

Package Title:	Bore Water Pumping Program
Package Ref:	EOIP5504
Harmony Overview	<p>Harmony is a 70-year-old mining company headquartered in South Africa and listed on the Johannesburg and New York stock exchanges.</p> <p>In December 2022, Harmony acquired 100% of the Eva Copper (“Eva Copper”) project, a near-term copper project in North-West Queensland, Australia.</p> <p>Harmony is updating the feasibility study and progressing front end engineering and design over the next 12-month period prior to a final investment decision (FID). Once FID is achieved construction is expected to take approximately 24 months.</p>
Indigenous Communities:	<p>Harmony is committed to developing a diverse workforce and inclusive work environment, which includes providing training and career opportunities to local residents of the communities in which we operate. The Eva Copper Project is located on the traditional land of the Kalkadoon People, and the Project is committed to hiring and training of Kalkadoon People. Subject to the technical capabilities, this criterion will be a key consideration in the shortlisting of vendors, release of future tenders, and award of any contracts.</p>
Project Overview:	<p>Eva Copper Mine Project (ECMP) is a multi-open pit sulphide and native copper mine producing a copper concentrate. The current feasibility assumes 170 million tonne of ore and 381 million tonnes of waste are mined from seven open pits. The copper concentrator will process copper concentrate through a conventional crushing, milling, gravity, and flotation plant, for the life-of-mine (LOM) duration.</p>
Scoping details:	<p>The ECMP requires pumping tests to be conducted on three production bores (PBs) within the Northern Borefield located on our Mining Leases. Data will support an understanding of potential on-site water supply from deep borefields.</p> <p>Details of the three bores are summarized below with final details provided during onboarding. The following requirements and specifications, pending confirmation, inform this EOI:</p> <ul style="list-style-type: none"> a) PBs will all be steel cased with stainless steel screens (see table below. Note that top 150m will be 12”). Adjacent MBs will be 2” uPVC. b) Expected drawdown in PBs is not known, however may range 20-80m over 4 – 7 days. <p>Eva Copper Mine Project expects that this pump test program would involve pumps deployed to a depth of 150 m only within the 12” diameter steel casing that will be installed in the upper portion of each bore hole. There is no intent to pump from depths below 150 m.</p> <p>ECMP requires:</p> <ul style="list-style-type: none"> c) Preliminary pump tests to confirm equipment performance and to confirm pumping ranges for subsequent step and constant rate tests. d) Step test on each PB to determine aquifer parameters and well loss coefficients. The test is to consist of 3–4 steps with each step of 1.5–2 hours duration, plus recovery monitoring. Assume recovery for 24 hours or to at least 90% of pre-step test water levels. Assume pumping rates between a range of possible yields of 10–60 L/s (e.g. 10, 25, 40, 55-60 L/s). e) Constant rate test on each PB to determine aquifer parameters and sustainable long-term pumping rates. Test duration is 4–7 days, plus recovery monitoring. Assume 2 days recovery or to at least 90% of pre-step test water levels. Assume pumping rate close to the upper rate of the step test (depending on actual drawdowns). f) Pumping rates and durations to be determined in consultation with the supervising hydrogeologist.

Nominal bore details for quoting purposes								
Bore ID	Easting (nominal)	Northing (nominal)	Target Depth (mbgl)	Conductor / Surface Casing Diameter and Depth	Production Casing Diameter and Depth	Expected Screen Length (m)	Airlift yield (L/s)	Standing water level (mbgl)
NBPB006	408460	7773080	450	16" 2-10m	12" and 8" 150-450m	12 to 24m	30-60	7-15
				12" to 150m				
NBPB007	411200	7774700	450	16" 2-10m	12" and 8" 150-450m	12 to 24m	30-60	7-15
				12" to 150m				
NBPB008	407041	7769196	450	16" 2-10m	12" and 8" 150-450m	12 to 24m	30-60	7-15
				12" to 150m				

Specific Requirements: The selected Supplier is required to complete the scope of work in accordance with Australian Standard – Test Pumping of Water Wells (AS 2368-1990). Testing requirements include:

- Deployment and operation of the pump in the bore.
- The pumping rate must be kept within $\pm 5\%$ from the initial pumping rate throughout the duration of the constant rate pumping test.
- Provision of discharge pipe 100–200 m from the test bore and monitoring bores. A map and distances between bores will be provided on engagement.
- Recording flow rate manually and electronically.
- Recording field water quality during tests (pH, EC, Temp, if possible redox) every 3–4 hours using a calibrated water meter.
- Recording water level manually, as well as by deploying data loggers in the pumping bore and between 2–4 monitoring bores. Loggers must be able to be programmed to take measurements at intervals between 1–60 minutes
- The frequency of all water level, flow rate, and water quality measurements will be determined by the Contractor in consultation with the supervising hydrogeologist.
- Direct read cable is preferred on the loggers to ensure the logger is operational and can be reprogrammed.
- Groundwater levels in the pumping and monitoring bores should be monitored for at least 1 hour, and preferably 24 hours, prior to pre-testing to determine baseline water levels. Site set up could be scheduled to accommodate this requirement.
- Manual water levels and flow rates within the pumping bore shall be measured as per Table 2.1 Manual measurements in monitoring bores can be completed periodically when time allows.
- Provide T-piece on outlet pipe for sampling and access to water.

The selected Supplier must:

- Display strong performance in regional sub-contracting, supply and employment strategies to maximise local opportunities for the Projects host Shire and surrounding regions.

	<ul style="list-style-type: none"> b) Work closely with ECMP and the Traditional Owners of the land, the Kalkadoon people to maximise opportunities for employment and training development. c) Comply with all the ECMP policies and regulatory approvals issued, such as the conditions set forth in Environmental Authority EMPL00899613 and its approval for ERA 63 – Sewage Treatment. d) Undertake the works in accordance with the ECMP Safety and Health Management System and all of its provisions in accordance with the Mining and Quarrying Safety and Health Act and Regulations.
Expression of Interest (EOI):	<p>Harmony invites expressions of interest (EOI) from capable and experienced contractors and suppliers, who demonstrate through their response a clear capability against the key requirements as listed below.</p> <p>We ask that you keep your expression of interest submission short, specifically addressing the following in your response. A full tender submission is NOT required for this submission and will be released to suitable suppliers based on the quality of responses to the below criteria.</p> <ul style="list-style-type: none"> a) General company information <ul style="list-style-type: none"> (i) ABN, Company name, Registered address (ii) Contact details (name, email, mobile) (iii) Alternate point of contact details (iv) Headquarter and office locations (v) Company financials (vi) Local and indigenous engagement policies (vii) Prior project information and capability statement (viii) Safety, Risk, Quality, and other accreditations b) Response based specifically to this Package of work: <ul style="list-style-type: none"> (i) Proof of capabilities to complete the specifications required by this scope (ii) Confirmation of expected availability over the next six months (iii) Indicative lead times for materials and delivery durations (iv) Identification of critical lead time sizes and recommendation of proposed size changes. List of readily available sizes. (v) Potential sub-supplier requirements (vi) Other information considered essential to supporting the Suppliers submission (ix) Harmony will refer to the EOIs to assist in gauging its understanding of market capability and interest. Suitable EOI Registrants may be invited to submit a tender for this package. c) Comply with the Projects Australian Industry Participation Plan (AIPP) requirements found here: https://www.industry.gov.au/sites/default/files/aip/eva_copper_mine_-_project_and_operations_phase_summary.pdf
EOI Closing Date:	20 October 2023
Forecast Commencement:	At the time of publishing this invitation to register an EOI it is forecast the services will be required at the commencement of: Q1 2024
Project Contact Officer:	All communications in connection with this invitation to register an EOI for this package including clarification regarding this package or request for technical support in connection with the EOI or ICN Gateway, must be submitted to: Nimmi Pushparajan Procurement Engineering Specialist ICN Queensland E nimmi.pushparajan@icnqld.org.au
Project URL's:	Details of additional Project opportunities will be published on the ICN Gateway at Eva Copper Project.

Disclaimer:

The information contained in this invitation to register an EOI is indicative only and subject to change at Harmony's discretion. It is intended to provide a brief outline of the relevant Supply which may be required on the Project and should be read in conjunction with the Project Description on the ICN Gateway.