



A partnership approach to meeting future water needs

FLOODEX UK
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- Summary

WRE overview

- Water resources are critical to the future success of the East of England
- We need a multi-company, multi-sector long-term water resource strategy
 - Which is resilient to the effects of drought, climate change and growth
 - Balances affordability and reliability with sustainability
- WRE set up to meet this challenge




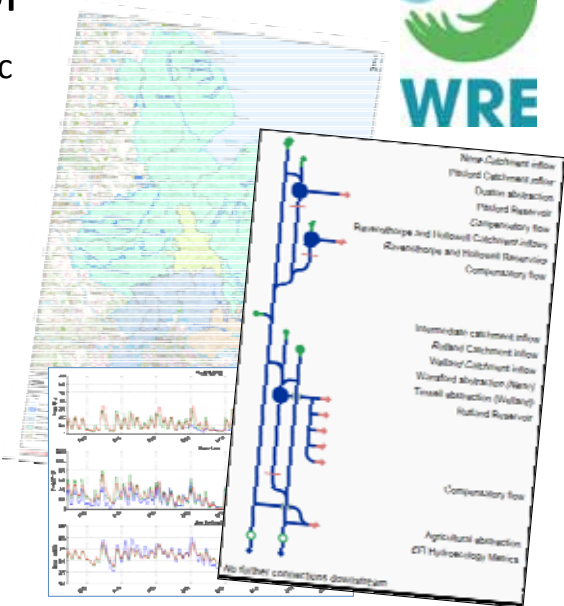
WRE decision making framework

- Collaborative
- Performance based
 - Using a water resource simulator
 - With multiple criteria for success, and
 - Trade-offs to select schemes
- Water, energy, agriculture, drainage and environment represented along with government and regulators



WRE simulator


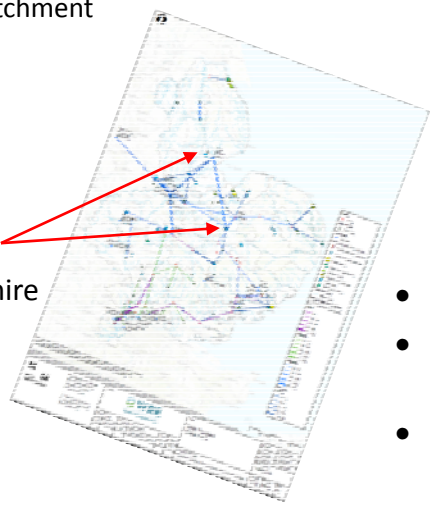
- Regional and strategic
- Supply
 - Surface Water
 - Groundwater
- Demand
 - Agriculture
 - Water supply
 - Power
 - Environment
- New schemes
- For scheme selection and stress testing

WRE Options

Link to Black Sluice catchment

- Desalination
- Water reuse
- Dam raising
- New reservoirs
 - South Lincolnshire Fens
 - Norfolk Fens
- ASR
- Tankering

- Metering
- Water efficiency
- Leakage reduction

Black Sluice case study



Aims

- Minimise flood risk
- Maximise opportunities for economic growth
 - Food and farming
 - Leisure and tourism
- Restore and protect fenland and other habitats
- Secure water for public water supply
- **Deliver desired outcomes at a lower cost than is otherwise possible**

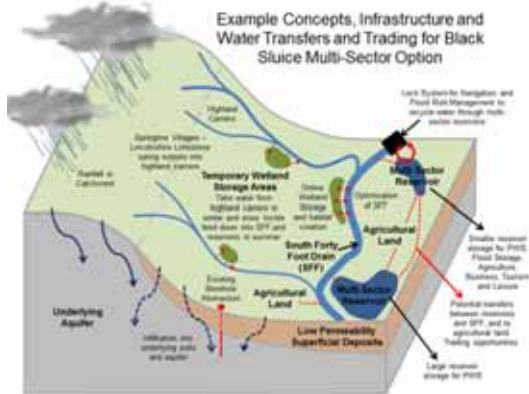


Sector	Representation
Water	Anglian Water Services
Drainage	Black Sluice IDB, Welland and Deepings IDB
Agriculture	Fenland Agriculture Water Group, UKIA, NFU
Environment	Lincolnshire Wildlife Trust, South Lincolnshire Fenland Partnership
Leisure and tourism	Greater Lincolnshire LEP, Lincolnshire County Council
Regulators	EA and Natural England
Technical support	Mott MacDonald, Atkins, Cranfield University, Wild Planet

Black Sluice IWRM

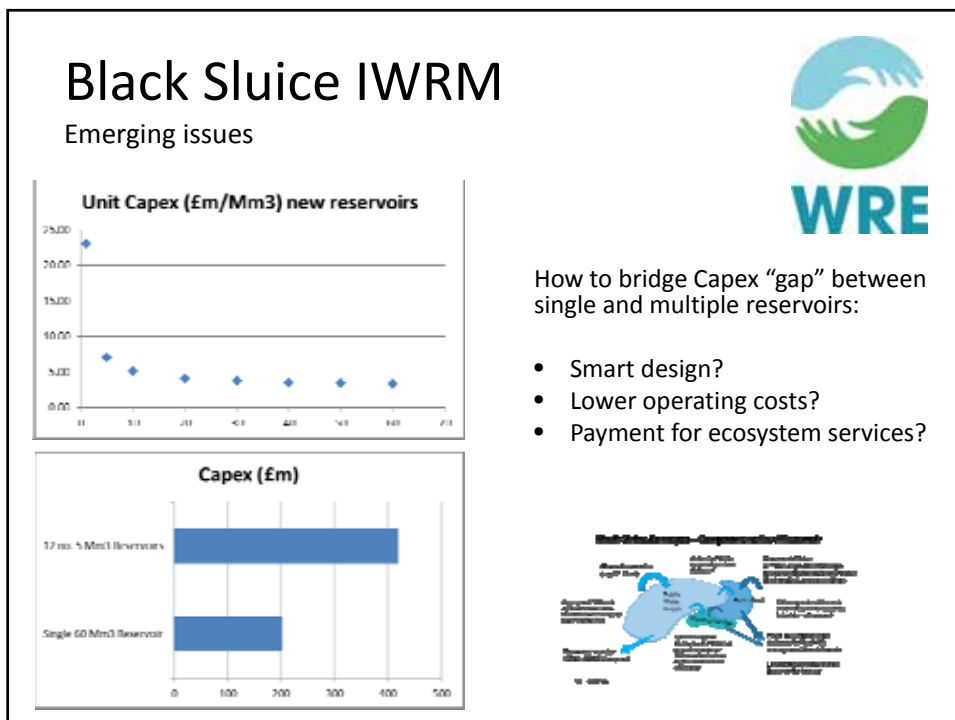
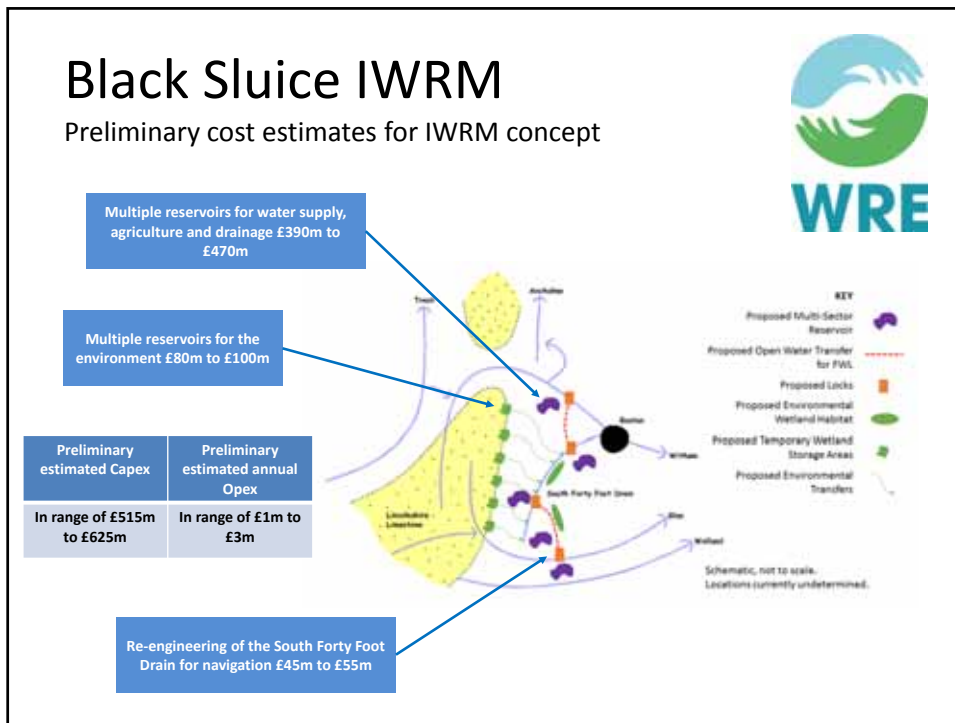


Concept



Sector	Maximum Estimated Storage Requirement (Mm3)
Water Supply	50
Agriculture	5
Flood Storage	4
Environment	1.5
Navigation	0.06
Total	60.56 (~60)

From:
 "Managing Water Together" multi-sector planning workshop
 Spalding
 November 25 2016



Black Sluice IWRM

Next steps

1. Refine concept
 - With/without reservoir for public water supply
2. Assess potential costs and benefits
 - Use ecosystem services model?
3. Develop and assess alternative operating models
4. Feed relevant results into draft 2019 WRMPs and Drought Plans



Key messages

1. We're seeing lots of collaboration
2. Leading to Integrated Water Resource Management (IWRM) planning at a variety of different scales, and
3. We've made a good start, but there is still lots to do!

