

Groundwater dependent ecosystem pictorial conceptual model 'sedimentary rocks (Clarence-Moreton Basin)'

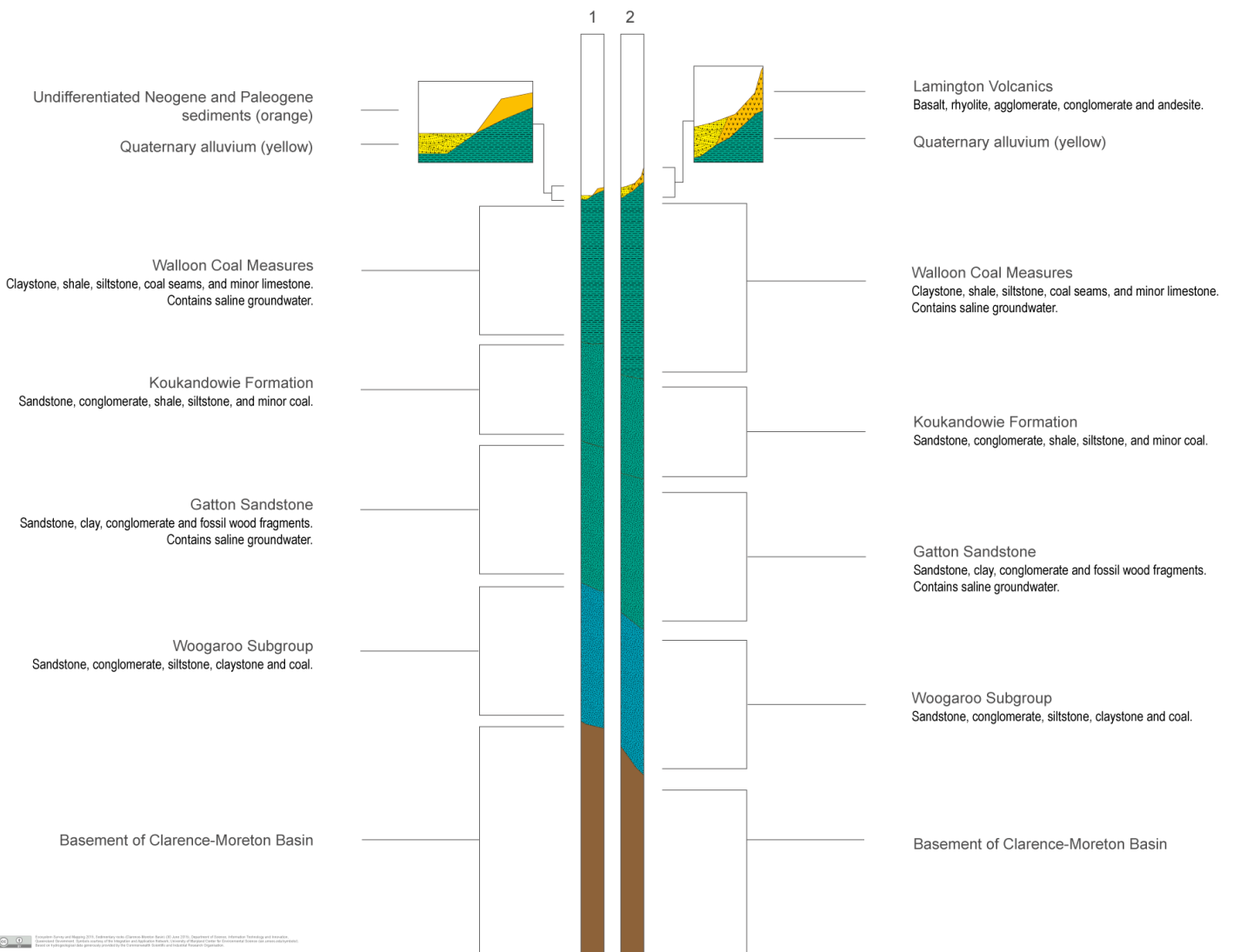
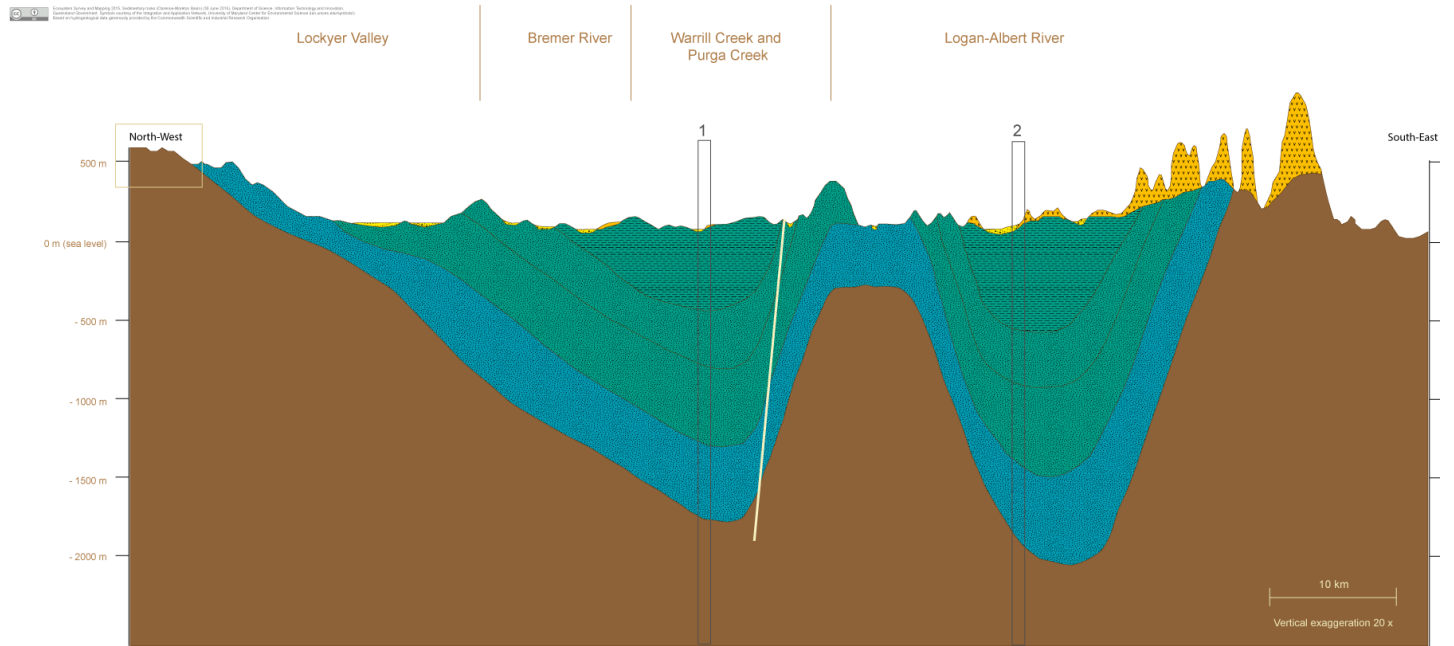
Version 1.5

Sedimentary rocks (Clarence-Moreton Basin)

The Clarence–Moreton Basin contains layered formations of Triassic and Jurassic sedimentary rocks of variable grain size and permeability. Sedimentary rocks may store and transmit groundwater through inter-granular pore space, fractures and weathered zones. Sedimentary rocks with coarser grain size, for example the Woogaroo Subgroup, are generally more permeable than those with finer grain size such as the Walloon Coal Measures. Groundwater tends to discharge locally from the sedimentary rock aquifers typically along foot slopes and drainage lines. Younger rocks such as the Lamington Volcanics and unconsolidated deposits like Quaternary alluvium may overlie the sedimentary rocks of the Clarence–Moreton Basin and these are depicted in other conceptual models. The direction of groundwater flow is uncertain in the deeper strata of the Clarence-Moreton Basin.

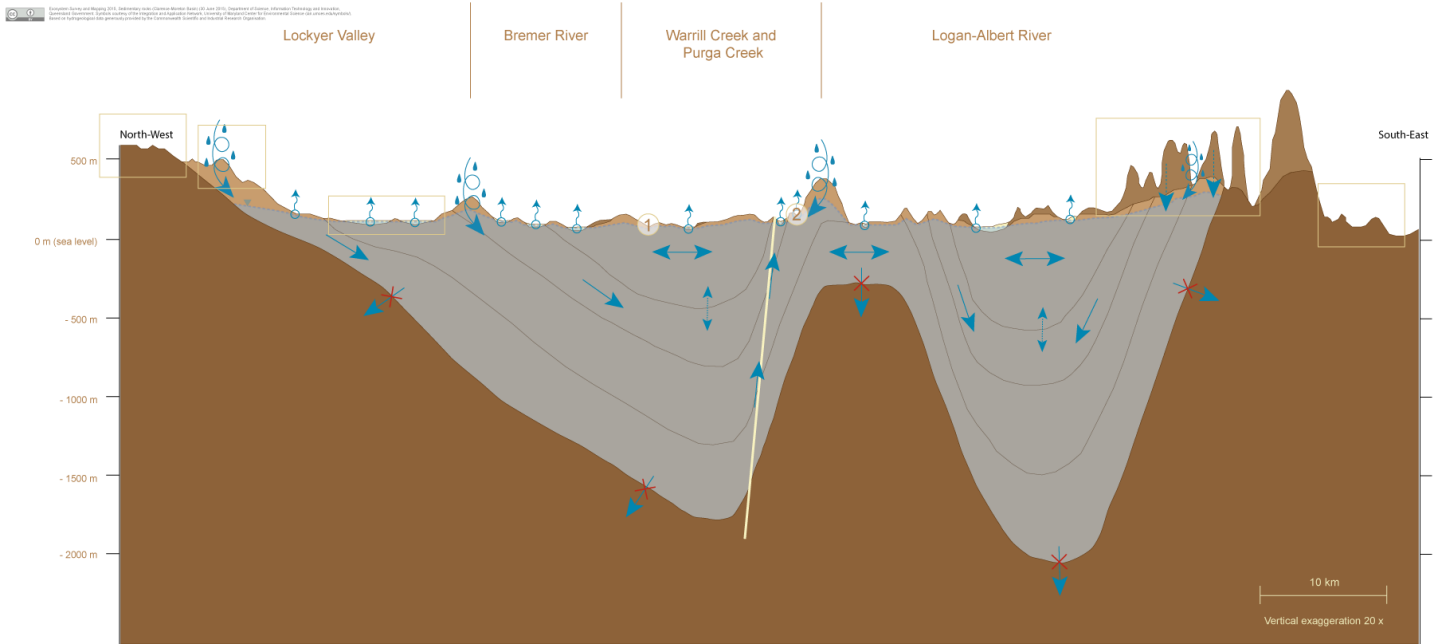
- Sedimentary rock aquifers may provide a range of ecosystems with water required to support their fauna and flora communities, ecological processes and delivery of ecosystem services.
- Palustrine (e.g. swamps), lacustrine (e.g. lakes) and riverine (e.g. streams and rivers) wetlands located on sedimentary rocks may depend on the surface expression of groundwater from the underlying sedimentary rock aquifers.
- Terrestrial vegetation located on sedimentary rock aquifers may depend on the subsurface presence of groundwater, typically using deep roots to access groundwater in the capillary zone above the water table.
- Sedimentary rock aquifers may also support ecosystems within the aquifer itself, which can be indicated by the presence of stygofauna.

Geology of the Clarence-Moreton Basin

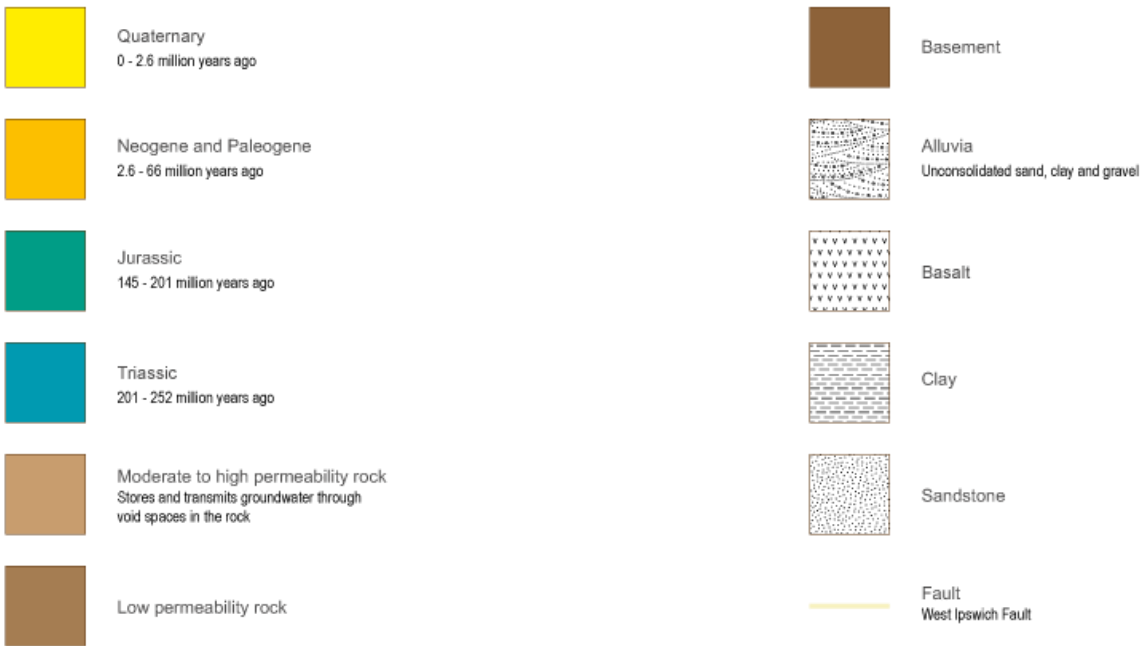


Queensland Government 2015. Information on the Clarence-Moreton Basin. Queensland Government, Department of Science, Information Technology and Innovation. Queensland Government. Information on the Clarence-Moreton Basin. Queensland Government, Department of Science, Information Technology and Innovation. Queensland Government. Information on the Clarence-Moreton Basin. Queensland Government, Department of Science, Information Technology and Innovation.













Groundwater hydrology of the Clarence-Moreton Basin




Geology legend



Groundwater hydrology legend

	Alluvia (saturated)		Groundwater table
	Alluvia (unsaturated)		Infiltration and percolation Rain infiltrates through the soil to recharge the aquifer below
	Moderate to high permeability rock (saturated)		Direction of groundwater movement
	Moderate to high permeability rock (unsaturated)		Negligible groundwater movement
	Low permeability rock (unsaturated)		Groundwater leakage
	Basement (unsaturated)		Spring A hydrogeological feature by which groundwater discharges naturally to the land surface or cave

Groundwater dependent ecosystem legend

	Terrestrial GDEs Regional ecosystems and riverine wetlands may depend on the subsurface presence of groundwater within the capillary zone for some or all of their water requirements.		Surface expression GDEs Lacustrine wetlands, palustrine wetlands and riverine water bodies may depend on the surface expression of groundwater for some or all of their water requirements.
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Citation

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