

HERTFORDSHIRE WATER STUDY 2017

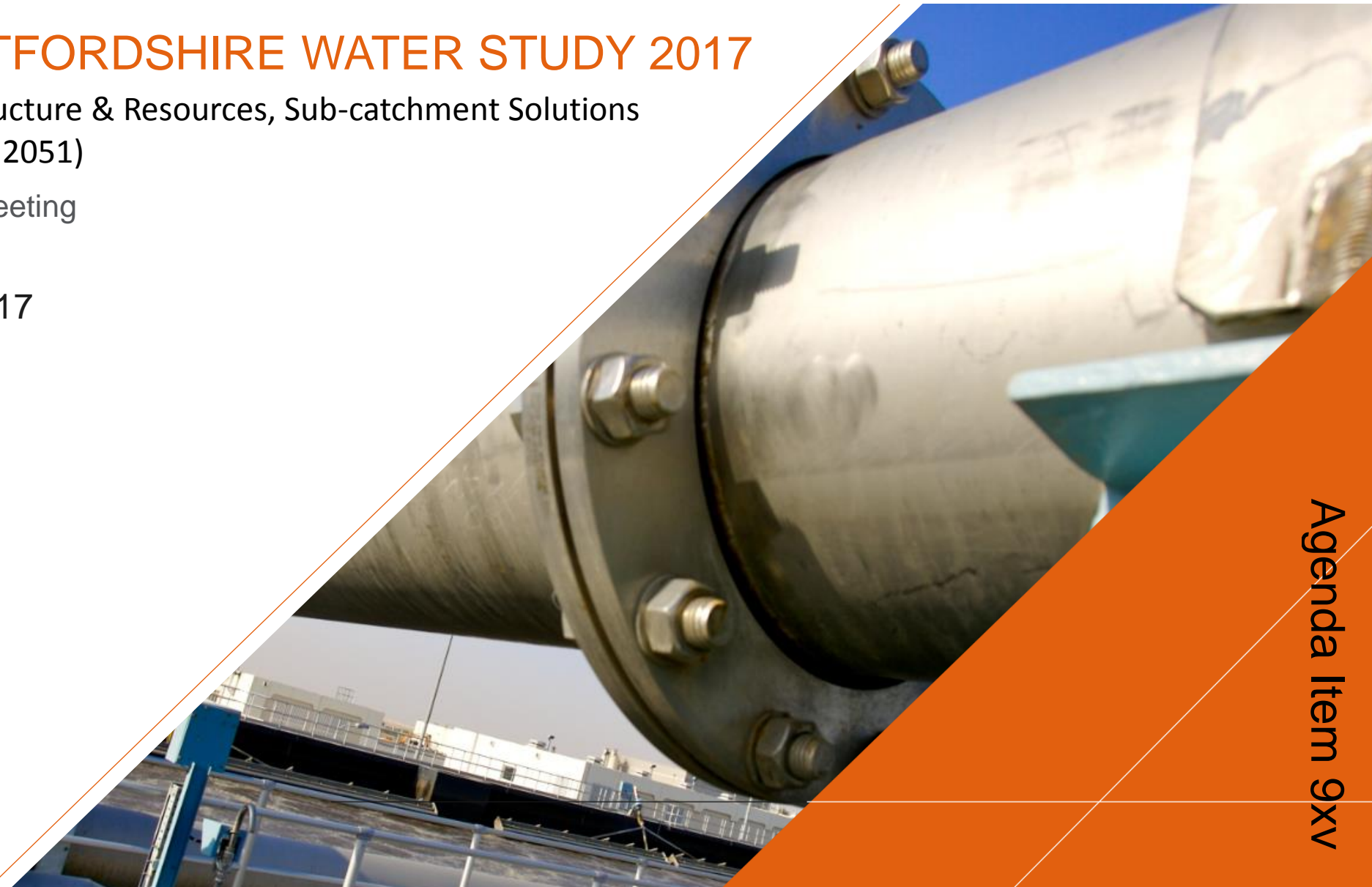
Infrastructure & Resources, Sub-catchment Solutions
(2021 – 2051)

HIPP Meeting

Mar 2017

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Agenda Item 9xv



WATER VISION FOR HERTFORDSHIRE

We proposed a Vision for Hertfordshire to underpin the aims and objectives of this project and help steer the identification of options and strategies. The vision has been encapsulated as follows:

Page 256 **“** A water **resilient, sustainable** and **secure** Hertfordshire, where all administrative organisations, water authorities and local environmental groups **collaborate to provide efficient water infrastructure** and **preserve the quality of the water environment** for the benefit of everyone, especially its chalk rivers and the valuable ecosystems they host.

An **integrated** and **diverse wastewater infrastructure** that will help **remove obstacles to planned growth** and **contributes to local economic prosperity**, whilst helping to maintain healthy groundwater supplies. **Innovative** and **water sensitive developments**, designed to deliver sustainable benefits to their local water and regional water environment, former part of a wider **holistic water management strategy** to ensure **Hertfordshire is an exemplar of integrated planning, effective catchment management** and **environmental protection.** **”**

WATER VISION FOR HERTFORDSHIRE

Sustainability

Resilience

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Prosperity

Security

THIS STUDY

We Are Here...

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Understand
Need and
Growth

Resilience

Effective
Long-term
Planning

Timely Provision of Water
Infrastructure

Security

Prosperity

Sustainability



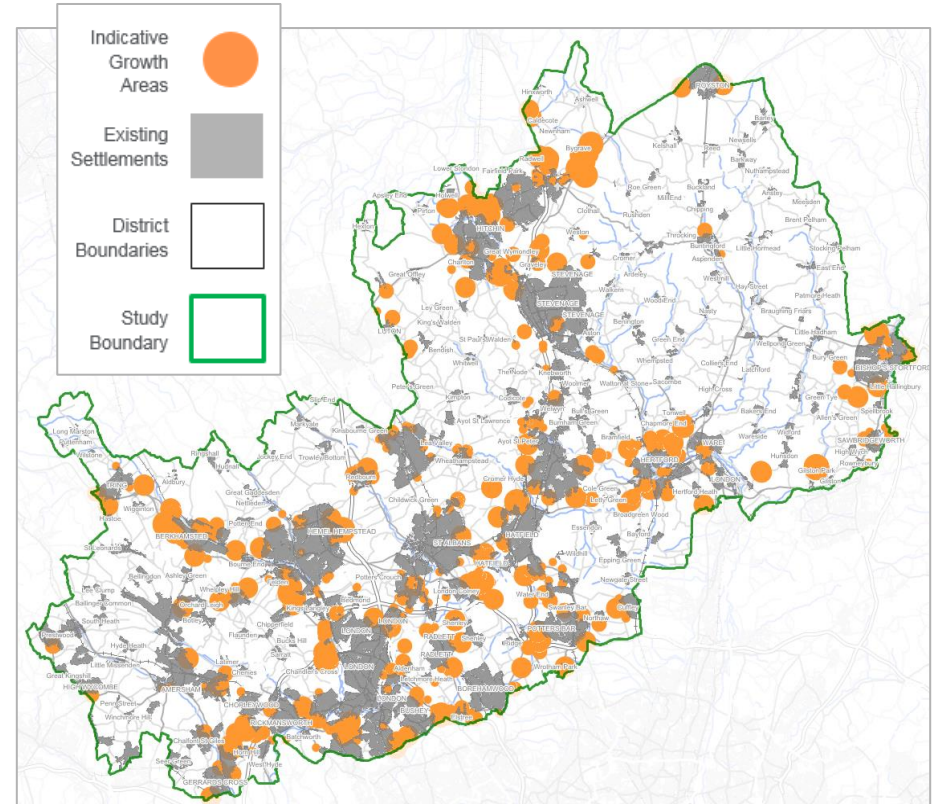
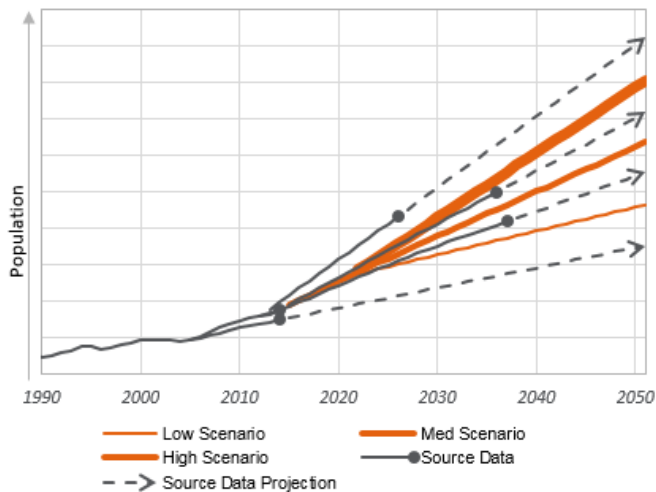
The Vision
For Hertfordshire

STUDY APPROACH

Understanding Development & Growth Trends

- Future Time Horizons
- Clarify growth expectations through district consultations
 - Local Plans
 - Growth strategies
 - Population projections (ONS, SHMA etc.)
 - Indicative growth areas
- Create robust projections to 2051

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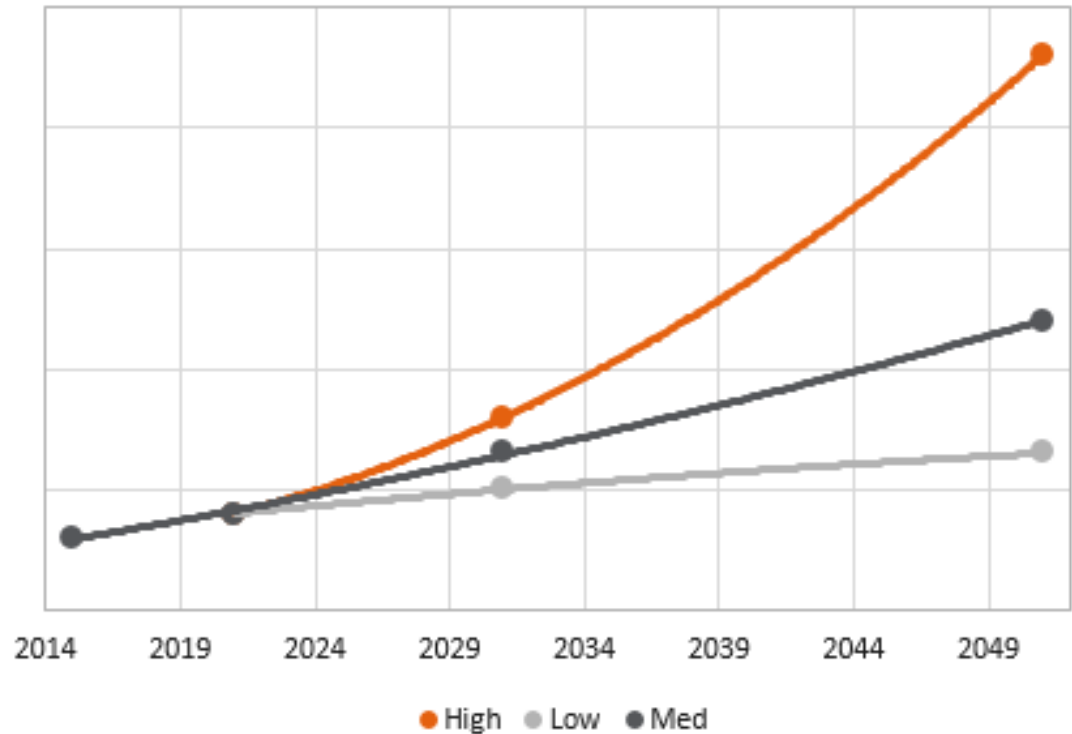
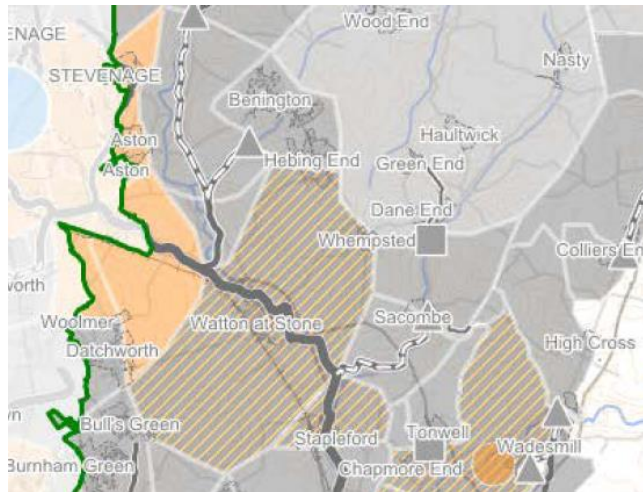


STUDY APPROACH

Understanding & Managing Uncertainty

- Population change inherently uncertain
- Created uncertainty scenarios (Low / Medium / High)

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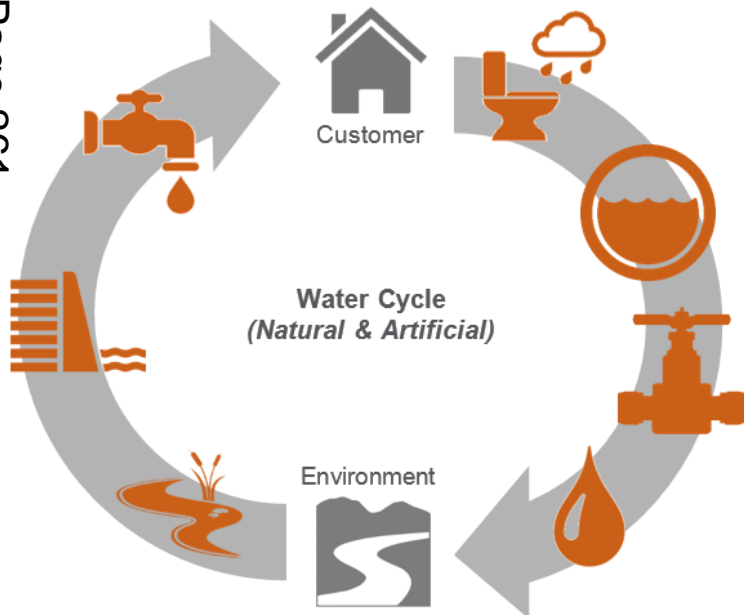


STUDY APPROACH

Establishing Strategic Understanding of Water Infrastructure

- Catchment Schematic
- High-level Numerical / Hydraulic Modelling

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Evaluating Future System Capacity and Potential Deficits

- Classification of Need

Requirement for strategic intervention(s), investment, planning and implementation, to accommodate significant increase in demand and / or offset significant headroom / capacity deficit.

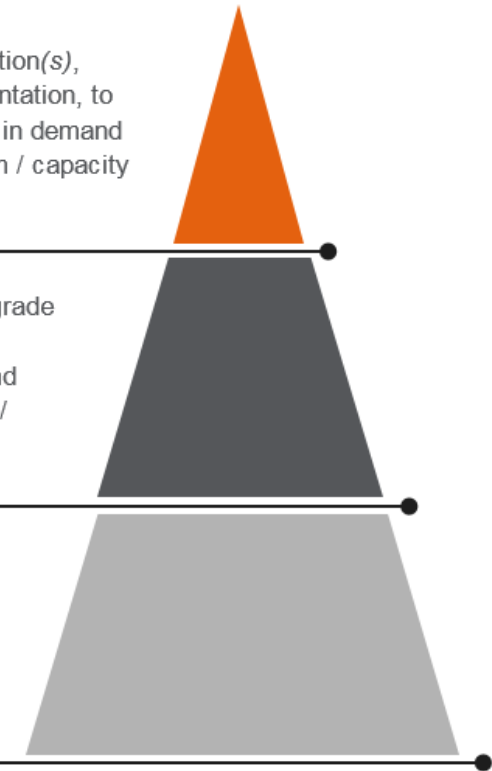
Strategic Intervention

Potential requirement for local upgrade / improvement investments, to accommodate increases in demand and / or offset possible headroom / capacity deficit.

Focused Planning

Continued planning and minor improvement works, driven by asset management planning process, should be sufficient to accommodate future changes.

Routine Investment

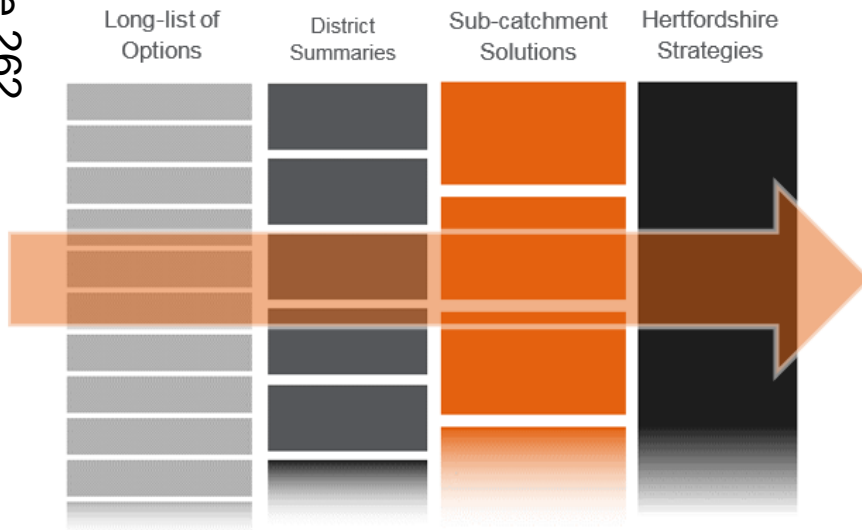


STUDY APPROACH

Identification of Water Infrastructure Options

- Undertaken based on the three key principles of **sustainability**, **resilience** and **security**
- A **'bottom-up'** approach applied

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Long-list of Options

- Broad range of industry approaches

District Summaries

- **District-level understanding** of the potential water infrastructure requirements
- **Graphically represented** Classification of Need
- Provides districts with **information to support site selection**

Sub-catchment Solutions

- Strategic infrastructure solutions
- Opportunities to **implement multi-stakeholder multi-benefit schemes**

Hertfordshire Strategy

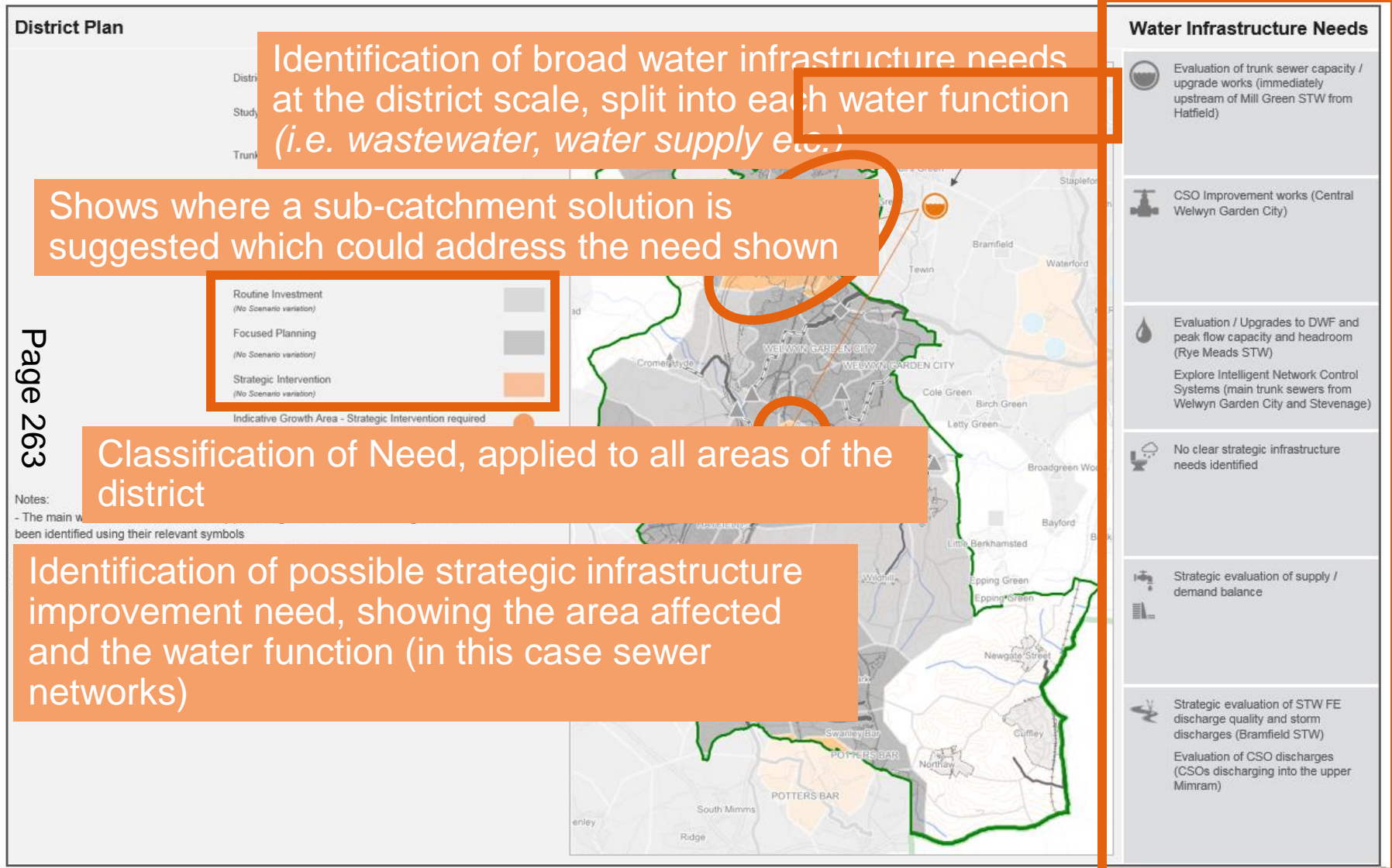
- Overarching **catchment strategy**

Policy Based Options

- Help facilitate the implementation of strategic and long-term engineering options

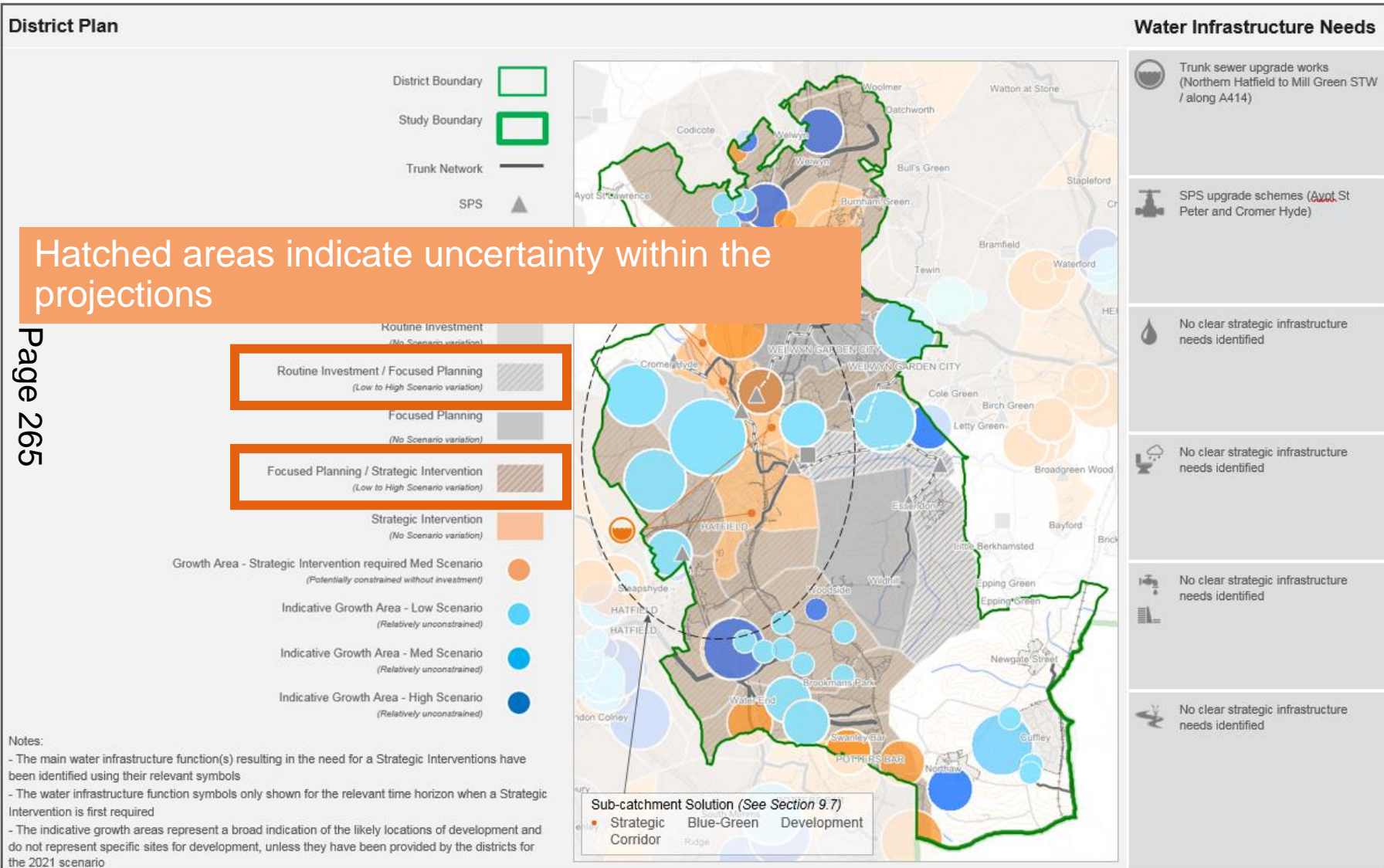
DISTRICT SUMMARIES

8.10.4 Welwyn Hatfield Classification of Need – Immediate Recommendations (2021)



DISTRICT SUMMARIES

8.10.6 Welwyn Hatfield Classification of Need – Suggested Long-Term Considerations (2051)



SUB-CATCHMENT SOLUTIONS

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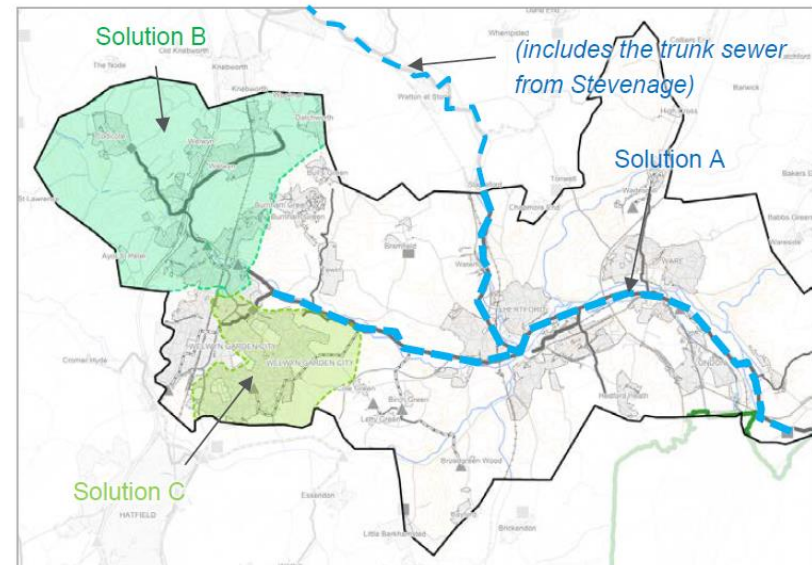
Sub-Catchments

- Present **opportunities to address** key growth challenges and infrastructure demands **at key strategic scales**
- Allow **critical and strategic decisions to be made**
- Assess and plan based on **water infrastructure need** (*not administrative Boundaries*)

Definition

- **Drainage infrastructure** (*consolidating areas with comparable issues, risks and opportunities*)

- **Geographical context** (following natural and artificial watersheds, transcending administrative boundaries and responsibilities)
- **Settlement boundaries**



CONCLUSIONS

Main Conclusions

- Ensuring adequate **water infrastructure capacity is critical** to support the projected quantum of growth
- Indicative confirmation that **current growth strategies are broadly robust**
- Continued **partnership collaboration is necessary** to facilitate the development of robust long-term planning
- Remains **challenging linking long-term infrastructure planning with investment**
- A wide range of **options available**
- **Current water management and efficiency policies broadly robust** and effective, specifically related to water supply

Other Outcomes

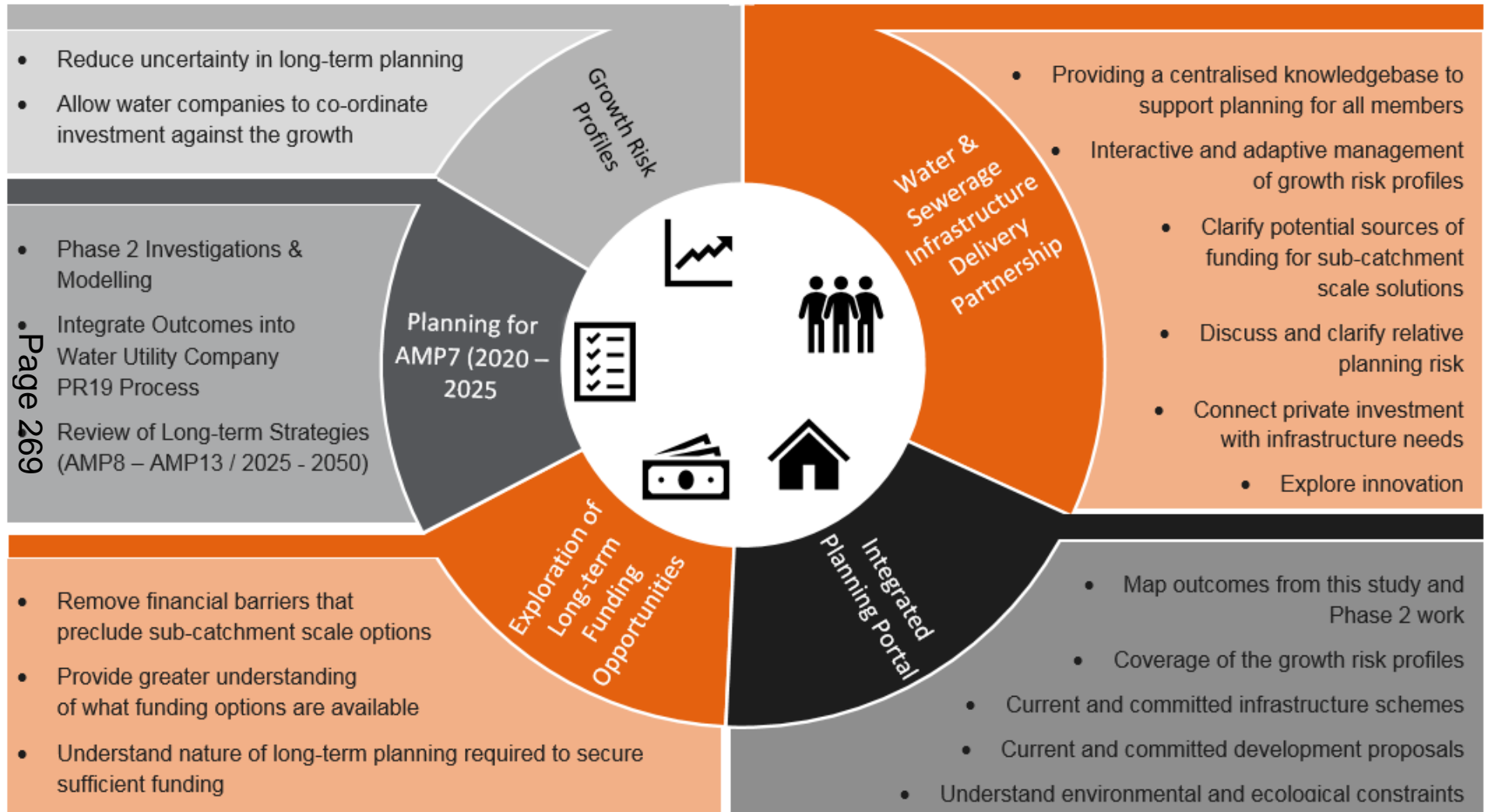
- Potential need for a **more self-reliant water resource strategy**
- Sustainable Water Utility Company **investment reliant on robust understanding of growth** plans and expectations
- Benefits of **consolidating growth proposals** into geographically discrete areas
- Benefits of a **collective voice**
- **Difficult to incorporate** the **intangible elements** of the development planning process when defining growth
- Complexities of catchment water systems will require range of **Phase 2 investigations to** fully clarify uncertainty and improve long-term planning

ACTION PLAN

Next Steps

- First phase or a (at least) two-phase project
- Five-Point Action Plan
 - **Water & Sewerage Infrastructure Delivery Partnership**
 - **Shared Planning Portal**
 - **Growth Risk Profiles**
 - **Exploration of Long-term Funding Opportunities**
 - **Planning for AMP7 (2020 – 2025)**

ACTION PLAN



INTO THE FUTURE

Integrated Long-term Planning

Collaboration & Transparency

Sharing of Data & Information

Innovation

Commitment to Sustainable Growth