

A KEY DELIVERY PARTNER FOR OLIVE DOWNS

OVER the past four years, Phronis has partnered with Pembroke Resources to deliver its infrastructure vision for the Olive Downs coking coal project.

Starting from the mining development lease stage, Phronis formed an infrastructure strategy that was based on lean operational concepts and tight budget control, while ensuring stakeholder needs and requirements were kept front of mind.

When completed, the open cut mining project will deliver up to 20mtpa of run-of-mine coal, with resulting product coal of up to 15mtpa at the peak.

An operation of this scale has required the full depth of Phronis's domestic and international mining experience. Phronis focused on the formation of an infrastructure strategy that walks the fine line between simplicity, project economics and operational efficiency.

Phronis provided a full range of engineering services required to deliver the infrastructure and coal process facilities through concept, prefeasibility and bankable feasibility studies, EIS approval, utility approvals, stakeholder approvals, tendering and final design definition.

The infrastructure component of the Bankable Feasibility Study document was a key deliverable by the Phronis team.

During the project definition process, Phronis also contributed to the completion of the infrastructure elements of the EIS

documentation. Over the four years Phronis provide a range of project management services, engineering designs, estimating and scheduling, establishing capital budgets and procurement of infrastructure contract packages.

Throughout the project definition and approvals phase, Phronis has remained committed to defining and documenting Pembroke's infrastructure vision for the development of the project; providing a basis for detailed design and construction of the infrastructure; and most importantly providing Pembroke, with a high degree of confidence, that the project can be constructed in a technically sound and cost-effective manner.

The key Innovations of the project include maintaining good working relationships with local government and private sector stakeholders; innovative and adaptive engineering processes and solutions to cater for constraints to allow timely approvals processes; a multi-stage EPC contracting methodology to provide flexibility on delivery timing; and a cell based dry tailings disposal system.

The project infrastructure to be created for the Olive Downs coking coal mine comprises of industrial facilities at Olive Downs South and Willunga mining areas; three coal handling and preparation plants ranging in capacity from between 800 and 1100 tph of ROM coal, designed to achieve high levels of metallurgical efficiency at nameplate capacity across the full size and yield envelopes of the life of mine; a 20km



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rail spur, loop and train loader connecting to the Norwich Park Branch Railway; a 29km water supply pipeline connecting to the Eungella pipeline network; a 44km power supply transmission line and substation; water management structures, dams and levees; mobile and data communication system; and mine access roads including a

new Isaac River bridge crossing.

With three approved mining leases and federal and state environmental approvals in place, Phronis is currently preparing to move to the delivery and operational phases of the project life cycle.

AMR



MINING INFRASTRUCTURE DELIVERY PARTNER



Phronis provides the project management and engineering support required to deliver mining infrastructure projects globally.

During all phases of the mining project life cycle, Phronis has delivered the vision of mine infrastructure projects through:

- project management services;
- Infrastructure definition services for EIS documentation;
- multi-disciplined engineering;
- estimating, scheduling, budgeting and project controls;
- infrastructure contract procurement services;
- construction management; and
- mine rehabilitation and closure services.

Phronis adds value to mining operations by focusing on:

- the support and delivery of the clients vision for the project;
- providing the basis for detailed design and construction of the infrastructure;
- how the project can be constructed and operated in a technically sound and cost-effective manner;
- how to reduce waste and deliver in a sustainable manner; and
- effective communication between all parties to achieve successful outcomes.

Phronis delivers infrastructure such as:

- mine industrial facilities;
- coal and minerals processing facilities;
- rail infrastructure;
- water management and water supply infrastructure;
- communications, power supply and power distribution infrastructure; and
- roads and bridges.

LET'S CONNECT!

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