

Case study 6: Zanoni Historic shipwreck

Background

The Zanoni was a 44m, 338t, 1865-built barque that sank in a freak storm while travelling from Ardrossan to Port Adelaide in South Australia in 1867. The Zanoni wreck was discovered in 1983 and is now recognised as the most complete wreck of a 19th century trading vessel in South Australian waters. The wreck is protected under the *Historic Shipwrecks Act 1981* and all activities including taking a vessel into the protected zone are prohibited. In addition, since October 2012, the site of the Zanoni has been included within the Offshore Ardrossan Sanctuary Zone as part of the Upper Gulf St Vincent Marine Park (UGSVMP) management plan. Despite being protected by two legislative Acts, the wreck has sustained damage as a result of vessels anchoring and fishing at the site. In March 2015, there was an increase in community concern regarding offences at the wreck site.

This case study highlights compliance and protection activities at Zanoni, the links with the UGSVMP management plan strategies, and the socio-economic and ecological outcomes as a result of implementation of the management plan.

Improving compliance at the Zanoni

In response to community concern, DEWNR and PIRSA increased patrols to the area and witnessed up to 13 boats at the wreck site on a single visit. Targeted education of boat owners was undertaken with a total of 130 vessels engaged. This included 11 commercial vessels (marine scale fishers) and included vessels leaving from ramps in Ardrossan, as well as from the other side of Gulf St Vincent at North Haven and St Kilda. Through aerial and boat patrols, vessels breaching sanctuary zones are able to be identified and prosecuted. To date, there have been 30 prosecutions for breaches at the Zanoni site.

Since the targeted patrolling and education efforts in 2015, subsequent patrols through busy periods such as Christmas and New Year by DEWNR, PIRSA and SAPOL usually result in just a single vessel on the wreck at any time. Patrols during Easter 2017 reported no offenders at the wreck site, suggesting that education efforts are having a positive impact. Commercial fishing at the site continues to be reported but as yet no commercial offenders have been intercepted.

The Zanoni is also an attractive site for divers who may enter the 550m exclusion zone under a permit issued by DEWNR. Since marine parks were introduced in 2012 the number of vessel permits has averaged about 5 per year. Permitting allows divers to enjoy diving on the Zanoni wreck but in a manner that does not damage the wreck.

Targeted boat ramp Zanoni education

Location	No. of boat owners
Ardrossan	45
North Haven	62
St Kilda	23

Management plan strategies

Activities associated with Zanoni have addressed multiple strategies of the UGSVMP management plan:

Strategies addressed

1	2	4	5	6	7	8	10	15
✓	✓	✓	✓	✓	✓	✓	✓	✓

Strategies 1 and 2: Through targeted compliance activities the incidence of illegal fishing and boating activity at the Zanoni has decreased, thus mitigating threats to the biodiversity and habitats of the Offshore Ardrossan SZ.



Diving at the Zanoni wreck

Strategies 4, 5 and 6: A permitting system is in place to allow boats to enter the zone for research or sustainable tourism activities such as scuba diving.

Strategies 5 and 7: Education on marine parks and the Zanoni wreck has been implemented through educational signs, boat ramp outreaches and regular patrols to the area.

Strategy 8: Local community members have taken ownership for the Zanoni and voiced concern about non-compliance which lead to "Operation Open Season" being implemented.

Strategy 10: Baited Remote Underwater Video Systems (BRUVS) monitoring as part of the MER plan is conducted at the site.

Strategy 15: The compliance strategy is being implemented to ensure voluntary compliance and prosecution of offenders.

Ecological outcomes

Specific evaluation questions addressed:

- ✓ What biodiversity is included within the marine parks network?

The wreck is a haven for recreationally and commercially important fish species such as snapper. Recent studies on snapper movement have shown that in winter, snapper show strong site attachment around the Zanoni wreck before moving off in spring. The study provided good evidence of the effectiveness of well-placed sanctuary zones (Fowler et al. 2017). The ongoing marine parks MER Program is using BRUVS to monitor for changes in fish populations, including snapper that may be due to the UGSVMP management plan.

Enforcing compliance around the wreck is important to protect the artificial reef habitat that houses a range of species, as anchor chains and fishing activity can damage the habitat. It is envisaged that this protection will have a positive ecological outcome.

Socio-economic outcomes

Specific evaluation questions addressed:

- ✓ Have European heritage values changed due to marine park management plans?

The UGSVMP management plan (through the Offshore Ardrossan Sanctuary Zone) helps to protect the structural integrity of the Zanoni wreck by ensuring boating activity does not damage the site. Since implementation of the management plan the number of illegal boating incidences has declined and the plan has therefore had a positive effect on the Zanoni wreck.

References

Fowler, A.J., Huveneers, C. and Lloyd, M.T. (2017). Insights into movement behaviour of snapper (*Chrysophrys auratus*, Sparidae) from a large acoustic array. *Marine and Freshwater Research*, 68, 1438-1453.

