

ECR's Kapunda Copper Research Project

- ❖ Studies indicate that more than 100,000 tonnes of copper remain in the historic Kapunda mine.
- ❖ Due to the proximity to town and the heritage of the site, conventional mining of the copper is not practical.
- ❖ ISR (In Situ Recovery) mining is a possible solution to extracting this remaining copper.
- ❖ ISR accelerates the existing naturally leaching copper process.
- ❖ With a low environmental footprint and little permanent infrastructure, it could present a viable mining solution that addresses the interests of the Kapunda community.
- ❖ ECR Pty Ltd have received a CRC-P Research Grant to investigate potential Copper ISR at Kapunda over the next 2.5 years.
- ❖ As part of the research, extensive environmental studies will be done, still under the regulation of State government, Mining and Environment Protection Acts.
- ❖ ECR are committed to making a positive contribution to the Kapunda community, and delivering on our social, environmental and legal obligations throughout our research.

Join the conversation at

The Kapunda Copper Voice

kapundavoice@envirocopper.com.au

ENVIRONMENTAL COPPER RECOVERY PTY LTD

Leon Faulkner - Managing Director
M: 0409 612 004

Philippa Faulkner - Business Manager
M: 0448 795 762

Street: 58 Galway Ave,
North Plympton SA 5037

Postal: PO Box 5, Marleston DC, SA 5033
Tel: 08 7127 1110

Email: kapundavoice@envirocopper.com.au
www.envirocopper.com.au
@EnviroCopper



OUR RESEARCH PARTNERS



ENVIRONMENTAL COPPER RECOVERY



*A new solution for
extracting copper*



KEEP IN TOUCH

Web: www.envirocopper.com.au

kapundavoice@envirocopper.com.au

Kapunda is a town with a rich mining history, growing from Australia's first ever commercial copper mine in the 1840's. Even though the mine ceased production in 1912, successive mining companies have looked at recovering the remaining copper in the mine.

ECR Pty Ltd in association with their partners, Terramin Exploration, have estimated a resource of 119,000 tonnes of copper remaining.

Using ISR would put Kapunda at the fore front of technology within the mining industry and be a first for Australia.

The question is

If there was a way to extract this copper resource

- without excavating an open pit or digging underground,
- without moving large masses of rock creating dust and noise, *and*
- without impacting on the environment,

and at the same time as

- providing direct and indirect jobs, benefiting the town and surrounding region, **and**
- improving the condition of the historic tourist mine workings

**Could Solution Mining
be the “solution” at Kapunda?**

COPPER IN-SITU RECOVERY (ISR)

Conventional mining, open cut and underground methods, can pose challenges when they are located close to existing communities.

Mining copper using the ISR method is **extending application of proven** technology that has a lower environmental footprint than conventional mining.

WHAT IS ISR MINING AND ITS BENEFITS :

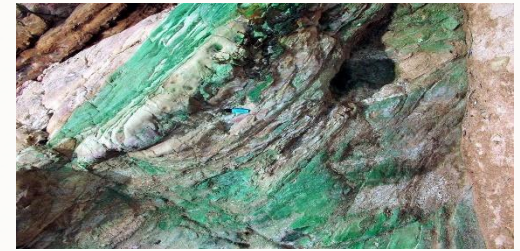
- ✓ Also known as in-situ “leaching” or solution mining, it has had limited applications in mineral extraction until now.
- ✓ Recent advances in technology allow ISR to be applied to copper and gold resources that were previously un-mineable.
- ✓ ISR mining accelerates what is naturally happening within the bedrock and water table.
- ✓ ISR mining requires a shallow resource and a high-water table, both present at Kapunda (and other historic mine sites).
- ✓ There is no rock movement, no dust, little noise, no open cut pits.
- ✓ There is little visual impact, minimal infrastructure and low impact on the environment.

PROCESS FOR ISR:

- ✓ Wells or bores are drilled into a targeted host ore body.
- ✓ Benign solution is then pumped underground to dissolve valuable minerals (copper) from the ore body.
- ✓ This copper containing solution is then pumped out to a recovery plant to separate and process the metal for market.

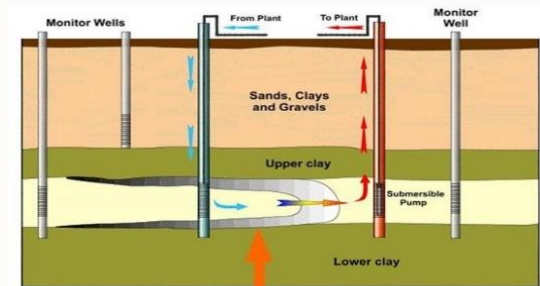
GOVERNMENT RESEARCH GRANT (CRC-P):

- ✓ The research grant with Uni of Adelaide and CSIRO will investigate :-
 - Environmental baseline measurements for risk mitigation
 - ISR Copper mining economics
 - Community acceptance of renewed mining activity



Significant oxidised copper naturally leaching on the pit walls

... SOLUTION MINING



Copper deposit



Australian Government
Department of Industry,
Innovation and Science

Business
Cooperative Research
Centres Program

**Research Grant Duration
August 2018 to December 2020**