



CQUni water breakthrough

CQUNIVERSITY researcher Ben Kele is setting the agenda for CSG water filtration in a world-first project that he spearheaded through his company Midell Water.

For the first time a blend of volcanic rock media and reverse osmosis will be used to remove sodium from CSG water, while putting calcium and magnesium back in.

Mr Kele said this was

unusual as filters usually did the opposite – remove calcium and magnesium while replacing sodium.

CSG water is typically high in salinity, sodicity and metals such as boron, so requires treatment before the water is fit for safe reuse.

Mr Kele said he came across this volcanic rock by mistake.

“We discovered it completely by accident

during a research trial in the Gemfields,” he said.

“We discovered a rock that took sodium out of water – for a long time it was a little niche research area, then the CSG came along and their biggest problem is sodium salts and their extracted water, then suddenly we went from a small area to (addressing) one of their biggest problems.”

A portable treatment

plant will be built into a shipping container in Rockhampton, then shipped to Moura where it will treat up to 250,000 litres of water a day at the Meridian SeamGas CSG joint venture business operated by WestSide.

“A lot of other mine water has sodium and heavy metal issues,” Mr Kele said.

The project is a partnership between CQU, Midell Water, Arris Pty

Ltd and WestSide Corporation Limited.

FILTRATION FACTS

Volcanic rock filters used will reduce the following in CSG water:

- Sodium salts
- Selected heavy metals
- Hydrocarbons



FILTRATION BREAKTHROUGH: Ben Kele says using volcanic rock to filter water could reduce the salt content by up to 40%.