

BASELINE SURVEYS UPDATE

Julia Creek Vanadium Project



QEM, with its environmental consulting partner Epic Environmental (Epic), have commenced initial baseline surveys of the Project area, including ecology surveys and upcoming drone surveys (mid June).

ECOLOGY SURVEY UPDATE

A team of four Epic Ecologists completed a 10-day flora and fauna survey of the Project area during March 2022.

The purpose of the ecology survey was to assess the ecological values (flora and fauna) of the Project site and generate a baseline list of species. The Epic Ecology team completed regional ecosystem surveys, habitat assessments, bird surveys, spotlighting surveys and fauna trapping, particularly for Julia Creek Dunnarts across the Project area.



FAUNA

The fauna survey recorded 55 terrestrial fauna species, comprised of six mammal, 40 bird, seven reptile and two frog species in the Project area and immediate surrounds.

Some of these fauna species included the Red Kangaroo, microbats, various bird species, Downs Bearded Dragon, Speckled Brown Snake, Spencer's Monitor and Bumpy Rocket Frog amongst others. Despite suitable habitat being present, no Dunnart were found during the survey.

Various introduced fauna species were identified, including Cattle, the Cane Toad, wild dog, feral pig and feral goat.



FLORA

The Project area is located in the Mitchell Grassland Plains. The flora survey confirmed the presence of six regional ecosystems (REs), comprised of low woodland on active Quaternary alluvial plains, cracking clay soils and tussock grassland.

No threatened ecological communities or flora species were identified within the Project area.

Understanding the habitat values of the Project site is important to inform what impact the Project may have on habitat connectivity and fragmentation, species populations and biodiversity in general. Additional studies will be undertaken in 2022 to continue to build the baseline profile for the Project area.

WIND AND SOLAR MONITORING UPDATE

Sodar

The Fulcrum3D Sodar is a fully integrated, user friendly wind monitoring system and is delivered complete with its own trailer, solar power supply and communications. The portable monitoring system measures wind speed, direction and inflow angle up to 200m above ground level. The Sodar system will be used for a low-cost site prospecting as QEM looks to investigate available wind resources and confirm turbine suitability. Sodar delivery to Julia Creek and commissioning onsite - 17 May.





Solar

The Fulcrum3D Solar monitoring system is a solar resource monitoring set up that has been designed to operate in the remote and harsh environments common at solar power station sites. The portable, stand-alone monitoring system aims to provide the highest quality solar data in addition to monitoring the performance of the operating power stations. Fulcrum3D's solar system will be used for QEM's site prospecting for a proposed solar farm.

Met Mast

The Fulcrum 3D Meteorological Mast (Met Mast) is a 160m tall steel lattice tower designed to accurately record wind speeds and wind conditions for a given area. The mast is fitted with several specialised meteorological instruments which will constantly record and share live data with the Project to ensure the on-site conditions are factored into the Projects design parameters.

The steel lattice is approximately 639mm by 639mm wide and is comprised of 52 3-meter span components, totalling 156m in height. The structure is supported by 39 pre-tensioned guy wires at varying radiuses around the base of the mast (maximum radius = 95m).

The Met Mast will be installed on-site in July and remain for a minimum of 12 months in order to capture the required seasonal data. This data will allow QEM to complete the bankable/ definitive feasibility study for the renewable Project and assists in reducing the Projects uncertainties.

QEM intends to share the data gained from the Met Mast, Sodar and Solar Monitoring station with the Bureau of Meteorology, McKinlay Shire Council and the Julia Creek Aerodrome.



DRONE SURVEY UPDATE

QEM has engaged National Drones to conduct an aerial drone survey across the entirety of QEM's Tenements.

The purpose of this survey is to baseline the current environmental condition of the tenement along with using the topographic data to conduct a flood modelling study.

National Drones has completed thousands of surveys and inspections since their inception in 2015, and has worked with some of Australia's largest companies across the resources, agricultural and environmental sectors.

The survey will be conducted over 5 days, with the team from National Drones using the Julia Creek Aerodrome as their take-off and landing base. The drone is a fixed wing petrol aircraft that will fly at approximately 300m above ground level during the survey.

The survey is currently planned for Mid-June.

