

GRIFFIN RTM DECOMMISSIONING & DISPOSAL PROJECT

OVERVIEW

In July 2024, Birdon was awarded the Griffin RTM Disposals Services Project by Woodside Energy. The project involved the onshore receipt, deconstruction, recycling, and disposal of the recovered Riser Turret Mooring (RTM) structures from the Griffin offshore oil and gas field. Delivered by Heerema’s Heavy Lift Vessel DCV Aegir in multiple sections inside purpose-built cradles, the RTM arrived at Wharf 4, AMC Henderson, on 7th December 2024. Birdon’s scope included safe offloading, systematic dismantling, hazardous material management, waste classification, and sustainable material disposal.

Division	Disposals
Client	Woodside Energy
Location	Australian Marine Complex (AMC), Henderson, WA
Contract Value	\$6M
Project Duration	Dec 2024 - July 2025

PROJECT EXECUTION & UNIQUE ENGINEERING SOLUTIONS

Birdon implemented a blend of conventional heavy-lift techniques and innovative engineering methods to dismantle the Griffin RTM safely and efficiently:

- **Mobilisation & Load-In:** Custom-engineered set-down aides and support cradles ensured precise placement and reduced manual handling risks.
- **Deconstruction Methodology:** A hybrid approach of oxy-cutting, mechanically induced collapse, shear cutting with High reach excavator and 150t crawler crane lifts minimised working-at-heights exposure while maintaining structural control.
- **High-Reach Excavator Deployment:** Used for safely deconstruct the RTM Top Deck where there was potential trapped pressure, energised equipment and hazardous material contamination, eliminating the need for direct personnel contact.
- **In-Situ Foam Removal Frames:** Purpose-built containment frames, netting, and shade cloth systems enabled environmentally controlled removal of waterlogged foam at height.

- **Precise Lifting Plans:** Every lift was pre-studied with center-of-gravity calculations and third-party engineering verification to mitigate load shift risks.
- **Sequenced Material Separation:** Integrated workflow to segregate steel and contaminated materials for maximum recycling potential.

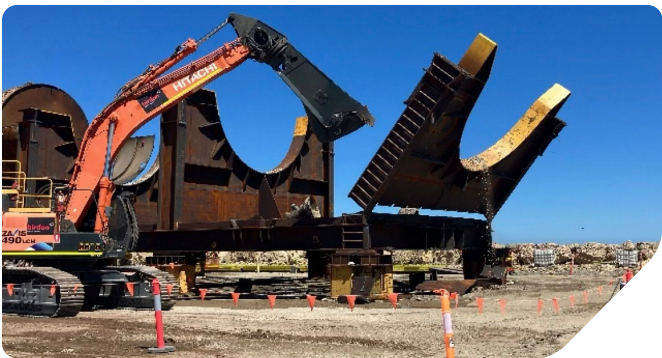


SAFETY-DRIVEN METHODOLOGIES & PROBLEM-SOLVING

The Griffin RTM project presented multiple technical challenges — from NORM and Mercury contaminated risers to waterlogged foam of two ballast compartments weighing far above original estimates. Birdon’s approach combined proactive safety measures with adaptive engineering:

- **Risk-Controlled Cutting:** Oxy-cutting and shearing methods adapted on-site to avoid foam ignition risk, replacing certain cuts with shear-based removal after real-time hazard assessment.
- **Contamination Management:** Contained NORM and hazardous waste zones with bunded exclusion areas, poly liners, and decontamination protocols verified by specialists.
- **Complex Load Challenges:** Adjusted lift methods mid-operation when section weights deviated from estimates — preventing overloading and ensuring crane stability.
- **Emergency Response Preparedness:** Rapid containment of unexpected riser fluid release using site portable bunds, spill kits and exclusion zones, preventing environmental impact.

- **Worker Safety Culture:** Daily Prestart, on-site Permit to Work systems, Safety Observation Cards, and toolbox talks engagement ensured all 10,424 total project hours were completed without a single Lost Time Injury.



SUSTAINABILITY ACHIEVEMENTS

Birdon implemented a resource recovery-first approach, resulting in:

- 100% recycling of all non-contaminated metals.
- 90% total material reuse/recycling recovery rate.
- Only 10% of materials sent to landfill, primarily hazardous or contaminated waste.
- Partnered with a local WA recycling and waste management facilities to maximise regional economic benefit.

Material	Quantity (mT)	Pathway
Recycled (metals)	2,152.9	Licensed facilities: Sims Metal, Bulk Metal Recyclers, Hayes Metal
Reused (rigging gear)	46.7	Engaged with Evolve Surplus reuse/ resale purpose
Returned (rigging gear)	46.3	Returned to Heerema for reuse

CONCLUSION

The Griffin RTM Decommissioning & Disposal Project demonstrates Birdon’s ability to deliver technically complex offshore dismantling projects with precision, safety, and sustainability at the forefront. By combining innovative engineering, robust safety management, and a recycling-first philosophy, Birdon not only exceeded client expectations but also set new benchmarks for environmentally responsible decommissioning in Australia.