

PROJECT CASE STUDY

Proving Long-Term Anchor Performance at Corra Linn Dam

- DYWIDAG Anchors in service for more than 30 years.
- Lift of testing results confirmed anchors remain within 5% of original lock-off loads.
- Innovative approach developed to restress anchors

How we helped our customer

Summary

For infrastructure owners, ageing assets can create difficult challenges; Are critical systems still performing as intended? Can their service life be extended safely? And what happens when an existing system needs maintenance or restressing, but was not originally designed with that requirement in mind?

At Corra Linn Dam in British Columbia, Canada, DYWIDAG worked alongside FortisBC and KGS Group to evaluate the long-term performance of DYWIDAG anchors installed more than 30 years earlier and develop a practical solution for restressing anchors that were never intended to be restressed.

The results provided valuable confidence for the customer. Lift-off testing confirmed that most anchors remained within 5% of their original lock-off loads after more than three decades in service, demonstrating the long-term performance of the original anchor system and supporting informed asset management decisions.

- **Location** British Columbia, Canada
- **Client** FortisBC
- **Partners** KGSGroup
- **Scope** Anchor performance evaluation, lift-off testing and development of a restressing solution
- **Products & Services** DYWIDAG Geotechnical anchors, anchor assessment, lift-off testing support, engineered restressing solution
- **Sector** Hydropower & Dams

Project wins

Confirmed Long-Term Performance: Most anchors remained within 5% of their original lock-off loads after more than 30 years in service

Reduced Uncertainty For The Asset Owner: Testing helped provide a clearer understanding of the anchors' condition and performance

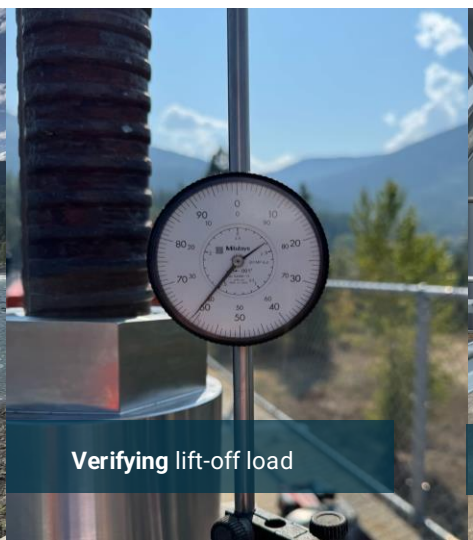
Extended Asset Value: The project supported a more informed approach to the long-term management of the dam

Solved An Unusual Engineering Challenge: DYWIDAG helped develop a restressing solution for anchors that had not originally been designed for restressing

Demonstrated Lifecycle Expertise: The project highlights how engineering knowledge and field experience can help owners maximise the performance of existing infrastructure.



Case Study: Cora Linn Dam



Verifying lift-off load



System Restressing

How we helped our customer

The Challenge

Critical infrastructure owners need confidence that ageing assets are still performing safely and reliably. At Corra Linn Dam, the challenge was to assess the condition and performance of DYWIDAG anchors installed more than 30 years earlier, while also addressing a complex technical issue: the anchors were never originally intended to be restressed.

For the customer, this created several key pain points:

- Uncertainty over long-term anchor performance
- Need to validate whether the anchors were still carrying their intended loads
- Limited options because the anchors were not designed for restressing
- Pressure to manage a critical dam asset safely and cost-effectively
- Need for a practical solution that could support long-term asset management decisions

The Solution

DYWIDAG's geotechnical team worked alongside FortisBC and KGSGroup to evaluate the anchors' performance and develop a solution for restressing anchors that were never intended to be restressed.

The approach combined:

- Specialist geotechnical expertise to understand the existing anchor system and its long-term performance.
- Lift-off testing to assess retained loads and verify how the anchors had performed over time.
- Engineering problem-solving to develop a viable restressing approach for a system not originally designed for that purpose.
- Asset management insight to help the customer make informed decisions about the dam's ongoing performance and service life.

The Result

The lift-off testing confirmed that most anchors remained within 5% of their original lock-off loads after more than three decades in service.

For the customer, this provided valuable confidence in the long-term performance of the anchors and demonstrated the benefits of proactive asset evaluation. The project highlights how targeted testing, specialist engineering support and innovative problem-solving can help infrastructure owners reduce uncertainty, maximise existing asset performance and extend service life.

More than 30 years after installation, the Corra Linn Dam project proved that long-term performance is not just designed in. It can be measured, validated and extended through the right engineering expertise.



Set-up for Lift-off Test



Creating safer, stronger, and smarter structures

DYWIDAG

Want to know more?

Discover how DYWIDAG anchoring solutions can strengthen your project's foundation. Contact our North American sales team via our website **dywidag.com**