

## A BRIEF REPORT ON THE ASSESSMENT OF THE IMPACTS FROM AIRCRAFT AND OTHER FACTORS ON VISITOR USE AND AMENITY AT WHITEHAVEN BEACH, WHITSUNDAY ISLAND.

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**T**his paper briefly presents the results of a research project commissioned by the Great Barrier Reef Marine Park Authority (GBRMPA) to report upon the impact aircraft and watercraft activity have upon the use and amenity values visitors attribute to Whitehaven Beach. The final report from this study will be available in January 2000. This report complements an article that appeared in the previous edition of *Reef Research* ([Vol. 9, No. 2](#)) by Hamilton and Innes that reported on a sound-monitoring project undertaken at Whitehaven Beach in October 1998 (see also Hamilton 1999).

Whitehaven Beach is a dazzling six kilometre stretch of silica sand located on the south-eastern side of Whitsunday Island, the largest island in the Whitsundays group ([figure 1](#)). The beach is a popular destination for visitors to the Whitsundays and locals alike, with approximately 14 000 visitors travelling there each year<sup>1</sup>. The need to protect the unique natural and cultural values of the area combined with the pressure of high use presents a challenge for management.

To address this challenge the GBRMPA, with the [Queensland Parks and Wildlife Service](#) (QPWS), has developed a specific site plan for the Whitehaven Bay and Beach area. In keeping with the Marine Park's philosophy of multiple use, the object of the site plan is to protect the natural and cultural values of the area whilst providing a range of users opportunity to access and enjoy the area.

The object of the research project was to provide specific information to the Authority's Planning Section to report on the level of impact aircraft and watercraft activity had upon the values visitors ascribed to Whitehaven Beach. The Authority commissioned consultant social psychologists Jayne Ormsby and Scott Shafer to undertake this project.

People mainly travel to Whitehaven Beach using services provided by local Whitsundays tour operators<sup>2</sup>. The tour services provided include a large cat ferry that can transport up to 250 people, small- to medium-sized watercraft that carry 15 to 30 people, and seaplanes and helicopters. Marine Parks managers recognise that the variety of air and watercraft that provide people with the opportunity to access Whitehaven Beach can also affect peoples' use and amenity of the area as

well as its natural values. The challenge for the Authority and QPWS is to achieve a balance of use at Whitehaven Beach that is acceptable to all users and other stakeholders.

The Authority recognises the importance of incorporating objective and accurate social science information into its planning and management decisions (Williams 1996; Wachenfeld et al. 1998). The current Whitehaven Beach research follows on from social research undertaken at Whitehaven Beach by Gooch (1991) and a field experiment conducted at Green Island in 1986 to measure the impact of seaplanes on peoples' enjoyment (Brown 1986). The Whitehaven research is also built upon applied research that has been undertaken by the Cooperative Research Centre for Ecologically Sustainable Development of the Great Barrier Reef (CRC Reef Research Centre) (Shafer et al. 1998). Similar work reporting on the impact of aircraft sound on wilderness experiences has also been conducted for the United States Parks Service (Tabachinick et al. 1992) and other environmental resource management applications in the United States (Shafer and Hammitt 1995; Tarrant et al. 1995).

Data for the Whitehaven research was obtained in three ways: 1) visitor survey; 2) on-site observations; and 3) a local interest group survey. Self-administered questionnaires were completed by 583 day trip visitors on-board tourist boats during March and April 1999<sup>3</sup>.

There was a 97% response rate to the questionnaire. Of the sample, 56% were female and 44% were male, with 40% aged between 20–29 years of age. Fifty per cent were Australian visitors (4% local residents) and 50% were international travellers, mostly from Great Britain (41%), Europe (21%) and North America (21%). Twenty-two per cent had previously visited the Whitsundays and 10% had visited Whitehaven Beach before.

The presence of other people and their activities did not generally affect visitors' social amenity whilst at Whitehaven Beach. Twelve per cent reported that they felt there were too many people on the beach, whilst 85% indicated that the number of other people did not concern them. There was no significant influence in the activities of aircraft or vessels upon visitor use and amenity at Whitehaven Beach. Ninety per cent of the people interviewed indicated that the noise, distance and number of these craft did not affect their enjoyment of Whitehaven Beach.

The majority of people interviewed (88%) indicated that they would like Whitehaven Beach to remain in its present state – natural and undeveloped. Eighty-nine per cent rated their Whitehaven Beach visit as highly satisfying with 69% indicating they would definitely like to return in the future.

Both visitors to the Whitsundays interviewed and members of local interest groups were of the opinion that Whitehaven Beach was most valuable for its natural and ecological processes, conservation, recreation and educational opportunities. The values associated with economic opportunities and spiritual meaning were of least importance to respondents. The most popular words that people used to describe Whitehaven Beach were 'beautiful', 'relaxing and calming', 'quiet' and 'tranquil'. The 'clean beach', 'pure white sand', 'clear water' and 'unspoilt natural environment' were also Whitehaven Beach reflected in many peoples' responses.

The three experiences the majority of respondents were seeking related to participating in water-based activities such as swimming and snorkelling, enjoying the beach and water, and relaxing and sunbathing.

The natural and scenic qualities of Whitehaven Beach were attributes that visitors enjoyed the most. The area was not valued highly as a physically or socially active place.

The Whitehaven Beach study has highlighted that a number of experiential preferences and conditions can be developed as social indicators to monitor changes in social amenity for particular locations in the Marine Park. The results of the Whitehaven study are also consistent with the more general findings of Gooch's 1991 research. The findings also demonstrate that current management strategies being applied to Whitehaven Beach and Bay area by both the Authority and QPWS are providing opportunity for balanced multiple use of the area in line with the site plan and the settings-based structure of the Whitsundays Plan of Management.

Ormsby and Shafer's Whitehaven study provides one source of information to inform GBRMPA and QPWS planning decisions. The long-term benefit of such social science information is realised when it compounds in value when developed into a time series data set. The social science tools developed for the Whitehaven study provide GBRMPA with the capacity to regularly acquire information on usage and amenity values for specific locations with the Marine Park.

During 2000 the Authority, with the [CRC Reef Research Centre](#), will examine the development of social science monitoring programs based upon the Whitehaven research and other relevant social research. Like the long-term monitoring of the biophysical aspects of the Great Barrier Reef World Heritage Area, the development of social science monitoring programs to regularly report on a social indicators will add to the Authority's capacity to fairly balance competing uses of the Marine Park whilst protecting the area's unique natural and cultural values.

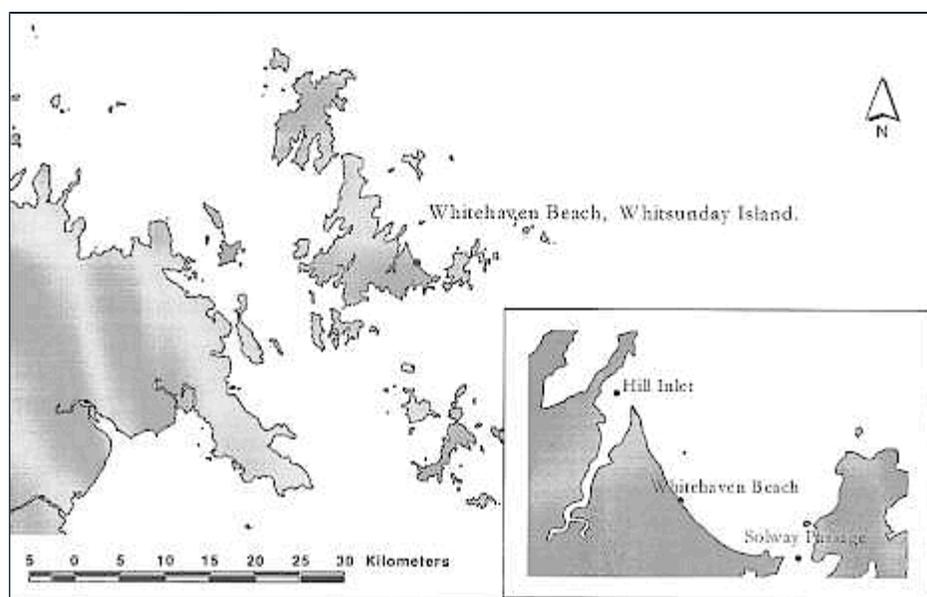


Figure 1. Whitsunday Island and adjoining mainland, Queensland, Australia (insert showing Whitehaven Beach).

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- 1** This figure is sourced from Great Barrier Reef Marine Park Authority Environmental Management Charge returns and is based upon the number of visitors who access the site through the services of Whitsunday tour operators, sail yourself yacht charters (bareboat), seaplanes and helicopters. Visitors aboard private vessels also access the beach but the exact numbers of this type of visitor are not known.
- 2** Logistical support for the Whitehaven project was provided by Fantasea Cruises, Hamilton Island Aviation, Operators of Baby J and Ocean Rafting, On the Edge and QPWS Marine Parks.
- 3** Volunteers from the QPWS Whitsundays Volunteers provided research assistance to the consultants by administering interviews to visitors on-board commercial tour vessels.



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