



Arrow's proposed water management approach

January 2019

Our commitment

Arrow will:

1. **maximise beneficial use of produced water**
2. **where practical, return water to the region from which it is produced**
3. **offset our impact on the Condamine Alluvium in the area of greatest predicted Arrow-caused drawdown.**

Guided by the community, our approach to beneficially using our coal seam water will include providing it to existing, licensed users as a substitution for their approved allocations from the Condamine Alluvium. Instead of drawing from the Condamine Alluvium, users will use the same amount of our treated water. This is 'substitution of allocation'.



CSG and water: the basics

Coal seam gas (CSG) is held in coal seams by ground pressure and by the pressure of water in the coal seams. To get CSG to flow up a well, Arrow reduces the pressure by pumping out some of the target seam's water. This water is piped to a water treatment plant. From here, it becomes a valuable resource.

Our water production, treatment and use is licensed and regulated under the *Petroleum and Gas (Production and Safety) Act 2004*, the *Water Act 2000* and the *Environmental Protection Act 1994*.

From coal seams to community resource

Arrow is planning a 'beneficial use network' for the Condamine Alluvium area (Dalby, Tipton and Cecil Plains), to provide our treated water to landholders as a substitute for their Condamine Alluvium allocations.

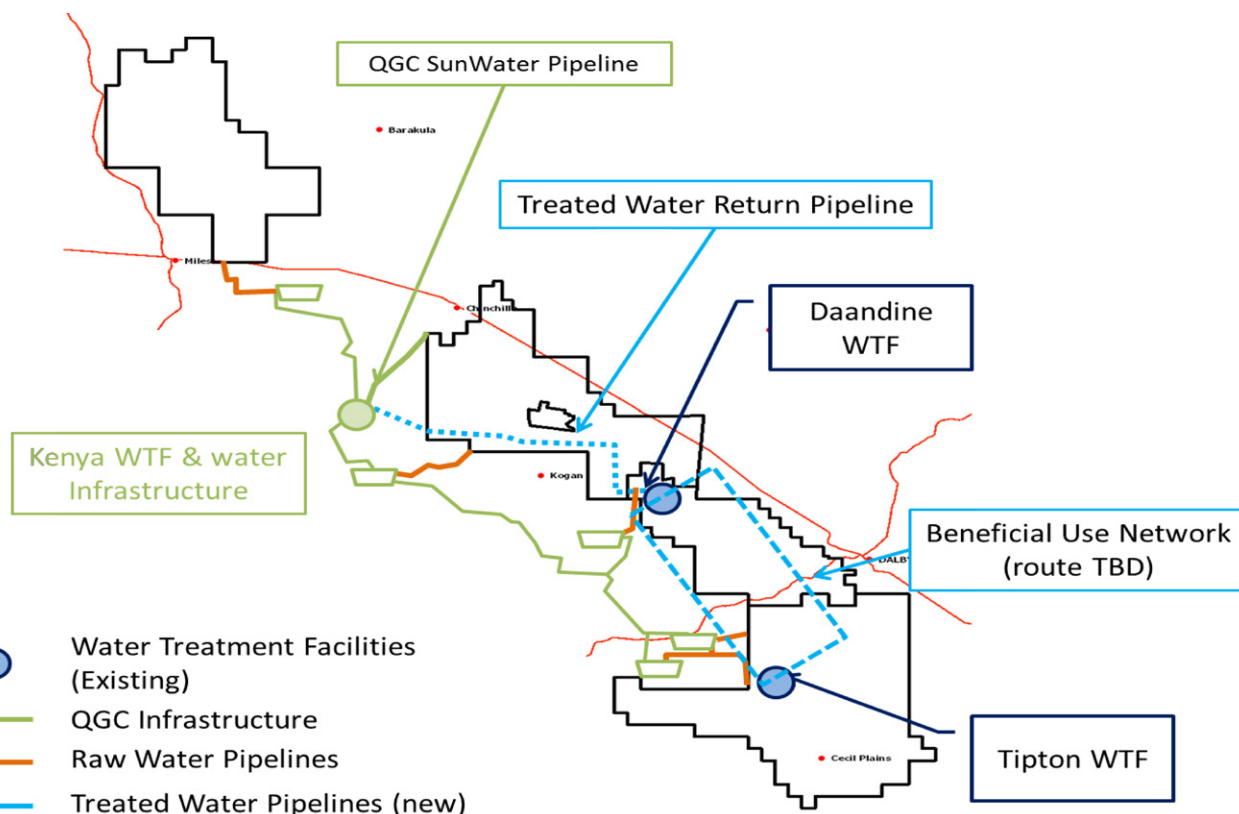
Outside the Condamine Alluvium – near to, and north of, Chinchilla – our treated water will be supplied to users through the existing SunWater Chinchilla scheme.

Due to the limited volume of water we expect to produce, water supply is likely to be available only to a limited number of existing allocation holders and to users of the existing SunWater Chinchilla scheme.

Arrow will not be producing sufficient water to support new industries.

To be involved

In 2019, we will engage with holders of Condamine Alluvium water allocations to inform the design and planning of our beneficial use network.



Kenya water treatment facilities and water infrastructure

Surat Gas Project anticipated water production

Arrow continues to update its development plans and refine water production predictions with real-life data. This has displayed a consistent trend downwards; we're going to take less groundwater than previously expected.

In 2013, our Surat Gas Project (SGP) Environmental Impact Statement (EIS) and supplementary report predicted the greatest possible water production of 510 gegalitres (GL) from 6,500 wells over 30 years; or 510,000 megalitres (ML).

Since then, the number of wells has been reduced by nearly 60 per cent to 2,500. This means we will produce much less water.

The anticipated water volumes will continue to change over time as new wells provide additional data.



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