

Going Underground

# TBM Kirsten

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## FAST FACTS

LENGTH

**205 metres**

WEIGHT

**3,350 tonnes**

Motors to turn the cutterhead when excavating

**14 × 350 kilowatts**

TORQUE

**23.828 kilonewton-metres**

**6.75km**

Total distance to be excavated by this TBM

CUTTERHEAD DIAMETER

**11 METRES**

(the height of a three-storey building)

**4.66**

Cutterhead revolutions per minute

**63**

Cutter discs

**11**

Gantries

**15-20** people needed to operate TBM

Operating gradient

**-9% to +47%**

### WHAT IT WILL EXCAVATE

Emergency, cable and ventilation tunnel, inclined pressure shaft, 2.4km of the headrace tunnel

Manufacturer: Herrenknecht

**TBM KIRSTEN HAS BEEN NAMED AFTER NSW ASTROPHYSICIST AND SCIENCE COMMUNICATOR KIRSTEN BANKS.**

## Dr. Kirsten Banks



Kirsten Banks is an astrophysicist, avid science communicator and proud Wiradjuri woman. She has always had a passion for science and a love for the sky, dreaming of becoming a meteorologist in Primary School and then an astrophysicist in High School. Kirsten loves to share her passion for the stars and is most well known for her short and entertaining TikTok videos about space and astronomy. She has a PhD in the field of galactic archaeology, studying the stars of the Milky Way to uncover secrets of its formation and evolution.

## Did you know?

Snowy 2.0 is showcasing Australian ingenuity to an international audience, with TBM Kirsten excavating one of the most innovative and technologically-advanced tunnels in the world. Just as the original Snowy Scheme gave us rock bolting techniques that are still used today, Snowy 2.0 now has a TBM that is setting a global standard. It has been designed to excavate on a very steep gradient (to +47% or a 25-degree angle) so all equipment within the TBM can switch to work on the incline, and the stairways and walkways will pivot to remain horizontal.

