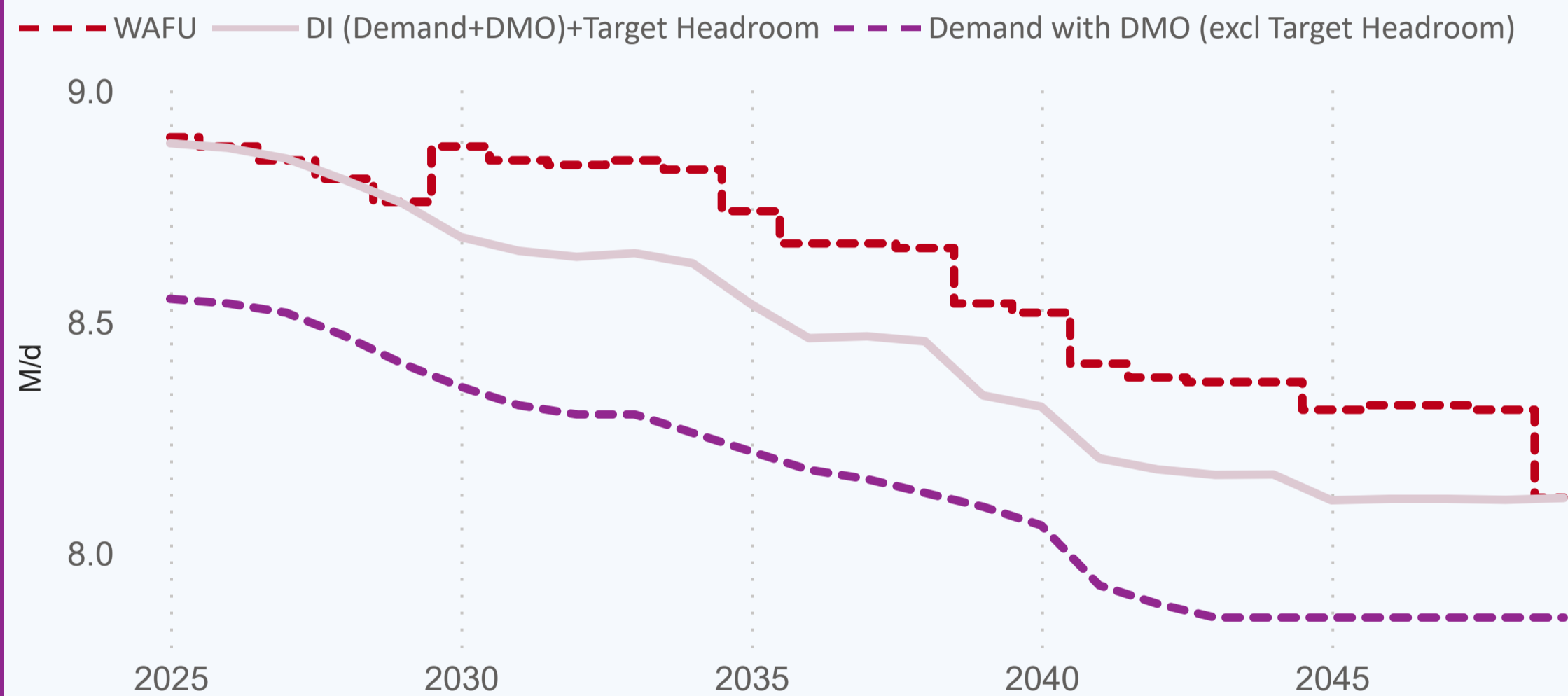


Table 9a: final plan SDB to 2050 for Dry Year conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	8.9	8.9	7.8	4.0	4.0	4.0
Net Transfers	0.0	-0.2	1.0	4.5	4.4	4.1
Total Water Available For Use	8.9	8.8	8.8	8.5	8.4	8.1
Distribution Input	8.6	8.4	8.3	8.1	7.9	7.9
Target Headroom	0.3	0.3	0.4	0.2	0.3	0.3
Supply Demand Balance	0.0	0.0	0.2	0.2	0.2	0.0

Table 9b: Final Plan demand forecast for DYAA conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	4.6	4.7	4.7	4.7	4.6	4.7
Water delivered unmeasured household	0.8	0.7	0.5	0.4	0.4	0.3
Total Leakage	1.7	1.6	1.6	1.6	1.5	1.4
Water delivered measured non-household	1.5	1.5	1.4	1.4	1.4	1.4
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	8.6	8.4	8.3	8.1	7.9	7.9

9.1 DYAA FP supply demand summary: Norfolk Bradenham

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 5.4 MI/d in 2025 to 5.0 MI/d in 2050, a percentage change of -6.7 %.
- Final Plan Leakage is forecast to change from 1.7 MI/d in 2025 to 1.4 MI/d by 2050.
- Final Plan Non-Household demand is expected to change from 1.5 MI/d to 1.4 MI/d.
- Final Plan Distribution Input is expected to change from 8.6 MI/d to 7.9 MI/d by 2050.

10. Final Plan Supply Demand Balance DYCP

Norfolk Bradenham

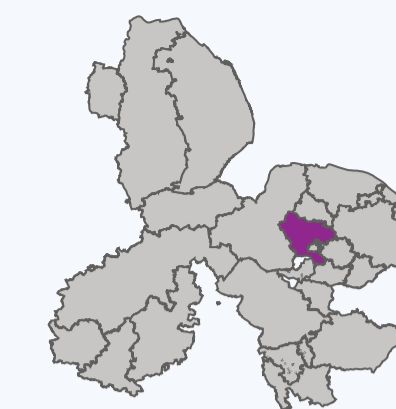


Figure 9: Norfolk Bradenham baseline supply demand balance to 2050 for Dry Year Critical Period conditions

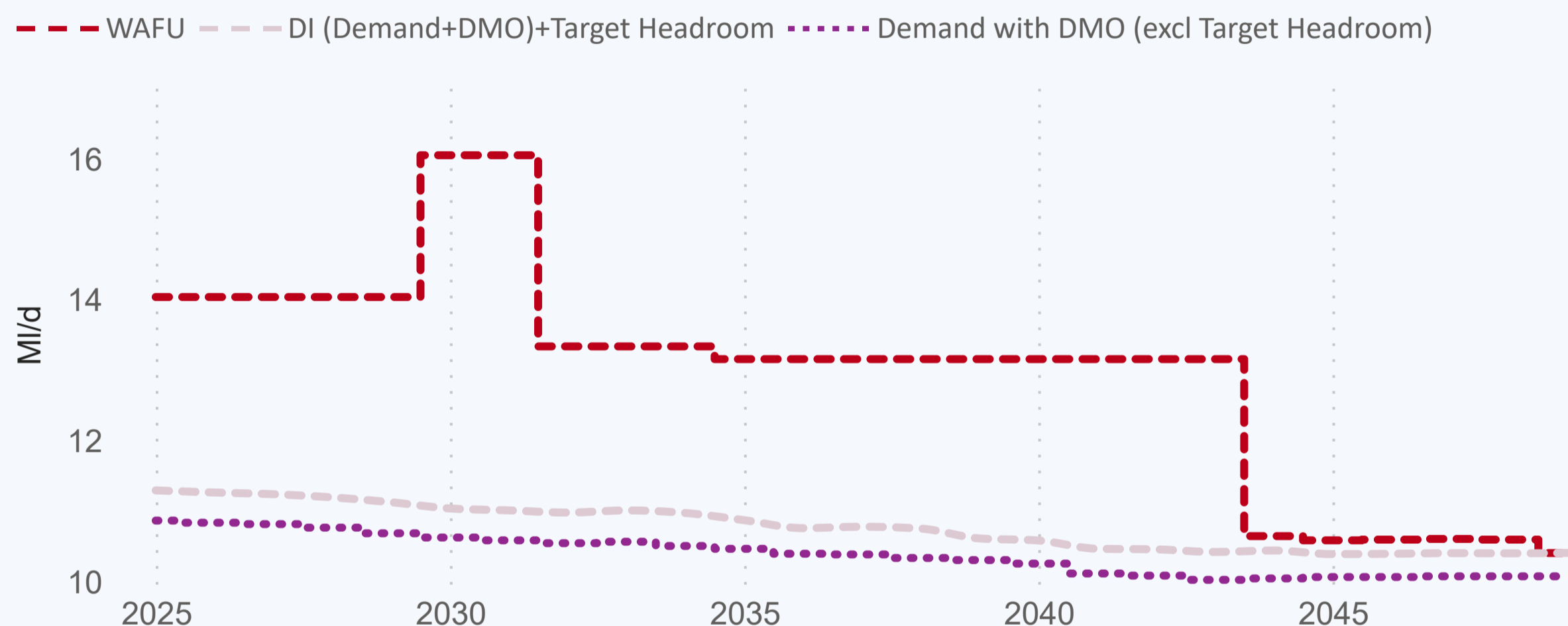


Table 10a: Final Plan supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	14.0	14.0	14.2	14.2	14.2	14.2
Net Transfers	0.0	0.0	-0.9	-1.1	-3.6	-3.8
Total Water Available For Use	14.0	14.0	13.3	13.2	10.7	10.4
Distribution Input	10.9	10.7	10.5	10.3	10.1	10.1
Target Headroom	0.4	0.4	0.5	0.3	0.4	0.3
Supply Demand Balance	2.7	2.9	2.4	2.5	0.2	0.0

Table 10b: Final Plan demand forecast for DYCP conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	6.1	6.2	6.2	6.2	6.2	6.4
Water delivered unmeasured household	1.1	0.9	0.7	0.6	0.5	0.5
Total Leakage	1.7	1.6	1.6	1.6	1.5	1.4
Water delivered measured non-household	2.0	2.0	1.9	1.9	1.8	1.8
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	10.9	10.7	10.5	10.3	10.1	10.1

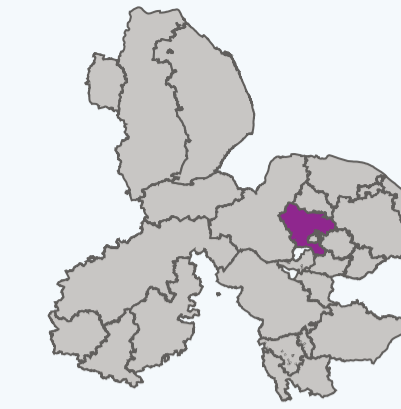
10.1 DYCP BL supply demand summary: Norfolk Bradenham

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 7.2 MI/d in 2025 to 6.8 MI/d in 2050, a percentage change of -5.5 %.
- Final Plan Leakage: is forecast to change from 1.7 MI/d in 2025 to 1.4 MI/d by 2050
- Final Plan Non-Household demand: is expected to change from 2.0 MI/d to 1.8 MI/d.
- Final Plan Distribution Input: is expected to change from 10.9 MI/d to 10.1 MI/d by 2050.



11. Supply Side Strategy



Norfolk Bradenham

Table 11a: Total Water Available for use Baseline and Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
WAFU - BL	8.8	6.7	2.2	2.2	2.2
WAFU - FP	8.8	8.8	8.5	8.4	8.1

11.1 Supply side strategy options.

For details on the feasible options list for Norfolk Bradenham WRZ please refer to the Supply-Side Option Development technical supporting document.

Figure 10 Water Available for Use (WAFU) - baseline (BL) and final plan (FP)

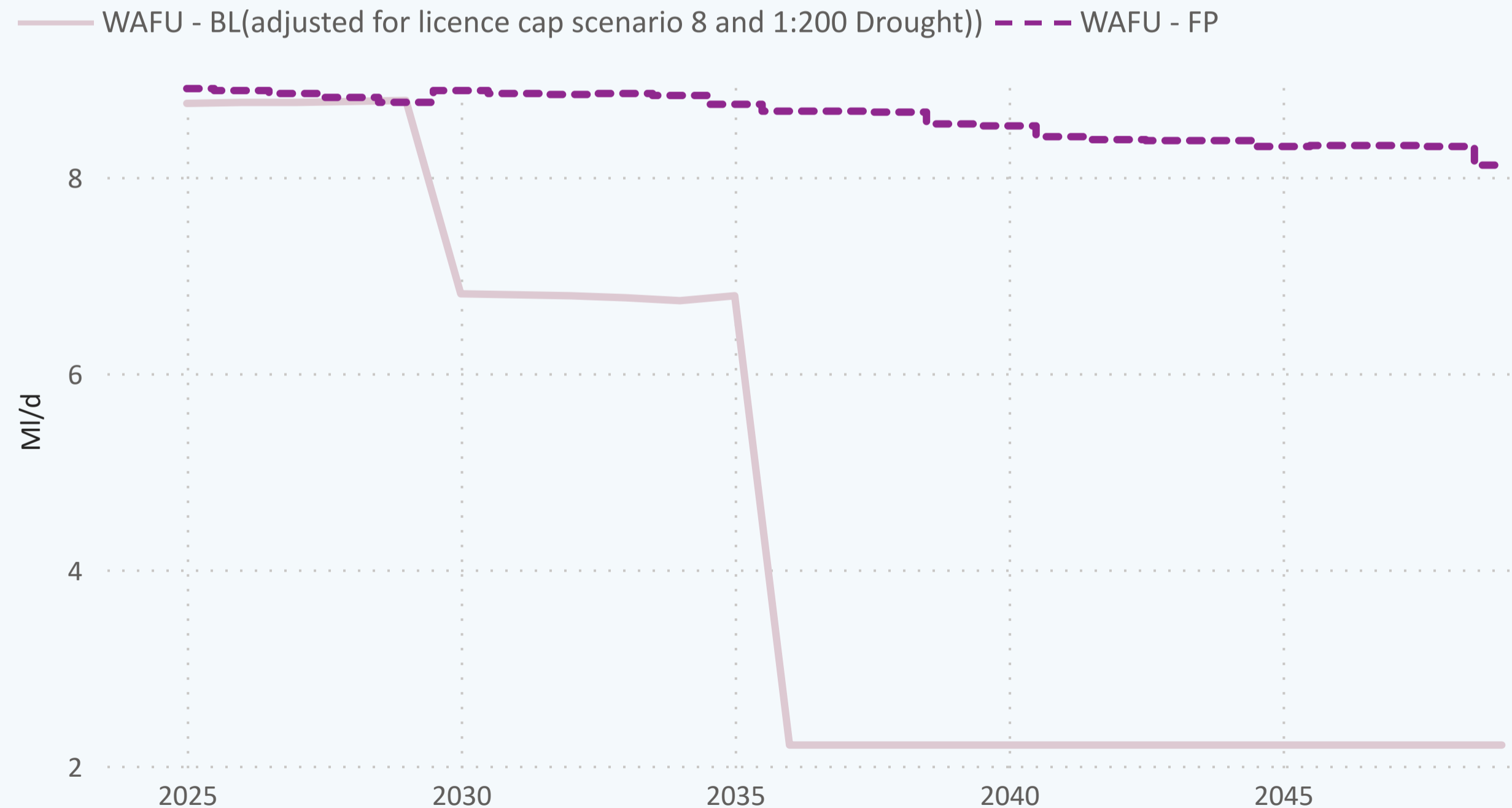


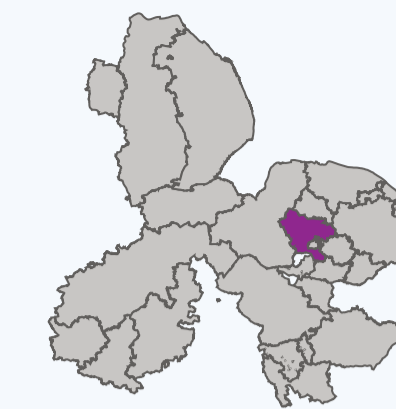
Table 11b: Preferred supply side options

Option ID	First Option Name
EE06	Adjustment to existing potable water export
LC08	Adjustment for Licence cap scenario 8
NBR6	Fenland to Norfolk Bradenham potable transfer (45 MI/d)
NBR9	Norfolk Bradenham WTW backwash water recovery



12. Non-Household consumption

Norfolk Bradenham

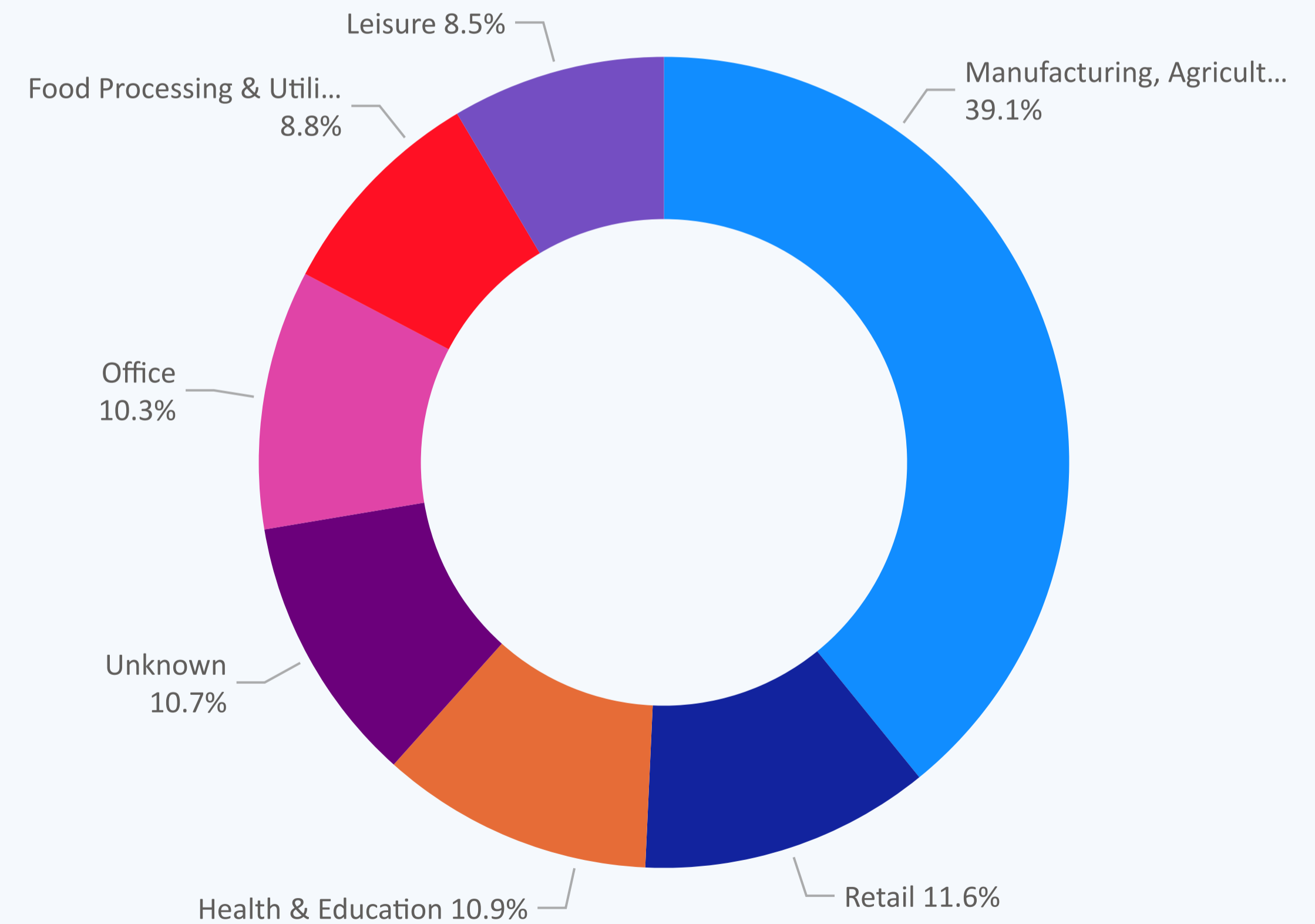
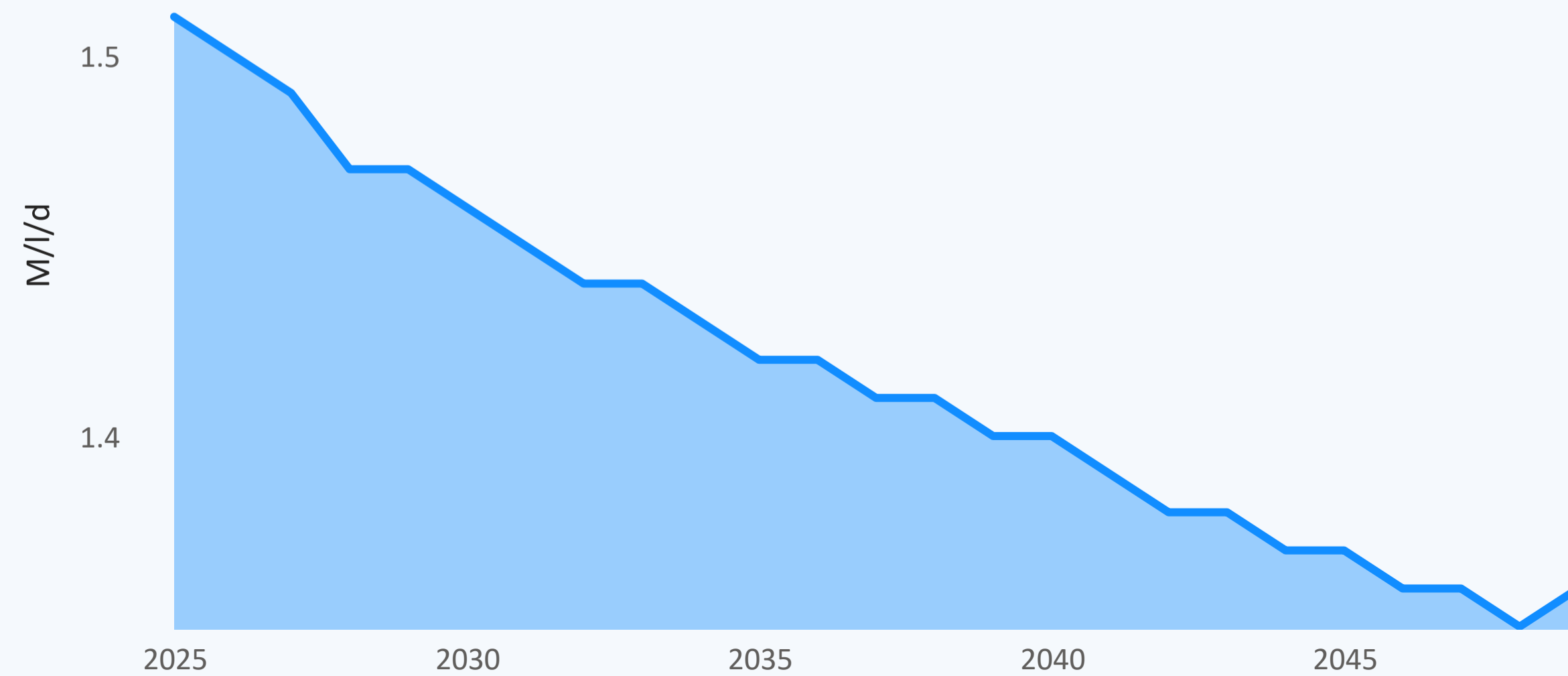


12.1 Non-Household demand Norfolk Bradenham

In 2025, 1.5 MI/d of Non-Household demand (measured and unmeasured) is expected. In 2049 it is expected to be 1.4 MI/d, which is a -10.60% change between the years.

Figure 12: % Non-Household modelled sectors within resource zone

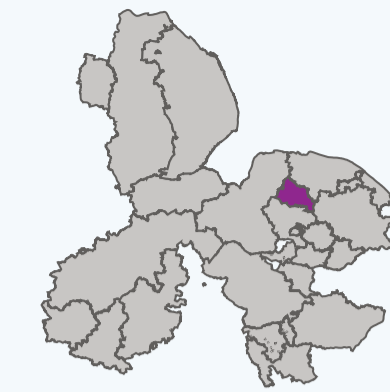
Figure 11: Non-Household demand forecast 2025-2050



3. Deployable Output summary

DYAA

Norfolk East Dereham



3.1 Resource Zone geography: Norfolk East Dereham:

The Norfolk East Dereham WRZ covers an area of 244 sq. km and it sits in the centre of East Anglia. Water is supplied from groundwater abstractions from the Norfolk Chalk aquifer.

3.2

Baseline deployable output (including 1:500 drought): 6.2 MI/d

Deployable output reductions

Restoring sustainable abstraction (recent actual average): -1.8 MI/d

Reductions to achieve environmental destination (BAU+): -1.0 MI/d by 2036.

Climate change: 0.0 MI/d by 2050.

Baseline deployable output reduces by a total of -2.7 MI/d by 2050 a reduction of 44.3%.

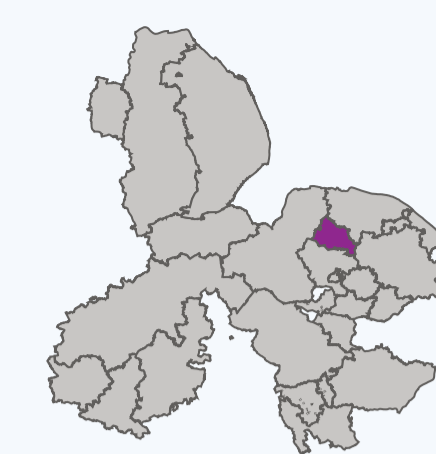
Table 3: supply characteristics (all values are MI/d)

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
DO pre forecast changes	6.2	6.2	6.2	6.2	6.2
Change in DO due to climate change	0.0	0.0	0.0	0.0	0.0
DO reductions to restore sustainable abstraction	-1.0	-1.8	-1.8	-1.8	-1.8
DO reductions for Environmental Destination	0.0	0.0	-1.0	-1.0	-1.0
Change in DO from drought measures	0.0	0.0	0.0	0.0	0.0
Final DO	5.1	4.4	3.4	3.4	3.4
Raw water losses (-ve)	-0.3	-0.3	-0.3	-0.3	-0.3
Outage Allowance (-ve)	0.0	0.0	0.0	0.0	0.0
WAFU (own sources)	4.8	4.1	3.1	3.1	3.1
Net Transfers	0.1	0.6	1.1	1.0	1.0
Other benefits	1.04	0.10	0.10	0.10	0.10
Total Water Available for Use	6.0	4.8	4.3	4.3	4.3

3.3 The baseline Deployable Output data presented in this section represents the Environment Agency's preferred sustainability reduction licence cap scenario. This includes recent actual average caps to time limited licences in 2022-24 and caps to all other permanent licences by 2030. The impact of 1:500 drought resilience has also been applied from 2025 rather than the preferred scenario of 2039/2040. These factors apply to the baseline forecast only. For the final plan forecast we have applied our best value scenario for licence caps, which was developed following an iterative process to deliver licence caps as early as possible. The transition to 1:500 drought resilience occurs in 2039/40 in the final plan forecast. Further information is available in the WRMP24 Decision Making technical supporting document, section 6.



4. Population & Housing



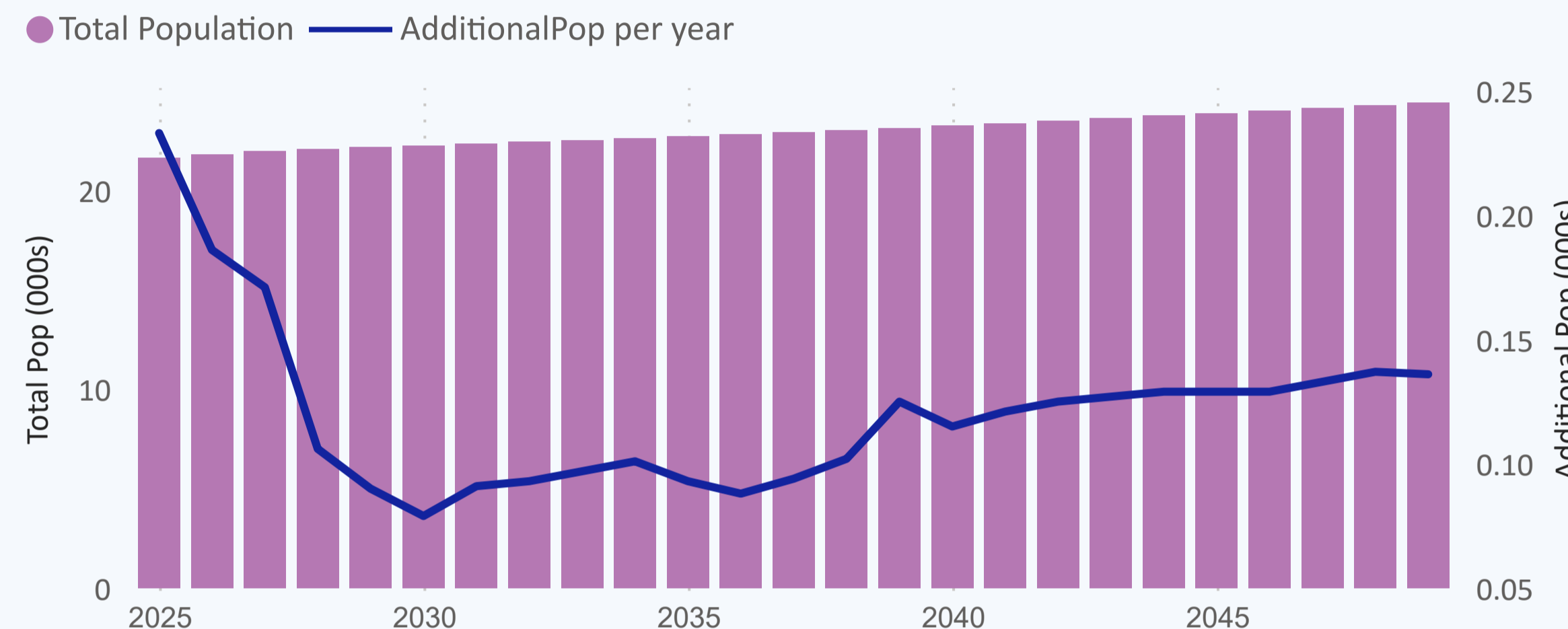
Norfolk East Dereham

4.1 Over the WRMP period, population in **Norfolk East Dereham** is set to increase from **21617** in 2025 to **24414** in 2049-50 - this is an increase of **12.9 %** over the 25 years.

Table 4a: Population totals (cumulative) by AMP

Year	Total Population (000s)
2029-30 (end of AMP8)	22.170
2034-35 (end of AMP9)	22.631
2039-40 (end of AMP10)	23.133
2044-45 (end of AMP11)	23.750
2049-50 (end of AMP12)	24.414

Figure 2: Total Resource Zone Population

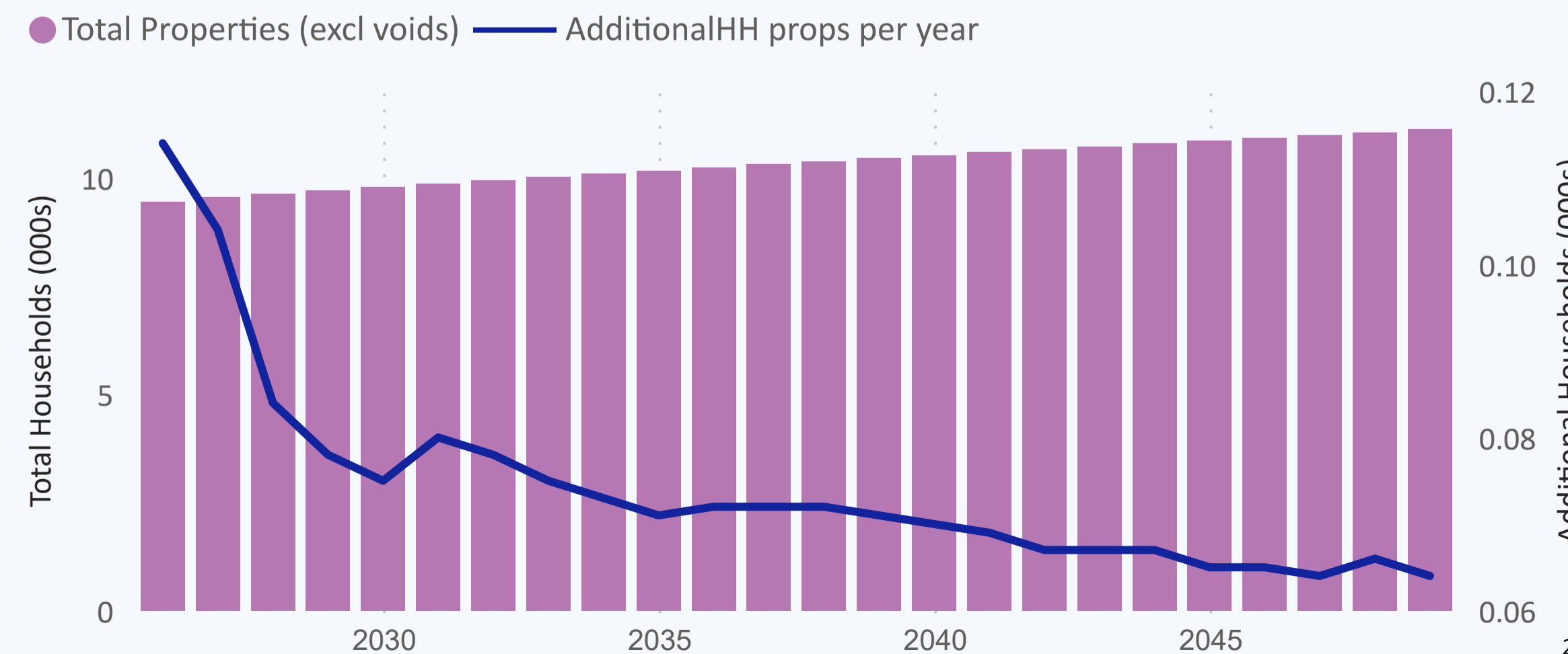


4.2 Over the WRMP period, property numbers in **Norfolk East Dereham** are set to increase from **9338** in 2025 to **11121** in 2049-50 - this is an increase of **19.1 %** over the 25 years.

Table 4b: Property totals (cumulative) by AMP

Year	Total Properties-excl voids (000s)
2029-30 (end of AMP8)	9.718
2034-35 (end of AMP9)	10.099
2039-40 (end of AMP10)	10.457
2044-45 (end of AMP11)	10.797
2049-50 (end of AMP12)	11.121

Figure 3: Total Resource Zone Properties (excl. voids)



5. Baseline Supply Demand Balance DYAA

Norfolk East Dereham

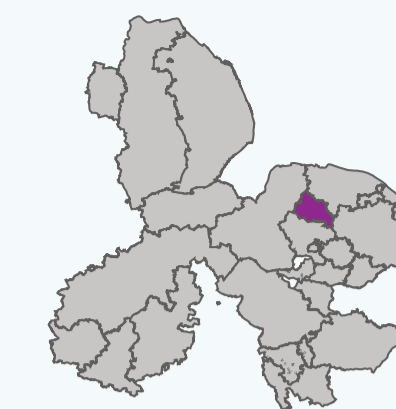


Figure 4: Norfolk East Dereham baseline supply demand balance to 2050 for Dry Year Annual Average conditions

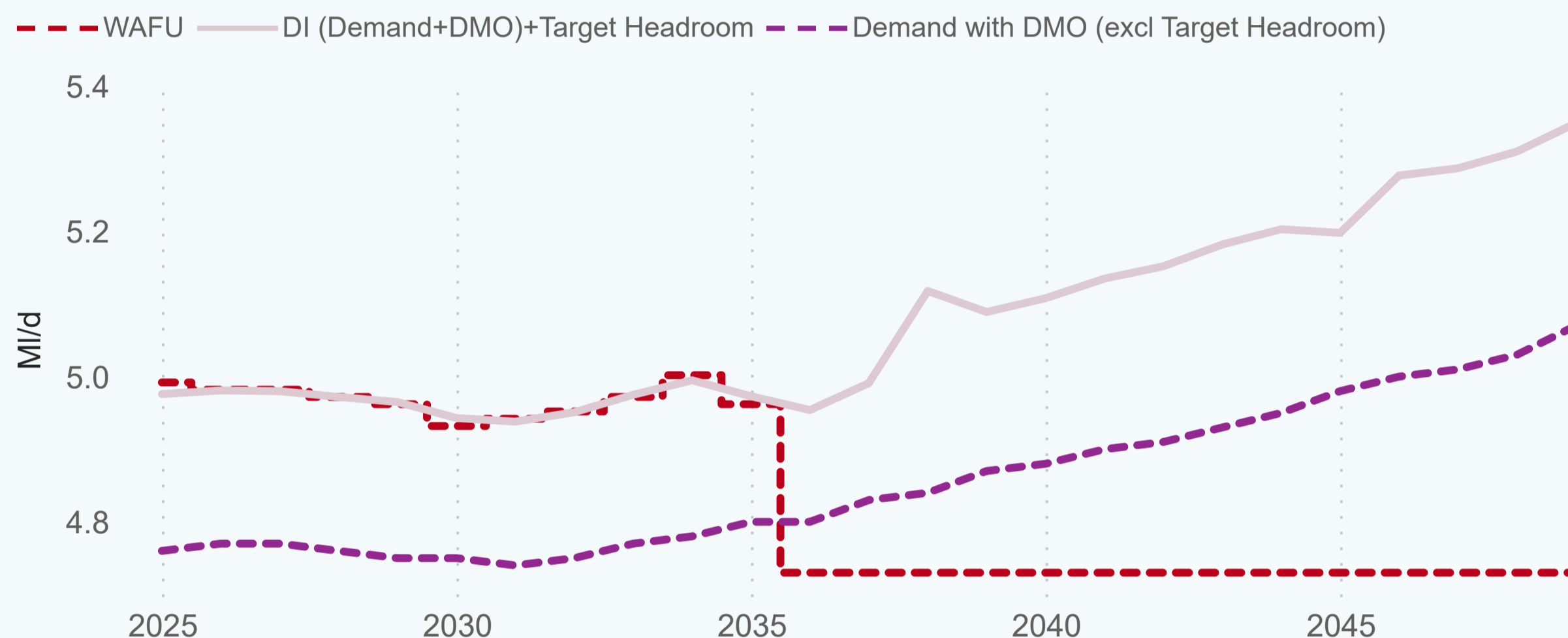


Table 5a: Baseline supply demand balance 2025 - 2050 for DYAA conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	4.8	4.8	4.1	3.1	3.1	3.1
Net Transfers	0.2	0.2	0.9	1.6	1.6	1.6
Total Water Available For Use	5.0	5.0	5.0	4.7	4.7	4.7
Distribution Input	4.8	4.8	4.8	4.9	5.0	5.1
Target Headroom	0.2	0.2	0.2	0.2	0.3	0.3
Supply Demand Balance	0.0	0.0	0.0	-0.4	-0.5	-0.6

Table 5b: Baseline demand forecast (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.3	2.4	2.5	2.7	2.8	2.9
Water delivered unmeasured household	0.5	0.4	0.3	0.2	0.1	0.1
Total Leakage	1.2	1.2	1.2	1.2	1.2	1.2
Water delivered measured non-household	0.7	0.7	0.7	0.8	0.8	0.8
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	4.8	4.8	4.8	4.9	5.0	5.1

5.1 DYAA BL supply demand summary: Norfolk East Dereham

Baseline Supply Demand Balance: This zone is not expected to go into deficit (under the preferred baseline scenario - as described in section 3.3).

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 2.8 MI/d in 2025 to 3.0 MI/d in 2050, a percentage change of 7.1 %.
- Baseline Leakage: is forecast to change from 1.2 MI/d in 2025 to 1.2 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 0.7 MI/d to 0.8 MI/d.
- Baseline Distribution Input: is expected to change from 4.8 MI/d to 5.1 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).

6. Baseline Supply Demand Balance DYCP

Norfolk East Dereham

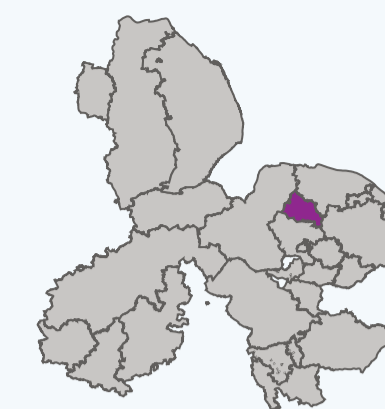


Figure 5: Norfolk East Dereham baseline supply demand balance to 2050 for Dry Year Critical Period conditions

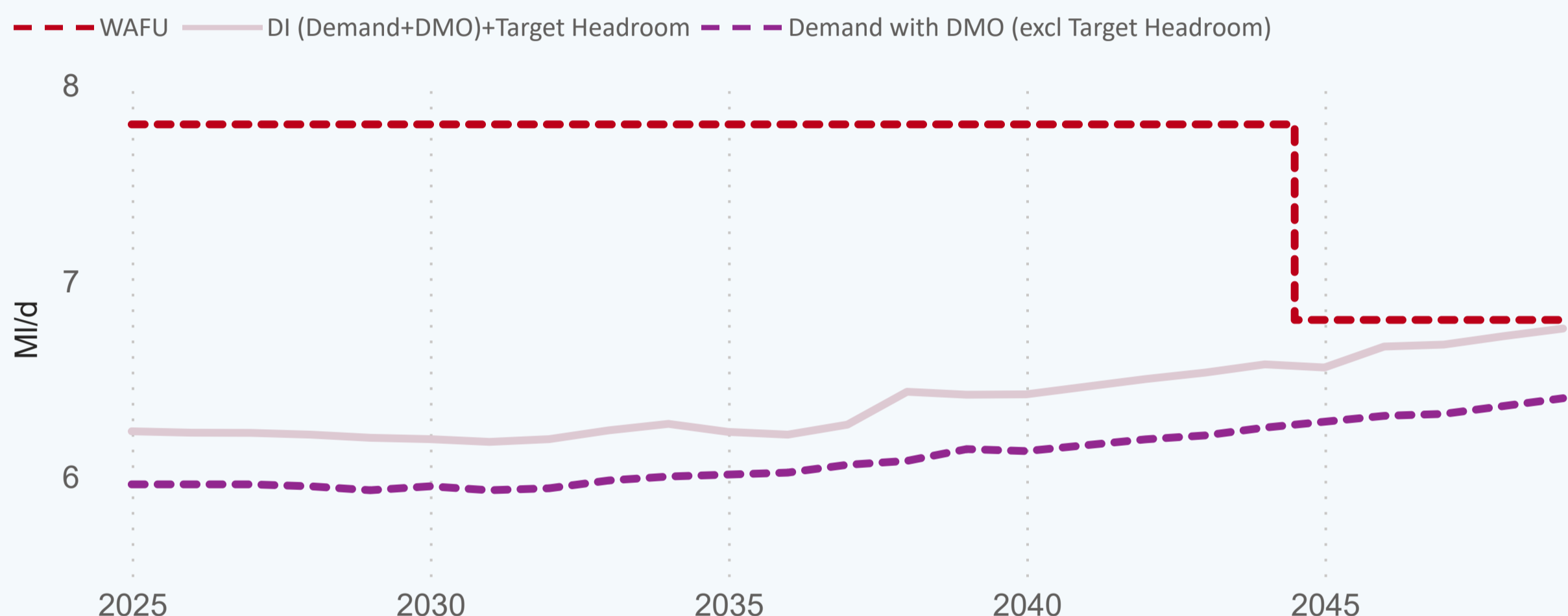


Table 6b: Baseline demand forecast with DYCP conditions (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	3.0	3.2	3.3	3.6	3.8	3.9
Water delivered unmeasured household	0.8	0.6	0.4	0.3	0.2	0.1
Total Leakage	1.2	1.2	1.2	1.2	1.2	1.2
Water delivered measured non-household	1.0	1.0	1.0	1.0	1.1	1.1
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	6.0	5.9	6.0	6.1	6.3	6.4

Table 6a: Baseline supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	7.8	7.8	7.8	7.8	7.8	7.8
Net Transfers	0.0	0.0	0.0	0.0	0.0	-1.0
Total Water Available For Use	7.8	7.8	7.8	7.8	7.8	6.8
Distribution Input	6.0	5.9	6.0	6.1	6.3	6.4
Target Headroom	0.3	0.3	0.3	0.3	0.3	0.4
Supply Demand Balance	1.6	1.6	1.5	1.4	1.2	0.0

6.1 DYCP BL supply demand summary: Norfolk East Dereham

Baseline Supply Demand balance: This zone is not expected to go into deficit

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 3.8 MI/d in 2025 to 4.1 MI/d in 2050, a percentage change of 7.9 %.
- Baseline Leakage: is forecast to change from 1.2 MI/d in 2025 to 1.2 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 1.0 MI/d to 1.1 MI/d.
- Baseline Distribution Input: is expected to change from 6.0 MI/d to 6.4 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).



7. Demand forecast and PCC



Norfolk East Dereham

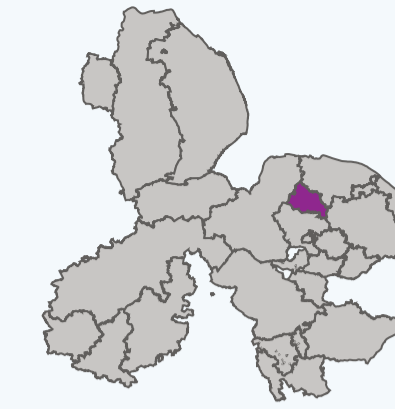


Figure 6: Norfolk East Dereham DYAA DI with and without demand management strategy

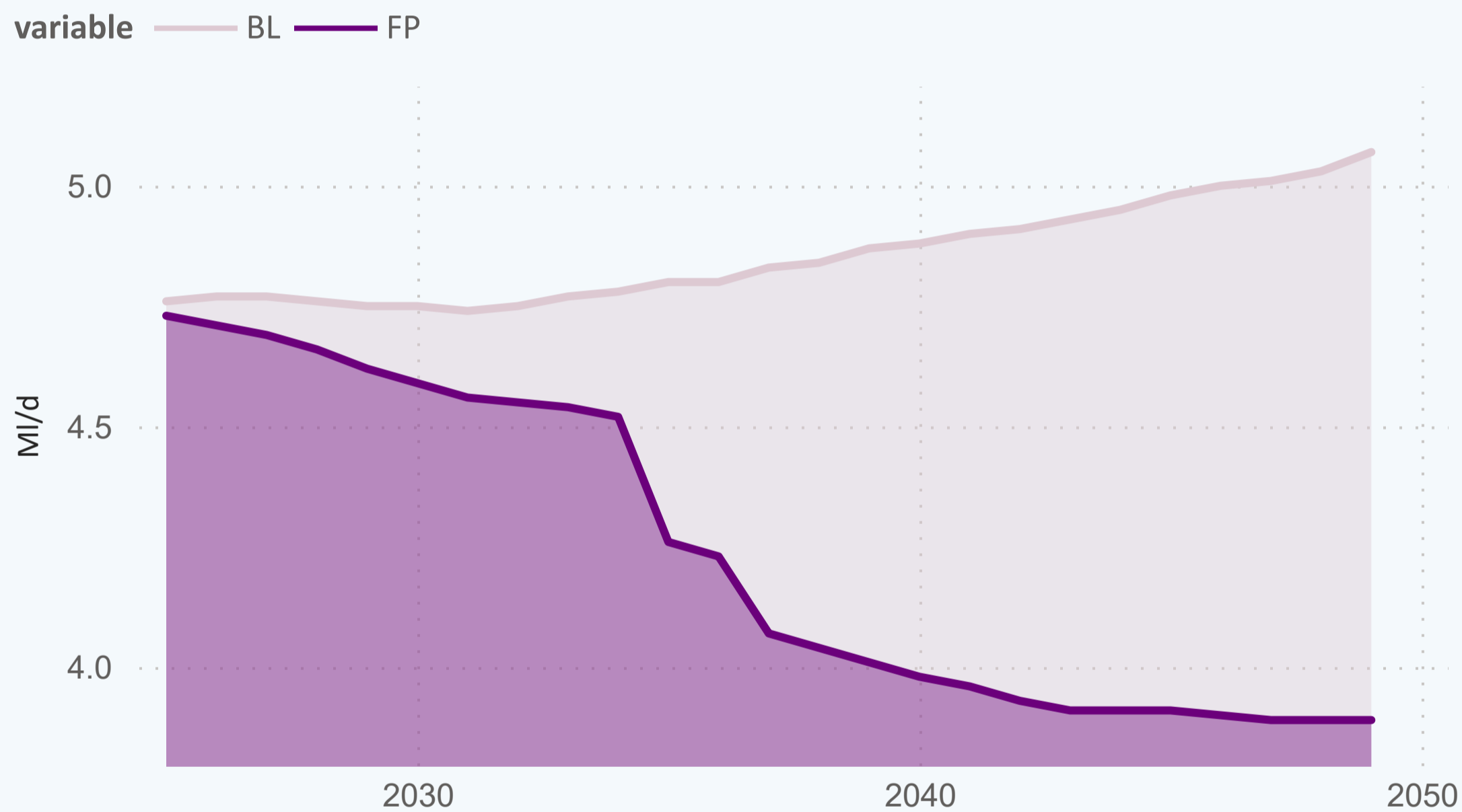


Table 7a: Demand - baseline and final plan

variable	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL	4.8	4.8	4.9	5.0	5.1
FP	4.6	4.5	4.0	3.9	3.9

7.2 Demand Norfolk East Dereham (see Table 7a)

Baseline demand is expected to increase from 4.8 (MI/d) in 2025 to 5.1 (MI/d) in 2050. With demand management options in place, demand is expected to be 3.9 (MI/d).

7.1 PCC Norfolk East Dereham (see Table 7b)

Per Capita Consumption (PCC) in the base year 2025/26 is 112.0 (l/h/d) measured and 231.9 (l/h/d) unmeasured.

The weighted average PCC (l/h/d) comes in at 124.0 (l/h/d) in 2025/26. This is forecast to fall to 99.5 (l/h/d) in the Final Plan forecast as demand management option savings are realised and customers switch from unmeasured to measured status

Table 7b: DMO strategy Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL demand forecast(DYAA)	120.4	118.9	118.9	118.3	118.8
FP demand forecast(DYAA)	117.7	112.7	106.3	101.5	99.5
% change BL to FP	-2.2%	-5.2%	-10.5%	-14.2%	-16.2%

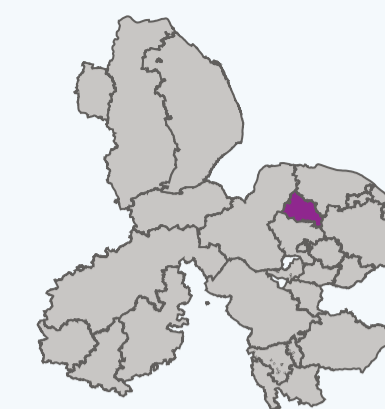




8. Demand management options



Norfolk East Dereham



8.1 Regional overview:

Across the entirety of the Anglian Water region our demand management strategy will comprise three strongly interlinked programs:

Water metering program:

- We intend to complete our current smart meter rollout which will replace our entire meter stock over 10 years (2 AMPs), noting that 1.1M smart meters will be installed across Anglian Water by 2025. The information resulting from 'smart metering' will help inform our customers regarding their water usage and will assist in our ability to influence this behaviour. It will also help with our ability to detect leakage, significantly reducing plumbing losses and customer supply pipe leaks.

Leakage reduction

- Our aim is to reduce leakage by more than 45MI/d from 2025 to 2050 across the whole Anglian Water area, building upon our ambitious program of leakage reduction in AMP7 (14% reduction of more than 27MI/d across the region by 2025).

Water efficiency measures

- New technologies and interventions will help promote the careful use of water. Additional water efficiency programs will include: the promotion of 'Smart' devices; further development of our Multi-utility web-portal; garden advice; support for vulnerable customers with plumbing loss and cspl; Community reward schemes. As part of our revised draft WRMP24 we have developed and included 'water efficiency visits' and leakage reduction measures for our Non-Household customers.

Figure 7: DMO strategy Final Plan for Norfolk East Dereham

For full chart key see table below

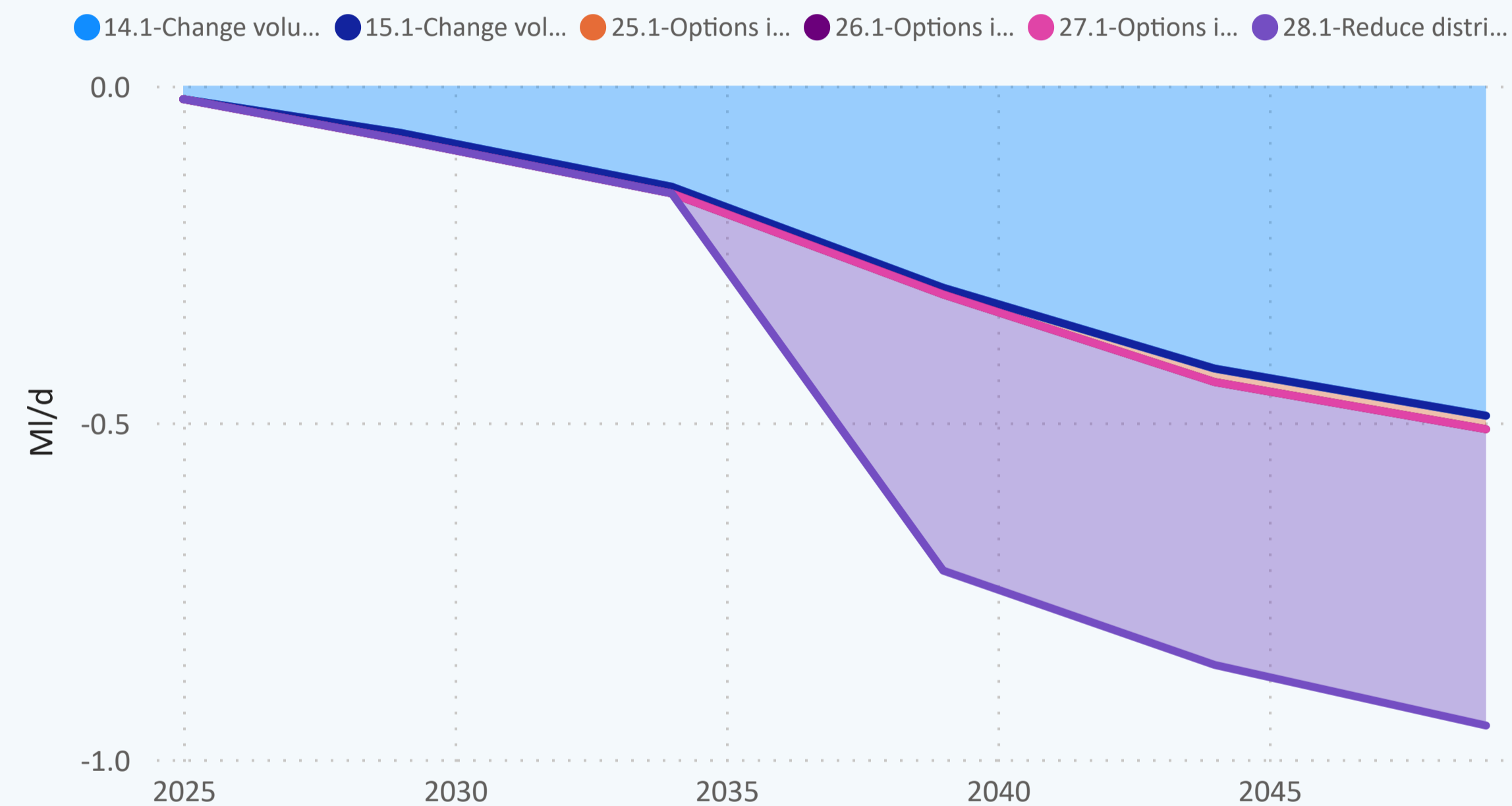


Table 8: DMO strategy Final Plan for Norfolk East Dereham

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
14.1-Change volume delivered to measured households(-ve)	-0.1	-0.2	-0.3	-0.4	-0.5
15.1-Change volume delivered to unmeasured households(-ve)	0.0	0.0	0.0	0.0	0.0
25.1-Options impacting on measured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
26.1-Options impacting on unmeasured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
27.1-Options impacting on Void properties - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
28.1-Reduce distribution losses (-ve)	0.0	0.0	-0.4	-0.4	-0.4



9. Final Plan Supply Demand Balance DYAA

Norfolk East Dereham

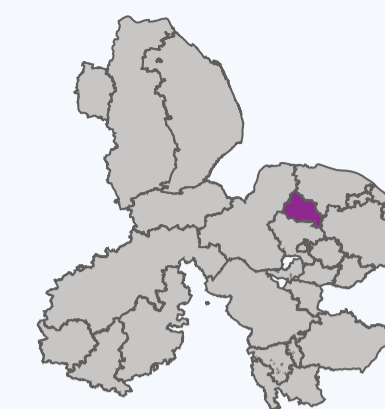


Figure 8: Norfolk East Dereham final plan SDB to 2050 for Dry Year Annual Average conditions

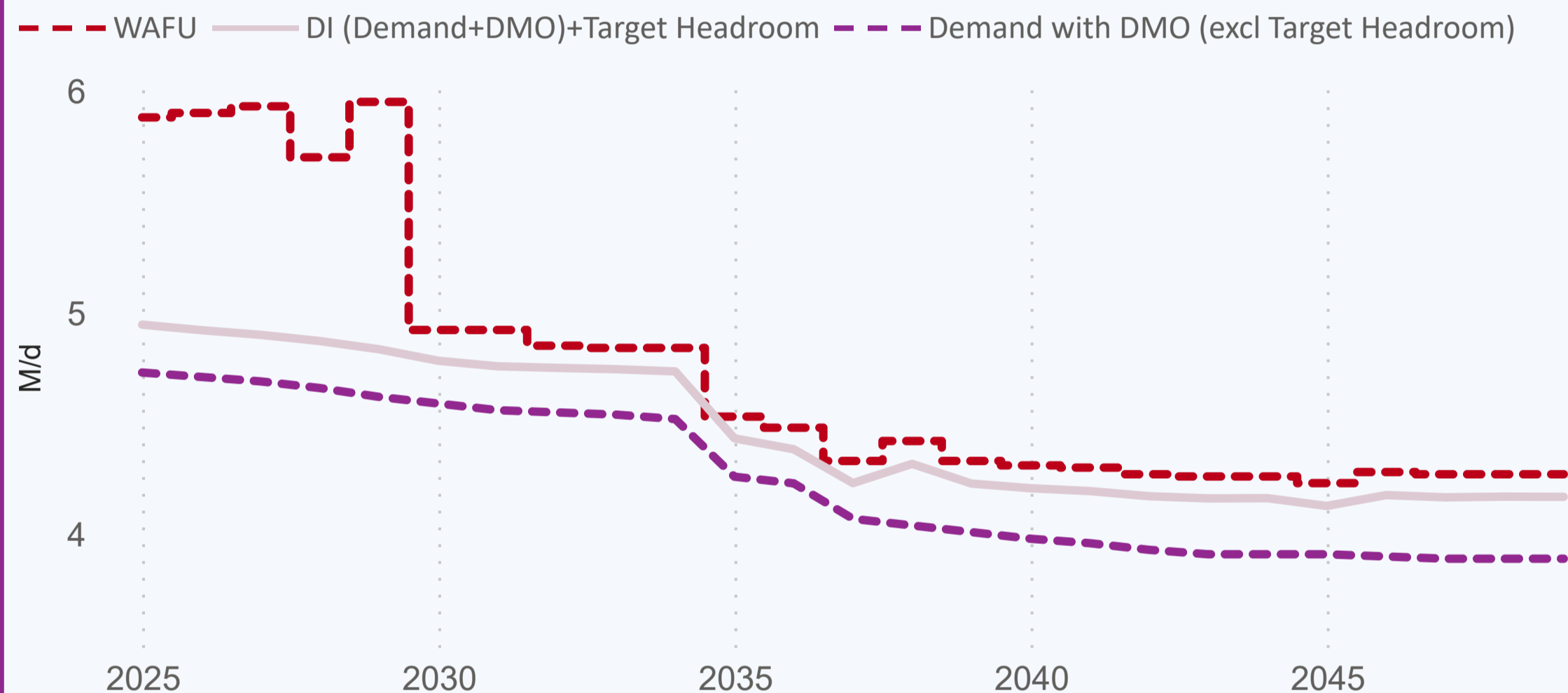


Table 9a: final plan SDB to 2050 for Dry Year conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	5.9	5.9	4.2	3.2	3.2	3.2
Net Transfers	0.0	0.1	0.6	1.1	1.0	1.0
Total Water Available For Use	5.9	6.0	4.8	4.3	4.3	4.3
Distribution Input	4.7	4.6	4.5	4.0	3.9	3.9
Target Headroom	0.2	0.2	0.2	0.2	0.3	0.3
Supply Demand Balance	0.9	1.1	0.1	0.1	0.1	0.1

Table 9b: Final Plan demand forecast for DYAA conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.3	2.3	2.4	2.4	2.4	2.4
Water delivered unmeasured household	0.5	0.4	0.3	0.2	0.1	0.1
Total Leakage	1.2	1.2	1.2	0.8	0.8	0.7
Water delivered measured non-household	0.7	0.7	0.6	0.6	0.6	0.6
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	4.7	4.6	4.5	4.0	3.9	3.9

9.1 DYAA FP supply demand summary: Norfolk East Dereham

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 2.8 MI/d in 2025 to 2.5 MI/d in 2050, a percentage change of -9.6 %.
- Final Plan Leakage is forecast to change from 1.2 MI/d in 2025 to 0.7 MI/d by 2050.
- Final Plan Non-Household demand is expected to change from 0.7 MI/d to 0.6 MI/d.
- Final Plan Distribution Input is expected to change from 4.7 MI/d to 3.9 MI/d by 2050.



10. Final Plan Supply Demand Balance DYCP

Norfolk East Dereham

Norfolk East Dereham

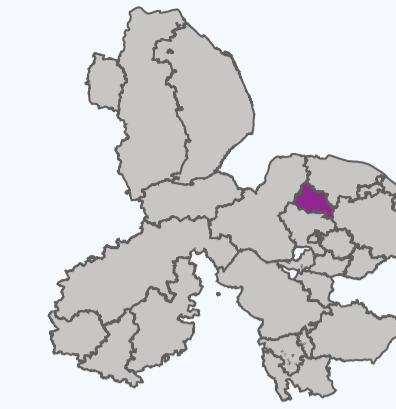


Figure 9: Norfolk East Dereham baseline supply demand balance to 2050 for Dry Year Critical Period conditions

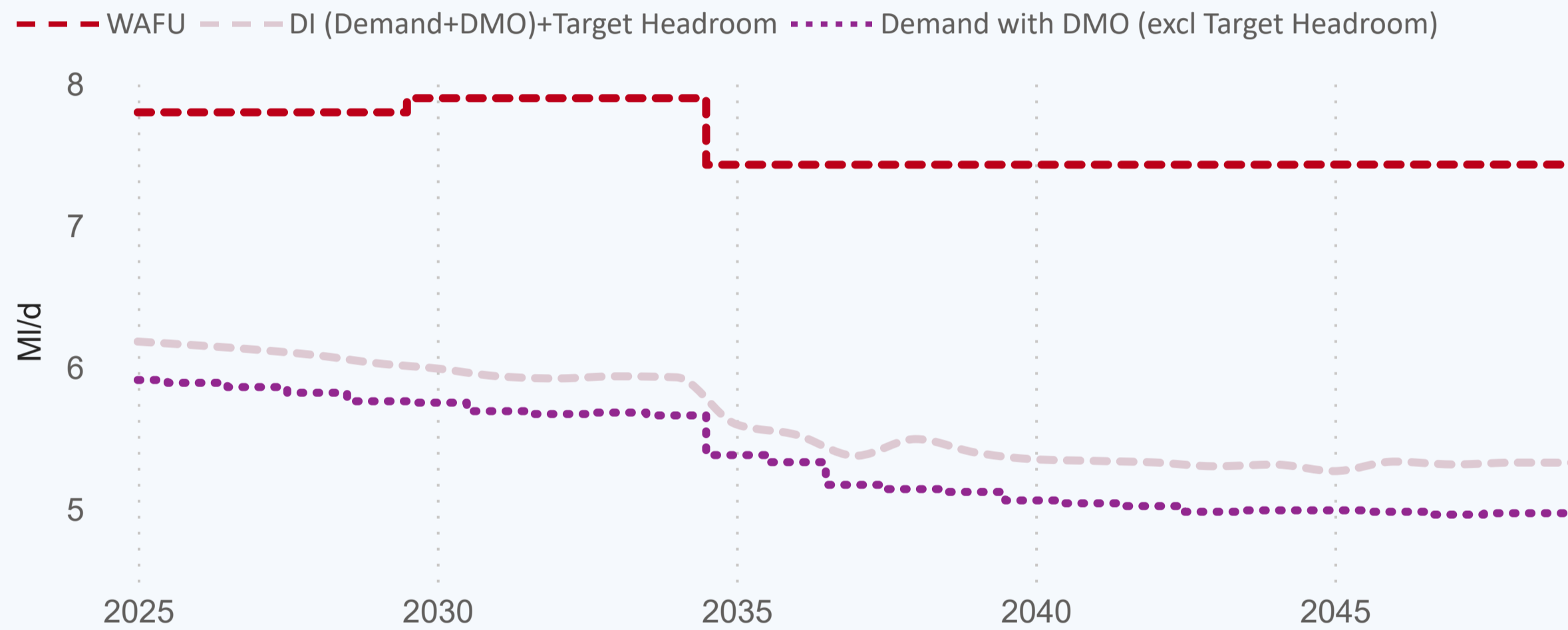


Table 10a: Final Plan supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	7.8	7.8	7.9	7.9	7.9	7.9
Net Transfers	0.0	0.0	0.0	-0.5	-0.5	-0.5
Total Water Available For Use	7.8	7.8	7.9	7.4	7.4	7.4
Distribution Input	5.9	5.8	5.7	5.1	5.0	5.0
Target Headroom	0.3	0.3	0.3	0.3	0.3	0.4
Supply Demand Balance	1.6	1.8	2.0	2.0	2.1	2.1

Table 10b: Final Plan demand forecast for DYCP conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	3.0	3.1	3.1	3.2	3.2	3.3
Water delivered unmeasured household	0.8	0.6	0.4	0.3	0.2	0.1
Total Leakage	1.2	1.2	1.2	0.8	0.8	0.7
Water delivered measured non-household	0.9	0.9	0.9	0.8	0.8	0.7
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	5.9	5.8	5.7	5.1	5.0	5.0

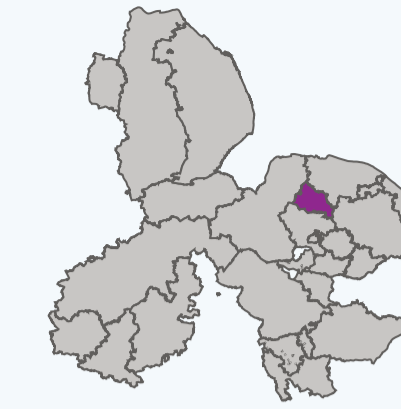
10.1 DYCP BL supply demand summary: Norfolk East Dereham

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 3.8 MI/d in 2025 to 3.4 MI/d in 2050, a percentage change of -8.8 %.
- Final Plan Leakage: is forecast to change from 1.2 MI/d in 2025 to 0.7 MI/d by 2050
- Final Plan Non-Household demand: is expected to change from 0.9 MI/d to 0.7 MI/d.
- Final Plan Distribution Input: is expected to change from 5.9 MI/d to 5.0 MI/d by 2050.



11. Supply Side Strategy



Norfolk East Dereham

Table 11a: Total Water Available for use Baseline and Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
WAFU - BL	6.0	5.0	4.7	4.7	4.7
WAFU - FP	6.0	4.8	4.3	4.3	4.3

11.1 Supply side strategy options.

For details on the feasible options list for Norfolk East Dereham WRZ please refer to the Supply-Side Option Development technical supporting document.

Figure 10 Water Available for Use (WAFU) - baseline (BL) and final plan (FP)

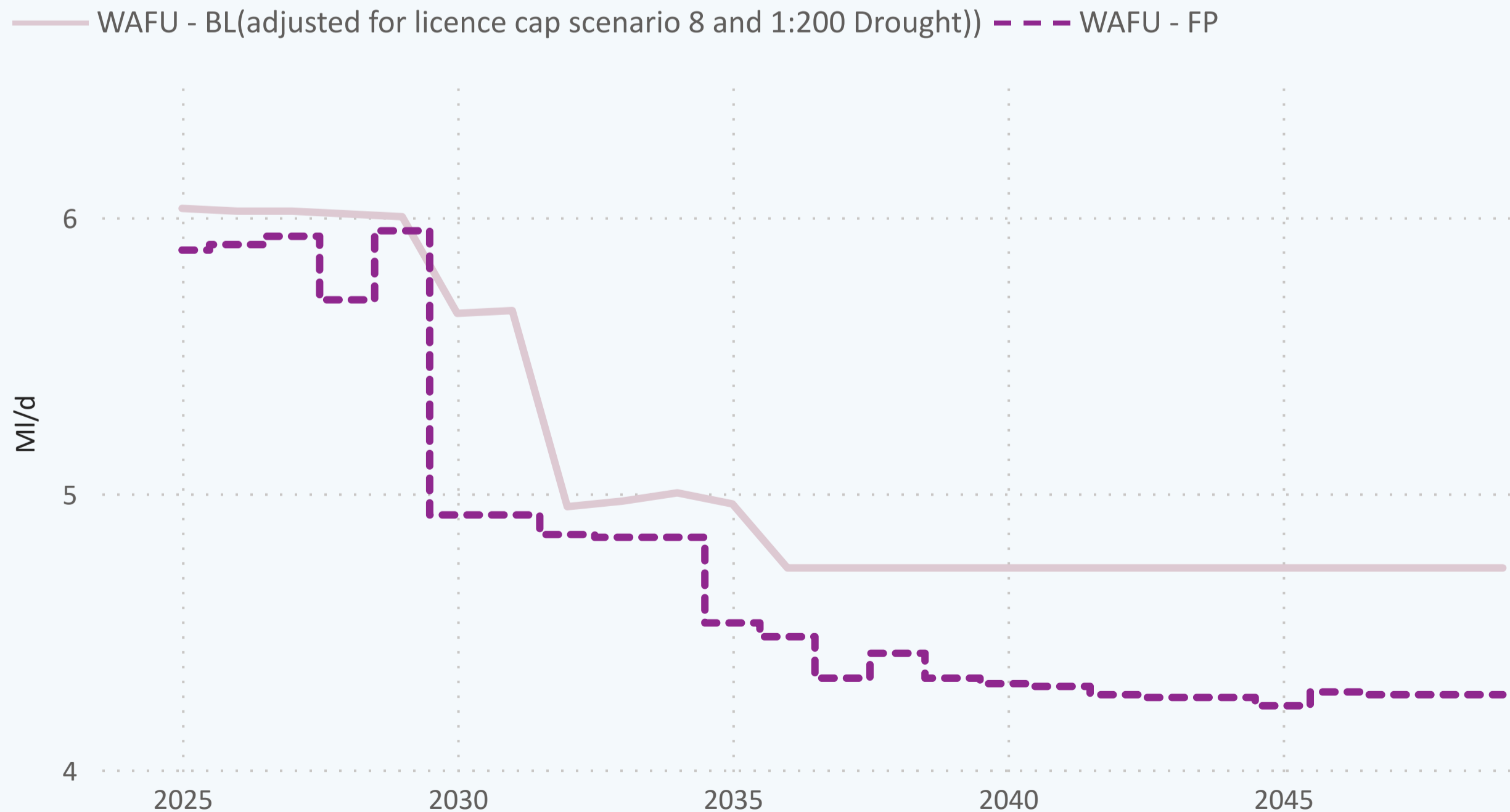


Table 11b: Preferred supply side options

Option ID	First Option Name
EE07	Adjustment to existing potable water export
EI08	Adjustment to existing potable water import
LC09	Adjustment for Licence cap scenario 8
NED2	Norfolk Bradenham to Norfolk East Dereham potable transfer (10 MI/d)
NED3	Norfolk East Dereham WTW backwash water recovery

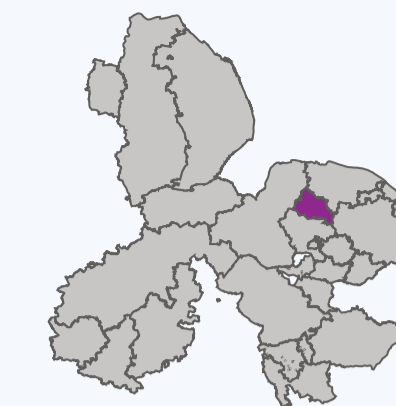


12. Non-Household consumption

Norfolk East Dereham



Norfolk East Dereham

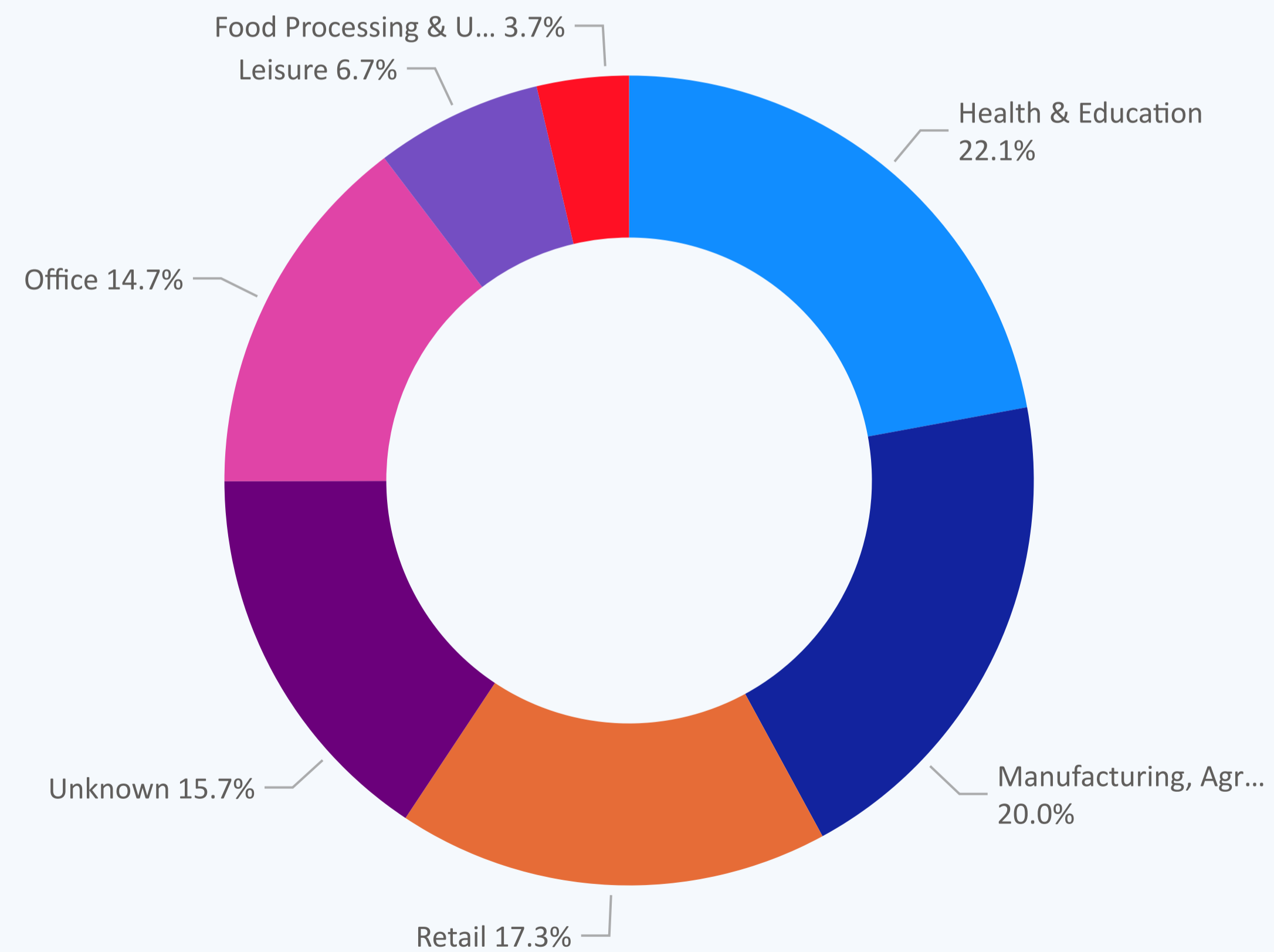
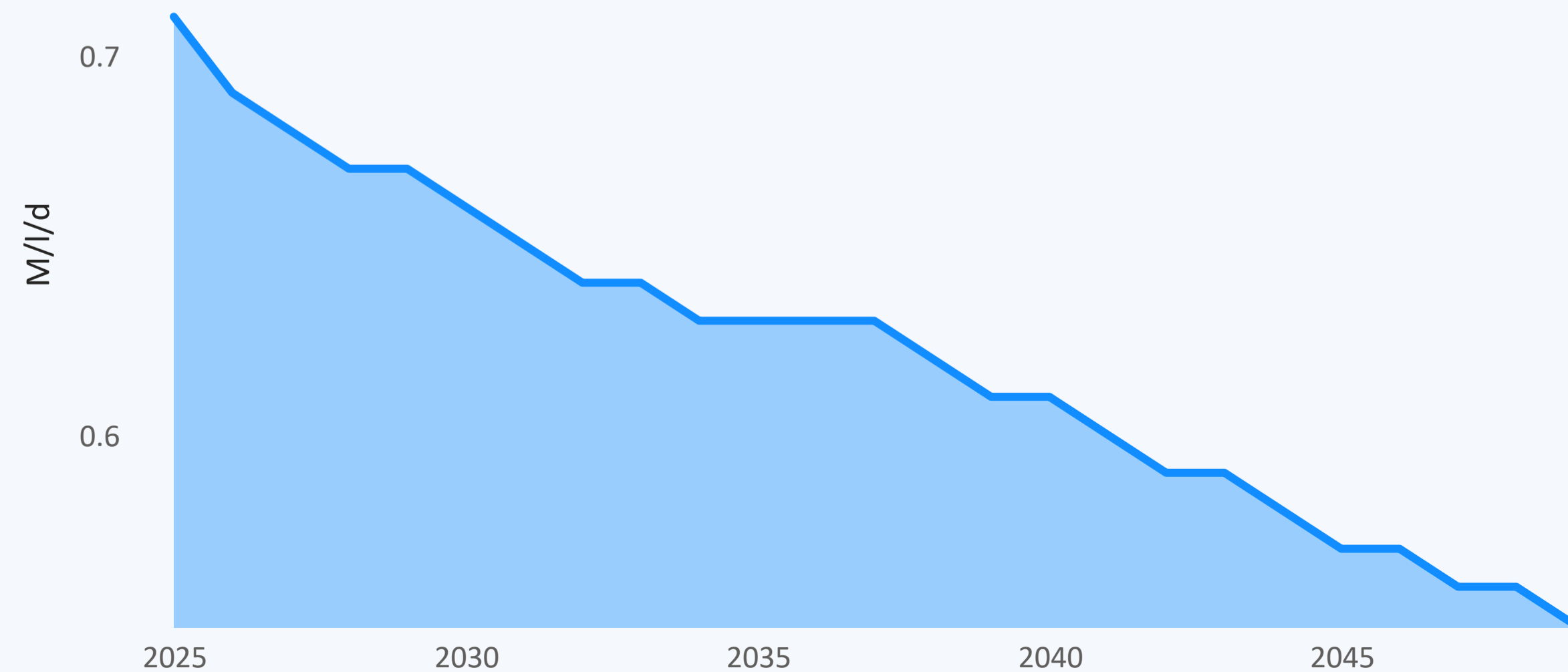


12.1 Non-Household demand Norfolk East Dereham

In 2025, 0.7 MI/d of Non-Household demand (measured and unmeasured) is expected. In 2049 it is expected to be 0.6 MI/d, which is a -22.54% change between the years.

Figure 12: % Non-Household modelled sectors within resource zone

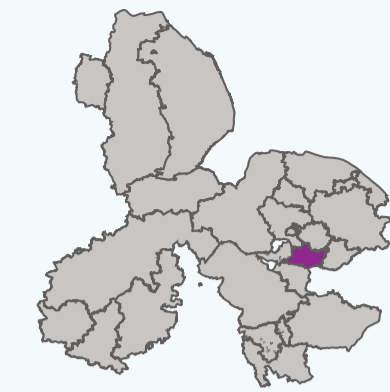
Figure 11: Non-Household demand forecast 2025-2050



3. Deployable Output summary

DYAA

Norfolk East Harling



3.1 Resource Zone geography: Norfolk East Harling:

The Norfolk East Harling WRZ covers an area of 217 sq. km and lies in the centre of East Anglia. The zone is supplied by groundwater abstractions from the Suffolk Chalk aquifer.

3.2

Baseline deployable output (including 1:500 drought): *5.1 MI/d*

Deployable output reductions

Restoring sustainable abstraction (recent actual average): *-1.7 MI/d*

Reductions to achieve environmental destination (BAU+): *-3.0 MI/d* by 2036.

Climate change: *0.0 MI/d* by 2050.

Baseline deployable output reduces by a total of *-4.7 MI/d* by 2050 a reduction of 93.1%.

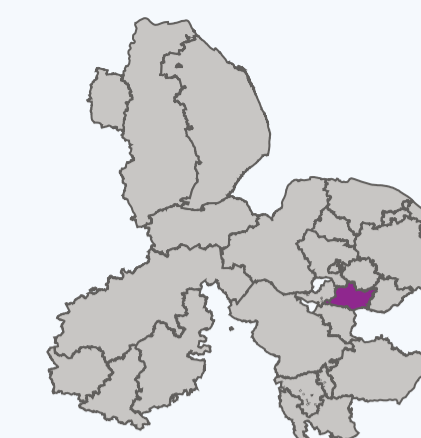
Table 3: supply characteristics (all values are MI/d)

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
DO pre forecast changes	5.1	5.1	5.1	5.1	5.1
Change in DO due to climate change	0.0	0.0	0.0	0.0	0.0
DO reductions to restore sustainable abstraction	-1.7	-1.7	-1.7	-1.7	-1.7
DO reductions for Environmental Destination	0.0	0.0	-3.0	-3.0	-3.0
Change in DO from drought measures	0.0	0.0	0.0	0.0	0.0
Final DO	3.4	3.4	0.4	0.4	0.4
Raw water losses (-ve)	-0.2	-0.2	-0.2	-0.2	-0.2
Outage Allowance (-ve)	0.0	0.0	0.0	0.0	0.0
WAFU (own sources)	3.2	3.2	0.1	0.1	0.1
Net Transfers	-0.3	0.6	3.5	3.4	3.4
Other benefits	1.68	0.00	0.00	0.00	0.00
Total Water Available for Use	4.5	3.8	3.7	3.6	3.6

3.3 The baseline Deployable Output data presented in this section represents the Environment Agency's preferred sustainability reduction licence cap scenario. This includes recent actual average caps to time limited licences in 2022-24 and caps to all other permanent licences by 2030. The impact of 1:500 drought resilience has also been applied from 2025 rather than the preferred scenario of 2039/2040. These factors apply to the baseline forecast only. For the final plan forecast we have applied our best value scenario for licence caps, which was developed following an iterative process to deliver licence caps as early as possible. The transition to 1:500 drought resilience occurs in 2039/40 in the final plan forecast. Further information is available in the WRMP24 Decision Making technical supporting document, section 6.



4. Population & Housing



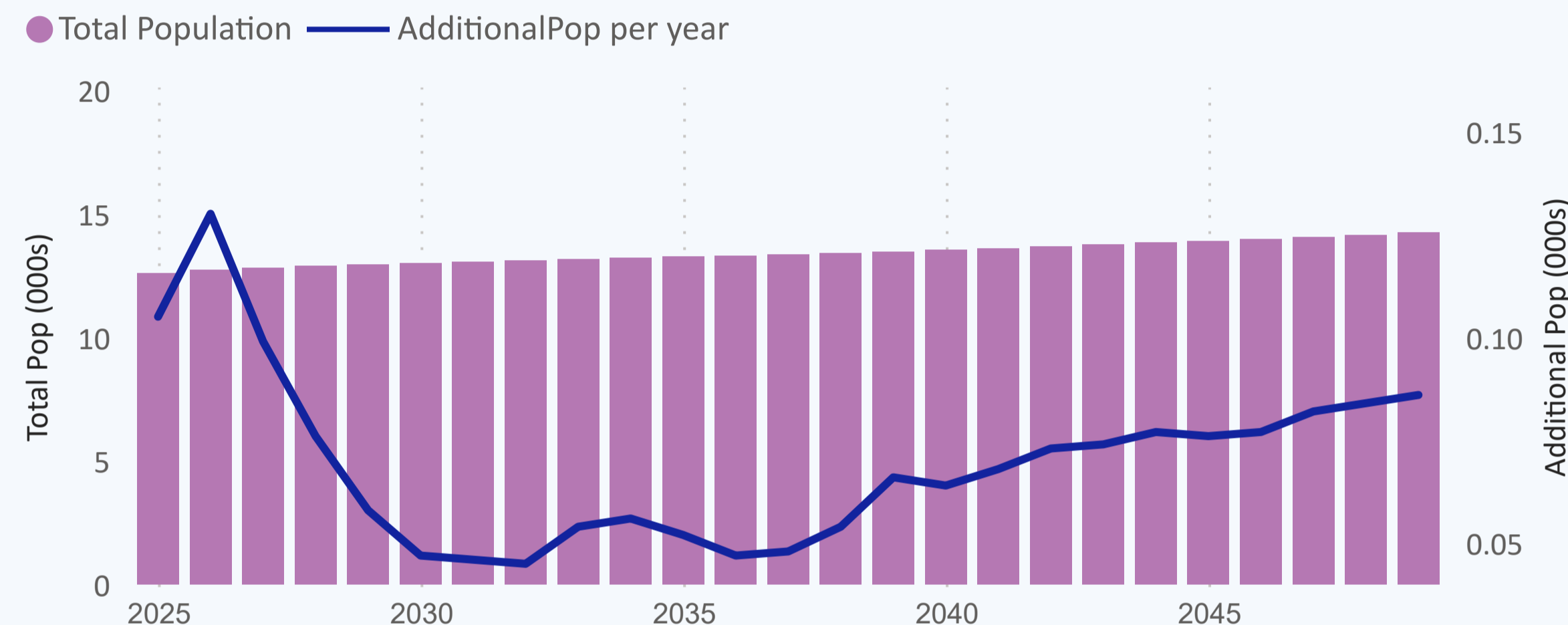
Norfolk East Harling

4.1 Over the WRMP period, population in **Norfolk East Harling** is set to increase from **12599** in 2025 to **14238** in 2049-50 - this is an increase of **13.0 %** over the 25 years.

Table 4a: Population totals (cumulative) by AMP

Year	Total Population (000s)
2029-30 (end of AMP8)	12.962
2034-35 (end of AMP9)	13.210
2039-40 (end of AMP10)	13.477
2044-45 (end of AMP11)	13.833
2049-50 (end of AMP12)	14.238

Figure 2: Total Resource Zone Population

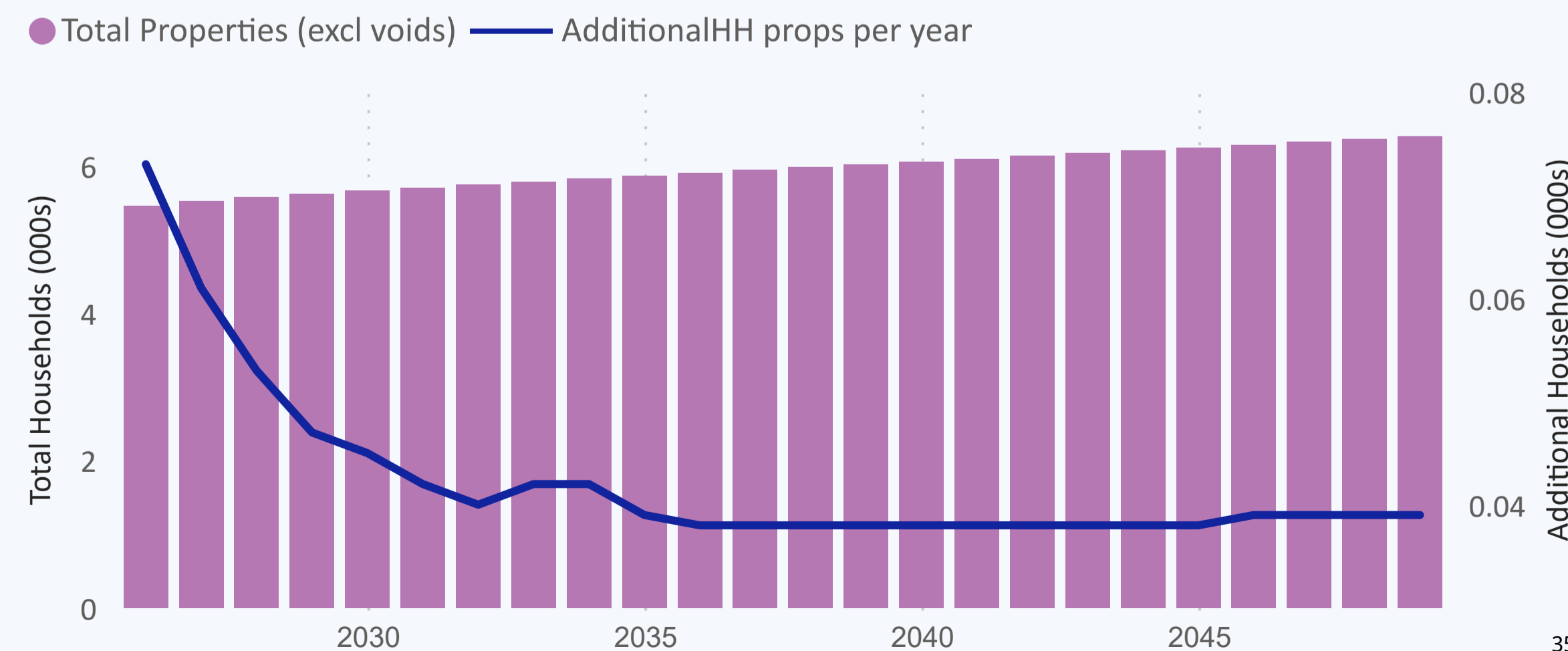


4.2 Over the WRMP period, property numbers in **Norfolk East Harling** are set to increase from **5384** in 2025 to **6404** in 2049-50 - this is an increase of **18.9 %** over the 25 years.

Table 4b: Property totals (cumulative) by AMP

Year	Total Properties-excl voids (000s)
2029-30 (end of AMP8)	5.618
2034-35 (end of AMP9)	5.829
2039-40 (end of AMP10)	6.020
2044-45 (end of AMP11)	6.210
2049-50 (end of AMP12)	6.404

Figure 3: Total Resource Zone Properties (excl. voids)



5. Baseline Supply Demand Balance DYAA

Norfolk East Harling

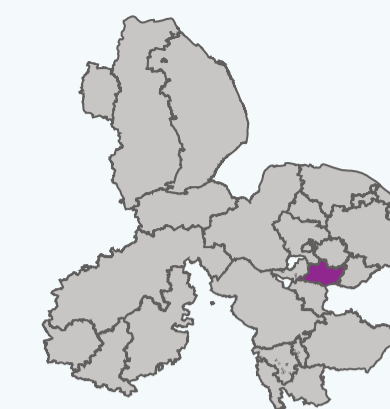


Figure 4: Norfolk East Harling baseline supply demand balance to 2050 for Dry Year Annual Average conditions

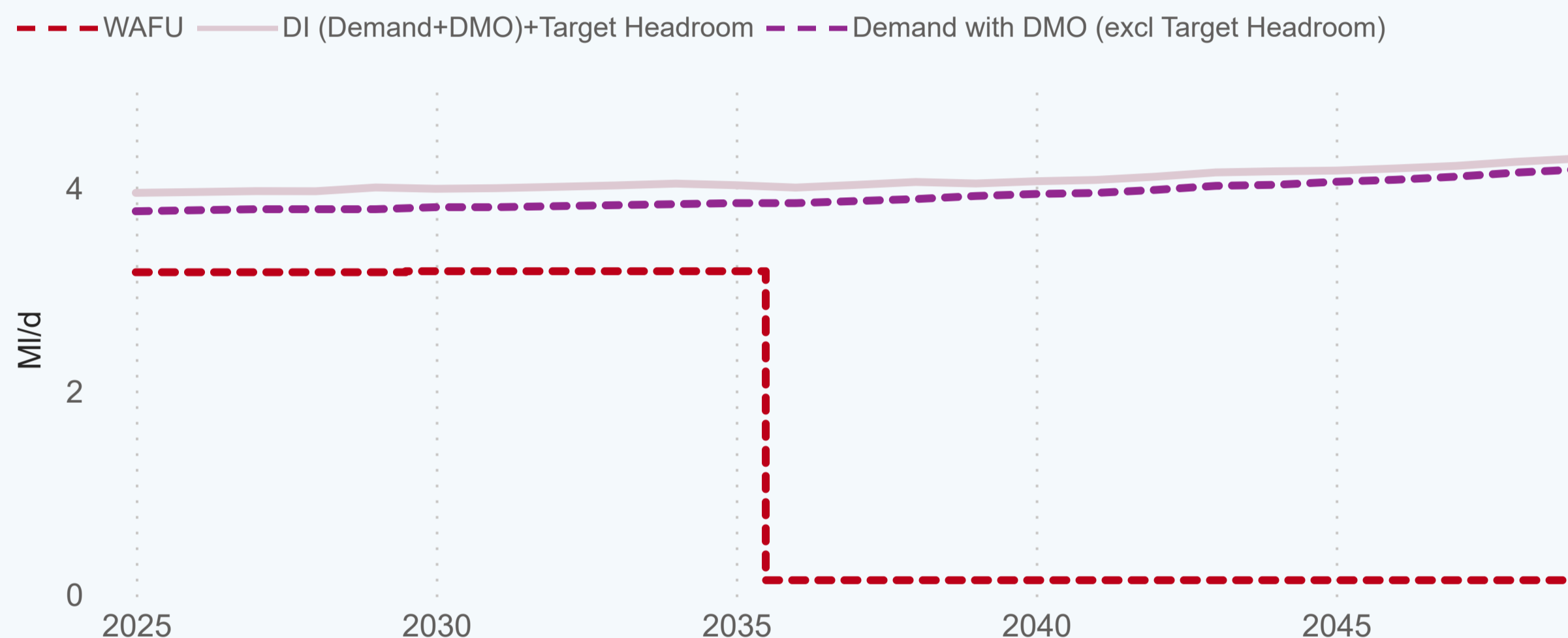


Table 5a: Baseline supply demand balance 2025 - 2050 for DYAA conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	3.2	3.2	3.2	0.1	0.1	0.1
Net Transfers	0.0	0.0	0.0	0.0	0.0	0.0
Total Water Available For Use	3.2	3.2	3.2	0.1	0.1	0.1
Distribution Input	3.8	3.8	3.8	3.9	4.0	4.2
Target Headroom	0.2	0.2	0.2	0.1	0.1	0.1
Supply Demand Balance	-0.8	-0.8	-0.9	-3.9	-4.0	-4.1

Table 5b: Baseline demand forecast (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	1.5	1.6	1.8	1.9	2.0	2.0
Water delivered unmeasured household	0.4	0.2	0.1	0.0	0.0	0.0
Total Leakage	0.6	0.6	0.6	0.6	0.6	0.6
Water delivered measured non-household	1.3	1.3	1.4	1.4	1.5	1.6
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	3.8	3.8	3.8	3.9	4.0	4.2

5.1 DYAA BL supply demand summary: Norfolk East Harling

Baseline Supply Demand Balance: This zone is expected to go into deficit by 2025 (under the preferred baseline scenario - as described in section 3.3).

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 1.9 MI/d in 2025 to 2.0 MI/d in 2050, a percentage change of 9.2 %.
- Baseline Leakage: is forecast to change from 0.6 MI/d in 2025 to 0.6 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 1.3 MI/d to 1.6 MI/d.
- Baseline Distribution Input: is expected to change from 3.8 MI/d to 4.2 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).

6. Baseline Supply Demand Balance DYCP

Norfolk East Harling

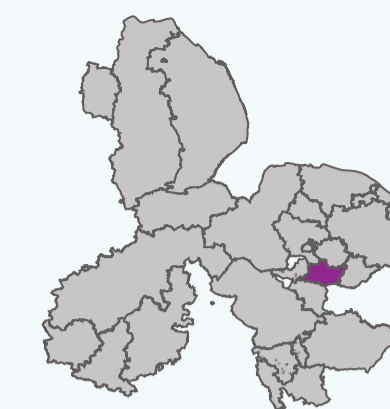


Figure 5: Norfolk East Harling baseline supply demand balance to 2050 for Dry Year Critical Period conditions

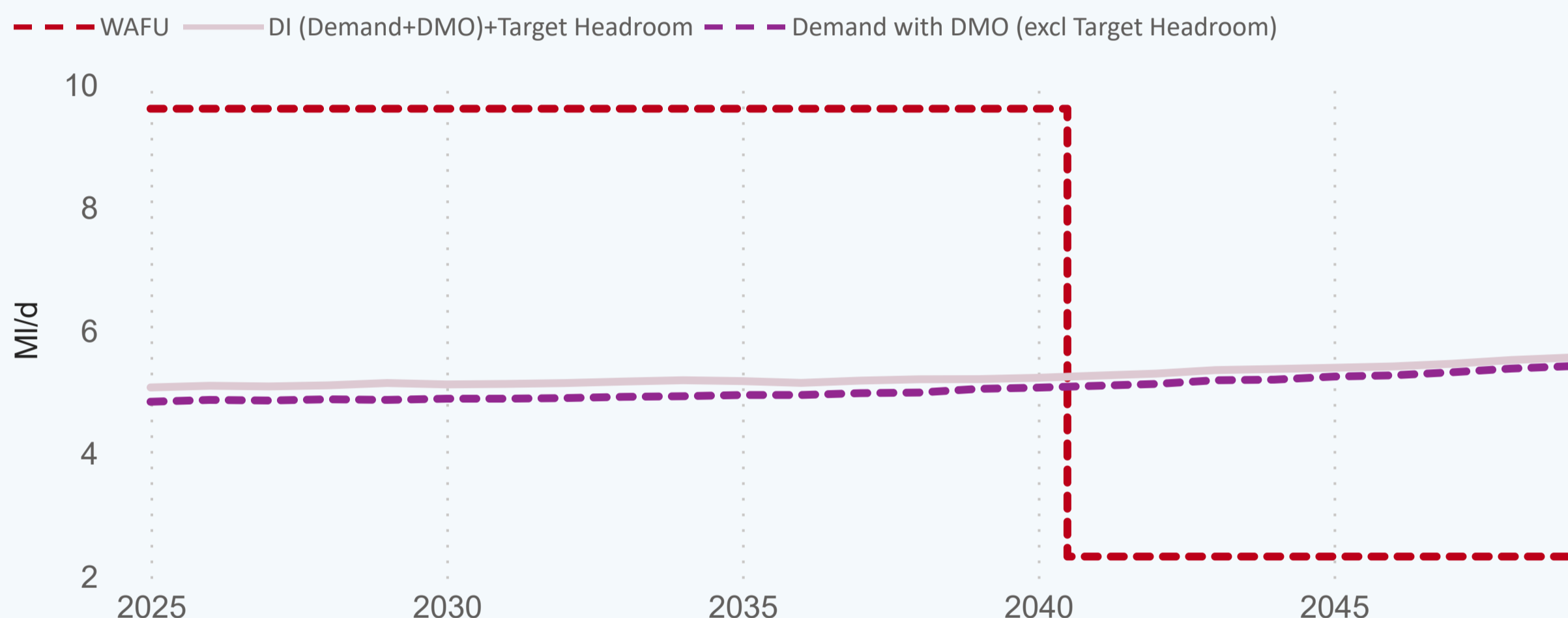


Table 6b: Baseline demand forecast with DYCP conditions (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.0	2.2	2.4	2.5	2.6	2.7
Water delivered unmeasured household	0.5	0.3	0.1	0.0	0.0	0.0
Total Leakage	0.6	0.6	0.6	0.6	0.6	0.6
Water delivered measured non-household	1.8	1.8	1.8	1.9	2.0	2.1
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	4.8	4.9	4.9	5.1	5.2	5.4

Table 6a: Baseline supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	9.6	9.6	9.6	9.6	2.3	2.3
Net Transfers	0.0	0.0	0.0	0.0	0.0	0.0
Total Water Available For Use	9.6	9.6	9.6	9.6	2.3	2.3
Distribution Input	4.8	4.9	4.9	5.1	5.2	5.4
Target Headroom	0.2	0.3	0.3	0.2	0.2	0.1
Supply Demand Balance	4.5	4.5	4.4	4.4	-3.1	-3.2

6.1 DYCP BL supply demand summary: Norfolk East Harling

Baseline Supply Demand balance: This zone is not expected to go into deficit

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 2.5 MI/d in 2025 to 2.7 MI/d in 2050, a percentage change of 10.5 %.
- Baseline Leakage: is forecast to change from 0.6 MI/d in 2025 to 0.6 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 1.8 MI/d to 2.1 MI/d.
- Baseline Distribution Input: is expected to change from 4.8 MI/d to 5.4 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).



7. Demand forecast and PCC

Norfolk East Harling

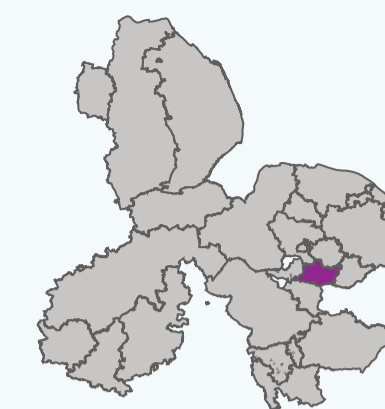


Figure 6: Norfolk East Harling DYAA DI with and without demand management strategy

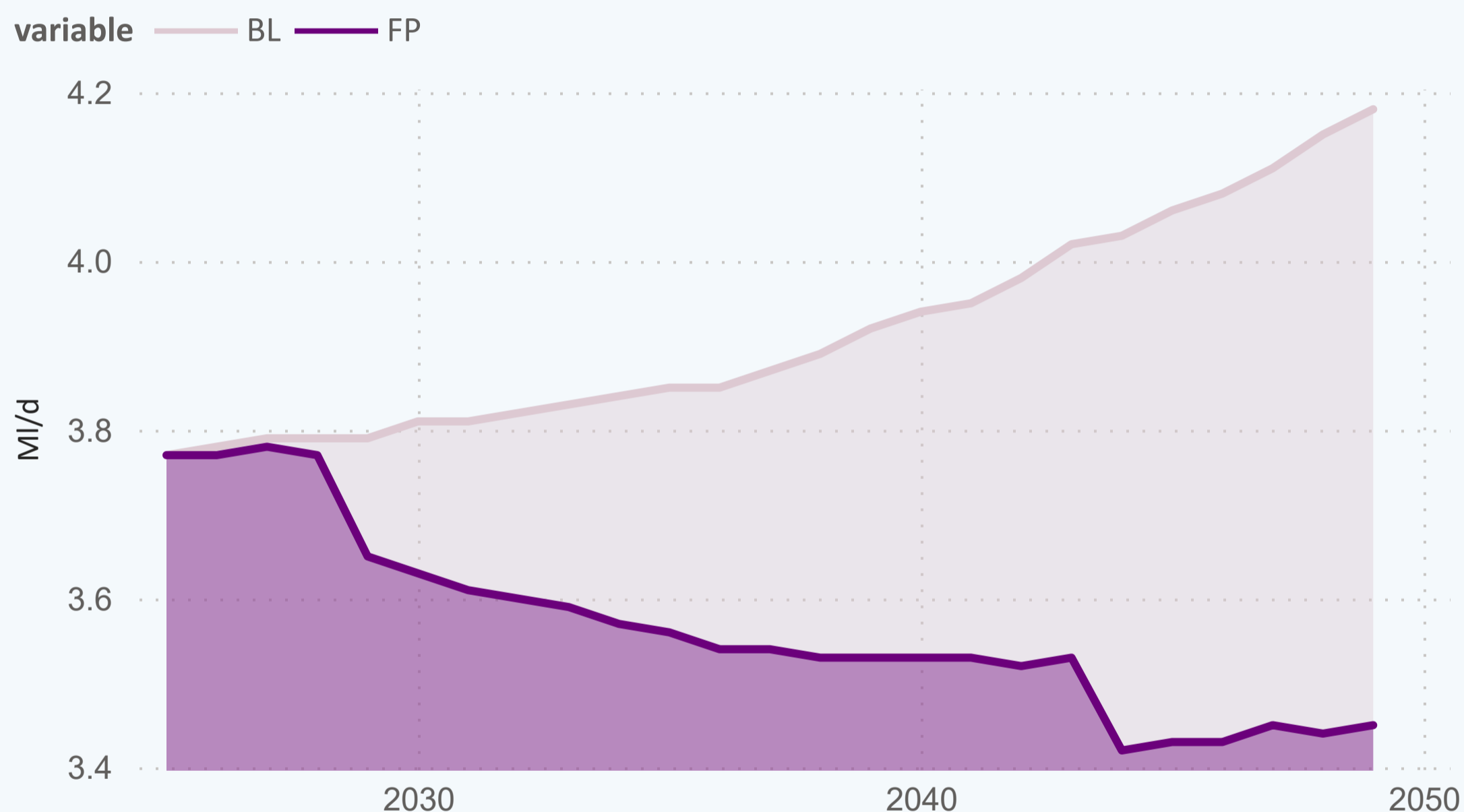


Table 7a: Demand - baseline and final plan

variable	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL	3.8	3.8	3.9	4.0	4.2
FP	3.7	3.6	3.5	3.4	3.5

7.2 Demand Norfolk East Harling (see Table 7a)

Baseline demand is expected to increase from 3.8 (MI/d) in 2025 to 4.2 (MI/d) in 2050. With demand management options in place, demand is expected to be 3.5 (MI/d).

7.1 PCC Norfolk East Harling (see Table 7b)

Per Capita Consumption (PCC) in the base year 2025/26 is 130.8 (l/h/d) measured and 194.8 (l/h/d) unmeasured.

The weighted average PCC (l/h/d) comes in at 139.7 (l/h/d) in 2025/26. This is forecast to fall to 111.7 (l/h/d) in the Final Plan forecast as demand management option savings are realised and customers switch from unmeasured to measured status

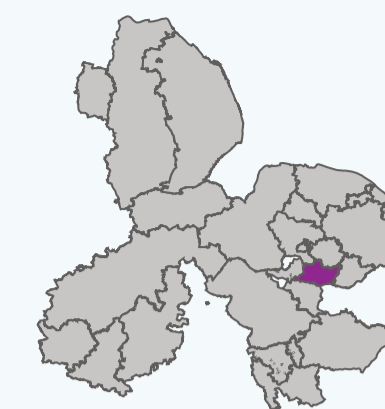
Table 7b: DMO strategy Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL demand forecast(DYAA)	136.6	135.5	135.0	135.9	135.6
FP demand forecast(DYAA)	128.1	121.9	115.8	113.5	111.7
% change BL to FP	-6.2%	-10.1%	-14.3%	-16.5%	-17.6%



8. Demand management options

Norfolk East Harling



8.1 Regional overview:

Across the entirety of the Anglian Water region our demand management strategy will comprise three strongly interlinked programs:

Water metering program:

- We intend to complete our current smart meter rollout which will replace our entire meter stock over 10 years (2 AMPs), noting that 1.1M smart meters will be installed across Anglian Water by 2025. The information resulting from 'smart metering' will help inform our customers regarding their water usage and will assist in our ability to influence this behaviour. It will also help with our ability to detect leakage, significantly reducing plumbing losses and customer supply pipe leaks.

Leakage reduction

- Our aim is to reduce leakage by more than 45MI/d from 2025 to 2050 across the whole Anglian Water area, building upon our ambitious program of leakage reduction in AMP7 (14% reduction of more than 27MI/d across the region by 2025).

Water efficiency measures

- New technologies and interventions will help promote the careful use of water. Additional water efficiency programs will include: the promotion of 'Smart' devices; further development of our Multi-utility web-portal; garden advice; support for vulnerable customers with plumbing loss and cspl; Community reward schemes. As part of our revised draft WRMP24 we have developed and included 'water efficiency visits' and leakage reduction measures for our Non-Household customers.

Figure 7: DMO strategy Final Plan for Norfolk East Harling

For full chart key see table below

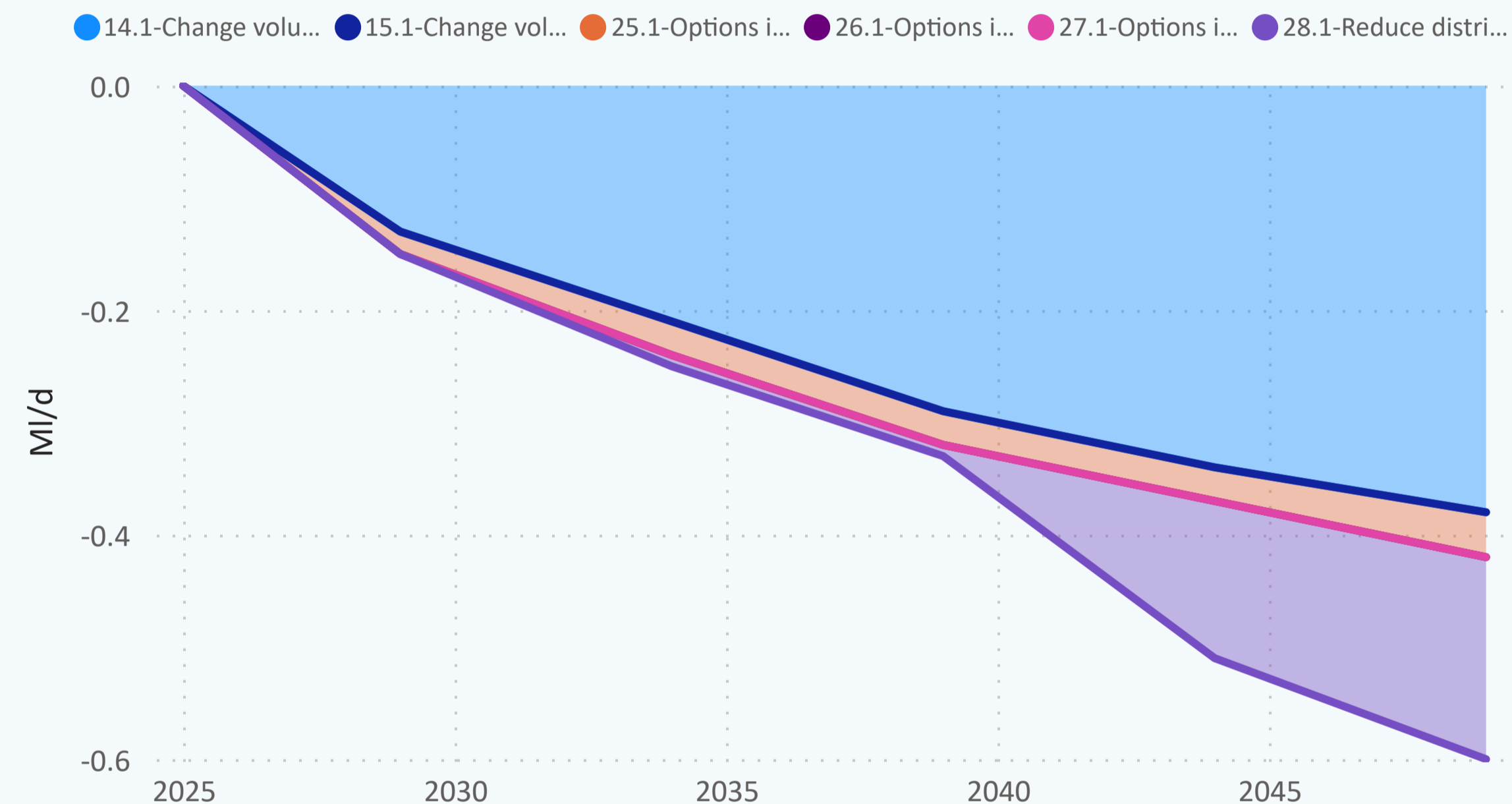


Table 8: DMO strategy Final Plan for Norfolk East Harling

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
14.1-Change volume delivered to measured households(-ve)	-0.1	-0.2	-0.3	-0.3	-0.4
15.1-Change volume delivered to unmeasured households(-ve)	0.0	0.0	0.0	0.0	0.0
25.1-Options impacting on measured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
26.1-Options impacting on unmeasured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
27.1-Options impacting on Void properties - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
28.1-Reduce distribution losses (-ve)	0.0	0.0	0.0	-0.1	-0.2



9. Final Plan Supply Demand Balance DYAA

Norfolk East Harling

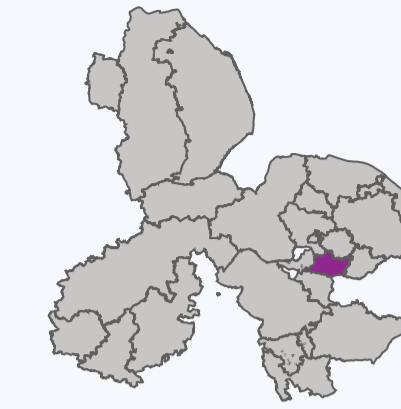


Figure 8: Norfolk East Harling final plan SDB to 2050 for Dry Year Annual Average conditions

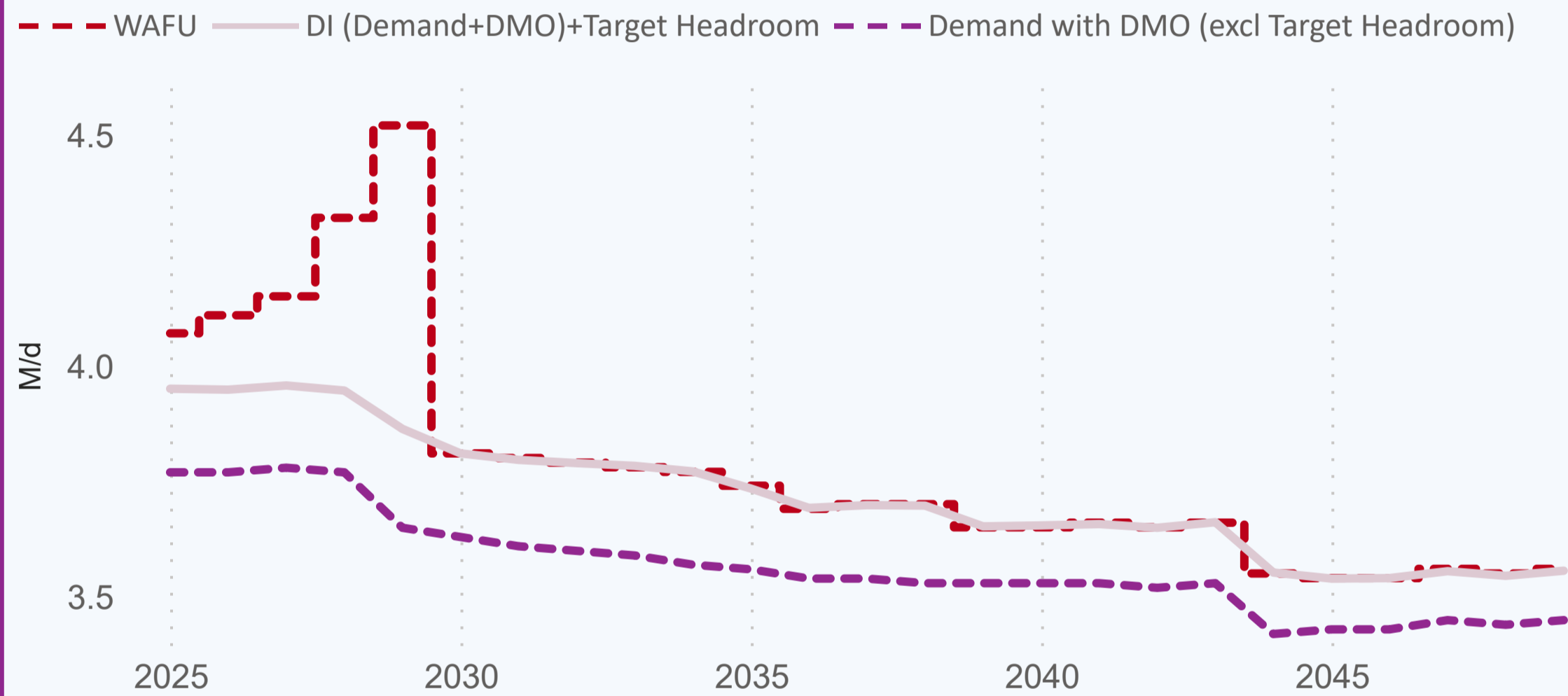


Table 9a: final plan SDB to 2050 for Dry Year conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	4.9	4.9	3.2	0.1	0.1	0.1
Net Transfers	-0.8	-0.3	0.6	3.5	3.4	3.4
Total Water Available For Use	4.1	4.5	3.8	3.7	3.6	3.6
Distribution Input	3.8	3.7	3.6	3.5	3.4	3.5
Target Headroom	0.2	0.2	0.2	0.1	0.1	0.1
Supply Demand Balance	0.1	0.7	0.0	0.0	0.0	0.0

Table 9b: Final Plan demand forecast for DYAA conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	1.5	1.5	1.6	1.6	1.6	1.6
Water delivered unmeasured household	0.4	0.2	0.1	0.0	0.0	0.0
Total Leakage	0.6	0.6	0.5	0.5	0.4	0.4
Water delivered measured non-household	1.3	1.3	1.3	1.3	1.3	1.4
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	3.8	3.7	3.6	3.5	3.4	3.5

9.1 DYAA FP supply demand summary: Norfolk East Harling

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 1.9 MI/d in 2025 to 1.6 MI/d in 2050, a percentage change of -11.4 %.
- Final Plan Leakage is forecast to change from 0.6 MI/d in 2025 to 0.4 MI/d by 2050.
- Final Plan Non-Household demand is expected to change from 1.3 MI/d to 1.4 MI/d.
- Final Plan Distribution Input is expected to change from 3.8 MI/d to 3.5 MI/d by 2050.



10. Final Plan Supply Demand Balance DYCP

Norfolk East Harling

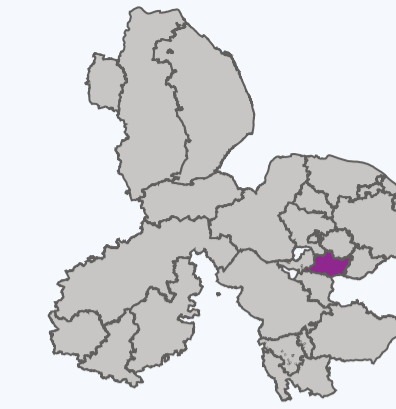


Figure 9: Norfolk East Harling baseline supply demand balance to 2050 for Dry Year Critical Period conditions

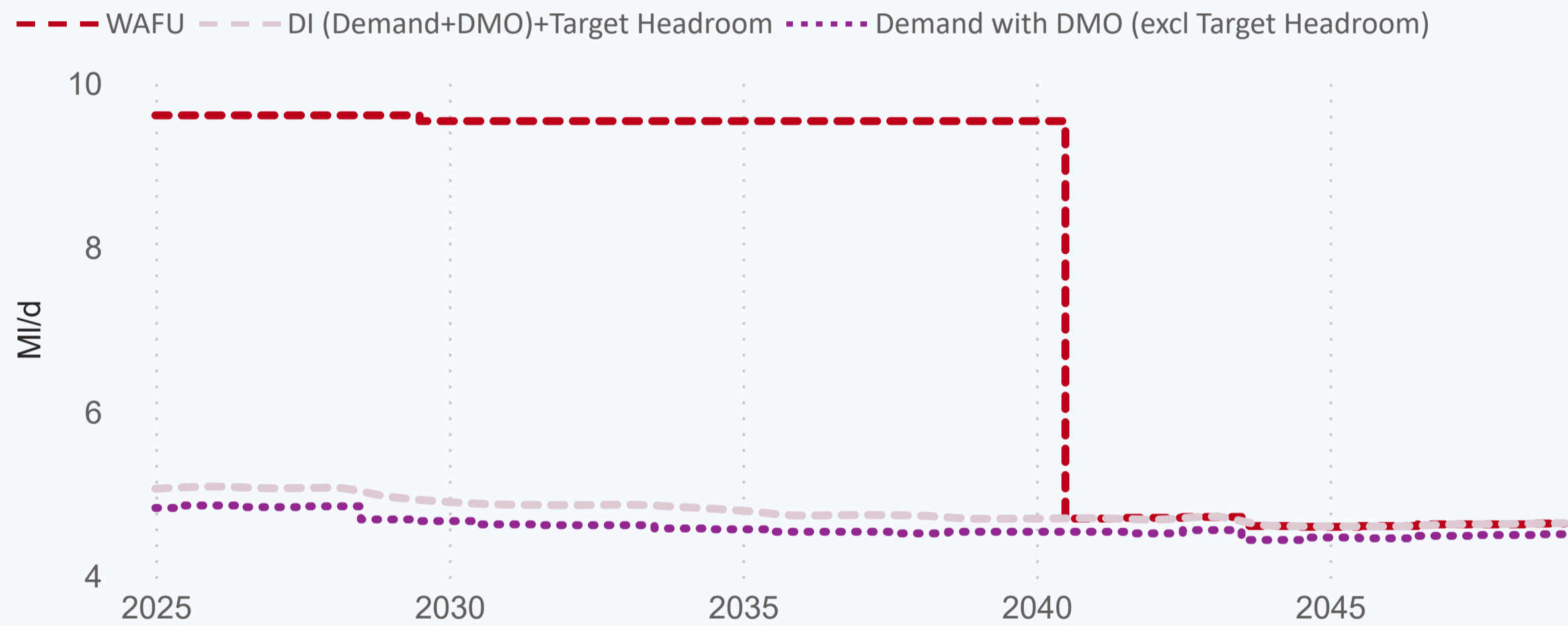


Table 10a: Final Plan supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	9.6	9.6	9.6	9.6	2.3	2.3
Net Transfers	0.0	0.0	-0.1	-0.1	2.3	2.3
Total Water Available For Use	9.6	9.6	9.5	9.5	4.6	4.6
Distribution Input	4.8	4.7	4.6	4.5	4.4	4.5
Target Headroom	0.2	0.3	0.3	0.2	0.2	0.1
Supply Demand Balance	4.5	4.6	4.7	4.8	0.0	0.0

Table 10b: Final Plan demand forecast for DYCP conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.0	2.0	2.1	2.2	2.2	2.2
Water delivered unmeasured household	0.5	0.3	0.1	0.0	0.0	0.0
Total Leakage	0.6	0.6	0.5	0.5	0.4	0.4
Water delivered measured non-household	1.8	1.8	1.8	1.8	1.8	1.9
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	4.8	4.7	4.6	4.5	4.4	4.5

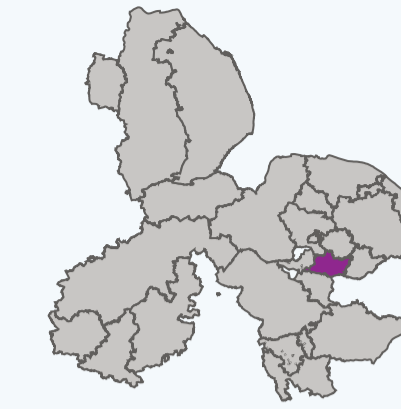
10.1 DYCP BL supply demand summary: Norfolk East Harling

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 2.5 MI/d in 2025 to 2.2 MI/d in 2050, a percentage change of -9.3 %.
- Final Plan Leakage: is forecast to change from 0.6 MI/d in 2025 to 0.4 MI/d by 2050
- Final Plan Non-Household demand: is expected to change from 1.8 MI/d to 1.9 MI/d.
- Final Plan Distribution Input: is expected to change from 4.8 MI/d to 4.5 MI/d by 2050.



11. Supply Side Strategy



Norfolk East Harling

Table 11a: Total Water Available for use Baseline and Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
WAFU - BL	4.9	3.2	0.1	0.1	0.1
WAFU - FP	4.5	3.8	3.7	3.6	3.6

11.1 Supply side strategy options.

For details on the feasible options list for Norfolk East Harling WRZ please refer to the Supply-Side Option Development technical supporting document.

Figure 10 Water Available for Use (WAFU) - baseline (BL) and final plan (FP)

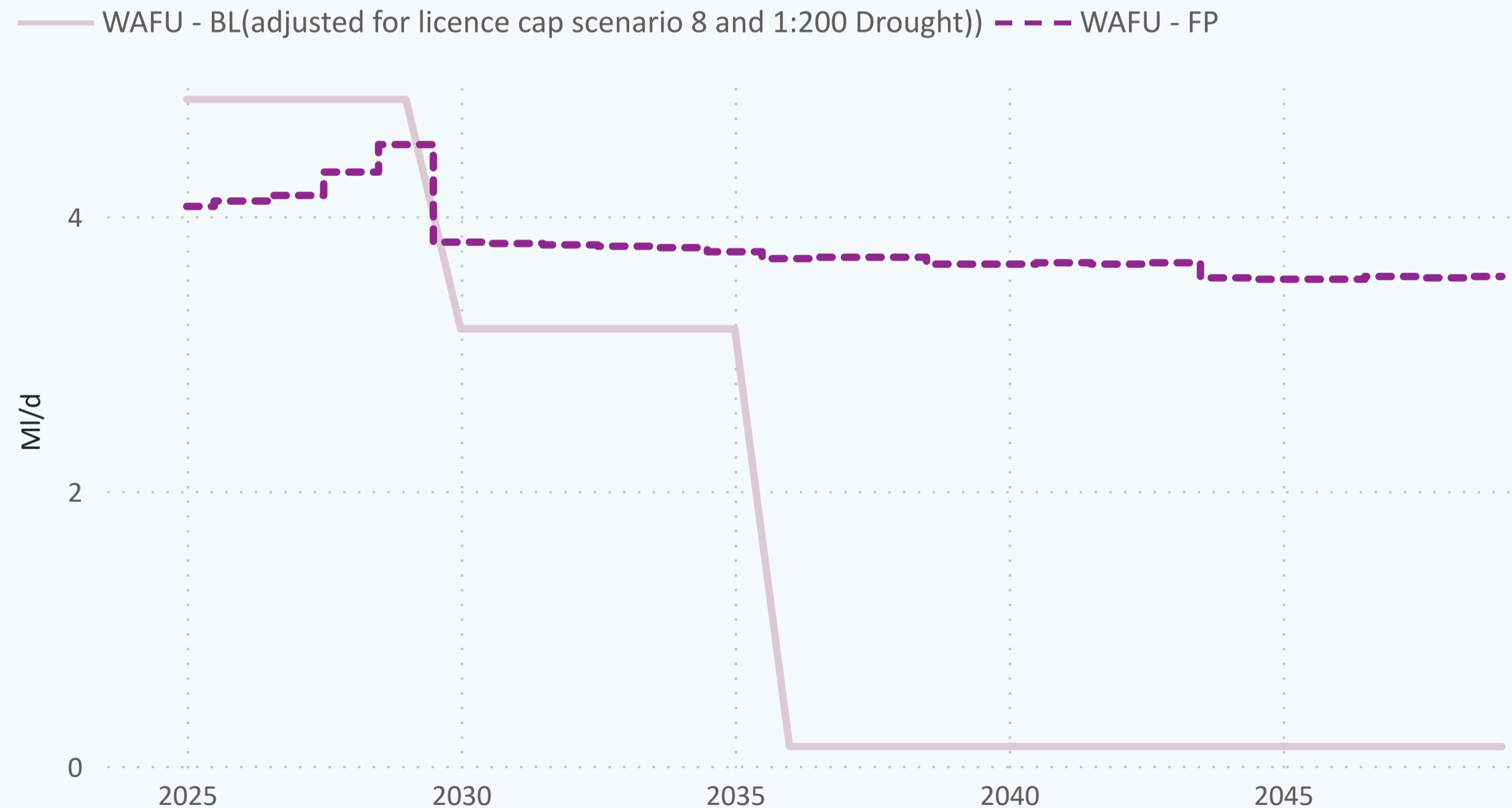


Table 11b: Preferred supply side options

Option ID	First Option Name
EE08	Adjustment to existing potable water export
LC10	Adjustment for Licence cap scenario 8
NEH3	Suffolk Thetford to Norfolk East Harling potable transfer (5 MI/d)



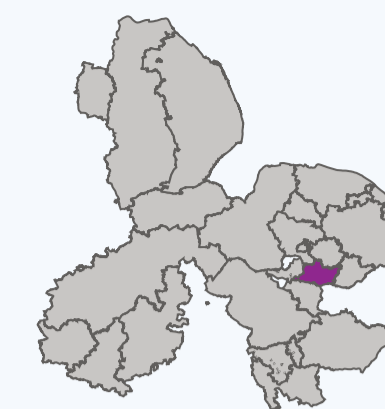


12. Non-Household consumption

Norfolk East Harling



Norfolk East Harling

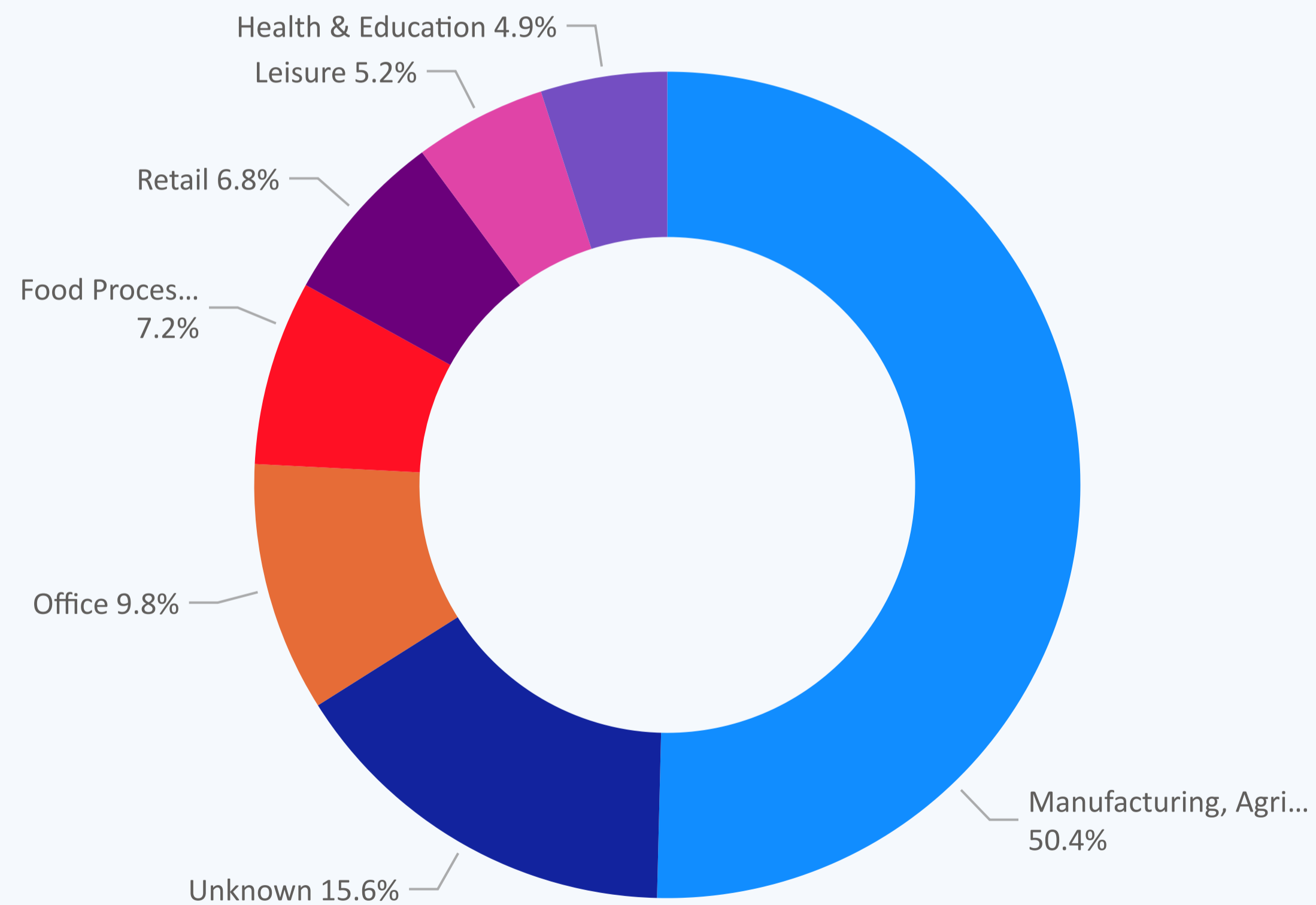
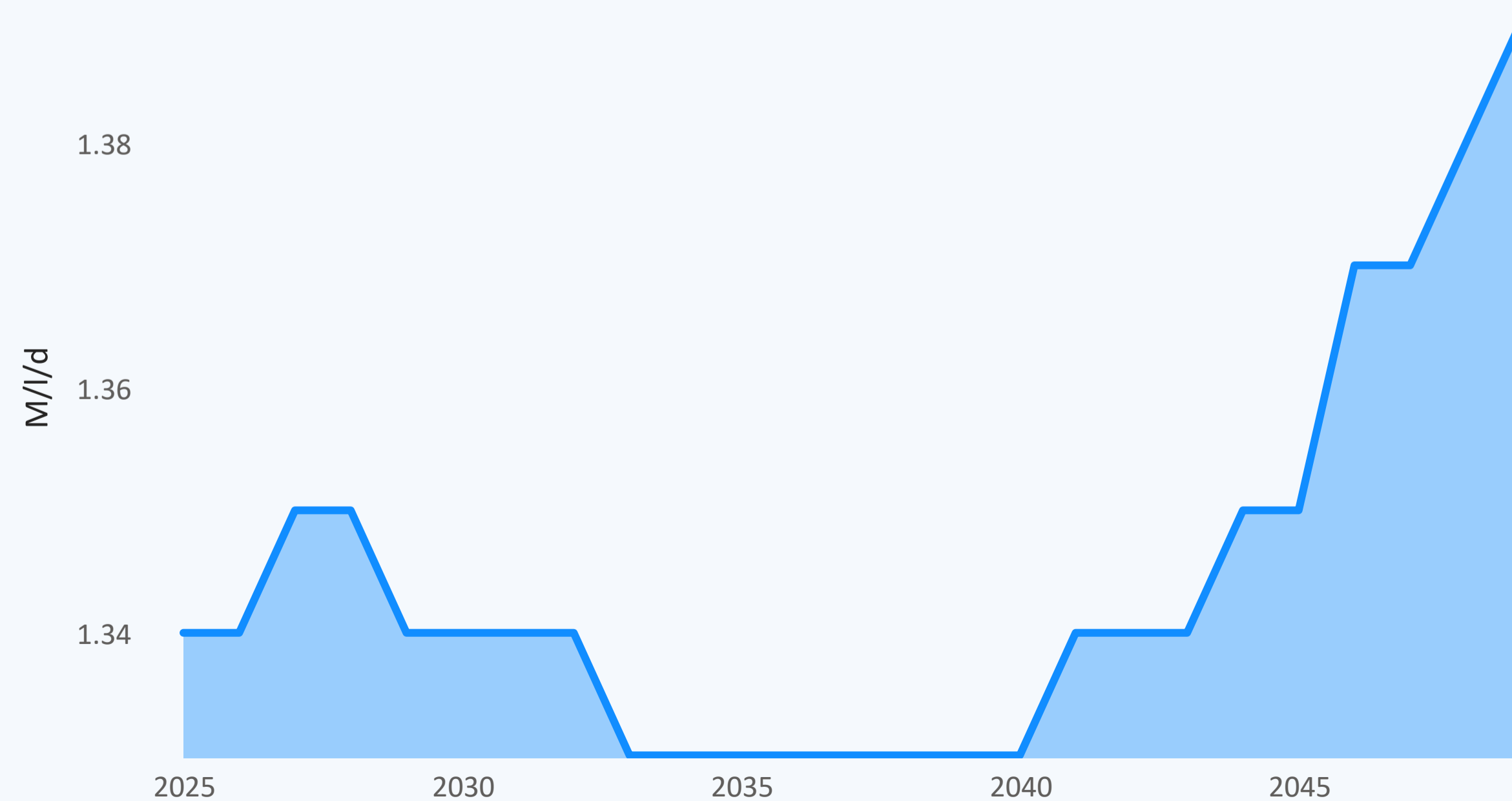


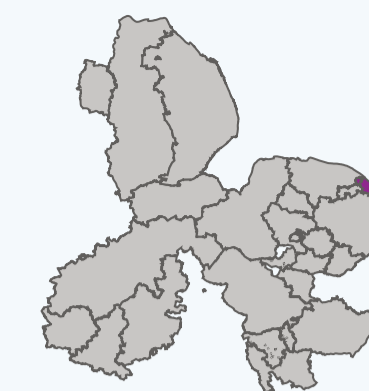
12.1 Non-Household demand Norfolk East Harling

In 2025, 1.3 MI/d of Non-Household demand (measured and unmeasured) is expected. In 2049 it is expected to be 1.4 MI/d, which is a 2.99% change between the years.

Figure 12: % Non-Household modelled sectors within resource zone

Figure 11: Non-Household demand forecast 2025-2050





3. Deployable Output summary DYAA

Norfolk Happisburgh

3.1 Resource Zone geography: Norfolk Happisburgh:

The Norfolk Happisburgh WRZ covers an area of 190 sq. km and sits along the Norfolk coastline.

It should be noted that this WRZ has no actual supply sources of its own.

3.2

Baseline deployable output (including 1:500 drought): *0.0 MI/d*

Deployable output reductions

Restoring sustainable abstraction (recent actual average): *0.0 MI/d*

Reductions to achieve environmental destination (BAU+): *0.0 MI/d*.

Climate change: *0.0 MI/d* by 2050.

Baseline deployable output reduces by a total of *0.0 MI/d* by 2050.

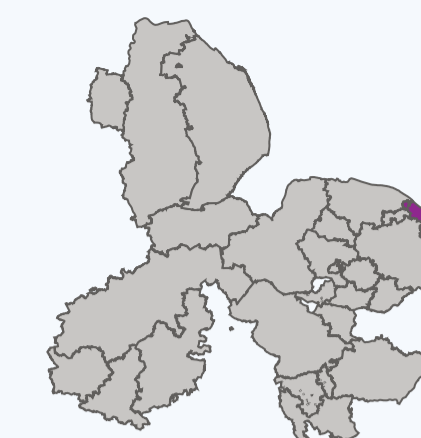
Table 3: supply characteristics (all values are MI/d)

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
DO pre forecast changes	0.0	0.0	0.0	0.0	0.0
Change in DO due to climate change	0.0	0.0	0.0	0.0	0.0
DO reductions to restore sustainable abstraction	0.0	0.0	0.0	0.0	0.0
DO reductions for Environmental Destination	0.0	0.0	0.0	0.0	0.0
Change in DO from drought measures	0.0	0.0	0.0	0.0	0.0
Final DO	0.0	0.0	0.0	0.0	0.0
Raw water losses (-ve)	0.0	0.0	0.0	0.0	0.0
Outage Allowance (-ve)	0.0	0.0	0.0	0.0	0.0
WAFU (own sources)	0.0	0.0	0.0	0.0	0.0
Net Transfers	4.1	4.2	4.1	4.3	4.6
Other benefits	0.00	0.00	0.00	0.00	0.00
Total Water Available for Use	4.1	4.2	4.1	4.3	4.6

3.3 The baseline Deployable Output data presented in this section represents the Environment Agency’s preferred sustainability reduction licence cap scenario. This includes recent actual average caps to time limited licences in 2022-24 and caps to all other permanent licences by 2030. The impact of 1:500 drought resilience has also been applied from 2025 rather than the preferred scenario of 2039/2040. These factors apply to the baseline forecast only. For the final plan forecast we have applied our best value scenario for licence caps, which was developed following an iterative process to deliver licence caps as early as possible. The transition to 1:500 drought resilience occurs in 2039/40 in the final plan forecast. Further information is available in the WRMP24 Decision Making technical supporting document, section 6.



4. Population & Housing



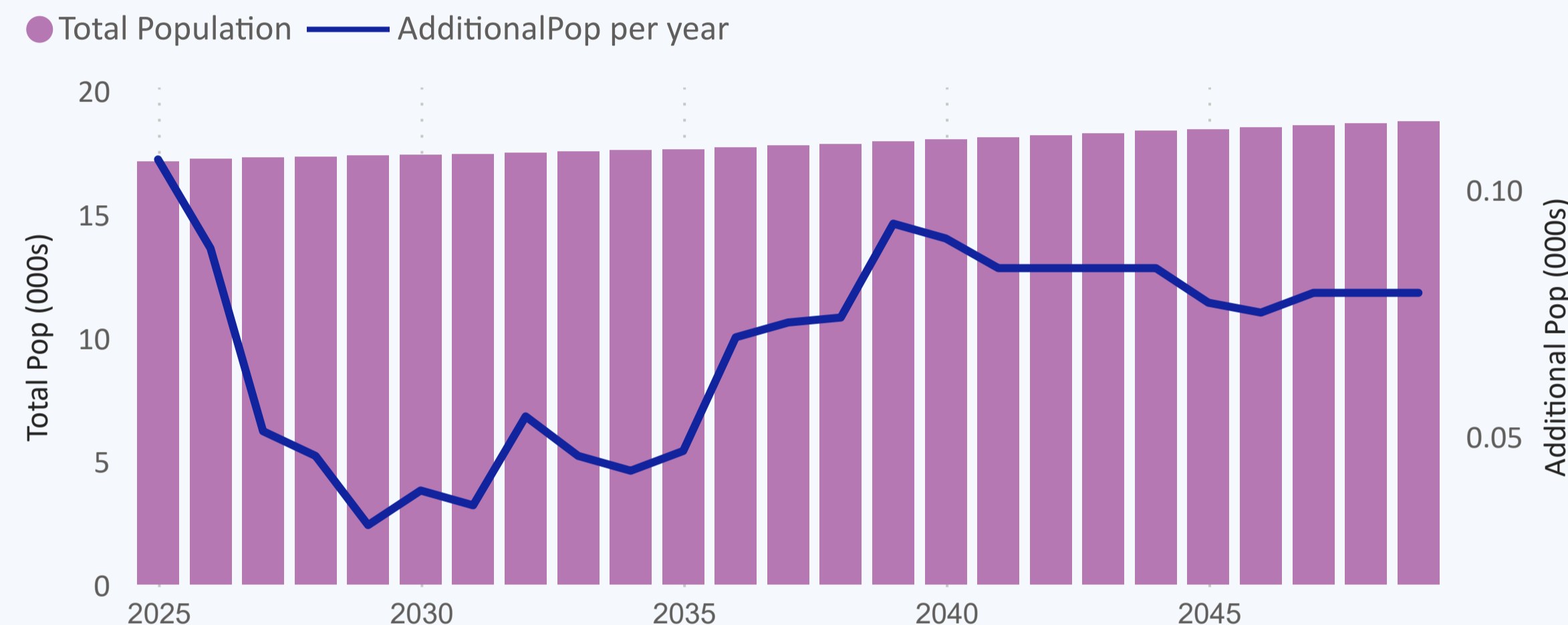
Norfolk Happisburgh

4.1 Over the WRMP period, population in **Norfolk Happisburgh** is set to increase from **17131** in 2025 to **18738** in 2049-50 - this is an increase of **9.4 %** over the 25 years.

Table 4a: Population totals (cumulative) by AMP

Year	Total Population (000s)
2029-30 (end of AMP8)	17.348
2034-35 (end of AMP9)	17.566
2039-40 (end of AMP10)	17.923
2044-45 (end of AMP11)	18.349
2049-50 (end of AMP12)	18.738

Figure 2: Total Resource Zone Population

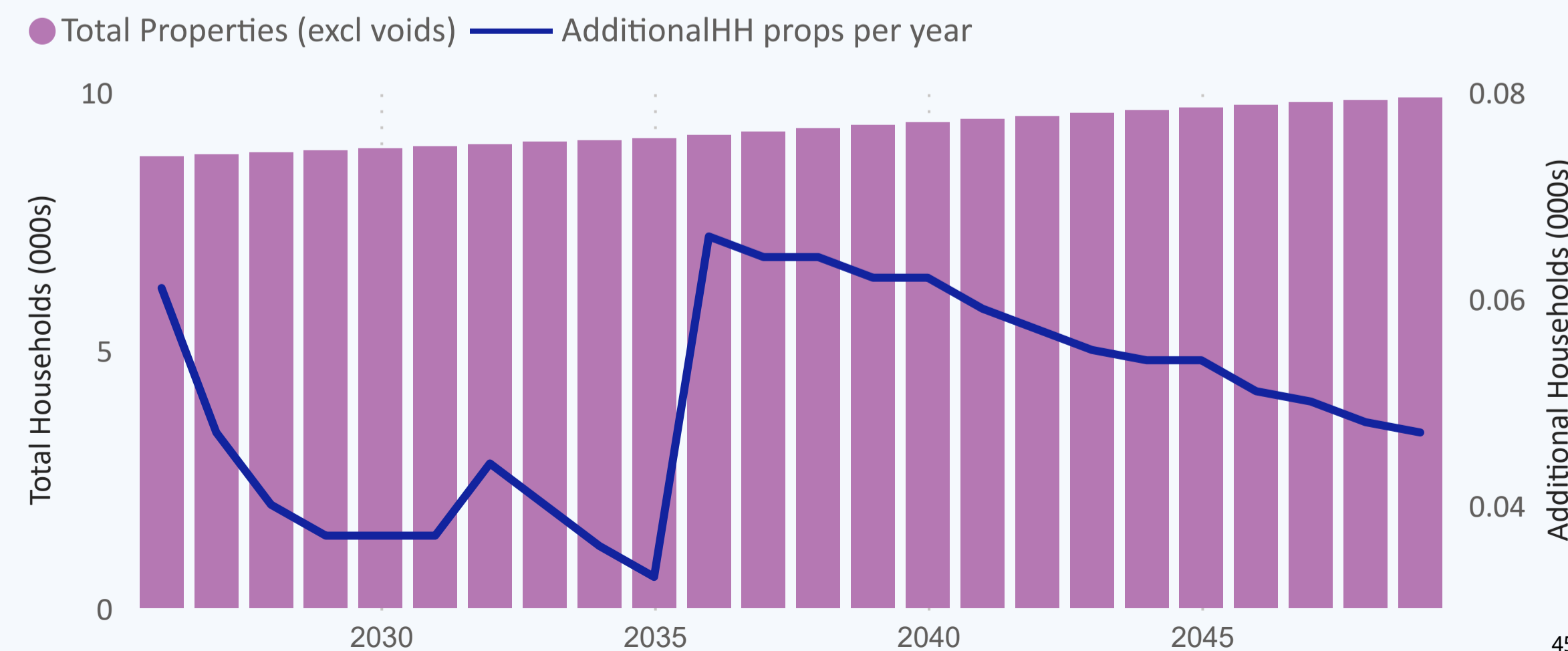


4.2 Over the WRMP period, property numbers in **Norfolk Happisburgh** are set to increase from **8691** in 2025 to **9896** in 2049-50 - this is an increase of **13.9 %** over the 25 years.

Table 4b: Property totals (cumulative) by AMP

Year	Total Properties-excl voids (000s)
2029-30 (end of AMP8)	8.876
2034-35 (end of AMP9)	9.070
2039-40 (end of AMP10)	9.359
2044-45 (end of AMP11)	9.646
2049-50 (end of AMP12)	9.896

Figure 3: Total Resource Zone Properties (excl. voids)





5. Baseline Supply Demand Balance DYAA

Norfolk Happisburgh

Norfolk Happisburgh

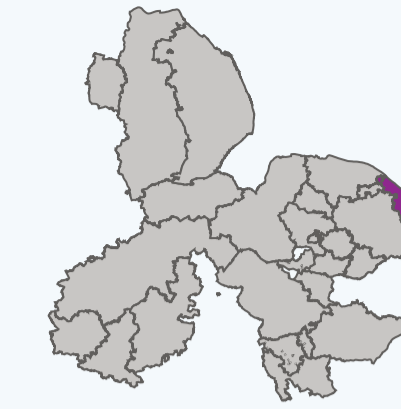


Figure 4: Norfolk Happisburgh baseline supply demand balance to 2050 for Dry Year Annual Average conditions

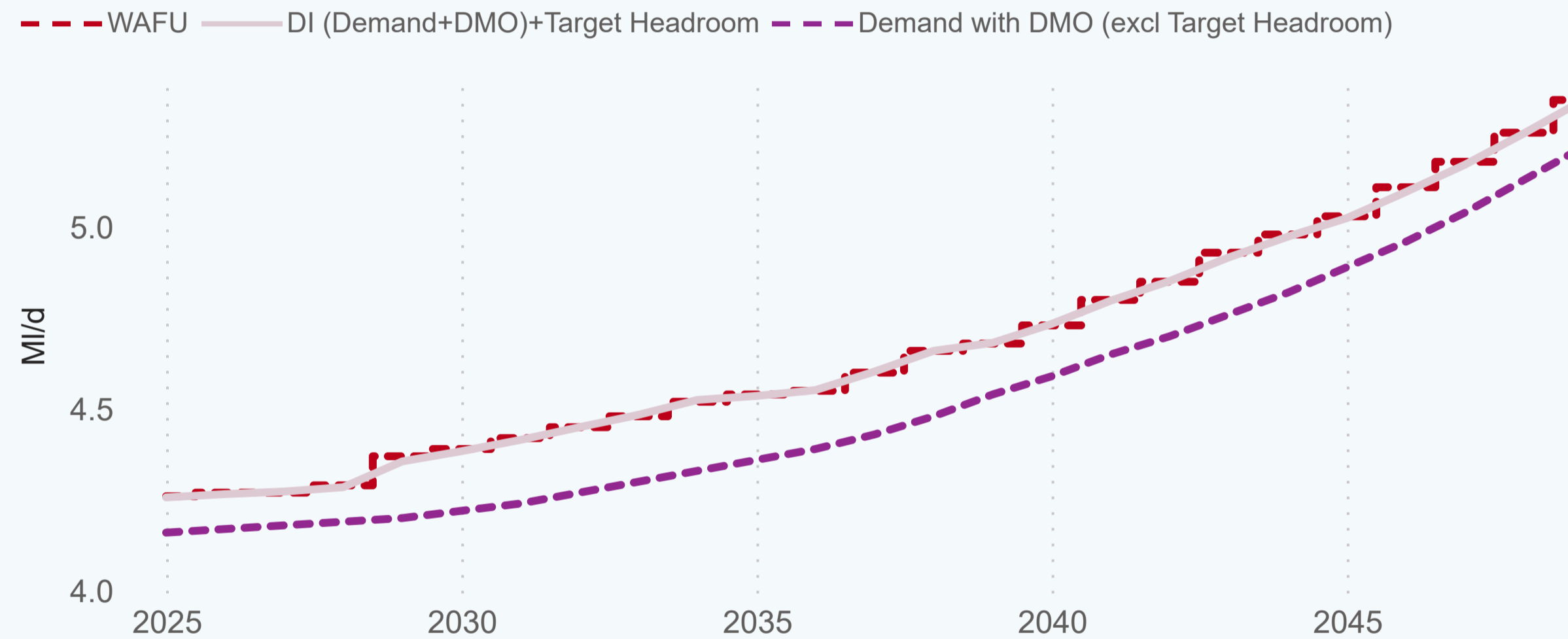


Table 5a: Baseline supply demand balance 2025 - 2050 for DYAA conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	0.0	0.0	0.0	0.0	0.0	0.0
Net Transfers	4.3	4.4	4.5	4.7	5.0	5.4
Total Water Available For Use	4.3	4.4	4.5	4.7	5.0	5.4
Distribution Input	4.2	4.2	4.3	4.5	4.8	5.2
Target Headroom	0.1	0.2	0.2	0.1	0.2	0.1
Supply Demand Balance	0.0	0.0	0.0	0.0	0.0	0.0

Table 5b: Baseline demand forecast (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.1	2.1	2.2	2.4	2.5	2.6
Water delivered unmeasured household	0.4	0.3	0.2	0.1	0.1	0.1
Total Leakage	0.8	0.8	0.8	0.8	0.8	0.8
Water delivered measured non-household	0.9	1.0	1.1	1.2	1.5	1.8
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	4.2	4.2	4.3	4.5	4.8	5.2

5.1 DYAA BL supply demand summary: Norfolk Happisburgh

Baseline Supply Demand Balance: This zone is not expected to go into deficit (under the preferred baseline scenario - as described in section 3.3).

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 2.4 MI/d in 2025 to 2.6 MI/d in 2050, a percentage change of 7.4 %.
- Baseline Leakage: is forecast to change from 0.8 MI/d in 2025 to 0.8 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 0.9 MI/d to 1.8 MI/d.
- Baseline Distribution Input: is expected to change from 4.2 MI/d to 5.2 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).

6. Baseline Supply Demand Balance DYCP

Norfolk Happisburgh



Figure 5: Norfolk Happisburgh baseline supply demand balance to 2050 for Dry Year Critical Period conditions

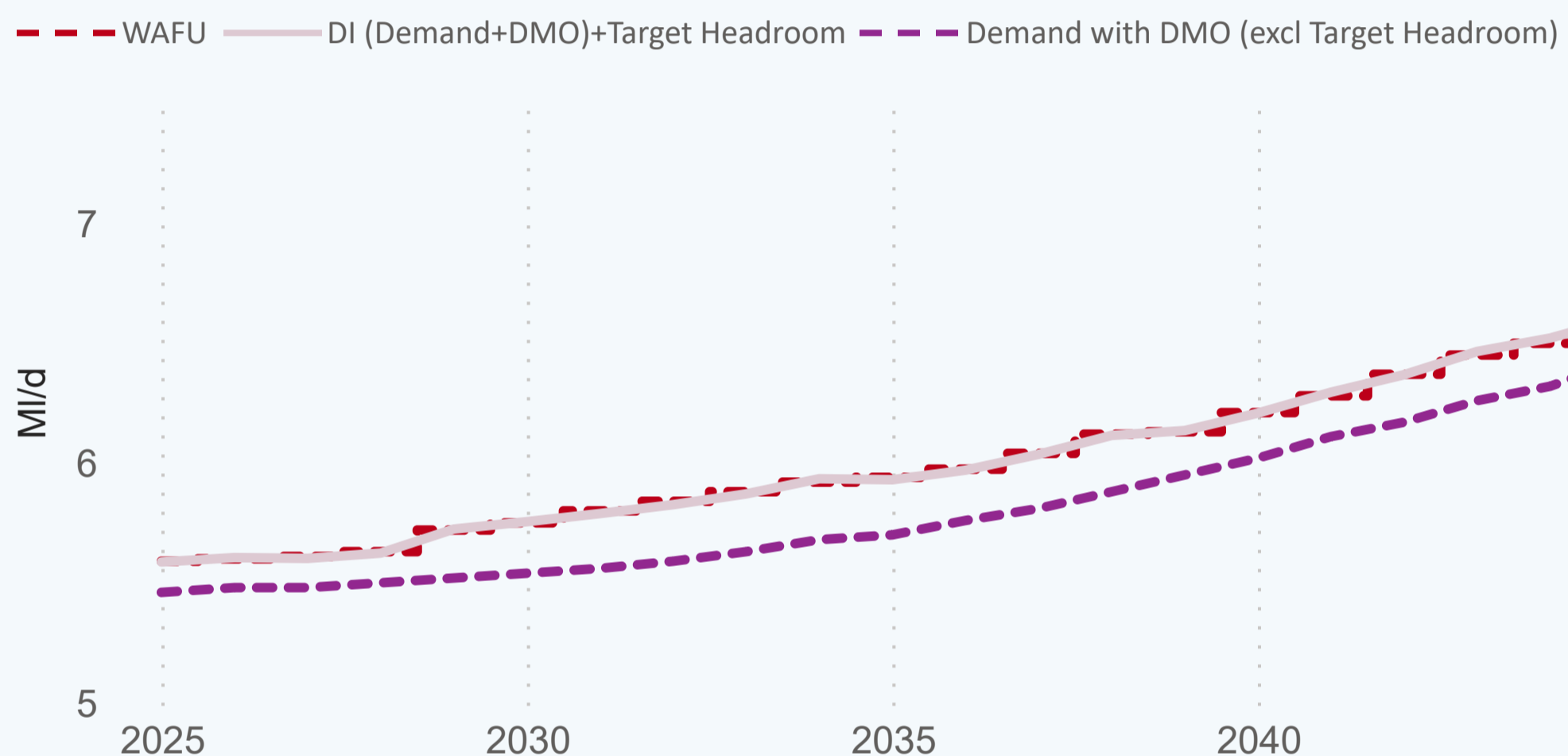


Table 6b: Baseline demand forecast with DYCP conditions (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.9	3.1	3.2	3.4	3.6	3.7
Water delivered unmeasured household	0.6	0.5	0.3	0.2	0.1	0.1
Total Leakage	0.8	0.8	0.8	0.8	0.8	0.8
Water delivered measured non-household	1.1	1.2	1.3	1.5	1.8	2.2
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	5.5	5.5	5.7	6.0	6.3	6.9

Table 6a: Baseline supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	0.0	0.0	0.0	0.0	0.0	0.0
Net Transfers	5.6	5.7	5.9	6.1	6.5	6.5
Total Water Available For Use	5.6	5.7	5.9	6.1	6.5	6.5
Distribution Input	5.5	5.5	5.7	6.0	6.3	6.9
Target Headroom	0.1	0.2	0.3	0.2	0.2	0.2
Supply Demand Balance	0.0	0.0	0.0	0.0	0.0	-0.5

6.1 DYCP BL supply demand summary: Norfolk Happisburgh

Baseline Supply Demand balance: This zone will go into deficit immediately

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 3.5 MI/d in 2025 to 3.8 MI/d in 2050, a percentage change of 8.5 %.
- Baseline Leakage: is forecast to change from 0.8 MI/d in 2025 to 0.8 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 1.1 MI/d to 2.2 MI/d.
- Baseline Distribution Input: is expected to change from 5.5 MI/d to 6.9 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).



7. Demand forecast and PCC



Norfolk Happsburgh

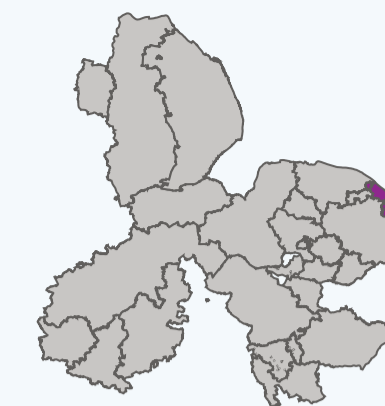


Figure 6: Norfolk Happsburgh DYAA DI with and without demand management strategy

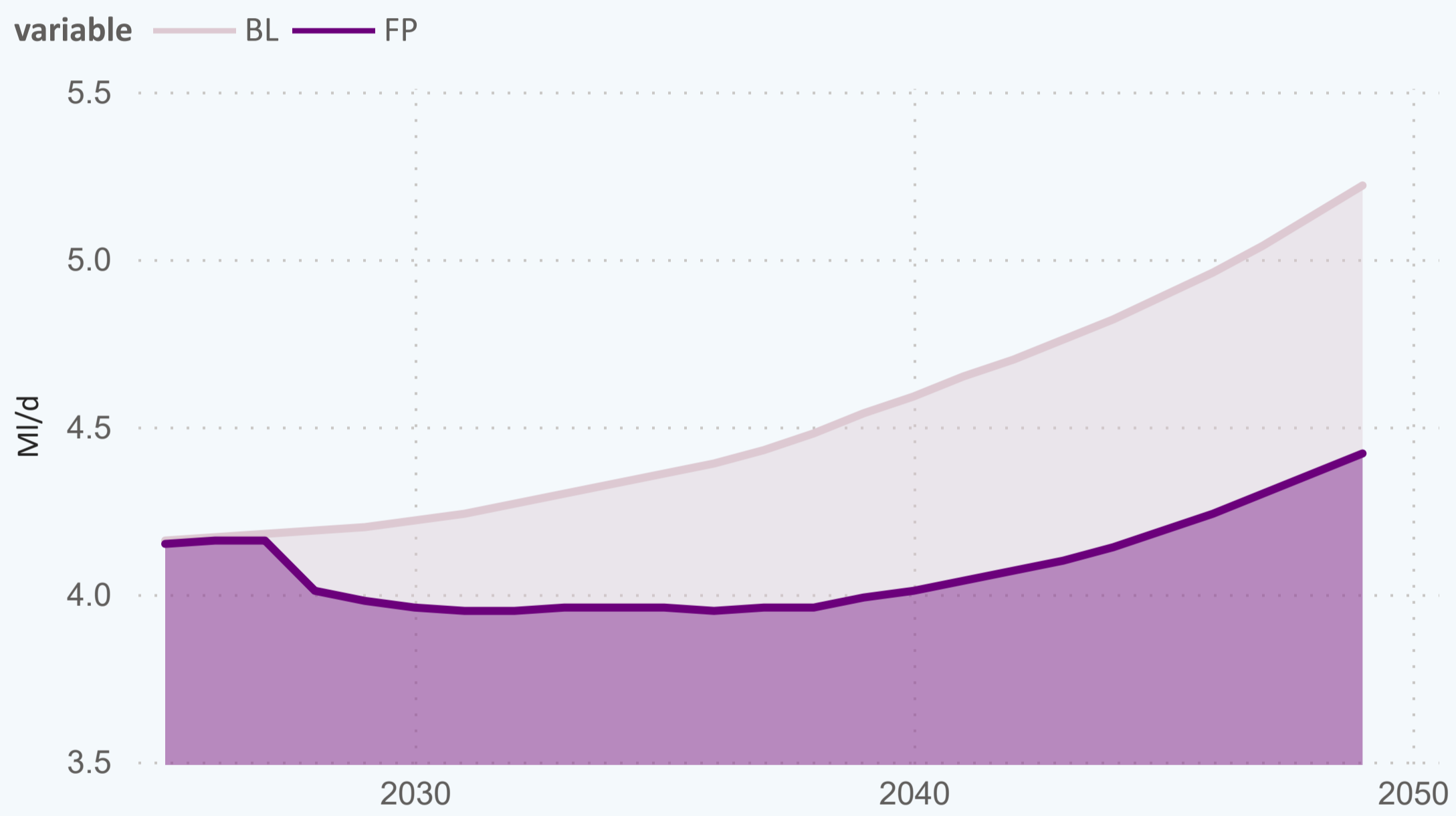


Table 7a: Demand - baseline and final plan

variable	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL	4.2	4.3	4.5	4.8	5.2
FP	4.0	4.0	4.0	4.1	4.4

7.2 Demand Norfolk Happsburgh (see Table 7a)

Baseline demand is expected to increase from 4.2 (MI/d) in 2025 to 5.2 (MI/d) in 2050. With demand management options in place, demand is expected to be 4.4 (MI/d).

7.1 PCC Norfolk Happsburgh (see Table 7b)

Per Capita Consumption (PCC) in the base year 2025/26 is 125.6 (l/h/d) measured and 223.9 (l/h/d) unmeasured.

The weighted average PCC (l/h/d) comes in at 134.8 (l/h/d) in 2025/26. This is forecast to fall to 106.7 (l/h/d) in the Final Plan forecast as demand management option savings are realised and customers switch from unmeasured to measured status

Table 7b: DMO strategy Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL demand forecast(DYAA)	132.6	132.1	132.8	133.0	132.4
FP demand forecast(DYAA)	123.4	118.4	113.3	109.5	106.7
% change BL to FP	-7.0%	-10.3%	-14.7%	-17.6%	-19.4%

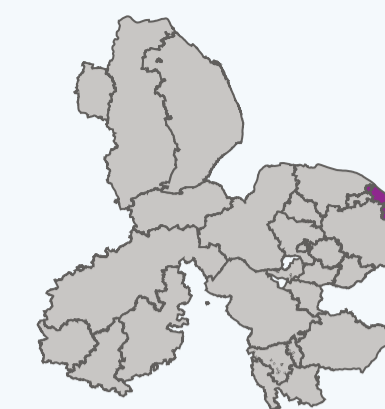




8. Demand management options



Norfolk Happisburgh



8.1 Regional overview:

Across the entirety of the Anglian Water region our demand management strategy will comprise three strongly interlinked programs:

Water metering program:

- We intend to complete our current smart meter rollout which will replace our entire meter stock over 10 years (2 AMPs), noting that 1.1M smart meters will be installed across Anglian Water by 2025. The information resulting from 'smart metering' will help inform our customers regarding their water usage and will assist in our ability to influence this behaviour. It will also help with our ability to detect leakage, significantly reducing plumbing losses and customer supply pipe leaks.

Leakage reduction

- Our aim is to reduce leakage by more than 45MI/d from 2025 to 2050 across the whole Anglian Water area, building upon our ambitious program of leakage reduction in AMP7 (14% reduction of more than 27MI/d across the region by 2025).

Water efficiency measures

- New technologies and interventions will help promote the careful use of water. Additional water efficiency programs will include: the promotion of 'Smart' devices; further development of our Multi-utility web-portal; garden advice; support for vulnerable customers with plumbing loss and cspl; Community reward schemes. As part of our revised draft WRMP24 we have developed and included 'water efficiency visits' and leakage reduction measures for our Non-Household customers.

Figure 7: DMO strategy Final Plan for Norfolk Happisburgh

For full chart key see table below

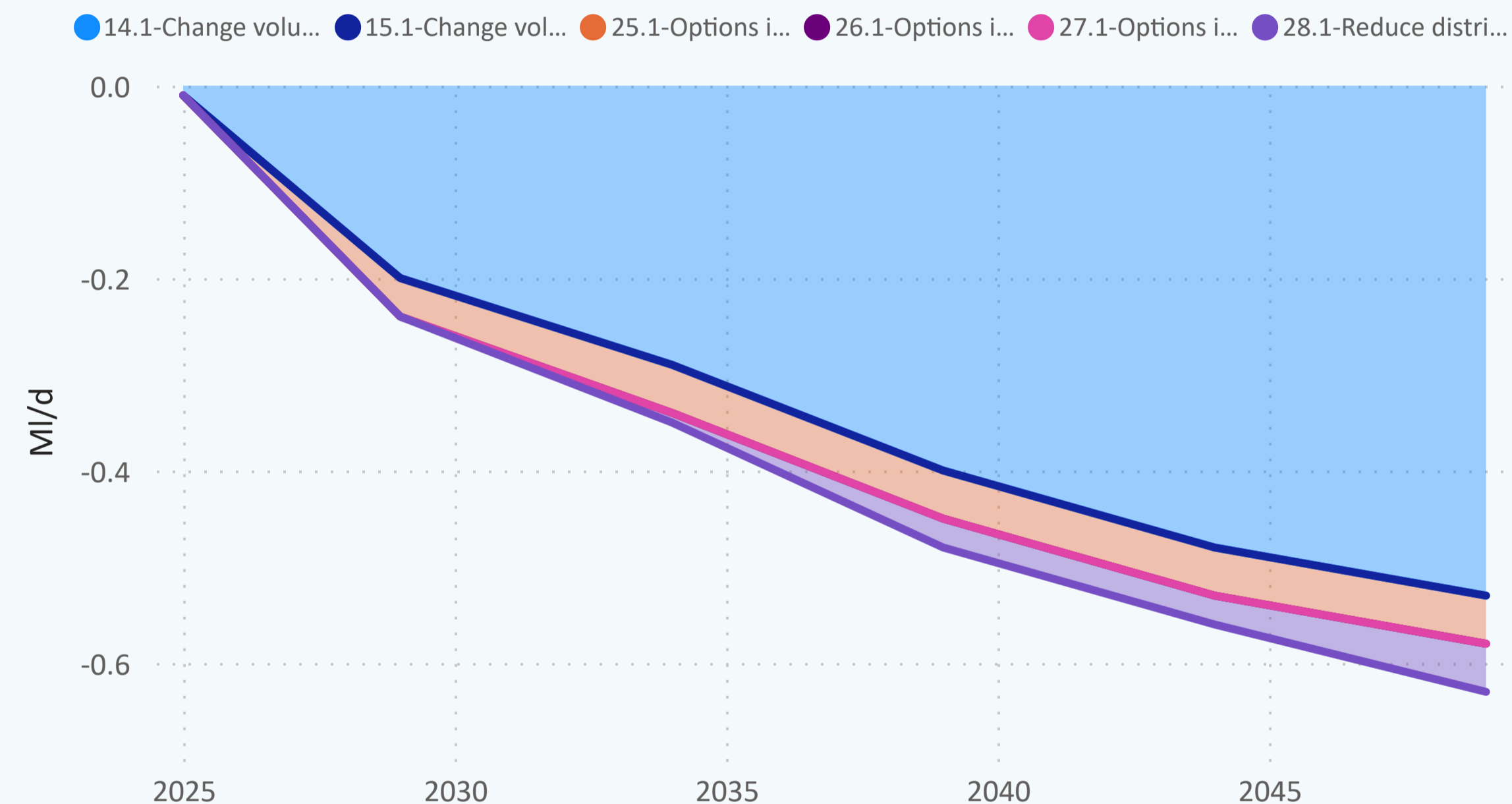


Table 8: DMO strategy Final Plan for Norfolk Happisburgh

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
14.1-Change volume delivered to measured households(-ve)	-0.2	-0.3	-0.4	-0.5	-0.5
15.1-Change volume delivered to unmeasured households(-ve)	0.0	0.0	0.0	0.0	0.0
25.1-Options impacting on measured Household - USPL (-ve)	0.0	-0.1	-0.1	-0.1	-0.1
26.1-Options impacting on unmeasured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
27.1-Options impacting on Void properties - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
28.1-Reduce distribution losses (-ve)	0.0	0.0	0.0	0.0	-0.1



9. Final Plan Supply Demand Balance DYAA

Norfolk Happisburgh

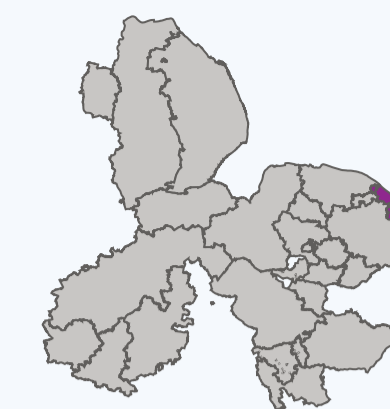


Figure 8: Norfolk Happisburgh final plan SDB to 2050 for Dry Year Annual Average conditions

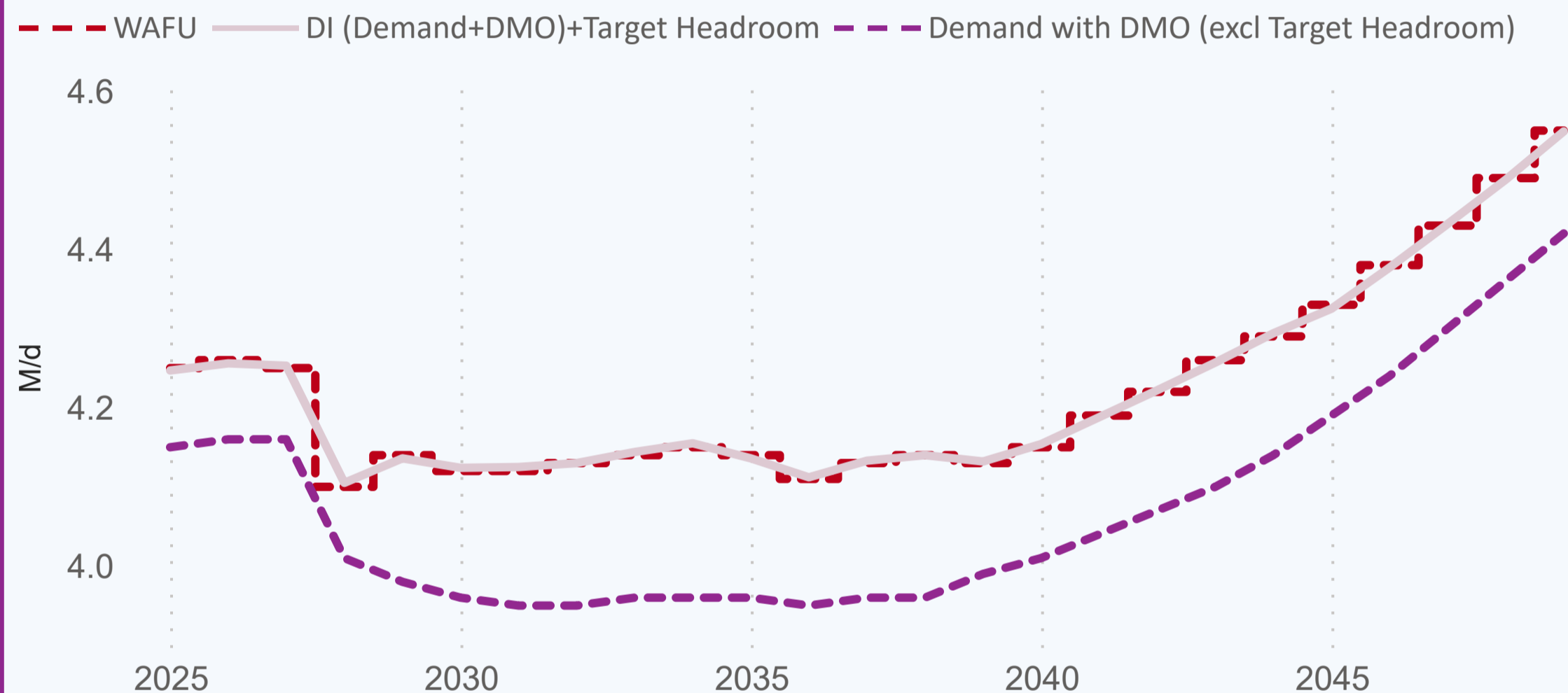


Table 9a: final plan SDB to 2050 for Dry Year conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	0.0	0.0	0.0	0.0	0.0	0.0
Net Transfers	4.3	4.1	4.2	4.1	4.3	4.6
Total Water Available For Use	4.3	4.1	4.2	4.1	4.3	4.6
Distribution Input	4.2	4.0	4.0	4.0	4.1	4.4
Target Headroom	0.1	0.2	0.2	0.1	0.2	0.1
Supply Demand Balance	0.0	0.0	0.0	0.0	0.0	0.0

Table 9b: Final Plan demand forecast for DYAA conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.0	1.9	2.0	2.0	2.0	2.0
Water delivered unmeasured household	0.4	0.3	0.2	0.1	0.1	0.1
Total Leakage	0.8	0.8	0.7	0.7	0.7	0.7
Water delivered measured non-household	0.9	1.0	1.0	1.1	1.3	1.6
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	4.2	4.0	4.0	4.0	4.1	4.4

9.1 DYAA FP supply demand summary: Norfolk Happisburgh

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 2.4 MI/d in 2025 to 2.1 MI/d in 2050, a percentage change of -14.0 %.
- Final Plan Leakage is forecast to change from 0.8 MI/d in 2025 to 0.7 MI/d by 2050.
- Final Plan Non-Household demand is expected to change from 0.9 MI/d to 1.6 MI/d.
- Final Plan Distribution Input is expected to change from 4.2 MI/d to 4.4 MI/d by 2050.





10. Final Plan Supply Demand Balance DYCP

Norfolk Happisburgh

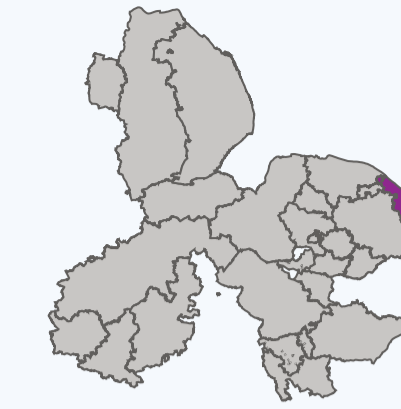


Figure 9: Norfolk Happisburgh baseline supply demand balance to 2050 for Dry Year Critical Period conditions

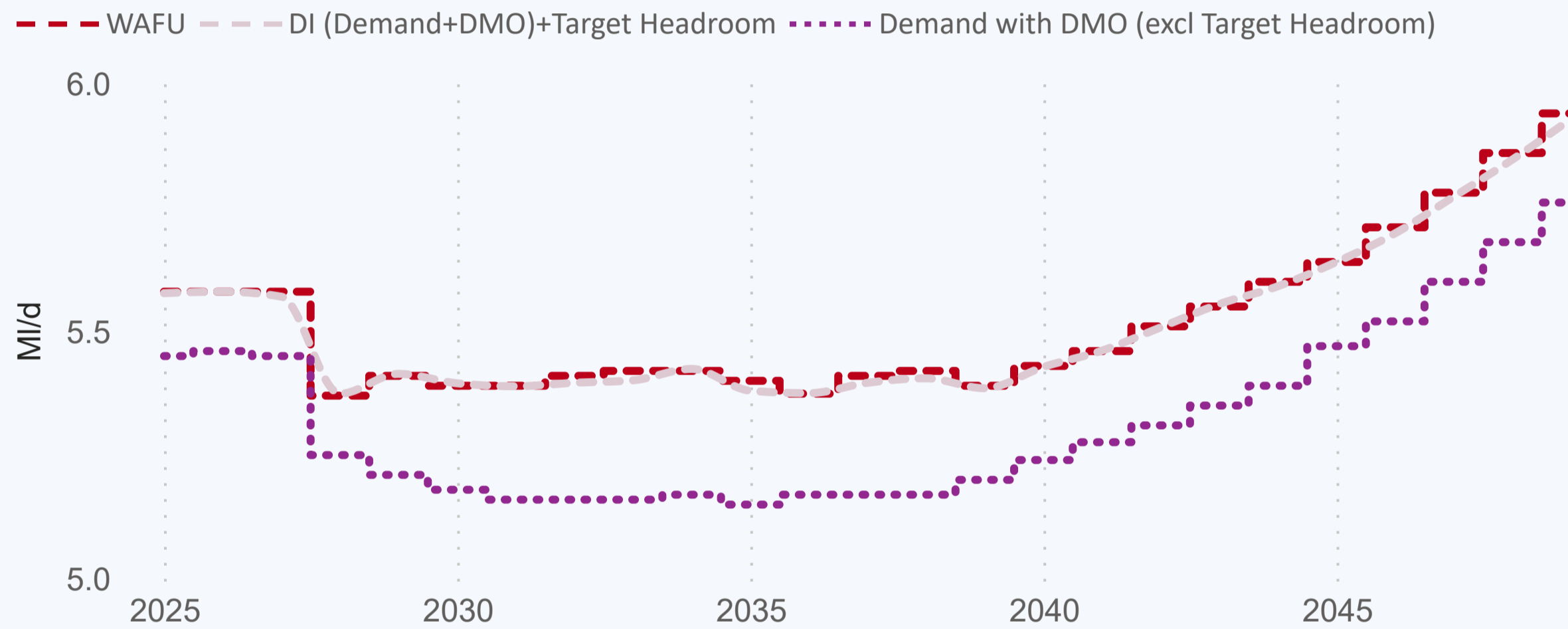


Table 10a: Final Plan supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	0.0	0.0	0.0	0.0	0.0	0.0
Net Transfers	5.6	5.4	5.4	5.4	5.6	5.9
Total Water Available For Use	5.6	5.4	5.4	5.4	5.6	5.9
Distribution Input	5.5	5.2	5.2	5.2	5.4	5.8
Target Headroom	0.1	0.2	0.3	0.2	0.2	0.2
Supply Demand Balance	0.0	0.0	0.0	0.0	0.0	0.0

Table 10b: Final Plan demand forecast for DYCP conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	2.9	2.8	2.8	2.9	2.9	3.0
Water delivered unmeasured household	0.6	0.5	0.3	0.2	0.1	0.1
Total Leakage	0.8	0.8	0.7	0.7	0.7	0.7
Water delivered measured non-household	1.1	1.2	1.2	1.4	1.6	1.9
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	5.5	5.2	5.2	5.2	5.4	5.8

10.1 DYCP BL supply demand summary: Norfolk Happisburgh

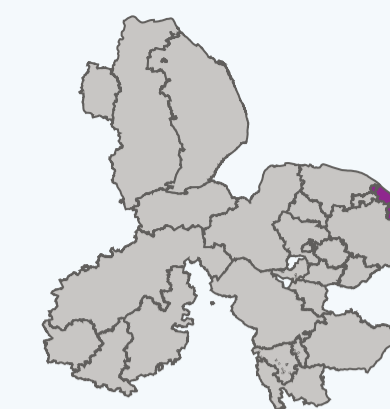
The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 3.5 MI/d in 2025 to 3.1 MI/d in 2050, a percentage change of -12.8 %.
- Final Plan Leakage: is forecast to change from 0.8 MI/d in 2025 to 0.7 MI/d by 2050
- Final Plan Non-Household demand: is expected to change from 1.1 MI/d to 1.9 MI/d.
- Final Plan Distribution Input: is expected to change from 5.5 MI/d to 5.8 MI/d by 2050.





11. Supply Side Strategy



Norfolk Happisburgh

Table 11a: Total Water Available for use Baseline and Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
WAFU - BL	4.4	4.5	4.7	5.0	5.4
WAFU - FP	4.1	4.2	4.1	4.3	4.6

11.1 Supply side strategy options.

For details on the feasible options list for Norfolk Happisburgh WRZ please refer to the Supply-Side Option Development technical supporting document.

Figure 10 Water Available for Use (WAFU) - baseline (BL) and final plan (FP)

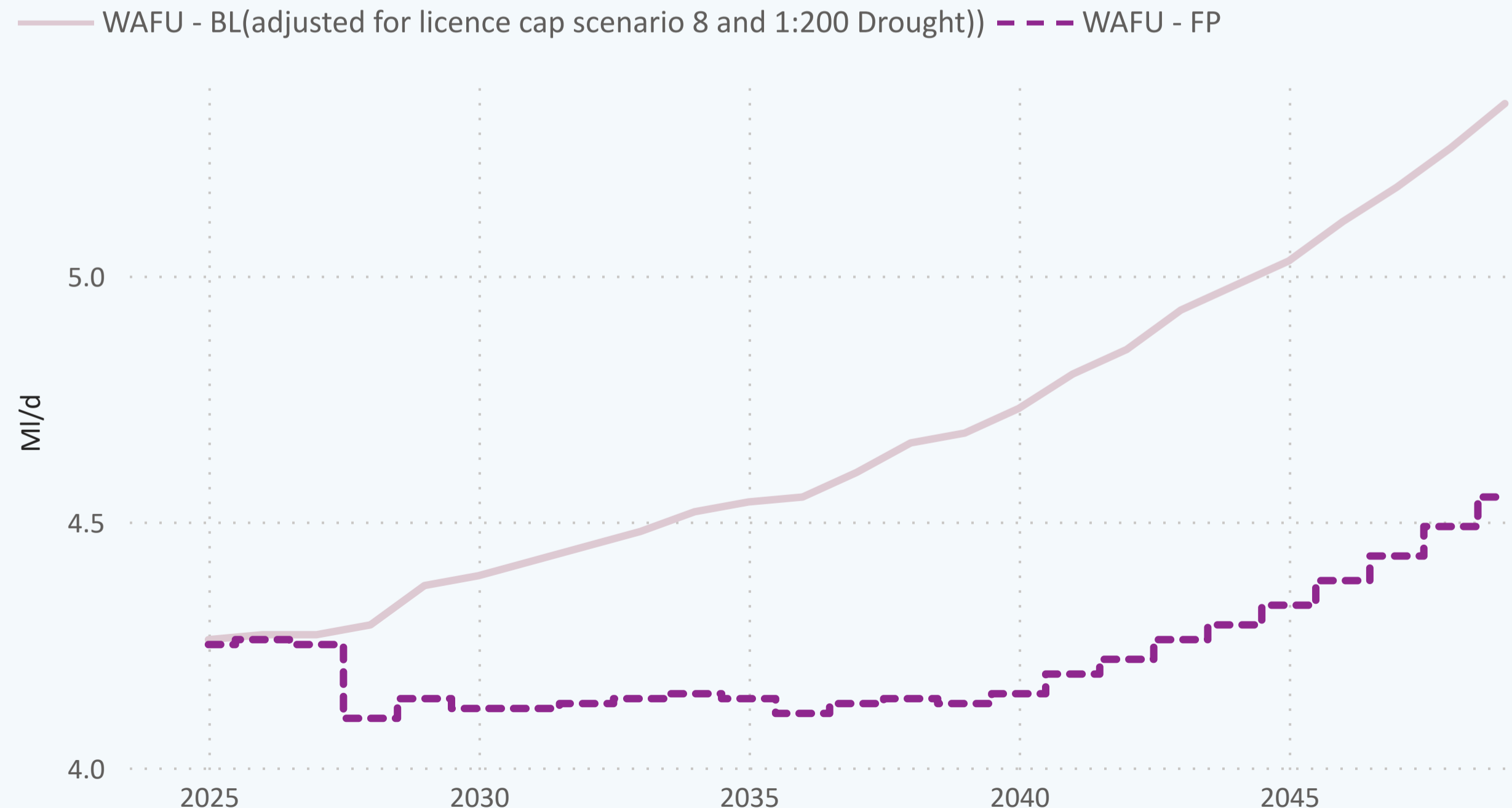


Table 11b: Preferred supply side options

Option ID	First Option Name
EE09	Adjustment to existing potable water export
EI09	Adjustment to existing potable water import



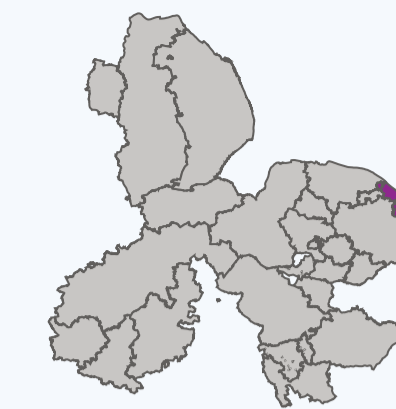


12. Non-Household consumption

Norfolk Happisburgh



Norfolk Happisburgh

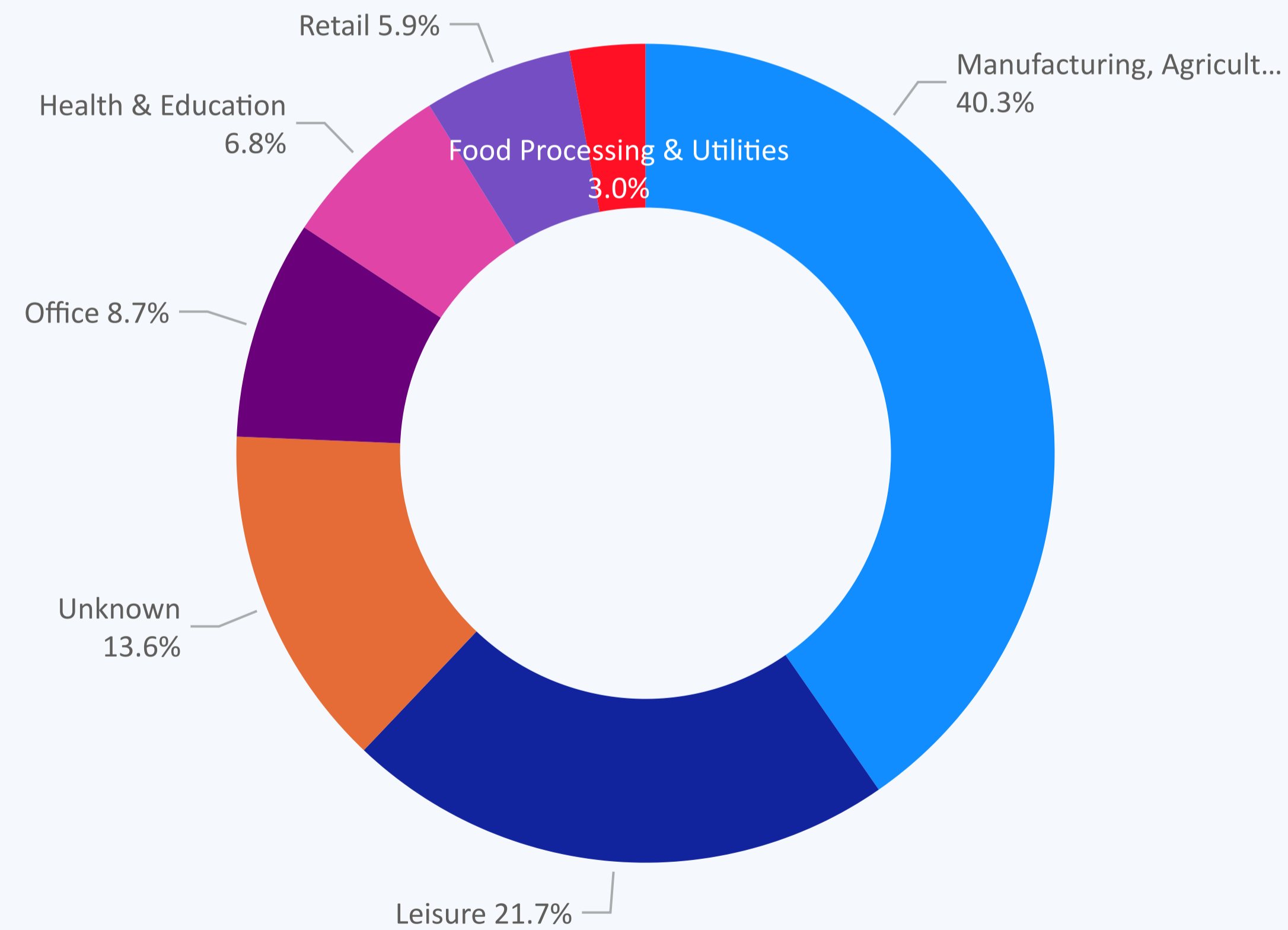
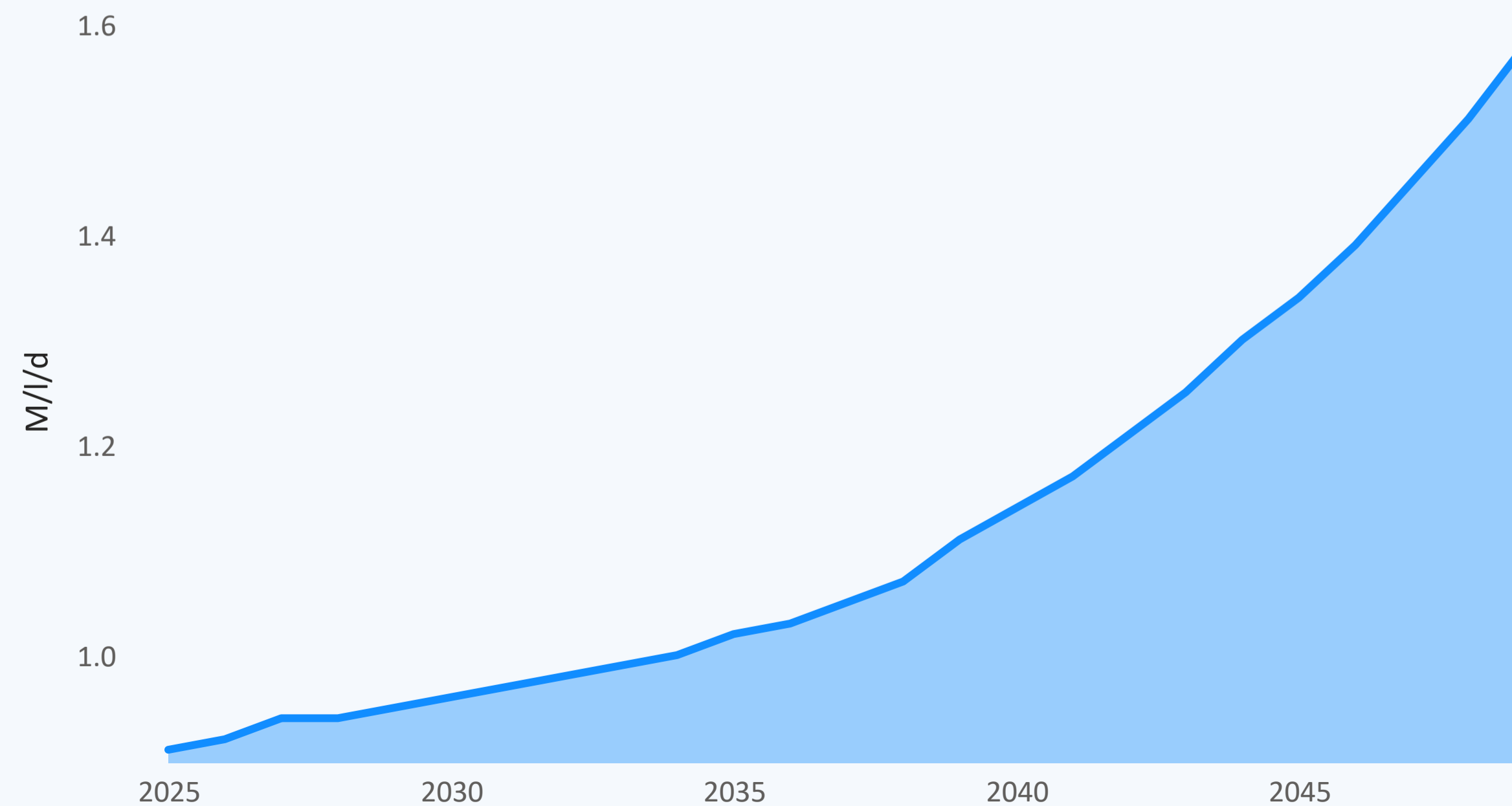


12.1 Non-Household demand Norfolk Happisburgh

In 2025, 0.9 MI/d of Non-Household demand (measured and unmeasured) is expected. In 2049 it is expected to be 1.6 MI/d, which is a 72.53% change between the years.

Figure 12: % Non-Household modelled sectors within resource zone

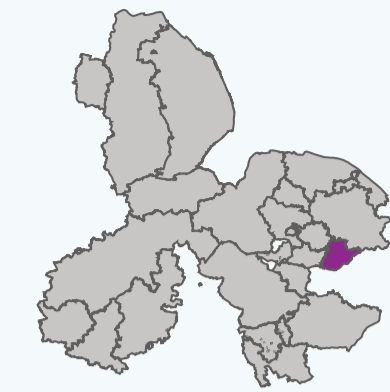
Figure 11: Non-Household demand forecast 2025-2050



3. Deployable Output summary

DYAA

Norfolk Harleston



3.1 Resource Zone geography: Norfolk Harleston:

The Norfolk Harleston WRZ covers an area of 240 sq. km and lies in the centre of East Anglia. The zone is supplied by groundwater abstractions from the Suffolk Chalk aquifer.

3.2

Baseline deployable output (including 1:500 drought): *9.8 MI/d*

Deployable output reductions

Restoring sustainable abstraction (recent actual average): *-1.5 MI/d*

Reductions to achieve environmental destination (BAU+): *-0.7 MI/d* by 2036.

Climate change: *0.0 MI/d* by 2050.

Baseline deployable output reduces by a total of *-2.1 MI/d* by 2050 a reduction of 21.8%.

Table 3: supply characteristics (all values are MI/d)

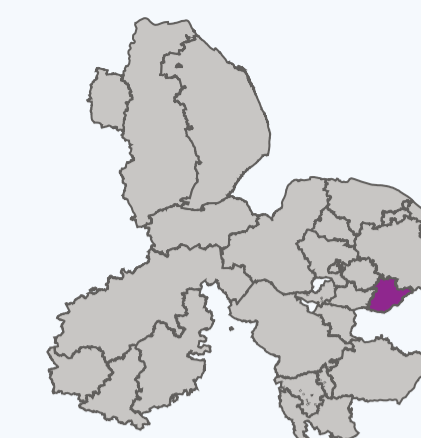
	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
DO pre forecast changes	9.8	9.8	9.8	9.8	9.8
Change in DO due to climate change	0.0	0.0	0.0	0.0	0.0
DO reductions to restore sustainable abstraction	-1.0	-1.5	-1.5	-1.5	-1.5
DO reductions for Environmental Destination	0.0	0.0	-0.7	-0.7	-0.7
Change in DO from drought measures	0.0	0.0	0.0	0.0	0.0
Final DO	8.8	8.4	7.7	7.7	7.7
Raw water losses (-ve)	-0.8	-0.8	-0.8	-0.8	-0.8
Outage Allowance (-ve)	-0.1	-0.1	-0.1	-0.1	-0.1
WAFU (own sources)	8.0	7.5	6.8	6.8	6.8
Net Transfers	0.3	1.0	1.0	0.8	0.6
Other benefits	1.00	0.20	0.20	0.20	0.20
Total Water Available for Use	9.3	8.7	8.0	7.8	7.6

3.3 The baseline Deployable Output data presented in this section represents the Environment Agency's preferred sustainability reduction licence cap scenario. This includes recent actual average caps to time limited licences in 2022-24 and caps to all other permanent licences by 2030. The impact of 1:500 drought resilience has also been applied from 2025 rather than the preferred scenario of 2039/2040. These factors apply to the baseline forecast only. For the final plan forecast we have applied our best value scenario for licence caps, which was developed following an iterative process to deliver licence caps as early as possible. The transition to 1:500 drought resilience occurs in 2039/40 in the final plan forecast.

Further information is available in the WRMP24 Decision Making technical supporting document, section 6.



4. Population & Housing



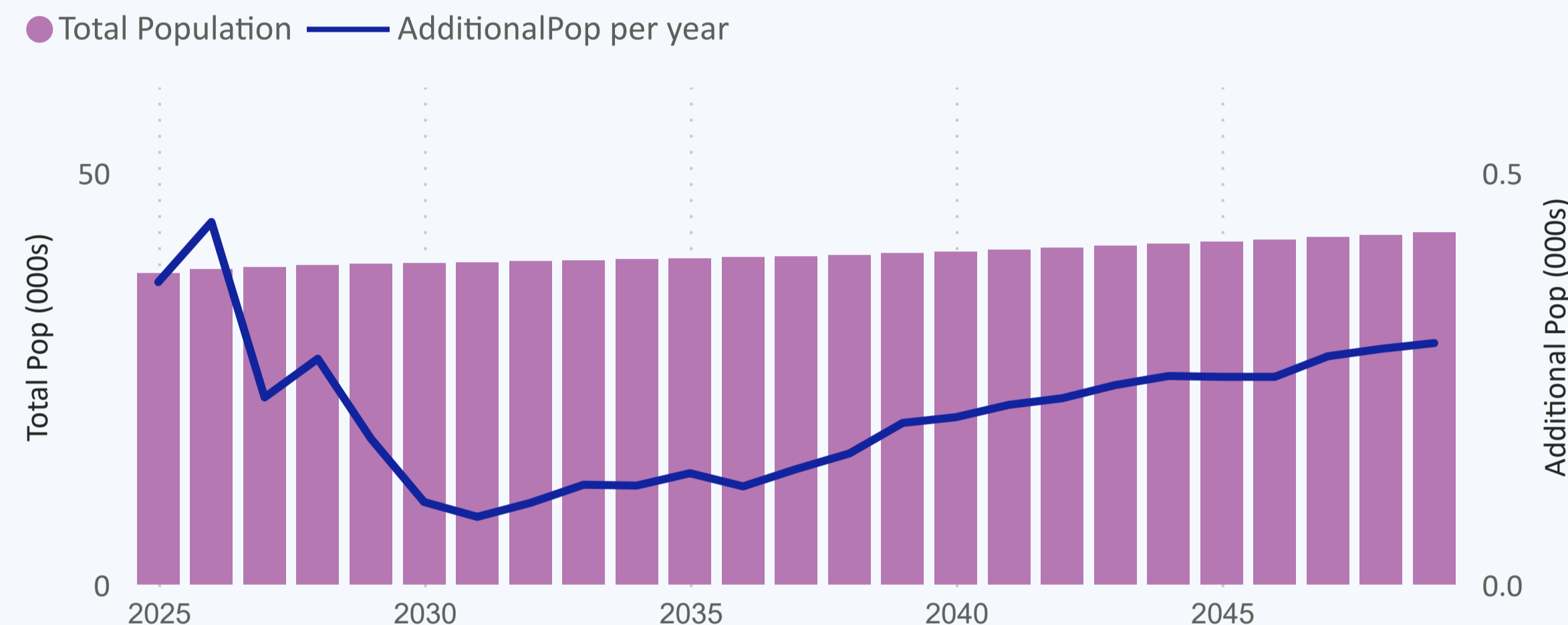
Norfolk Harleston

4.1 Over the WRMP period, population in **Norfolk Harleston** is set to increase from **37830** in 2025 to **42721** in 2049-50 - this is an increase of **12.9 %** over the 25 years.

Table 4a: Population totals (cumulative) by AMP

Year	Total Population (000s)
2029-30 (end of AMP8)	38.948
2034-35 (end of AMP9)	39.470
2039-40 (end of AMP10)	40.219
2044-45 (end of AMP11)	41.361
2049-50 (end of AMP12)	42.721

Figure 2: Total Resource Zone Population

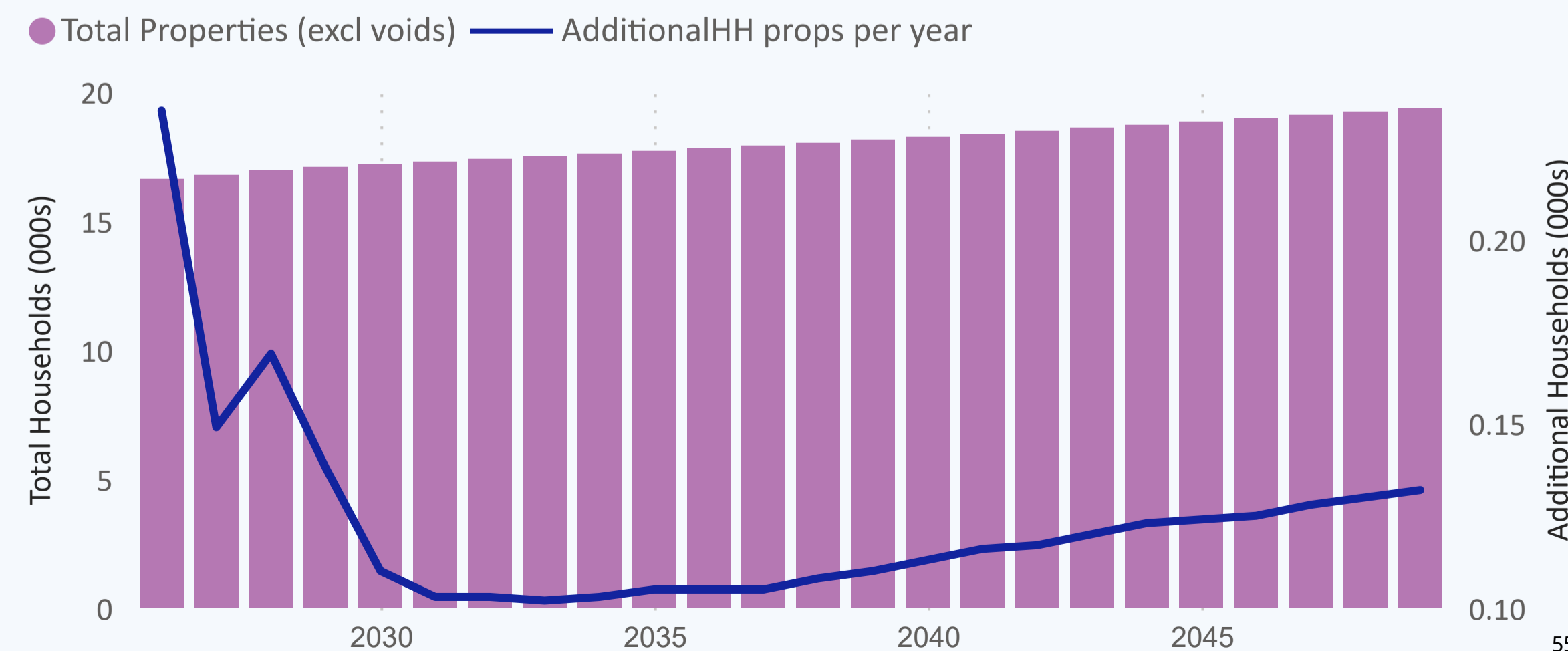


4.2 Over the WRMP period, property numbers in **Norfolk Harleston** are set to increase from **16401** in 2025 to **19374** in 2049-50 - this is an increase of **18.1 %** over the 25 years.

Table 4b: Property totals (cumulative) by AMP

Year	Total Properties-excl voids (000s)
2029-30 (end of AMP8)	17.092
2034-35 (end of AMP9)	17.613
2039-40 (end of AMP10)	18.146
2044-45 (end of AMP11)	18.735
2049-50 (end of AMP12)	19.374

Figure 3: Total Resource Zone Properties (excl. voids)



5. Baseline Supply Demand Balance DYAA

Norfolk Harleston

Norfolk Harleston

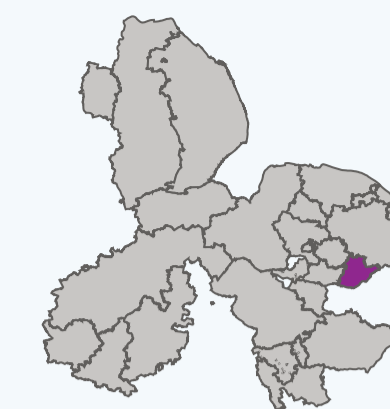


Figure 4: Norfolk Harleston baseline supply demand balance to 2050 for Dry Year Annual Average conditions

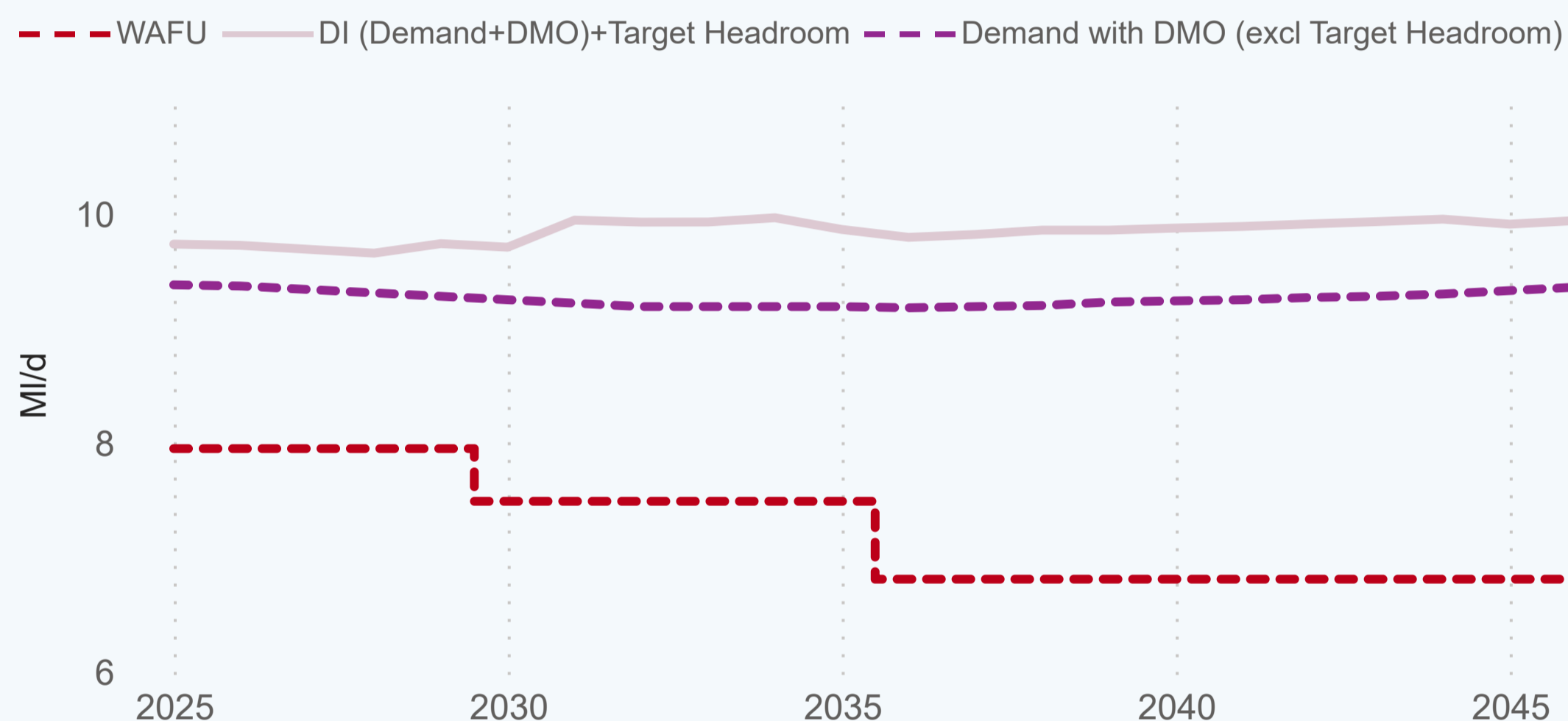


Table 5a: Baseline supply demand balance 2025 - 2050 for DYAA conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	8.0	8.0	7.5	6.8	6.8	6.8
Net Transfers	0.0	0.0	0.0	0.0	0.0	0.0
Total Water Available For Use	8.0	8.0	7.5	6.8	6.8	6.8
Distribution Input	9.4	9.3	9.2	9.2	9.3	9.5
Target Headroom	0.4	0.5	0.8	0.6	0.7	0.6
Supply Demand Balance	-1.8	-1.8	-2.5	-3.0	-3.1	-3.2

Table 5b: Baseline demand forecast (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	4.2	4.5	4.7	5.0	5.2	5.4
Water delivered unmeasured household	0.7	0.4	0.2	0.0	0.0	0.0
Total Leakage	1.5	1.5	1.5	1.5	1.5	1.5
Water delivered measured non-household	3.0	2.9	2.8	2.7	2.6	2.6
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	9.4	9.3	9.2	9.2	9.3	9.5

5.1 DYAA BL supply demand summary: Norfolk Harleston

Baseline Supply Demand Balance: This zone will go into deficit immediately (under the preferred baseline scenario - as described in section 3.3).

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 4.9 MI/d in 2025 to 5.4 MI/d in 2050, a percentage change of 10.9 %.
- Baseline Leakage: is forecast to change from 1.5 MI/d in 2025 to 1.5 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 3.0 MI/d to 2.6 MI/d.
- Baseline Distribution Input: is expected to change from 9.4 MI/d to 9.5 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).

6. Baseline Supply Demand Balance DYCP

Norfolk Harleston

Norfolk Harleston

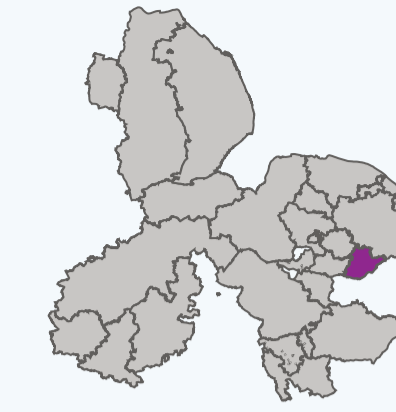


Figure 5: Norfolk Harleston baseline supply demand balance to 2050 for Dry Year Critical Period conditions

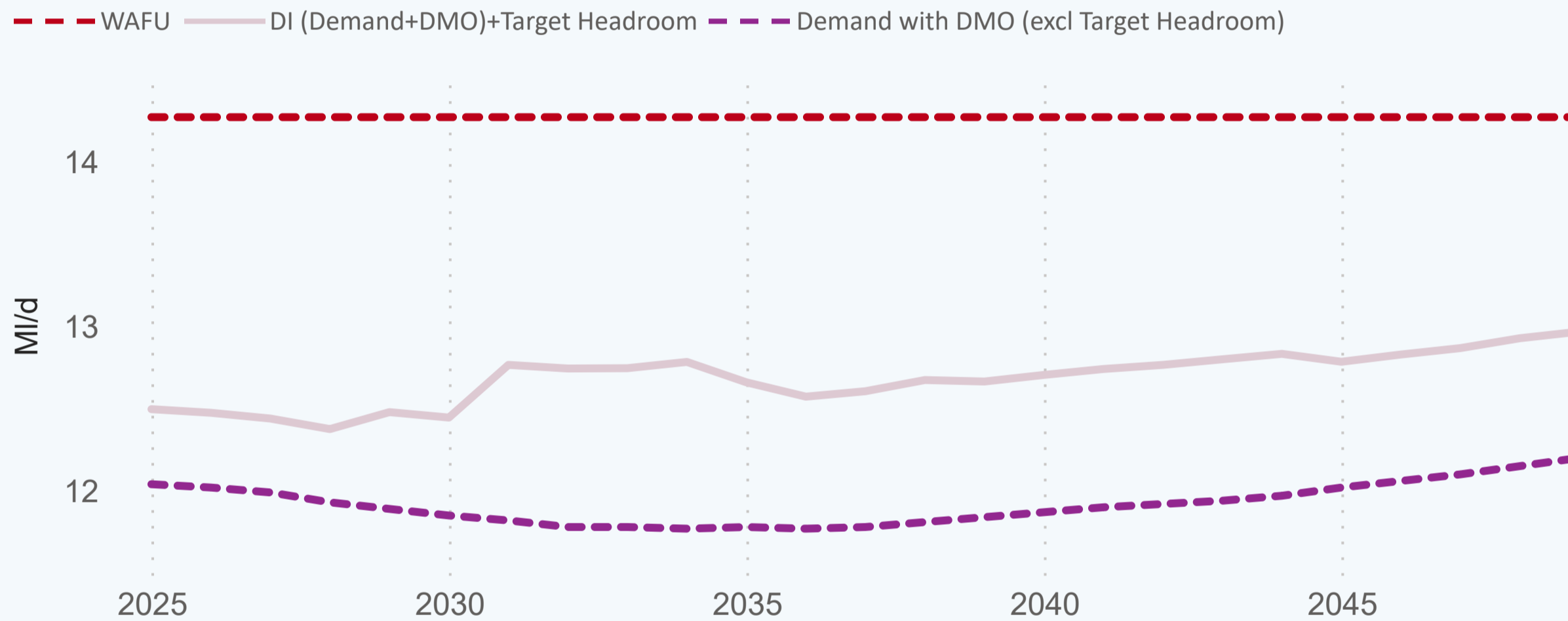


Table 6b: Baseline demand forecast with DYCP conditions (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	5.6	5.9	6.3	6.7	6.9	7.2
Water delivered unmeasured household	0.9	0.6	0.3	0.1	0.1	0.1
Total Leakage	1.5	1.5	1.5	1.5	1.5	1.5
Water delivered measured non-household	4.1	3.9	3.7	3.6	3.5	3.5
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	12.0	11.9	11.8	11.8	12.0	12.2

Table 6a: Baseline supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	14.3	14.3	14.3	14.3	14.3	14.3
Net Transfers	0.0	0.0	0.0	0.0	0.0	0.0
Total Water Available For Use	14.3	14.3	14.3	14.3	14.3	14.3
Distribution Input	12.0	11.9	11.8	11.8	12.0	12.2
Target Headroom	0.5	0.6	1.0	0.8	0.9	0.8
Supply Demand Balance	1.8	1.8	1.5	1.6	1.4	1.3

6.1 DYCP BL supply demand summary: Norfolk Harleston

Baseline Supply Demand balance: This zone is not expected to go into deficit

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 6.5 MI/d in 2025 to 7.3 MI/d in 2050, a percentage change of 12.2 %.
- Baseline Leakage: is forecast to change from 1.5 MI/d in 2025 to 1.5 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 4.1 MI/d to 3.5 MI/d.
- Baseline Distribution Input: is expected to change from 12.0 MI/d to 12.2 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).



7. Demand forecast and PCC

Norfolk Harleston

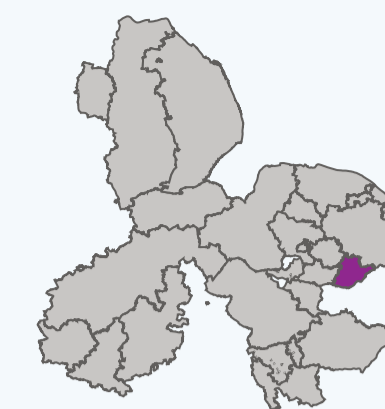


Figure 6: Norfolk Harleston DYAA DI with and without demand management strategy

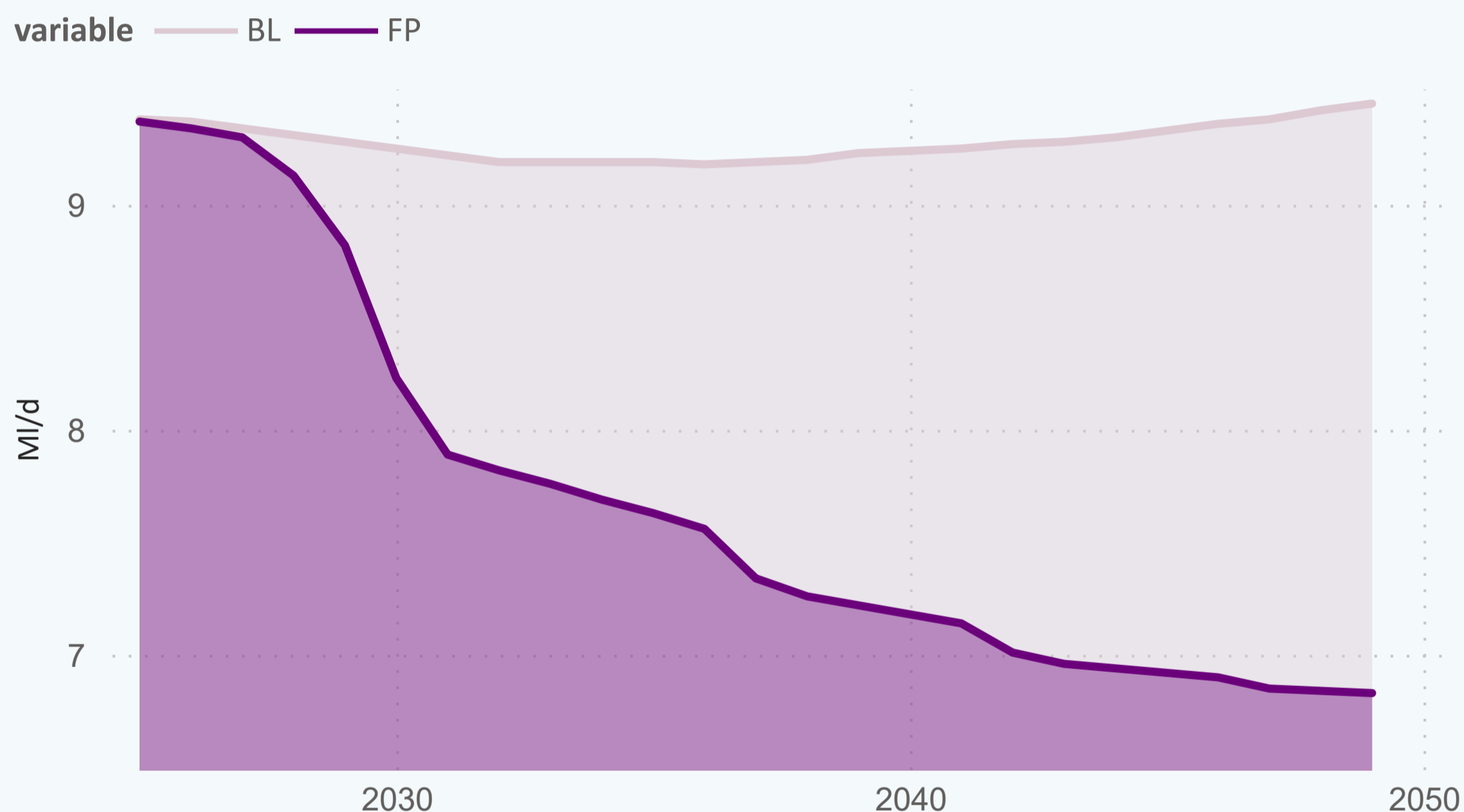


Table 7a: Demand - baseline and final plan

variable	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL	9.3	9.2	9.2	9.3	9.5
FP	8.8	7.7	7.2	6.9	6.8

7.2 Demand Norfolk Harleston (see Table 7a)

Baseline demand is expected to increase from 9.4 (MI/d) in 2025 to 9.5 (MI/d) in 2050. With demand management options in place, demand is expected to be 6.8 (MI/d).

7.1 PCC Norfolk Harleston (see Table 7b)

Per Capita Consumption (PCC) in the base year 2025/26 is 117.2 (l/h/d) measured and 160.7 (l/h/d) unmeasured.

The weighted average PCC (l/h/d) comes in at 121.6 (l/h/d) in 2025/26. This is forecast to fall to 96.2 (l/h/d) in the Final Plan forecast as demand management option savings are realised and customers switch from unmeasured to measured status

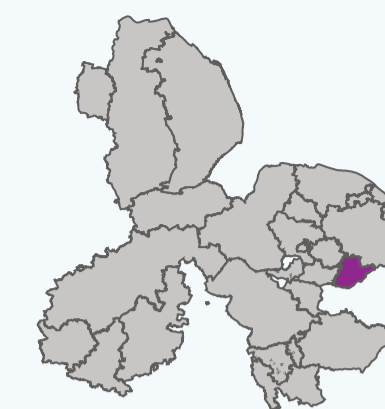
Table 7b: DMO strategy Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL demand forecast(DYAA)	119.6	119.1	119.6	119.7	120.1
FP demand forecast(DYAA)	110.9	106.2	100.9	97.7	96.2
% change BL to FP	-7.3%	-10.9%	-15.6%	-18.4%	-19.9%



8. Demand management options

Norfolk Harleston



8.1 Regional overview:

Across the entirety of the Anglian Water region our demand management strategy will comprise three strongly interlinked programs:

Water metering program:

- We intend to complete our current smart meter rollout which will replace our entire meter stock over 10 years (2 AMPs), noting that 1.1M smart meters will be installed across Anglian Water by 2025. The information resulting from 'smart metering' will help inform our customers regarding their water usage and will assist in our ability to influence this behaviour. It will also help with our ability to detect leakage, significantly reducing plumbing losses and customer supply pipe leaks.

Leakage reduction

- Our aim is to reduce leakage by more than 45MI/d from 2025 to 2050 across the whole Anglian Water area, building upon our ambitious program of leakage reduction in AMP7 (14% reduction of more than 27MI/d across the region by 2025).

Water efficiency measures

- New technologies and interventions will help promote the careful use of water. Additional water efficiency programs will include: the promotion of 'Smart' devices; further development of our Multi-utility web-portal; garden advice; support for vulnerable customers with plumbing loss and cspl; Community reward schemes. As part of our revised draft WRMP24 we have developed and included 'water efficiency visits' and leakage reduction measures for our Non-Household customers.

Figure 7: DMO strategy Final Plan for Norfolk Harleston

For full chart key see table below

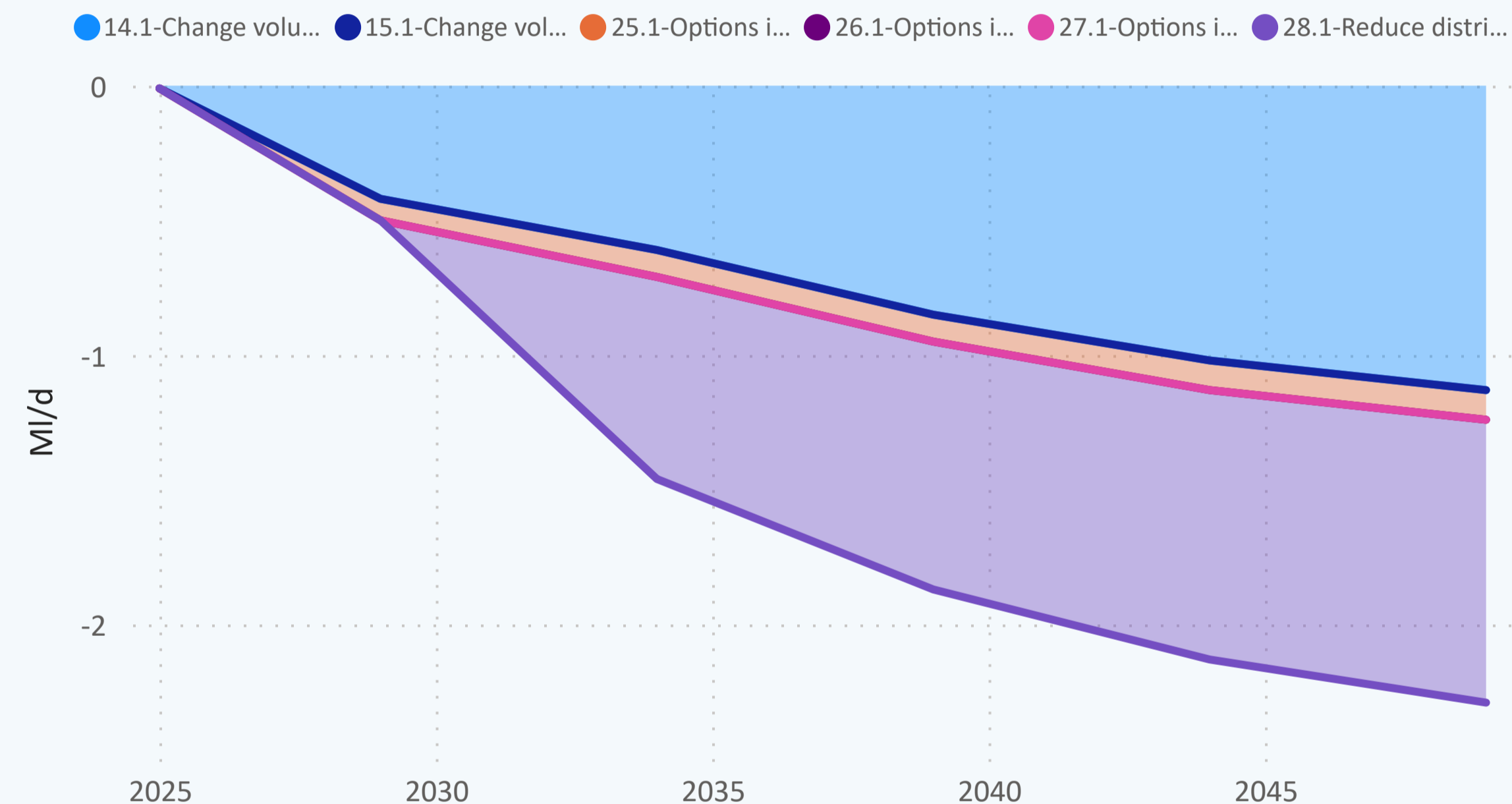


Table 8: DMO strategy Final Plan for Norfolk Harleston

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
14.1-Change volume delivered to measured households(-ve)	-0.4	-0.6	-0.9	-1.0	-1.1
15.1-Change volume delivered to unmeasured households(-ve)	0.0	0.0	0.0	0.0	0.0
25.1-Options impacting on measured Household - USPL (-ve)	-0.1	-0.1	-0.1	-0.1	-0.1
26.1-Options impacting on unmeasured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
27.1-Options impacting on Void properties - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
28.1-Reduce distribution losses (-ve)	0.0	-0.8	-0.9	-1.0	-1.1



9. Final Plan Supply Demand Balance DYAA

Norfolk Harleston

Norfolk Harleston

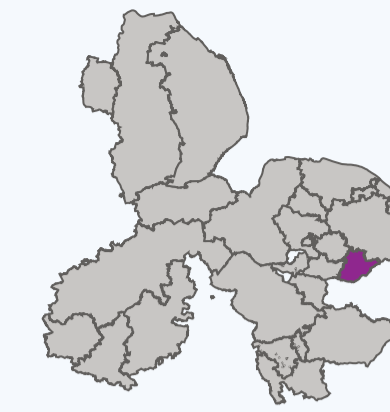


Figure 8: Norfolk Harleston final plan SDB to 2050 for Dry Year Annual Average conditions

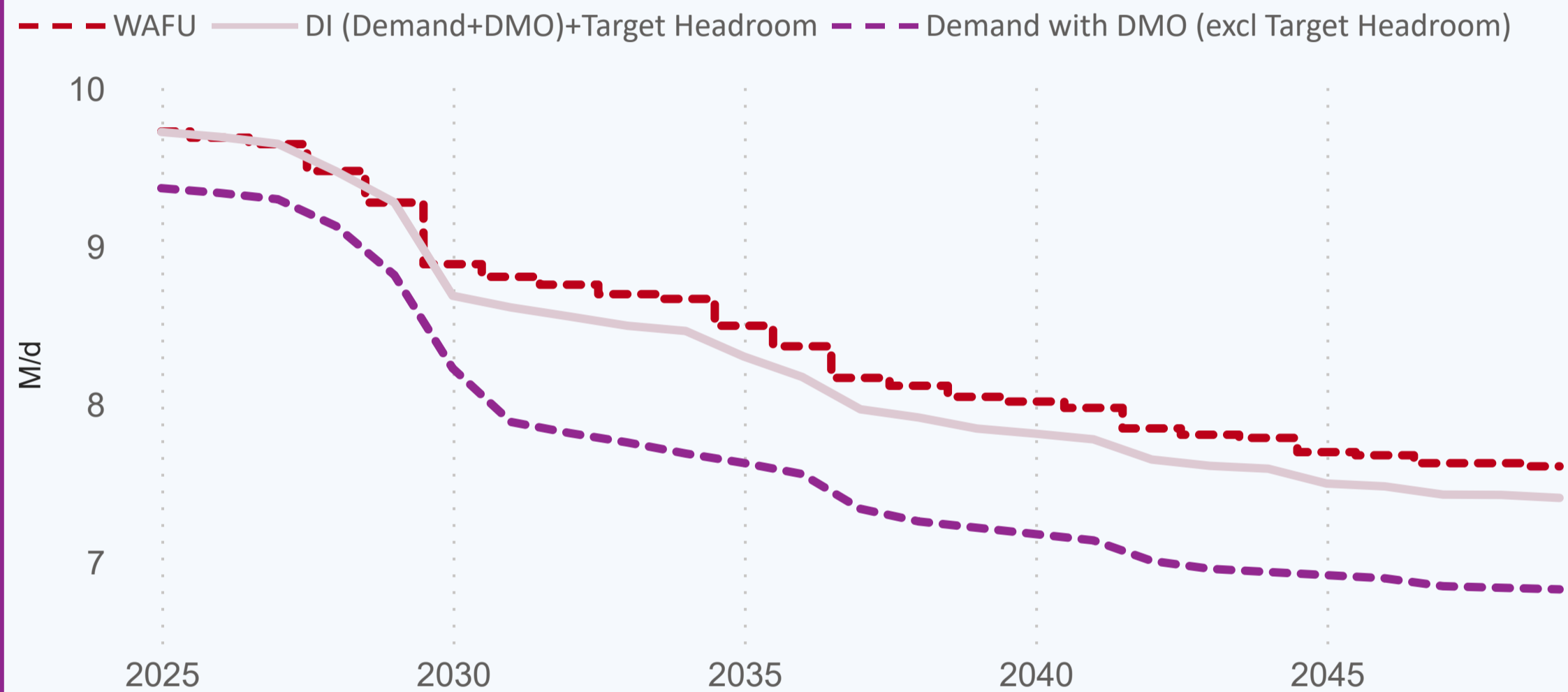


Table 9a: final plan SDB to 2050 for Dry Year conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	9.0	9.0	7.7	7.0	7.0	7.0
Net Transfers	0.8	0.3	1.0	1.0	0.8	0.6
Total Water Available For Use	9.7	9.3	8.7	8.0	7.8	7.6
Distribution Input	9.4	8.8	7.7	7.2	6.9	6.8
Target Headroom	0.4	0.5	0.8	0.6	0.7	0.6
Supply Demand Balance	0.0	0.0	0.2	0.2	0.2	0.2

Table 9b: Final Plan demand forecast for DYAA conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	4.2	4.1	4.1	4.2	4.2	4.2
Water delivered unmeasured household	0.7	0.4	0.2	0.0	0.0	0.0
Total Leakage	1.5	1.4	0.6	0.5	0.4	0.3
Water delivered measured non-household	3.0	2.8	2.6	2.4	2.3	2.1
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	9.4	8.8	7.7	7.2	6.9	6.8

9.1 DYAA FP supply demand summary: Norfolk Harleston

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 4.9 MI/d in 2025 to 4.3 MI/d in 2050, a percentage change of -12.2 %.
- Final Plan Leakage is forecast to change from 1.5 MI/d in 2025 to 0.3 MI/d by 2050.
- Final Plan Non-Household demand is expected to change from 3.0 MI/d to 2.1 MI/d.
- Final Plan Distribution Input is expected to change from 9.4 MI/d to 6.8 MI/d by 2050.



10. Final Plan Supply Demand Balance DYCP

Norfolk Harleston

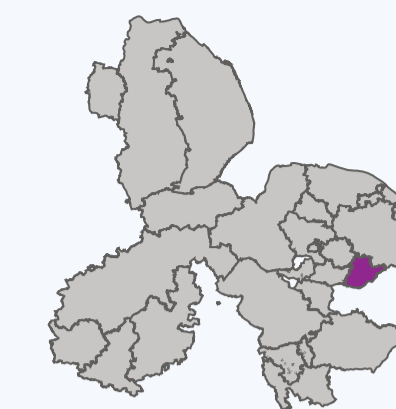


Figure 9: Norfolk Harleston baseline supply demand balance to 2050 for Dry Year Critical Period conditions

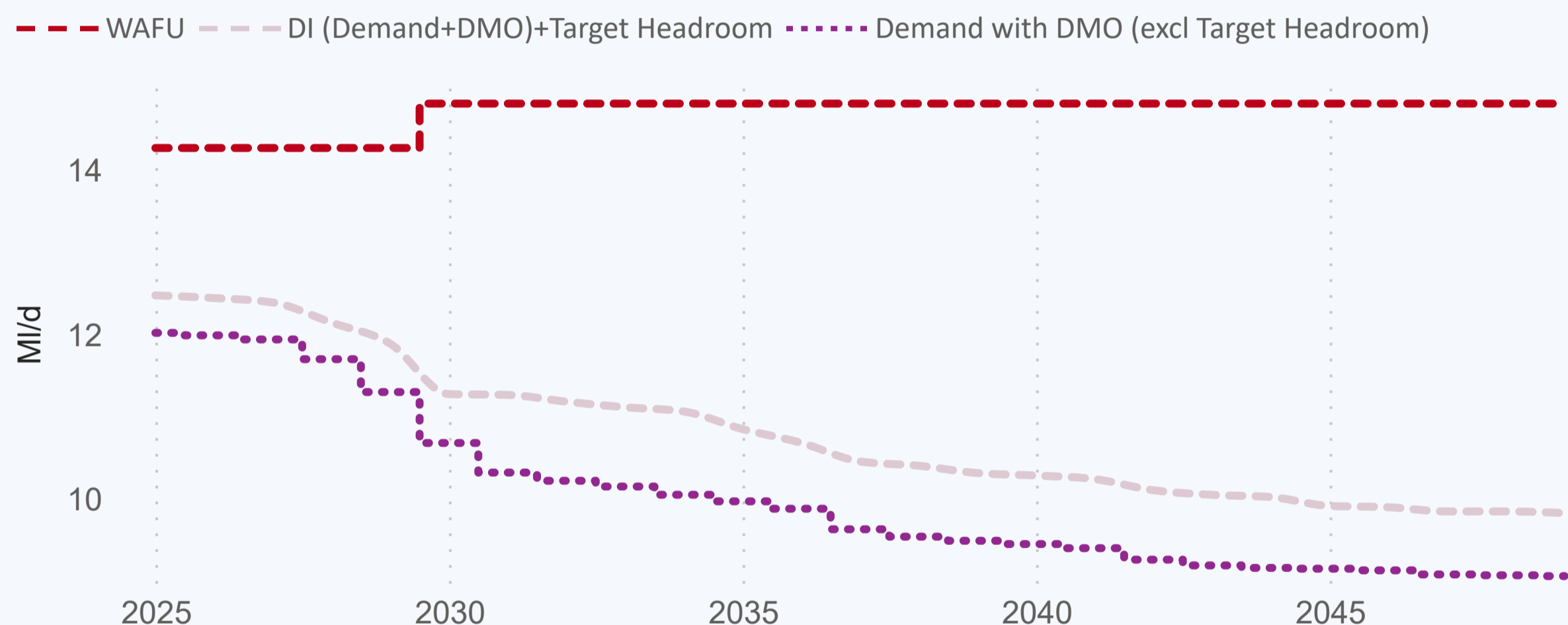


Table 10a: Final Plan supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	14.3	14.3	14.5	14.5	14.5	14.5
Net Transfers	0.0	0.0	0.3	0.3	0.3	0.3
Total Water Available For Use	14.3	14.3	14.8	14.8	14.8	14.8
Distribution Input	12.0	11.3	10.1	9.5	9.2	9.1
Target Headroom	0.5	0.6	1.0	0.8	0.9	0.8
Supply Demand Balance	1.8	2.4	3.7	4.5	4.8	5.0

Table 10b: Final Plan demand forecast for DYCP conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	5.5	5.4	5.5	5.6	5.6	5.7
Water delivered unmeasured household	0.9	0.6	0.3	0.1	0.1	0.1
Total Leakage	1.5	1.4	0.6	0.5	0.4	0.3
Water delivered measured non-household	4.1	3.8	3.5	3.3	3.0	2.9
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	12.0	11.3	10.1	9.5	9.2	9.1

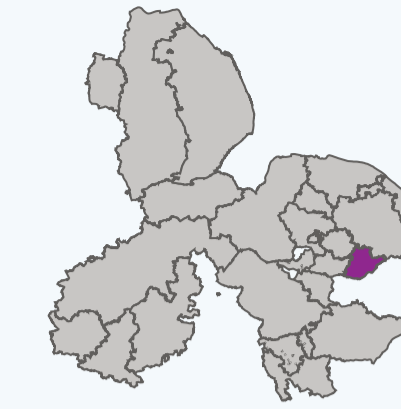
10.1 DYCP BL supply demand summary: Norfolk Harleston

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 6.5 MI/d in 2025 to 5.8 MI/d in 2050, a percentage change of -10.7 %.
- Final Plan Leakage: is forecast to change from 1.5 MI/d in 2025 to 0.3 MI/d by 2050
- Final Plan Non-Household demand: is expected to change from 4.1 MI/d to 2.9 MI/d.
- Final Plan Distribution Input: is expected to change from 12.0 MI/d to 9.1 MI/d by 2050.



11. Supply Side Strategy



Norfolk Harleston

Table 11a: Total Water Available for use Baseline and Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
WAFU - BL	9.0	7.5	6.8	6.8	6.8
WAFU - FP	9.3	8.7	8.0	7.8	7.6

11.1 Supply side strategy options.

For details on the feasible options list for Norfolk Harleston WRZ please refer to the Supply-Side Option Development technical supporting document.

Figure 10 Water Available for Use (WAFU) - baseline (BL) and final plan (FP)

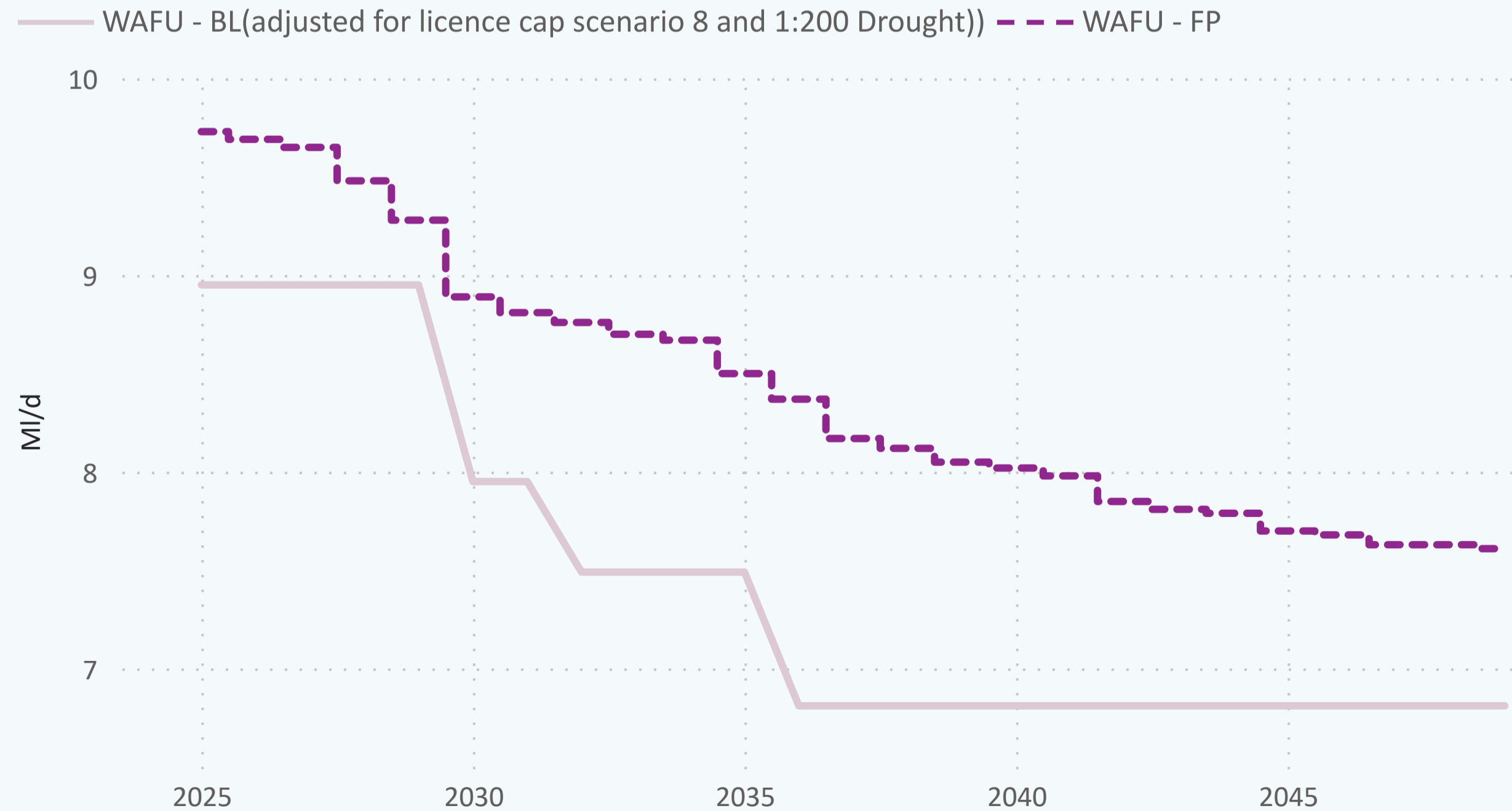


Table 11b: Preferred supply side options

Option ID	First Option Name
EI10	Adjustment to existing potable water import
LC11	Adjustment for Licence cap scenario 8
NHL4	Norfolk East Harling to Norfolk Harleston potable transfer (5 MI/d)
NHL7	Norfolk Harleston WTW backwash water recovery

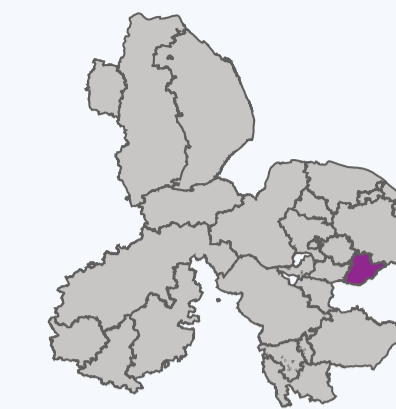


12. Non-Household consumption

Norfolk Harleston



Norfolk Harleston

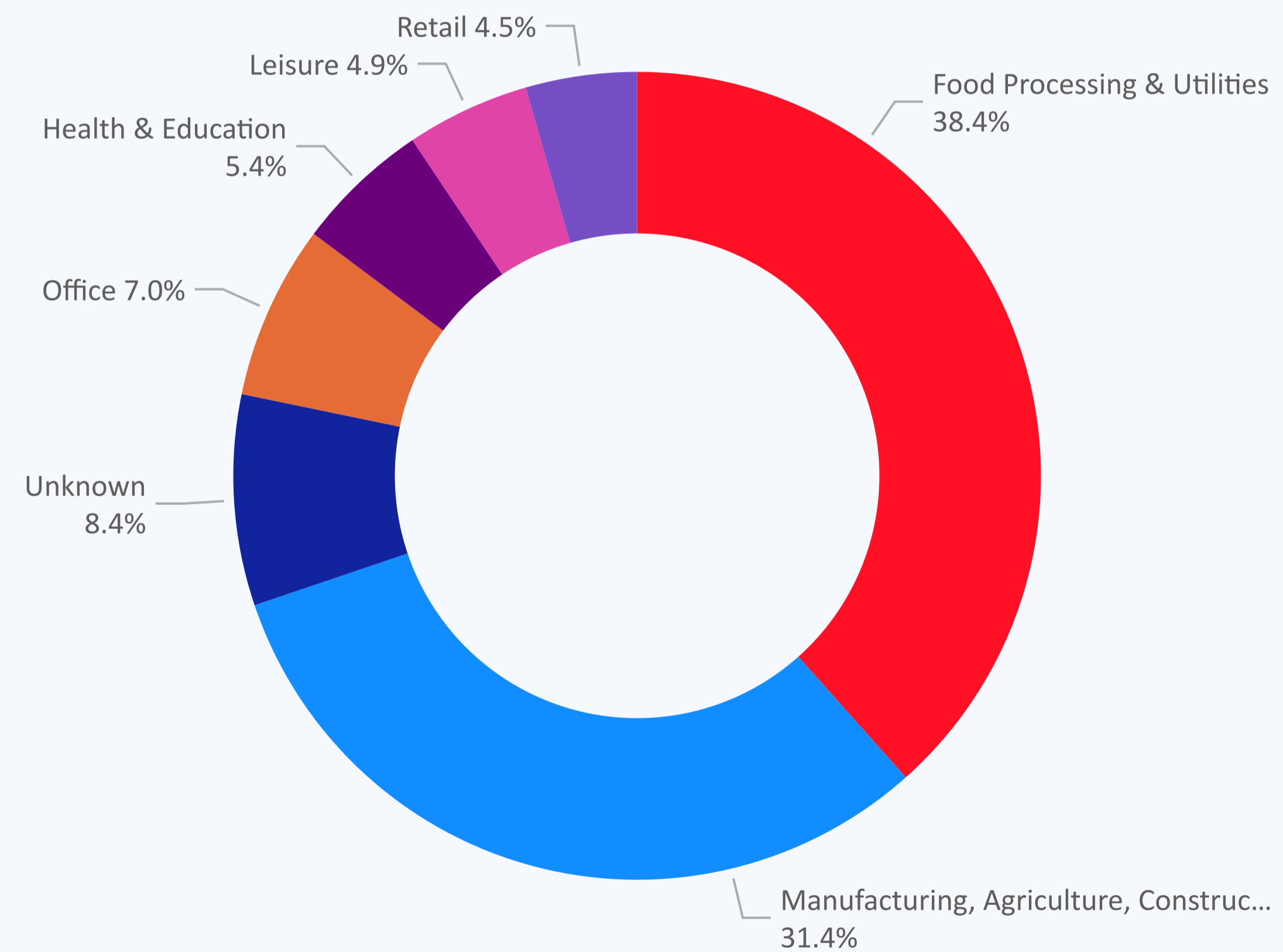
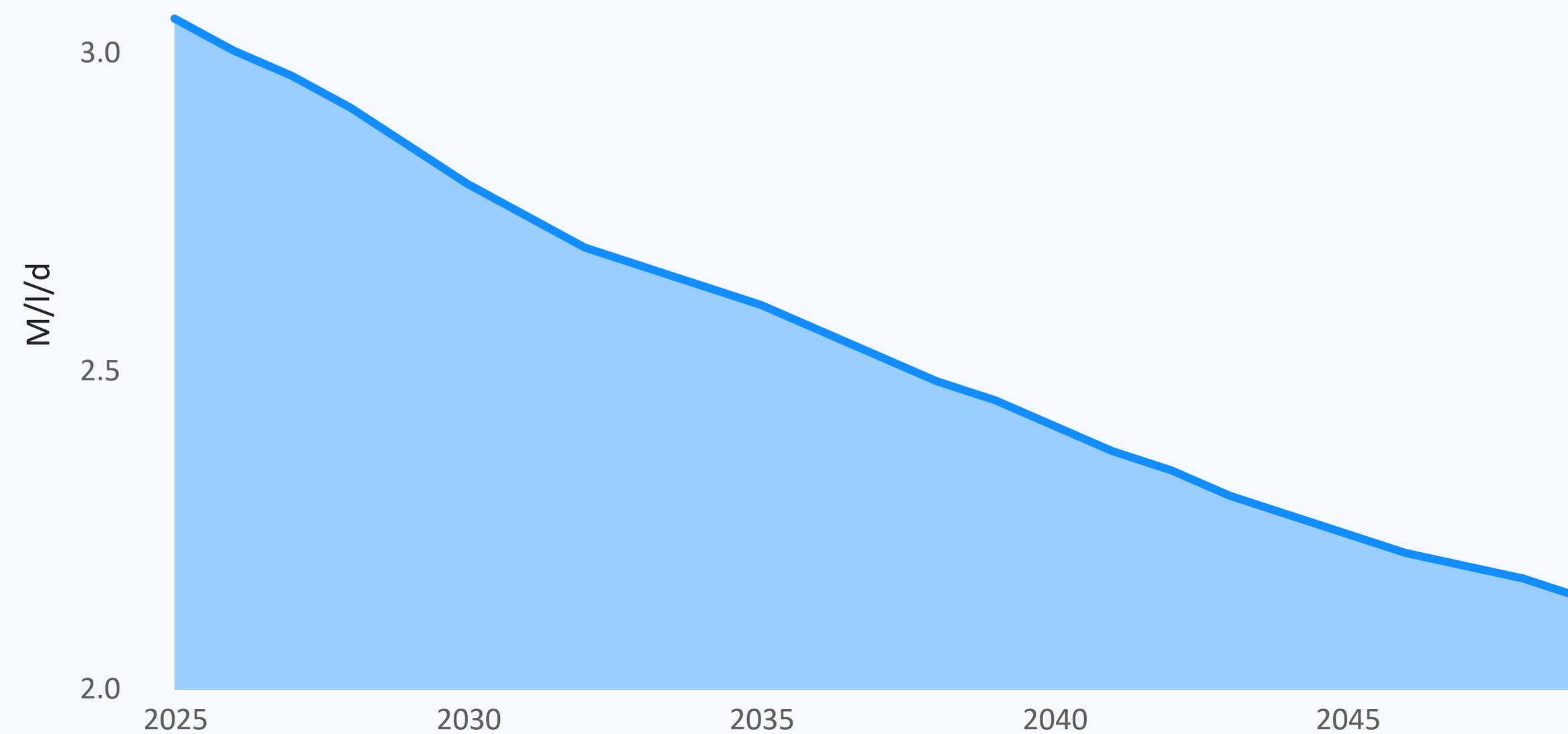


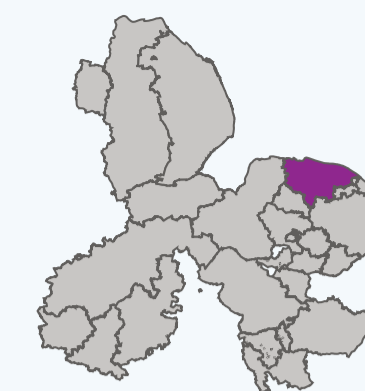
12.1 Non-Household demand Norfolk Harleston

In 2025, 3.1 MI/d of Non-Household demand (measured and unmeasured) is expected. In 2049 it is expected to be 2.1 MI/d, which is a -30.16% change between the years.

Figure 12: % Non-Household modelled sectors within resource zone

Figure 11: Non-Household demand forecast 2025-2050





3. Deployable Output summary DYAA

Norfolk North Coast

3.1 Resource Zone geography: Norfolk North Coast:

The North Norfolk Coast WRZ covers an area of 746 sq. km and lies along the North Norfolk coastline. It is supplied from groundwater abstractions in the Norfolk Chalk aquifer.

3.2

Baseline deployable output (including 1:500 drought): 18.6 MI/d

Deployable output reductions

Restoring sustainable abstraction (recent actual average): -4.0 MI/d

Reductions to achieve environmental destination (BAU+): -5.8 MI/d by 2036.

Climate change: 0.0 MI/d by 2050.

Baseline deployable output reduces by a total of -9.8 MI/d by 2050 a reduction of 52.6%.

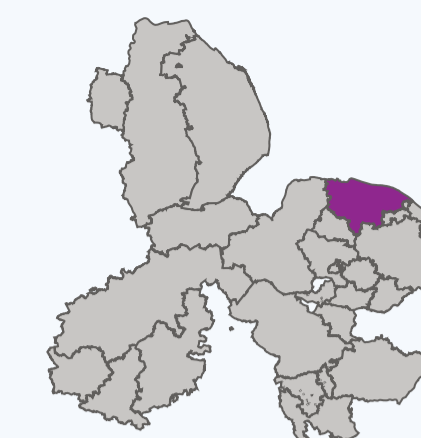
Table 3: supply characteristics (all values are MI/d)

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
DO pre forecast changes	18.6	18.6	18.6	18.6	18.6
Change in DO due to climate change	0.0	0.0	0.0	0.0	0.0
DO reductions to restore sustainable abstraction	-0.2	-4.0	-4.0	-4.0	-4.0
DO reductions for Environmental Destination	0.0	0.0	-5.8	-5.8	-5.8
Change in DO from drought measures	0.0	0.0	0.0	0.0	0.0
Final DO	18.5	14.7	8.8	8.8	8.8
Raw water losses (-ve)	-0.7	-0.7	-0.7	-0.7	-0.7
Outage Allowance (-ve)	-0.1	-0.1	-0.1	-0.1	-0.1
WAFU (own sources)	17.7	13.8	8.0	8.0	8.0
Net Transfers	0.0	0.0	7.6	7.2	6.4
Other benefits	0.15	4.21	0.38	0.38	0.38
Total Water Available for Use	17.8	18.0	16.0	15.6	14.8

3.3 The baseline Deployable Output data presented in this section represents the Environment Agency’s preferred sustainability reduction licence cap scenario. This includes recent actual average caps to time limited licences in 2022-24 and caps to all other permanent licences by 2030. The impact of 1:500 drought resilience has also been applied from 2025 rather than the preferred scenario of 2039/2040. These factors apply to the baseline forecast only. For the final plan forecast we have applied our best value scenario for licence caps, which was developed following an iterative process to deliver licence caps as early as possible. The transition to 1:500 drought resilience occurs in 2039/40 in the final plan forecast. Further information is available in the WRMP24 Decision Making technical supporting document, section 6.



4. Population & Housing



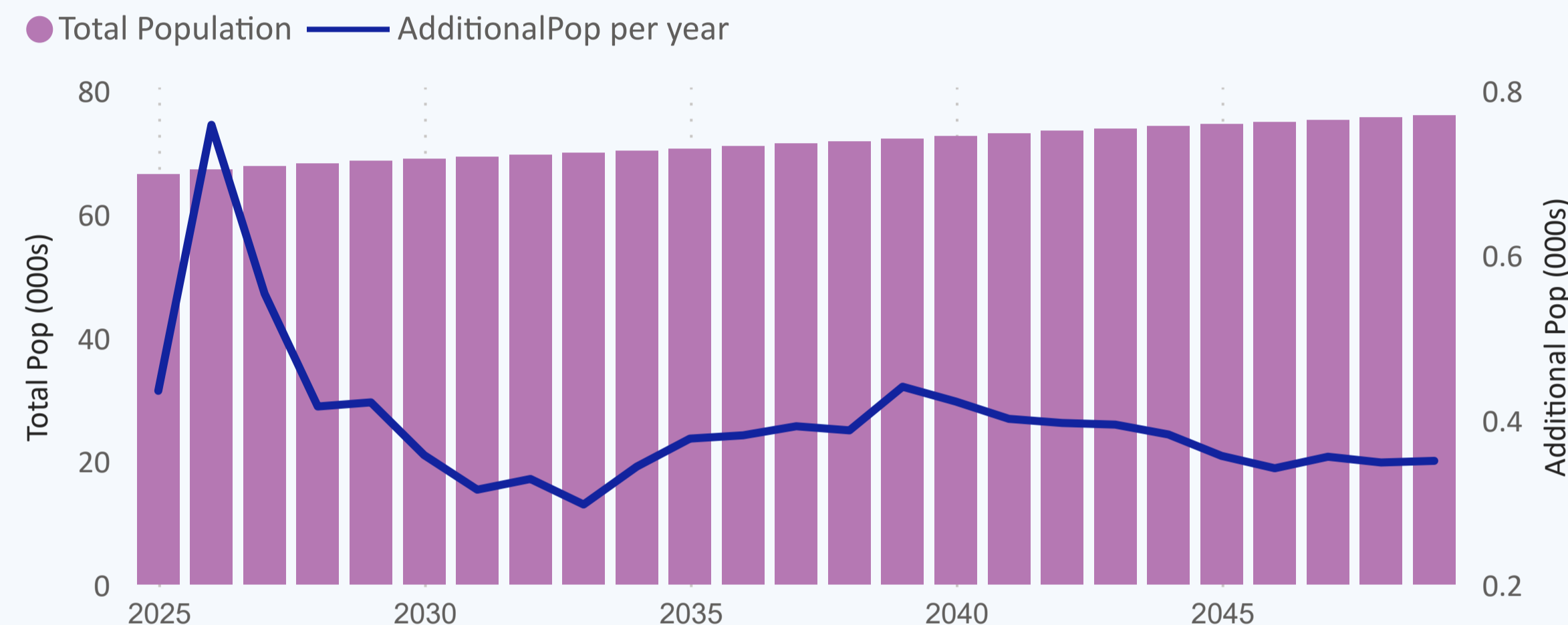
Norfolk North Coast

4.1 Over the WRMP period, population in **Norfolk North Coast** is set to increase from **66413** in 2025 to **75923** in 2049-50 - this is an increase of **14.3 %** over the 25 years.

Table 4a: Population totals (cumulative) by AMP

Year	Total Population (000s)
2029-30 (end of AMP8)	68.561
2034-35 (end of AMP9)	70.201
2039-40 (end of AMP10)	72.178
2044-45 (end of AMP11)	74.173
2049-50 (end of AMP12)	75.923

Figure 2: Total Resource Zone Population

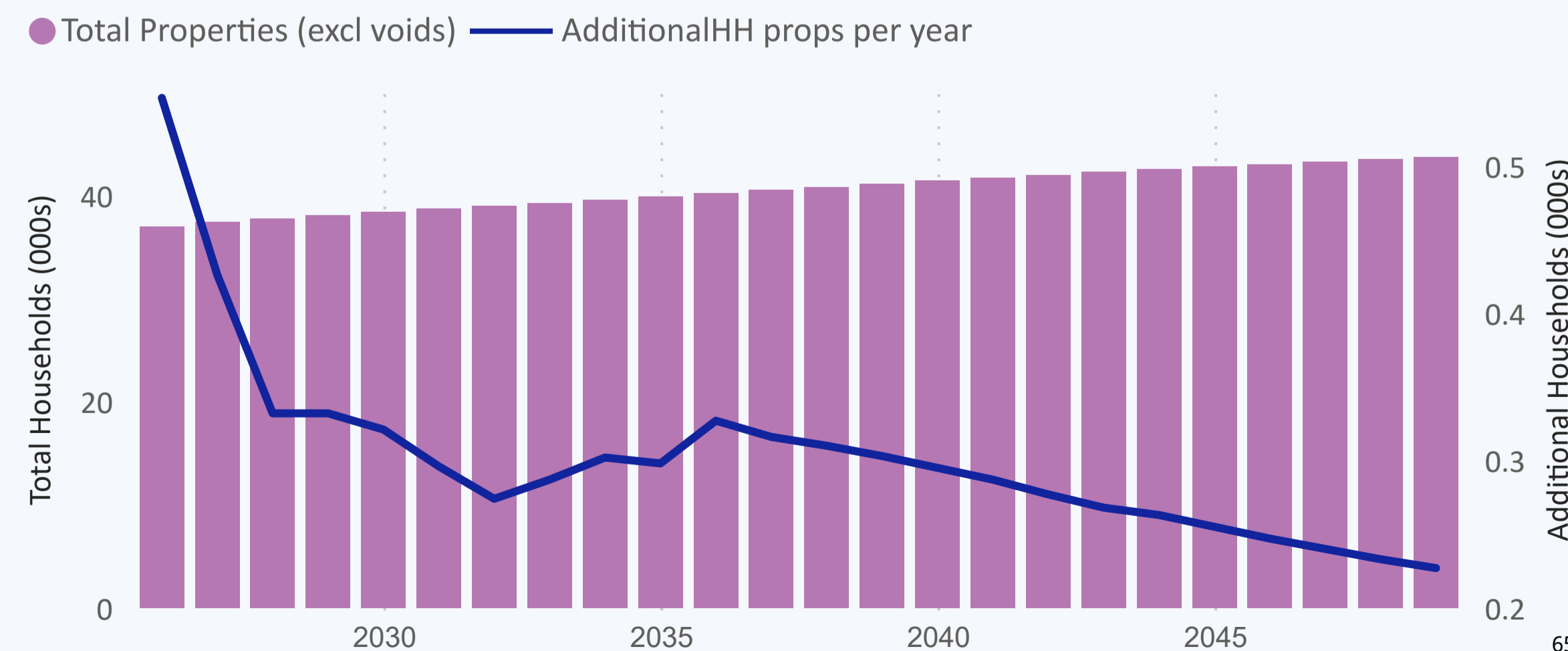


4.2 Over the WRMP period, property numbers in **Norfolk North Coast** are set to increase from **36456** in 2025 to **43718** in 2049-50 - this is an increase of **19.9 %** over the 25 years.

Table 4b: Property totals (cumulative) by AMP

Year	Total Properties-excl voids (000s)
2029-30 (end of AMP8)	38.092
2034-35 (end of AMP9)	39.572
2039-40 (end of AMP10)	41.126
2044-45 (end of AMP11)	42.516
2049-50 (end of AMP12)	43.718

Figure 3: Total Resource Zone Properties (excl. voids)





5. Baseline Supply Demand Balance DYAA

Norfolk North Coast

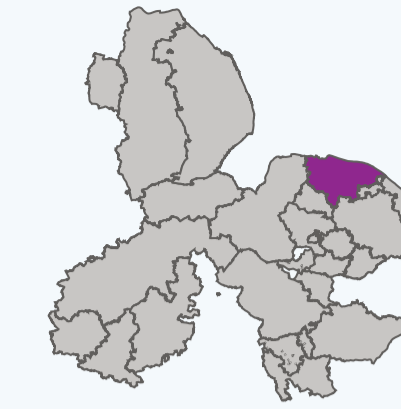


Figure 4: Norfolk North Coast baseline supply demand balance to 2050 for Dry Year Annual Average conditions

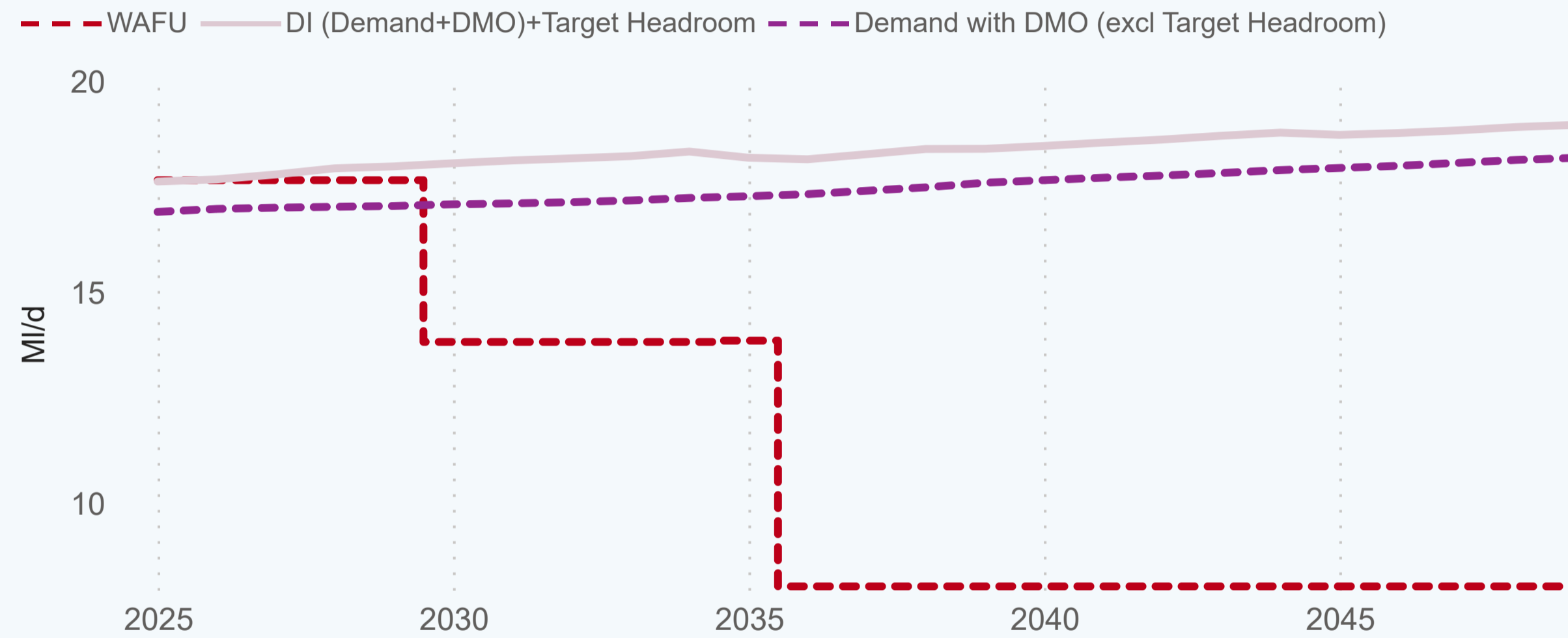


Table 5a: Baseline supply demand balance 2025 - 2050 for DYAA conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	17.7	17.7	13.8	8.0	8.0	8.0
Net Transfers	0.0	0.0	0.0	0.0	0.0	0.0
Total Water Available For Use	17.7	17.7	13.8	8.0	8.0	8.0
Distribution Input	16.9	17.1	17.2	17.6	17.9	18.2
Target Headroom	0.7	0.9	1.1	0.8	0.9	0.8
Supply Demand Balance	0.0	-0.3	-4.5	-10.4	-10.7	-10.9

Table 5b: Baseline demand forecast (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	8.5	9.1	9.7	10.4	11.0	11.3
Water delivered unmeasured household	1.7	1.3	0.8	0.4	0.1	0.1
Total Leakage	2.7	2.7	2.7	2.7	2.7	2.8
Water delivered measured non-household	4.1	4.1	4.1	4.2	4.2	4.2
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	16.9	17.1	17.2	17.6	17.9	18.2

5.1 DYAA BL supply demand summary: Norfolk North Coast

Baseline Supply Demand Balance: This zone is expected to go into deficit by 2026 (under the preferred baseline scenario - as described in section 3.3).

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 10.2 MI/d in 2025 to 11.3 MI/d in 2050, a percentage change of 11.2 %.
- Baseline Leakage: is forecast to change from 2.7 MI/d in 2025 to 2.8 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 4.1 MI/d to 4.2 MI/d.
- Baseline Distribution Input: is expected to change from 16.9 MI/d to 18.2 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).



6. Baseline Supply Demand Balance DYCP

Norfolk North Coast

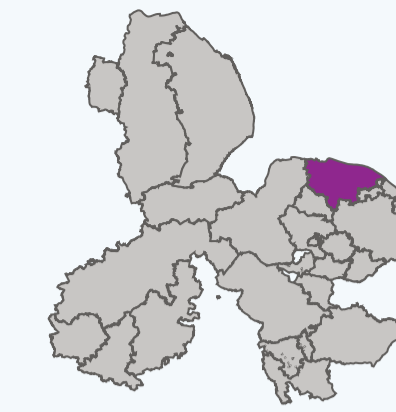


Figure 5: Norfolk North Coast baseline supply demand balance to 2050 for Dry Year Critical Period conditions

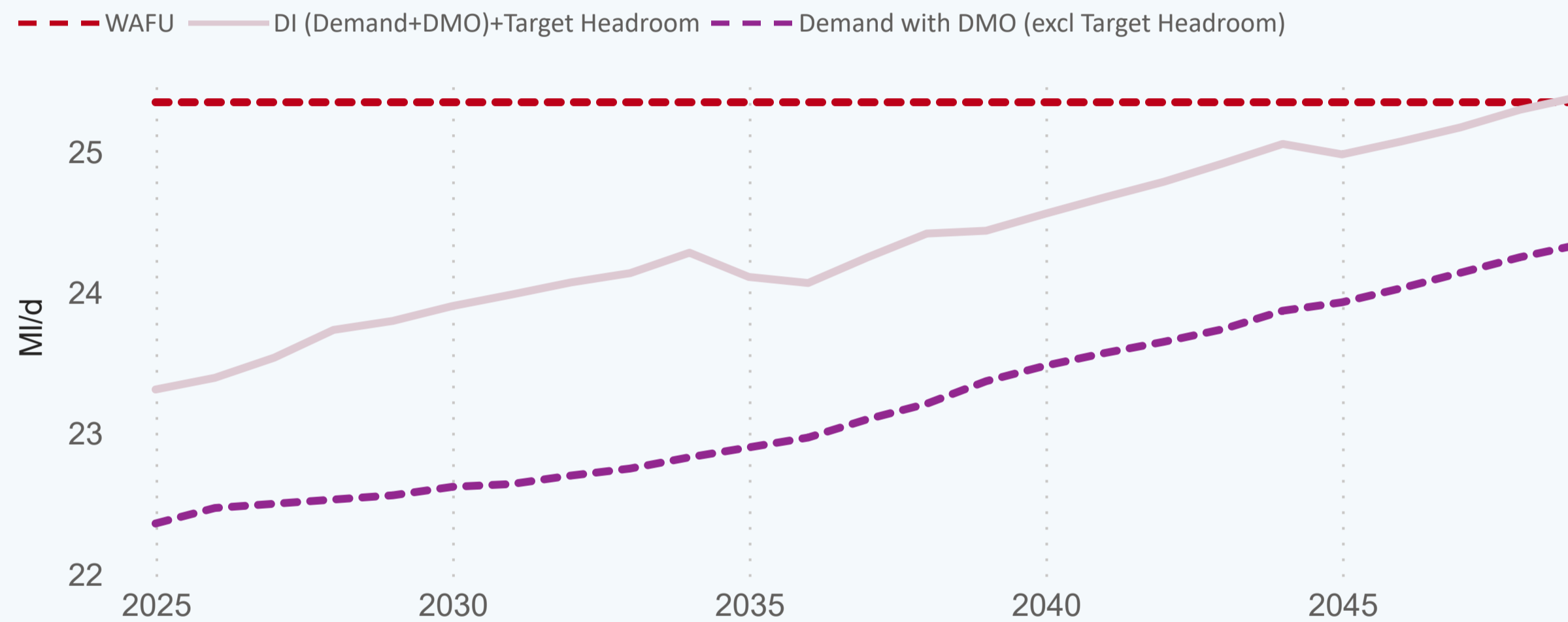


Table 6b: Baseline demand forecast with DYCP conditions (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	12.1	13.0	13.9	15.0	15.9	16.4
Water delivered unmeasured household	2.6	1.9	1.2	0.6	0.2	0.1
Total Leakage	2.7	2.7	2.7	2.7	2.7	2.8
Water delivered measured non-household	5.1	5.1	5.1	5.1	5.2	5.2
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	22.4	22.6	22.8	23.4	23.9	24.3

Table 6a: Baseline supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	25.4	25.4	25.4	25.4	25.4	25.4
Net Transfers	0.0	0.0	0.0	0.0	0.0	0.0
Total Water Available For Use	25.4	25.4	25.4	25.4	25.4	25.4
Distribution Input	22.4	22.6	22.8	23.4	23.9	24.3
Target Headroom	1.0	1.2	1.5	1.1	1.2	1.0
Supply Demand Balance	2.0	1.6	1.1	0.9	0.3	0.0

6.1 DYCP BL supply demand summary: Norfolk North Coast

Baseline Supply Demand balance: This zone is not expected to go into deficit

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 14.7 MI/d in 2025 to 16.5 MI/d in 2050, a percentage change of 12.3 %.
- Baseline Leakage: is forecast to change from 2.7 MI/d in 2025 to 2.8 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 5.1 MI/d to 5.2 MI/d.
- Baseline Distribution Input: is expected to change from 22.4 MI/d to 24.3 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).



7. Demand forecast and PCC



Norfolk North Coast

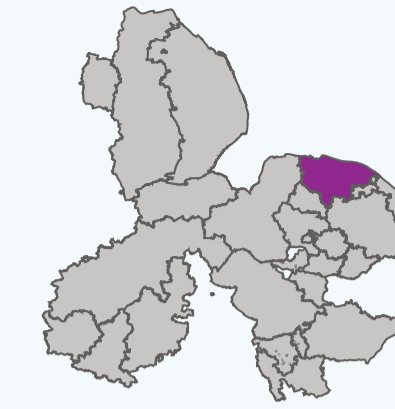


Figure 6: Norfolk North Coast DYAA DI with and without demand management strategy

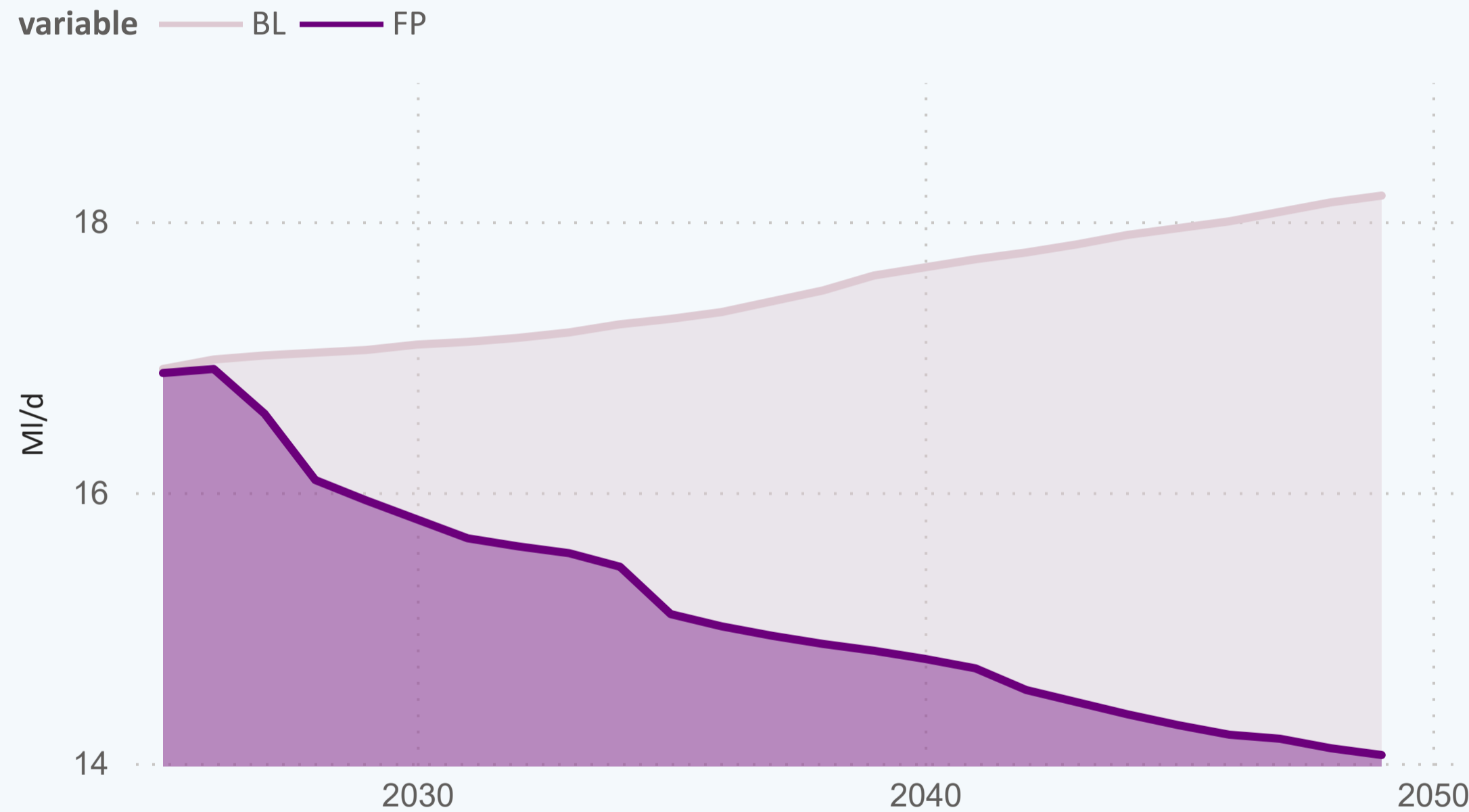


Table 7a: Demand - baseline and final plan

variable	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL	17.1	17.2	17.6	17.9	18.2
FP	15.9	15.5	14.8	14.4	14.1

7.2 Demand Norfolk North Coast (see Table 7a)

Baseline demand is expected to increase from 16.9 (MI/d) in 2025 to 18.2 (MI/d) in 2050. With demand management options in place, demand is expected to be 14.1 (MI/d).

7.1 PCC Norfolk North Coast (see Table 7b)

Per Capita Consumption (PCC) in the base year 2025/26 is 133.7 (l/h/d) measured and 234.2 (l/h/d) unmeasured.

The weighted average PCC (l/h/d) comes in at 143.8 (l/h/d) in 2025/26. This is forecast to fall to 113.4 (l/h/d) in the Final Plan forecast as demand management option savings are realised and customers switch from unmeasured to measured status

Table 7b: DMO strategy Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL demand forecast(DYAA)	141.2	140.0	140.9	140.5	140.5
FP demand forecast(DYAA)	130.5	124.6	119.7	115.1	113.4
% change BL to FP	-7.5%	-11.0%	-15.0%	-18.0%	-19.3%

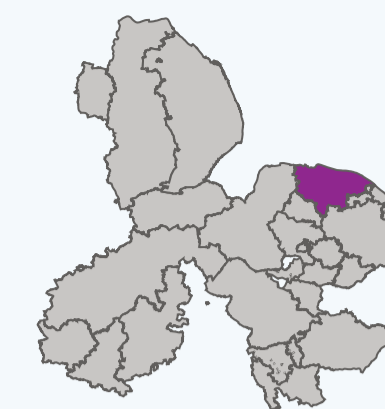




8. Demand management options



Norfolk North Coast



8.1 Regional overview:

Across the entirety of the Anglian Water region our demand management strategy will comprise three strongly interlinked programs:

Water metering program:

- We intend to complete our current smart meter rollout which will replace our entire meter stock over 10 years (2 AMPs), noting that 1.1M smart meters will be installed across Anglian Water by 2025. The information resulting from 'smart metering' will help inform our customers regarding their water usage and will assist in our ability to influence this behaviour. It will also help with our ability to detect leakage, significantly reducing plumbing losses and customer supply pipe leaks.

Leakage reduction

- Our aim is to reduce leakage by more than 45MI/d from 2025 to 2050 across the whole Anglian Water area, building upon our ambitious program of leakage reduction in AMP7 (14% reduction of more than 27MI/d across the region by 2025).

Water efficiency measures

- New technologies and interventions will help promote the careful use of water. Additional water efficiency programs will include: the promotion of 'Smart' devices; further development of our Multi-utility web-portal; garden advice; support for vulnerable customers with plumbing loss and cspl; Community reward schemes. As part of our revised draft WRMP24 we have developed and included 'water efficiency visits' and leakage reduction measures for our Non-Household customers.

Figure 7: DMO strategy Final Plan for Norfolk North Coast

For full chart key see table below

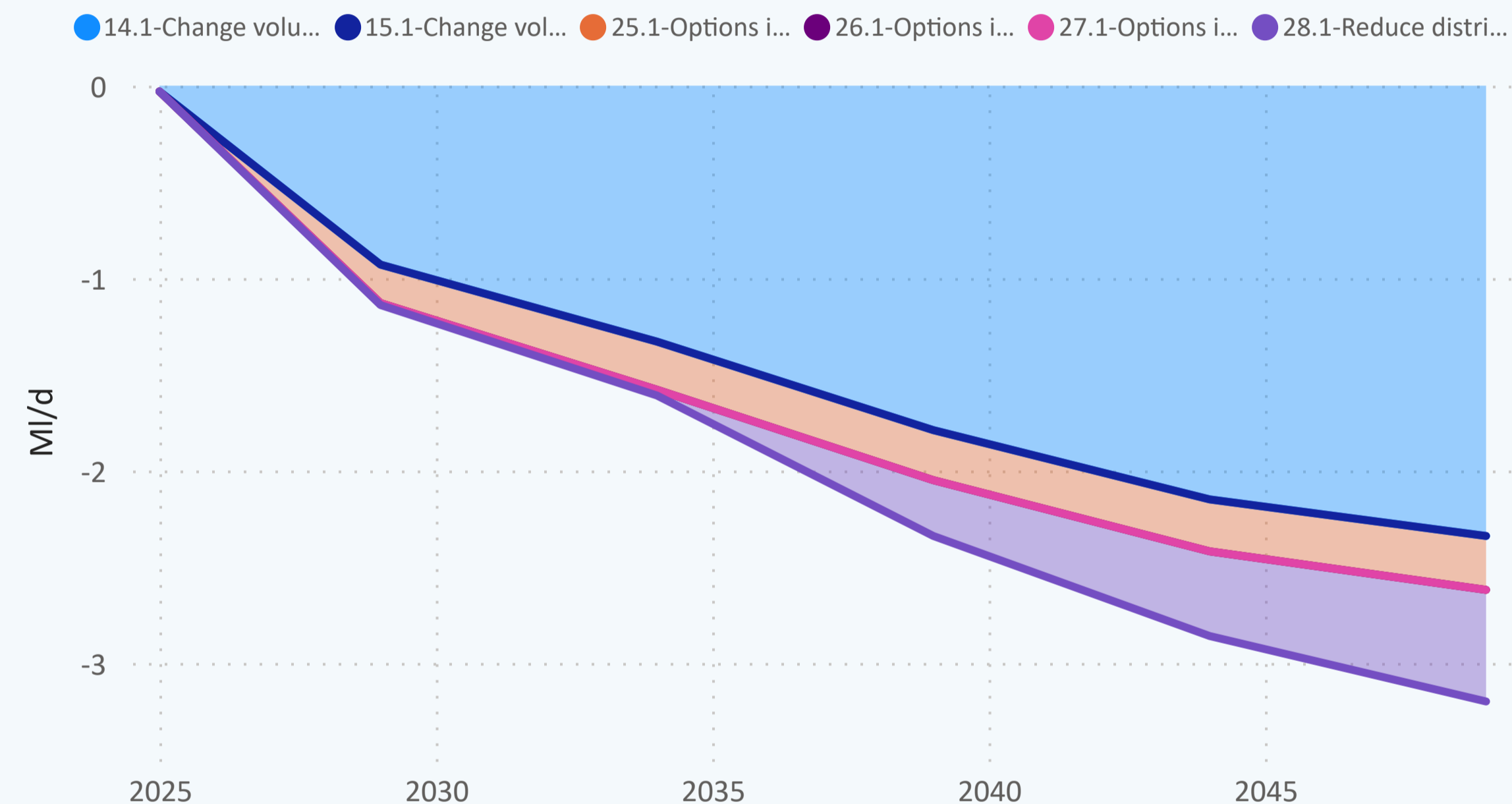


Table 8: DMO strategy Final Plan for Norfolk North Coast

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
14.1-Change volume delivered to measured households(-ve)	-0.9	-1.3	-1.8	-2.2	-2.3
15.1-Change volume delivered to unmeasured households(-ve)	0.0	0.0	0.0	0.0	0.0
25.1-Options impacting on measured Household - USPL (-ve)	-0.2	-0.3	-0.3	-0.3	-0.3
26.1-Options impacting on unmeasured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
27.1-Options impacting on Void properties - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
28.1-Reduce distribution losses (-ve)	0.0	0.0	-0.3	-0.4	-0.6

9. Final Plan Supply Demand Balance DYAA

Norfolk North Coast

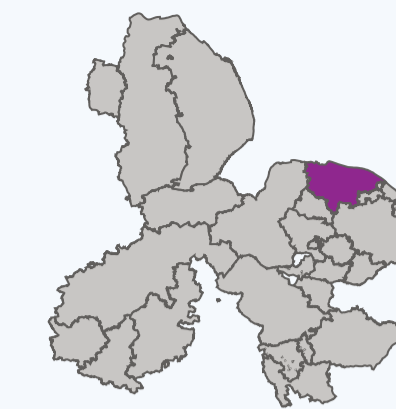


Figure 8: Norfolk North Coast final plan SDB to 2050 for Dry Year Annual Average conditions

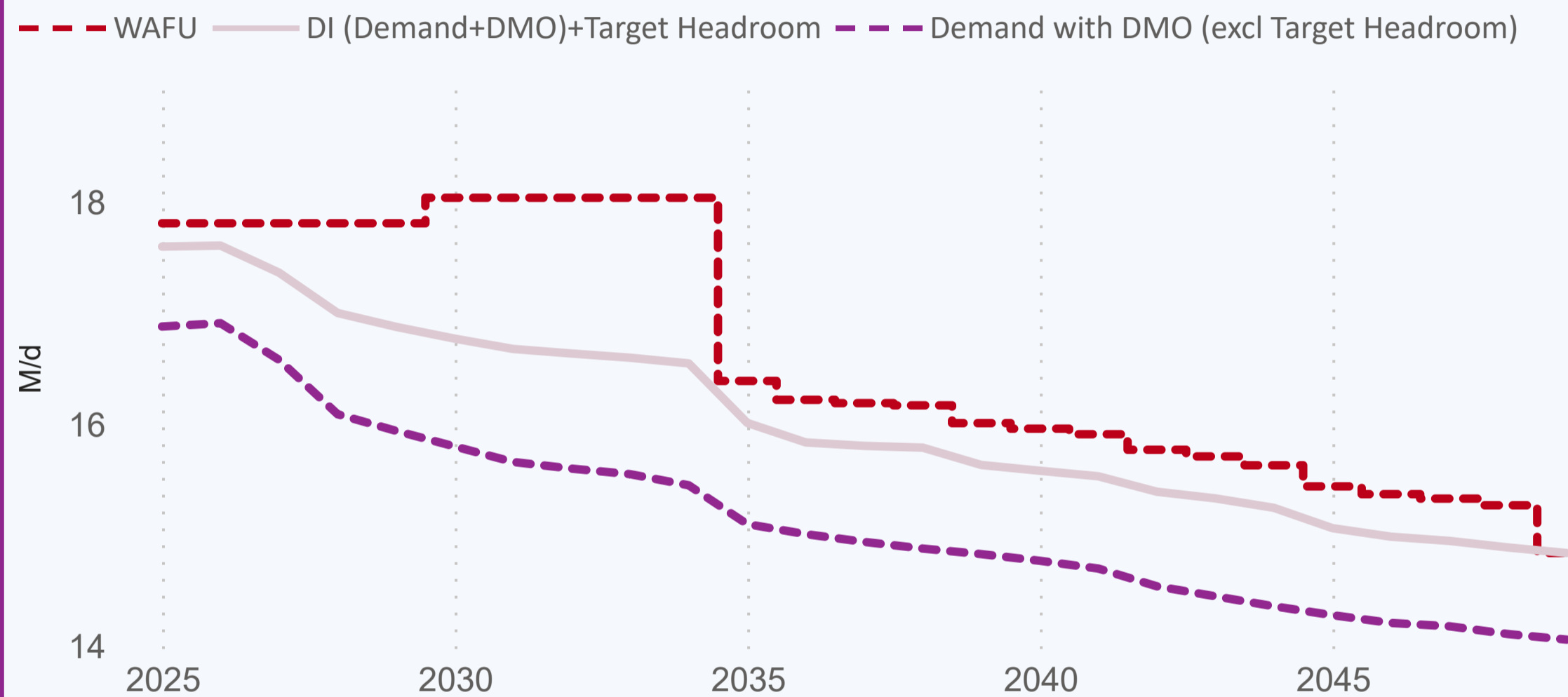


Table 9a: final plan SDB to 2050 for Dry Year conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	17.8	17.8	18.0	8.4	8.4	8.4
Net Transfers	0.0	0.0	0.0	7.6	7.2	6.4
Total Water Available For Use	17.8	17.8	18.0	16.0	15.6	14.8
Distribution Input	16.9	15.9	15.5	14.8	14.4	14.1
Target Headroom	0.7	0.9	1.1	0.8	0.9	0.8
Supply Demand Balance	0.2	0.9	1.5	0.4	0.4	0.0

Table 9b: Final Plan demand forecast for DYAA conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	8.4	8.1	8.3	8.6	8.8	8.9
Water delivered unmeasured household	1.7	1.3	0.8	0.4	0.1	0.1
Total Leakage	2.7	2.5	2.5	2.2	2.0	1.9
Water delivered measured non-household	4.1	3.9	3.7	3.5	3.2	3.0
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	16.9	15.9	15.5	14.8	14.4	14.1

9.1 DYAA FP supply demand summary: Norfolk North Coast

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 10.2 MI/d in 2025 to 9.0 MI/d in 2050, a percentage change of -11.5 %.
- Final Plan Leakage is forecast to change from 2.7 MI/d in 2025 to 1.9 MI/d by 2050.
- Final Plan Non-Household demand is expected to change from 4.1 MI/d to 3.0 MI/d.
- Final Plan Distribution Input is expected to change from 16.9 MI/d to 14.1 MI/d by 2050.



10. Final Plan Supply Demand Balance DYCP

Norfolk North Coast

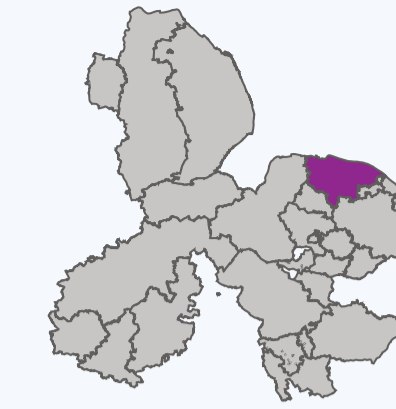


Figure 9: Norfolk North Coast baseline supply demand balance to 2050 for Dry Year Critical Period conditions

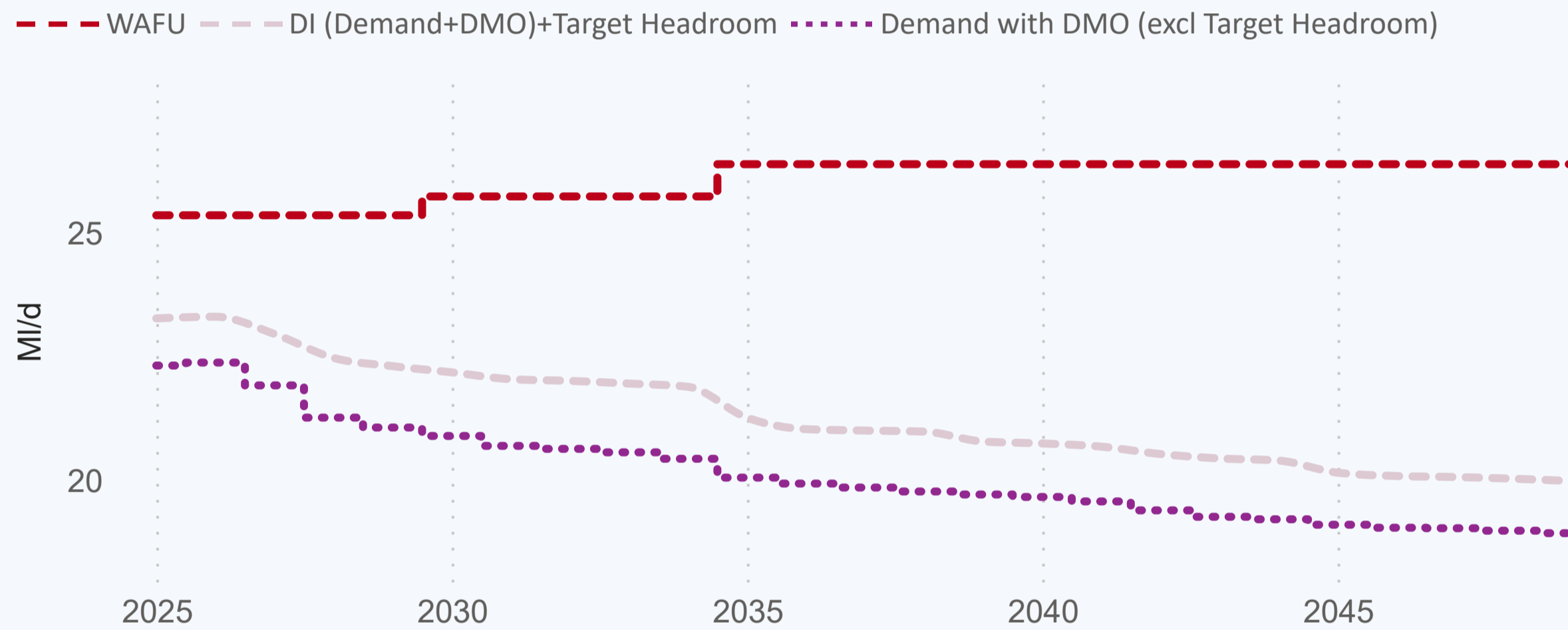


Table 10a: Final Plan supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	25.4	25.4	25.7	25.7	25.7	25.7
Net Transfers	0.0	0.0	0.0	0.7	0.7	0.7
Total Water Available For Use	25.4	25.4	25.7	26.4	26.4	26.4
Distribution Input	22.3	21.1	20.4	19.7	19.2	18.9
Target Headroom	1.0	1.2	1.5	1.1	1.2	1.0
Supply Demand Balance	2.1	3.0	3.8	5.6	6.0	6.4

Table 10b: Final Plan demand forecast for DYCP conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	12.1	11.7	12.1	12.5	12.8	13.0
Water delivered unmeasured household	2.6	1.9	1.2	0.6	0.2	0.1
Total Leakage	2.7	2.5	2.5	2.2	2.0	1.9
Water delivered measured non-household	5.1	4.9	4.6	4.3	4.0	3.7
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	22.3	21.1	20.4	19.7	19.2	18.9

10.1 DYCP BL supply demand summary: Norfolk North Coast

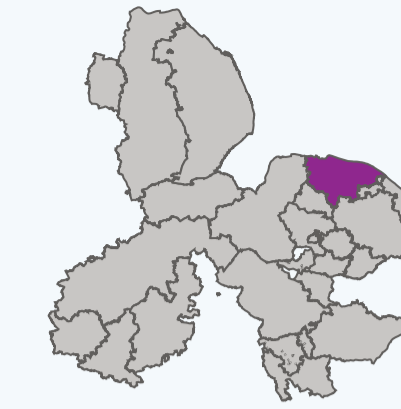
The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 14.6 MI/d in 2025 to 13.2 MI/d in 2050, a percentage change of -10.1 %.
- Final Plan Leakage: is forecast to change from 2.7 MI/d in 2025 to 1.9 MI/d by 2050
- Final Plan Non-Household demand: is expected to change from 5.1 MI/d to 3.7 MI/d.
- Final Plan Distribution Input: is expected to change from 22.3 MI/d to 18.9 MI/d by 2050.





11. Supply Side Strategy



Norfolk North Coast

Table 11a: Total Water Available for use Baseline and Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
WAFU - BL	17.8	17.7	8.0	8.0	8.0
WAFU - FP	17.8	18.0	16.0	15.6	14.8

11.1 Supply side strategy options.

For details on the feasible options list for Norfolk North Coast WRZ please refer to the Supply-Side Option Development technical supporting document.

Figure 10 Water Available for Use (WAFU) - baseline (BL) and final plan (FP)

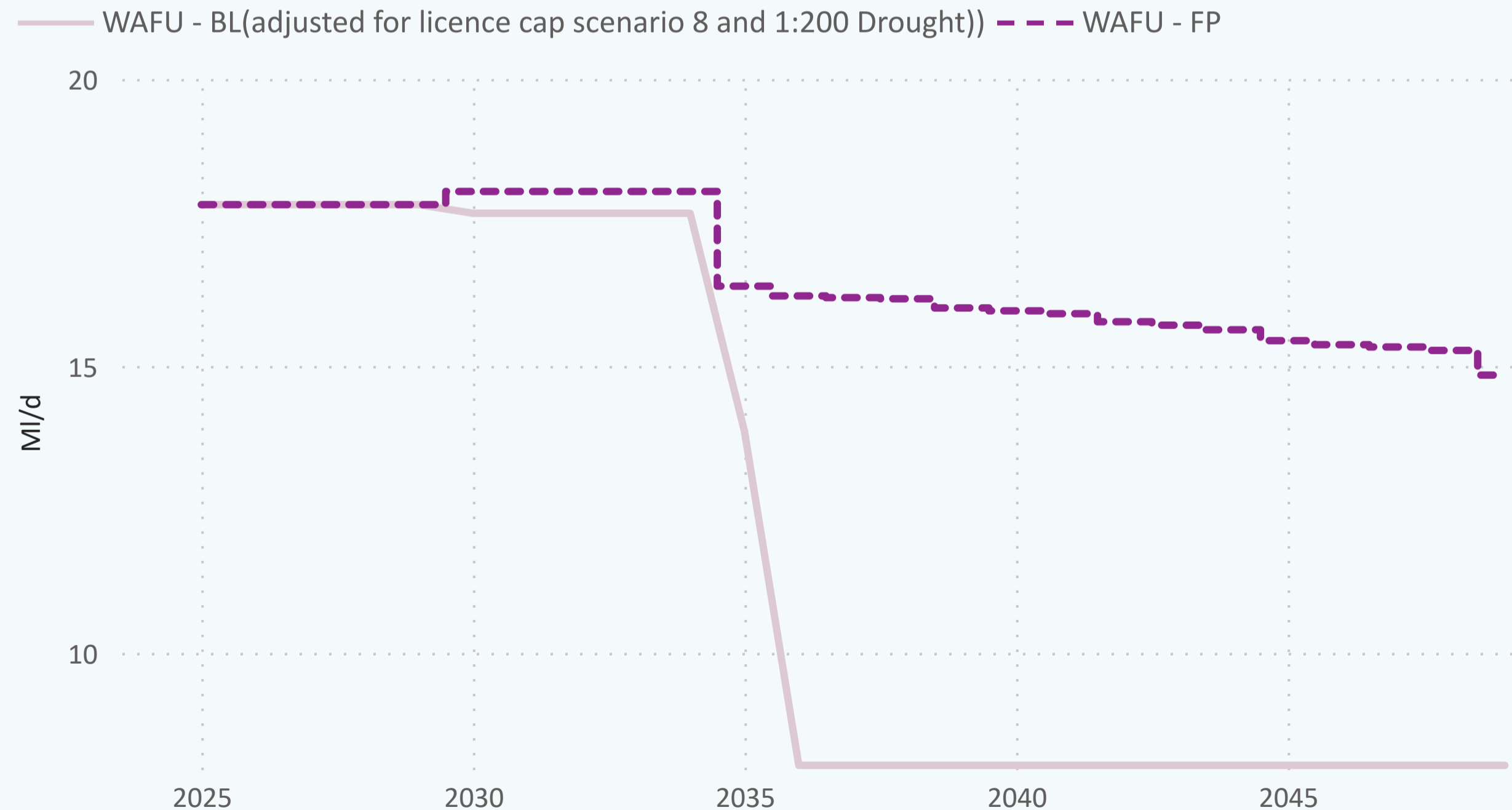


Table 11b: Preferred supply side options

Option ID	First Option Name
LC12	Adjustment for Licence cap scenario 8
NNC4	Norfolk East Dereham to North Norfolk Coast potable transfer (10 MI/d)
NNC5	North Norfolk Coast1 WTW backwash water recovery
NNC6	North Norfolk Coast2 WTW backwash water recovery

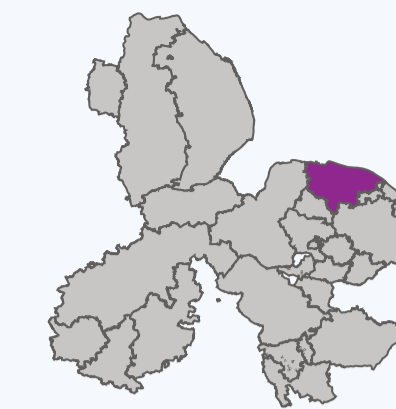


12. Non-Household consumption

Norfolk North Coast



Norfolk North Coast

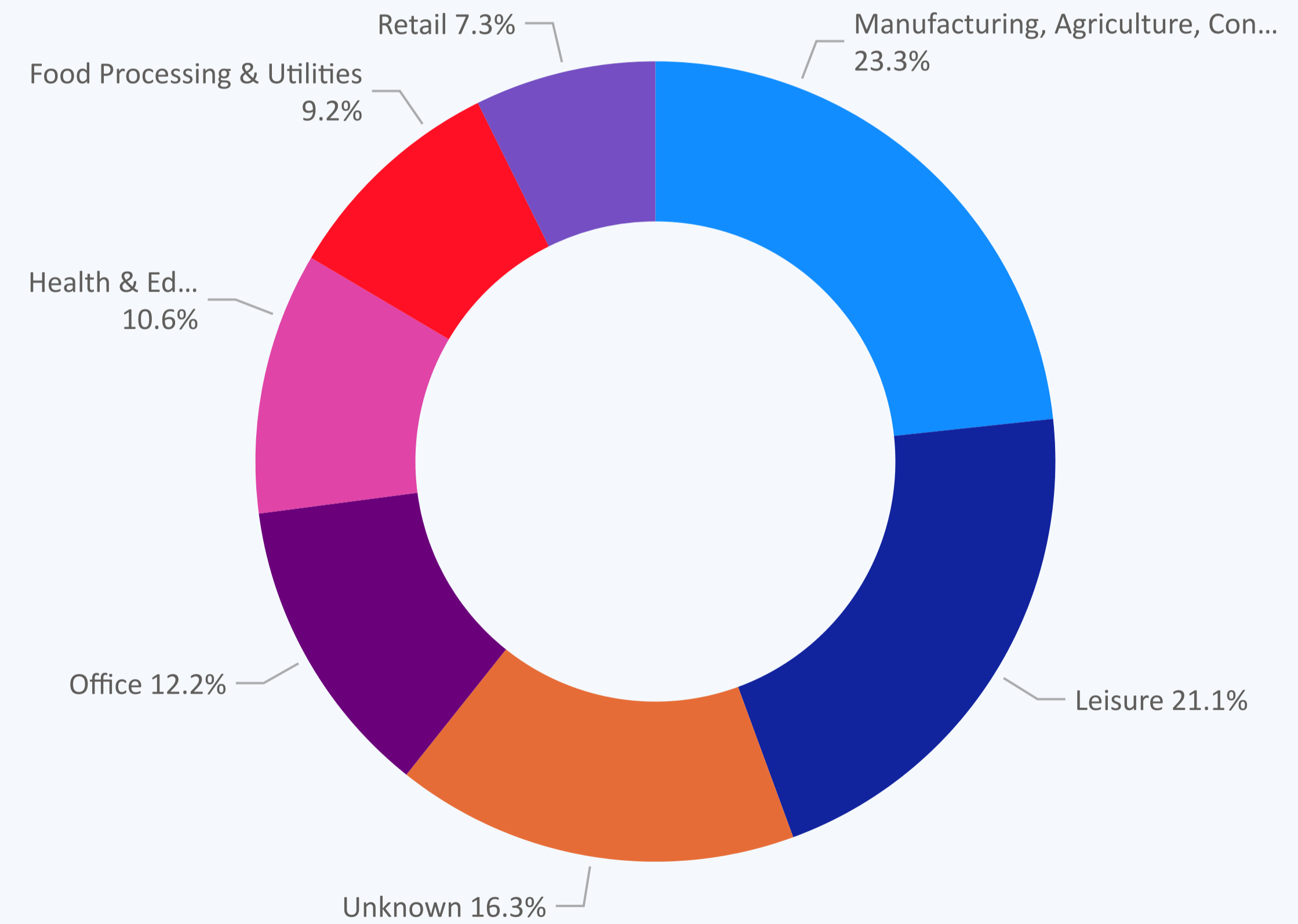
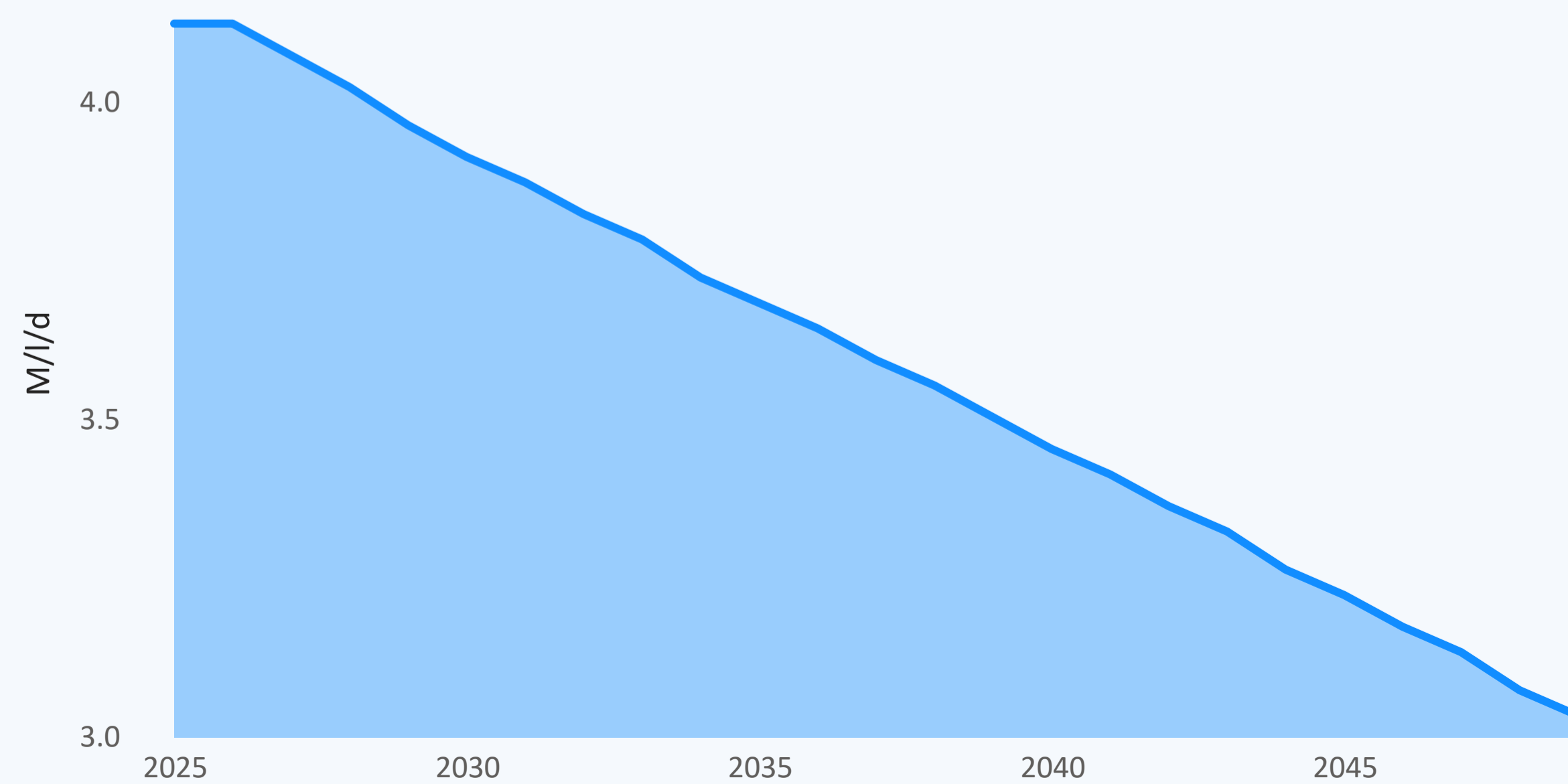


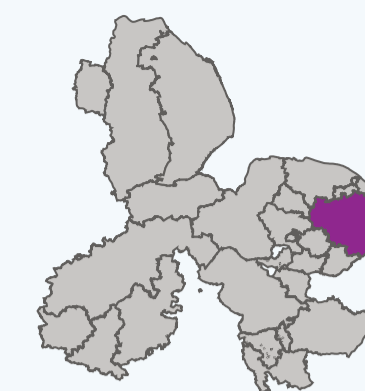
12.1 Non-Household demand Norfolk North Coast

In 2025, 4.1 MI/d of Non-Household demand (measured and unmeasured) is expected. In 2049 it is expected to be 3.0 MI/d, which is a -26.94% change between the years.

Figure 12: % Non-Household modelled sectors within resource zone

Figure 11: Non-Household demand forecast 2025-2050





3. Deployable Output summary DYAA

Norfolk Norwich & the Broads

3.1 Resource Zone geography: Norfolk Norwich & the Broads:

The Norwich and the Broads WRZ covers an area of 1130 sq. km. Water is supplied from groundwater abstractions in the Norfolk Chalk aquifer and surface water abstraction from the River Wensum.

3.2

Baseline deployable output (including 1:500 drought): *83.4 MI/d*

Deployable output reductions

Restoring sustainable abstraction (recent actual average): *-16.8 MI/d*

Reductions to achieve environmental destination (BAU+): *-23.7 MI/d* by 2040.

Climate change: *0.0 MI/d* by 2050.

Baseline deployable output reduces by a total of *-40.5 MI/d* by 2050 a reduction of 48.5%.

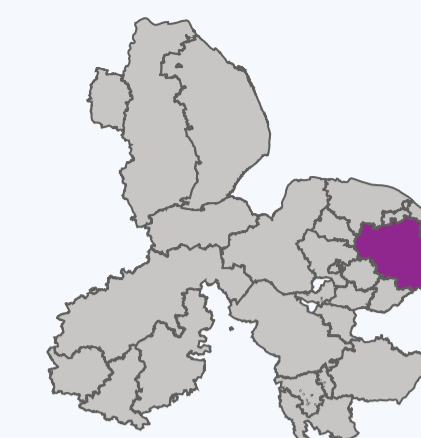
Table 3: supply characteristics (all values are MI/d)

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
DO pre forecast changes	83.4	83.4	83.4	83.4	83.4
Change in DO due to climate change	0.0	0.0	0.0	0.0	0.0
DO reductions to restore sustainable abstraction	-16.8	-16.8	-16.8	-16.8	-16.8
DO reductions for Environmental Destination	0.0	0.0	0.0	-23.7	-23.7
Change in DO from drought measures	0.0	0.0	0.0	0.0	0.0
Final DO	66.7	66.7	66.7	43.0	43.0
Raw water losses (-ve)	-5.0	-5.0	-5.0	-5.0	-5.0
Outage Allowance (-ve)	-0.6	-0.5	-0.5	-0.5	-0.5
WAFU (own sources)	61.1	61.2	61.2	37.5	37.5
Net Transfers	-4.3	11.2	8.1	5.6	4.6
Other benefits	16.75	0.00	0.00	25.00	25.00
Total Water Available for Use	73.6	72.3	69.2	68.0	67.1

3.3 The baseline Deployable Output data presented in this section represents the Environment Agency’s preferred sustainability reduction licence cap scenario. This includes recent actual average caps to time limited licences in 2022-24 and caps to all other permanent licences by 2030. The impact of 1:500 drought resilience has also been applied from 2025 rather than the preferred scenario of 2039/2040. These factors apply to the baseline forecast only. For the final plan forecast we have applied our best value scenario for licence caps, which was developed following an iterative process to deliver licence caps as early as possible. The transition to 1:500 drought resilience occurs in 2039/40 in the final plan forecast. Further information is available in the WRMP24 Decision Making technical supporting document, section 6.



4. Population & Housing



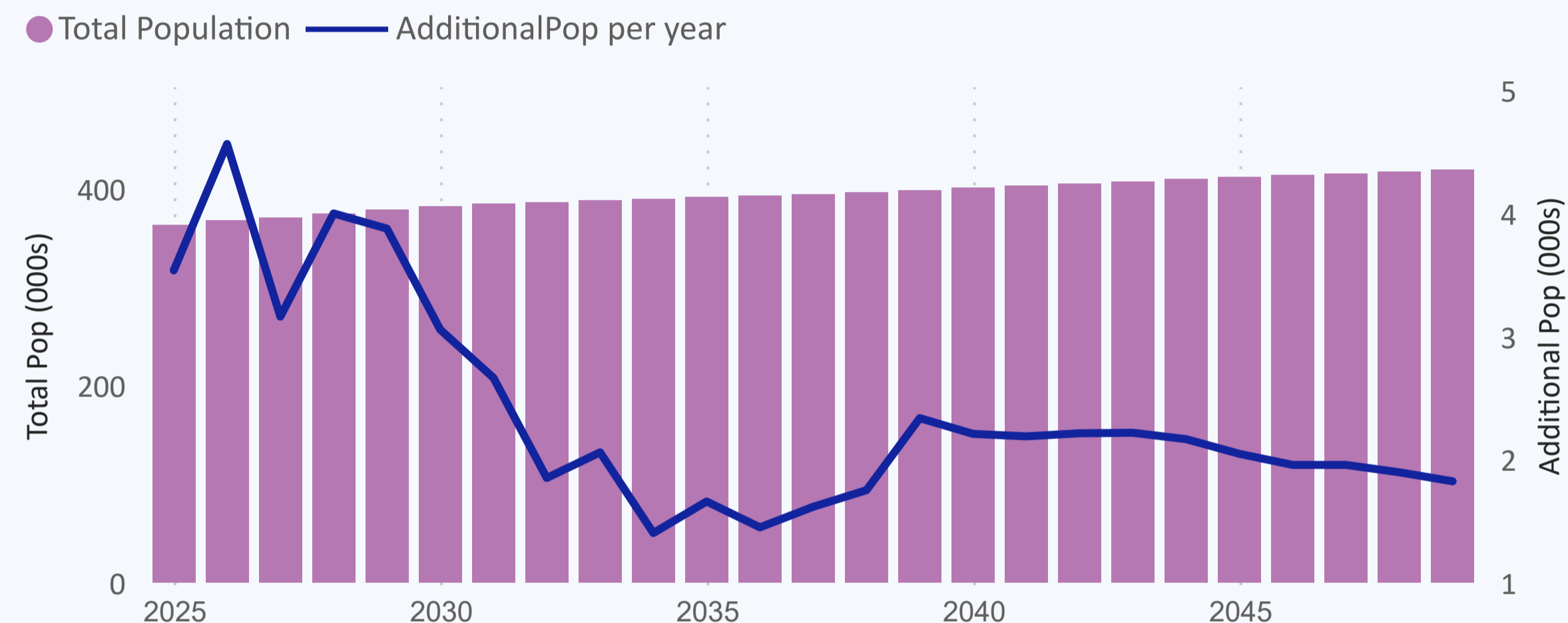
Norfolk Norwich & the Broads

4.1 Over the WRMP period, population in **Norfolk Norwich & the Broads** is set to increase from **363045** in 2025 to **419124** in 2049-50 - this is an increase of **15.4 %** over the 25 years.

Table 4a: Population totals (cumulative) by AMP

Year	Total Population (000s)
2029-30 (end of AMP8)	378.636
2034-35 (end of AMP9)	389.660
2039-40 (end of AMP10)	398.466
2044-45 (end of AMP11)	409.452
2049-50 (end of AMP12)	419.124

Figure 2: Total Resource Zone Population

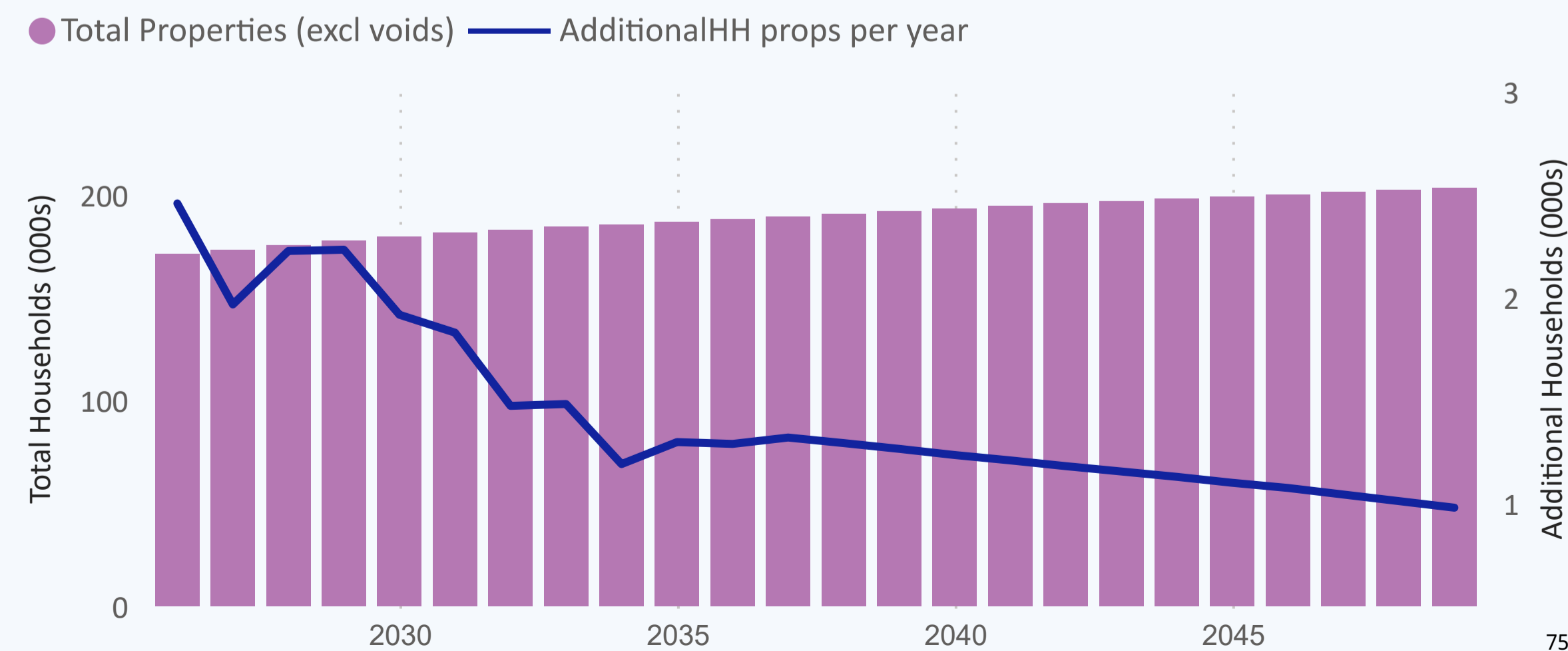


4.2 Over the WRMP period, property numbers in **Norfolk Norwich & the Broads** are set to increase from **168866** in 2025 to **203204** in 2049-50 - this is an increase of **20.3 %** over the 25 years.

Table 4b: Property totals (cumulative) by AMP

Year	Total Properties-excl voids (000s)
2029-30 (end of AMP8)	177.747
2034-35 (end of AMP9)	185.637
2039-40 (end of AMP10)	192.097
2044-45 (end of AMP11)	198.001
2049-50 (end of AMP12)	203.204

Figure 3: Total Resource Zone Properties (excl. voids)



5. Baseline Supply Demand Balance DYAA

Norfolk Norwich & the Broads

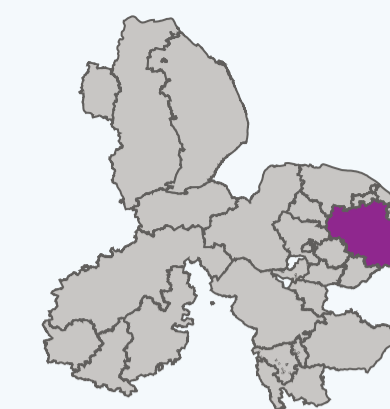


Figure 4: Norfolk Norwich & the Broads baseline supply demand balance to 2050 for Dry Year Annual Average conditions

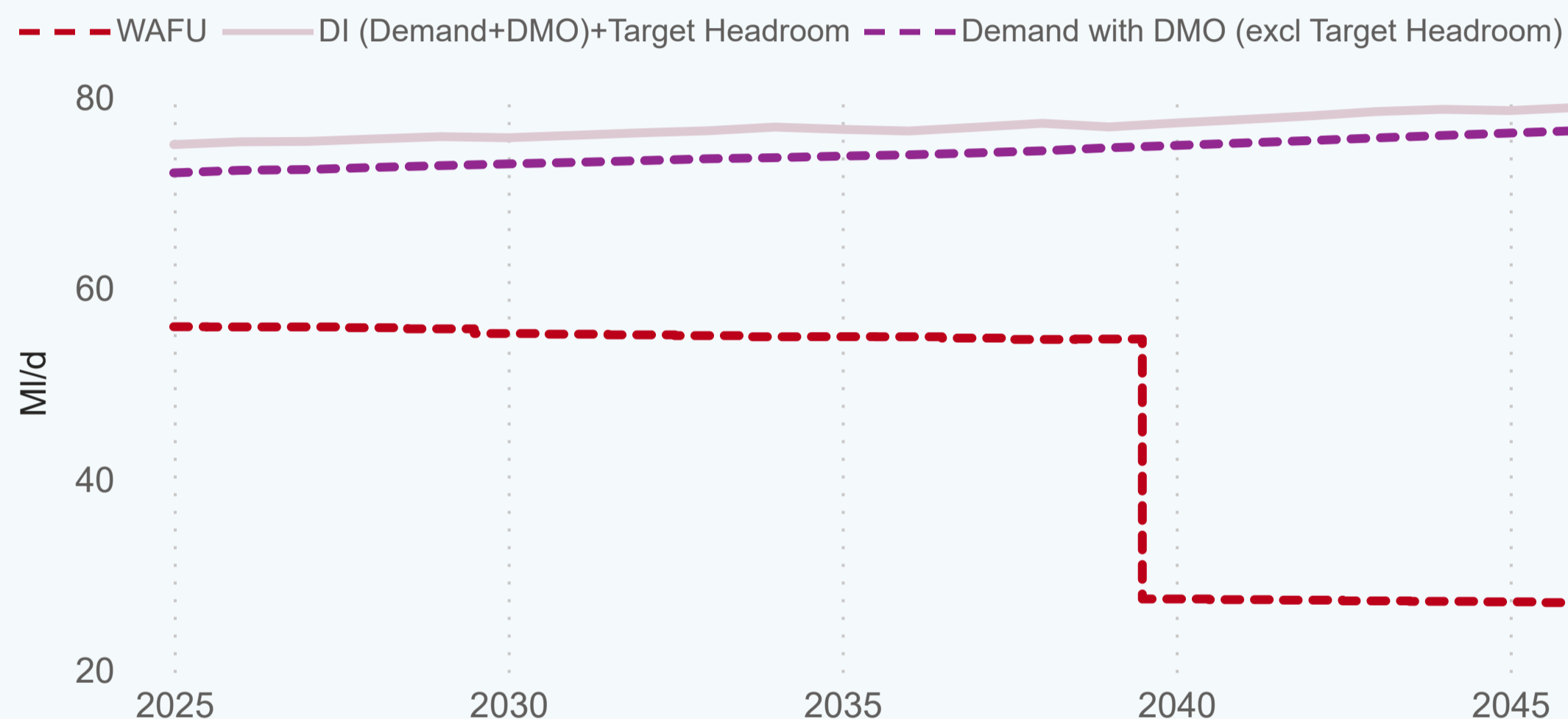


Table 5a: Baseline supply demand balance 2025 - 2050 for DYAA conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	61.1	61.1	61.2	61.2	37.5	37.5
Net Transfers	-5.1	-5.3	-6.3	-6.5	-10.3	-10.6
Total Water Available For Use	56.0	55.7	54.9	54.7	27.2	26.8
Distribution Input	72.1	72.8	73.7	74.7	76.0	77.2
Target Headroom	3.0	3.0	3.2	2.2	2.7	2.4
Supply Demand Balance	-19.1	-20.1	-22.0	-22.2	-51.5	-52.9

Table 5b: Baseline demand forecast (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	40.2	42.5	44.9	47.2	49.5	51.1
Water delivered unmeasured household	11.7	10.3	8.9	7.8	7.0	6.7
Total Leakage	6.0	5.8	5.7	5.8	5.8	5.9
Water delivered measured non-household	15.1	14.9	14.7	14.5	14.4	14.3
Water delivered unmeasured non-household	0.1	0.1	0.1	0.1	0.1	0.1
Distribution Input	72.1	72.8	73.7	74.7	76.0	77.2

5.1 DYAA BL supply demand summary: Norfolk Norwich & the Broads

Baseline Supply Demand Balance: This zone will go into deficit immediately (under the preferred baseline scenario - as described in section 3.3).

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 51.9 MI/d in 2025 to 57.8 MI/d in 2050, a percentage change of 11.4 %.
- Baseline Leakage: is forecast to change from 6.0 MI/d in 2025 to 5.9 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 15.1 MI/d to 14.3 MI/d.
- Baseline Distribution Input: is expected to change from 72.1 MI/d to 77.2 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).

6. Baseline Supply Demand Balance DYCP

Norfolk Norwich & the Broads

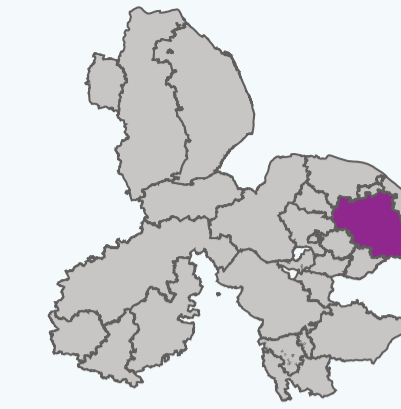


Figure 5: Norfolk Norwich & the Broads baseline supply demand balance to 2050 for Dry Year Critical Period conditions

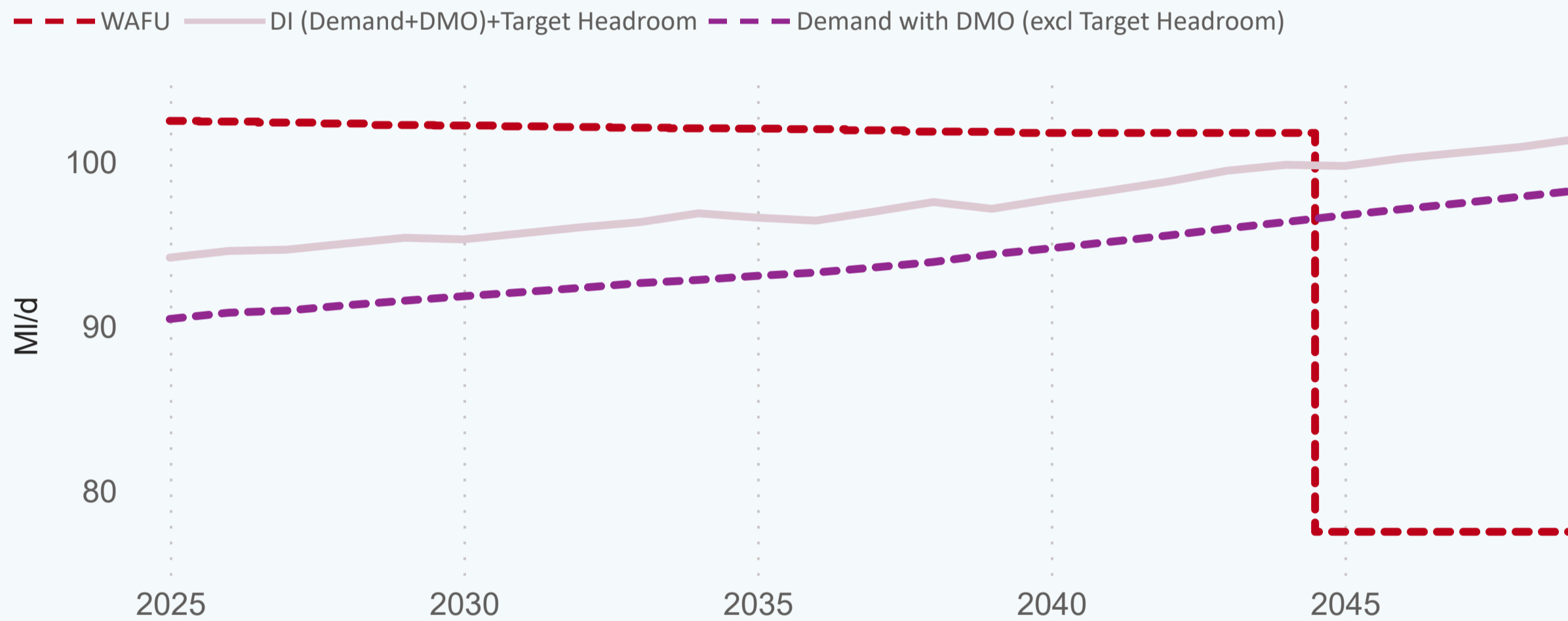


Table 6b: Baseline demand forecast with DYCP conditions (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	52.2	55.4	58.7	61.9	65.2	67.5
Water delivered unmeasured household	15.8	13.9	12.1	10.6	9.5	9.2
Total Leakage	6.0	5.8	5.7	5.8	5.8	5.9
Water delivered measured non-household	17.4	17.2	16.9	16.8	16.6	16.5
Water delivered unmeasured non-household	0.1	0.1	0.1	0.1	0.1	0.1
Distribution Input	90.4	91.6	92.8	94.4	96.3	98.3

Table 6a: Baseline supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	113.2	113.2	113.2	113.2	113.2	88.0
Net Transfers	-10.8	-11.0	-11.2	-11.4	-11.5	-10.5
Total Water Available For Use	102.5	102.2	102.0	101.8	101.7	77.5
Distribution Input	90.4	91.6	92.8	94.4	96.3	98.3
Target Headroom	3.7	3.8	4.0	2.8	3.5	3.1
Supply Demand Balance	8.3	6.9	5.2	4.7	1.9	-23.9

6.1 DYCP BL supply demand summary: Norfolk Norwich & the Broads

Baseline Supply Demand balance: This zone is not expected to go into deficit

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 68.0 MI/d in 2025 to 76.7 MI/d in 2050, a percentage change of 12.8 %.
- Baseline Leakage: is forecast to change from 6.0 MI/d in 2025 to 5.9 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 17.4 MI/d to 16.5 MI/d.
- Baseline Distribution Input: is expected to change from 90.4 MI/d to 98.3 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).

7. Demand forecast and PCC

Norfolk Norwich & the Broads

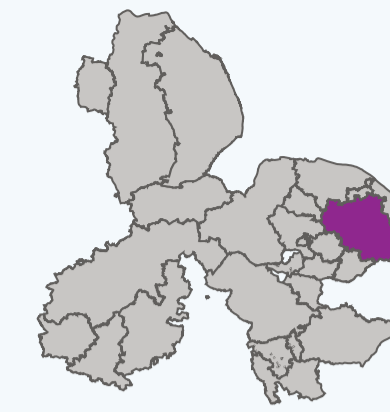


Figure 6: Norfolk Norwich & the Broads DYAA DI with and without demand management strategy

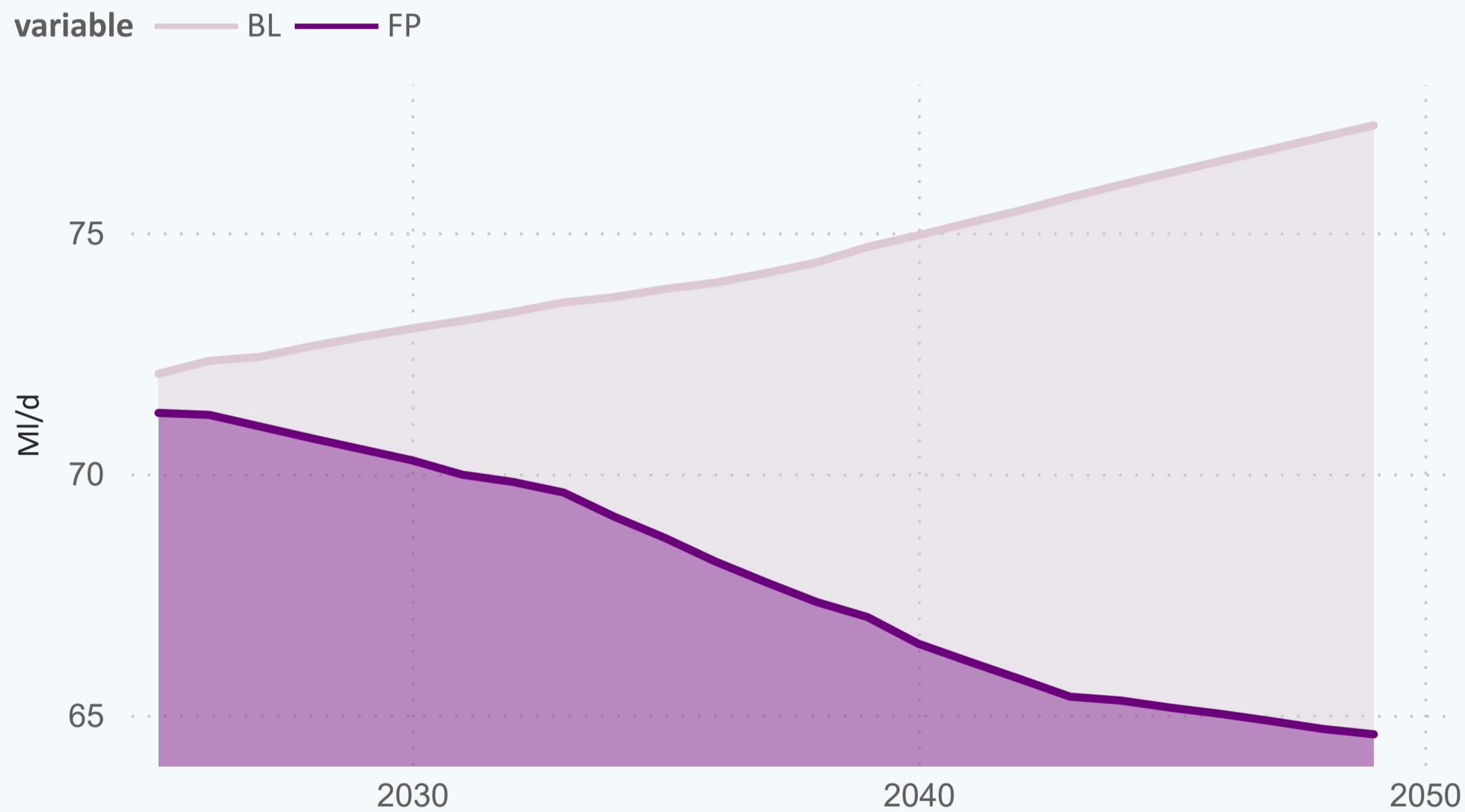


Table 7a: Demand - baseline and final plan

variable	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL	72.8	73.7	74.7	76.0	77.2
FP	70.5	69.1	67.0	65.3	64.6

7.2 Demand Norfolk Norwich & the Broads (see Table 7a)

Baseline demand is expected to increase from 72.1 (MI/d) in 2025 to 77.2 (MI/d) in 2050. With demand management options in place, demand is expected to be 64.6 (MI/d).

7.1 PCC Norfolk Norwich & the Broads (see Table 7b)

Per Capita Consumption (PCC) in the base year 2025/26 is 125.2 (l/h/d) measured and 194.6 (l/h/d) unmeasured.

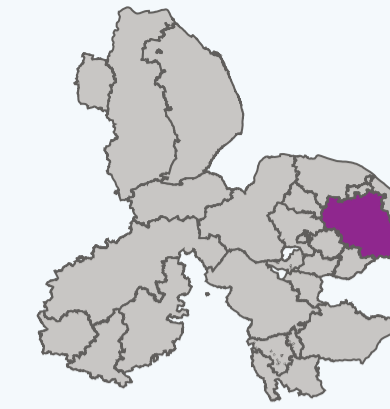
The weighted average PCC (l/h/d) comes in at 135.7 (l/h/d) in 2025/26. This is forecast to fall to 113.1 (l/h/d) in the Final Plan forecast as demand management option savings are realised and customers switch from unmeasured to measured status

Table 7b: DMO strategy Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL demand forecast(DYAA)	133.1	132.3	132.3	132.2	132.2
FP demand forecast(DYAA)	130.2	125.9	120.1	115.1	113.1
% change BL to FP	-2.2%	-4.8%	-9.2%	-12.9%	-14.4%

8. Demand management options

Norfolk Norwich & the Broads



8.1 Regional overview:

Across the entirety of the Anglian Water region our demand management strategy will comprise three strongly interlinked programs:

Water metering program:

- We intend to complete our current smart meter rollout which will replace our entire meter stock over 10 years (2 AMPs), noting that 1.1M smart meters will be installed across Anglian Water by 2025. The information resulting from 'smart metering' will help inform our customers regarding their water usage and will assist in our ability to influence this behaviour. It will also help with our ability to detect leakage, significantly reducing plumbing losses and customer supply pipe leaks.

Leakage reduction

- Our aim is to reduce leakage by more than 45MI/d from 2025 to 2050 across the whole Anglian Water area, building upon our ambitious program of leakage reduction in AMP7 (14% reduction of more than 27MI/d across the region by 2025).

Water efficiency measures

- New technologies and interventions will help promote the careful use of water. Additional water efficiency programs will include: the promotion of 'Smart' devices; further development of our Multi-utility web-portal; garden advice; support for vulnerable customers with plumbing loss and cspl; Community reward schemes. As part of our revised draft WRMP24 we have developed and included 'water efficiency visits' and leakage reduction measures for our Non-Household customers.

Figure 7: DMO strategy Final Plan for Norfolk Norwich & the Broads For full chart key see table below

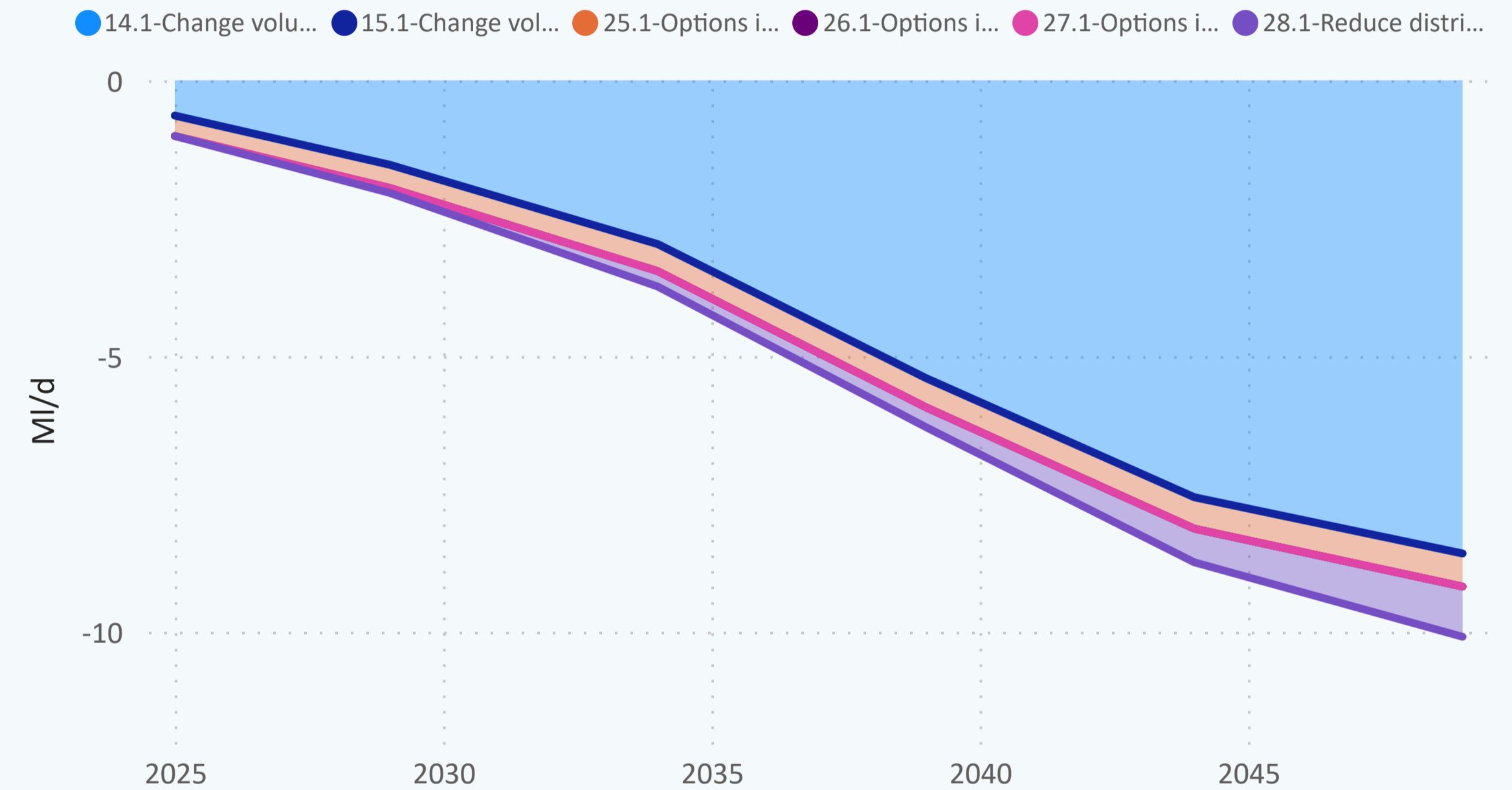


Table 8: DMO strategy Final Plan for Norfolk Norwich & the Broads

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
14.1-Change volume delivered to measured households(-ve)	-1.5	-3.0	-5.4	-7.6	-8.6
15.1-Change volume delivered to unmeasured households(-ve)	0.0	0.0	0.0	0.0	0.0
25.1-Options impacting on measured Household - USPL (-ve)	-0.4	-0.5	-0.5	-0.6	-0.6
26.1-Options impacting on unmeasured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
27.1-Options impacting on Void properties - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
28.1-Reduce distribution losses (-ve)	-0.1	-0.3	-0.4	-0.6	-0.9

9. Final Plan Supply Demand Balance DYAA

Norfolk Norwich & the Broads

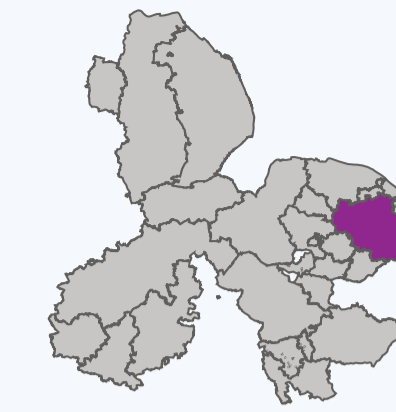


Figure 8: Norfolk Norwich & the Broads final plan SDB to 2050 for Dry Year Annual Average conditions

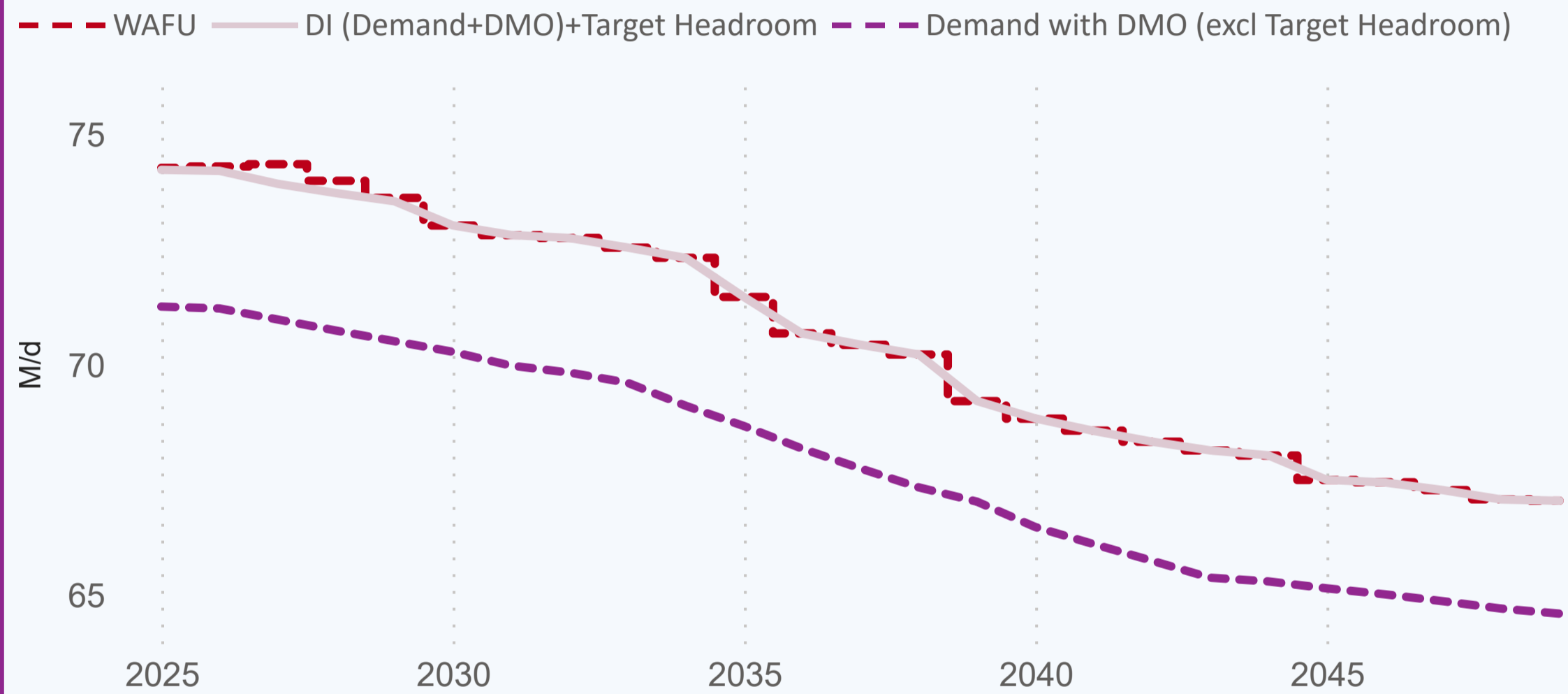


Table 9a: final plan SDB to 2050 for Dry Year conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	79.0	77.8	61.2	61.2	62.5	62.5
Net Transfers	-4.7	-4.3	11.2	8.1	5.6	4.6
Total Water Available For Use	74.3	73.6	72.3	69.2	68.0	67.1
Distribution Input	71.3	70.5	69.1	67.0	65.3	64.6
Target Headroom	3.0	3.0	3.2	2.2	2.7	2.4
Supply Demand Balance	0.0	0.1	0.0	0.0	0.0	0.0

Table 9b: Final Plan demand forecast for DYAA conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	39.5	41.0	42.0	41.8	42.0	42.5
Water delivered unmeasured household	11.7	10.3	8.9	7.8	7.0	6.7
Total Leakage	5.7	5.3	4.9	4.9	4.6	4.3
Water delivered measured non-household	14.9	14.2	13.4	12.6	11.9	11.2
Water delivered unmeasured non-household	0.1	0.1	0.1	0.1	0.1	0.1
Distribution Input	71.3	70.5	69.1	67.0	65.3	64.6

9.1 DYAA FP supply demand summary: Norfolk Norwich & the Broads

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 51.3 MI/d in 2025 to 49.2 MI/d in 2050, a percentage change of -4.0 %.
- Final Plan Leakage is forecast to change from 5.7 MI/d in 2025 to 4.3 MI/d by 2050.
- Final Plan Non-Household demand is expected to change from 14.9 MI/d to 11.2 MI/d.
- Final Plan Distribution Input is expected to change from 71.3 MI/d to 64.6 MI/d by 2050.

10. Final Plan Supply Demand Balance DYCP

Norfolk Norwich & the Broads

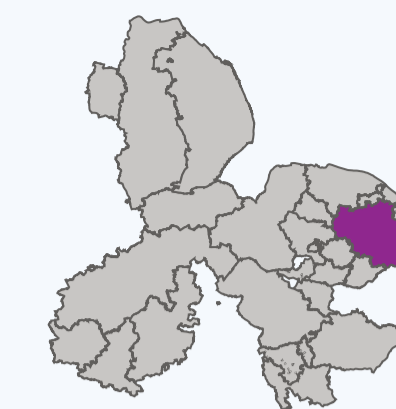


Figure 9: Norfolk Norwich & the Broads baseline supply demand balance to 2050 for Dry Year Critical Period conditions

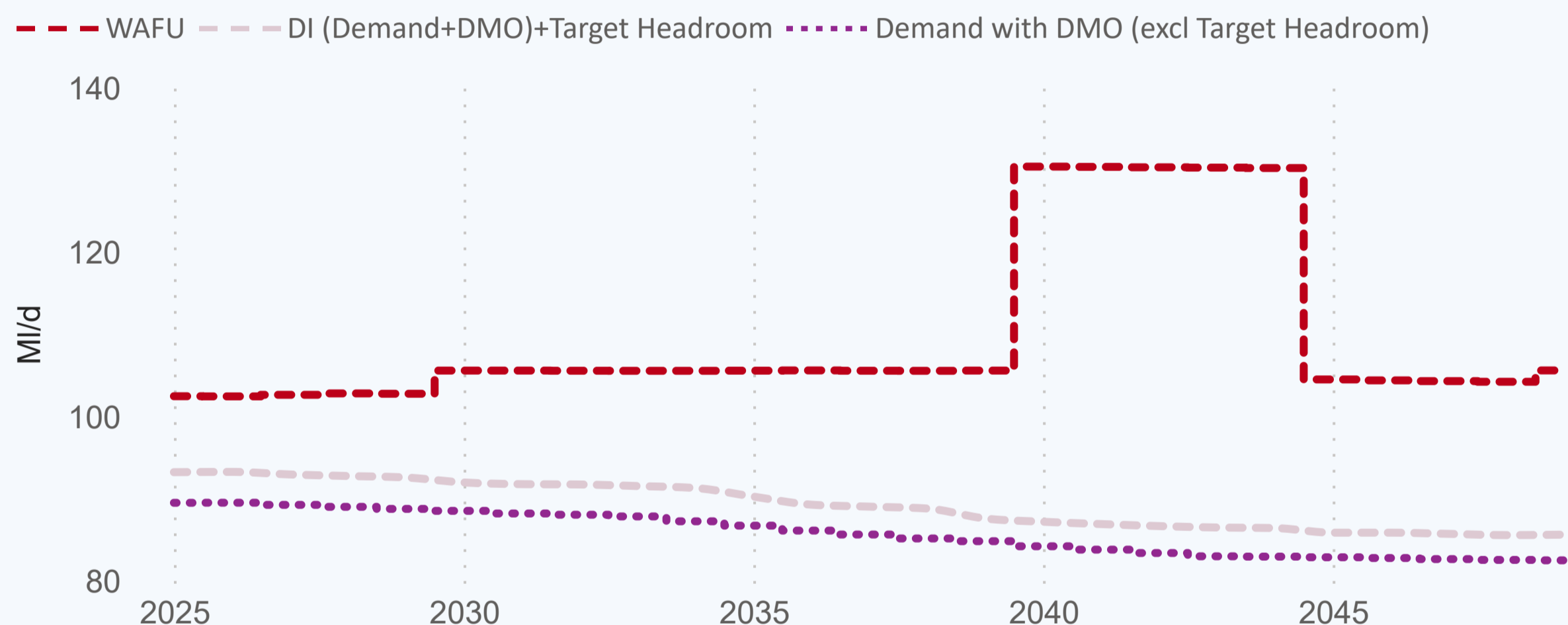


Table 10a: Final Plan supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	113.2	113.2	113.2	113.2	138.2	113.0
Net Transfers	-10.7	-10.4	-7.7	-7.6	-8.0	-7.4
Total Water Available For Use	102.5	102.8	105.6	105.6	130.3	105.6
Distribution Input	89.5	88.8	87.3	84.9	83.0	82.5
Target Headroom	3.7	3.8	4.0	2.8	3.5	3.1
Supply Demand Balance	9.2	10.2	14.3	18.0	43.8	20.0

Table 10b: Final Plan demand forecast for DYCP conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	51.4	53.5	54.9	55.0	55.3	56.3
Water delivered unmeasured household	15.8	13.9	12.1	10.6	9.5	9.2
Total Leakage	5.7	5.3	4.9	4.9	4.6	4.3
Water delivered measured non-household	17.2	16.4	15.4	14.6	13.7	12.9
Water delivered unmeasured non-household	0.1	0.1	0.1	0.1	0.1	0.1
Distribution Input	89.5	88.8	87.3	84.9	83.0	82.5

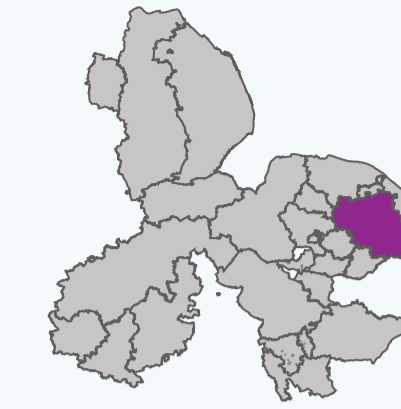
10.1 DYCP BL supply demand summary: Norfolk Norwich & the Broads

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 67.2 MI/d in 2025 to 65.5 MI/d in 2050, a percentage change of -2.7 %.
- Final Plan Leakage: is forecast to change from 5.7 MI/d in 2025 to 4.3 MI/d by 2050
- Final Plan Non-Household demand: is expected to change from 17.2 MI/d to 12.9 MI/d.
- Final Plan Distribution Input: is expected to change from 89.5 MI/d to 82.5 MI/d by 2050.



11. Supply Side Strategy



Norfolk Norwich & the Broads

Table 11a: Total Water Available for use Baseline and Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
WAFU - BL	72.5	54.9	54.7	27.2	26.8
WAFU - FP	73.6	72.3	69.2	68.0	67.1

11.1 Supply side strategy options.

For details on the feasible options list for Norfolk Norwich & the Broads WRZ please refer to the Supply-Side Option Development technical supporting document.

Figure 10 Water Available for Use (WAFU) - baseline (BL) and final plan (FP)

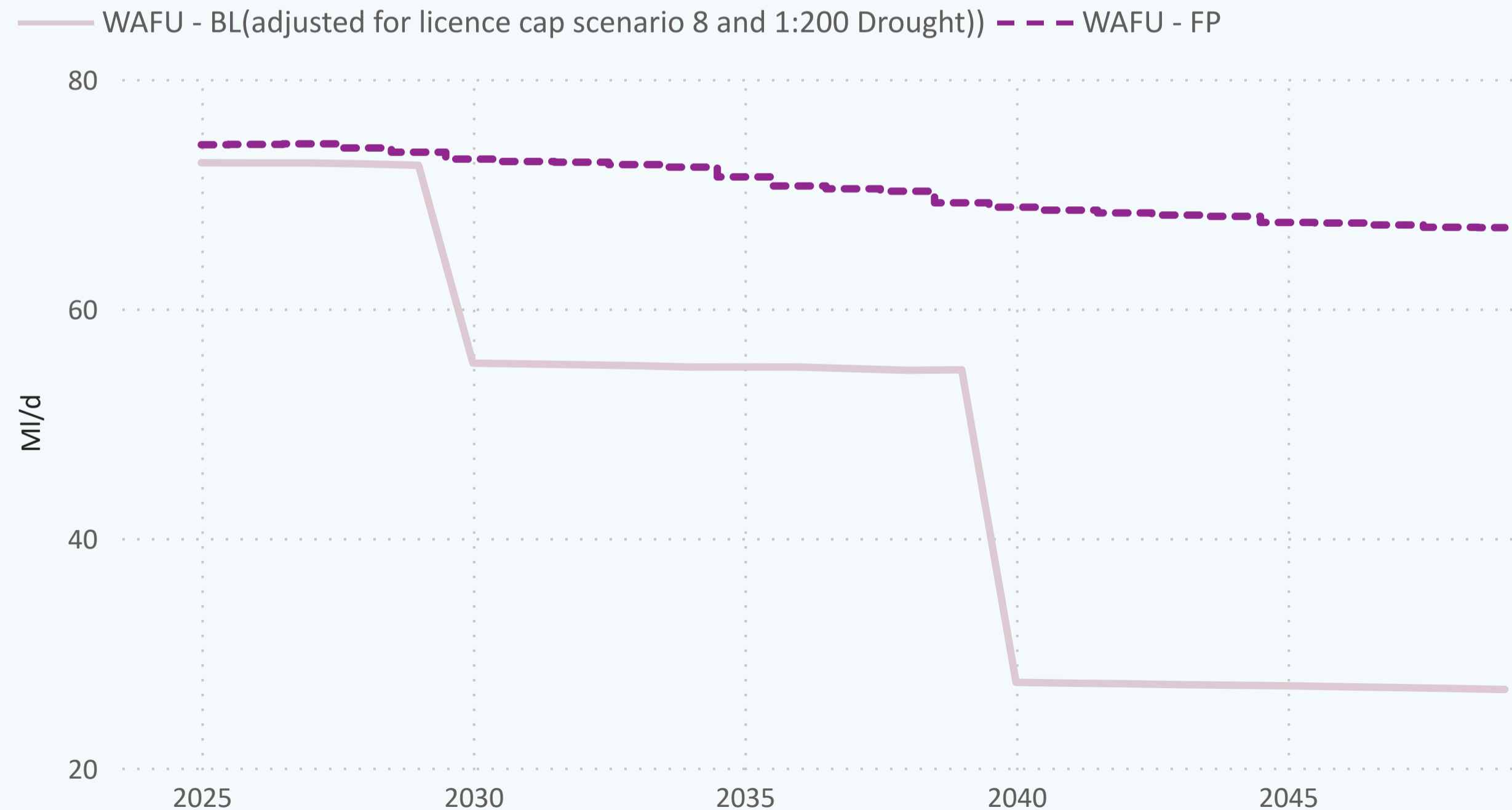


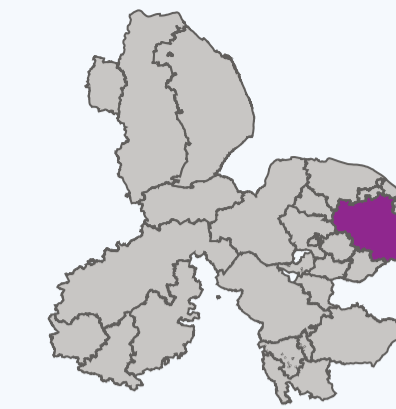
Table 11b: Preferred supply side options

Option ID	First Option Name
EE10	Adjustment to existing potable water export
EI20	Adjustment to existing potable water import
LC13	Adjustment for Licence cap scenario 8
NTB10	Norfolk Bradneham to Norwich and the Broads potable transfer (20 MI/d)
NTB17	Bacton desalination (seawater) 25 MI/d
OPI3	AMP8 OPI Adjustment



12. Non-Household consumption

Norfolk Norwich & the Broads

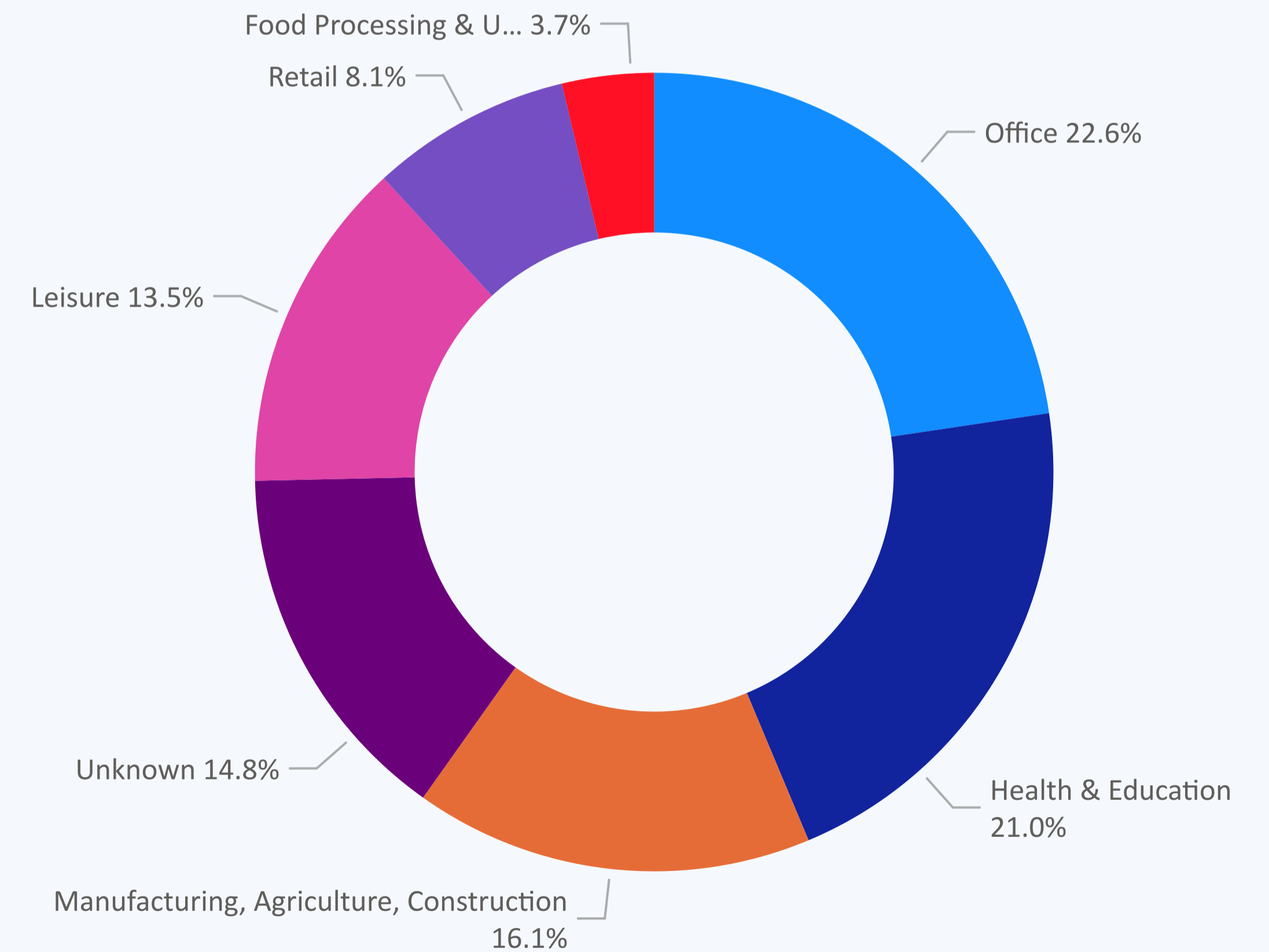
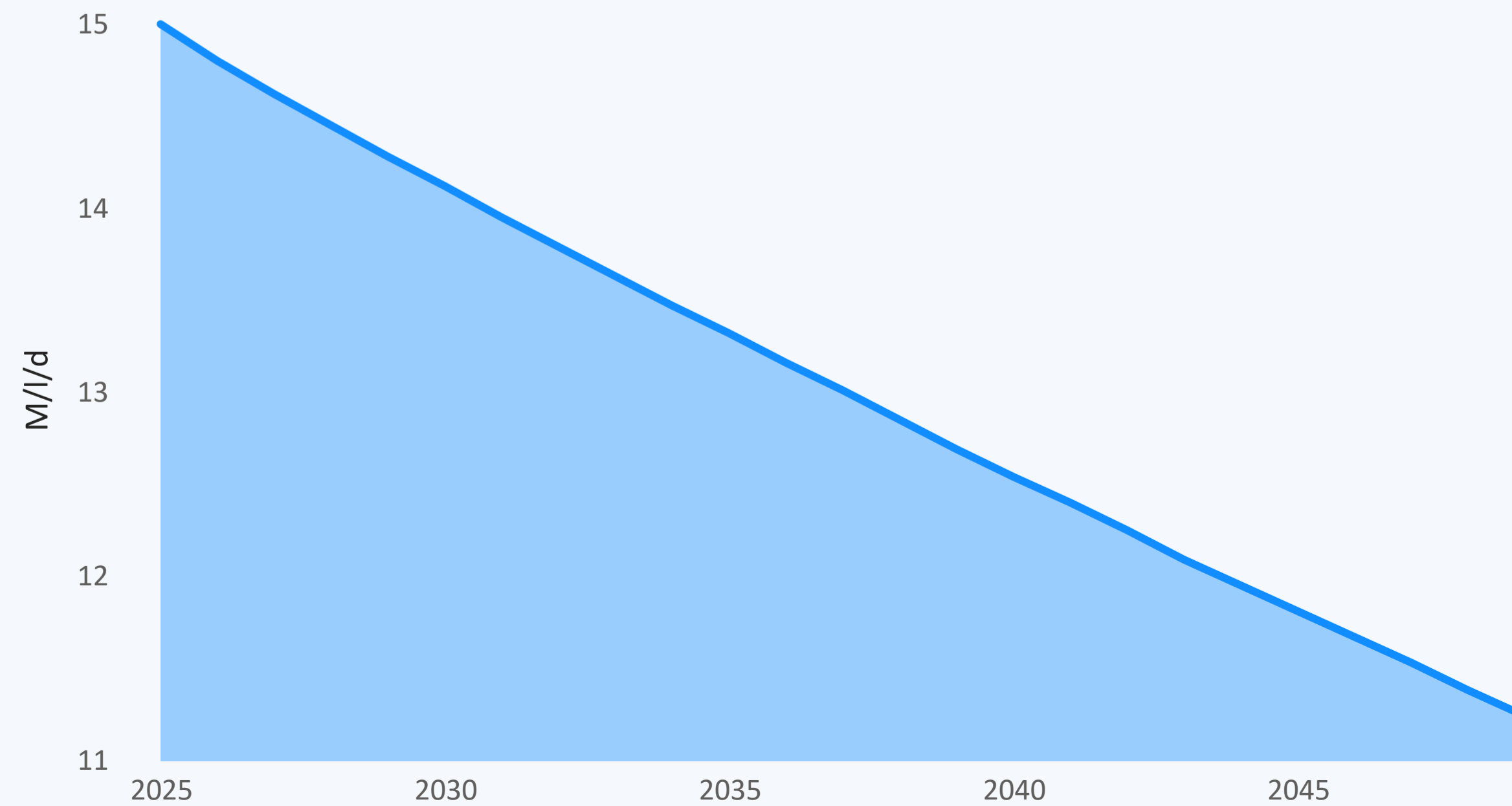


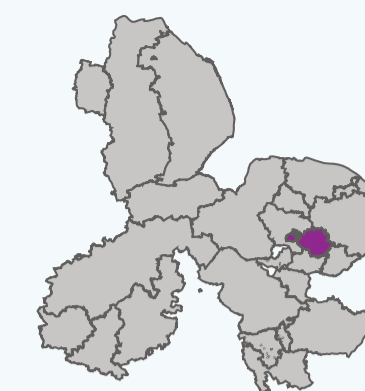
12.1 Non-Household demand Norfolk Norwich & the Broads

In 2025, 15.0 MI/d of Non-Household demand (measured and unmeasured) is expected. In 2049 it is expected to be 11.2 MI/d, which is a -25.48% change between the years.

Figure 12: % Non-Household modelled sectors within resource zone

Figure 11: Non-Household demand forecast 2025-2050





3. Deployable Output summary DYAA

Norfolk Wymondham

3.1 Resource Zone geography: Norfolk Wymondham:

The Norfolk Wymondham WRZ covers an area of 254 sq. km and it sits in the centre of East Anglia. Water is supplied from groundwater abstractions from the Norfolk Chalk aquifer.

3.2

Baseline deployable output (including 1:500 drought): 11.2 MI/d

Deployable output reductions

Restoring sustainable abstraction (recent actual average): -0.7 MI/d

Reductions to achieve environmental destination (BAU+): -8.6 MI/d by 2040.

Climate change: 0.0 MI/d by 2050.

Baseline deployable output reduces by a total of -9.3 MI/d by 2050 a reduction of 83.3%.

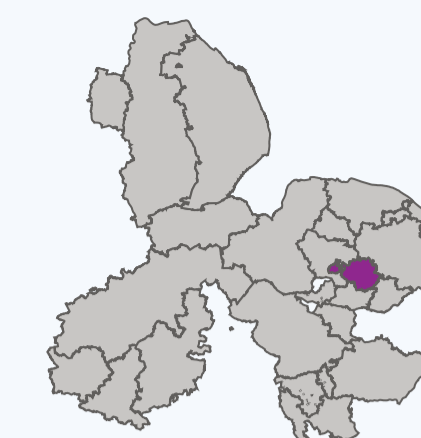
Table 3: supply characteristics (all values are MI/d)

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
DO pre forecast changes	11.2	11.2	11.2	11.2	11.2
Change in DO due to climate change	0.0	0.0	0.0	0.0	0.0
DO reductions to restore sustainable abstraction	-0.3	-0.7	-0.7	-0.7	-0.7
DO reductions for Environmental Destination	0.0	0.0	0.0	-8.6	-8.6
Change in DO from drought measures	0.0	0.0	0.0	0.0	0.0
Final DO	10.9	10.5	10.5	1.9	1.9
Raw water losses (-ve)	-0.3	-0.3	-0.3	-0.3	-0.3
Outage Allowance (-ve)	-0.1	-0.1	-0.1	-0.1	-0.1
WAFU (own sources)	10.5	10.1	10.1	1.5	1.5
Net Transfers	0.2	0.8	0.4	8.9	8.9
Other benefits	0.31	0.00	0.00	0.00	0.00
Total Water Available for Use	11.0	10.9	10.5	10.5	10.4

3.3 The baseline Deployable Output data presented in this section represents the Environment Agency’s preferred sustainability reduction licence cap scenario. This includes recent actual average caps to time limited licences in 2022-24 and caps to all other permanent licences by 2030. The impact of 1:500 drought resilience has also been applied from 2025 rather than the preferred scenario of 2039/2040. These factors apply to the baseline forecast only. For the final plan forecast we have applied our best value scenario for licence caps, which was developed following an iterative process to deliver licence caps as early as possible. The transition to 1:500 drought resilience occurs in 2039/40 in the final plan forecast. Further information is available in the WRMP24 Decision Making technical supporting document, section 6.



4. Population & Housing



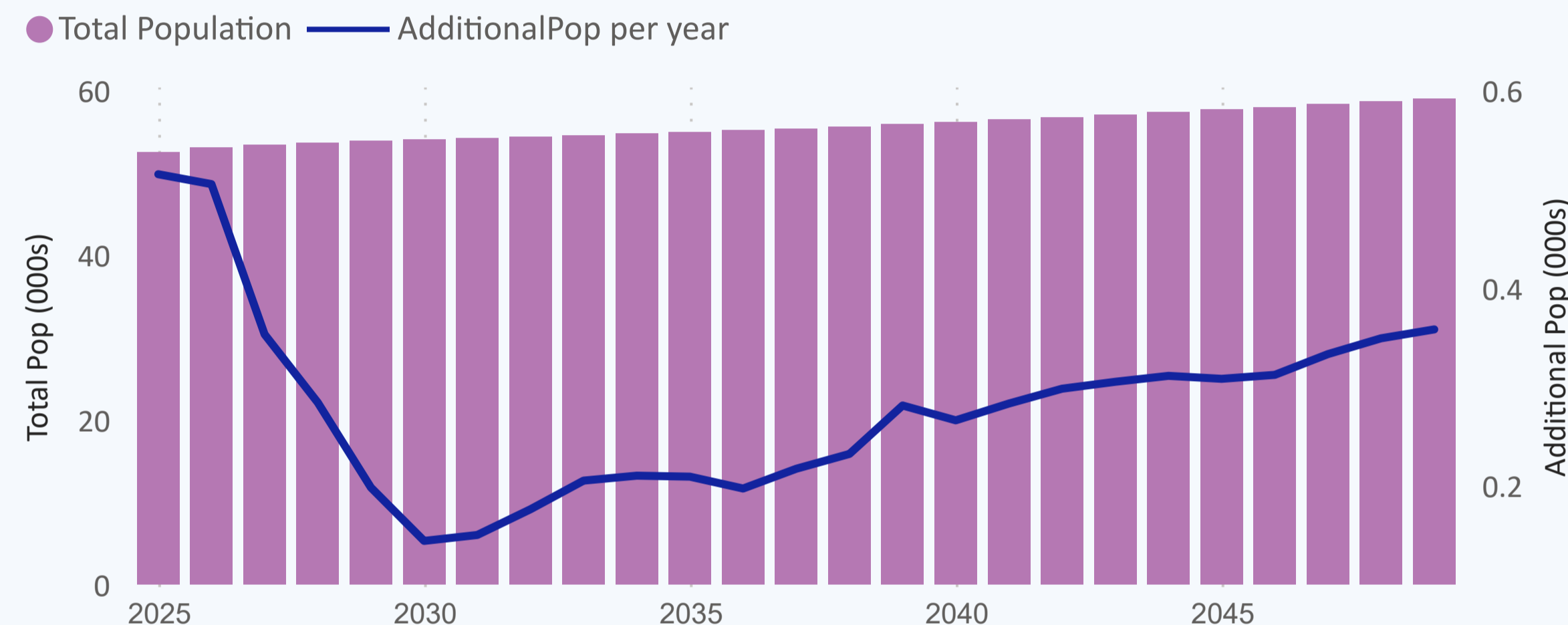
Norfolk Wymondham

4.1 Over the WRMP period, population in **Norfolk Wymondham** is set to increase from **52520** in 2025 to **59004** in 2049-50 - this is an increase of **12.3 %** over the 25 years.

Table 4a: Population totals (cumulative) by AMP

Year	Total Population (000s)
2029-30 (end of AMP8)	53.860
2034-35 (end of AMP9)	54.745
2039-40 (end of AMP10)	55.881
2044-45 (end of AMP11)	57.344
2049-50 (end of AMP12)	59.004

Figure 2: Total Resource Zone Population

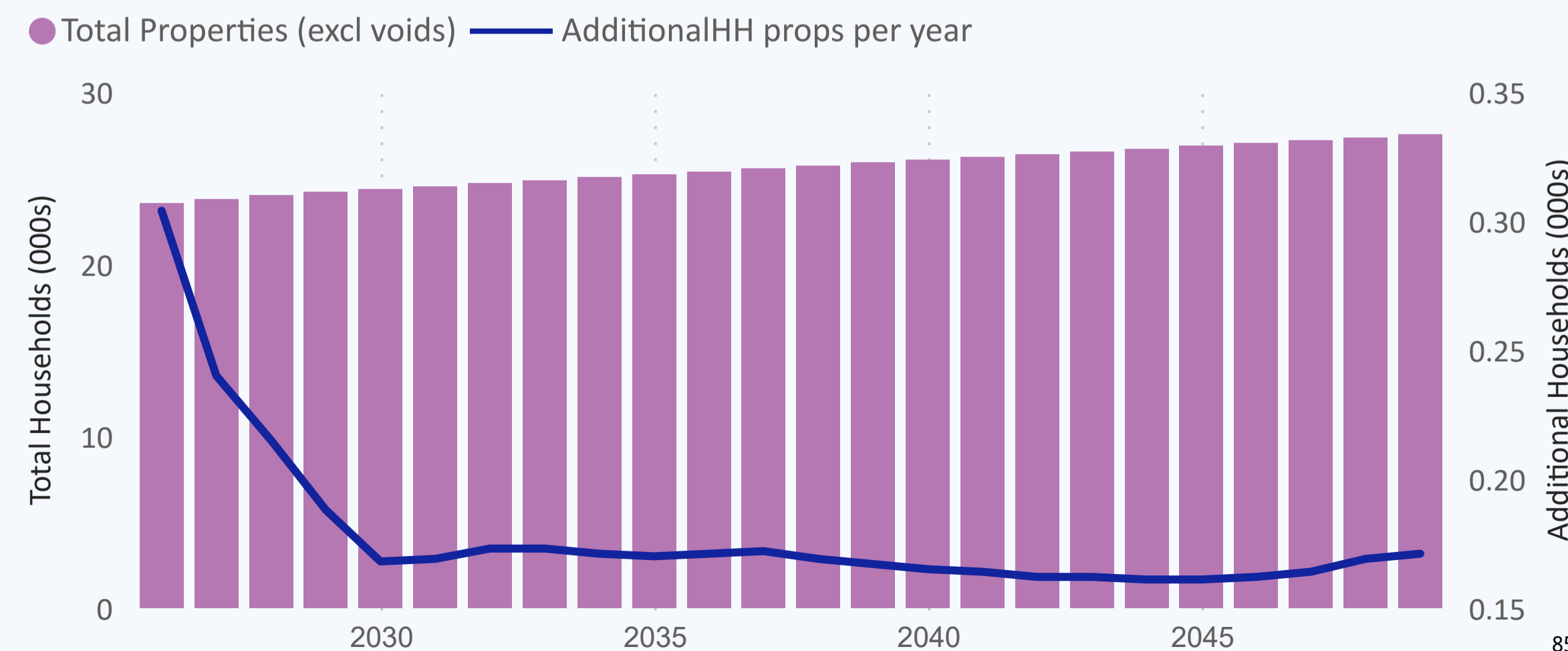


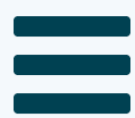
4.2 Over the WRMP period, property numbers in **Norfolk Wymondham** are set to increase from **23246** in 2025 to **27537** in 2049-50 - this is an increase of **18.5 %** over the 25 years.

Table 4b: Property totals (cumulative) by AMP

Year	Total Properties-excl voids (000s)
2029-30 (end of AMP8)	24.193
2034-35 (end of AMP9)	25.047
2039-40 (end of AMP10)	25.896
2044-45 (end of AMP11)	26.710
2049-50 (end of AMP12)	27.537

Figure 3: Total Resource Zone Properties (excl. voids)





5. Baseline Supply Demand Balance DYAA

Norfolk Wymondham

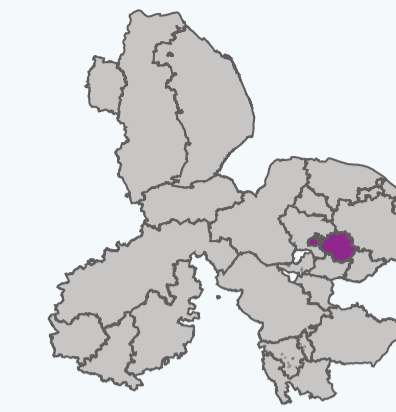


Figure 4: Norfolk Wymondham baseline supply demand balance to 2050 for Dry Year Annual Average conditions

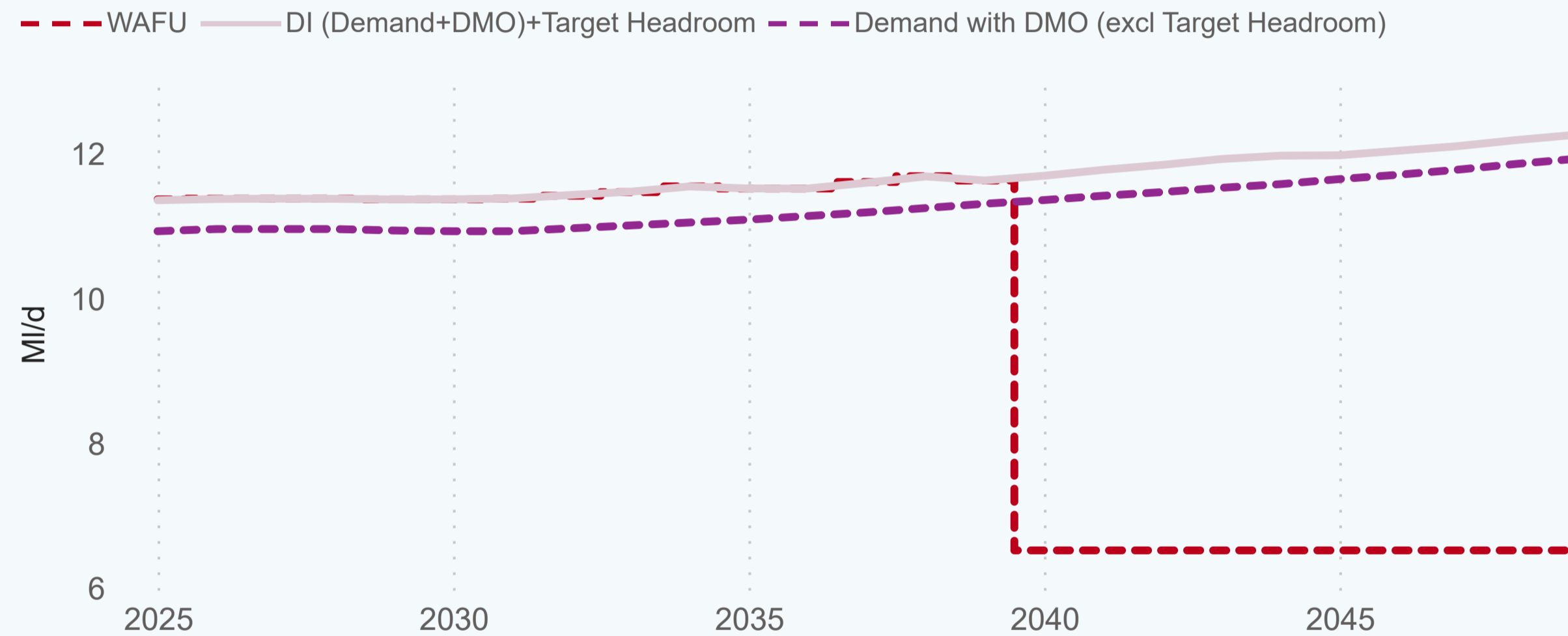


Table 5a: Baseline supply demand balance 2025 - 2050 for DYAA conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	10.5	10.5	10.1	10.1	1.5	1.5
Net Transfers	1.0	1.0	1.0	2.0	5.0	5.0
Total Water Available For Use	11.4	11.4	11.6	11.6	6.5	6.5
Distribution Input	10.9	10.9	11.1	11.3	11.6	11.9
Target Headroom	0.4	0.4	0.5	0.3	0.4	0.3
Supply Demand Balance	0.0	0.0	0.0	0.0	-5.5	-5.7

Table 5b: Baseline demand forecast (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	5.7	5.9	6.1	6.4	6.7	7.0
Water delivered unmeasured household	1.2	1.0	0.8	0.6	0.5	0.4
Total Leakage	1.4	1.3	1.3	1.3	1.3	1.3
Water delivered measured non-household	2.7	2.7	2.8	2.9	3.0	3.2
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	10.9	10.9	11.1	11.3	11.6	11.9

5.1 DYAA BL supply demand summary: Norfolk Wymondham

Baseline Supply Demand Balance: This zone is expected to go into deficit by 2031 (under the preferred baseline scenario - as described in section 3.3).

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 6.9 MI/d in 2025 to 7.4 MI/d in 2050, a percentage change of 7.4 %.
- Baseline Leakage: is forecast to change from 1.4 MI/d in 2025 to 1.3 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 2.7 MI/d to 3.2 MI/d.
- Baseline Distribution Input: is expected to change from 10.9 MI/d to 11.9 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).



6. Baseline Supply Demand Balance DYCP

Norfolk Wymondham

Norfolk Wymondham

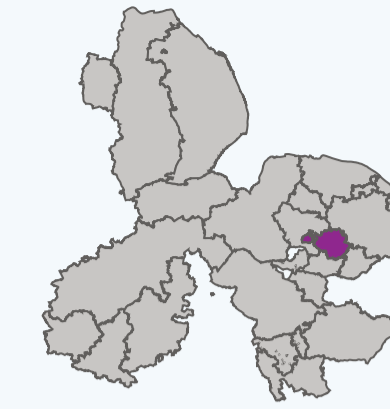


Figure 5: Norfolk Wymondham baseline supply demand balance to 2050 for Dry Year Critical Period conditions

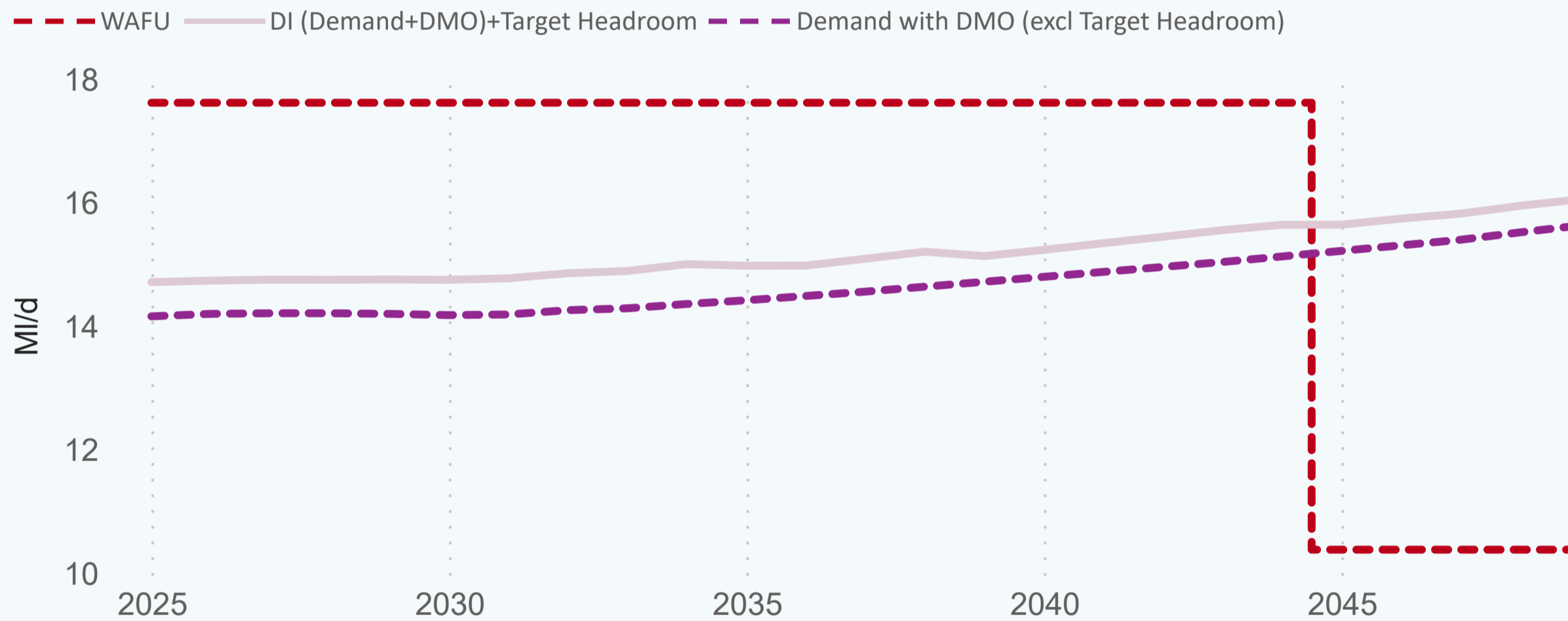


Table 6b: Baseline demand forecast with DYCP conditions (without preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	7.6	7.8	8.1	8.6	9.1	9.5
Water delivered unmeasured household	1.6	1.4	1.1	0.8	0.6	0.6
Total Leakage	1.4	1.3	1.3	1.3	1.3	1.3
Water delivered measured non-household	3.6	3.7	3.8	3.9	4.1	4.2
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	14.2	14.2	14.4	14.7	15.1	15.6

Table 6a: Baseline supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	12.6	12.6	12.6	12.6	12.6	5.4
Net Transfers	5.0	5.0	5.0	5.0	5.0	5.0
Total Water Available For Use	17.6	17.6	17.6	17.6	17.6	10.4
Distribution Input	14.2	14.2	14.4	14.7	15.1	15.6
Target Headroom	0.6	0.6	0.6	0.4	0.5	0.4
Supply Demand Balance	2.9	2.9	2.6	2.5	2.0	-5.7

6.1 DYCP BL supply demand summary: Norfolk Wymondham

Baseline Supply Demand balance: This zone is not expected to go into deficit

- Demand Forecast: Baseline household demand (measured and unmeasured) is forecast to change from 9.2 MI/d in 2025 to 10.0 MI/d in 2050, a percentage change of 8.9 %.
- Baseline Leakage: is forecast to change from 1.4 MI/d in 2025 to 1.3 MI/d by 2050.
- Baseline Non-Household demand: is expected to change from 3.6 MI/d to 4.2 MI/d.
- Baseline Distribution Input: is expected to change from 14.2 MI/d to 15.6 MI/d by 2050.

Nb. 'Deficit' is one outcome of the calculation WAFU minus Distribution Input (including Target Headroom).



7. Demand forecast and PCC



Norfolk Wymondham

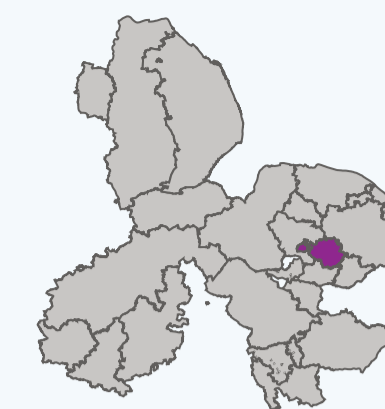


Figure 6: Norfolk Wymondham DYAA DI with and without demand management strategy

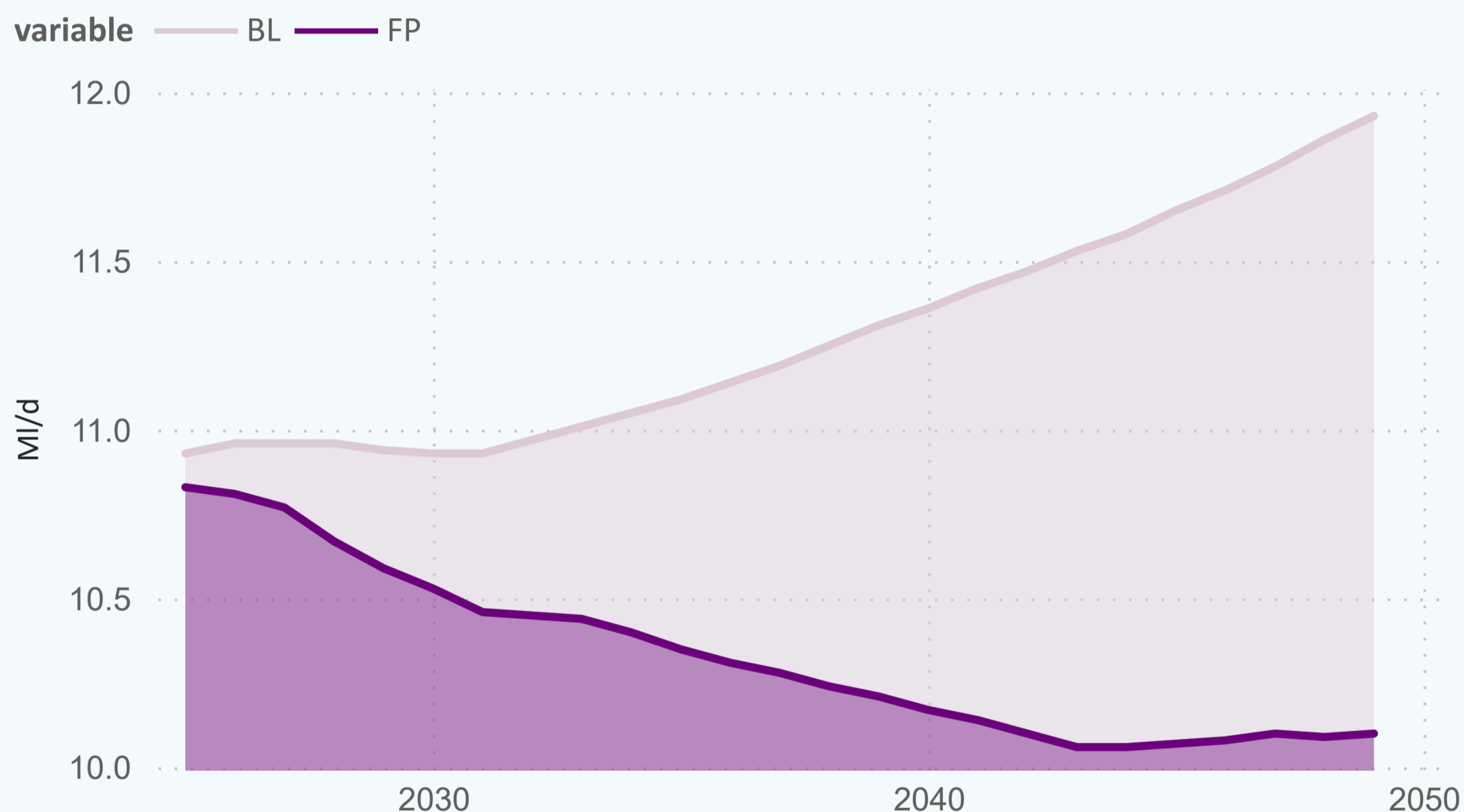


Table 7a: Demand - baseline and final plan

variable	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL	10.9	11.1	11.3	11.6	11.9
FP	10.6	10.4	10.2	10.1	10.1

7.2 Demand Norfolk Wymondham (see Table 7a)

Baseline demand is expected to increase from 10.9 (MI/d) in 2025 to 11.9 (MI/d) in 2050. With demand management options in place, demand is expected to be 10.1 (MI/d).

7.1 PCC Norfolk Wymondham (see Table 7b)

Per Capita Consumption (PCC) in the base year 2025/26 is 116.1 (l/h/d) measured and 201.7 (l/h/d) unmeasured.

The weighted average PCC (l/h/d) comes in at 125.1 (l/h/d) in 2025/26. This is forecast to fall to 101.5 (l/h/d) in the Final Plan forecast as demand management option savings are realised and customers switch from unmeasured to measured status

Table 7b: DMO strategy Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
BL demand forecast(DYAA)	121.6	120.4	120.4	120.5	120.7
FP demand forecast(DYAA)	118.6	114.2	108.3	103.4	101.5
% change BL to FP	-2.4%	-5.2%	-10.1%	-14.2%	-15.9%

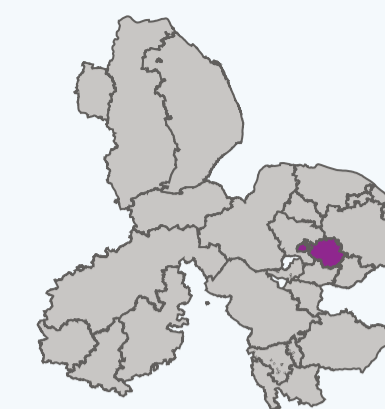




8. Demand management options



Norfolk Wymondham



8.1 Regional overview:

Across the entirety of the Anglian Water region our demand management strategy will comprise three strongly interlinked programs:

Water metering program:

- We intend to complete our current smart meter rollout which will replace our entire meter stock over 10 years (2 AMPs), noting that 1.1M smart meters will be installed across Anglian Water by 2025. The information resulting from 'smart metering' will help inform our customers regarding their water usage and will assist in our ability to influence this behaviour. It will also help with our ability to detect leakage, significantly reducing plumbing losses and customer supply pipe leaks.

Leakage reduction

- Our aim is to reduce leakage by more than 45MI/d from 2025 to 2050 across the whole Anglian Water area, building upon our ambitious program of leakage reduction in AMP7 (14% reduction of more than 27MI/d across the region by 2025).

Water efficiency measures

- New technologies and interventions will help promote the careful use of water. Additional water efficiency programs will include: the promotion of 'Smart' devices; further development of our Multi-utility web-portal; garden advice; support for vulnerable customers with plumbing loss and cspl; Community reward schemes. As part of our revised draft WRMP24 we have developed and included 'water efficiency visits' and leakage reduction measures for our Non-Household customers.

Figure 7: DMO strategy Final Plan for Norfolk Wymondham

For full chart key see table below

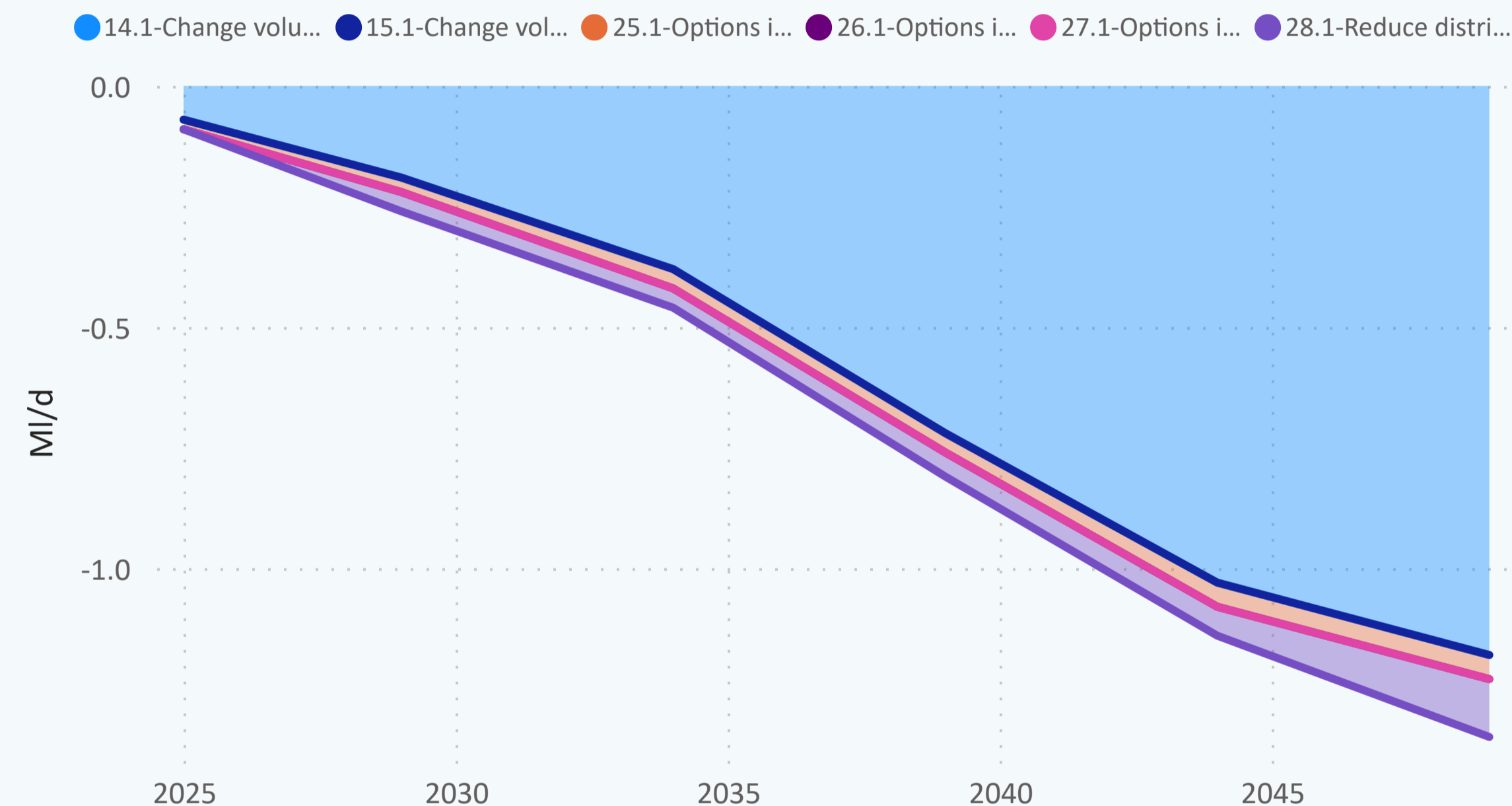


Table 8: DMO strategy Final Plan for Norfolk Wymondham

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
14.1-Change volume delivered to measured households(-ve)	-0.2	-0.4	-0.7	-1.0	-1.2
15.1-Change volume delivered to unmeasured households(-ve)	0.0	0.0	0.0	0.0	0.0
25.1-Options impacting on measured Household - USPL (-ve)	0.0	0.0	0.0	-0.1	-0.1
26.1-Options impacting on unmeasured Household - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
27.1-Options impacting on Void properties - USPL (-ve)	0.0	0.0	0.0	0.0	0.0
28.1-Reduce distribution losses (-ve)	0.0	0.0	-0.1	-0.1	-0.1



9. Final Plan Supply Demand Balance DYAA

Norfolk Wymondham

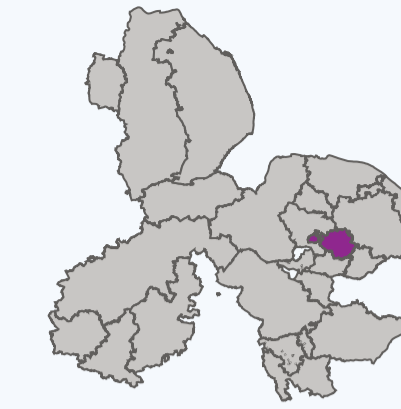


Figure 8: Norfolk Wymondham final plan SDB to 2050 for Dry Year Annual Average conditions

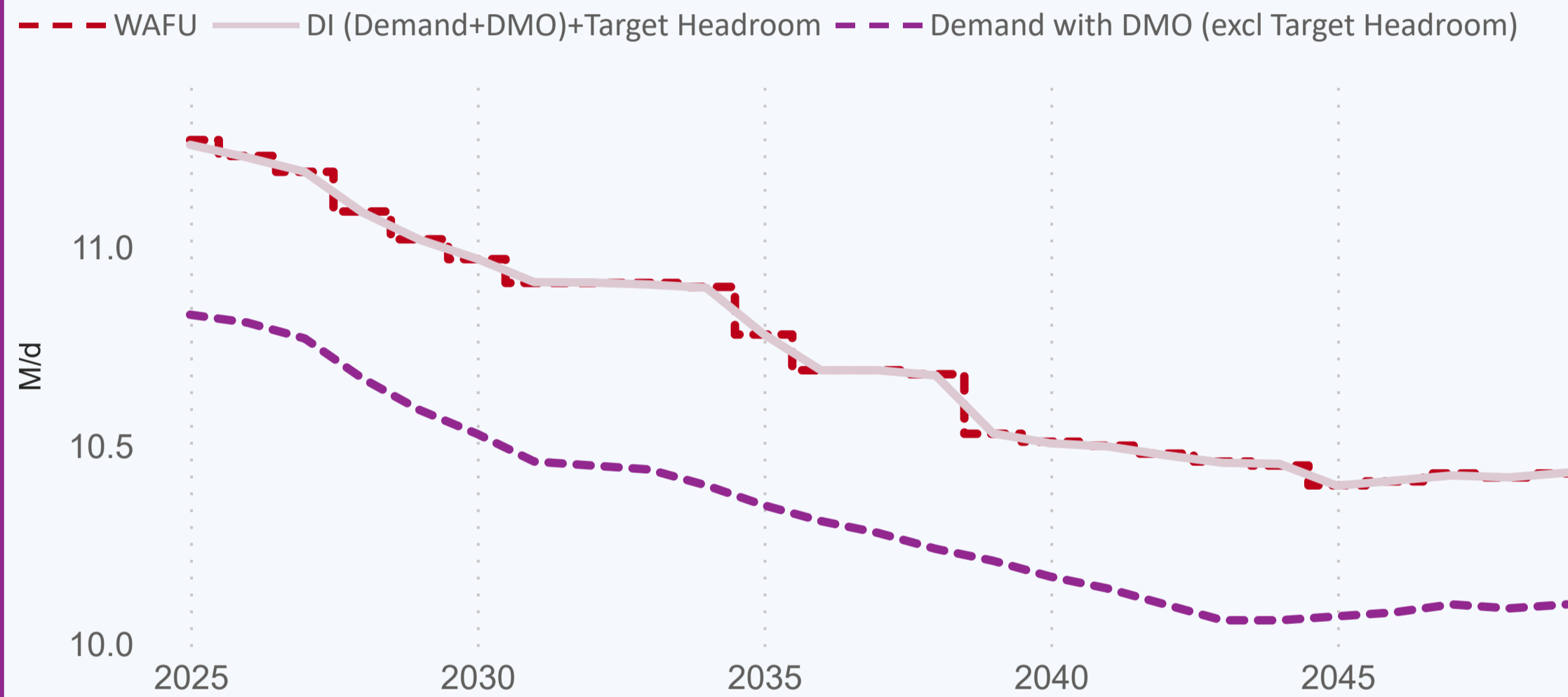


Table 9a: final plan SDB to 2050 for Dry Year conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	10.8	10.8	10.1	10.1	1.5	1.5
Net Transfers	0.6	0.2	0.8	0.4	8.9	8.9
Total Water Available For Use	11.3	11.0	10.9	10.5	10.5	10.4
Distribution Input	10.8	10.6	10.4	10.2	10.1	10.1
Target Headroom	0.4	0.4	0.5	0.3	0.4	0.3
Supply Demand Balance	0.0	0.0	0.0	0.0	0.0	0.0

Table 9b: Final Plan demand forecast for DYAA conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	5.6	5.7	5.7	5.7	5.7	5.8
Water delivered unmeasured household	1.2	1.0	0.8	0.6	0.5	0.4
Total Leakage	1.3	1.3	1.2	1.2	1.2	1.2
Water delivered measured non-household	2.7	2.6	2.6	2.6	2.6	2.6
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	10.8	10.6	10.4	10.2	10.1	10.1

9.1 DYAA FP supply demand summary: Norfolk Wymondham

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 6.8 MI/d in 2025 to 6.2 MI/d in 2050, a percentage change of -8.8 %.
- Final Plan Leakage is forecast to change from 1.3 MI/d in 2025 to 1.2 MI/d by 2050.
- Final Plan Non-Household demand is expected to change from 2.7 MI/d to 2.6 MI/d.
- Final Plan Distribution Input is expected to change from 10.8 MI/d to 10.1 MI/d by 2050.



10. Final Plan Supply Demand Balance DYCP

Norfolk Wymondham

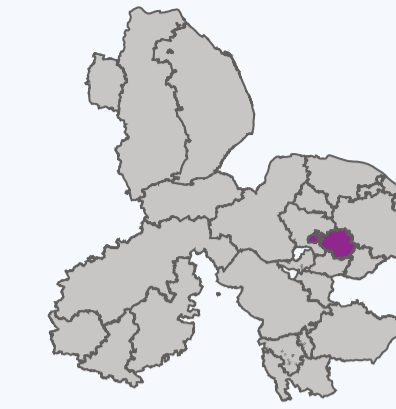


Figure 9: Norfolk Wymondham baseline supply demand balance to 2050 for Dry Year Critical Period conditions

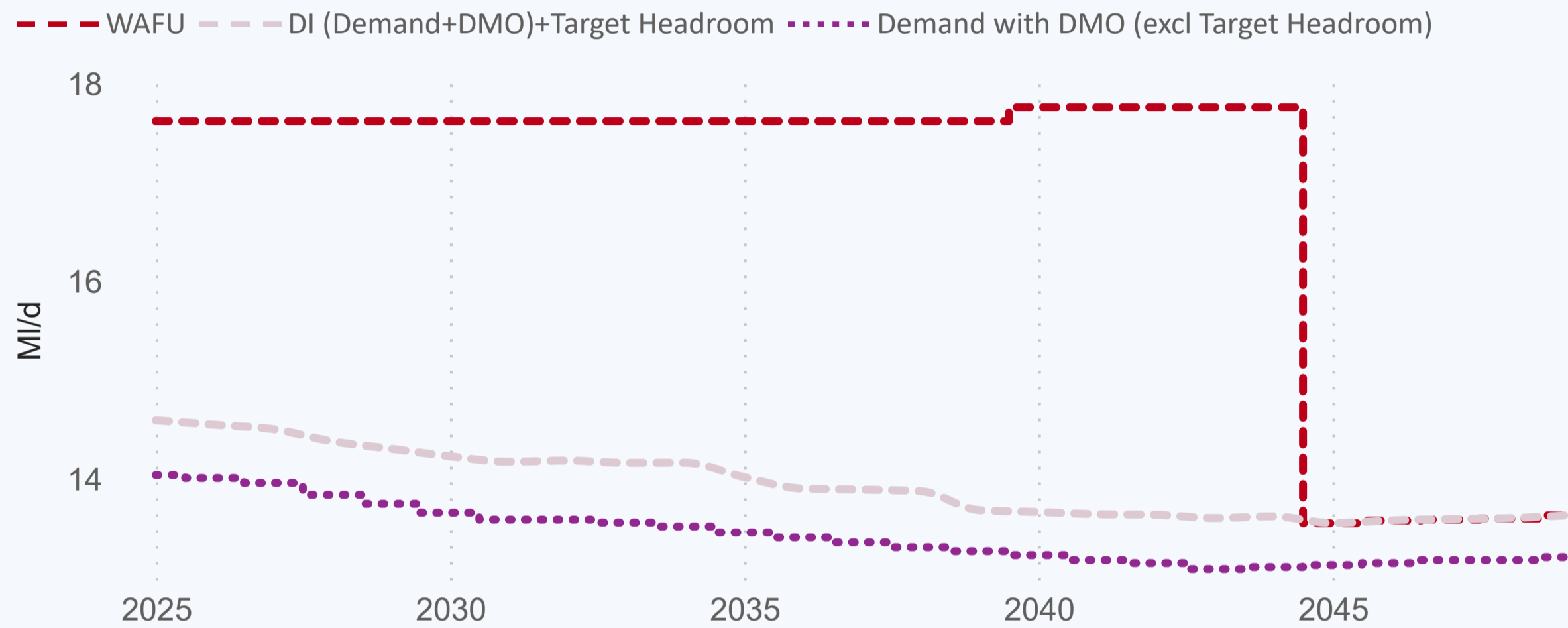


Table 10a: Final Plan supply demand balance 2025 - 2050 for DYCP conditions

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	12.6	12.6	12.6	12.6	12.6	5.4
Net Transfers	5.0	5.0	5.0	5.0	5.1	8.3
Total Water Available For Use	17.6	17.6	17.6	17.6	17.8	13.6
Distribution Input	14.0	13.8	13.5	13.3	13.1	13.2
Target Headroom	0.6	0.6	0.6	0.4	0.5	0.4
Supply Demand Balance	3.0	3.3	3.5	3.9	4.1	0.0

Table 10b: Final Plan demand forecast for DYCP conditions (with preferred demand management options)

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water delivered measured household	7.5	7.6	7.6	7.6	7.7	7.9
Water delivered unmeasured household	1.6	1.4	1.1	0.8	0.6	0.6
Total Leakage	1.3	1.3	1.2	1.2	1.2	1.2
Water delivered measured non-household	3.6	3.5	3.5	3.5	3.5	3.5
Water delivered unmeasured non-household	0.0	0.0	0.0	0.0	0.0	0.0
Distribution Input	14.0	13.8	13.5	13.3	13.1	13.2

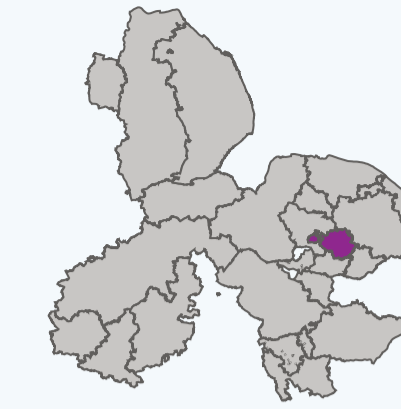
10.1 DYCP BL supply demand summary: Norfolk Wymondham

The zone is in balance.

- Demand Forecast: Final Plan household demand (measured and unmeasured) is forecast to change from 9.1 MI/d in 2025 to 8.4 MI/d in 2050, a percentage change of -7.6 %.
- Final Plan Leakage: is forecast to change from 1.3 MI/d in 2025 to 1.2 MI/d by 2050
- Final Plan Non-Household demand: is expected to change from 3.6 MI/d to 3.5 MI/d.
- Final Plan Distribution Input: is expected to change from 14.0 MI/d to 13.2 MI/d by 2050.



11. Supply Side Strategy



Norfolk Wymondham

Table 11a: Total Water Available for use Baseline and Final Plan

	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
WAFU - BL	11.7	11.6	11.6	6.5	6.5
WAFU - FP	11.0	10.9	10.5	10.5	10.4

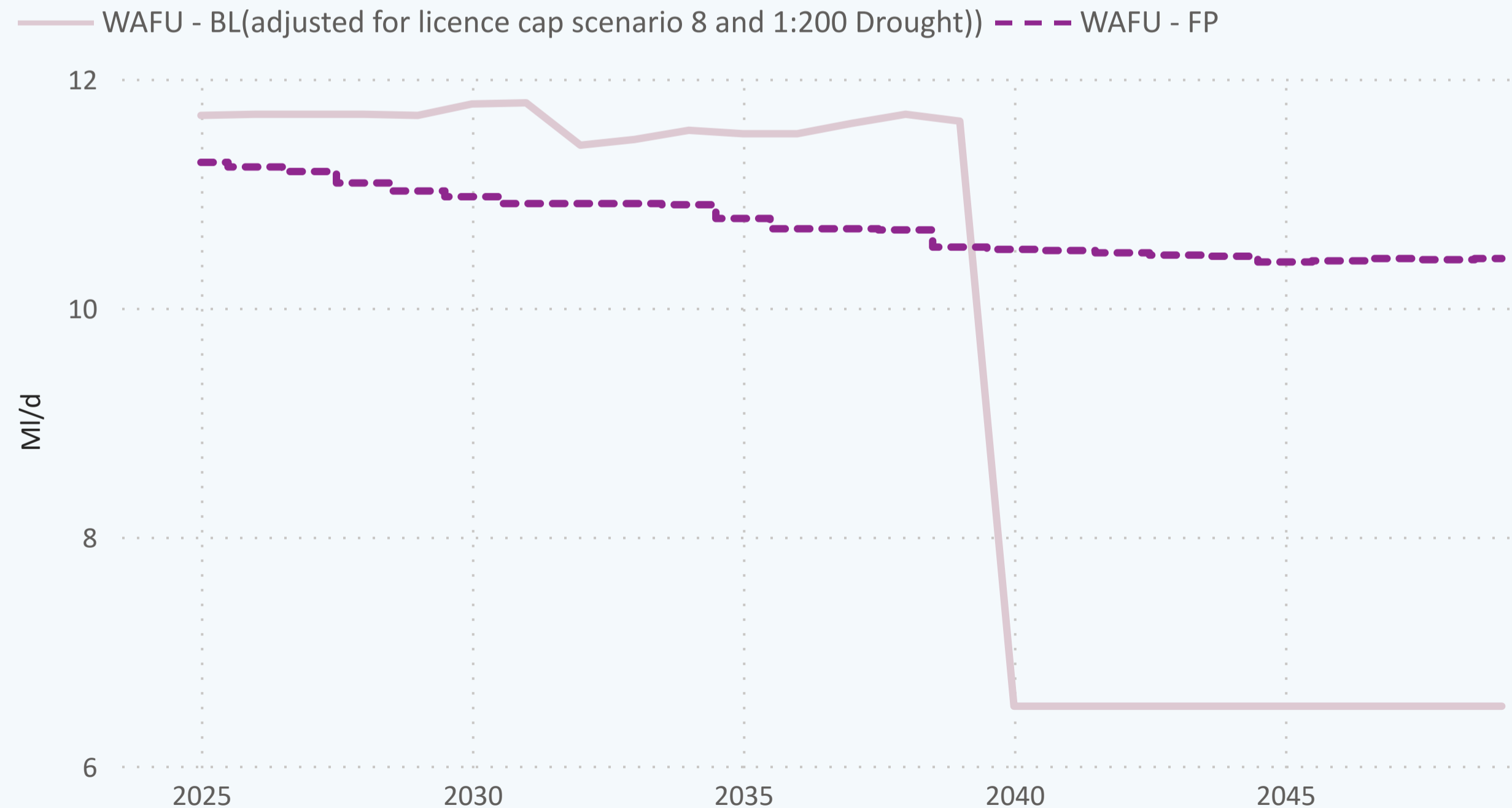
11.1 Supply side strategy options.

For details on the feasible options list for Norfolk Wymondham WRZ please refer to the Supply-Side Option Development technical supporting document.

Table 11b: Preferred supply side options

Option ID	First Option Name
EI11	Adjustment to existing potable water import
LC14	Adjustment for Licence cap scenario 8
NWY1	Norwich and the Broads to Norfolk Wymondham potable transfer (5 MI/d)

Figure 10 Water Available for Use (WAFU) - baseline (BL) and final plan (FP)

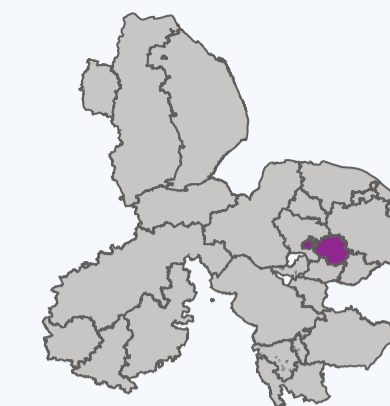




12. Non-Household consumption

Norfolk Wymondham

Norfolk Wymondham



12.1 Non-Household demand Norfolk Wymondham

In 2025, 2.7 MI/d of Non-Household demand (measured and unmeasured) is expected. In 2049 it is expected to be 2.6 MI/d, which is a -1.50% change between the years.

Figure 12: % Non-Household modelled sectors within resource zone

Figure 11: Non-Household demand forecast 2025-2050

