

Digital Soil Assessment: Guiding Irrigation Expansion in Tasmania, Australia

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Supported by the Tasmanian Government's Wealth from Water Pilot Program.



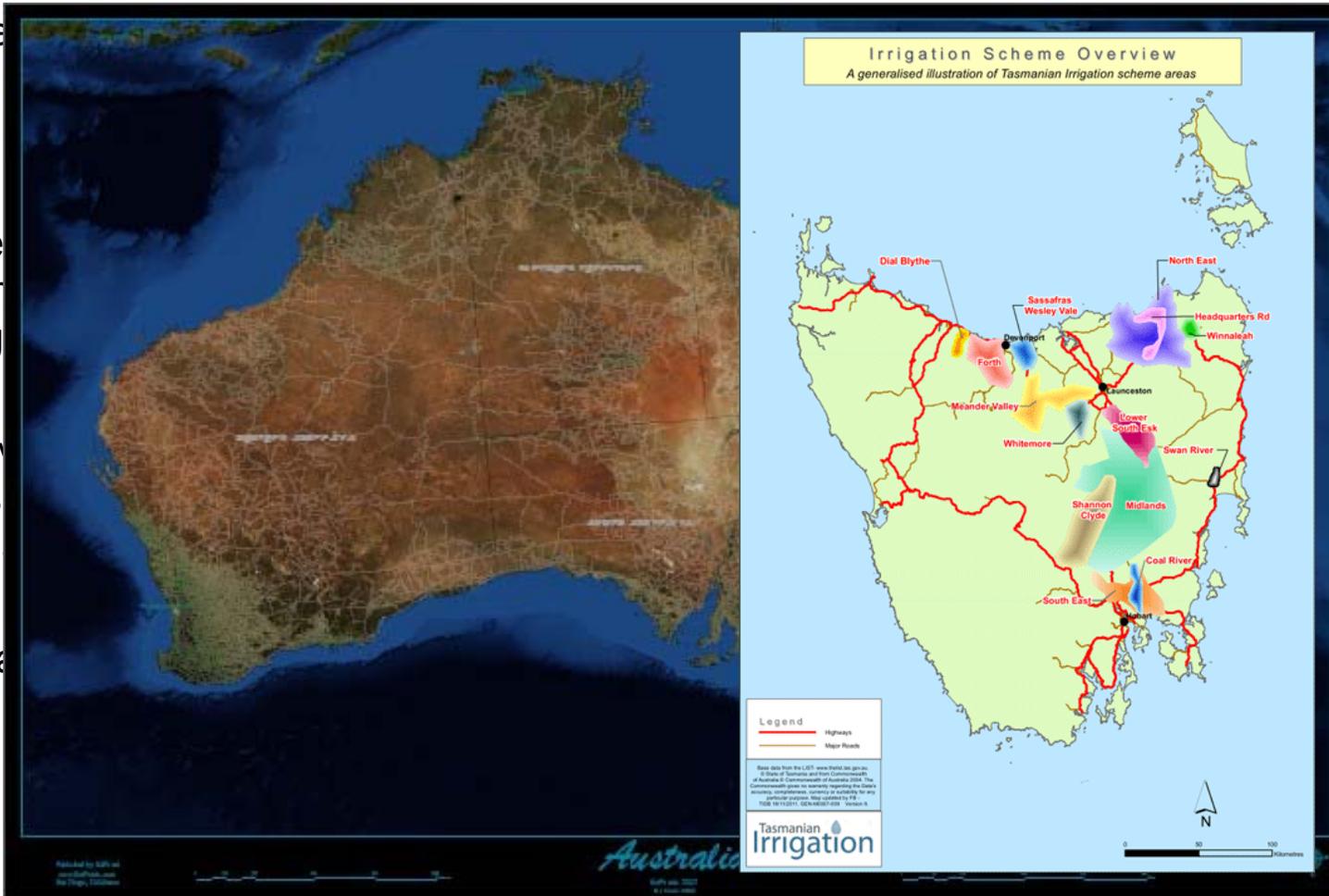
WEALTH FROM WATER PILOT PROGRAM

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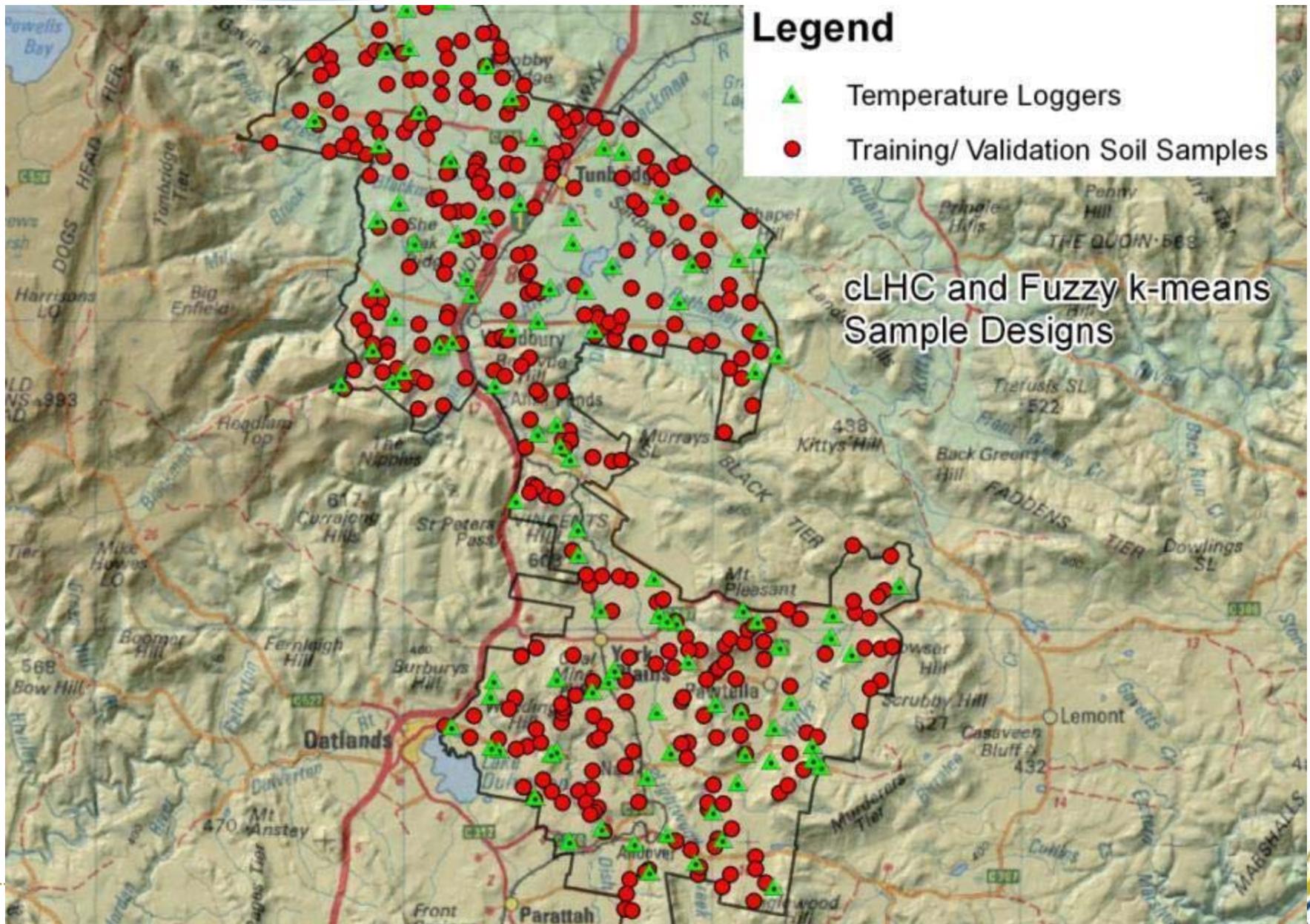


Sustainable Land Use and Information Management Section
Department of Primary Industries Parks Water & Environment

WEALTH FROM WATER AIMS:

1. Generate soil (DSM), climate, crop and enterprise suitability data
2. Classify Land (within Tasmanian Irrigation Schemes) according to its suitability for various agricultural enterprises (Approximately 70,000ha as a pilot (Dec 2012), 20 Enterprises) - potentially 340,000ha
3. Aid existing or potential farmers/ investors to move or diversify into high-valued enterprises, and/ or increase existing production.
4. Stimulate up-take of new irrigation scheme water-allocation licenses

WEALTH FROM WATER:



SUITABILITY REQUIREMENTS

Crop Suitability Rules: Blueberries

Crop	Soil Depth	Depth to sodic layer	pH of top 15cm (H2O)	EC	Texture (top 15cm - % clay)	Drainage	Stoniness (top 15cm)	slope	Frost (To be revisited when more is known about format of outputs)	Mean max monthly temp	rainfall (frequency and intensity and season to be determined)	Growing season (GDD)	Chill hours
W		>100cm	5-5.7			Well, Mod well	<20%	<12%	Min air temp >0°C Aug and Sept)	20-26°C	low		800-1200
S		75-100cm	4.5-5.5 5.7-6.7			imperfect	20-35	12-20%		26-30°C			700-800
MS		50>75cm	6.7-7.5				35-50						
U	<10cm	>50cm	<4.5 >7.5			Poor, v. poor	>50%	>20%	Min air temp <-6°C August <-4°C September <0°C October - March)	>30°C	High		<700 >1200

* Rules derived by TIAR from a combination of research, literature, industry workshops and expert opinion



DSA OUTPUTS

LISTmap version 1.2

www.thelist.tas.gov.au/listmap/listmap.jsp?cookiestate=check&llx=480173.486&lly=5397001.865&urx=491008.26&ury=5414335.777&layers=1,17,18,29

LISTmap

- Example of Government Investment in an Operational Digital Soil Assessment
- Build Tasmanian Government DSM Capacity, through Australian Research Council Linkage Project with University of Sydney

SCALE 0 6km

© Copyright State of Tasmania E: 489079 N: 5410851 (GDA94) Scale (Approx) 1:67800

Information Click on Feature from Active layer to Identify

Overall suitability	Unsuitable
Limiting factors	Drainage,
Soil depth	>40cm (Well suited)
Sodic depth	>30cm (Well suited)
Ph	5 - 5.5 (Marginally suitable)
Electrical conductivity	<4 (Well suited)

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