



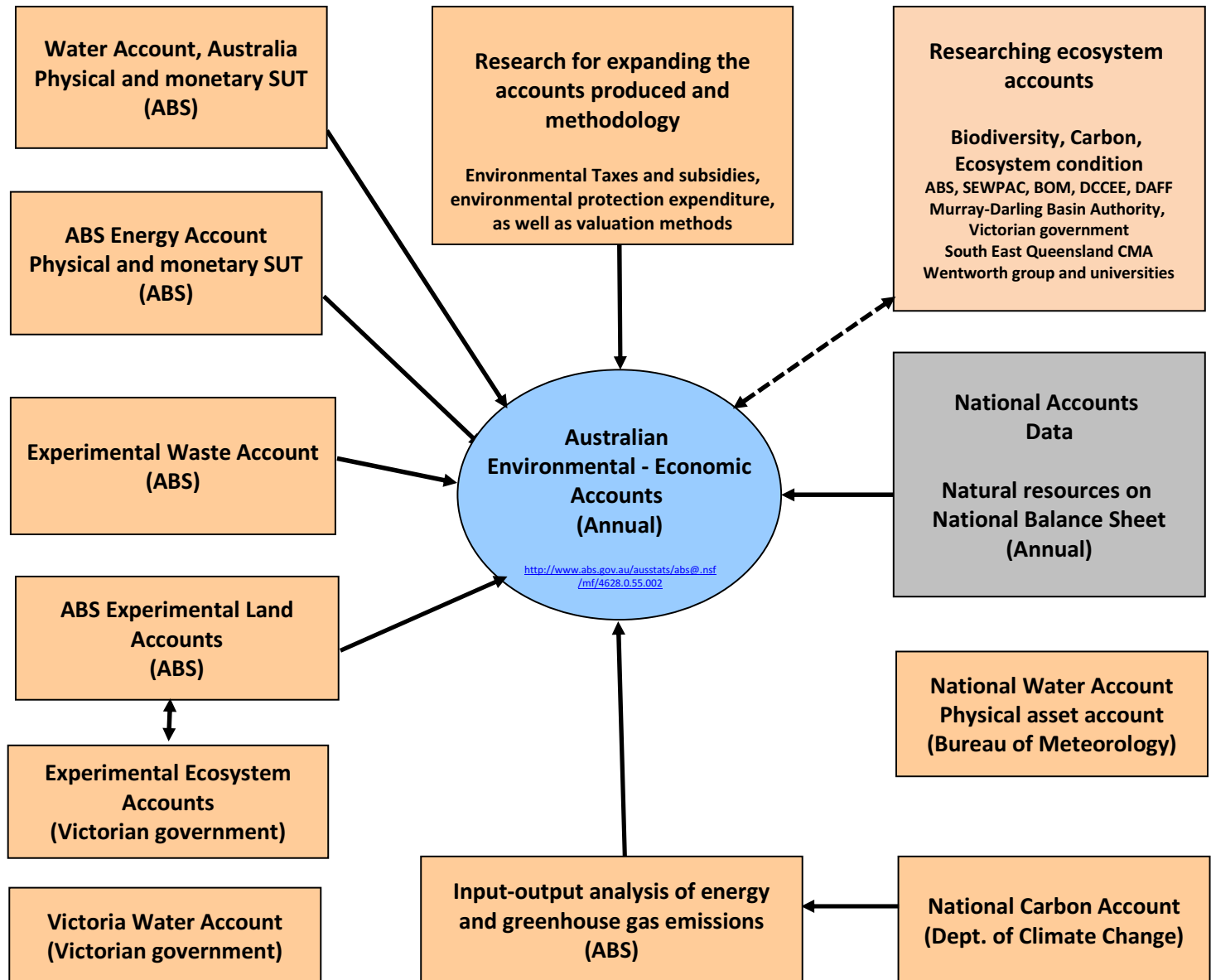
ABS Environmental Accounts

Land Accounts

Linking people, the economy
and environment

Mark Lound, Director, Environmental Accounts

Environmental Accounting in Australia

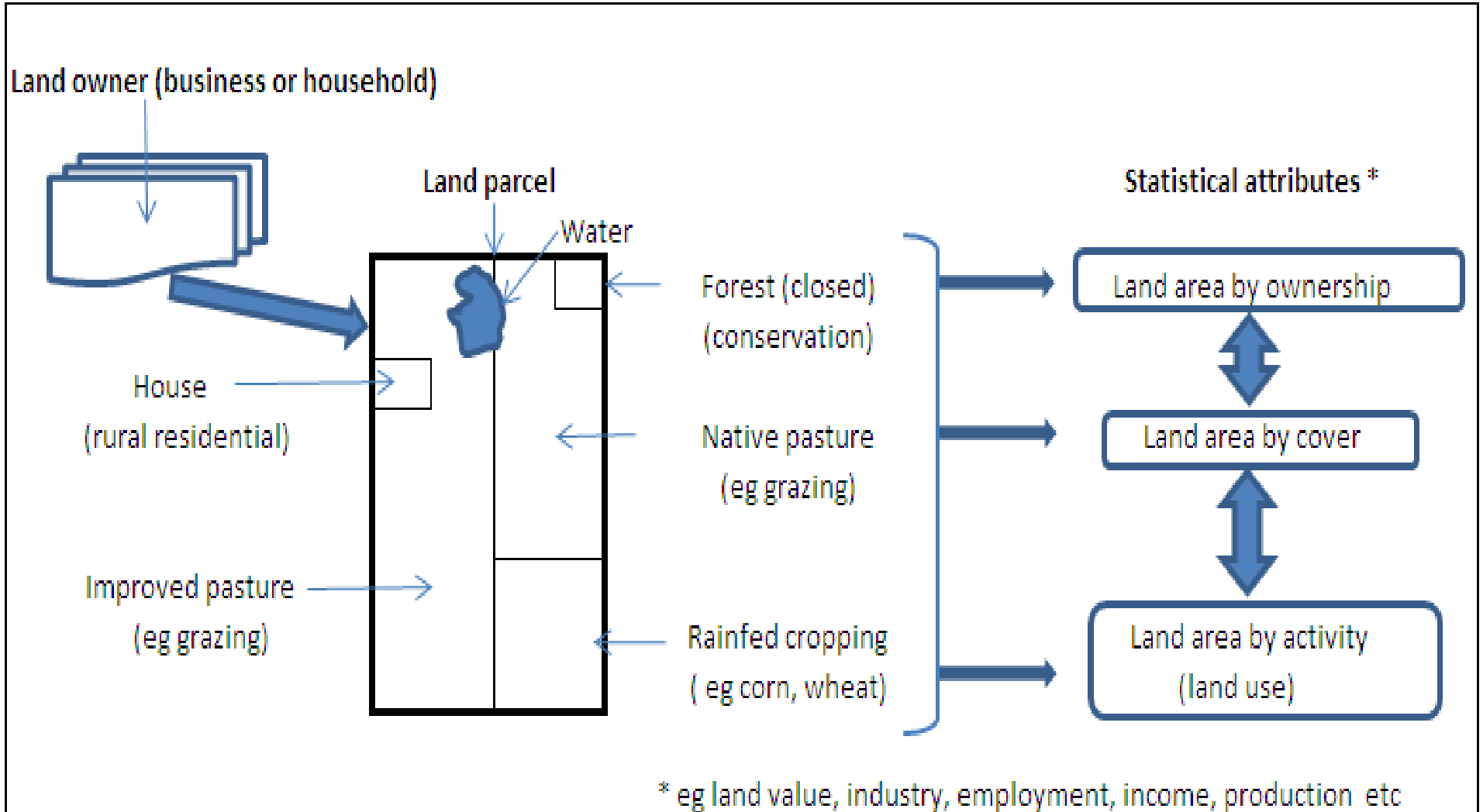


Land Accounts

- Land accounting measures the change in the land and its attributes resulting from the impact of human and natural activity.
- The value of a set of Land Accounts is the ability to measure these attributes by examining stocks at different points in time to support policy around sustainable development and economic management.



Land Attributes





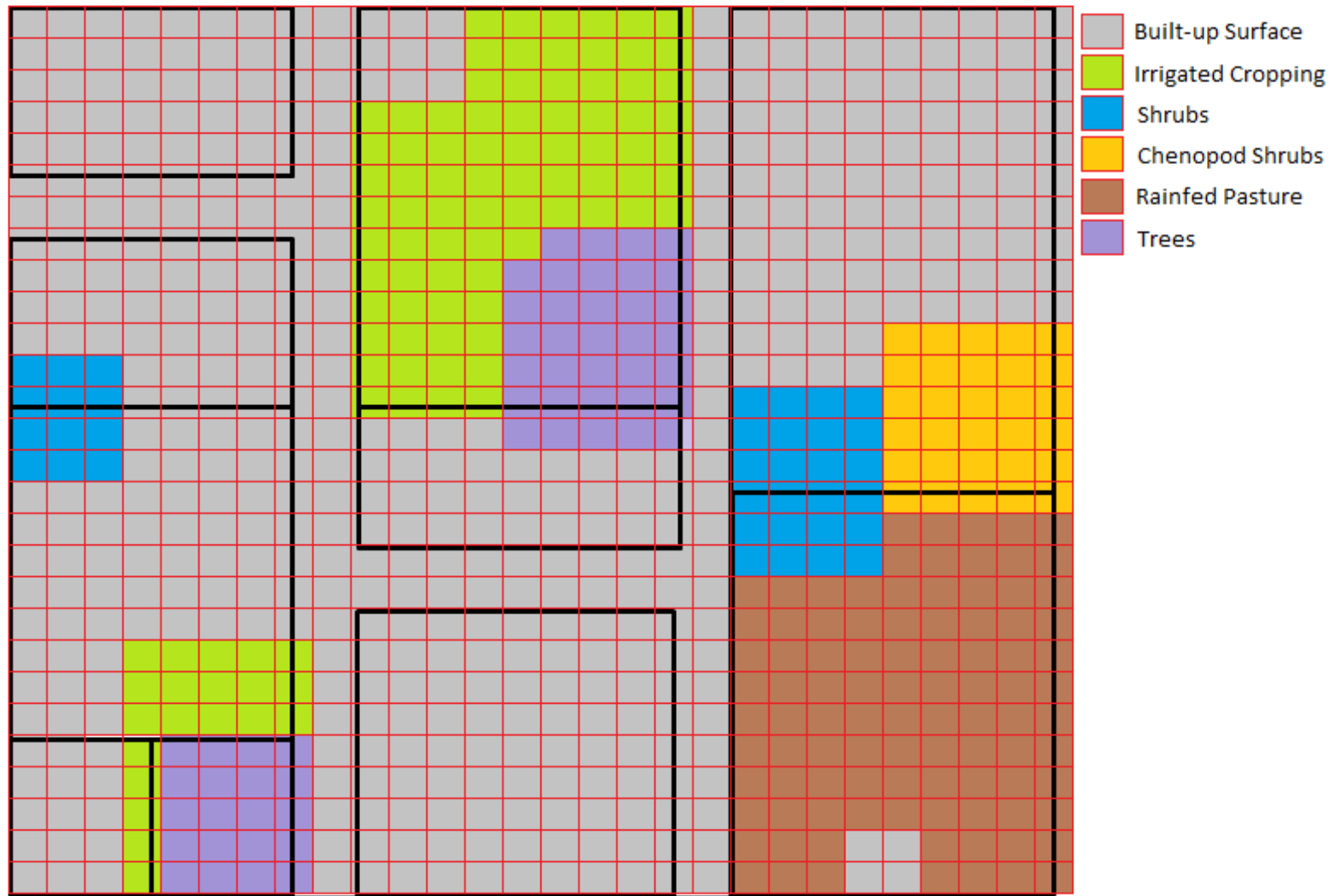
Data Sources



- Valuer General's land parcel information
- Cadlite information -PSMA
- Climate data - BoM
- Dynamic Land Cover Mapping – GA & ABARES
- NCAS forest extent – DCCEE
- Catchment scale Land Use – ABARES
- Transport and Topography – DERM & SEWPAC
- Geospatial ABS data – censuses and surveys

Visualisation of Land Account process

Property layer intersected with Dynamic Land Cover in ArcGIS



Visualisation of Land Account process– contd.

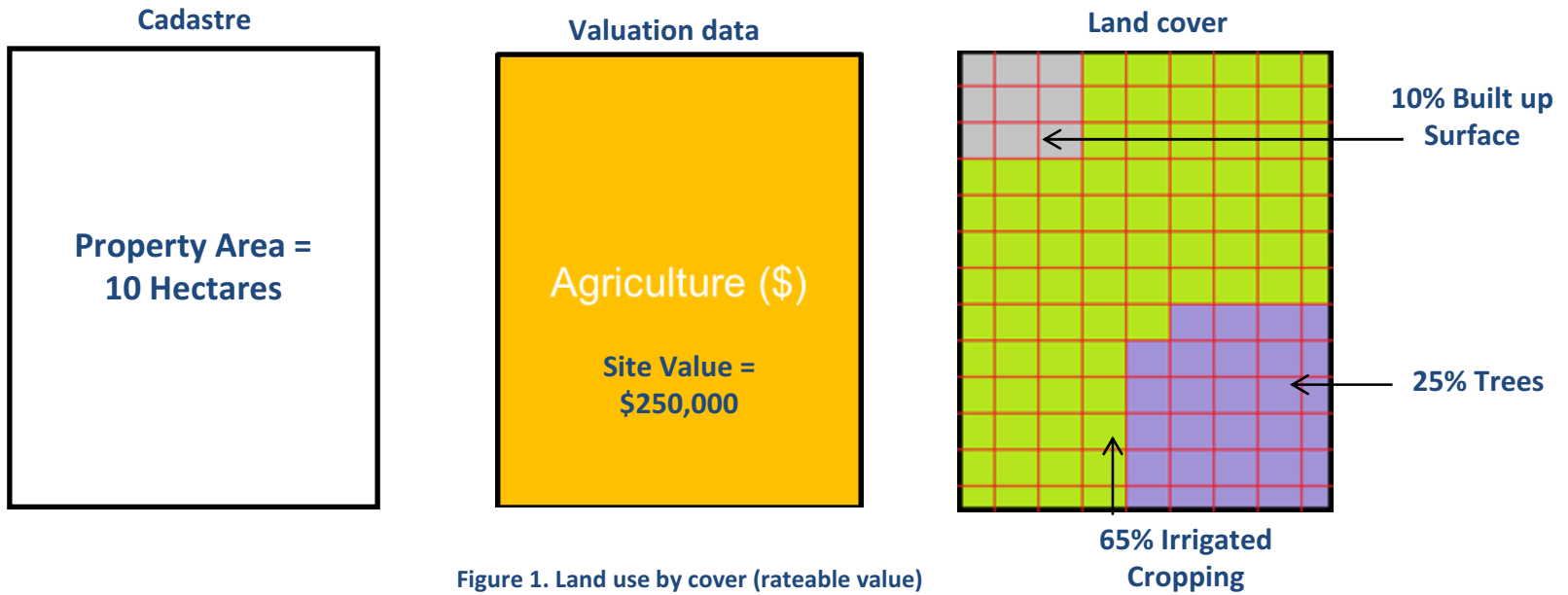


Figure 1. Land use by cover (rateable value)

	Dynamic Land Cover			
AVPCC	Irrigated Cropping	Built-up surface	Trees	Total
Agriculture	162,500.00	25,000.00	62,500.00	250,000.00
Total	162,500.00	25,000.00	62,500.00	250,000.00

Figure 2. Land use by cover (hectares)

	Dynamic Land Cover			
AVPCC	Irrigated Cropping	Built-up surface	Trees	Total
Agriculture	6.5	1	2.5	10
Total	6.5	1	2.5	10

Victorian Land Account example : Land use by Land Cover (\$ million) Corangamite NRM Region

Australian Valuation Property Classification Codes (AVPCC)	Extraction Sites	Inland Waterbodies	Salt Lakes	Irrigated Cropping	Irrigated Pasture	Rainfed Cropping	Rainfed Pasture
Native Vegetation	0	0	0	0	0	0	0
Agriculture Cropping	0		0	0	0	11 140	19 659
Livestock Grazing		7 778	0		81 645	314 327	1 811 261
Mixed Farming and Grazing	2 391	46 905	2 584	376	82 346	808 508	4 390 673
Livestock - special purpose fencing, pens, cages, yards or shedding, stables	0		0	0		9 121	33 156
Horticulture Fruit and Vegetable Crops	0	0	0	0			19 282
Horticulture - Special Purpose Structural Improvements	0		0	0	0	5 978	34 441
Forestry - Commercial Timber Production		0	0		4 448	6 682	62 061
Aquaculture	0	0	0	0	0		0
Primary Production Total	2 530	56 607	2 584	647	169 600	1 158 560	6 370 534
Residential	2 533	363 999	3 390		34 339	492 909	3 339 052
Commercial	0	9 234		0	1 885	5 215	77 939
Industrial	5 787	25 051	1 100	0	921	28 401	158 704
Extractive industries		275	0	0	0	11 377	9 738
Infrastructure and Utilities (Industrial)	0	349	0		126		12 537
Community services	0			0	0	31	1 458
Sport, heritage and culture	0	5 331	0	0	0	7 850	19 056
National Parks, conservation areas, forest reserves and natural water reserves	0			0	0		255
Non-active assessments and header records		0	0	0	0	132	1 525
Total	17 349	461 490	7 530	665	206 872	1 709 232	9 990 798

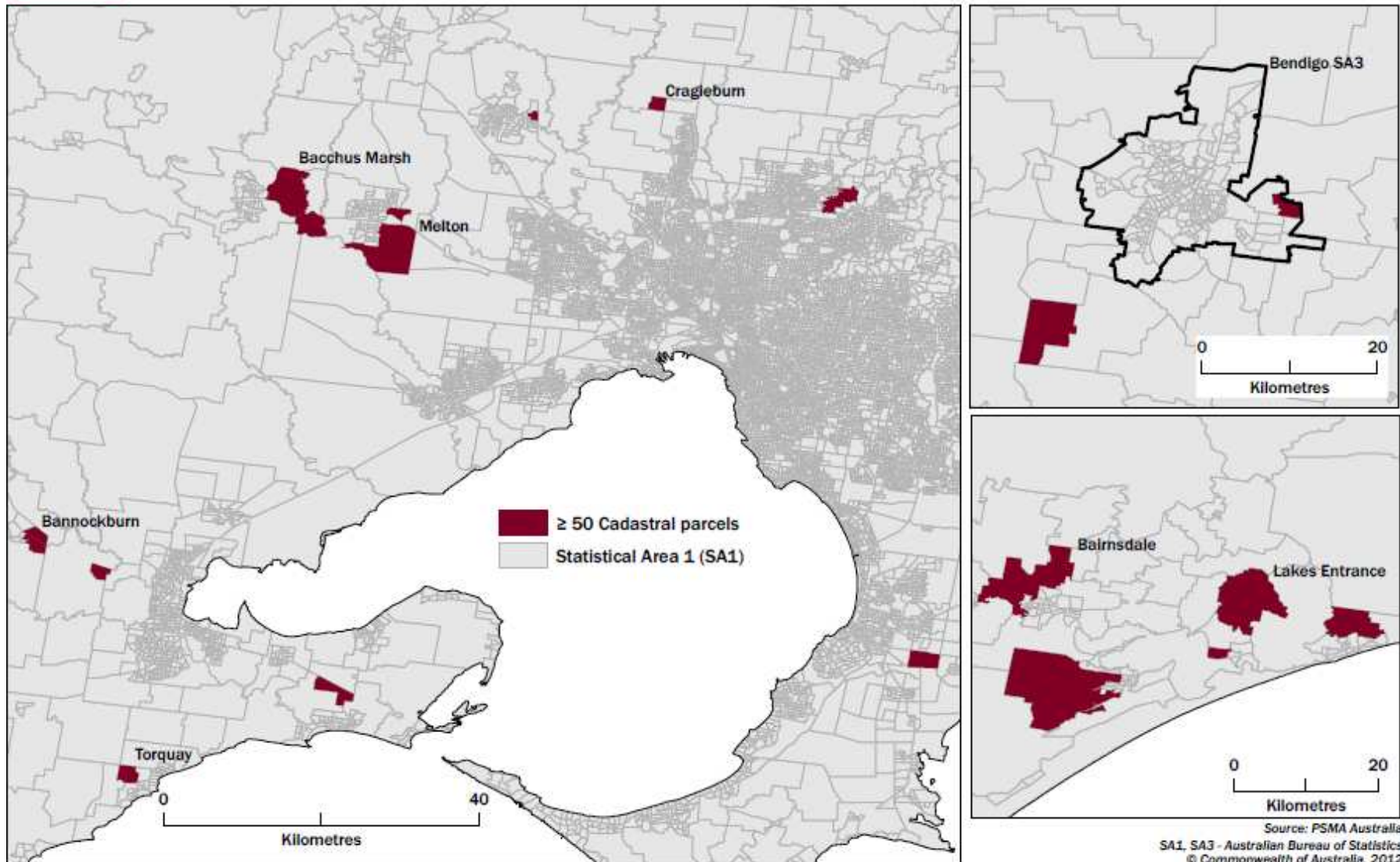
Victorian Land Account example : Land use by Land Cover hectares) Corangamite NRM Region

Australian Valuation Property Classification Codes (AVPCC)	Extraction Sites	Inland Waterbodies	Salt Lakes	Irrigated Cropping	Irrigated Pasture	Rainfed Cropping	Rainfed Pasture
Native Vegetation	0	0	0	0	0	0	0
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Victorian Land Account example : Industry by Land Use (\$ million) Victoria

ANZSIC	Industry	Extraction Sites	Inland Waterbodies	Salt Lakes	Irrigated Cropping	Irrigated Pasture	Rainfed Cropping	Rainfed Pasture
Division A	Nursery and Floriculture Production	5 307		0	0	983	3 926	65 089
	Mushroom and Vegetable Growing		5 616	0	0	6 958	14 847	335 156
	Fruit and Tree Nut Growing		9 194	0		18 351	70 659	696 466
	Sheep, Beef Cattle and Grain Growing	6 037	122 470	2 949	4 733	1 041 386	7 448 847	31 981 431
	Other Crop Growing	0		0		15 333	21 138	111 673
	Dairy Cattle Farming	28	7 202	45	308	397 595	486 631	3 324 176
	Poultry Farming			0	0	1 979	15 580	150 900
	Deer Farming	0	0	0	0	0	0	0
	Other Livestock Farming	0		0	0	923	13 932	24 994
	Forestry and Fishing (a)	220	3 317	0	5 717	37 297	72 164	825 393
	Agriculture Unallocated Industry (b)	297	21 375	136	0	23 220	1 972 374	1 050 860
	Total Agriculture, Forestry and Fishing	12 627	170 241	3 130	10 897	1 544 025	10 120 100	38 566 137
Division B	Mining	99 632	3 167			1 999	31 645	114 021
Division C	Manufacturing	16 691	58 207	3 594	0	7 315	130 436	603 297
Division D	Electricity, Gas, Water and Waste Services	17 057	534		0	291	5 037	37 038
Division E	Construction	25 232	19 158		0	2 460	232 293	726 404
Division F	Wholesale Trade	4 961	35 795	4 057	0	1 215	177 995	394 140
Division G	Retail Trade	3 501	127 663	3 638	0	5 748	31 088	532 186
Division H	Accommodation and Food Services		63 942	447	0	3 111	7 934	141 139

Map 3 - SA1s with an increase of 50 or more 0.4-10ha residential cadastral parcels, 2002-2011



Source: PSMA Australia
 SA1, SA3 - Australian Bureau of Statistics
 © Commonwealth of Australia, 2012



Welcome

Land area & value

Population and land development

Land use

Land cover

[Link to ABS website](#)

Victoria Land Account 2012

[Land Account: Victoria, Experimental Estimates, 2012. \(Cat no. 4609.0.55.002\)](#)

Social, Economic and Environmental Data

Welcome to the Google Earth® view of the experimental Victorian Land Account 2012. This project integrates environmental, economic and social data with a spatial dimension. Click on any [SA1 region](#) to bring up information about that region. There are four tabs you can click on to view information about different themes. When using this pop up window you can use the scroll bar to view all the data, for help using this Google Earth® layer please see this [page](#).

For a brief definition of each data item hover your mouse over the . Detailed information about data items and methods used in this publication are available in the [explanatory notes](#).

Note : The boundaries used in this file are a simplified version of the official SA1 boundaries and are to be used for cartographic purposes only, they may differ by up to 50 meters from the correct boundaries. The official SA1 boundaries can be downloaded from the ABS [here](#).



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Land area & value

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Land area & value

Land area

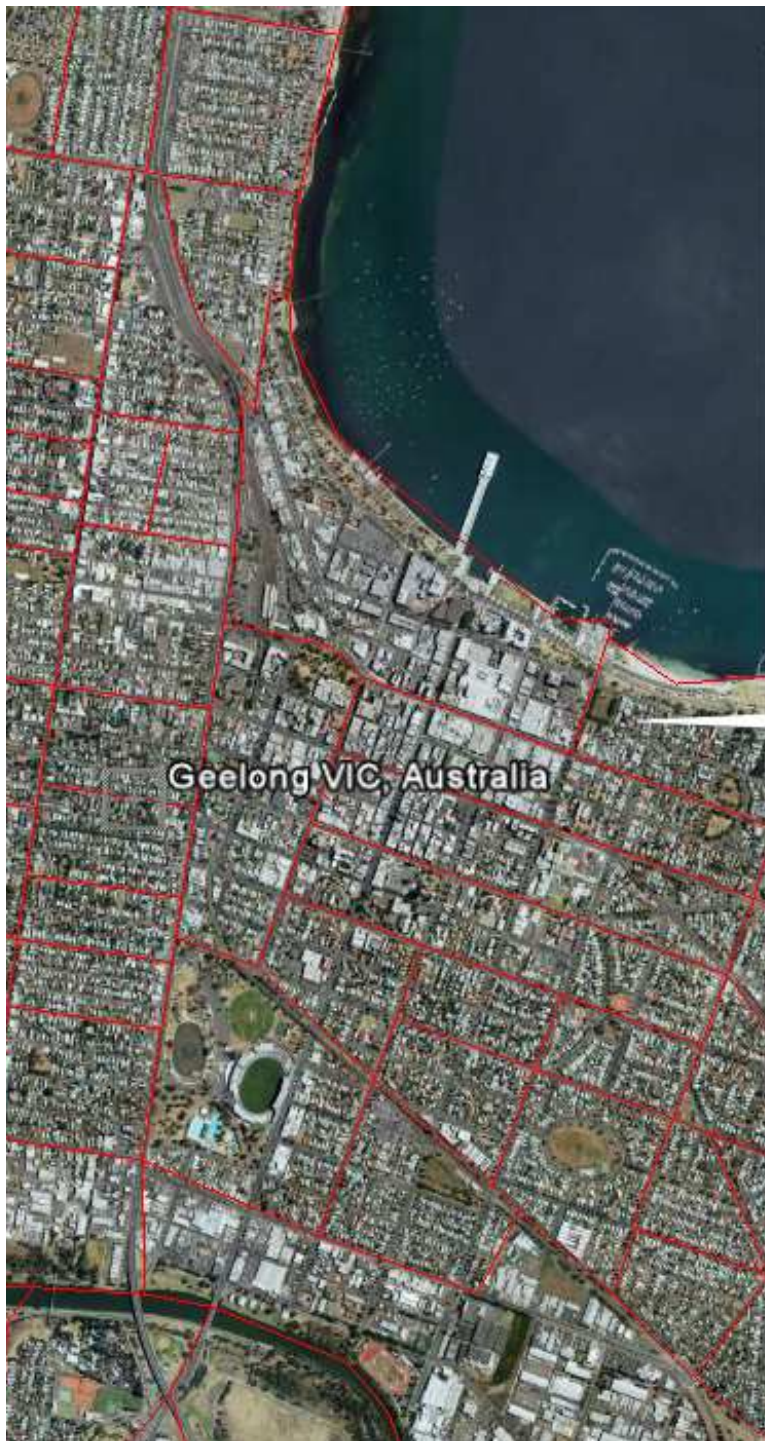
Data item	Value	Unit
SA1 identifying code	20302103912	-
Area of this SA1	26.8	Ha
Area of cadastral parcels	60.7	%

Sources: [Australian Bureau of Statistics \(ABS\)](#) and [Public Sector Mapping Agencies \(PSMA\)](#)

Land value

Data item	Value	Unit
Rateable value	116.9	\$m
Capital value	180.1	\$m

Source: State of Victoria



Welcome

Land area & value

Population and land development

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Land cover

Population and land development

Estimated Resident Population

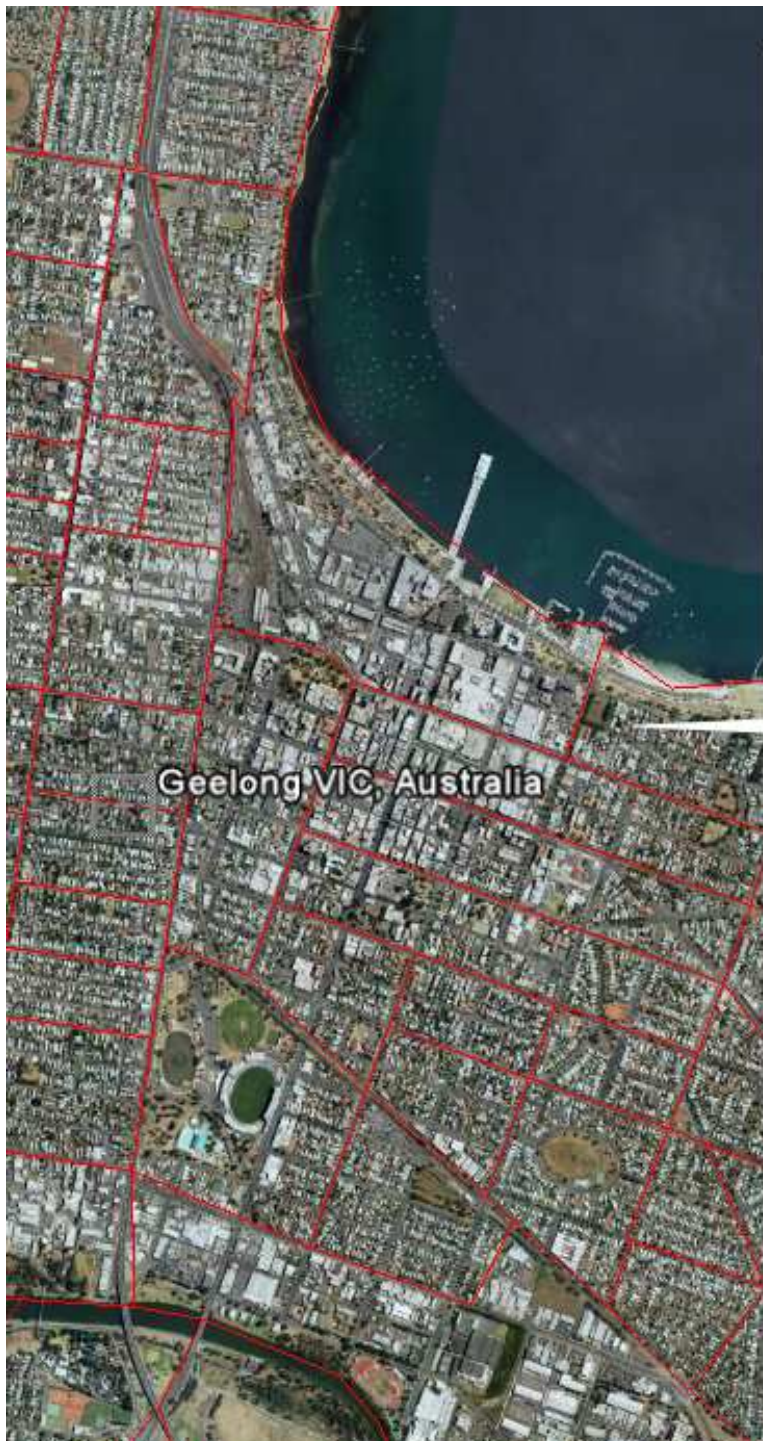
	Data item	Value	Unit
	ERP 2002	439	No.
	ERP 2006	499	No.
	ERP 2011	450	No.

Source: [Australian Bureau of Statistics \(ABS\)](#)

Building approvals 2011/12

	Data item	Value	Unit
	New dwellings approved	1	No.
	Value of total building approved	2332	\$.000

Source: [Australian Bureau of Statistics \(ABS\)](#)



Welcome

Land area & value

Population and land development

Land use

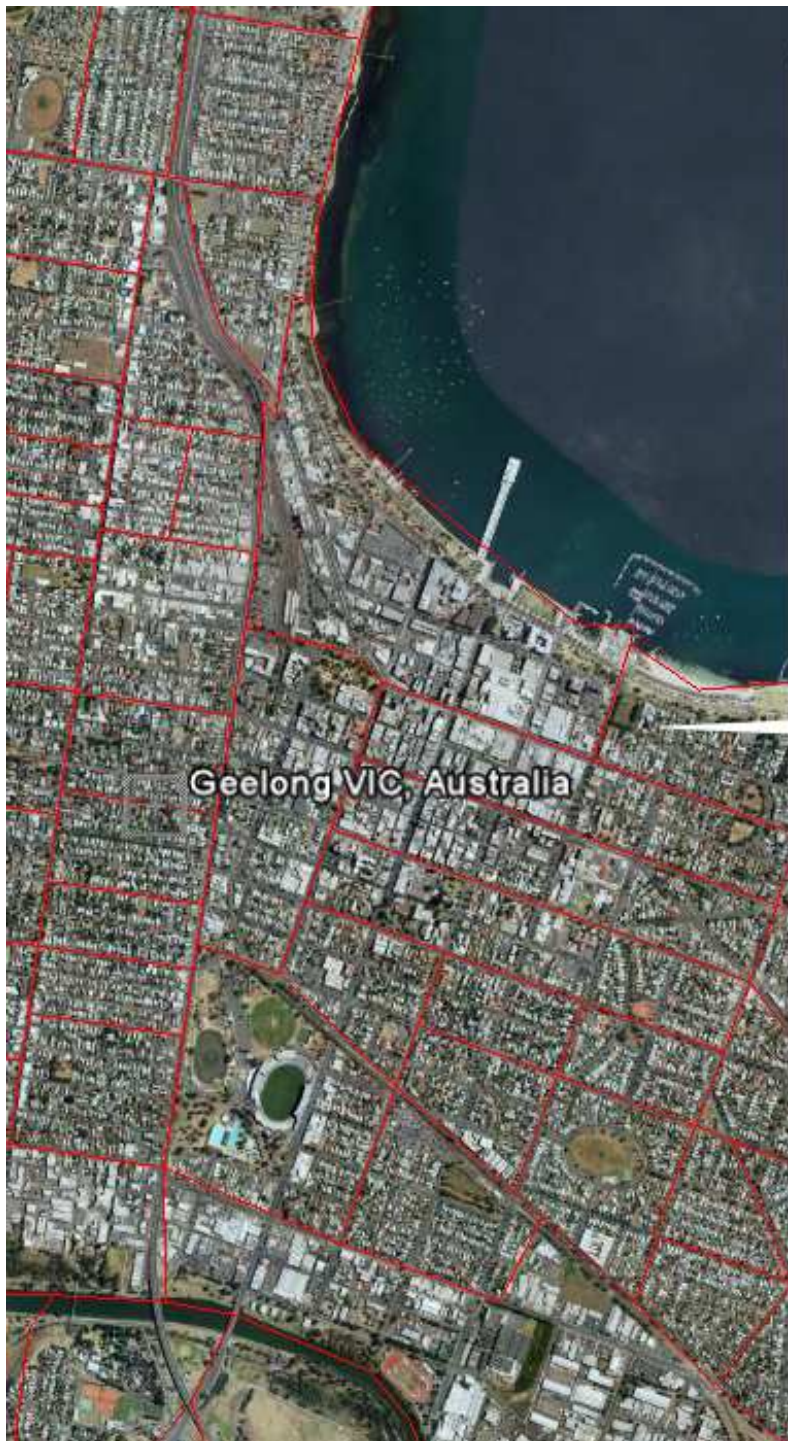
Land cover

Land use

Australian Land Use and Management - ALUM

Data item	Value	Unit
Area of this SA1	26.8	Ha
Conservation and Natural Environments	2.8	%
Production from Relatively Natural Environments	0	%
Production from Dryland Agriculture and Plantations	0	%
Production from Irrigated Agriculture and Plantations	0	%
Intensive uses	83.6	%
Water	0	%

Source: [Australian Bureau of Agricultural and Resource Economics and Sciences \(ABARES\)](#)



Welcome

Land area & value

Population and land development

Land use

Land cover

Land cover

Change in Forest extent

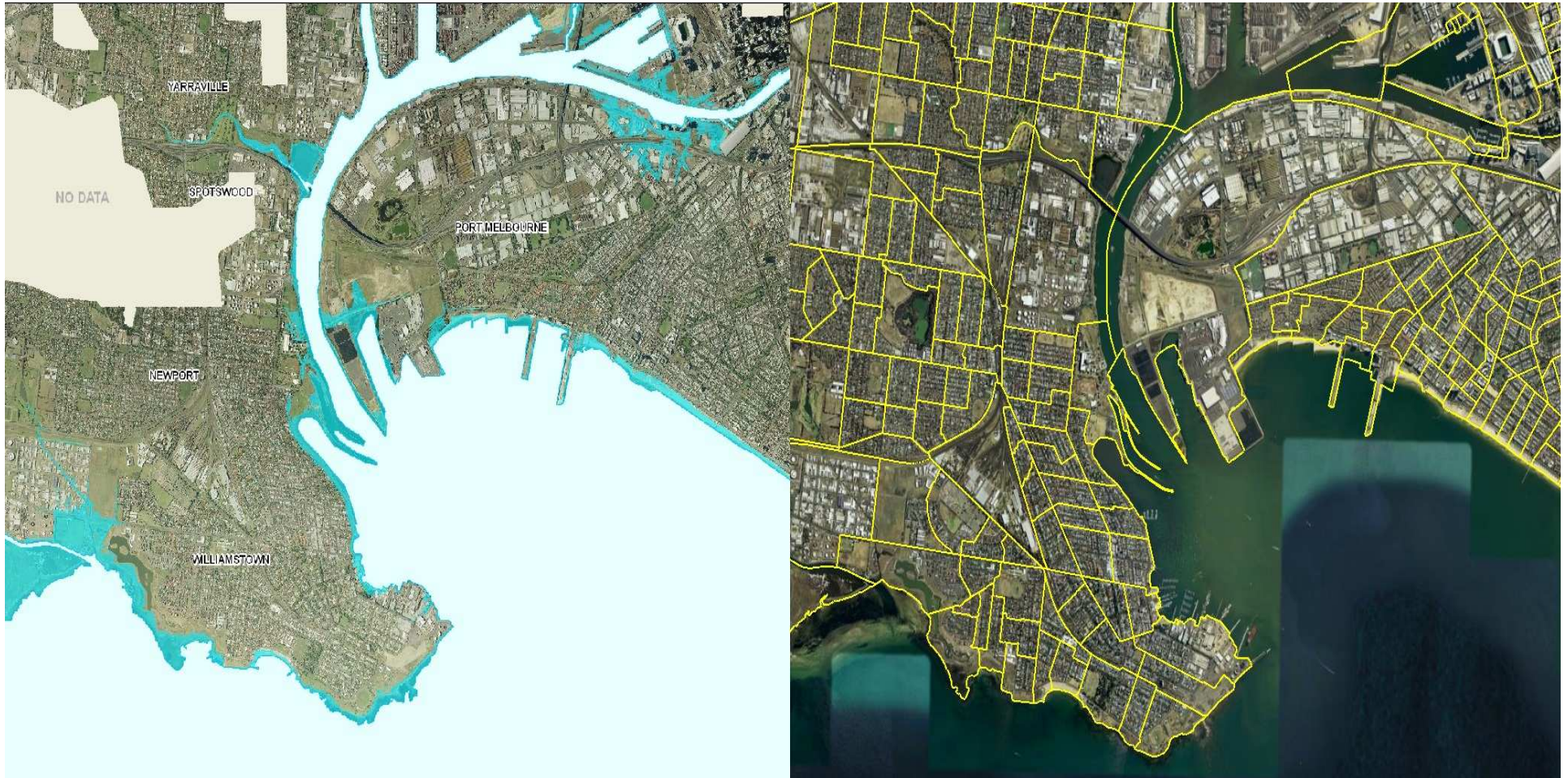
Data item	Value	Unit
Area of this SA1 region	26.8	Ha
Forest Extent 2008	0	%
Forest Extent 2011	0	%
Percentage change in forest extent from 2008 to 2011	0	%

Source: [Department of Climate Change and Energy Efficiency](#)

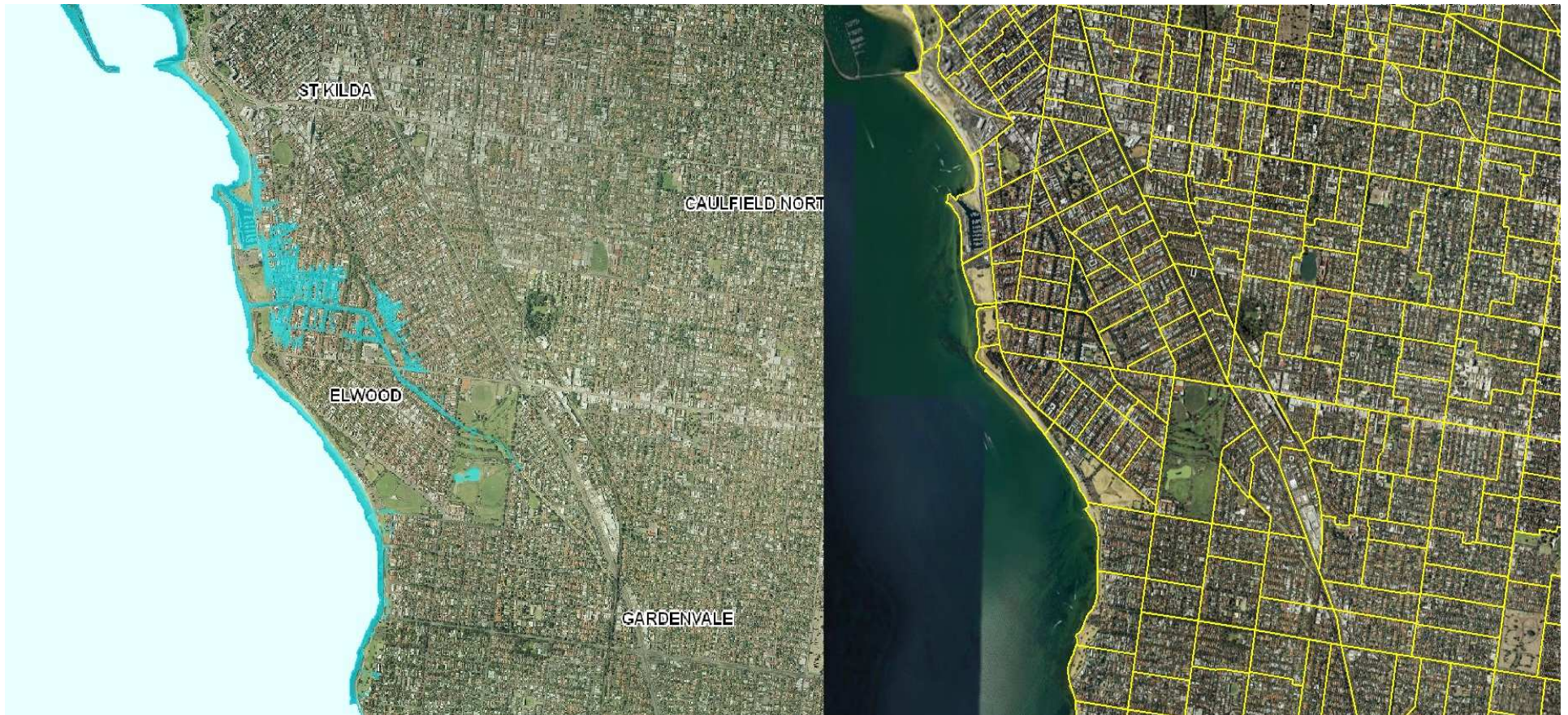
Dynamic land cover (a)

Data item	Value	Unit
Area of this SA1 region	26.8	Ha
Extraction Sites	0	%
Inland waterbodies	18.3	%

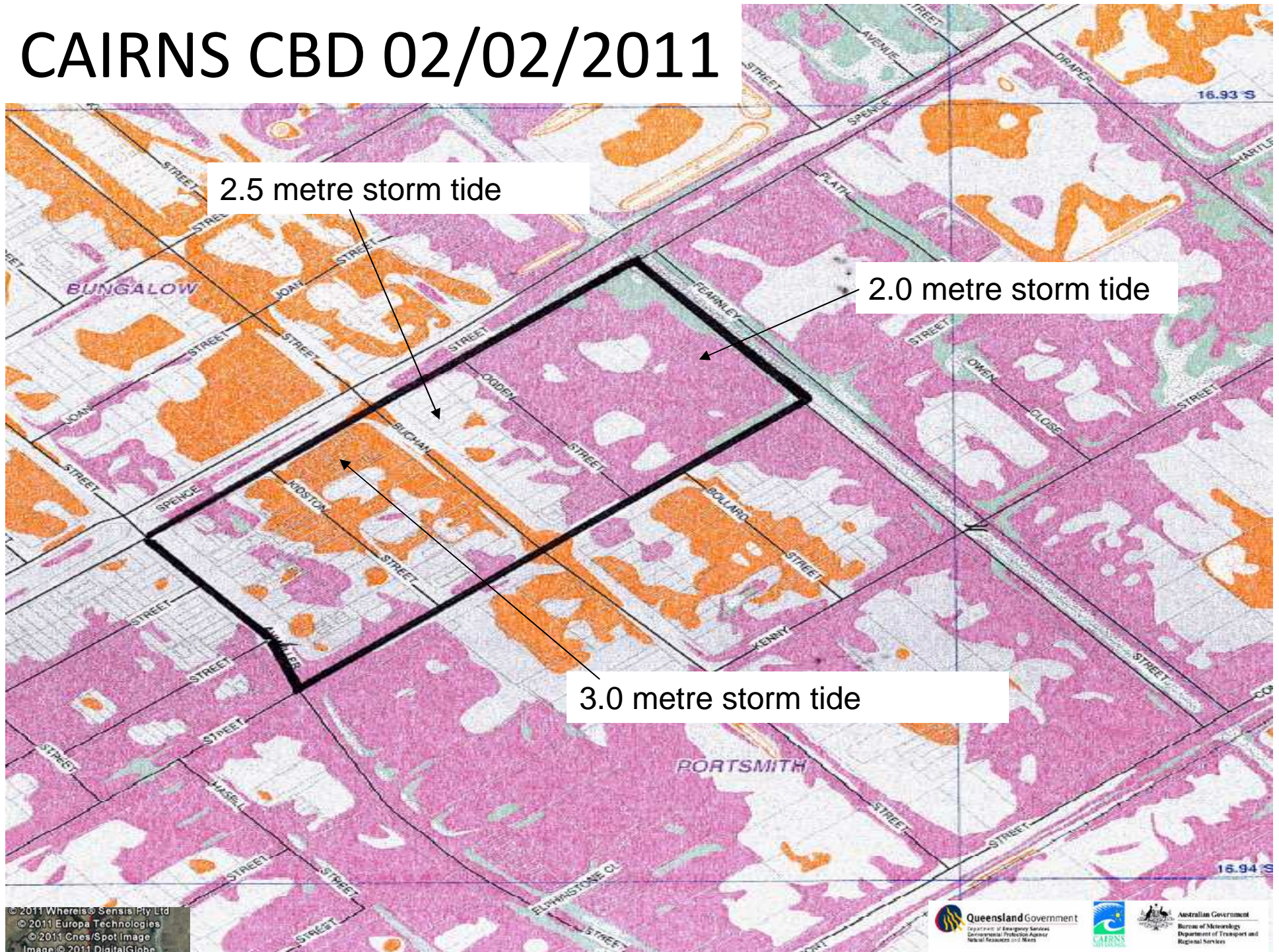
Estimated impact of a 1.0m rise in sea levels

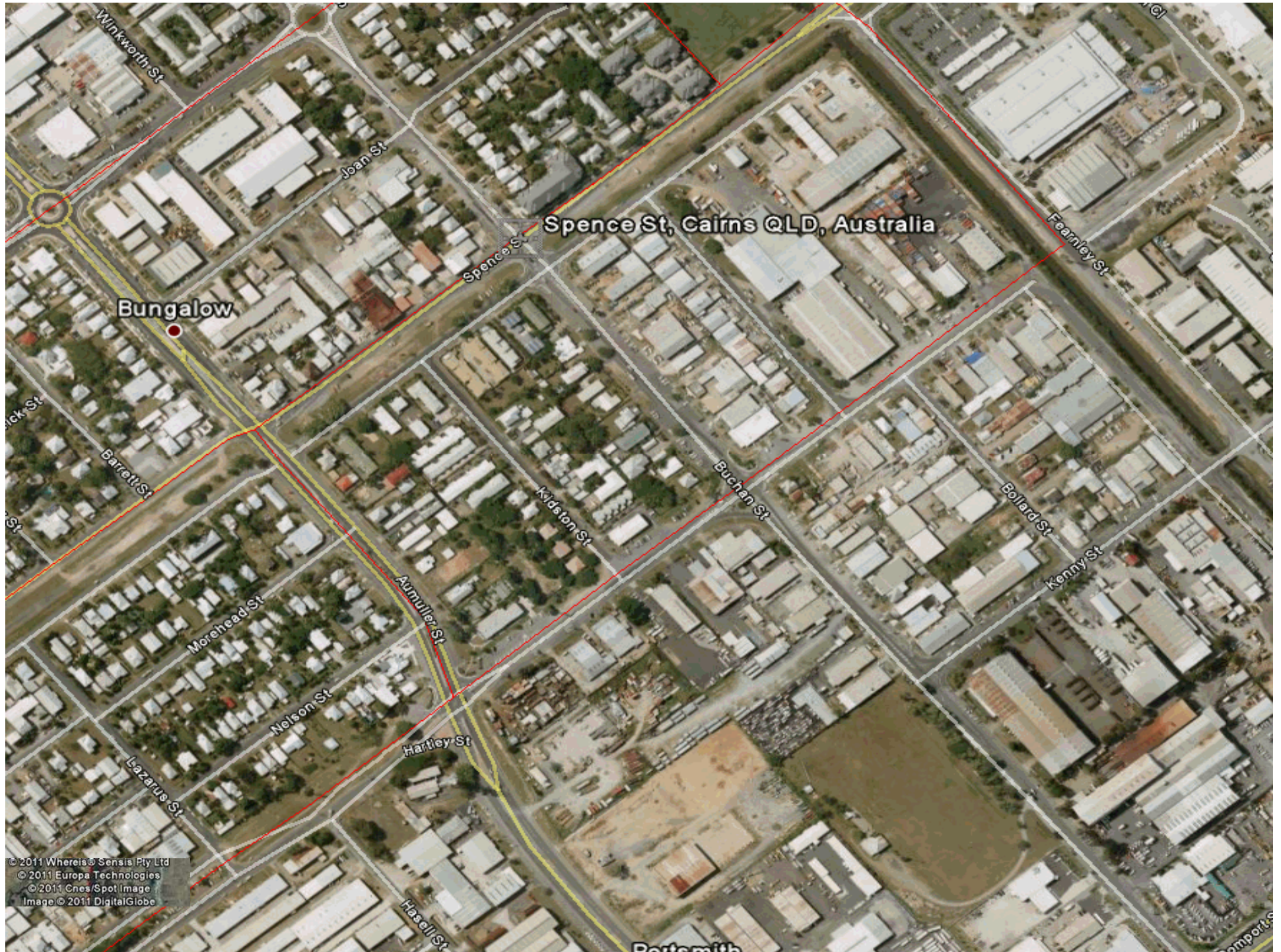


Estimated impact of a 1.0m rise in sea levels

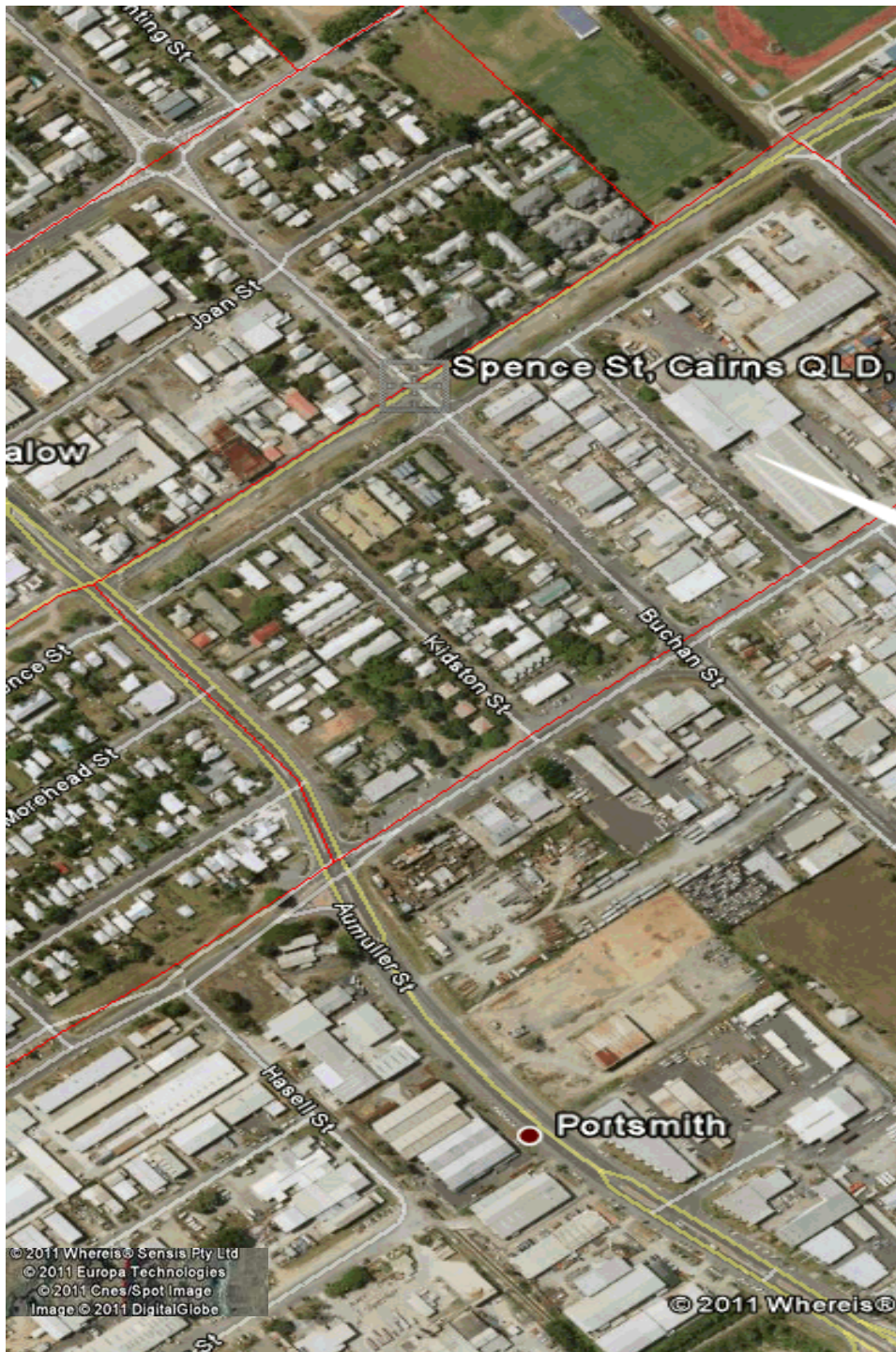


CAIRNS CBD 02/02/2011





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	Area of this SA1 region	19.0	Ha
	Number of cadastral parcels	156	No
	Area of cadastral parcels	65.9	%

Sources: [Australian Bureau of Statistics \(ABS\)](#)
and [Public Sector Mapping Agencies \(PSMA\)](#)

1.2 Population and business

Data item	Value	Unit
ABN count	58	No
Estimated population, 2006	251 to 310	No
Employment range	200 +	No
GVIAP, 2005-06	-	\$'000
GVAP, 2005-06	-	\$'000
Agricultural water use, 2005-06	-	ML

Source: [ABS](#)

2. Rateable value and land use

2.1 Land use and rateable land value

Data item	Value	Unit
Area of this SA1 region	19.0	Ha
Rateable value	19.2	\$m
Agriculture	-	%
Retail/Wholesale	1.1	%



Potential Data Sources that could be added to SA1 Output:



- Australian Tax Office Data
 - Business Income Tax (BIT)
 - Business Activity Statements (BAS)
 - Personal Income Tax (PIT)
- Utility useage – electricity, gas, water
- Medicare data
- Human Services data
- Population and Agricultural Census
- Biophysical information i.e rainfall, mean temperatures
- Social indexes i.e SEIFA

Issues...

1. Quality of information
2. Inconsistent frequency and timing of information
3. Inconsistent standards and definitions
4. Low levels of visibility, discoverability and accessibility
5. Lack of time series and stability of information over time
6. ABS resources to undertake future Environmental Accounts



Where to from here?

- Continue producing regular annual sets of environmental accounts
- Expand current program
- Engagement with stakeholders and feedback on compilation of future environmental accounts
- Assistance in identifying and accessing information sources
- Build on and integrate existing data sources
- Collaboration with other organizations to produce regional level data

