

# Keepit Dam Safety Upgrade

## Phase 2 – August 2017

The Keepit Dam Safety Upgrade Project will ensure the dam complies with contemporary safety standards for extreme floods and earthquakes. This involves the installation of post-tensioned cables on the concrete section of the dam wall.

### Project overview

- Tender awarded for construction works to SRG Limited November 2016
- Public access to dam wall not permitted in preparation for construction works
- All the environmental controls and site establishment have been completed
- Coring for anchor head blocks on the dam crest began late May 2017
- Drilling works on the dam crest started in July 2017
- Installation of precast anchor head block commenced in July 2017



### What's up ahead?

- Anchor installation on the dam crest scheduled for August 2017
- Stressing and testing anchors scheduled for September 2017
- Coring for spillway anchor head blocks scheduled for late August/ early September 2017
- Anchor installation on the spillway section will commence in late September 2017
- Installing, stressing and testing anchors will continue over the next 15 to 18 months

## Post-tensioning cables

Anchors are currently being installed into the concrete sections of the existing dam wall and into the rock foundation below the dam. These anchors will act like giant elastic bands to increase the stability and hold the structure to the earth in the event of an earthquake or flood.

The anchors are being manufactured on site quite close to the downstream of the dam wall. They will be transported about 1.5km to the wall via the WaterNSW access road. The cables will be transported on a purpose built set of trolleys approximately 100m long.

- There will be 67 anchors in total and each anchor is made up of 15.7mm strand cables.
- The largest anchors will have 91 strands and be approximately 88m in length.
- These 91 strand anchors are the world's largest capacity permanent ground anchors.



Trolleys designed for transporting the anchors



Strand anchor ready for transporting

## Working collaboratively

### WaterNSW project team

The Asset Solutions and Delivery (ASD) team within WaterNSW is responsible for managing the second stage of the Keepit Dam safety upgrade project

Keepit Dam was designed in the 1930's and construction was completed in 1960. Due to its age the Dam does not meet the NSW Dams Safety Committee (DSC) current risk requirements for large to extreme flood and earthquake events – although the dam currently operates within the DSC limits of tolerability.

The Keepit Dam Post-Tensioning project started in 2005 and is being led by a highly skilled and expert team of project managers, engineers, and officers.

### SRG Limited

SRG Limited was awarded the \$24.4 million construction contract in 2016. They have worked on over 20 dam strengthening projects and are specialists in the area. For this project they are installing world record capacity anchors into Keepit Dam.

SRG will have up to 35 people working over the duration of the project, made up of around 30% of workers from the local community. They are also using some local contractors and suppliers for labour, steel fabrication, concrete supply, earthmoving and electrical works.



Some of the WaterNSW project team on site (L-R) Nathaniel Selladurai (Construction Manager), Andrew George (Executive Manager), Nava Jeyachandran (Project Manager) and Russell Sainsbury (Project Technical Officer)



David Macgeorge SRG Managing Director on the dam wall with Gae Swain, Deputy Mayor of Gunnedah

## Official Opening Ceremony

A ceremony to officially open the construction works was held on 21 July 2017. It was attended by dignitaries including the member for Tamworth, Mr Kevin Anderson, the Mayors of Gunnedah and Tamworth Shire Councils, local residents, key stakeholders, WaterNSW CEO, and SRG Civil Managing Director and personnel.

David Harris (WaterNSW CEO) in his opening address said the dam was safe for day-to-day operations but the driving force behind the project is to safeguard the community, as knowledge increases and standards change to reflect best practice in the fields of hydrology and seismology. He acknowledged the dam as a key piece of infrastructure servicing community and water users of the Namoi Valley.

Gunnedah Mayor Jamie Chaffey added that the project would bring economic benefits to the local community. He said works were good news for the entire region with several local businesses chosen to help deliver the project.



SRG's Andrew McFarlane giving a tour of the work



The group donned their PPE to inspect the works



Mr Kevin Anderson (Member for Tamworth) at the opening event



## Other News

**Storage level:** The water level of the dam will not be affected by the construction works

**Site access:** For safety reasons, public access to the main wall will not be permitted during the construction period, however viewing and turning area will be available at the approach to the main wall.

**Community Consultation:** We are committed to keeping key project stakeholders up-to-date via emailed project updates. For more information please contact Felicity Rooney, WaterNSW Community Engagement Officer on 0419628387 or [Felicity.Rooney@waternsw.com.au](mailto:Felicity.Rooney@waternsw.com.au)

**Project web page:** Project information is available on the Keepit Dam page of the WaterNSW website [waternsw.com.au/projects/dam-safety/keepit](http://waternsw.com.au/projects/dam-safety/keepit).