Diversion of Herdsman Main Drain to Reduce Demand on the Superficial Aquifer

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• Why did we do this?
• What was the project?
• What did we learn?
• Conclusion
• Why did we do this?

• What was the project?

• What did we learn?

• Conclusion
• Apparent waste

• Good for the environment

• Potential risk mitigation
Why did we do this?

What was the project?

What did we learn?

Conclusion
• How much water flows to the ocean

• Options & benefits of harvesting

• Likely capital and operating costs

• Determine the high order risks
• Why did we do this?

• What was the project?

• What did we learn?

• Conclusion
• Measurements 1993-1999 ~9GL pa to ocean from HMD

• Random sampling of water quality in HMD

• Random sampling of water quality of groundwater
• Infiltrate groundwater by gravity or pump
• Pump into WGC main dam
• Create a wetlands
• Create feature lakes
• Fill Perry Lakes
• Gravity feed = energy savings
• 20% of flow = offset of all Town bores
• Entry level risk assessment = unknowns
• One environmental issue for another
• Key business drivers appeared
Herdsman Main Drain Diversion and Infiltration

Cross-Section

Plan
• ~ $960k capital to infiltrate 20% water, $125k pa operate and reserve for future dredging

• ~ $4.5m to pump to Perry Lakes, with operating costs > $200k pa

• Assumed no water treatment needed
• Paucity of relevant data
• DoW conceptual view of water banking
• Environmental balance – trees vs water
• Further risk analysis needed
Why did we do this?

What was the project?

What did we learn?

Conclusion
• Technical feasibility

• Substantial investment

• Replacement strategy for bore usage

• Support from State warranted