FACT SHEET
SEPTEMBER 2025

CHICHESTER DAM UPGRADES AND NEXT STEPS

PROGRESS OF DAM SAFETY PLANNING, UPGRADES AND ASSESSMENTS

Progress of dam safety upgrades

Since the completion of the Risk Assessment in 2023, the following activities have been undertaken.

Dam Safety Emergency Plan

The Dam Safety Emergency Plan (DSEP) was fully reviewed and updated in December 2024.

This plan sets out how the following emergency response agencies coordinate and communicate during an emergency:

- Hunter Water
- NSW SES
- NSW Police
- Dungog Shire Council

The update to the DSEP included lowering of the Amber and Red alert levels in response to the findings of the Risk Assessment and Safety Review. This is to provide more warning time for downstream residents, and to allow greater time for evacuation of the downstream community.

A practical emergency exercise involving all agencies was completed in November 2024. This tested the protocols in the DSEP.

An additional desktop exercise was completed in June 2025 to further refine the plan and to provide training to additional Hunter Water staff members that can be called upon during emergencies.

The DSEP was used to coordinate agency responses to severe wet weather and associated flooding in January, April and May 2025.

Current investigations

Following the Risk Assessment in 2023, a review of all needed work and upgrades was completed.

A consultant was engaged in November 2024 to identify all areas requiring specific technical expertise that will enable progression to the design stage of upgrade works.

This includes:

- photogrammetry, bathymetric and LiDAR surveys
- geophysical testing and seismic surveys
- geological mapping
- landslide geomorphological and reservoir rim stability hazard mapping.

The above studies have now been either completed or are underway.

To assess the dam wall itself, planning will identify the best access for equipment and the best locations for boreholes, which are small-diameter holes drilled to take rock and soil samples that can be analysed in a laboratory to test its strength. This work is due to begin in early 2026.

As we will take samples from boreholes in the spillway apron, we need a period of dry weather.

We may need to lower the dam water level using the scour outlet to stop water flowing down the spillway.

If we need to release water from the dam, we will advise downstream residents.

Flood hydrology and consequence assessment

The hydrology consultant has completed assessments. Initial detailed flood modelling with draft water inundation plans are available for discussion at community sessions.

Spillway 4 apron maintenance

Once there is consistent dry weather, we will be able to complete this work in late 2025 or early 2026. The work will address several small maintenance items on the spillway and will improve safe access.

To complete this work, a contractor has been engaged, and the design of the cover plates that we will install has been finalised.

NPWS environmental assessments

National Parks and Wildlife Service has provided approval for the geophysical investigations on the north abutment, and approval is pending for borehole drilling to be completed following this work.

These approvals were necessary due to the sensitive environment surrounding the dam.

Instrumentation review

There is an ancient landslide on the north abutment of the dam wall. This landslide is many thousands of years old.

We are reviewing options to provide ‘close to real-time’ monitoring of the area. This review is due to be completed in late 2025.

The equipment needed to monitor this area will be installed during the geotechnical investigations.

Survey monitoring

Routine 2-yearly monitoring of the dam wall and north abutment is scheduled to be completed in late 2025.

Flushing of foundation pressure relief drains

The drains were flushed in December 2023 and will be flushed again in late 2025.

Post-tensioned anchor testing

Routine 5-yearly anchor testing is scheduled to be completed in late 2025 and may require a temporary reduction of the dam water level.

These anchors are high-strength steel tendons which are tensioned to maintain the strength of structures including dams and bridges.

If the water level needs to be lowered to allow the assessment to be safely undertaken, Hunter Water will notify downstream property owners of a controlled water release from the scour outlet.

Emergency lighting upgrade

A major upgrade of the lighting of the dam wall was completed in June 2025 to improve the effectiveness of monitoring of the dam during emergency events overnight or in poor light.

Regular safety inspections

- Daily visual inspections
- Inspections following an earthquake
- Intermediate (annual) inspections
- Satellite monitoring to check for movement every two weeks
- Movement surveys every two years
- Comprehensive (five-yearly) inspections
- A five-yearly risk assessment
- A 15-yearly safety review

Next Steps

The current investigations are expected to take 12 to 18 months depending on the findings and weather conditions. Following this, a peer reviewed workshop will be undertaken to provide a revised risk profile and cost for the proposed upgrades.

The project will then progress through Hunter Water’s governance processes and commence through the required design and regulatory approval pathways.

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