2010 LGMA NATIONAL CONGRESS

Cambridge Sewerage Strategy

History

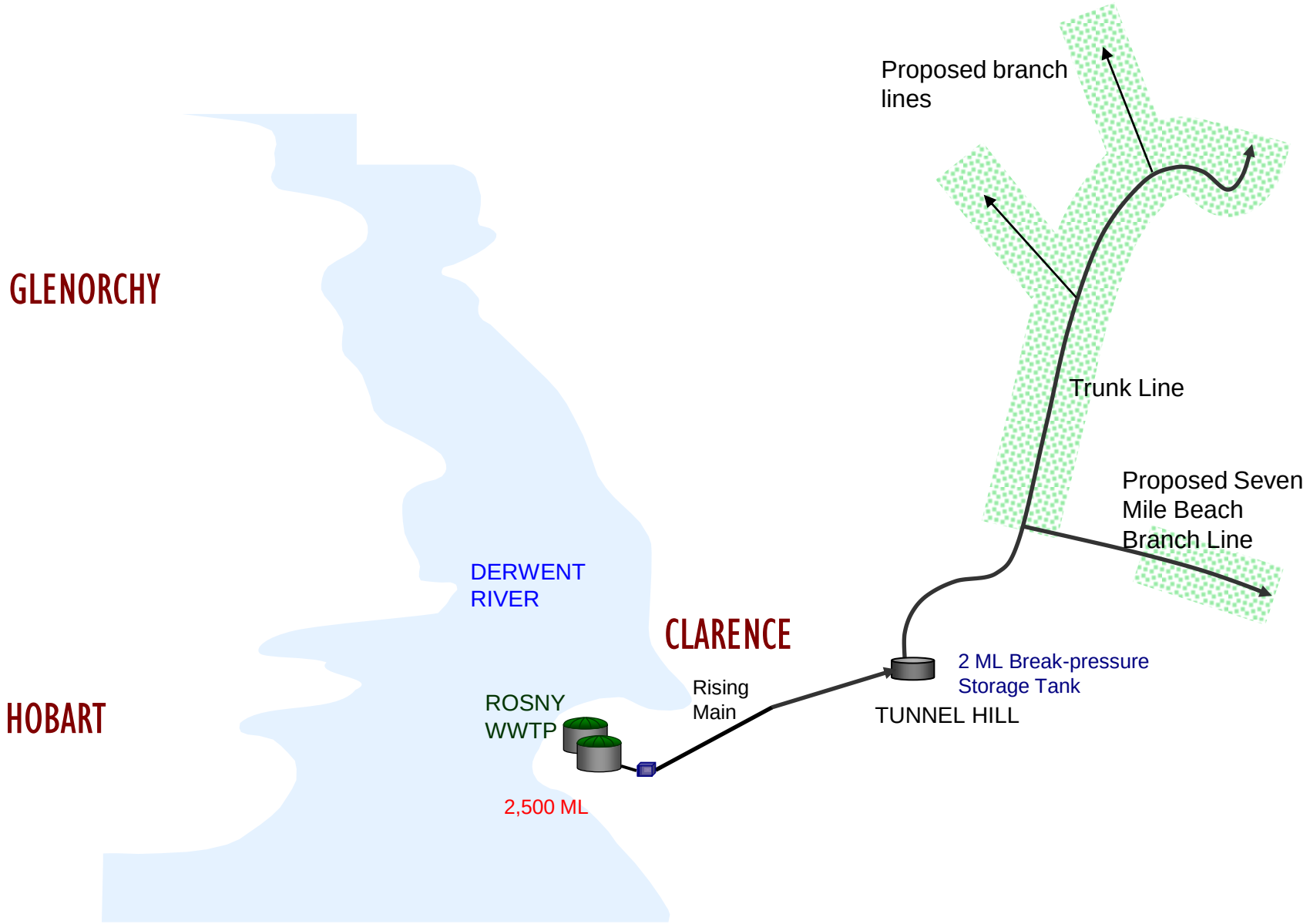
- 1995 - Review of sewage management options
- Australian Government Treaty obligations triggers consideration of legislation to reduce/eliminate effluent ocean outfalls
- Derwent Estuary identified as an environmental hotspot by Australian Government
- 2001 – Tasmanian Government releases "*Emission Limit Guidelines for Sewage Treatment Plants that Discharge Pollutants into Fresh and Marine Waters*" that set out technology upgrades for waste water treatment plants
- Reuse scheme identified to be more cost effective compared with upgrading Rosny Waste Water Treatment Plant

Clarence Recycled Water Scheme

HISTORY - 2001

- Brighton Council recognised for full effluent reuse
- Australian Government looks to capitalise on Brighton's success
- Council lodges Coast and Clean Seas Application for Clarence Recycled Water Scheme
- Council granted $8.4M to implement Clarence Recycled Water Scheme

Clarence Recycled Water Scheme



Clarence Recycled Water Scheme

HISTORY – 2002 to 2006

- Council signs Agreement with Australian Government – February 2002
- DP&EMP developed
- EPN issued for Rosny WWTP on 20 November 2002
- Design and project management tenders let early 2003
- Coal River Water Recycling Authority created June 2003
- Practical completion – October 2005
- Official Opening October 2006

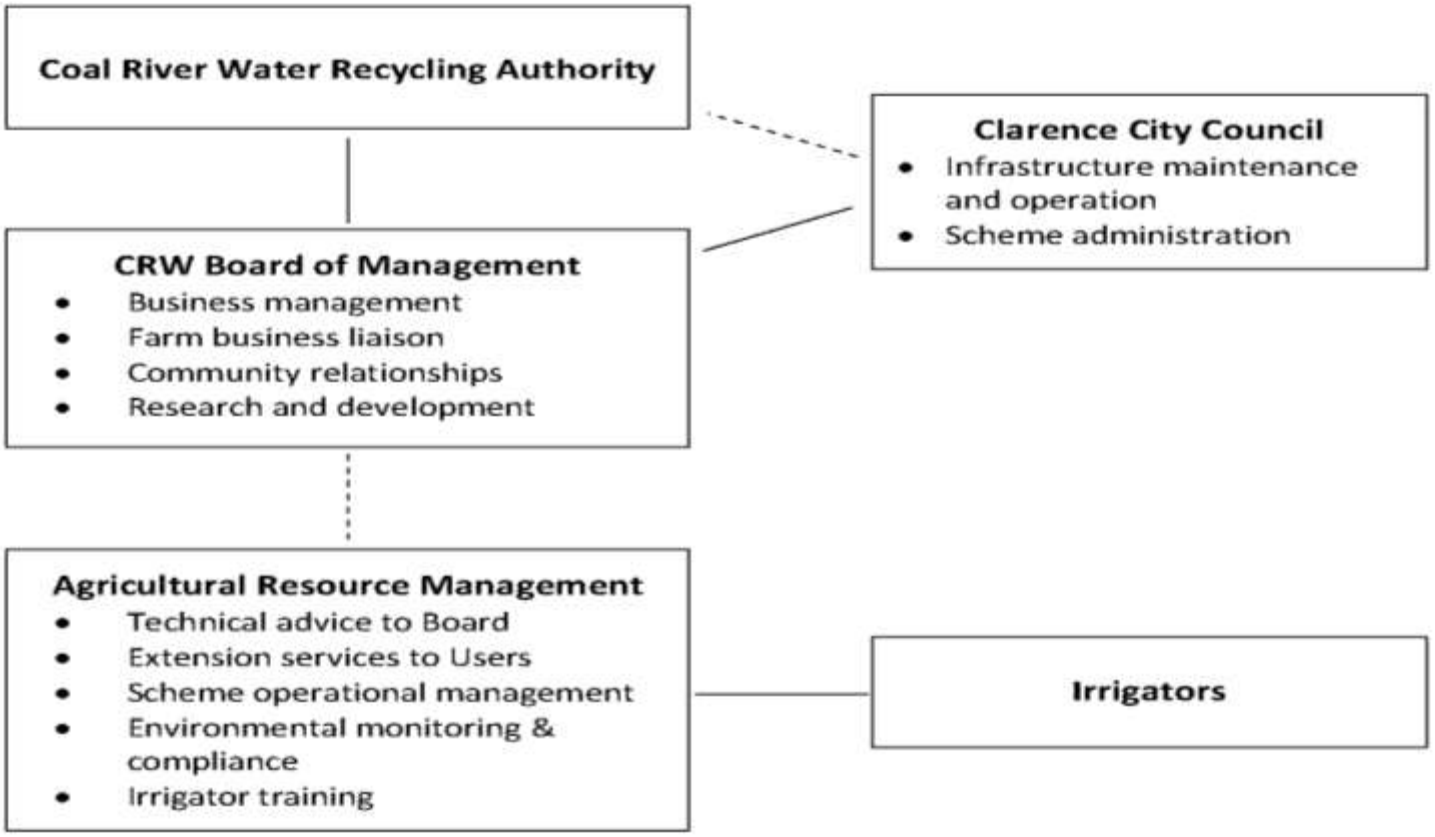
Transferability – What we did

DP&EMP

- Largest effluent reuse scheme in Tasmania
- Multiple outfalls, multiple receiving environments
- Resource concerns for both parties
- Devolved regulation and report back

Transferability – What we did

SCHEME GOVERNANCE & MANAGEMENT



Transferability – What we did

PROCESS MANAGEMENT

- Strong regulation/rules
- Adequate monitoring, and
- Timely and tough enforcement

Transferability – What we did

GOVERNANCE & PROCESS

- User Agreements, User categories and Part 5 Agreements
- Irrigation and Environmental Management Plans
- Allocation and Pricing Policy
- Storage Incentives Policy
- Compliance checks and testing
- Reporting to Director of Environmental Management through Rosny WWTP EPN Annual Report provisions

Transferability – What we did

COMMUNICATION

- Project Steering Committee
  - Council
  - Australian Government
  - State Government
- Management and operations
  - Operational Advisory and Users Group
  - Broader community
  - 6 monthly User forums
  - Dedicated Website

Transferability – What we didn't do and should have done

- Recycled Water Schemes should be designed using a Risk Assessment Process as per the National Guidelines;
  - Helminth control
  - Saline intrusion
- Communication and consultation with potential users is critical – needs to be constant and consistent from grant application through to commissioning.

Seven Mile Beach Expansion

- In 2007 consortium of users formed to expand Scheme to Seven Mile Beach
- $1M Extension funded
  - 48% - Consortium members
  - 33% - Australian Government
  - 19% - Clarence City Council
- Successful funding due to linkage to economic and environmental sustainability

Scheme Expansion

Lessons learnt

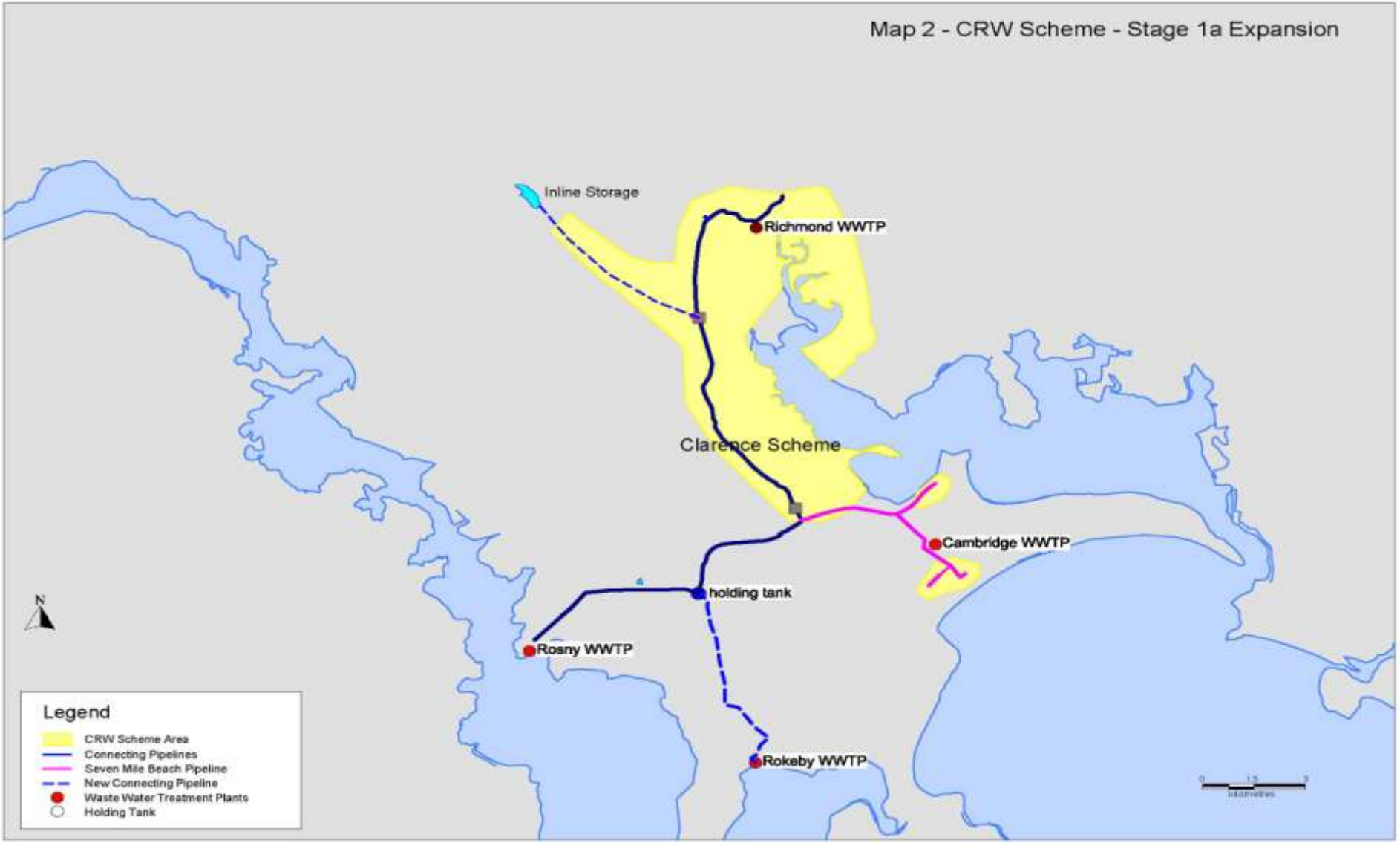
- SCHEME – Operation
  - Daily average supply constant but diurnal variations in WWTP output
  - Daily average demand varies due to seasons and weather
  - Lower than expected development of on-farm storage due to lack of suitable sites or loss of quality land

Configuration and operation leads to sub optimal supply consistency and the conclusion that a large balancing storage is required to maximise supply security

Scheme Expansion

- Authority develops Business Case for Scheme expansion
- Australian Labor Party promises $10.5M for stage 1 expansion in 2007 Federal Election
- Council signs Agreement with Australian Government in September 2008 for $10.5M expansion of the Scheme
- At same time Richmond Lagoons have effluent storage dam constructed and connected to Scheme

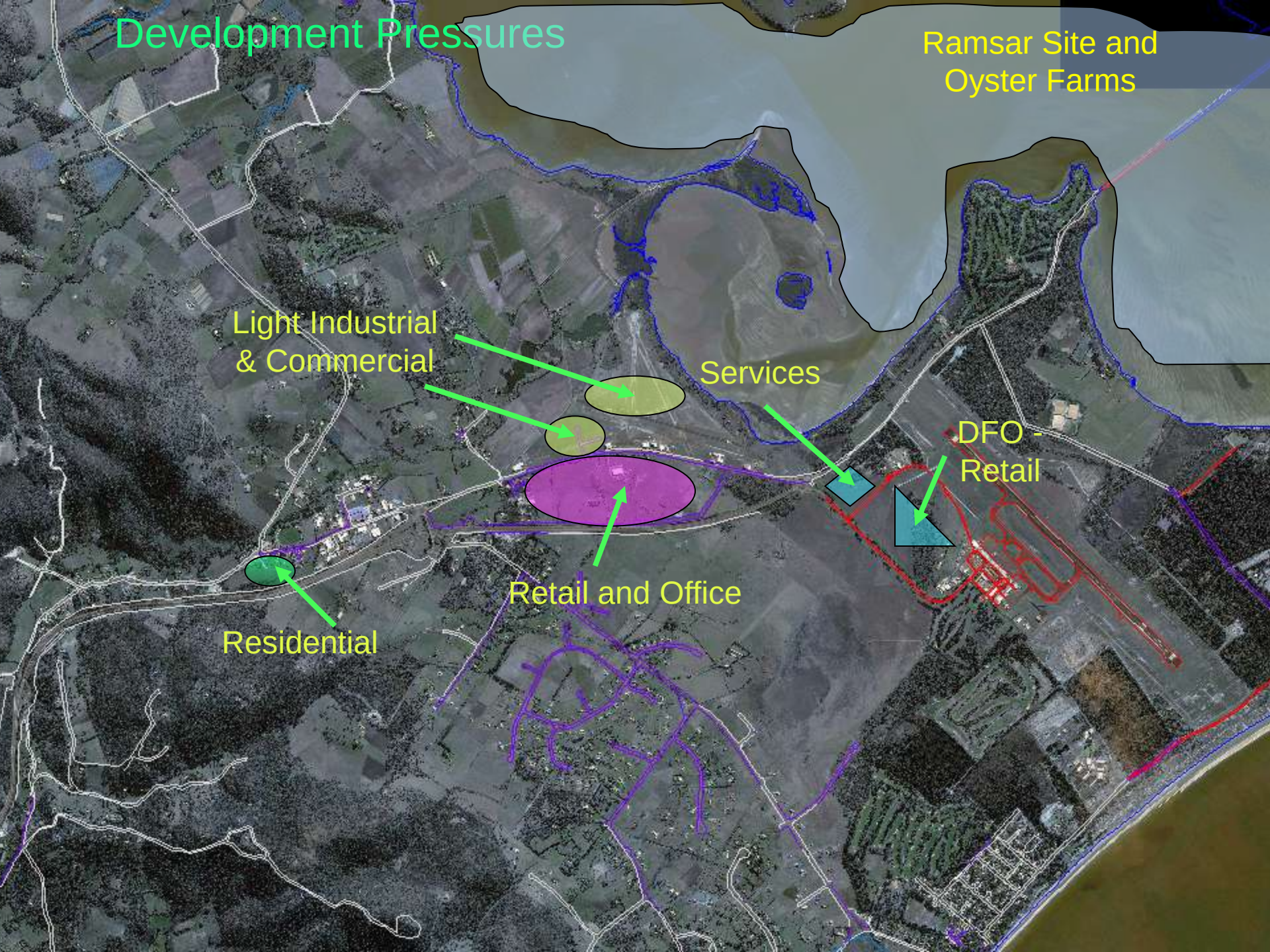
Scheme Expansion

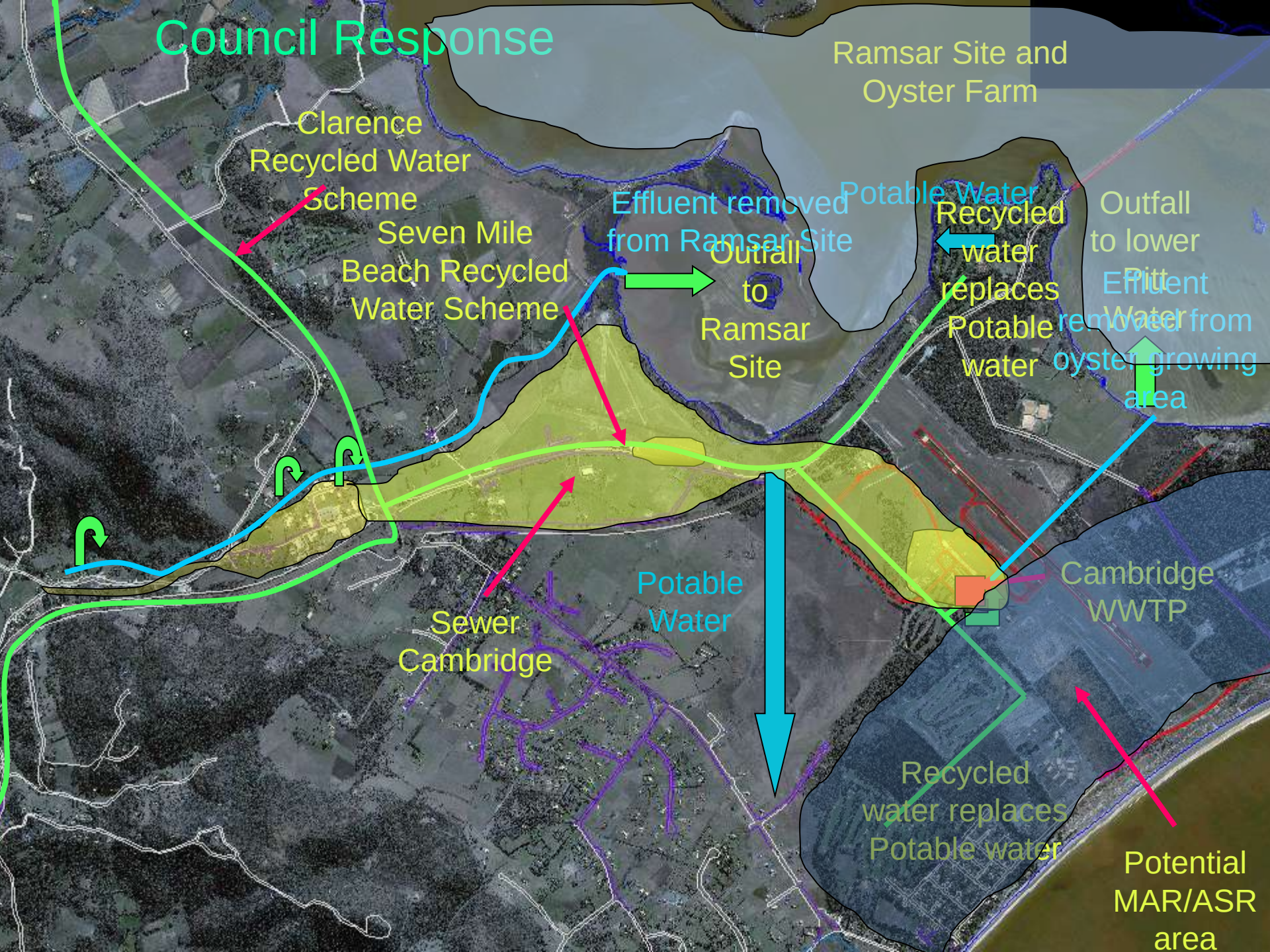


Cambridge


Aquaculture Industry
Midway
Aquaculture Industry
Cambridge Aerodrome
Cambridge
HOBART INTERNATIONAL AIRPORT
A3
C330
C320
Mount Rumney
Seven Mile Beach


Previous Situation
Ramsar Site and
Oyster Farms
Potable Water
Outfall
to lower
Pitt
Water
Outfall
to
Ramsar
Site
Sewered
Area
Potable
Water
Sewered
Area


Development Pressures
Ramsar Site and
Oyster Farms
Light Industrial
& Commercial
Services
DFO -
Retail
Retail and Office
Residential


Council Response
Ramsar Site and Oyster Farm
Clarence Recycled Water Scheme
Seven Mile Beach Recycled Water Scheme
Effluent removed from Ramsar Site
Outfall to Ramsar Site
Potable Water
Recycled water replaces Potable water
Outfall to lower Pitt
Effluent Water removed from oyster growing area
Sewer Cambridge
Potable Water
Cambridge WWTP
Recycled water replaces Potable water
Potential MAR/ASR area

Cambridge Sewerage Strategy

WIN – Environment

- Cambridge WWTP Class A+ tertiary treatment reducing nutrients into receiving waters of Ramsar site
- substitution of Potable Water with less climate dependent sources of supply
- sub regional groundwater monitoring program

WIN – Primary Industry

- potential pathogens removed from oyster sites
- Recycled Water diverted for beneficial horticultural reuse

WIN – Economy

- Treatment Lagoons and HIAPL WWTP closed freeing up valuable land
- Provision of sewerage reticulation to facilitate residential, commercial and industrial development and resultant employment opportunities
- Facilitation of landside commercial development at HIA


The End