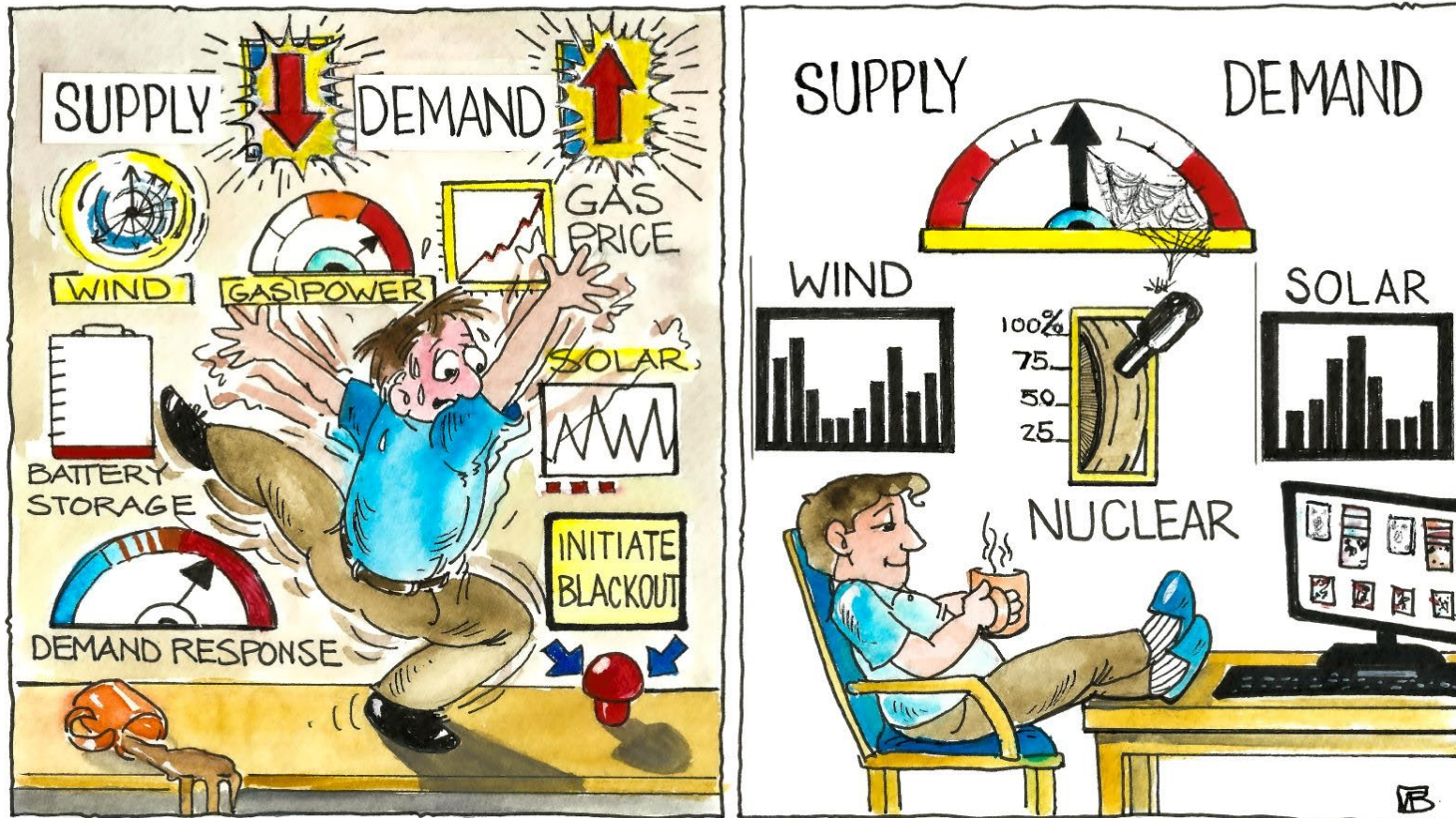


Nuclear Energy Plan for Queensland

Avoiding an Energy Blunder Downunder

Mr Robert Parker, B Eng Civil, M Eng Sci Nuclear,

"CONTROL ROOM – POWER GRID OPERATIONS"



"CURRENT ISP PLAN ≈ 2030"

"NUCLEAR AND RENEWABLES"



Content

1. Environmental Impact of wind and solar
2. The Economics and Mistakes made
3. Transition to Ultra Low carbon with Nuclear, Wind, Hydro and Solar
4. Share of Nuclear Capacity on the NEM by State
5. Reactor Sites and Key issues in Queensland
6. Conclusions

Robert Parker

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A Fearful Toll with Excessive Wind and Solar Development

**Clarke
Creek Wind
Farm,
Central Qld**



Image from Steven Nowakowski at the Australian Biodiversity Alliance
<http://www.australianbiodiversity.org/>



Industrialising Our Environment for the Most Expensive Energy

**Lotus Creek
Wind Farm,
Central Qld**



**Image from Steven Nowakowski at the Australian Biodiversity Alliance
<http://www.australianbiodiversity.org/>**



Bird and Bat Deaths from Wind Turbines at Kaban Wind Farm, North Qld



Blasting and massive earthworks destroying forests and biodiversity at Lotus Creek Wind Farm, Central Qld



Images from Steven Nowakowski at the Australian Biodiversity Alliance
<http://www.australianbiodiversity.org/>



Germany has wrecked its low cost, low carbon electricity – Australia must not repeat their mistakes

German Chancellor Friedrich Merz (as of Jan 2026) has labelled the country's complete shutdown of nuclear power a "serious strategic mistake," citing it as a major error that crippled energy capacity, forced a reliance on coal and gas, and created the world's most expensive energy transition.

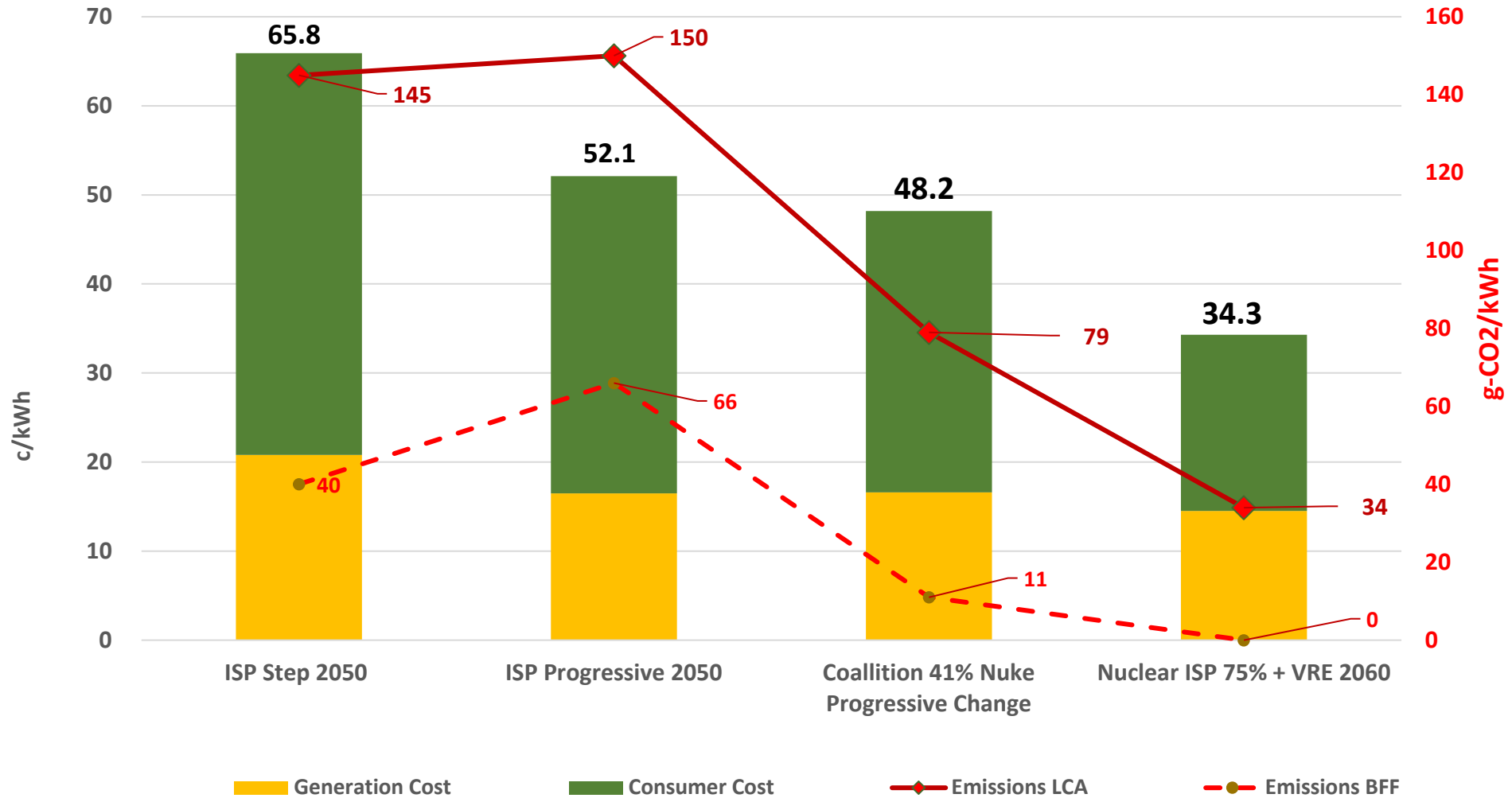


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27-04-2025

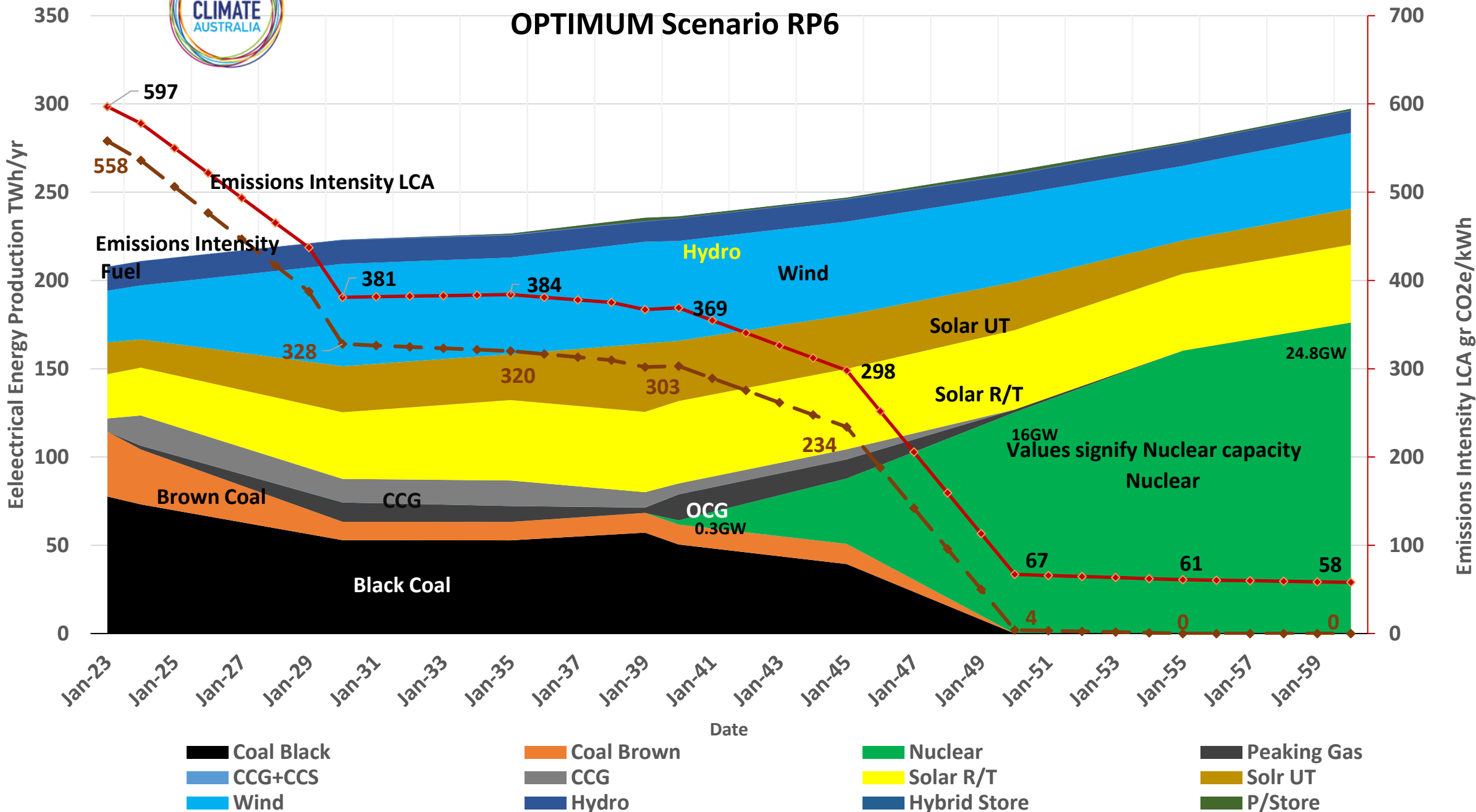
Electricity Sector - Nuclear Energy Drives Down Costs And Emissions





Nuclear + VRE Transition on the NEM 2023 to 2060

OPTIMUM Scenario RP6





Share of nuclear generation by state

State	Total generation TWh/yr	Percent excl TAS	Approx required GW nuclear in 2050	Number of reactors in 2050 at 1.4GW/unit	Approx required GW nuclear in 2060	Number of reactors in 2060 at 1.4GW/unit
NSW	74.2	36%	6.9	5	9.2	6
VIC	52.7	26%	4.6	3	7	5
QLD	64.7	31%	4.6	4	8	6
SA	15.0	7%	0.6	2 (300MW)	0.9	3 (300MW)
Totals	206.6	100%	16.76	14	24.8	20
			Installed Capacity	17.4GW	Installed Capacity	24.7GW



Sites reviewed for Reactor Locations in Queensland

	Cooling Resource	Cooling Type	Coordinates	
			Latitude	Longitude
Thompsons Point	Fitzroy River	Estuary	-23.490301°	150.753855°
Stanwell	Fitzroy River	Freshwater	-23.504386°	150.321709°
Curtis Island	Keppel Bay	Seawater	-23.486970°	151.018135°
Boyne River/Tannum Sands	Boyne River	Estuary	-23.950057°	151.304268°
Hummock Hill Island	Rodd Bay	Seawater	-24.025992°	151.522505°
Rodd Bay	Rodd Bay	Seawater	-24.057018°	151.597717°
Miara	Coral Sea	Seawater	-24.630891°	152.134254°
Tandora	Mary River	Estuary	-25.457208°	152.853656°
Tinnanbar	Great Sandy Strait	Estuary	-25.782660°	152.950929°



Possible mix to meet planned energy needs

Location	2050		2060		Cooling Type
	Capacity MW	Number of Units	Capacity MW	Number of Units	
Thompson Point	2.8	2	2.8	2	Estuary
Rodd Bay	2.8	2	2.8	2	Seawater
Tandora	0	0	2.8	2	Estuary
Total	5.6	4	8.4	7	

Note these sites and capacities are only one of many options



Capital Cost of Nuclear Power Plants and Grid Connections

The capital cost used for nuclear power plants reflects the figures quoted in CSIRO's Gen Cost report and our evaluation of the costs of Saeul Units 3 and 4, the Barakah project in the UAE as well as tendered amounts for South Korean plants in the Czech Republic and Poland.

- 1 Nuclear Power Plants, 8,400MW at \$8,655/kW = \$72.7 Billion**
- 2 Transmission and Substations - \$3.88Billion**
- 3 Total Cost - \$76.58Billion**





Professor James Hansen campaigned to keep Diablo Canyon open to reduce emissions



Image by John Lindsey who worked on Weather Forecasting for PG&E at Diablo Canyon

Queensland Sites for Nuclear Power Plants



Ten potential sites are shown.

Only two or three are needed

Grouped:

**1. Stanwell, Thompsons Point and
Curtis Island**

**2. Borne River/Tannum Sands,
Hunnock Hill Island and Rodd Bay**

3. Miara, Tandora and Tinnanbar

Stanwell- Thompsons Point- Curtis Island



Stanwell, Thompsons Point and Curtis Island sites





Hummock Hill Island - Rodd Bay





Miara - Mary River Region





Now for a Q&A

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