

LEADING THE WAY IN SUSTAINABLE AND DOMESTIC DECOMMISSIONING WITH EX-HMAS SIRIUS

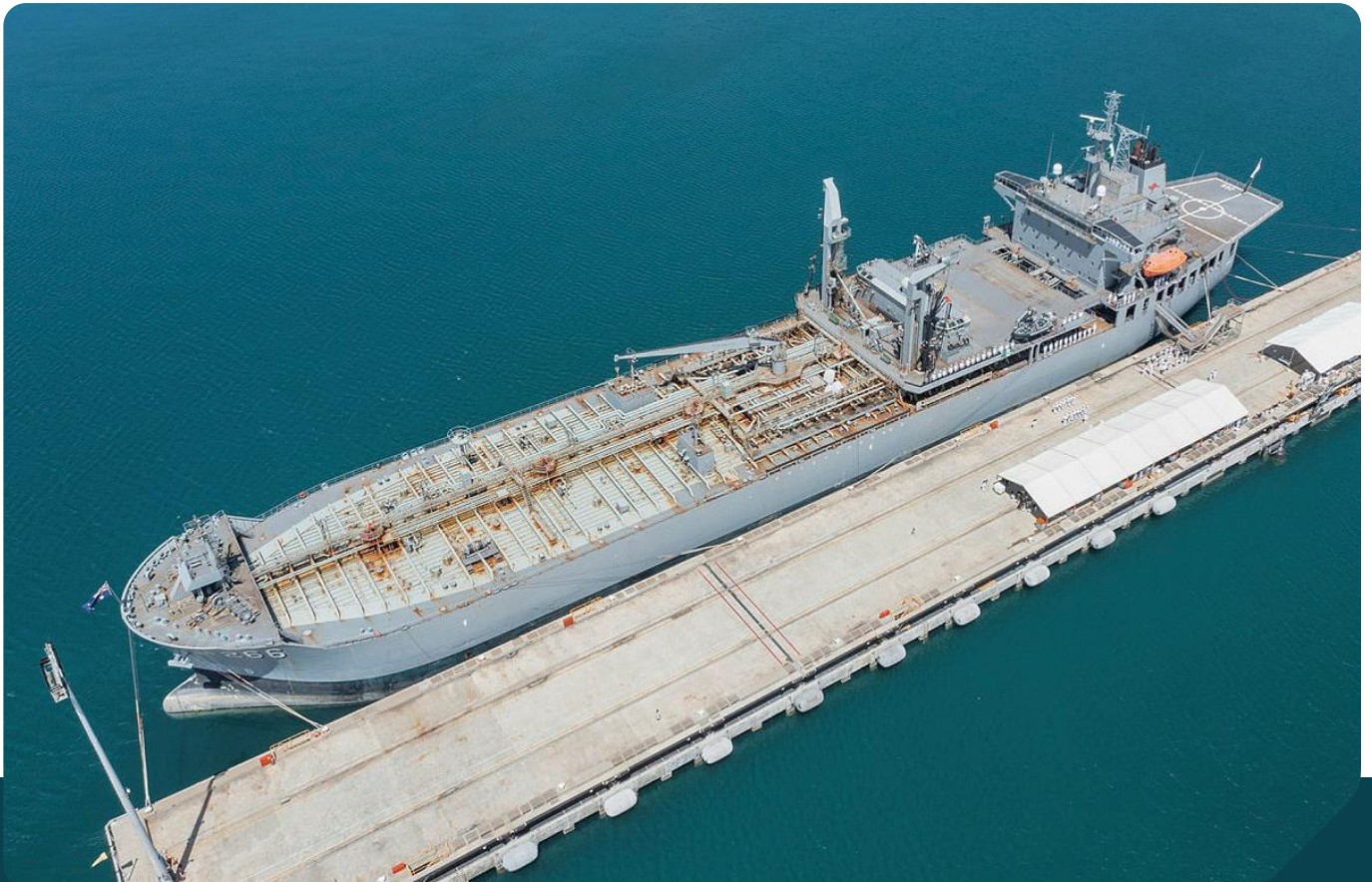
INTRODUCTION

Birdon Group has set a new benchmark in the decommissioning industry with its innovative and sustainable approach to the recycling of the Ex-HMAS Sirius. This case study highlights the key aspects of the project, the challenges faced, and the exceptional outcomes achieved.

PROJECT OVERVIEW

The Ex-HMAS Sirius, a 10,000-tonne ex-naval refuelling ship, presented a unique challenge due to its size. Birdon's groundbreaking engineering solution involved ballasting the ship to the ocean floor and cutting it in half to allow safe removal from the water.

This innovative approach emphasised sustainability, resulting in the recycling of 99.13% of materials recovered.



CHALLENGES AND SOLUTIONS



Birdon faced numerous technical challenges during the decommissioning of the Ex-HMAS Sirius, primarily due to the unique nature of the project and the size of the vessel. This presented an opportunity to provide innovative solutions.

Birdon's approach to this project included:

- **Designing and implementing a custom temporary mooring system:** This was essential to stabilise the vessel during the decommissioning process.
- **Safely and efficiently removing a substantial volume of hazardous waste:** This included aviation fuel and hydrocarbons, which were handled without any environmental incidents or spills.
- **Managing the intricate process of removing large sections of the ship on the water:** This involved dealing with adverse weather conditions and inherent structural instability, particularly when removing the helideck.
- **Carefully ballasting Sirius to the ocean floor:** Over sixty million litres of water were used to ballast the ship, ensuring it remained stable during the cutting process.
- **Utilising multiple cutting methods:** A diamond wire saw was used to mechanically cut the supply vessel in half while it rested on the ocean floor.





ENVIRONMENTAL IMPACT



The Ex-HMAS Sirius project had a significant positive environmental impact. Birdon's approach to decommissioning emphasised sustainability and environmental responsibility. Key environmental achievements included:

- Achieving an impressive 99.13% recovery rate for recyclable materials. Birdon contributed to the circular economy and ensured that a wide array of materials were repurposed.
- The vast majority of scrap steel was processed to HM1 Grade, allowing Birdon to increase the weight of each truck that carried material from the Deconstruction & Recycling Facility. This methodology also ensured that scrap metals could be shipped directly to end-user foundries and steel mills for consumption and the manufacture of new steel items.
- Segregation and processing of materials ensured the transformation of various components into valuable resources for future use, significantly reducing waste and minimising the environmental impact of the deconstruction.
- Conducting the detailed process of unbolting and removing hundreds of pumps, motors, fittings, and electrical equipment to facilitate the recovery of valuable metals.

The project did not encounter a single environmental issue from start to finish, a testament to Birdon's thorough and proactive environmental management, which aligns with international best practices in sustainability.



JOB CREATION AND WORKFORCE DEVELOPMENT



The Ex-HMAS Sirius project not only demonstrated Birdon's engineering excellence but also significantly contributed to job creation and workforce development. Birdon advanced its existing and planned partnerships with the education and training sector, positioning itself as an Employer of Choice. Key initiatives included:

- **Partnerships with Education and Training Institutions:** Birdon collaborated with local universities and technical colleges to provide hands-on training and internship opportunities for students. This initiative aimed to bridge the gap between academic learning and practical industry experience, ensuring a steady pipeline of skilled professionals for the future
- **Training and Career Development Programs:** Birdon implemented comprehensive training programs for its workforce, focusing on upskilling and reskilling employees to meet the demands of the decommissioning industry. These programs included certifications in hazardous waste management, advanced cutting techniques, and environmental sustainability practices.
- **Promoting Diversity and Inclusion:** Birdon has a strong commitment to diversity, with a high percentage of women in its workforce. The company actively promotes gender equality and provides a supportive work environment that encourages continuous learning and professional growth for all employees.
- **Building a Skilled Workforce for the Future:** Birdon's proven processes and decommissioning experience position the company as a leader in building the workforce required for the future. By investing in employee development and fostering a culture of continuous learning, Birdon ensures that it has the skilled people needed to tackle complex decommissioning projects.



CUSTOMER TESTIMONIAL



“Great job and well done. It has certainly been a much more complicated program than everyone anticipated. However, Birdon’s commitment to continually innovate, drive outcomes and firstly and foremost conduct the activity safely and with respect and dignity of all parties is a defining feature of the approach Birdon continues to take on all disposal programs I have had an involvement with. Fantastic outcome achieving greater than 99% recycling of the entire vessel (less than 1% went to landfill), you should all be proud of doing something that makes a difference.”

“

CDRE BD Smith

Director General, Major Surface Ships

Maritime Sustainment Division, Naval Shipbuilding and Sustainment Group.

CONCLUSION

The successful completion of the Ex-HMAS Sirius project demonstrates Birdon's capability and commitment to excellence in domestic decommissioning. This achievement aligns with the Australian Government's vision for a sustainable decommissioning industry, highlighting Birdon as a leader in decommissioning.

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