

Hydrogeology of Wales: Permo-Triassic and Jurassic aquifers - South Wales

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This page is part of a category of pages that provides an updated review of the occurrence of groundwater throughout Wales.

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Triassic Blue Anchor Formation exposed in cliffs at St Mary's Well Bay, south of Penarth. P802431.

The Triassic strata that lie to the east of Porthcawl comprises marginal basal facies deposited in a shallow coastal environment (**Plate P802431**). Lithologies include sandstone, conglomerate and subordinate dolomitised limestone. The conglomerates do not crop out and have poor recharge potential.

The younger Mercia Mudstone Group comprises massive red-brown dolomitic mudstones with gypsum either in veins or retained as nodules. The uppermost part of the sequence, the Blue Anchor Formation comprises grey dolomitic mudstones and siltstones, and the Penarth Group, which is nowhere thicker than 12 m, grades from calcareous marls and marly limestones to sandstone near Bridgend where small potable groundwater supplies have been obtained. Typical yields range up to 8 l s^{-1} in the Cardiff area where the water has a bicarbonate concentration of up to 500 mg l^{-1} .

The Jurassic Blue Lias Formation is essentially an aquitard although seeps can occur where fractures intercept the ground surface at low elevations.

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