

Proposed Water Treatment Plant

Second Deliberative Forum

12 June 2006

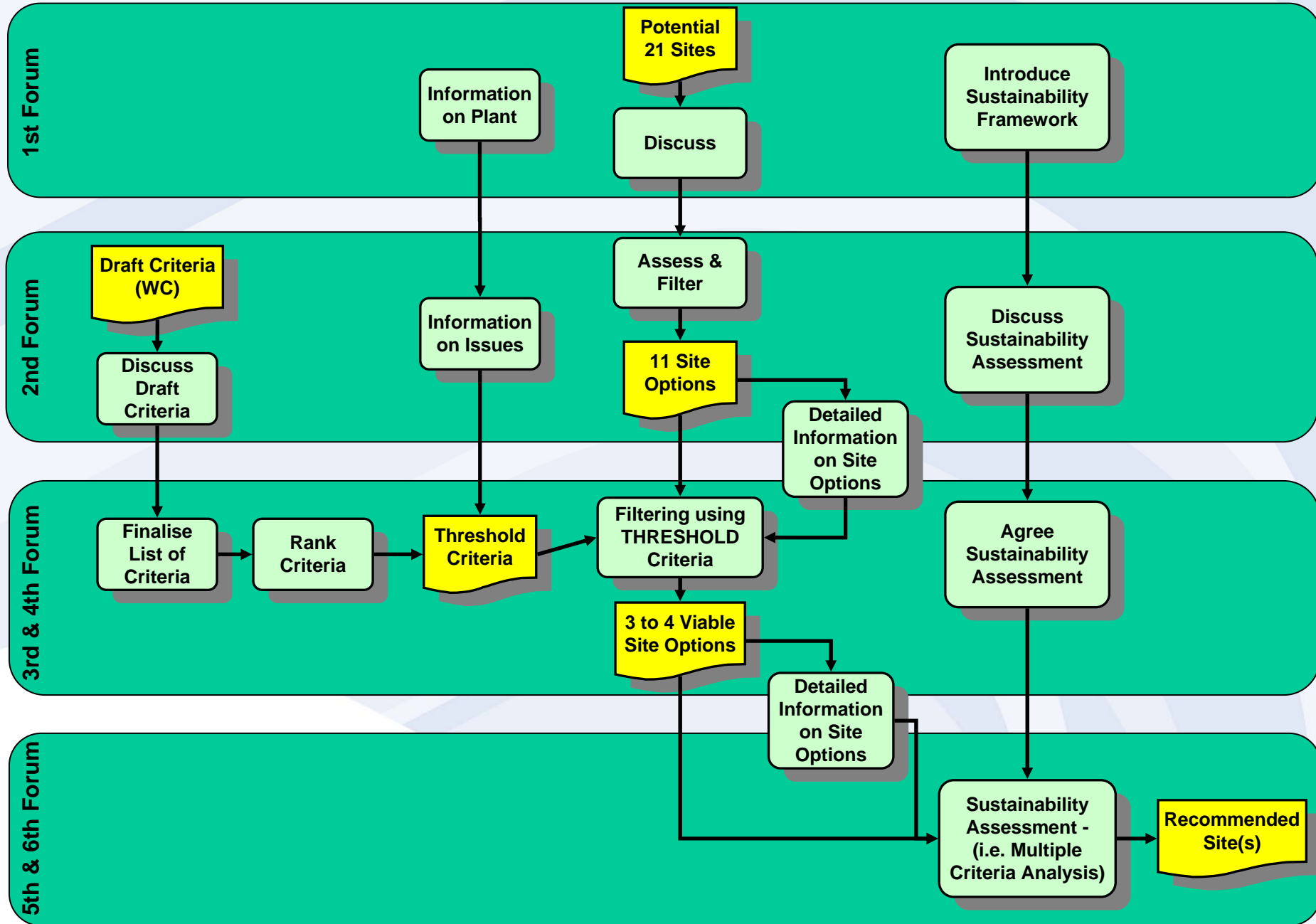


Ken Walter

Project Director – Site Selection



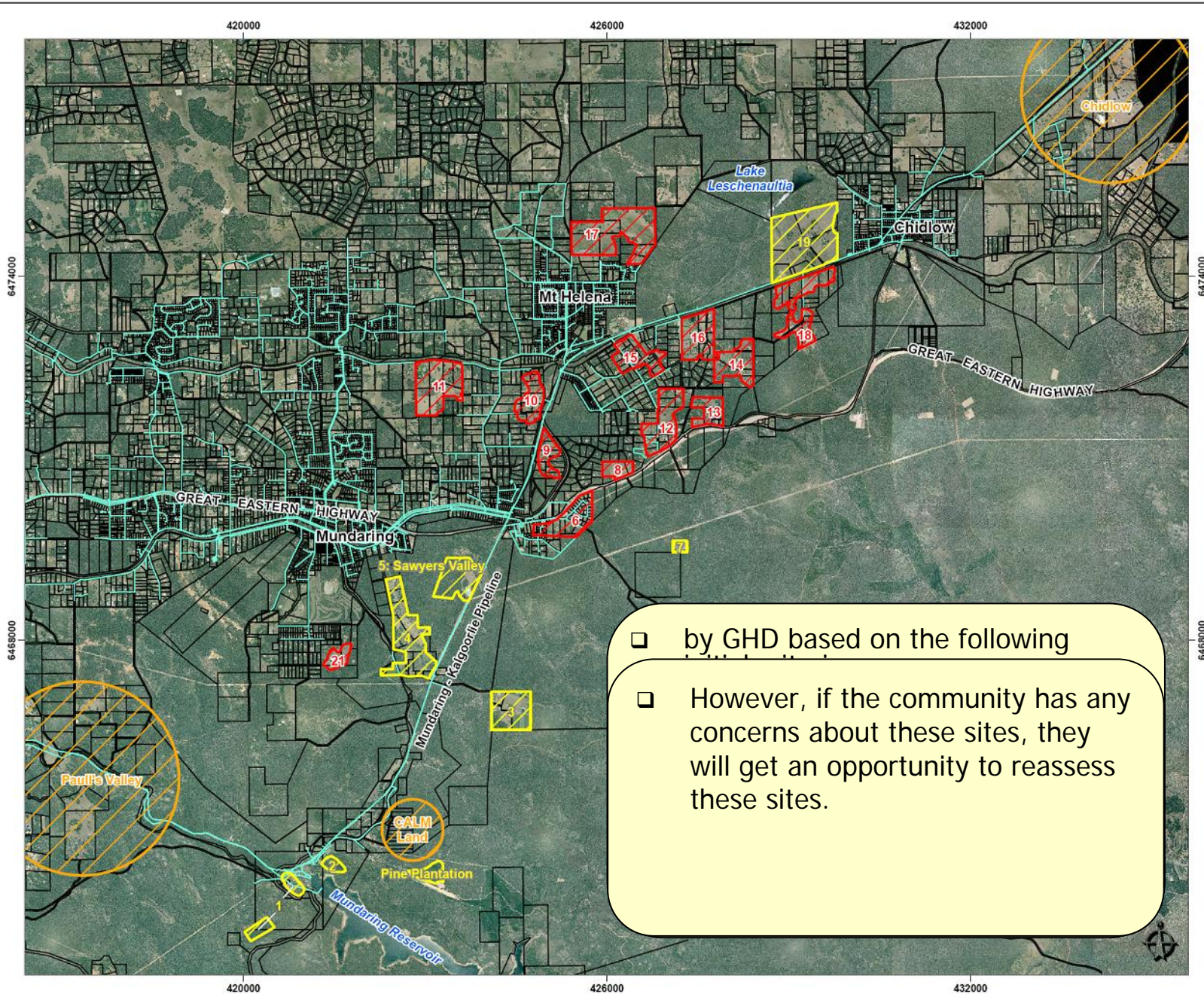
Site Selection Process Flowchart



Q and A discussion (30 minutes)



Possible Sites & Sites Proposed for further Study



- by GHD based on the following
- However, if the community has any concerns about these sites, they will get an opportunity to reassess these sites.

LEGEND

- Water Pipelines
- Cadastral Boundaries

Sites Investigated

- Conceptual Locations
- Sites Identified for Further Study
- Sites Not Meeting Initial Criteria

NOTE THAT ADDITIONAL WORKS CAN BE - 10% IN SOME AREAS
AERIAL PHOTOGRAPHY DATED DEC 2004 SOURCED FROM DL - AUG 2005

SCALE
600 0 600 1200 1800m
1:60000 at A3

LOCALITY MAP

Metropolitan Area

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HEIGHT DATUM: METADATA RECORDED:

DATE: 06.12.05 FILE LOCATION: \\s:\15611\GIS\MXD\8115811-08_Rev2.mxd

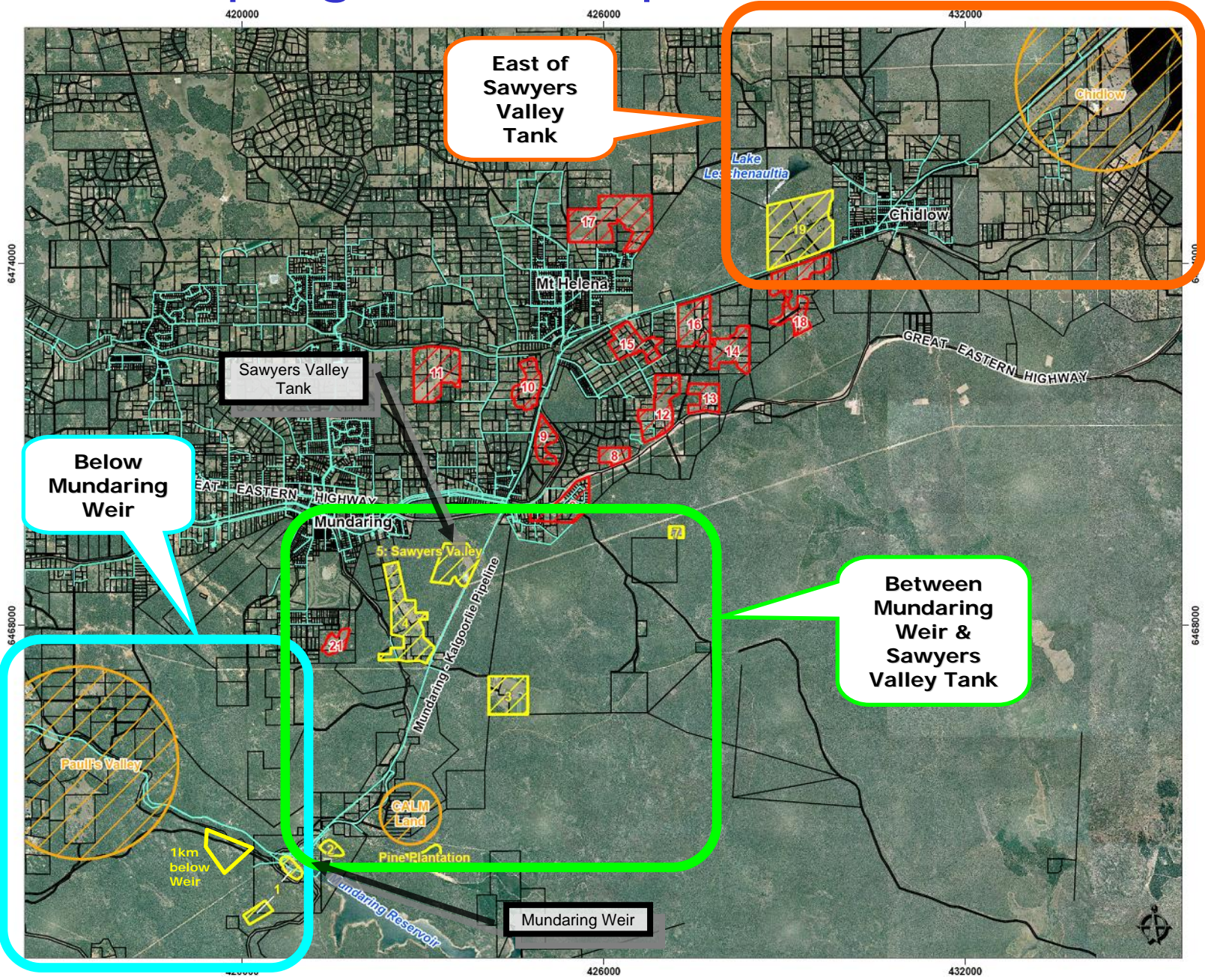
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ENVIRONMENTAL PERFORMANCE

**MUNDARING WATER TREATMENT PLANT
SITE COMPARISON**

**Figure 1
Sites Investigated**

Grouping of Site Options



LEGEND

- Water Pipelines
- Cadastral Boundaries

Sites Investigated

- Conceptual Locations
- Sites Identified for Further Study
- Sites Not Meeting Initial Criteria

NOTE THAT POSITIONAL ERRORS CAN BE ± 100 MM OVER AREAS
AERIAL PHOTOGRAPHY DATED DEC 2004 SOURCED FROM DL1 - AUG 2005

SCALE

600 0 600 1200 1800mm

1:60000 at A3

LOCALITY MAP

Metropolitan Area

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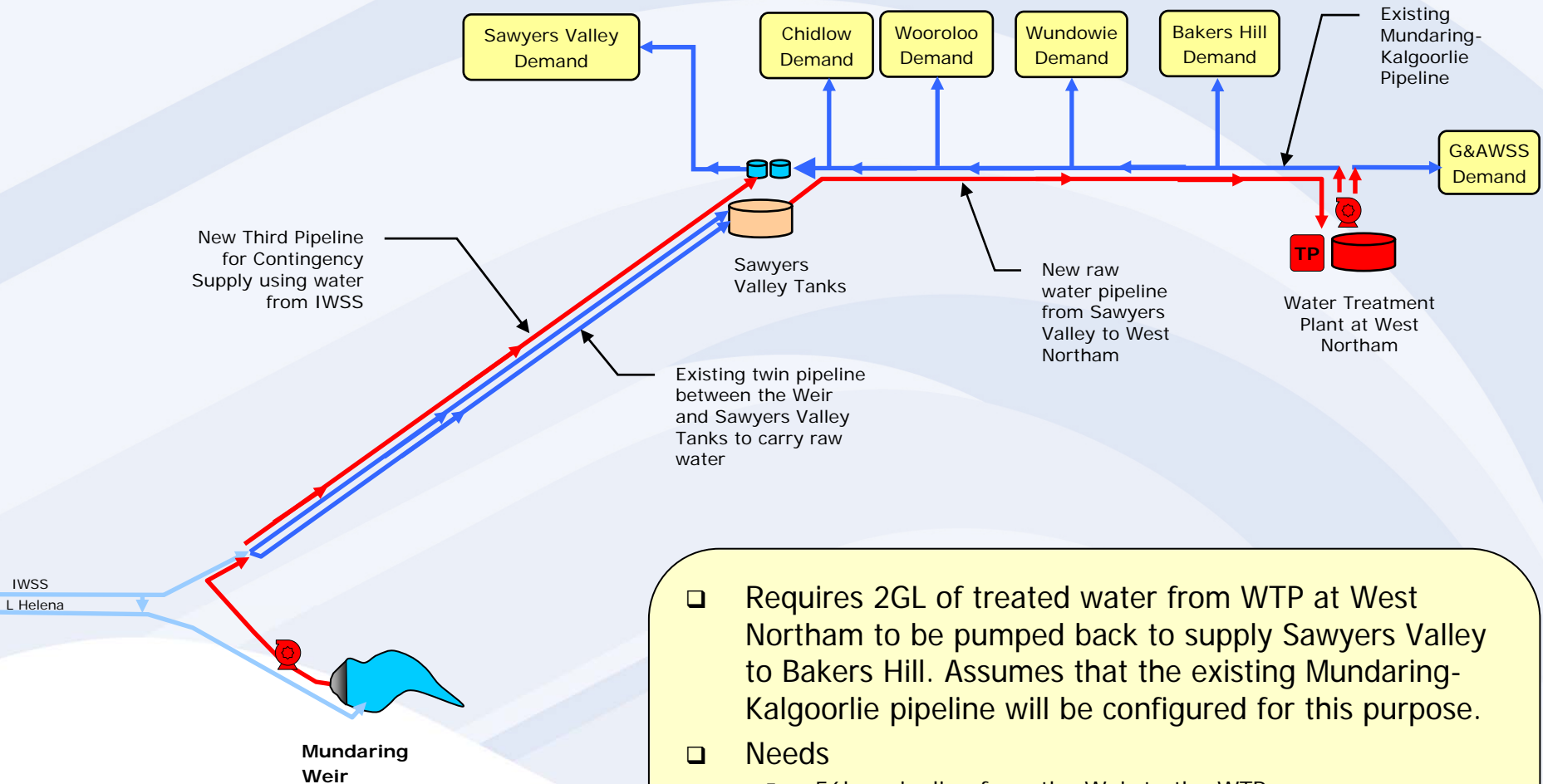
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WATER CORPORATION **GHD** ENVIRONMENTAL PERFORMANCE

MUNDARING WATER TREATMENT PLANT SITE COMPARISON

Figure 1
Sites Investigated

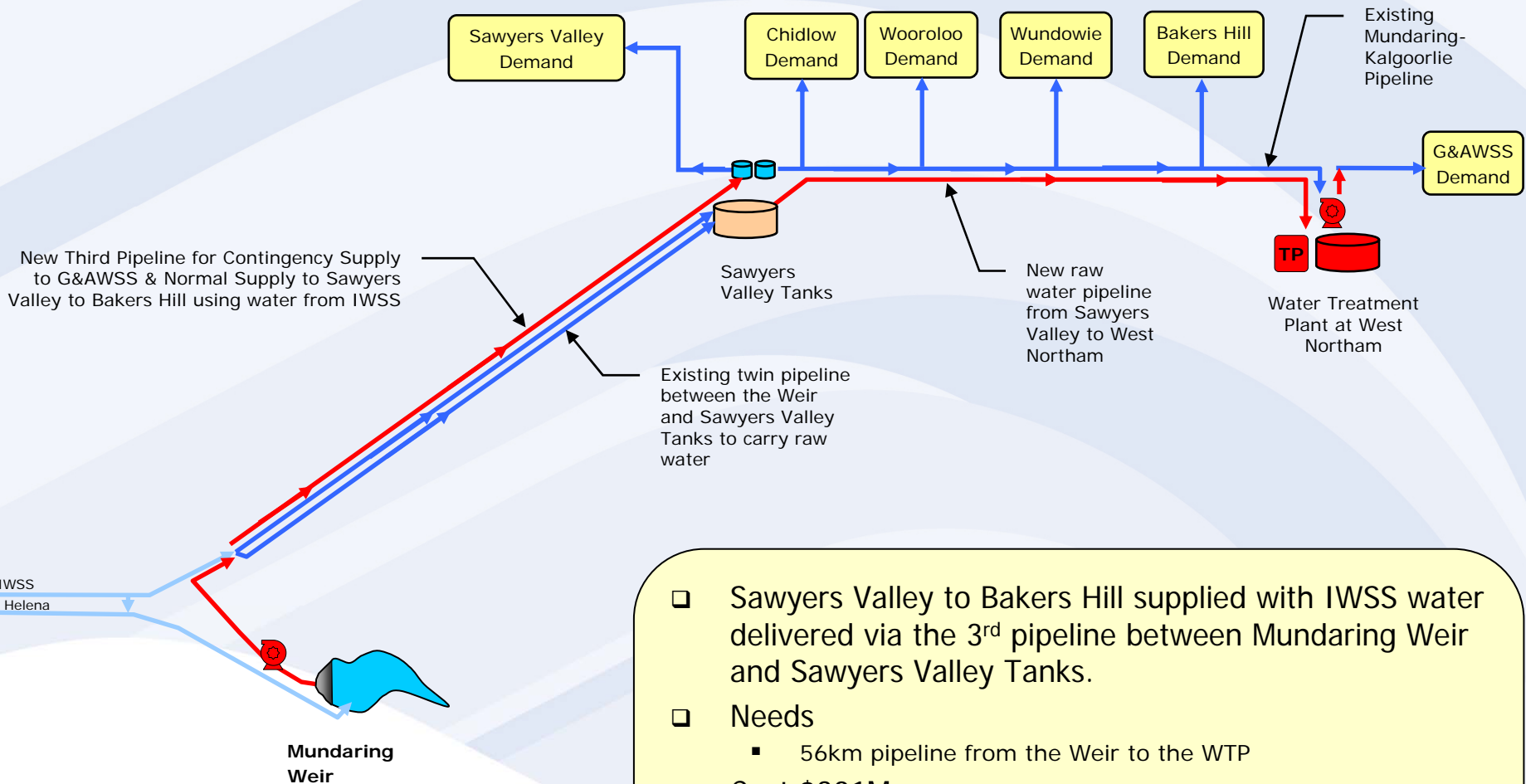
Site Option - WTP at West Northam Supplies G&AWSS including Sawyers Valley



- ❑ Requires 2GL of treated water from WTP at West Northam to be pumped back to supply Sawyers Valley to Bakers Hill. Assumes that the existing Mundaring-Kalgoorlie pipeline will be configured for this purpose.
- ❑ Needs
 - 56km pipeline from the Weir to the WTP
- ❑ Cost \$301M.

Site Option - WTP at West Northam

IWSS supplies Sawyers Valley to Bakers Hill



- ❑ Sawyers Valley to Bakers Hill supplied with IWSS water delivered via the 3rd pipeline between Mundaring Weir and Sawyers Valley Tanks.
- ❑ Needs
 - 56km pipeline from the Weir to the WTP
- ❑ Cost \$301M.

Other site suggestions

- ❑ Farrell Grove
- ❑ Fred Jacoby Park on the Pipeline
- ❑ Anything on cleared land
- ❑ Land along Great Eastern Highway

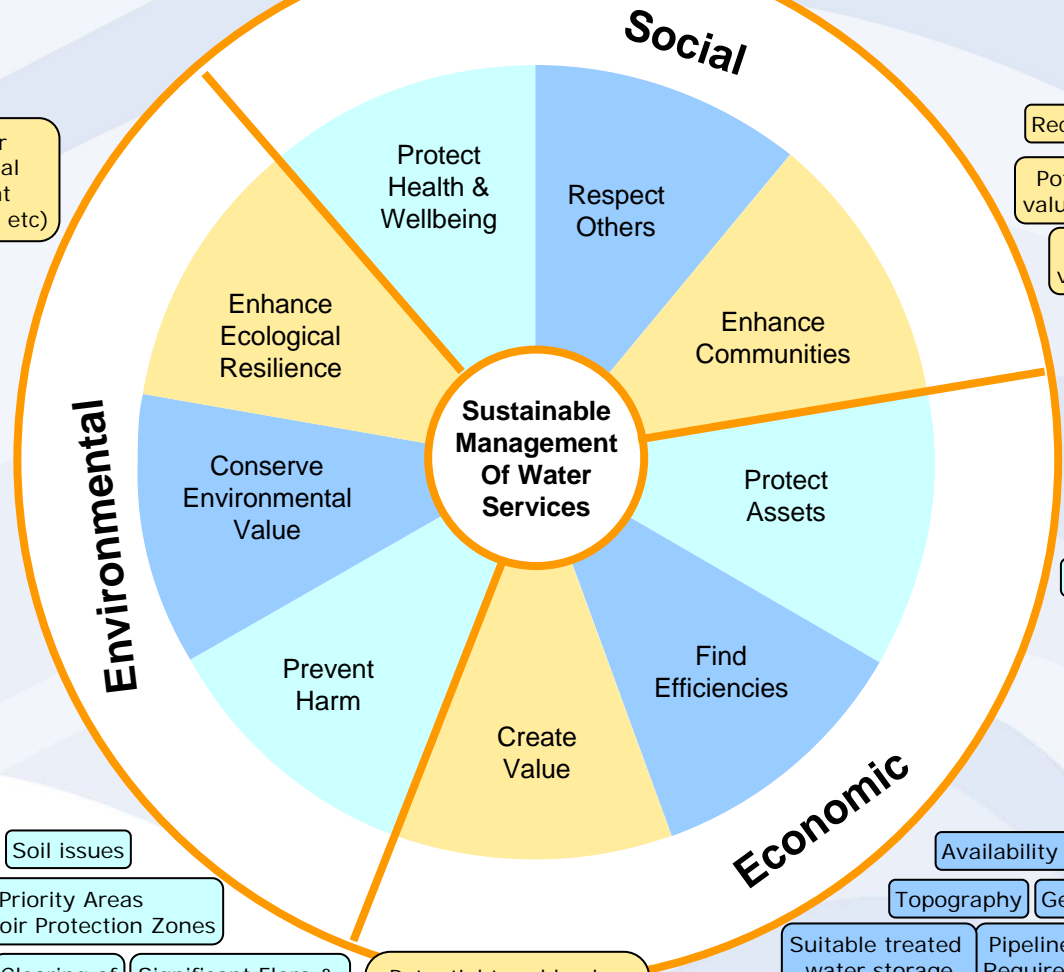
Corporation Criteria

- ❑ Number of land owners impacted
- ❑ Suitable chlorine buffer distance available
- ❑ Distance from Mundaring – Kalgoorlie Pipeline
- ❑ Return distance to Sawyers Valley Tanks
- ❑ Size of site (up to 25 ha)

Community criteria to assess site options

Criteria and Sustainability Principles – Megan's list

- Chemical Risk
- Non-indigenous Heritage
- Indigenous Heritage
- Native Title
- Visual Impact
- Local Business
- Fire Risk
- Traffic
- Zoning & Landuse
- Risk of Access To catchment
- Dust Air Quality
- Land Tenure
- Noise Vibration



- Recreation values
- Tourism values
- Potential to add value (road safety)
- Property Values
- Potential to add value (recreation/tourism)

Potential for Environmental Improvement (offsets, rehab, etc)

Energy Required & Greenhouse Gas Emission

Site Area
Initial Costs

- Fauna
- Soil issues
- Landscapes & Landforms
- Priority Areas
- Reservoir Protection Zones
- Wetlands, Waterways, Groundwater, Drainage
- Clearing of Native Veg
- Significant Flora & Vegetation

Potential to add value e.g. cost savings for WA, improvements to business/tourism/CALM properties

Ongoing Costs

- Availability of Access Route
- Topography
- Geology
- Suitable treated water storage
- Pipeline Required

	PREVENT
	SUSTAIN
	ENHANCE



Sustainable management of water services to make WA a great place to live and invest

Capital Costs

GROUP	Site Options	Capital \$M Present Value
Below Weir	1 km below Weir	\$ 121
	Site 1	\$ 118
Between Weir & Sawyers Valley Tank	Site 2	\$ 151
	CALM land	\$ 156
	Plantation	\$ 162
	Site 3	\$ 171
	Site 4	\$ 165
	Site 5	\$ 132
	Site 7	\$ 190
East of Sawyers Valley Tank	Site 19	\$ 192
	Site at Chidlow	\$ 202
	Site at West Northam	\$ 301

Group Discussion

- ❑ Discuss and identify community criteria to assess the proposed sites for the Mundaring Water Treatment Plant