

Appendix X.4 Wieambilla Creek Aquatic Values – Update



Wieambilla Creek aquatic values - update

Response to DERM issue regarding hydrological assessment

Dr Paul Clayton 7th October 2010

Based on updated QGC discharge figures and flows modelling, the proposed discharge to Wieambilla Creek of 12 ML/d represents only 0.2% or less of bank-full flows, and the downstream extent of discharge influence would be approximately 0.6 to 6 km (SKM letter to QGC, 5th October 2010). Wieambilla Creek is naturally an ephemeral stream system; however, the creek will be subject to an ecosystem shift from ephemeral to permanent flows for the duration of the QGC discharge and for the length of the affected reach (i.e. less than 6km downstream from the discharge point). At less than 6km influence and with no change to overbank flows frequency, the most significant identified aquatic ecological values along Wieambilla Creek will not be affected by the proposed discharge (i.e. semi-permanent waterholes further downstream and riparian/bank ecosystems and features). The ephemeral creek habitat and functional characteristics within the shorter affected reach will be temporarily replaced by permanent flow; however, they are not aquatic ecosystems features unique to Wieambilla Creek and they will re-establish quickly following discharge cessation.