

# DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY



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## ***DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY***

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## SUMMARY

### Background

This technical report is part of a broader national project ‘*Systematic and strategic collection and use of visitor information in protected area management*’, funded by Sustainable Tourism Cooperative Research Centre (STCRC), and conducted in partnership with protected area agencies across Australia. The aim of this report is to provide a systematic approach to using a set of core variables to collect data in a way that can be consistently applied across Australian protected areas. This information is most relevant to park-level management, but is also of central interest for corporate reporting. An associated aim was to develop and test a questionnaire for collecting these data.

The questionnaire was developed and tested in collaboration with the WA Department of Environment and Conservation (WA DEC) and Parks Australia (PA). Surveys were conducted in Yanchep National Park, a moderately sized peri-urban park managed by WA DEC, in April 2008 and in Booderee National Park, NSW, which encompasses marine features and a botanic garden, and is managed by Parks Australia (PA), in January 2009. In WA following the survey, a focus group was held with staff to obtain their feedback on the efficacy of the questionnaire. The following recommendations are based on statistical analyses of the results, feedback from the focus group, and the observations of the researchers conducting the surveys.

### Recommendations

1. *Design and implement park-level surveys to collect information on a set of core variables.*  
The following core variables were identified by this research and provide a basis for consistent visitor surveying for protected area agencies in Australia. Appendix A provides a comprehensive list of the core and supplementary variables identified through review of protected area agency needs.

Park-level variables	Corporate-level (regional to State/Territory level) variables
<b>Core:</b> age, gender, usual residence, education level, frequency of visits, length of stay, trip purpose, activities, importance and satisfaction with facilities and services, information source about park <b>Supplementary:</b> aspects that need changing, aspects liked	<b>Core:</b> overall satisfaction, recommend park to others (another ‘outcome’ measure additional to satisfaction), disabled access, ethnic group

2. *Use the questionnaire provided in Appendix B as a template for park-based visitor surveys.*  
The questionnaire in Appendix B has been tested through application, critiqued and subsequently modified. It includes the core variables listed above. As such, it provides a suitable template and consistent approach to visitor surveying for protected areas and parks more generally. This questionnaire will enable the collection of data for park-level management, as well as allowing for comparisons across parks (because a set of consistent core variables are proposed for use across parks) and aggregation of data from selected variables for corporate reporting at regional and State/Territory-wide levels.
3. *Use ‘Monitoring Visitors to Natural Areas: A Manual with Standard Methodological Guidelines’ by Horneman, Beeton and Hockings (2002) to design and conduct visitor surveys.*  
This manual provides a wealth of information on visitor surveying. Its guidelines complement the recommendations here regarding core and supplementary variables (App. 1) and the suggested structure and content for a park-level questionnaire (App. 2).
4. *Keep questionnaires short and limited to information required for management decisions.*  
Feedback from visitors obtained through this research suggests that, for them, a 4-page questionnaire taking 10–15 minutes to complete was reasonable. In Yanchep National Park visitors stayed for 2–4 hours and the questionnaires were delivered and collected by the researchers. Where distribution is from and/or returned to boxes or other unmanned places, or completed by visitors at sites where they stay for only a short period of time, questionnaires need to be shorter.

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5. *Continue including questions in visitor surveys about the importance and satisfaction with a number of services and facilities.*

Overall satisfaction is generally part of corporate reporting requirements, however, it provides park managers with little information on the aspects of their management that have contributed to visitors' satisfaction or dissatisfaction. At a park level, the information obtained from visitors about the importance of various facilities and services is invaluable for making management decisions, including establishing priorities for capital works programs. Although these importance-satisfaction questions contribute to the length of surveys, they should be retained.
6. *Continue asking about overall satisfaction (used for corporate performance reporting) in surveys.*

The questionnaires used in this research contained three questions relating to overall satisfaction, however, the significant correlations in the answers provided suggests that at least one of the questions can be omitted. Respondents indicated that they preferred the question about overall satisfaction, and as this question is used widely in protected area management allowing comparison of responses across states and countries, it should be retained. Another of the questions, asking whether respondents would recommend the park to others, provides an important insight into whether visitors would return or encourage new visitors. It may be prudent to include this second 'satisfaction' question in other visitor surveys to further investigate its relationship to overall satisfaction and if any relationship exists between responses to this 'recommendation' question and park visitor numbers.
7. *Choose a sampling approach that provides the best possible data for decision making.*

Park managers require different types of information for different purposes. To better understand visitors and the facilities and services they require, data from individuals are required. These data would include, for example, age, activities, and when and where visitors visit. In contrast, the similarity in responses provided by group members in this research, to the questions pertaining to importance and satisfaction, suggests selecting only one member per group. A pragmatic 'next available' approach is recommended, where all members in a group encountered are invited to complete a questionnaire. This strategy minimises the refusals that can occur when one group member is asked to complete the survey, but the rest of the group wants to move on, thereby minimising non-responses and the potential associated biases. Other critical issues include sample size and obtaining a sample that is representative of the park visitor population (which includes timing of surveys). Refer to 'Research Methods for Leisure and Tourism: A Practical Guide' by Veal (2006) for guidance.
8. *Provide training for staff administering surveys and where possible rely on direct contact for questionnaire distribution and return.*

The focus group emphasised the importance of training to: ensure the 'neutrality' of responses; minimise the number of refusals to complete the questionnaires (non-responses potentially bias the results); give staff the confidence to conduct surveys; and provide staff with the skills needed to analyse and interpret results. Results from the focus group and advice regarding social science research more generally emphasise that response rates are greatly enhanced by direct contact with respondents, although the greater commitment of resources required for such an approach is widely acknowledged.



## Chapter 1

### INTRODUCTION

Protected areas in Australia and across the world are considered special places that have come to be regarded as natural and cultural assets attracting many local, national and international visitors (Worboys, Lockwood & de Lacy 2005). For management of these assets to be effective and successful, it is necessary to obtain information about who the visitors are and why they visit. This knowledge then allows managers to manage protected areas accordingly (Newsome, Moore & Dowling 2002).

### Project Context

This report contributes to a national project on the '*Systematic and strategic collection and use of visitor information in protected area management*' funded by Sustainable Tourism Cooperative Research Centre (STCRC). The project aims to develop ways to improve current practices for the collection and management of data through nationally consistent approaches and information sharing (where appropriate). It is being coordinated by the University of Technology, Sydney and partnered by Murdoch University and the University of South Australia working in close consultation with protected area agencies across Australia. The project has included a review of the visitor data collected by protected area agencies and how these data are used and stored. A set of core and supplementary variables considered necessary for effective park management has been derived from this review (Appendix A). The variable set includes information about the visitor (e.g. number, age, gender, place of residence), the visit (activities undertaken, purpose and frequency of visits), and information on their attitudes and perceptions regarding protected areas and their management.

Two 'demonstration projects' were initiated following this review to investigate methods and instruments that would enable data on the core variables to be collected. The other demonstration project is concerned with developing an effective method for estimating aggregate annual visitor numbers at a State or Territory level (Griffin, Darcy, Moore & Crilley in prep. a), which was identified as a core data need through the review process (Griffin, Darcy, Moore & Crilley in prep. b, Appendix A). This type of data is important for protected area agencies for corporate performance reporting and because they are used by the Commonwealth Grants Commission to make recommendations to the Federal Treasury on funding allocations to State protected area agencies. However, different agencies have varying methods for estimating total visitor numbers of which most are subject to a high margin of error (Griffin, Moore, Darcy & Crilley 2008).

The second demonstration project and this report focus on collecting the remainder of the core data needs, that is, who are visitors and what they do at a park level. These core data are predominantly of interest at the park level, to park managers, although a number are also of interest at a corporate (i.e. State or Territory-wide) level including overall visitor satisfaction and across-park comparisons of key variables such as visitor profiles. Such data can be used for management planning for individual parks, regional visitor management strategies and aggregated for use in statewide performance reporting (e.g. State of the Parks reporting). A better understanding of visitors should assist in more efficient and effective management decisions in response to the expectations and needs of visitors.

### Project Objectives

The key outcome for the part of the project addressed in this report was to provide a systematic approach to using a set of core variables to collect data in a consistent way across Australian protected area agencies. To develop an instrument suitable for the collection of data on these core variables, the following objectives were pursued:

1. Design and develop the layout and content of a survey instrument (questionnaire) for collection of information on visitor use of protected areas;
2. Include, test and analyse questions relating to the core variables;

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3. Field-test the questionnaire, and
4. Review the suitability of the instrument.

This report does not explore sampling matters such as recommended sample size and obtaining a sample that is representative of the park visitor population. Refer to Horneman, Beeton and Hockings (2002) and Veal (2006) for guidance.

### **Background to Visitor Surveys**

Careful planning and management are essential for the sustainable use of protected areas by visitors (Newsome et al. 2002). As all management is dependent on information, the better the quality of information that can be used, the better the opportunity for efficient management (Hornback & Eagles 1999). Collecting visitor data also increases the likelihood of the 'best' facilities and services for meeting visitor needs rather than management decisions being the result of ad hoc decisions by managers (Wardell & Moore 2005). The type of information required for effective management can include where visitors are going and what are they doing; who are they; and how satisfied were they with their visit. The information obtained can help assess the values of the park, its resources and its commercial activities, as well as contributing to a greater awareness of how visitors behave and their expectations of national parks. There is a danger that under-reporting visitor data, or even no reporting at all, can present a misleading impression to the public, business and government as to the values of parks and protected areas (Hornback & Eagles 1999).

The objectives of visitor data collection will (and must) determine the type of method or technique used. Techniques include questionnaires, telephone surveys, face-to-face ('personal') interviews and focus groups. A widely used method for collecting detailed information on visitors, and their visit and expectations, is visitor surveys based on questionnaires. Visitor surveys are used by protected area agencies worldwide, making comparisons possible across agencies and even countries (Newsome et al. 2002). When these questionnaires are distributed and collected by agency staff or researchers onsite, a high response rate is usually achieved (Horneman et al. 2002). Data collected at this park (or site) level can be used both for managing the particular park where the survey has been conducted as well as aggregated or rolled-up for use in management decisions at a regional, state or national levels. Over recent years, greater attention has been paid by governments and the public to this aggregate reporting, largely due to increasing requirements for public accountability by government departments (including protected area managers) and the need for such data in pursuing funding (Wardell & Moore 2005).

A number of protected area agencies in Australia have manuals that guide visitor surveying (e.g. NT Parks). The most comprehensive manual to-date, and applicable for use by protected area agencies Australia-wide, is *Monitoring Visitors to Natural Areas: A Manual with Standard Methodological Guidelines* (Horneman, Beeton & Hockings 2002). This manual was prepared by The University of Queensland, in collaboration with the Queensland Parks and Wildlife Service, NSW National Parks and Wildlife Service and Sport and Recreation Queensland. This technical report does not aim to reproduce this manual, rather the aim is to test and then provide a method for collecting data on a small number of core variables. Readers are strongly advised to refer to Horneman et al. (2002) for guidelines and standardised approaches to visitor surveying in general in protected areas. This technical report and Horneman et al.'s (2002) *Monitoring Visitors Manual* should be regarded as complementary.

### **Methods**

Two questionnaires were tested, one a basic instrument and the other a variation with a number of additional questions. Both were used to field trial a survey of the core variables (Appendix A), excluding visitor numbers. The first was tested in Yanchep National Park, 48 km north of Perth in Western Australia. The Park covers approximately 2,800 ha and offers a diversity of recreation opportunities including picnic areas, underground caves, wildlife enclosures and numerous tracks and trails. The central area of the Park is highly developed and modified, allowing the concentration of visitor activities. The Park attracts over 240,000 local, interstate and international visitors each year (Department of Environment and Conservation 2008).

The second questionnaire was field tested in Booderee National Park, managed by Parks Australia and located on the southeast coast of New South Wales. The Park is owned by the Wreck Bay Aboriginal Community and jointly managed through a lease arrangement with the Australian Government's Director of



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National Parks and Wildlife. Booderee National Park covers an area of 6,312 ha, including 875 ha of marine environment and a botanic garden of 80 ha, and comprises most of the Bherwerre Peninsula on the southern side of Jervis Bay, St Georges Basin and part of the waters of Jervis Bay (Director of National Parks 2002). The Park has a rich natural and cultural heritage. It is popular with visitors with a range of aquatic and land based recreation opportunities available, including boating, bushwalking, camping in developed sites, fishing, surfing, and picnicking.

Yanchep National Park was selected for its relatively high visitor numbers providing a reasonable sample size over a short survey period (Veal 2006). Furthermore, the Park offers a diversity of activities and services allowing a range of attributes to be included in the survey. The questionnaire (App. C) was handed out onsite and collected from visitors, once completed, by Murdoch University research staff during the Western Australian autumn school holidays in 2008. All visitors encountered over 18 years of age at 7 survey locations (lakeside picnic area, koala enclosure, tearooms, cave tour, visitor centre), were invited to complete a questionnaire. Each questionnaire completed was given two reference numbers—a unique identifier for each individual and for each group. A group was identified as those sitting or walking together and interacting with each other that usually arrived in the Park together.

The questionnaire layout and many of the questions were derived from current survey approaches used by the Western Australian Department of Environment and Conservation (WA DEC) and the core data needs identified as part of the broader national project (STCRC Visitor Information Project) (App. D). Questions were also sourced from Horneman et al. (2002), the current Parks Australia survey being undertaken by Gary Crilley from the University of South Australia (see following) and previous visitor survey work by Tony Griffin of the University of Technology Sydney for the New South Wales Department of Environment, Climate Change and Water. The attributes selected for inclusion in the questions about satisfaction with the Park's facilities and services were influenced by Baker and Crompton (2000), Ryan and Cessford (2003) and Tonge and Moore (2007).

Questions about the visitors themselves covered gender, place of residence, age group, ethnic group and highest level of education completed. Visit characteristics included source of information about the Park, frequency of visits, length of stay, type of travel group, numbers in travel group, form of transport, whether trip was primary destination, purpose of visit, and activities undertaken. Visitors were also asked to rate the importance of and satisfaction with a number of attributes such as access to toilets, clean barbecues, sightings of native wildlife, useful visitor guides and feeling safe in the park (App. C, *Question 10*). They were also asked about their overall level of satisfaction with their visit, using three questions: how satisfied were they, how did they feel about their visit (both sourced from WA DEC surveys and required for corporate reporting) and would they recommend the Park to others (sourced from Ryan & Cessford 2003) (App. C, *Questions 11, 12 & 13*). The last of these was included because of growing interest in measuring and monitoring the *outcomes* of visitor management (Moore & Walker 2008). Satisfaction is one outcome measure, recommendations to others and by association increased visitation, is another and potentially more concrete outcome measure.

In addition to the survey, a focus group consisting of seven staff members from WA DEC was convened to obtain their views on the general usefulness of the survey questions and the resulting data. Representatives from the organisation's regional and district staff and specialist branches were invited to the two hour focus group on 26 August 2008. The meeting was digitally recorded to assist in later analysis.

Booderee National Park was selected for inclusion in this study because it is part of an intensive visitor survey program by the University of South Australia (led by Dr Gary Crilley) with three annual surveys planned, starting in 2009, to assist staff in monitoring and benchmarking visitor service quality. Their staff plans to use the results to develop strategies to improve visitor services. Similar surveys, as part of the same initiative, are underway at Kakadu and Uluru National Parks, both also managed by Parks Australia.

Potential respondents over 18 years of age were intercepted at various points selected by staff, on a 'next-available' basis. Next available means asking the next adult who is available, when the researcher is also ready to continue with surveying. Similarly to Yanchep, more than one person in a group was surveyed. Each respondent was asked to complete and return on the same day a self-administered questionnaire. This intercept survey was conducted in the last two weeks of the NSW summer school holidays: 14 – 26 January 2009. The sampling frame included a range of sites in daylight hours over a seven-day week to include a range of known adult visitors to the Park. Survey times were selected by Park staff in consultation with University of South Australia research staff.

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The questions asked in the Booderee questionnaire were almost identical to those in the Yanchep survey (compare App.s C & E). Two additional questions were asked in the Booderee survey: about sites visited (App. 5, *Question 15*) and the personal benefits realised through their visit (App. E, *Question 20*). Four questions related to overall satisfaction were included: intention to revisit, recommending the Park to a friend, overall satisfaction with visit, and giving friends or family mementoes or photos of the visit (App. E, *Question 21*). Two of the four are the same as the Yanchep questions. The Booderee survey used a 1 to 7 scale for these general satisfaction questions while the Yanchep survey used a 1 to 5 scale. Design of the survey questionnaire and protocols used for next available intercepts, and invitations for all adults of a group to complete surveys were influenced by a range of experiences and previous published work (Crilley 2005, 2008; Howat & Crilley 2007; Tharenou, Donohue & Cooper 2007).

Booderee and the associated visitor questionnaire are included in this report because most of the variables in both this and the Yanchep survey are very similar, adding robustness to the conclusions drawn later in this report about these variables from the Yanchep results. The Booderee survey also encompasses additional variables (beyond the core ones), making it longer for visitors to complete and for staff to analyse. It is included here for comparative purposes but the intention was to provide a modified version of the Yanchep survey as the basic instrument for use by protected area agencies to collect core data that can be collected in a consistent way across sites, parks, regions and states. As such, there is necessarily more detail included in the following pages on the Yanchep survey than the Booderee one. Both are nevertheless of central importance to the ideas developed and discussed.

### **Analysis**

The survey data were entered into Excel and SPSS spreadsheets. Analysis and tests used were similar for the results from Yanchep and Booderee given that both sets of survey data have a majority of identical variables and complementary scales. Analyses for most of the data involved descriptive statistics including importance-satisfaction analyses for the data obtained from *Question 10* (rating of attributes via importance and satisfaction) in the Yanchep survey and *Question 19* (ratings of attributes via importance and performance) in the Booderee survey.

For the Yanchep results, statistical analysis via Pearson correlation tests was undertaken to determine whether there was any correlation between the answers provided for the three questions relating to overall satisfaction (*Questions 11, 12 and 13*, App. C). Paired t-tests were also used to determine whether there were any significant differences between the responses provided for these three questions. For the analyses for *Questions 10, 11, 12 and 13* an individual was randomly selected from each group because statistical tests assume statistically independent responses. There was strong evidence in the data that people in the same group provided similar responses. The same analyses were applied to the results of *Question 21 (parts a-d)* from the Booderee survey (App. E).

The comments from the WA DEC focus group were reviewed as well as information the researchers recorded while distributing questionnaires to ascertain the usefulness of questions and refine them as needed.

**Chapter 2**

**RESULTS**

**Visitor Survey**

A total of 480 individuals (206 groups) completed the Yanchep questionnaire with nine visitors declining to take part, a response rate of 98%. The results are summarised in Appendix F. Appendix G presents the confidence intervals for the proportion of response to the questions by the respondents and should be read in conjunction with interpreting the findings in Appendix F. For Booderee, 397 people were approached to participate in the survey. Of these, 62 declined, giving a response rate of 84% and 335 completed questionnaires. A selection of results from the Booderee survey is provided in Appendix H. The summary data gathered on non-respondents (recorded on declined sheets) suggested the profile of visitors declining to complete a questionnaire was not age specific, but was slightly biased towards males. Reasons for not participating were predominantly a lack of time or interest, as well as supervising children responsibilities.

Questionnaires were distributed to all individuals over the age of 18 who agreed to participate. These individuals were either on their own or in groups of two or more adults, often including children. Responses from different individuals within the one group showed strong evidence that all individuals provided similar answers to the questionnaire compared to individuals in different groups. To illustrate from the Yanchep survey, group membership was a significant predictor of responses to *Question 11* (overall satisfaction) despite the fact that the associated test for significance (one-way ANOVA) compared mean satisfaction of only 480 individuals from 206 groups. Similarly, group membership was a significant predictor of satisfaction for all but three of the attributes listed in *Question 10* (App. C).

**Overall satisfaction**

Three questions relating to overall satisfaction were included in the Yanchep survey to determine the most effective means of gathering this information. These were (with responses on a scale of 1–5):

- *Question 11: Overall, how satisfied are you with your visit to this Park?*
- *Question 12: How did you feel about your visit today?*
- *Question 13: How strongly would you recommend this Park to friends who share your interest?*

Paired t-tests indicated that there were no significant differences in the means responses to *Question 11*, *Question 12* and *Question 13*. There was a moderately high correlation between the responses to these three questions (Table 1). Three quarters of respondents (or more) gave the same answers to at least two of these questions (Table 1, column 4). This suggests that not all of the three questions are required to measure overall satisfaction as they provided similar responses.

**Table 1: Relationship between Questions 11, 12 and 13 from the Yanchep survey**

Questions	Significance in difference in mean responses (2-tailed t-test)	Correlation (r)	Percentage of respondents giving the same answer
Question 11 – Question 12 (satisfied & feeling)	0.174 NS	0.684	85
Question 11 – Question 13 (satisfied & recommend)	0.575 NS	0.568	73
Question 12 – Question 13 (feeling & recommend)	0.509 NS	0.664	75

NS Not significant

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Four questions were included in the Booderee survey (for responses on a scale of 1-7):

- *Question 21a: I intend to revisit.*
- *Question 21b: I would strongly recommend (or not recommend) it [Booderee] to travellers similar to me.*
- *Question 21c: Overall I am satisfied with my visit.*
- *Question 21d: I plan to give family or friends positive images or items of my visit (e.g. photos).*

Paired t-tests indicated a significant difference in the mean responses to the questions about revisiting and giving positive images (*Questions 21a & d*) and satisfaction and giving positive images (*Questions 21c & d*). There was a moderate correlation between the responses to these four questions (Table 2). Two thirds of respondents (or more) gave the same answers to at least two of these questions (Table 2, column 4). For ‘recommend’ and ‘satisfied’ (*Questions 21b & 21c*) 98% of respondents gave the same answer. This suggests that these two questions are measuring the same thing. The significant difference in mean responses for the question pairs including ‘give’ (*Question 21d*) suggests that people are responding differently to the idea of giving photos to family or friends, perhaps influenced by some people not having cameras with them or intending to share images they acquire.

**Table 2: Relationship between Questions 21a-d from the Booderee survey**

Questions	Significance in difference in mean responses (2-tailed t-test)	Correlation (r)	Percentage of respondents giving the same answer
Question 21a – Question 21b (revisit & recommend)	.942 NS	0.641	75
Question 21a – Question 21c (revisit & satisfied)	.543 NS	0.629	69
Question 21a – Question 21d (revisit & give)	.044*	0.421	85
Question 21b – Question 21c (recommend & satisfied)	.418 NS	0.647	98
Question 21b – Question 21d (recommend & give)	.013*	0.561	72
Question 21c – Question 21d (satisfied & give)	.032*	0.680	77

\* Significant at  $p < 0.05$

NS Not significant

### Focus Group

Participants were asked to assess the suitability of the Yanchep survey questions in order to obtain useful information for management. A summary of their responses follows. The broader discussion of the questions and their relevance appears in the next section. This part deals only with the results from the focus group and only with the Yanchep survey.

*Question 6 – Including yourself, how many people were in your vehicle?*

Participants suggested leaving this question out of future surveys. Further discussion, however, indicated that this question could be useful in helping calibrate the counts from traffic counters/classifiers used to obtain aggregate visitor numbers for individual parks and protected areas that use these technologies.

*Question 7 – When you were planning this trip, was the visit to this Park ...?*

This question was regarded as vague and potentially unclear considering that managers are more interested in whether the respondent’s visit was to just to this one park or a number of parks. Further development of this question was suggested, if needed.

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*Question 8 – What was the main purpose of your visit to this Park? Please tick one box only.*

Respondents to this question often provided more than the one response. As such, it was considered that respondents should be able to choose more than one response as it did not affect the purpose of the question. Changing to a multiple response question has implications for the type of statistical analysis that can be undertaken.

*Question 10 – Your experience of the features of this Park?*

Participants suggested reducing the list of attributes in the questionnaire (App. C). Information relating to the cleanliness of the toilets, visitor safety and visitor behaviour were noted as being already available to park staff (through ranger patrols and the like) and as such, visitors' views were not needed. Furthermore, it was suggested that rangers would be more aware of the maintenance needs and standards of roads throughout parks. Additionally, the comment was made that visitors' perceptions may not reflect reality with the example provided of low water levels causing boat tours not to be available and visitors basing their perception of 'healthy water condition' on this. As such, questions about these types of attributes may be obsolete. However, it was countered that including these attributes was useful in that the associated results could be used to help build a case for capital works funding, in addition to indicating whether money spent on these attributes has improved visitor satisfaction. An important suggestion was the inclusion of an attribute relating to general accessibility, for example disability access. Apart from using this information for park level management, protected area agencies are required to have disability action plans, with five located on the Australian Human Rights web site (AHRC 2009).

*Question 11 – Overall, how satisfied are you with your visit to this Park?*

*Question 12 – How did you feel about your visit today?*

Focus group participants suggested that these two questions were very similar and one could be omitted. Their preference was to retain *Question 11*.

*Question 17 – Which ethnic group do you belong to?*

*Question 18 – What is the highest level of education you have completed?*

Responses from the focus group indicated that these questions appear helpful on a larger reporting scale (e.g. statewide reporting) and would help to establish if the protected area agency is reaching a broad cross-section of the community. State and national governments have an interest in ethnicity to ensure that no ethnic group feels excluded or is under-represented in their opportunities to enjoy national parks. In relation to *Question 18* specifically, it was suggested by one participant that this question could be omitted as every visitor is the same in the sense that they all pay the same entrance fee regardless of education level. It was also recommended for inclusion for statewide comparison purposes as outlined above.

*Question 19 – Tell us about one aspect you would like to change in the Park?*

*Question 20 – Tell us about one aspect that you really like in the Park?*

The focus group agreed that responses to these questions provide useful information. It was also thought that the value of these responses would be dependent on a number of factors including the type of user group, the site visited, how much time was spent at the site, and questionnaire fatigue.

### **Fieldwork Researchers' Feedback**

The Yanchep questionnaire took 10–15 minutes to complete, with a number of respondents commenting that it was too long. They specifically viewed *Question 10* (importance-satisfaction matrix, App. C) as being the most time-consuming. Observations regarding specific questions are provided in Table 3 (in the next section).

For the Booderee questionnaire the time taken often depended on the time the respondent had already been in the Park and the range of sites and experiences encountered. Asking all the adults in a group to complete a questionnaire minimised refusals based on some members of a group wanting to 'move on' from a site and helped to obtain a representative sample of adults in the Park over a seven-day period. Distribution of questionnaires by Park staff or identified volunteers of Park Care, with a small incentive on completion of the questionnaire (a local park postcard), was viewed favourably. Visitors often took the time to ask questions or complement staff on park management.

## Chapter 3

### DISCUSSION OF METHODS

#### Suitability of Questions

Two types of survey variables can be identified from analysis of the fieldwork and focus group comments: core and supplementary. Although the surveys were designed with only core variables in mind it is apparent that not all the variables tested are core requirements. These core and supplementary variables can be further differentiated into park- and corporate-level. Park-level core variables provide data that are essential for park-level management—who are the visitors, what are the characteristics of their visit, what activities are they undertaking, and how satisfied are they with their park experience (Table 3). These park-level data are essential for the development of management plans, park works plans and for monitoring their implementation. Supplementary variables provide additional but not necessarily essential information for managers. At the park-level these include aspects that respondents liked and disliked about the park. Although these two questions provide useful information, they are resource intensive to analyse and as a result may not be fully utilised. For this reason and because the associated results are not essential for management they have been categorised as supplementary.

At the corporate level many agencies want information on visitors' overall satisfaction with their visit and other 'measures' of outcomes such as recommendations being made to friends (Table 4). Ethnic group and provision for disabled access are other corporate-level core variables. These data can be aggregated from the park-level to report on the performance of the protected area system at a regional or State-wide level (e.g. overall satisfaction of visitors). These corporate-level variables also provide information of use at the park-level.

Tables 3 and 4, which include the fieldwork researchers' comments from the Yanchep and Booderee surveys and feedback from the WA DEC focus group, clarify how these core and supplementary variables were identified. The tables also detail which variables need modification, based on the results from the surveys, and which questions and associated variables are not needed in future surveys.

Most of the variables (and associated questions) should be retained, except for those dealing with form of transport, number of people in transport vehicle, trip planning, and feelings about the visit (Tables 3 and 4). The two questions about transport (*Questions 5 and 6* from the Yanchep survey, App. C) can be omitted for parks where more accurate information on vehicle numbers, types and number of passengers has been obtained through other means, such as staff observations/surveys and using traffic classifiers. Parks NT and Parks Australia have contractors, staff and volunteers who observe these details for all vehicles entering the park of interest for up to 2–3 days each in peak, off-peak and shoulder season. The resultant data are then used to calibrate traffic counts obtained through automated means.

Where protected area agencies do not have manned entry stations or vehicle counters/classifiers and have insufficient staff to undertake calibration surveys these questions can provide much-needed information. Additionally, agencies may have counters that are unable to distinguish between the different types of vehicles (e.g. campervans, 4WD or 2WD) and as such the information from *Question 5* is needed to assist with site and access planning for different vehicles. The information obtained from these surveys is only useful if it is acquired in peak, off-peak and shoulder so that differential calibration factors based on the time of year can be applied. Additionally, there is growing interest in and application of other methods for counting visitors to protected areas because of the inaccuracies and costs associated with traffic counters (Griffin et al. 2008; Griffin et al. in prep. a). Protected area agencies in both NSW and Victoria now use cost-effective phone-based polling and modelling to accurately determine total annual visitor numbers to their parks and reserves. This approach appears better at meeting the core data requirement for aggregate number of visitors (Griffin et al. in prep. a) (Appendix A).

The question relating to trip planning (*Question 7* in the Yanchep survey, App. C) could also be omitted as it caused confusion with respondents being unclear as to what 'your trip' referred to—a day out from Perth or a longer trip around Australia.

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Lastly, the question on feelings about the visit was one of three in the Yanchep survey dealing with overall visitor satisfaction (*Questions 11, 12 and 13, App. C*). The significant correlation and similarity in responses between these three questions strongly suggests that only one is required. *Question 11* 'Overall, how satisfied are you with your visit to this Park' is the most widely used in Australia and elsewhere and is often used in corporate reporting to demonstrate accountability and value for monies spent. Based on comparability of results, one question, preferable *Question 11*, is sufficient to obtain the required information. If managers are interested, however, in repeat visitation or potential future visitation, or determining whether their management of a park has produced a favourable outcome, then *Question 13* 'How strongly would you recommend this Park to friends who share your interests?' would most accurately capture this. Inclusion of either question depends on the purpose of the survey. *Question 12* ('How did you feel about your visit today?') can be omitted as it overlaps with *Question 11*.

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**Table 3: Park-level core variables for future visitor surveys**

Variable (& question number) <sup>*</sup>	Fieldwork comments	Focus group comments	Recommendation
<b><i>Park-level core variables</i></b>			
Age group (YQ16, BQ8) Gender (YQ14, BQ9) Usual residence (YQ15, BQ5) Education level (YQ18, BQ7)			Retain  Retain Retain  Retain
How often visited (YQ2, BQ1) Length of stay (YQ3, BQ12) Travel group (YQ4, BQ2-4)			Retain  Retain  Replace with 'life cycle' and tour group questions (see following text)
How did you find out about park (YQ1, BQ14)	Most visitors ticked single response (Yanchep)		Retain
Purpose of trip (YQ8, BQ18)	Most respondents ticked multiple reasons rather than one as requested (Yanchep)		Retain with provision to tick multiple boxes
Activities (YQ9, BQ16-17)	Did not include 'Aboriginal tours' (Yanchep)		Retain and add more activities as required (see App. I)
Importance – satisfaction (with individual attributes) (YQ10, BQ19)	Difficulties in answering, improved once instructions provided. Perception was it took too long to answer (Yanchep)	Include disability accessibility item. Items 19 & 21 possibly cover same issue (App. C: Yanchep). Omit items 5, 7, 18 and 20, 21 – could be sourced elsewhere.	Retain, edit to include disabled access item
<b><i>Park-level supplementary variables</i></b>			
Aspects to change (Q19, BQ22)	Most respondents provided multiple aspects. Managers may 'over respond' to these	May not provide useful answers due to survey fatigue – but many responses were useful.	Omit from recommended questionnaire (Appendix B)
Aspects liked (Q20, BQ23)	Most respondents provided multiple aspects. Managers may 'over respond' to these	May not provide useful answers due to survey fatigue – but many responses were useful and could be used to argue a case.	Omit from recommended questionnaire (Appendix B)
<b><i>Omit from future surveys</i></b>			
Transport (YQ5, BQ10)	'Passenger (2WD) vehicle' created confusion (Yanchep)	Leave out. May need for site planning and calibrating traffic counter data if no other means available.	Omit
People in vehicle (YQ6)	Confusion over how many in vehicle or how many in group (Yanchep)	Leave out. May need for calibrating traffic counter data if no other means available.	Omit



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**Table 4: Corporate-level core variables for future visitor surveys**

Variable (& question number)	Fieldwork comments	Focus group comments	Recommendation
<b>Corporate-level core variables</b>			
Overall satisfaction (YQ11, BQ21-part 3)	Most respondents preferred this question to YQ12 as they understood it more easily (Yanchep)	Doubling up with Q12	Retain YQ11 (and omit YQ12)
Recommend park to others (YQ13, BQ21-part 2)			Retain as provides outcome-based evidence of success or otherwise of management (i.e. more visitors likely)
Ethnic group (YQ17, BQ6)	Many UK respondents wrote 'white Anglo Saxon' or 'white British' (Yanchep)	Useful for corporate reporting but not necessarily at park level	Re-word (see following text)
<b>Omit from future surveys</b>			
Trip planning (YQ7)	Overseas respondents tended to say 'one of several' as they were travelling Australia (Yanchep)	Potentially leave out. Unclear aim of question, most interested in whether visitation is to one park or a number of parks	Omit
Feeling re visit (YQ12)	Many respondents indicated an overlap with YQ11 (Yanchep)	Doubling up with YQ11 (Yanchep)	Omit

\*YQ1 – Yanchep question number. BQ1 – Booderee question number. The entry permit type (BQ11), accommodation type (BQ13), sites visited (up to 5) (BQ15), personal benefits (BQ20), intention to revisit (BQ21-part 1) and giving friends mementoes or photos (BQ21-part 4) were part of the Booderee survey but not the Yanchep one. They are not included in the above table.

Several of the variables and related questions were identified as needing adjustment (Tables 3 and 4, last column). This included the questions about travel group, ethnic group and the importance-satisfaction items (particularly adding an item regarding disability access).

The broader intent of the travel group question (*Question 4* in the Yanchep survey) is to find out where in the 'life cycle' of park use visitors sit. Life cycle has been identified in previous reviews (Griffin et al. in prep. b) as a core data requirement for protected area management (Appendix A). A question used successfully in a Statewide survey of national park usage in NSW was presented as follows:

<b>Which life cycle category best describes your situation?</b>	
Note: If you have children living at home whose ages are spread across more than one of the 'raising children' stages identified below, please tick the box that relates to the age of your youngest child.	
(Tick only ONE box)	
Young, single independent adult (18–34 years)	<input type="checkbox"/>
Older, single independent adult (35+ years)	<input type="checkbox"/>
Married/de facto couple with no children	<input type="checkbox"/>
Raising children, Stage I (0–5 years)	<input type="checkbox"/>
Raising children, Stage II (6–12 years)	<input type="checkbox"/>
Raising children, Stage III (13–17 years)	<input type="checkbox"/>
Have independent adult children (18+) living at home	<input type="checkbox"/>
Empty nest (all children have left home)	<input type="checkbox"/>

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To ensure that details on whether the respondent is part of a tour group or not the following question also needs to be included:

<p>Are you in a commercial tour group?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes what is the name of the company? _____</p>
---

Both these questions have been added to the recommended visitor questionnaire (Appendix B).

For the **ethnic group** question (*Question 17* in the Yanchep survey and *Question 6* in the Booderee survey), the following is suggested to prevent confusion, again based on the NSW Statewide survey:

<p>In addition to being an Australian, what ethnic group do you consider that you belong to?  <i>It is important that you provide a written response to this question and be as specific as possible in describing your ethnic/cultural background. For example, even if you are of Anglo-Saxon origin please say so.</i></p> <p>_____</p> <p><i>Another possible approach, also trialled on NSW was:</i></p> <p>In which country were you born?  <input type="checkbox"/> Australia  <input type="checkbox"/> Other – <i>please specify:</i></p> <p>In which country was your father born?  <input type="checkbox"/> Australia  <input type="checkbox"/> Other – <i>please specify:</i></p> <p>In which country was your mother born?  <input type="checkbox"/> Australia  <input type="checkbox"/> Other – <i>please specify:</i></p>
---

Including such a question on ethnicity is important for a number of agencies, as part of their social charter catering for community needs. This question has been added to the recommended visitor questionnaire (Appendix B).

For **activities**, the list provided in the Yanchep survey (App. C) provides sufficient breadth. Other activities can be included as needed for park-specific surveys. An expanded list is given in Appendix I.

Lastly, for the importance-satisfaction items, item 21 (feeling safe) can be omitted as it overlaps with feeling safe and an item on **disabled access** added. The following question is suggested:

Accessible features for people with disabilities and seniors	1	2	3	4	5	1	2	3	4	5	*
--	---	---	---	---	---	---	---	---	---	---	---

This question has also been added to the recommended visitor questionnaire (Appendix B).

A few final comments about the importance-satisfaction questions and the opinions of staff expressed in the focus group. In contrast to the views presented in the focus group (see ‘Focus group results’ for *Question 10*) it is vitally important to know visitor perceptions regarding a range of facilities and services. It is the subjective perceptions of visitors that determine in large part visitors’ satisfaction or otherwise with their visit, and hence whether they will return again, recommend the park to their friends and family, and just as importantly provide community and political support for parks into the future. Only one item ‘access to water’ may not be relevant in a number of parks and could be omitted.

### Sampling Techniques

As noted previously, this report does not explore sampling matters such as recommended sample size and obtaining a sample that is representative of the park visitor population. Refer to Horneman, Beeton and Hockings (2002) and Veal (2006) for guidance. Brief comment is provided, however, on whether to sample one person per group or all group members. On one hand statistical rigour suggests sampling only one person per group, as members of a group are all likely to provide similar responses. The Yanchep survey sampled all group members.

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In a subsequent analysis one member of each group was randomly selected to determine the relationships between group membership and similarities in responses. The results showed that people within a group answered questions similarly. Therefore, findings relying on statistical inference (such as standard errors, confidence intervals or P-values) may be unreliable if several individuals from the one group are included. This is because when individuals within a group give similar responses, it artificially inflates the sample size, therefore creating an impression of greater certainty than is realistic. This is the same reason that efforts are made not to survey the same person (or group) numerous times as they are likely to provide similar responses on each occasion.

On the other hand sampling more than one person in a group, using the 'next available' approach, can improve the response rate. This was the approach taken in the Booderee survey. If only one person is approached and invited to participate they are often under pressure from the rest of the group to keep moving and are likely then to decline involvement. If more than one member is approached and most or all of the group becomes involved, then the likelihood of refusal is reduced. Also, for sites with low visitor numbers surveying all or most group members can provide sufficient responses to provide guidance for managers, whereas rigidly sampling only person per group may result in very few completed questionnaires.

One of the most recently completed and widely distributed manuals for surveying visitors to protected areas recommends asking only one person per group to participate (Horneman et al. 2002). These authors suggest selecting the person who has had the most recent birthday, to reduce the bias that may be introduced by asking for a volunteer (e.g. females are more likely than males to complete surveys). The results from this research suggest a pragmatic approach using the 'next available' strategy to survey as many group members as possible. This strategy is valuable because it minimises refusals, and hence non-responses and the potential associated biases. Given the potential ongoing concerns raised here about sampling, it would seem sensible for managers, if they are distributing and collecting questionnaires, to give each individual and their group unique identifiers on the complete questionnaires so researchers and others can periodically test the influence of group membership on the responses (Appendix B).

The remaining outstanding issue is how to deal with tour groups. Using the 'next available' approach may mean that at some sites, the survey results are dominated by tour group members. The responses to Question 5 (Appendix B) can be used by managers to identify the questionnaires completed by tour group members and the results can then be analysed and interpreted accordingly.

### **Limitations to Study**

In reality, the strength of these results is limited by surveying only two parks, each with a slightly different survey instrument, at one period in time. The number of parks surveyed was limited by the resources available for this study. It is unlikely, however, that the results pertaining to the suitability of the questions within the survey would differ greatly with a larger and more varied sample because the variables underpinning the questionnaire were developed from various sources. Additionally, these variables have been extensively tested through previous research. The inclusion of the WA DEC focus group strengthens the analysis of the Yanchep questions given the participants' experience in visitor management across a number of parks. A larger, more varied sample could assist in further determining the attributes to be included or excluded from *Question 10* (importance-satisfaction question) in the Yanchep survey and *Question 19* (importance-performance question) in the Booderee survey.

**Chapter 4**

**RECOMMENDATIONS**

1. *Design and implement park-level surveys to collect information on a set of core variables.*  
The following core variables were identified by this research and provide a basis for consistent visitor surveying for protected area agencies in Australia. Appendix A provides a comprehensive list of the core and supplementary variables identified through review of protected area agency needs.

Park-level variables	Corporate-level (regional to State/Territory level) variables
<p><b>Core:</b> age, gender, usual residence, education level, frequency of visits, length of stay, trip purpose, activities, importance and satisfaction with facilities and services, information source about park</p> <p><b>Supplementary:</b> aspects that need changing, aspects liked</p>	<p><b>Core:</b> overall satisfaction, recommend park to others (another ‘outcome’ measure additional to satisfaction), ethnic group</p>

2. *Use the questionnaire provided in Appendix B as a template for park-based visitor surveys.*  
The questionnaire in Appendix B has been tested through application, critiqued and subsequently modified. It includes the core variables listed above. As such, it provides a suitable template and consistent approach to visitor surveying for protected areas and parks more generally. This questionnaire will enable the collection of data for park-level management, as well as allowing for comparisons across parks (because a set of consistent core variables are proposed for use across parks) and aggregation of data from selected variables for corporate reporting at regional and State/Territory-wide levels.
3. *Use ‘Monitoring Visitors to Natural Areas: A Manual with Standard Methodological Guidelines’ by Horneman, Beeton and Hockings (2002) to design and conduct visitor surveys.*  
This manual provides a wealth of information on visitor surveying. Its guidelines complement the recommendations here regarding core and supplementary variables (App. 1) and the suggested structure and content for a park-level questionnaire (App. 2).
4. *Keep questionnaires short and limited to information required for management decisions.*  
Feedback from visitors obtained through this research suggests that, for them, a 4-page questionnaire taking 10–15 minutes to complete was reasonable. In Yanchep National Park visitors stayed for 2–4 hours and the questionnaires were delivered and collected by the researchers. Where distribution is from and/or returned to boxes or other unmanned places, or completed by visitors at sites where they stay for only a short period of time, questionnaires need to be shorter.
5. *Continue including questions in visitor surveys about the importance and satisfaction with a number of services and facilities.*  
Overall satisfaction is generally part of corporate reporting requirements, however, it provides park managers with little information on the aspects of their management that have contributed to visitors’ satisfaction or dissatisfaction. At a park level, the information obtained from visitors about the importance of various facilities and services is invaluable for making management decisions, including establishing priorities for capital works programs. Although these importance-satisfaction questions contribute to the length of surveys, they should be retained.
6. *Continue asking about overall satisfaction (used for corporate performance reporting) in surveys.*  
The questionnaires used in this research contained three questions relating to overall satisfaction, however, the significant correlations in the answers provided suggests that at least one of the questions can be omitted. Respondents indicated that they preferred the question about overall satisfaction, and as this question is used widely in protected area management allowing comparison of responses across states and countries, it should be retained. Another of the questions, however, asking whether respondents would recommend the park to others, provides an important insight into whether visitors would return or encourage new visitors. It may be prudent to include this second ‘satisfaction’ question

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in other visitor surveys to further investigate its relationship to overall satisfaction and if any relationship exists between responses to this 'recommendation' question and park visitor numbers.

7. *Choose a sampling approach that provides the best possible data for decision making.*

Park managers require different types of information for different purposes. To better understand visitors and the facilities and services they require, data from individuals are required. These data would include, for example, age, activities, and when and where visitors visit. In contrast, the similarity in responses provided by group members in this research, to the questions pertaining to importance and satisfaction, suggests selecting only one member per group. A pragmatic 'next available' approach is recommended, where all members in a group encountered are invited to complete a questionnaire. This strategy minimises the refusals that can occur when one group member is asked to complete the survey, but the rest of the group wants to move on, thereby minimising non-responses and the potential associated biases. Other critical issues include sample size and obtaining a sample that is representative of the park visitor population (which includes timing of surveys). Refer to 'Research Methods for Leisure and Tourism: A Practical Guide' by Veal (2006) for guidance.

8. *Provide training for staff administering surveys and where possible rely on direct contact for questionnaire distribution and return.*

The focus group emphasised the importance of training to: ensure the 'neutrality' of responses; minimise the number of refusals to complete the questionnaires (non-responses potentially bias the results); give staff the confidence to conduct surveys; and provide staff with the skills needed to analyse and interpret results. Results from the focus group and advice regarding social science research more generally emphasise that response rates are greatly enhanced by direct contact with respondents, although the greater commitment of resources required for such an approach is widely acknowledged.

## **Appendix A: Core and Supplementary Variables Identified through Review of Protected Area Agency Needs (Griffin et al. in prep. B)**

### **CORE DATA NEEDS**

- Aggregate number of visitors State or Territory-wide
- Visitor profile, including:
  - age
  - gender
  - place of origin/residence
  - ethnic background
  - life cycle stage
  - socio-economic status (e.g. income and/or occupational status and/or education)
- Frequency/regularity of use
- Length of stay
- Activities (possibly a supplementary need if highly specific activities required)
- Purpose/motivation for visit
- Visitor satisfaction:
  - overall visit
  - with specific services/facilities/attributes
- Determinants of satisfaction/quality or experience, including:
  - importance of park/services/facilities/attributes
  - sources of dissatisfaction
- Community attitudes, values and perceptions, e.g.:
  - benefits of national parks
  - barriers/impediments to use
- Trends
  - external factors/outlook affecting visitation to protected areas
  - needs/expectations of emerging or new user groups

### **SUPPLEMENTARY DATA NEEDS**

- Number of visitors at park level
- Spatial patterns of use within individual park
- Displacement effects arising from park management changes
- Visitor characteristics, not included in core profile data, e.g.:
  - repeat visitation
  - overnight/day visitor
  - group composition
- Activities (possibly a core if broad categories required)
- Visitor information requirements (pre-visit and on-site)
- Program evaluation (e.g. for guided tours, interpretation etc.)
- Visitor experiences (deeper level of understanding)
- Commercial tour activity (numbers, spatial data etc.)
- Problems/complaints about services and facilities
- New user requirements (how to engage with and explore requirements of new user groups in depth and detail)
- Visitor safety (accidents, incidents, etc.)
- Facility preferences/expectations (to support business case for facility improvements, etc.)

## **Appendix B: Recommended Park-Based Visitor Questionnaire**

Visitor Survey  
We value your feedback

Dear Visitor,

Welcome to [*park name*], an area managed by the [*agency name*].

This survey aims to obtain your views about your visit today. We hope you can spare the time to fill out this questionnaire as your feedback will help manage this area better.

This survey will only take a few minutes to complete. Once completed, please return it to [*location/staff member*].

Thank you for sharing your thoughts and ideas.

[*AGENCY LOGO, PARK GRAPHICS, IMAGES*]

*If you have any questions or concerns regarding this survey, please contact us [*contact details*].*

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Please tell us about your experience today while visiting this Park *Please tick relevant box(es) and answer for yourself only*

### Q.1 How did you first find out about this Park? *You may tick more than one box*

- |  |  |
|--|--|
| <input type="checkbox"/> Word of mouth / friends               | <input type="checkbox"/> DEC office / staff member |
| <input type="checkbox"/> Visitor centre (local tourism office) | <input type="checkbox"/> Brochure                  |
| <input type="checkbox"/> Local knowledge                       | <input type="checkbox"/> Tourist magazine / map    |
| <input type="checkbox"/> Internet / website                    | <input type="checkbox"/> Other _____               |

### Q.2 How often do you visit this Park? *Please tick one box only*

- |  |   |
|--|---|
| <input type="checkbox"/> First visit     | <input type="checkbox"/> 2–5 times a year         |
| <input type="checkbox"/> Every few years | <input type="checkbox"/> More than 5 times a year |
| <input type="checkbox"/> Once a year     | <input type="checkbox"/> On a weekly basis        |
|  | <input type="checkbox"/> Other _____              |

### Q.3 How long did you stay (plan to stay) in the Park on this visit? *Please tick one box only*

- |   |   |
|---|---|
| <input type="checkbox"/> Short stop (under 2 hours) | <input type="checkbox"/> All day (4 to 8 hours)                     |
| <input type="checkbox"/> Half day (2 to 4 hours)    | <input type="checkbox"/> Overnight ( <i>how many nights?</i> _____) |

### Q.4 Which best describes you and your travel group? *Please tick one box only*

- |  |  |
|--|--|
| <input type="checkbox"/> Young, single independent adult (18-34 years) | <input type="checkbox"/> Raising children, Stage II (6–12 years)         |
| <input type="checkbox"/> Older, single independent adult (35+ years)   | <input type="checkbox"/> Raising children, Stage III (13-17 years)       |
| <input type="checkbox"/> Married/de facto couple with no children      | <input type="checkbox"/> Independent adult children (18+) living at home |
| <input type="checkbox"/> Raising children, Stage I (0–5 years)         | <input type="checkbox"/> Empty nest (all children have left home)        |
|  | <input type="checkbox"/> Other _____                                     |

### Q.5 Are you in a commercial tour group *Please tick one box only*

- |                              |  |
|------------------------------|--|
| <input type="checkbox"/> No  |  |
| <input type="checkbox"/> Yes | What is the name of the company? _____ |

### Q.6 What was the main purpose of your visit to this Park? *Please tick all that apply*

- |   |  |
|---|--|
| <input type="checkbox"/> To rest and relax                        | <input type="checkbox"/> To spend time with family and friends   |
| <input type="checkbox"/> To learn about native animals and plants | <input type="checkbox"/> To have a break from everyday city life |
| <input type="checkbox"/> To enjoy nature and the outdoors         | <input type="checkbox"/> To see the sights                       |
| <input type="checkbox"/> To engage in recreational activities     | <input type="checkbox"/> To get some exercise                    |
| <input type="checkbox"/> To learn about the cultural heritage     | <input type="checkbox"/> Other _____                             |

### Q.7 What activities have you participated in during this visit to this Park? *Please tick all that apply*

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Sightseeing                | <input type="checkbox"/> Bird / wildlife viewing               | <input type="checkbox"/> Visit Aboriginal / cultural sites |
| <input type="checkbox"/> Bushwalking / hiking       | <input type="checkbox"/> Guided tours                          | <input type="checkbox"/> Swimming                          |
| <input type="checkbox"/> Camping                    | <input type="checkbox"/> Photography                           | <input type="checkbox"/> Fishing                           |
| <input type="checkbox"/> Picnicking / barbecuing    | <input type="checkbox"/> Rock climbing / abseiling             | <input type="checkbox"/> Canoeing / boating                |
| <input type="checkbox"/> Relaxing / fun / enjoyment | <input type="checkbox"/> Cycling                               | <input type="checkbox"/> Snorkelling / diving              |
| <input type="checkbox"/> Fitness / health           | <input type="checkbox"/> Other ( <i>please specify</i> ) _____ |  |



## DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY

<b>Q.8 Your experiences of the features of this Park?</b>											
<p><b>For each statement below, please tell us:</b>                      (A) How important each aspect is to you as a visitor &amp;                      (B) How satisfied you were regarding each aspect.</p> <p><i>Circle one number for (A) Importance, and one number for (B) Satisfaction.</i>  <i>If you have no experience of the aspect, please still tell us how important it is to you, then circle the 'No experience'* in (B).</i></p>	(A) Importance					(B) Satisfaction					
	Not at all important	Not very important	Somewhat important	Very important	Extremely important	Not at all satisfied	Not very satisfied	Somewhat satisfied	Very satisfied	Extremely satisfied	No experience
1 Pre-visit information about the Park was easy to obtain	1	2	3	4	5	1	2	3	4	5	*
2 Useful directional road signs in the Park	1	2	3	4	5	1	2	3	4	5	*
3 Access to friendly, responsive Park staff	1	2	3	4	5	1	2	3	4	5	*
4 Access to toilet facilities	1	2	3	4	5	1	2	3	4	5	*
5 Clean, well presented toilet facilities	1	2	3	4	5	1	2	3	4	5	*
6 Clean, well presented picnic/BBQ facilities	1	2	3	4	5	1	2	3	4	5	*
7 Well designed & maintained roads	1	2	3	4	5	1	2	3	4	5	*
8 Well designed & maintained walking tracks/trails	1	2	3	4	5	1	2	3	4	5	*
9 Able to enjoy nature in this Park	1	2	3	4	5	1	2	3	4	5	*
10 Sightings of native wildlife/birds	1	2	3	4	5	1	2	3	4	5	*
11 Access to water (e.g., lake, river, ocean)	1	2	3	4	5	1	2	3	4	5	*
12 Healthy water condition (e.g., lake, river, ocean)	1	2	3	4	5	1	2	3	4	5	*
13 A broad range of activities available (e.g., walking, picnicking, bird watching)	1	2	3	4	5	1	2	3	4	5	*
14 Interesting guided walks/talks by rangers/others	1	2	3	4	5	1	2	3	4	5	*
15 Interesting information on culture (e.g., Aboriginal, non-aboriginal, heritage)	1	2	3	4	5	1	2	3	4	5	*
16 Useful visitor guides/maps in the Park	1	2	3	4	5	1	2	3	4	5	*
17 Useful information on plants & animals in the Park	1	2	3	4	5	1	2	3	4	5	*
18 Clear information about visitor safety	1	2	3	4	5	1	2	3	4	5	*
19 Feeling safe in the Park	1	2	3	4	5	1	2	3	4	5	*
20 Not too many other visitors present	1	2	3	4	5	1	2	3	4	5	*
21 Accessible features for people with disabilities and seniors	1	2	3	4	5	1	2	3	4	5	*

**DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY**

**Q.9 Overall, how satisfied are you with your visit to this Park? Please circle one number only**  
Very dissatisfied 1 2 3 4 5 Very satisfied

**Q.10 How strongly would you recommend this Park to friends who share your interests? Please circle one number only**  
Not at all 1 2 3 4 5 Very strongly

**Q.11 Are you?**  
 Male  Female

**Q.12 Where is your usual place of residence?**  
 Australia, Postcode \_\_\_\_\_  
 Overseas \_\_\_\_\_  
*(Please state which country)*

**Q.13 Which age group do you belong to?**  
18-24 25-34 35-44 45-54 55-64 65 or older

**Q.14 Which ethnic group do you belong to? (This may be in addition to being Australian e.g., Anglo Saxon, Italian. You may identify more than one group)**

**Q.15 What is the highest level of education you have completed? Please tick one box only**  
 Primary/some secondary  Secondary  Vocational/Technical  Tertiary/University

*Thank you very much for taking the time to complete this survey. Have a safe journey.*

**Office Use Only**  
Site Code:  Date of visit \_\_\_\_/\_\_\_\_/\_\_\_\_  
Group Code:  Respondent Code:

**Appendix C: Yanchep National Park Visitor Questionnaire (as tested)**

Visitor Satisfaction Survey  
We value your feedback

Dear Visitor,

Welcome to Yanchep National Park, an area managed by the Department of Environment and Conservation (DEC).

This survey aims to obtain your views about your visit today. We hope you can spare the time to fill out this questionnaire as your feedback will help manage this area better.

This survey will only take a few minutes to complete. Once completed, please return it to Murdoch University's researcher.

Thank you for sharing your thoughts and ideas.



*If you have any questions or concerns regarding this survey, please contact us, or alternatively you can contact Murdoch University's Human Research Ethics Committee on (08) 9360 6677.*

## DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY

Please tell us about your experience today while visiting this Park *Please tick relevant box(es) and answer for yourself only*

### Q.1 How did you first find out about this Park? *You may tick more than one box*

- |  |  |
|--|--|
| <input type="checkbox"/> Word of mouth / friends               | <input type="checkbox"/> DEC office / staff member |
| <input type="checkbox"/> Visitor centre (local tourism office) | <input type="checkbox"/> Brochure                  |
| <input type="checkbox"/> Local knowledge                       | <input type="checkbox"/> Tourist magazine / map    |
| <input type="checkbox"/> Internet / website                    | <input type="checkbox"/> Other _____               |

### Q.2 How often do you visit this Park? *Please tick one box only*

- |  |   |
|--|---|
| <input type="checkbox"/> First visit     | <input type="checkbox"/> 2-5 times a year         |
| <input type="checkbox"/> Every few years | <input type="checkbox"/> More than 5 times a year |
| <input type="checkbox"/> Once a year     | <input type="checkbox"/> On a weekly basis        |
|  | <input type="checkbox"/> Other _____              |

### Q.3 How long did you stay (plan to stay) in the Park on this visit? *Please tick one box only*

- |   |   |
|---|---|
| <input type="checkbox"/> Short stop (under 2 hours) | <input type="checkbox"/> All day (4 to 8 hours)                     |
| <input type="checkbox"/> Half day (2 to 4 hours)    | <input type="checkbox"/> Overnight ( <i>how many nights?</i> _____) |

### Q.4 Which best describes you and your travel group? *Please tick one box only*

- |   |  |
|---|--|
| <input type="checkbox"/> Travelling alone                           | <input type="checkbox"/> With friends and/or relatives           |
| <input type="checkbox"/> Adult couple (18 yrs and older)            | <input type="checkbox"/> Business associates travelling together |
| <input type="checkbox"/> Young family (with children under 6 years) | <input type="checkbox"/> School / university / sporting group    |
| <input type="checkbox"/> Mid-life family (with children 6-17 years) | <input type="checkbox"/> Tour group                              |
| <input type="checkbox"/> Mature couple, no children at home         | <input type="checkbox"/> Other _____                             |

### Q.5 What form of transport did you use to arrive at this Park? *Please tick one box only*

- |  |  |
|--|--|
| <input type="checkbox"/> Walk                    | <input type="checkbox"/> Tour bus / coach                |
| <input type="checkbox"/> Passenger (2WD) vehicle | <input type="checkbox"/> Campervan / caravan / motorhome |
| <input type="checkbox"/> 4WD vehicle             | <input type="checkbox"/> Other _____                     |

### Q.6 Including yourself, how many people were in your vehicle?

Adults \_\_\_\_\_ Children (under 18 years old) \_\_\_\_\_

### Q.7 When you were planning your trip, was the visit to this Park...? *Please tick one box only*

- |   |
|---|
| <input type="checkbox"/> The main destination for this trip       |
| <input type="checkbox"/> One of several destinations on this trip |
| <input type="checkbox"/> Not a planned destination on this trip   |

### Q.8 What was the main purpose of your visit to this Park? *Please tick one box only*

- |   |  |
|---|--|
| <input type="checkbox"/> To rest and relax                        | <input type="checkbox"/> To spend time with family and friends   |
| <input type="checkbox"/> To learn about native animals and plants | <input type="checkbox"/> To have a break from everyday city life |
| <input type="checkbox"/> To enjoy nature and the outdoors         | <input type="checkbox"/> To see the sights                       |
| <input type="checkbox"/> To engage in recreational activities     | <input type="checkbox"/> To get some exercise                    |
| <input type="checkbox"/> To learn about the cultural heritage     | <input type="checkbox"/> Other _____                             |

## DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY

### Q.9 What activities have you participated in during this visit to this Park? Please tick all that apply

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Sightseeing                | <input type="checkbox"/> Bird / wildlife viewing      | <input type="checkbox"/> Visit Aboriginal / cultural sites |
| <input type="checkbox"/> Bushwalking / hiking       | <input type="checkbox"/> Guided tours                 | <input type="checkbox"/> Swimming                          |
| <input type="checkbox"/> Camping                    | <input type="checkbox"/> Photography                  | <input type="checkbox"/> Fishing                           |
| <input type="checkbox"/> Picnicking / barbecuing    | <input type="checkbox"/> Rock climbing / abseiling    | <input type="checkbox"/> Canoeing / boating                |
| <input type="checkbox"/> Relaxing / fun / enjoyment | <input type="checkbox"/> Cycling                      | <input type="checkbox"/> Snorkelling / diving              |
| <input type="checkbox"/> Fitness / health           | <input type="checkbox"/> Other (please specify) _____ |  |

### Q.10 Your experiences of the features of this Park?

For each statement below, please tell us:  
 (A) How important each aspect is to you as a visitor &  
 (B) How satisfied you were regarding each aspect.

Circle one number for (A) Importance, and one number for (B) Satisfaction.  
 If you have no experience of the aspect, please still tell us how important it is to you, then circle the 'No experience'\* in (B).

	(A) Importance					(B) Satisfaction					
	Not at all important	Not very important	Somewhat important	Very important	Extremely important	Not at all satisfied	Not very satisfied	Somewhat satisfied	Very satisfied	Extremely satisfied	No experience
1 Pre-visit information about the Park was easy to obtain	1	2	3	4	5	1	2	3	4	5	*
2 Useful directional road signs in the Park	1	2	3	4	5	1	2	3	4	5	*
3 Access to friendly, responsive Park staff	1	2	3	4	5	1	2	3	4	5	*
4 Access to toilet facilities	1	2	3	4	5	1	2	3	4	5	*
5 Clean, well presented toilet facilities	1	2	3	4	5	1	2	3	4	5	*
6 Clean, well presented picnic/BBQ facilities	1	2	3	4	5	1	2	3	4	5	*
7 Well designed & maintained roads	1	2	3	4	5	1	2	3	4	5	*
8 Well designed & maintained walking tracks/trails	1	2	3	4	5	1	2	3	4	5	*
9 Able to enjoy nature in this Park	1	2	3	4	5	1	2	3	4	5	*
10 Sightings of native wildlife/birds	1	2	3	4	5	1	2	3	4	5	*
11 Access to water (e.g., lake, river, ocean)	1	2	3	4	5	1	2	3	4	5	*
12 Healthy water condition (e.g., lake, river, ocean)	1	2	3	4	5	1	2	3	4	5	*
13 A broad range of activities available (e.g., walking, picnicking, bird watching)	1	2	3	4	5	1	2	3	4	5	*
14 Interesting guided walks/talks by rangers/others	1	2	3	4	5	1	2	3	4	5	*
15 Interesting information on culture (e.g., Aboriginal, non-aboriginal, heritage)	1	2	3	4	5	1	2	3	4	5	*
16 Useful visitor guides/maps in the Park	1	2	3	4	5	1	2	3	4	5	*
17 Useful information on plants & animals in the Park	1	2	3	4	5	1	2	3	4	5	*
18 Clear information about visitor safety	1	2	3	4	5	1	2	3	4	5	*
19 Feeling safe in the Park	1	2	3	4	5	1	2	3	4	5	*
20 Not too many other visitors present	1	2	3	4	5	1	2	3	4	5	*
21 Other visitors generally well behaved	1	2	3	4	5	1	2	3	4	5	*

**DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY**

**Q.11 Overall, how satisfied are you with your visit to this Park? Please circle one number only**

Very dissatisfied 1 2 3 4 5 Very satisfied

**Q.12 How did you feel about your visit today? Please circle one number only**

Very displeased 1 2 3 4 5 Very pleased

**Q.13 How strongly would you recommend this Park to friends who share your interests? Please circle one number only**

Not at all 1 2 3 4 5 Very strongly

**Q.14 Are you?**

Male  Female

**Q.15 Where is your usual place of residence?**

Australia, Postcode \_\_\_\_\_  Overseas \_\_\_\_\_  
(Please state which country)

**Q.16 To which age group do you belong?**

18-24 25-34 35-44 45-54 55-64 65 or older

**Q.17 Which ethnic group do you belong to e.g., Australian, Aboriginal Australian, Italian? You may identify more than one group**

**Q.18 What is the highest level of education you have completed? Please tick one box only**

Primary/some secondary  Secondary  Vocational/Technical  Tertiary/University

**Q.19 Tell us about one aspect that you would like to change in the Park**

**Q.20 Tell us about one aspect that you really like in the Park**

*Thank you very much for taking the time to complete this survey. Have a safe journey.*

<b>Office Use Only</b>	
Site Code: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of visit ____/____/____
Primary respondent (✓): <input type="checkbox"/>	Group: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Respondent: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

## Appendix d: Rationale for Content of Yanchep National Park Questionnaire

(Prepared by Murdoch University in collaboration with WA DEC 11 April 2008)

Item	Question number	Source of question	
		STCRC Visitor Information Project	WA DEC
<b>VISITOR CHARACTERISTICS</b>			
Age*	16	√	√
Gender	14	√	√
Residence	15	√	√
Ethnic background	17	√	√
Life cycle stage	4	√	
Socio-economic status	18	√	
<b>VISIT CHARACTERISTICS</b>			
Frequency of use	2	√	√
Length of stay	3	√	√
Activities	9	√	√
Purpose/motivations for visit	8	√	√
Information sources	1		√
Travel group	4		√
Transport	5		√
Vehicle occupancy	6		√
Trip purpose	7		√
Likes and dislikes through open-ended question	19, 20		√
<b>SATISFACTION</b>			
Satisfaction with specific services/facilities/ attributes	10	√	√
Determinants of satisfaction			
Importance of services/facilities/ attributes	10	√	√
Satisfaction with overall visit	11	√	√
Feelings about visit	12		√
Post-visit recommendation	13		√

\* Used Australian Bureau of Statistics categories

**Appendix E: BOODEREE NATIONAL PARK Visitor questionnaire AS TESTED**

**You and Your Visit to Booderee National Park (BNP)**

1. **How many times in the past year have you visited Booderee National Park?**  
 Once (first visit)    Twice    3 to 5 times    6 to 10 times    more than 10- how many?\_
  
2. **Which of the categories below best describes you or your group?**  
 Please tick [✓] one box only.  
 Travelling alone    With friends and/or relatives  
 Adult couple (16 +)    Community/edn. group (including sports)  
 Young family (w/ children under 6 years)    Other (please specify \_\_\_\_\_)  
 Mid-life family (w/ some children 6-16 years)
  
3. **How many people altogether are in your personal travel group?**  
 One - me    Two    Three    Four    Five    More than 5 (please specify \_\_\_\_\_)
  
4. **Are you in a commercial tour group?**  
 No    Yes what is the name of the company? \_\_\_\_\_
  
5. **Where do you live?** Australia (postcode)  Or Overseas (Country) \_\_\_\_\_
  
6. **Is English the main language you speak at home?**  
 Yes    No   If you ticked 'no', what is the main language you speak at home? \_\_\_\_\_
  
7. **What is the highest level of education you have completed?**  
 Primary/some secondary    Secondary    Vocational/Technical    Tertiary/University
  
8. **Which age group are you in?**  
 15-19    20-29    30-39    40-49    50-59    60-69    70+
  
9. **Are you:** Female  or Male
  
10. **What is the main form of transport you will use in Booderee NP?**  
 Private/own vehicle    Motorcycle    Bicycle    Campervan/Motor home  
 Rented/hire vehicle    Bus/coach    Other: \_\_\_\_\_
  
11. **What type of entry permit do you have today?** Please tick [✓] one box.  
 Annual -full access    Full 48 hour pass    Entry with camping fee  
 Annual - concession    Concessional 48 hour pass    I didn't pay
  
12. **How many nights will you stay in the Shoalhaven region as part of your visit to the Park?** Please tick [✓] one box only.  
 I live locally    None (skip to Q14)    One    Two    Three    Four    More than 4
  
13. **What type of accommodation are you using while visiting Booderee NP?**  
 Please tick [✓] one box only.  
 Own holiday house    Camping in BNP    Renting a holiday house    With rel. & friends  
 Own place of residence    Camping outside BNP    Hotel/motel    Other \_\_\_\_\_



## DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY

**14. How did you access information about Booderee NP for this visit?**

Please tick [✓] one or more boxes (up to 3).

<input type="checkbox"/> Friends or relatives	<input type="checkbox"/> Media advertising (e.g. TV, radio, print)
<input type="checkbox"/> Internet	<input type="checkbox"/> Staff at accommodation places
<input type="checkbox"/> Local knowledge	<input type="checkbox"/> Tour company/guide/coach driver
<input type="checkbox"/> Motor association	<input type="checkbox"/> Visitor Information Centre (which one) _____
<input type="checkbox"/> Park Visitor Guide /brochure	<input type="checkbox"/> Travel book (e.g.: 'Lonely Planet')
	<input type="checkbox"/> Other sources (which) _____

**15. By numbering the boxes, please list up to 5 sites in the park you have already visited or will visit (with 1 being your first choice).**

<input type="checkbox"/> BNP Visitor Centre	<input type="checkbox"/> Iluka
<input type="checkbox"/> Booderee Botanic Gardens	<input type="checkbox"/> Murray's Beach
<input type="checkbox"/> Bherwerre Beach	<input type="checkbox"/> Murray's boat ramp & waters of BNP
<input type="checkbox"/> Bristol Point	<input type="checkbox"/> Murray's Loop walk-via Governors Head
<input type="checkbox"/> Cave Beach	<input type="checkbox"/> Scottish Rocks/Hole in the Wall
<input type="checkbox"/> Cape St George Lighthouse	<input type="checkbox"/> Steamers Beach
<input type="checkbox"/> Ellmoos Road	<input type="checkbox"/> Telegraph Creek Nature Trail
<input type="checkbox"/> Green Patch	<input type="checkbox"/> Other _____

**16. By numbering the boxes, please list up to 5 activities you have undertaken or plan to do on your visit (with 1 being your first choice).**

<input type="checkbox"/> Aboriginal culture walk/talk	<input type="checkbox"/> Picnicking
<input type="checkbox"/> Beach or rock fishing	<input type="checkbox"/> Purchasing souvenirs/crafts/paintings
<input type="checkbox"/> Boat fishing	<input type="checkbox"/> Ranger guided walk/talk
<input type="checkbox"/> Bushwalking/self guided walks	<input type="checkbox"/> Relaxing and taking time out
<input type="checkbox"/> Camping	<input type="checkbox"/> Scenic driving
<input type="checkbox"/> Cycling	<input type="checkbox"/> Scuba diving / snorkelling
<input type="checkbox"/> Commercial guided tours	<input type="checkbox"/> Surfing
<input type="checkbox"/> Kayaking/canoeing	<input type="checkbox"/> Swimming
<input type="checkbox"/> Learn about plants/nature	<input type="checkbox"/> Wildlife viewing
<input type="checkbox"/> Photography	<input type="checkbox"/> Other _____

**17. Were there any activities that you wanted to do in Booderee National Park that were not available?**  No  Yes (please list them \_\_\_\_\_)

**18. How strongly do you disagree or agree with the following statements?**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Mark one number for each statement to indicate your level of agreement or disagreement.					
It is important to visit places before too many tourists discover them	1	2	3	4	5
Stepping into the unknown is part of the adventure on my holidays	1	2	3	4	5
I actively seek out local people for conversation when I am on holidays	1	2	3	4	5

## DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY

19.											No experience	
	1 Importance					2 Performance						
	Very low	Low	Neutral	High	Very high	Very low	Low	Neutral	High	Very high		
<b>1. Please rate the importance</b> of each of these attributes <b>to you</b> as a visitor to Booderee NP, and												
<b>2. Rate how Booderee NP performed</b> in delivering them												
Access to useful pre-visit information about Booderee	1	2	3	4	5	1	2	3	4	5	*	
Useful directional road signs in the park	1	2	3	4	5	1	2	3	4	5	*	
Quality directional signs on walking tracks in the park	1	2	3	4	5	1	2	3	4	5	*	
Informative & interesting interpretative & information signs	1	2	3	4	5	1	2	3	4	5	*	
Useful visitor guides and maps in the park	1	2	3	4	5	1	2	3	4	5	*	
Clear and reassuring information about visitor safety	1	2	3	4	5	1	2	3	4	5	*	
Access to friendly and responsive park staff	1	2	3	4	5	1	2	3	4	5	*	
Friendly and responsive service at the entrance stations	1	2	3	4	5	1	2	3	4	5	*	
Accurate, current information available at visitor/cultural centres	1	2	3	4	5	1	2	3	4	5	*	
Opportunities for guided walks/talks by rangers	1	2	3	4	5	1	2	3	4	5	*	
Access to toilet facilities	1	2	3	4	5	1	2	3	4	5	*	
Clean and well presented toilet facilities	1	2	3	4	5	1	2	3	4	5	*	
Not too many other visitors in the same location	1	2	3	4	5	1	2	3	4	5	*	
Well designed and maintained walking tracks	1	2	3	4	5	1	2	3	4	5	*	
Clean and well presented picnic and BBQ facilities	1	2	3	4	5	1	2	3	4	5	*	
Clean and well presented campgrounds	1	2	3	4	5	1	2	3	4	5	*	
Access to drinking water	1	2	3	4	5	1	2	3	4	5	*	
Value for money camping experience	1	2	3	4	5	1	2	3	4	5	*	
A suitable range of accommodation levels nearby	1	2	3	4	5	1	2	3	4	5	*	
Opportunities to engage in Aboriginal-guided activities	1	2	3	4	5	1	2	3	4	5	*	
Useful information about plants and animals	1	2	3	4	5	1	2	3	4	5	*	
Accurate and interesting information on Aboriginal culture	1	2	3	4	5	1	2	3	4	5	*	
Sightings of native wildlife	1	2	3	4	5	1	2	3	4	5	*	
A broad range of experiences available (e.g. walking, picnicking, bird watching, fishing)	1	2	3	4	5	1	2	3	4	5	*	



## DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY

### 20. Personal benefits from your visit to Booderee NP

1 Please rate how important each benefit is for you as a visitor to Booderee, and then  2 Rate the level of benefit you attained from your visit.	1 Important level rating					2 Level of benefit attained rating					
	Very low	Low	Neutral	High	Very high	Very low	Low	Neutral	High	Very high	No experience
Learning about this part of Australia	1	2	3	4	5	1	2	3	4	5	*
Experiencing nature and the natural environment	1	2	3	4	5	1	2	3	4	5	*
Learning about nature and the natural environment	1	2	3	4	5	1	2	3	4	5	*
Escape everyday routines	1	2	3	4	5	1	2	3	4	5	*
Improving my health and wellbeing	1	2	3	4	5	1	2	3	4	5	*
Escaping the pressures of daily life and relaxing	1	2	3	4	5	1	2	3	4	5	*
Spending time with my family and friends	1	2	3	4	5	1	2	3	4	5	*
Taking time out for myself	1	2	3	4	5	1	2	3	4	5	*
Enjoying the scenery and aesthetics of locations	1	2	3	4	5	1	2	3	4	5	*
Visiting interesting destinations and attractions	1	2	3	4	5	1	2	3	4	5	*
Discovering and exploring new destinations	1	2	3	4	5	1	2	3	4	5	*
Experiencing local histories and cultures	1	2	3	4	5	1	2	3	4	5	*
Meeting new people	1	2	3	4	5	1	2	3	4	5	*
Experiencing Aboriginal culture	1	2	3	4	5	1	2	3	4	5	*
Learning about Aboriginal culture	1	2	3	4	5	1	2	3	4	5	*

21. How strongly do you disagree or agree with the following statements.  Mark one number for each statement in regard to Booderee NP where 1 is weakest, 7 is strongest	Definitely not	Disagreement or weak rating	Undecided	Agreement or strong rating	Yes definitely		
I intend to revisit	1	2	3	4	5	6	7
I would strongly recommend (or not recommend) it to travellers similar to me.	1	2	3	4	5	6	7
Overall I am satisfied with my visit	1	2	3	4	5	6	7
I plan to give family or friends positive images or items of my visit (eg photos).	1	2	3	4	5	6	7

22. What was the **most negative** aspect about your time in Booderee National Park during this visit?

---

23. What was the **most positive** aspect about your time in Booderee National Park during this visit?

---

*Once again, thank you for your time.*

## Appendix F: Results from Yanchep National Park Visitor Survey

Note. Where the responses sum to >100% this is because respondents were able to tick more than response (e.g. as in Question 8).

### Question 1

Information source	Number of visitors (%)
Word of mouth	50
DEC office/staff member	1
Visitor centre	3
Brochure	5
Local knowledge	31
Tourist magazine/map	8
Internet/website	3
Other	4

### Question 2

How Often	Number of visitors (%)
First visit	47
Every few years	24
Once a year	6
2-5 times per year	11
more than 5 times per year	7
Weekly	2
Other	3

### Question 3

Length of stay	Number of visitors (%)
Short stop (<2h)	16
Half day (2-4h)	69
All day (4-8h)	14
Overnight	1

### Question 4

Type of travel group	Number of visitors (%)
Alone	2
Adult couple	13
Young family	16
Mid-life family	17
Mature couple	6
Friends/relatives	39
Business associates	1
School group	6

### Question 5

Type of vehicle	Number of visitors (%)
Walking	2
2WD vehicle	62
4WD vehicle	28
Tour bus/coach	6
Campervan/motorhome	2

### Question 6

Average number of adults (over 18 years of age) per vehicle: 2.6

Average number of children (under 18 years of age) per vehicle: 1.1

### Question 7

Purpose of trip	Number of visitors (%)
Main purpose	63
One of several	23
Not planned	14

### Question 8

Main purpose of trip	Number of visitors (%)
Rest/relax	12
Learn about flora/fauna	13
Enjoy nature/outdoors	33
Recreational activities	2
Learn about culture	1
Time with family/friends	16
Break from everyday city life	21
See the sights	8
Exercise	1
Other	5

### Question 9

Activities participated in	Number of visitors (%)
Sightseeing	65.0
Bushwalking/hiking	28.0
Camping	1.0
Picnicking/BBQ	27.0
Relaxing/fun/enjoyment	52.0
Fitness/health	7.0
Bird/wildlife viewing	60.0
Guided tours	27.0
Photography	31.0
Rock climbing	0.5
Cycling	1.0
Visit Aboriginal/cultural sites	17.0
Swimming	0.5
Fishing	0.0
Canoeing/boating	1.0
Snorkelling/diving	0.0
Other	12.0

## DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY

### Question 10

Attribute	N	Mean Importance (standard error)	Mean Satisfaction (standard error)
1. Pre-visit information about the Park was easy to obtain	168	3.40 (0.08)	3.82 (0.06)
2. Useful directional road signs in the Park	183	3.98 (0.06)	3.93 (0.06)
3. Access to friendly, responsive Park staff	176	3.86 (0.06)	4.17 (0.05)
4. Access to toilet facilities	179	4.13 (0.06)	4.20 (0.05)
5. Clean, well presented toilet facilities	169	4.19 (0.05)	3.76 (0.07)
6. Clean, well presented picnic/BBQ facilities	138	3.88 (0.08)	4.07 (0.06)
7. Well designed & maintained roads	186	3.67 (0.06)	4.11 (0.05)
8. Well designed & maintained walking tracks/trails	166	3.92 (0.06)	4.18 (0.05)
9. Able to enjoy nature in this Park	191	4.34 (0.05)	4.35 (0.05)
10. Sightings of native wildlife/birds	181	4.14 (0.06)	4.27 (0.05)
11. Access to water (e.g. lake, river, ocean)	171	3.54 (0.07)	4.02 (0.06)
12. Healthy water condition (e.g. lake, river, ocean)	161	4.03 (0.06)	3.94 (0.06)
13. A broad range of activities available (e.g. walking, picnicking, bird watching)	174	3.98 (0.06)	4.06 (0.05)
14. Interesting guided walks/talks by rangers/others	130	3.60 (0.08)	4.02 (0.06)
15. Interesting information on culture (e.g. Aboriginal, non-Aboriginal, heritage)	136	3.63 (0.07)	3.87 (0.07)
16. Useful visitor guides/maps in the Park	177	4.03 (0.05)	4.06 (0.05)
17. Useful information on plants & animals in the Park	164	3.87 (0.06)	3.87 (0.06)
18. Clear information about visitor safety	155	3.72 (0.07)	3.83 (0.06)
19. Feeling safe in the Park	183	4.25 (0.06)	4.28 (0.04)
20. Not too many other visitors present	183	3.33 (0.08)	4.10 (0.05)
21. Other visitors generally well behaved	184	4.14 (0.06)	4.26 (0.05)
<b>Grand means</b>		3.89	4.06

### Question 11

How satisfied	Number of visitors (%)
1 (very dissatisfied)	0.5
2	1.0
3	4.0
4	42.0
5 (very satisfied)	52.5

### Question 12

How pleased	Number of visitors (%)
1 (very displeased)	0.0
2	0.5
3	5.0
4	39.0
5 (very pleased)	55.5

### Question 13

How strongly they would recommend the park	Number of visitors (%)
1 (not at all)	0.5
2	0.5
3	5.0
4	39.0
5 (very strongly)	56.0

### Question 14

Number of male visitors: 40%  
Number of female visitors: 60%

### Question 15

Australia	Number of visitors (%)	Overseas	Number of visitors (%)
Western Australia	60	Asia	12.0
Interstate	5	Africa	0.5
Overseas	35	Europe	77.0
		Pacific	3.5
		North America	7.0

## DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY

### Question 16

Age Category	Number of visitors (%)
18–24	10
25–34	16
35–44	29
45–54	18
55–64	15
>65	12

### Question 17

Ethnic group	Number of visitors (%)
Australian	44
British	30
German	4
Chinese	2
Other	20

### Question 18

Level of education	Number of visitors (%)
Primary	2
Secondary	24
Vocational/Technical	19
Tertiary/University	55

### Question 19

The results have been grouped according to common themes and responses:

Facilities – more eating facilities, more interactive facilities, more BBQs, more shelters, more seats, improve cleanliness (tables, BBQs, toilets), better lighting in toilets, more bins, update toilets, better walking paths for prams and wheelchairs;

Activities – need more activities, more activities (interactive) for children, Aboriginal experience during the week, children’s playground, water activities;

Natural environment – consistent water access, control of feral animals, removal of animal droppings on lawn, more animals for viewing;

Education – more guided tours (koalas, Aboriginal, caves), more information on flora and fauna, signs on roads/in the park, more interpretation, reduction in group size on cave tours; and

General – remove sculptures, updated information if activities are not available, more publicity, seasonal passes, extend shop/cafe opening hours.

### Question 20

Responses included:

#### Natural aspects

- Wildlife – kangaroos, birds, being close to, access, free roaming;
- Koalas – koala boardwalk;
- Flora – trees, representative coastal habitat, smell of eucalyptus, mix with lawn areas, beautiful gardens;
- Caves – cave tour;
- Waterbodies – lake and wetlands;

Cultural aspects – Aboriginal experience;

Atmosphere –relaxing, peaceful, spacious, close to nature, serenity, quietness, freedom to roam, not too touristy, not commercialised, tranquillity, being casual, feel of the park;

Staff – friendly, helpful;

‘Created’ environment – lawn areas, picnic areas, BBQ, walking trails, well maintained, the presentation of the park, order and cleanliness, constant improvement, general layout, wheelchair access;

Facilities – Yanchep Inn, cafe (tearoom), range of facilities.

## **Appendix G: Confidence Intervals and Significance of Results for Yanchep National Park Survey**

All surveys are subject to a certain amount of statistical error. The margins of error, or ‘confidence intervals’, are based on the sample size of the study. The confidence intervals for the sample in this study are as follows:

**Table 5: Confidence Intervals**

<b>Finding from survey (n = 480)</b>	<b>95% Confidence Interval</b>
50%	+ or – 4.6
40/60%	+ or – 4.5
30/70%	+ or – 4.2
20/80%	+ or – 3.7
90/10%	+ or – 2.7
95/5%	+ or – 2.0

This means, for example, in commenting on a question where 50 percent of respondents found their park information through “word of mouth”, there is a 95 percent chance that the true population percentage lies between 50 + or – 4.5, that is in the interval of 45.4 – 54.6 percent. This is significantly different from 31 percent of respondents who knew through “local knowledge” where we can be 95 percent certain that the true population percentage is in between 31 + or – 4.2, that is the interval 26.8 – 35.2. If the intervals for the two responses for a question overlap, they are not significantly different and we can not be certain that this is true for the population. In this case, they do not overlap and therefore there is a significant difference in the responses and we can be certain that this is true for the population. These confidence intervals need to be taken in to account when reading the analysis of the report (adapted from Veal 2006, p. 294).



Appendix H: Results from Booderee National Park Visitor Survey



**Booderee National Park Visitor Snapshot 2009**





### Whom did we listen to?

Adult visitors to Booderee were intercepted on a 'next available' basis.

Summary of Visitors to Booderee National Park	
Australian	94%
International visitors	6%
<b>Total number of visitors</b>	<b>279</b>

How Did They Travel?	%
Private/own vehicle	93
Rented/hired vehicle	3
Bicycle	3

With Whom Did They Visit?	%
With friends and/or relatives	34
Mid-life family (children 6-16)	32
Young family (children under 6)	13
Adult couple (16 years and older)	13

### How Did They Access Information?

Visitors accessed information primarily from:

- Friends or relatives
- Local knowledge
- Internet
- Parks visitor guide/brochure
- Visitor information centre

### What Do They Visit in Booderee?

Five of the main sites visited in Booderee during January:

- Cave Beach
- Green Patch
- Murray's Beach
- Booderee National Park Visitor Centre
- Booderee Botanic Gardens

### What Do They Do at Booderee?

The five main activities undertaken by respondents in Booderee were:

- Swimming
- Relaxing and taking time out
- Bush walks/self guided walks
- Camping
- Picnicking

### Visitor Benefits

Visitors were asked to rate the importance of personal benefits sought from their visit to Booderee.

Selected personal benefits	Importance rating 1 to 5
Enjoying the scenery & aesthetics of location	4.5
Escaping the pressure of daily life & relaxing	4.5
Spending time with family & friends	4.5



**Booderee National Park Visitor Snapshot 2009**





### Visitor Service Quality

Visitor service quality (VSQ) is defined as the extent or level to which visitor service attributes of importance are matched by the perceived level of service provision; or 'What you want' compared to 'what you get'.

Selected VSQ Attributes	Importance rating 1 to 5
Access to toilet facilities	4.5
Clean & well presented toilet facilities	4.5
Access to drinking water	4.4

### Where Did They Stay?

Accommodation places for visitors staying overnight :

- Booderee National Park camp grounds
- Rented holiday house
- Own place of residence or own holiday house

How Many Nights Did They Stay in the Shoalhaven region?	%
I live locally	19
None	9
One	5
Two	5
Three	8
Four	6
More than four	49

### Visitors' Advocating

Visitors were asked four questions about their overall feelings, and what they plan to do, or say about their visit after leaving Booderee. All questions required people to rate their response from 1 = very unlikely, or definitely not, through to 7 = very likely, or yes definitely.

Advocacy & loyalty	Domestic Visitors
Intend to revisit	6.5
Overall satisfaction with the visit	6.5
Level of recommendation	6.5
Plan to give family/friends positive images of Booderee	6.4

Age profile of Visitors surveyed	%
15-19	6
20-29	14
30-39	25
40-49	29
50-59	19
60-69	6
70 years and over	2

**There's more in the full report**

For more results, please refer to the full report with Parks Australia staff.  
 Information on the research project & researchers is available from CT&LM, School of Management, University of South Australia (08) 8302 5321;  
 Email [raylene.jones@unisa.edu.au](mailto:raylene.jones@unisa.edu.au) Website: <http://www.unisa.edu.au/tourismleisure>



## **Appendix I: Visitor Activities Categories**

The following activity items are taken from the Statewide survey of national park usage in NSW. The activities listed in the recommended questionnaire in Appendix A can be regarded as the core set. The following list provides additional options for managers. Another useful resource is the list in Horneman et al. (2002).

<b>CODE</b>	<b>ACTIVITY</b>
1	ABORIGINAL HERITAGE APPRECIATION
2	ACCOMMODATION
3	ASTRONOMY/ STAR GAZING
4	CAMPING
5	CANYONING
6	CAR AND ROAD MOTORBIKES
7	CAVING
8	CLIMBING
9	CONFERENCES/ CONCERTS/ FESTIVALS ETC
10	CYCLING (ROAD OR MOUNTAIN BIKING)
11	DINING/ EATING AT FOOD OUTLETS
12	EXERCISING/ FITNESS
13	FIRE RELATED ACTIVITIES
14	FISHING
15	FORMAL SPORT
16	FOSSICKING
17	FOUR WHEEL DRIVING
18	GEOLOGICAL/ GEOMORPHOLOGICAL APPRECIATION
19	GRASS SKIING
20	GUIDED/ COMMERCIAL TOURS
21	HANG GLIDING/ PARAGLIDING
22	HOLIDAY/ BREAK AWAY/ WEEKEND TRIP
23	HORSE RIDING/ CAMEL RIDING
24	ICE SKATING
25	INFORMAL SPORT/ FREE PLAY
26	KITE FLYING/ MODEL PLANE FLYING
27	LOCATION/ NEARBY/ CENTRAL
28	LOOKOUTS AND SCENERY
29	MOTOR BOATING/ PARASAILING
30	MOUNTAIN BIKING
31	ORIENTEERING AND ROGAINING
32	OTHER EDUCATIONAL ACTIVITIES
33	OTHER SPORTS RELATED ACTIVITY
34	OUTDOOR ACTIVITY WITH OR FOR CHILDREN
35	PHOTOGRAPHY
36	PICNICKING AND BARBECUES
37	PLAYGROUNDS
38	POST-SETTLEMENT HERITAGE APPRECIATION
39	READING
40	RECREATION NFI
41	RELAXING/ RESTING
42	ROLLER BLADING/ SKATING
43	ROWING/ RAFTING/ CANOEING/ KAYAKING
44	RUNNING/ JOGGING
45	SAILING/ KITE SURFING/ SAIL BOARDING
46	SAND TOBOGGANING
47	SCENIC DRIVING
48	SCHOOL/ UNIVERSITY EXCURSIONS

## ***DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY***

- 49 SCUBA DIVING/ SNORKELLING
- 50 SIGHTSEEING
- 51 SKATE BOARDING
- 52 SKIING/ SNOWBOARDING/ TOBOGGANING
- 53 SOCIALISING WITH/ MEETING WITH FRIENDS/ FAMILY
- 54 SUNBATHING/ SITTING AROUND
- 55 SUPERVISING CHILDRENS PLAY IN PLAY AREA
- 56 SURFING
- 57 SWIMMING
- 58 TRAIL BIKE RIDING
- 59 TRAVELLING OR PASSING THROUGH FROM OR TO SOME OTHER PLACE
- 60 VOLUNTEER WORK
- 61 WALKING/ BUSHWALKING (SHORT, LONG, OVERNIGHT)
- 62 WALKING THE DOG
- 63 WATERSKIING
- 64 WEDDINGS
- 65 WILDFLOWER DISPLAYS
- 66 WILDLIFE WATCHING
- 67 WORKING

Sub-categories are justified where there are different management implications arising from a specific activity, for example, splitting cycling into road or mountain biking.

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## ***DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY***

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***DESIGNING AND TESTING A PARK-BASED VISITOR SURVEY***

- Travel and tourism industry
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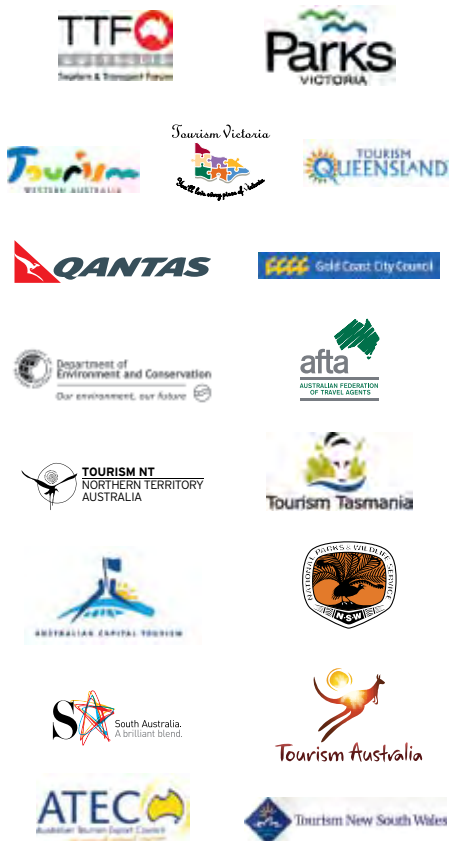
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### Introduction

STCRC has grown to be the largest dedicated tourism research organisation in the world, with \$187 million invested in tourism research programs, commercialisation and education since 1997.

STCRC was established in July 2003 under the Commonwealth Government's CRC program and is an extension of the previous Tourism CRC, which operated from 1997 to 2003.

### Role and responsibilities

The Commonwealth CRC program aims to turn research outcomes into successful new products, services and technologies. This enables Australian industries to be more efficient, productive and competitive.

The program emphasises collaboration between businesses and researchers to maximise the benefits of research through utilisation, commercialisation and technology transfer.

An education component focuses on producing graduates with skills relevant to industry needs.

### STCRC's objectives are to enhance:

- the contribution of long-term scientific and technological research and innovation to Australia's sustainable economic and social development;
- the transfer of research outputs into outcomes of economic, environmental or social benefit to Australia;
- the value of graduate researchers to Australia;
- collaboration among researchers, between researchers and industry or other users; and
- efficiency in the use of intellectual and other research outcomes.