



Hells Gates



A range of field surveys will be undertaken for the Hells Gates Project to document the current environmental conditions across the project area. These studies will be supplemented by desktop assessment of existing information. The results will inform the Business Case and environmental assessment.

WATER SURVEYS

Surveys will be undertaken to assess the quantity and quality of surface and ground water resources across the project area.

The information collected during the surveys will include, but not be limited to, physical characteristics (e.g. water level / depth, water temperature and suspended sediments), and chemical characteristics (e.g. dissolved oxygen, acidity (pH) and salinity).



Surface Water

Surface water is to be surveyed in the creeks, rivers and wetlands of the project area. Quality will be measured on site or through samples collected for analysis in an accredited laboratory. Measurements and samples will be collected by qualified environmental scientists. The measurements will be taken using a hand held water quality meter whilst water samples will be collected using bottles supplied by the laboratory.

Surface water quantity will be assessed primarily through hydrologic and hydraulic modelling and supported by surveys of bed and bank shape, LiDAR data and flow monitoring.

Ground Water

Groundwater surveys will assess water that is stored underground in rock crevices and the pores of geologic materials. The survey will access groundwater via existing bores in the project area, where available and suitable, and may also require the installation of bores.

Suitably qualified environmental scientists will measure the water level and pump groundwater up the bores for water quality testing. As for surface water, on site measurements will be taken using a hand-held water quality meter and water samples will be collected for analysis using bottles supplied by the laboratory.

Consultation

All field investigations will be undertaken in consultation with landholders. Protocols are in place to ensure there will be no effect on landholder operations and activities. These protocols are documented in our the Land Access Protocol developed for the project and available from our team or on website. All field work will be conducted in accordance with landholder requests and consider the location of sampling sites, how these sites are to be access and the timing of access.



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**townsville
enterprise**