

# Sustainable Nature Based Tourism: Planning and Management

## Report on Visitation and Use at Mamu Rainforest Canopy Walkway, Far North Queensland, 2009/2010



Julie Carmody and Bruce Prideaux



Australian Government  
Department of the Environment,  
Water, Heritage and the Arts



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Far North Queensland, 2009/2010

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**Australian Government**  
**Department of the Environment,  
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Supported by the Australian Government's  
Marine and Tropical Sciences Research Facility  
Project 4.9.2 Sustainable Nature Based Tourism: Planning and Management

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ISBN 978-1-921359-98-9

**This report should be cited as:**

Carmody, J. and Prideaux, B. (2011) *Sustainable Nature Based Tourism: Planning and Management. Report on Visitation and Use at Mamu Rainforest Canopy Walkway, Far North Queensland, 2009/2010*. Report to the Marine and Tropical Sciences Research Facility. Published by the Reef and Rainforest Research Centre Limited, Cairns (63pp.).

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March 2011

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## Acronyms and Abbreviations

<b>DERM</b> .....	Queensland Department of Environment and Resource Management
<b>MTSRF</b> .....	Marine and Tropical Sciences Research Facility
<b>N</b> .....	Entire survey sample
<b>n</b> .....	Portion of survey sample
<b>QPWS</b> .....	Queensland Parks and Wildlife Service
<b>WTMA</b> .....	Wet Tropics Management Authority
<b>WTWHA</b> .....	Wet Tropics World Heritage Area

## Acknowledgements

Funding for this research was provided by the Australian Government's Marine and Tropical Sciences Research Facility (MTRSF) and the Wet Tropics Management Authority.

We would like to acknowledge the assistance of Max Chappell (Wet Tropics Management Authority) and Andrew Millerd (Queensland Department of Environment and Resource Management). We would also like to thank Brett Stallbaum, Diane Edwards and the ranger staff at the Mamu Rainforest Canopy Walkway for their assistance in the distribution and collection of visitor surveys. Data entry was completed by Debbie Cobden.

## Key Findings

The following key findings are based on a visitor survey (N = 181) undertaken at Mamu Rainforest Canopy Walkway between April and July 2009. Where findings are reported as a mean, 1 represents the lowest level of agreement with given statements by survey respondents, while 6 represents the highest level of agreement.

### ***Respondent Profile***

- The mean age of survey respondents was 51.7 years.
- Most respondents were travelling independently and used a private vehicle (85.3%).

### ***Travel Patterns***

- The largest groups of respondents travelled from Innisfail (19.3%), Cairns (11.1%) and home (6.4%).
- After leaving the Walkway, respondents were mostly travelling on to towns and attractions on the Atherton Tablelands (38.2%) as well as Innisfail (12.2%) and Cairns (6.9%).
- Word-of-mouth and road signs were the most popular information sources used to locate Mamu Rainforest Canopy Walkway.

### ***Reasons for Visiting Mamu Rainforest Canopy Walkway***

- The main reasons for visiting the Walkway were to see natural features and scenery (mean = 5.15) and to experience nature (5.01).
- Respondents who had visited other canopy walks generally considered Mamu to be better (54.2%) or the same (31.9%) in terms of overall visitor satisfaction.

### ***Perceptions of the Natural Environment***

- The natural environment surrounding the Walkway was considered interesting (mean = 5.59), well-managed (5.57), appealing (5.57) and in good condition (5.43).

### ***Perceptions and Use of the Site Facilities***

- The Walkway facilities were considered to be in good condition (mean = 5.62), well-managed (5.54), adequate (5.49) and appealing (5.45).
- The walking tracks (94.8%), viewing platform (92.0%) and toilet (87.4%) were the most used facilities.

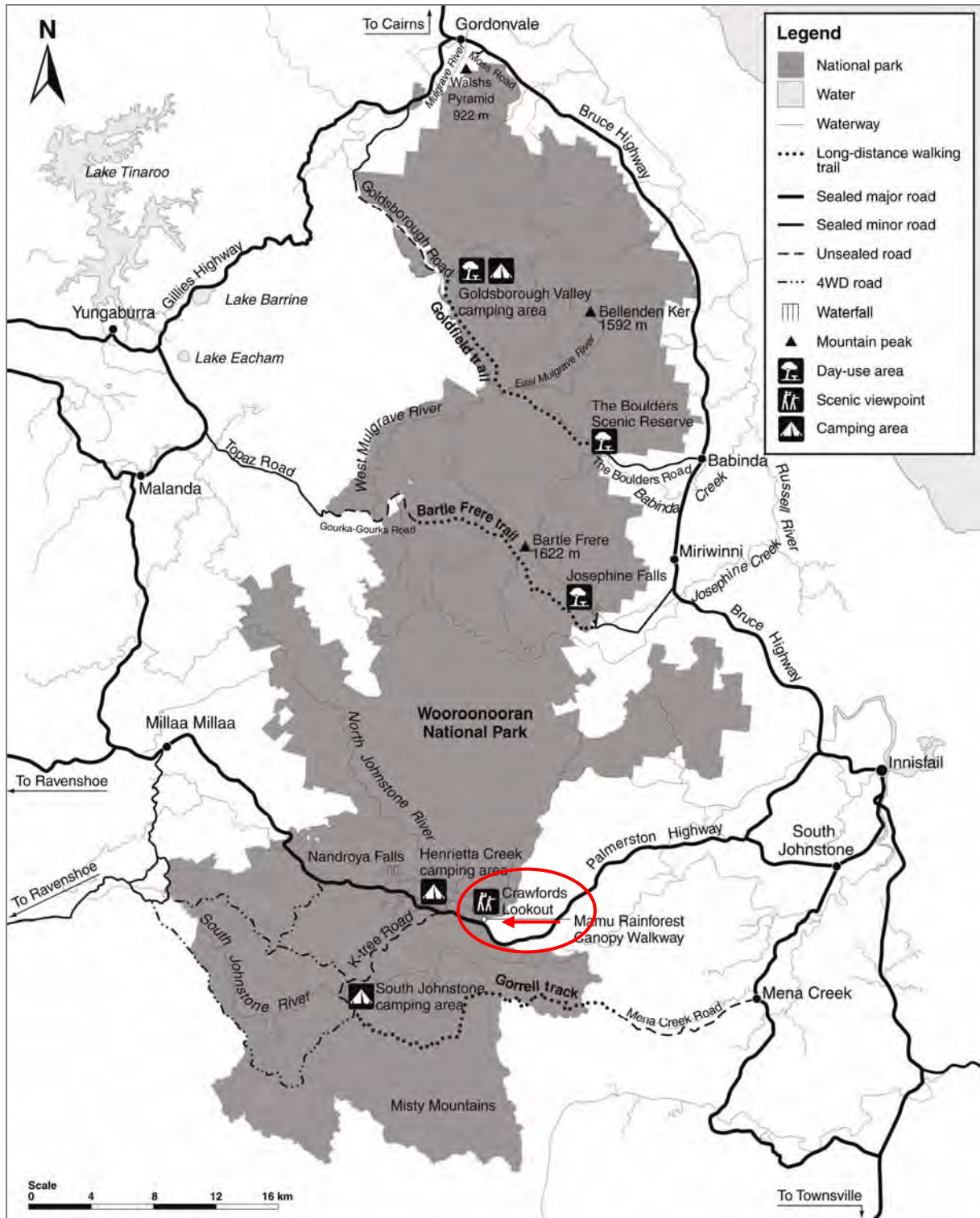
### ***Perceptions of Signage***

- There was highest levels of agreement that rules and safety signage were easy to understand (mean = 5.52) and that signage about the natural features was interesting (5.49).

### ***Satisfaction with the Visitor Experience***

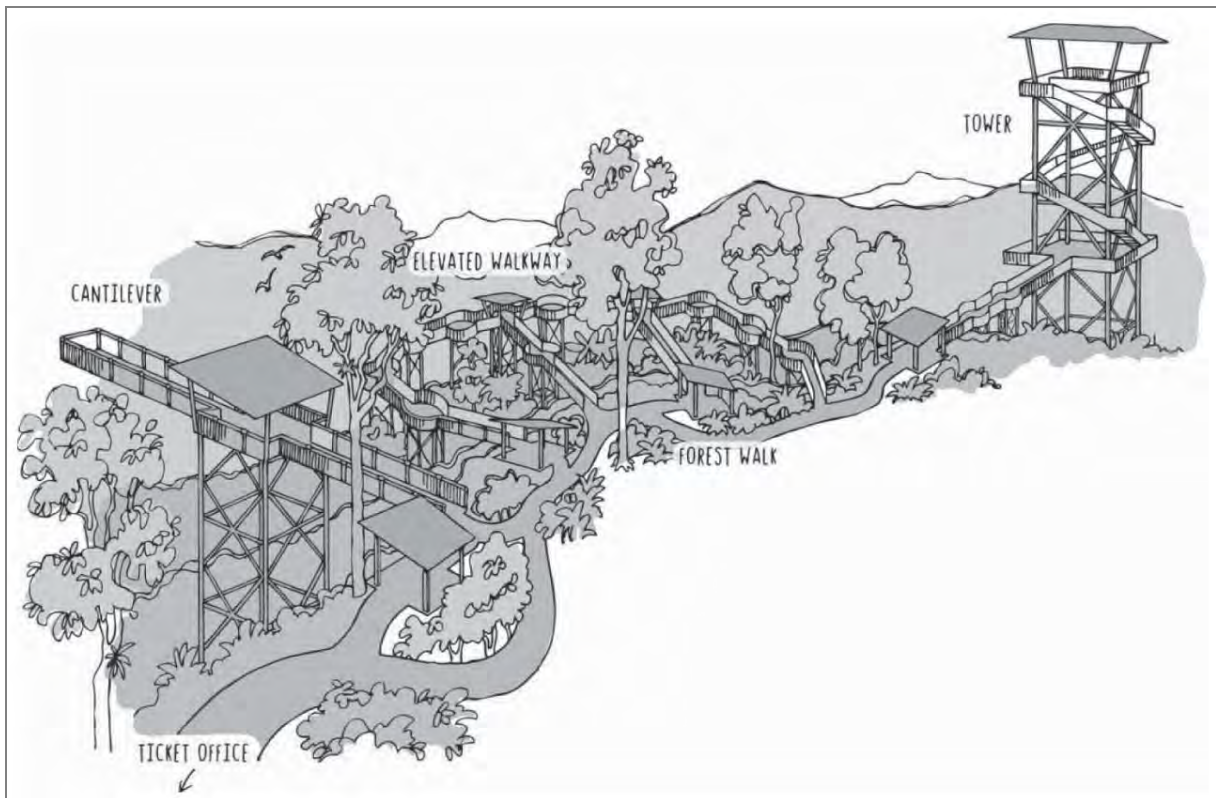
- The Walkway observation tower and helpful staff enhanced the visitor experience.
- There was no evidence of overcrowding being an issue.
- Generally, high levels of satisfaction with the Mamu Rainforest Canopy Walkway were evident.

WOOROONOORAN NATIONAL PARK



**Figure i:** Wooroonooran National Park, showing the Mamu Rainforest Canopy Walkway visitor survey site. Map courtesy of Queensland Parks and Wildlife Service, Department of Environment and Resource Management.

MAMU RAINFOREST CANOPY WALKWAY -  
WOOROONOORAN NATIONAL PARK



**Figure ii:** Mamu Rainforest Canopy Walkway visitor map. Map courtesy of Queensland Parks and Wildlife Service, Department of Environment and Resource Management.



# 1. Introduction

This report is one of a series of ten that examine visitor activity at sites within Wet Tropics rainforests. The aim of the research was to provide a snapshot of visitor activity to inform management on how sites are used and investigate visitors' views on site management. Visitor data was collected using a self-completed visitor survey. Collectively the series of reports will provide an overall understanding of how visitors use the rainforest and provide managers with feedback that can be used for site management and future planning.

Responsibility for the management of the Wet Tropics rainforests is shared by the Wet Tropics Management Authority (WTMA) and the Queensland Department of Environment and Resource Management (DERM). The WTMA was established after listing of the Wet Tropics as a World Heritage site and is responsible for the planning of visitor sites across the Wet Tropics World Heritage Area (WTWHA). The Queensland Parks and Wildlife Service (QPWS), an agency of the DERM, has responsibility for the day to day management of site infrastructure including toilets, car parking, signage, viewing lookouts, boardwalks, walking trails and other recreational facilities. The Wet Tropics has a large number of visitor sites, some of which have high rates of visitation. A number of sites have relatively low visitation rates, but all offer unique nature-based visitor experiences.

## 1.1 Site Location and Description

The Mamu Rainforest Canopy Walkway is located 115 kilometres south of Cairns on the Palmerston Highway (see Figure i) in the traditional country of the Ma:Mu Aboriginal people. The site is located on the eastern edge of the WTWHA and Wooroonooran National Park near Crawford's Lookout. The Walkway was built in an area of forest that suffered considerable damage from Tropical Cyclone *Larry* in 2006 and was opened on the 25 August 2008. The Walkway is the only QPWS site that operates on a commercial basis and is the only visitor site that charges an admission fee.

The site features a 2.5 kilometre return walk that leads visitors to a 37 metre high observation tower that overlooks the North Johnstone River. The forest walk provides access to a cantilever walkway and platform providing views of the gorge below and a 350 metre elevated walkway that winds through the rainforest canopy providing opportunities for viewing birds, wildlife and flowers at the canopy level.

Admission charges at the time of this survey were \$20 per adult, \$10 per child or \$50 per family (2 adults and 2 children). Where applicable, a \$16 concession fee is charged, while residents in the Cairns Regional Council area as well as residents of the Cassowary Coast and Tablelands Regional Council areas are entitled to a 20% concession fee. Special prices are available for school groups. The Walkway is open every day of the year except Christmas Day (Department of Environment and Resource Management, 2010).

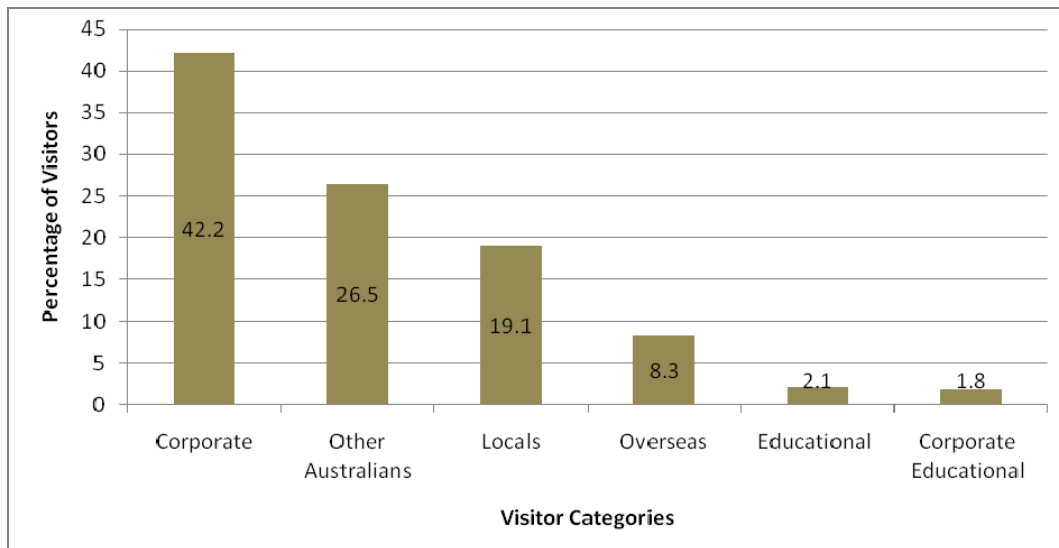
## 1.2 Previous Research

Previous visitor research has not been carried out at the Mamu Rainforest Canopy Walkway.

## 1.3 Traffic Counter and Visitor Counter Data

Traffic counter data is not collected at the Mamu Rainforest Canopy Walkway.

During 2009, visitor counter data collected at the Walkway indicates the site was visited by some 38,530 tourists (Department of Environment and Resource Management, 2010). Figure 1 provides a segmentation of visitors by origin. Corporate visitors are defined as visitors taken to the site by a commercial tour company and in this survey was the largest visitor sector (42.2%, n = 16,246) followed by other Australians (26.5%, n = 10,192). Corporate educational groups included school groups travelling as members of a commercial tour (1.8%) while educational groups are defined as school groups which travelled to the Walkway by private coach (2.1%). Local residents accounted for 19.1% of all visitors during 2009.



**Figure 1:** Visitor numbers to Mamu Rainforest Canopy Walkway recorded in 2009. Data courtesy of Queensland Parks and Wildlife Service, DERM.

## 2. Methodology

The aims of this report are to:

- Investigate visitor activities undertaken at the Mamu Rainforest Canopy Walkway visitor site; and
- Identify visitors' views about aspects of the site including its management.

Specific objectives of the research were to:

- Provide a snapshot profile of visitors to the Walkway;
- Understand visitors' perceptions of the management of the site;
- Understand visitors' perceptions of the natural environment at the site;
- Gain an understanding of visitors' travel patterns within the Wet Tropics region; and
- Assess the suitability of the interpretative information provided at the site.

A convenience sampling technique was used and data was analysed with the SPSS v17 statistical package.

This research complements earlier research (Carmody and Prideaux, 2008) that investigated how local residents used the Wet Tropics and their views on its management.

### 2.1 Survey Instrument

The Wet Tropics Visitor Site Level Survey (Appendix 1) was designed to gather information on visitors' expectations, perceptions and experiences of the Mamu Rainforest Canopy Walkway visitor site. The survey was based on a previous instrument used at visitor sites in 2001/2002, thereby allowing some comparison of results between the two surveys (see Carmody and Prideaux, 2010). The survey instrument used at the Walkway varied slightly to that used at the other nine sites surveyed as part of this project, in that three questions were modified. Where visitors to other Wet Tropics sites were surveyed for willingness-to-pay, visitors to the Walkway were instead asked to indicate other canopy walks they had visited, and how the Mamu Rainforest Canopy Walkway compared to these.

The self-completion survey contained 31 closed and open-ended questions. Open-ended questions were used because they can test specificity of knowledge more effectively (as shown by Whitmarsh, 2009), provide richer responses (Altinay and Paraskevas, 2008) and can minimise social desirability bias (Budeanu, 2007). The survey instrument was organised into eight sections commencing with demographic data (Table 1). Aspects of the survey, such as site location, date and time of survey collection and weather were recorded by survey staff.

**Table 1:** Components of the Mamu Rainforest Canopy Walkway visitor survey.

<b>Section A</b>	Background information	Place of residence, occupation, education, age, gender
<b>Section B</b>	Travel and transport	Organised tour or free and independent traveller, travel party, mode of transport, pre- and post-visit of site, experience of protected natural areas
<b>Section C</b>	Reasons for visiting	Motivations, activities, time spent at site, fee acceptability
<b>Section D</b>	Natural environment	Perceptions of the natural environment
<b>Section E</b>	Site facilities	Use of site facilities, expectations of facilities, perceptions of facilities, ranger presence, comparison with other canopy walkways
<b>Section F</b>	Information	Prior information search, perceptions of on-site information, additional information required
<b>Section G</b>	Visitor experience	Aspects of visit that enhanced and detracted from experience, perceptions of crowding
<b>Additional comments</b>		Open-ended to allow for any comments and feedback

## 2.2 Survey Collection

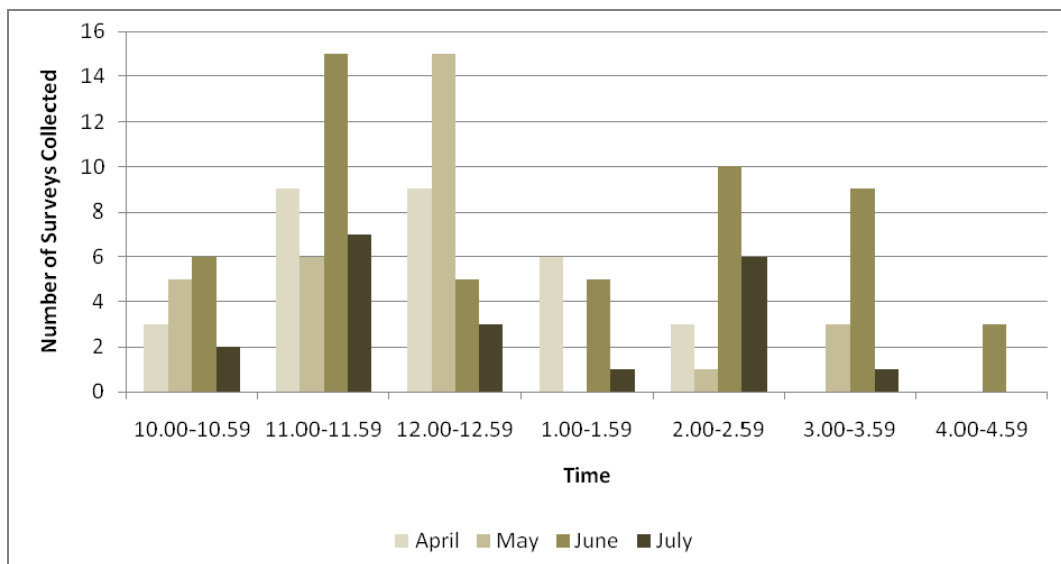
Surveying was conducted between April and July 2009 by staff of the Mamu Rainforest Canopy Walkway using a convenience sampling approach technique. Walkway staff members approached visitors on their return to the site's entrance/exit station and asked visitors if they would complete the survey. The purpose of the survey was explained and Walkway staff indicated the survey would take approximately ten minutes to complete. A postcard or WTMA cassowary sticker was offered as a token of appreciation on completion. Table 2 provides an overview of survey collection statistics.

Figure 2 details the number of surveys collected by month and time. Most surveys were collected during June ( $n = 53$ ) between 11.00 am and 12.00 noon ( $n = 15$ ) and between 2.00 pm and 4.00 pm ( $n = 19$ ).

**Table 2:** Mamu Rainforest Canopy Walkway visitor survey collection times and details (n = 167). Note, survey numbers detailed here (n = 167) are smaller than the actual total sample surveyed (N = 181) due to some survey collection details not having been recorded by Walkway staff.

Date	Day	Weather	Visitor Frequency	Percent of Total
10 April 2009	Saturday	Overcast	1	0.6
11 April 2009	Sunday	Overcast	10	6.0
12 April 2009	Monday	Overcast	2	1.2
13 April 2009	Tuesday	Raining	1	0.6
14 April 2009	Wednesday	Overcast	2	1.2
24 April 2009	Saturday	Sunny	2	1.2
25 April 2009	Sunday	Sunny	8	4.8
26 April 2009	Monday	Sunny	3	1.8
27 April 2009	Tuesday	Sunny	1	0.6
28 April 2009	Wednesday	Sunny	1	0.6
29 April 2009	Thursday	Sunny	2	1.2
1 May 2009	Saturday	Sunny	3	1.8
4 May 2009	Tuesday	Overcast	3	1.8
6 May 2009	Thursday	Overcast	1	0.6
8 May 2009	Saturday	Overcast	4	2.4
16 May 2009	Sunday	Overcast	2	1.2
21 May 2009	Friday	Sunny	4	2.4
28 May 2009	Friday	Overcast	4	2.4
30 May 2009	Sunday	Sunny	10	6.0
31 May 2009	Monday	Overcast	5	3.0
1 June 2009	Tuesday	Overcast	3	1.8
2 June 2009	Wednesday	Overcast	3	1.8
4 June 2009	Friday	Sunny	1	0.6
5 June 2009	Saturday	Sunny	1	0.6
6 June 2009	Sunday	Sunny	1	0.6
9 June 2009	Wednesday	Sunny	5	3.0
10 June 2009	Thursday	Sunny	4	2.4
11 June 2009	Friday	Sunny	2	1.1
12 June 2009	Saturday	Sunny and overcast	2	1.2
14 June 2009	Monday	Overcast	2	1.2
17 June 2009	Thursday	Overcast	1	0.6
18 June 2009	Friday	Overcast	1	0.6
19 June 2009	Saturday	Overcast	9	5.4
20 June 2009	Sunday	Sunny	2	1.2
21 June 2009	Monday	Overcast	5	3.0

Date	Day	Weather	Visitor Frequency	Percent of Total
22 June 2009	Tuesday	Sunny and overcast	2	1.2
24 June 2009	Thursday	Overcast	1	0.6
25 June 2009	Friday	Overcast and sunny	11	6.6
27 June 2009	Sunday	Sunny	1	0.6
28 June 2009	Monday	Sunny	5	3.0
1 July 2009	Wednesday	Sunny	1	0.6
2 July 2009	Thursday	Sunny and warm	2	1.2
6 July 2009	Tuesday	Sunny	1	0.6
8 July 2009	Thursday	Overcast	1	0.6
9 July 2009	Friday	Overcast and warm	6	3.6
16 July 2009	Friday	Sunny	1	0.6
17 July 2009	Saturday	Sunny	1	0.6
20 July 2009	Tuesday	Overcast	1	0.6
21 July 2009	Wednesday	Overcast	2	1.2
23 July 2009	Friday	-	1	0.6
27 July 2009	Tuesday	Sunny	19	11.4
<b>Total</b>			<b>167</b>	<b>100.0</b>



**Figure 2:** Surveys collected by date and time (n = 133).

## 2.3 Non-response and Observations

Refusals to complete the survey were not recorded at Mamu Rainforest Canopy Walkway.

## 2.4 Limitations

There were some limitations associated with the research that should be considered prior to generalising the results:

- First, the survey was conducted using a convenience sampling approach and may not be representative of all visitor segments to the Mamu Rainforest Canopy Walkway;
- Second, the sample size was limited by time and budget constraints, which precluded the researchers from identifying seasonality issues;
- Third, the survey was only available in English, resulting in a possible under-reporting of some nationalities visiting the site;
- Fourth, there was potential for social desirability bias occurring where respondents offered answers that are seen to be desirable or acceptable but may not reflect their true opinions. In most cases it is difficult to determine the level of social desirability for any given question;
- Finally, the number of international visitors surveyed was small ( $n = 18$ ) and for this reason comparisons between domestic and international visitors are omitted from the report.

### ***Understanding the Results***

Both closed questions with specific response options and open-ended questions were used in the visitor survey. The advantage of closed questions is that it allows the researcher to investigate specific issues of interest while open-ended questions provide a good indication of top-of-mind responses and concerns of interviewees. Closed response questions generally asked respondents to use a six-point Likert scale. In the following discussion, the results of closed questions are reported as means and as the percentage breakdown by the six items on the Likert scale. Means are useful for ranking in order of importance while percentage breakdown gives a clearer indication of the strength of agreement or disagreement with a particular given statement. The following discussion should be read with these considerations in mind. It should also be noted that not every question was answered by all respondents, thus the 'n' values of tables and figures may vary. The 'n' value reports valid responses. The 'N' value reports the entire sample.

### 3. Findings

The results presented in this report are from the Wet Tropics Visitor Site Level Survey undertaken at Mamu Rainforest Canopy Walkway between April and July 2009.

#### 3.1 Respondent Profile

Slightly less males (48.1%) than females (51.9%) completed the survey.

##### ***Place of Residence***

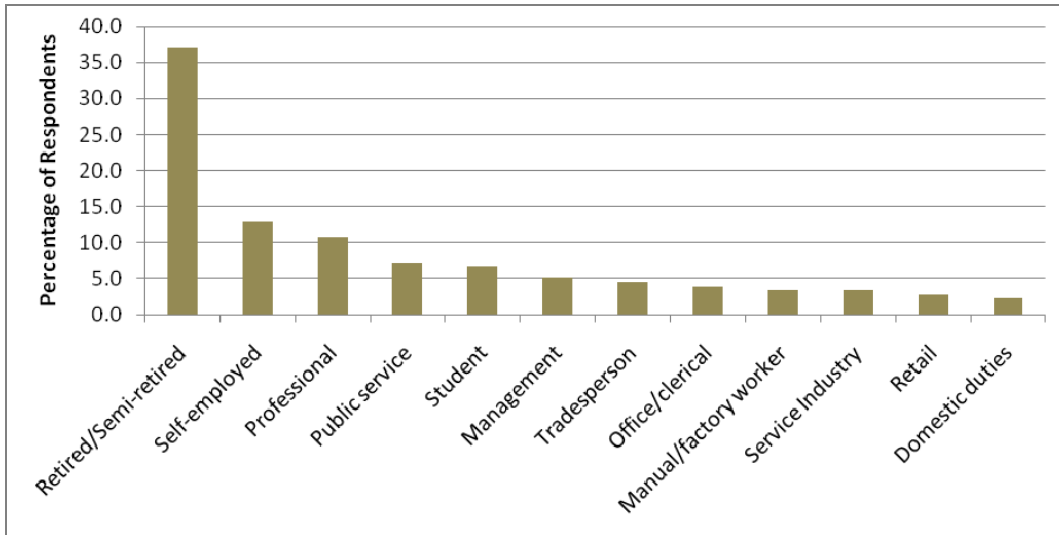
The majority of respondents were domestic visitors (89.6%). Surveys of the origin of respondents (Table 3) indicate that North Queensland residents (54.3%) were the largest visitor group followed by those from other Queensland locations (14.5%) as well as New South Wales (9.8%). Due to the small number of international respondents (n = 18) surveyed at the Walkway, most analyses throughout this report will not differentiate between domestic and international respondents.

**Table 3:** Origin of Mamu Rainforest Canopy Walkway survey respondents (n = 173).

	Frequency (n)	Percent (%)
<b>DOMESTIC</b>		
North Queensland	94	54.3
Other Queensland	25	14.5
New South Wales	17	9.8
Western Australia	10	5.8
Victoria	9	5.2
<b>Domestic Total</b>	<b>155</b>	<b>89.6</b>
<b>INTERNATIONAL</b>		
North America	8	4.6
Europe	6	3.5
England/ UK	3	1.7
New Zealand	1	0.6
<b>International Total</b>	<b>18</b>	<b>10.4</b>
<b>Total Domestic and International</b>	<b>173</b>	<b>100.0</b>

### Occupation

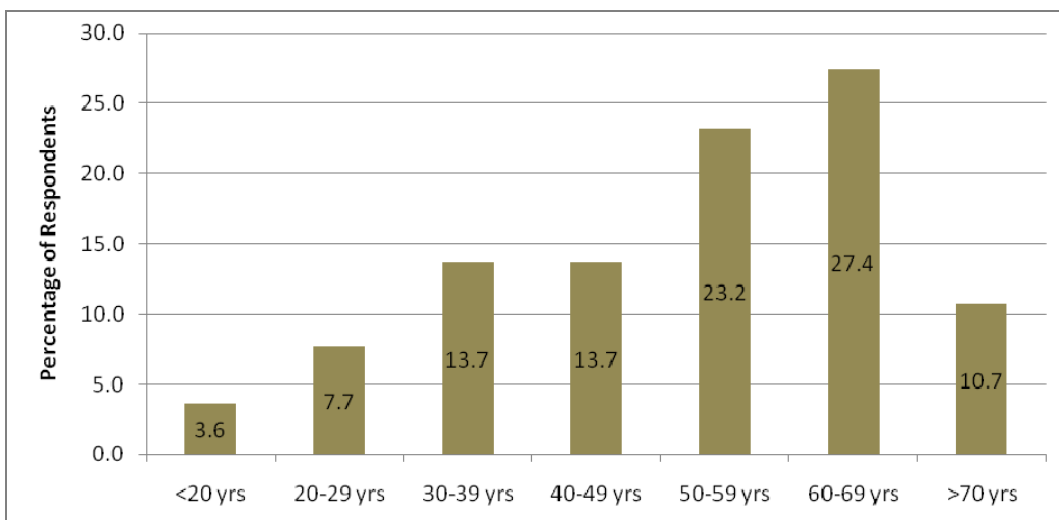
Figure 3 shows the largest group of respondents were retirees/semi-retirees (37.1%), followed by those who were self-employed (12.9%) and professionals (10.7%). The remaining 39.3% of respondents included public servants, students, managers and tradespersons.



**Figure 3:** Occupations of Mamu Rainforest Canopy Walkway survey respondents (n = 178).

### Age

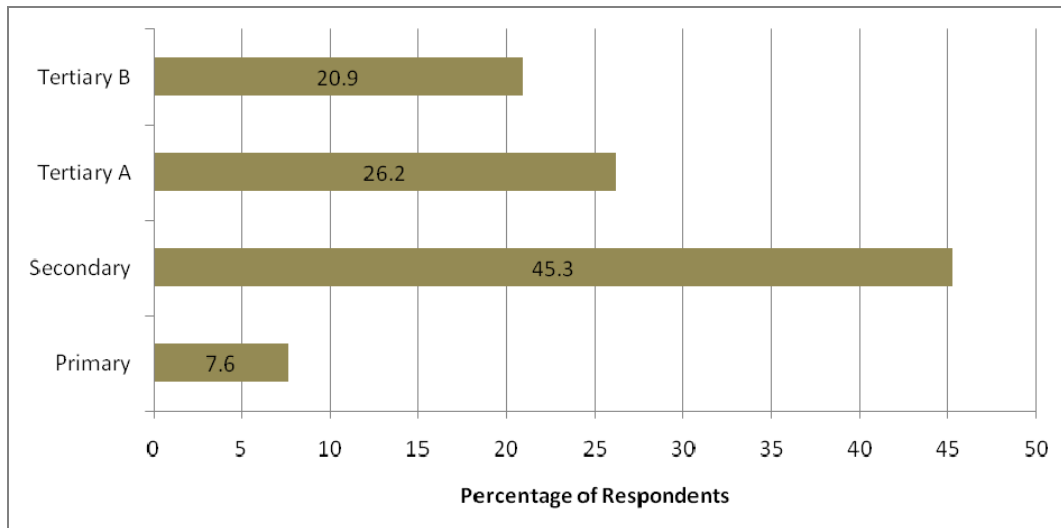
As illustrated in Figure 4, the largest group of respondents was aged 50 years or more (61.3%). Those aged 60-69 years dominated the Walkway survey sample (27.4%). The mean age was 51.7 years, with a range of 16 to 84 years. The standard deviation was 15.7 years.



**Figure 4:** Age groups of Mamu Rainforest Canopy Walkway survey respondents (n = 168).

**Education**

Figure 5 highlights survey respondents’ education levels, where Tertiary A is defined as technical or further education, and Tertiary B is defined as a university qualification. For the entire sample, 45.3% of respondents reporting having a secondary education followed by Tertiary A (26.2%) and Tertiary B (20.9%) qualification.



**Figure 5:** Levels of education attained by Mamu Rainforest Canopy Walkway survey respondents (n = 172).

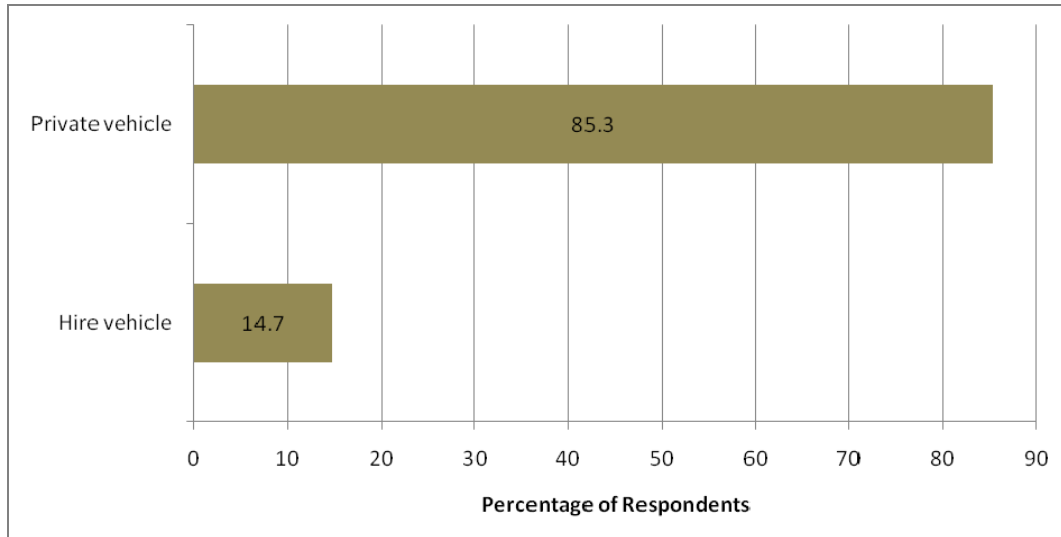
A cross-tabulation analysis of respondents’ age and education is provided in Table 4. Younger respondents (up to 49 years) were more likely to have a tertiary qualification while respondents aged 50 years and older were less likely to be tertiary trained.

**Table 4:** Respondents’ age and education (n = 163).

Age Group	Primary (%)	Secondary (%)	Tertiary A (%)	Tertiary B (%)
< 20 years	-	2.5	0.6	0.6
20-29 years	-	4.3	3.1	0.6
30-39 years	-	4.9	5.5	3.7
40-49 years	-	3.7	4.3	6.1
50-59 years	-	12.9	5.5	5.5
60-69 years	3.1	11.7	7.4	4.3
> 70 years	4.3	4.3	-	1.2
<b>Total Respondents (n = 163)</b>	<b>7.4% (n = 12)</b>	<b>44.2% (n = 72)</b>	<b>26.4% (n = 43)</b>	<b>22.1% (n = 36)</b>

**Travel Party and Mode of Transport**

Figure 6 indicates the majority of respondents (n = 147) reported travelling to Mamu Rainforest Canopy Walkway in private vehicles (85.3%), followed by rental vehicle (14.7%).



**Figure 6:** Modes of transport used by survey respondents to travel to Mamu Rainforest Canopy Walkway (n = 147).

Table 5 reports on travel party composition. The largest group consisted of couples travelling without children (n = 78). The next most significant groups were parties of four adults with no children (n = 24) followed by single adults (n = 12).

**Table 5:** Composition of visitor travel parties to Mamu Rainforest Canopy Walkway (n = 147).

	1 adult	2 adults	3 adults	4 adults	5 adults
0 children	12	78	9	24	4
1 child	1	1	2	-	1
2 children	1	5	3	1	-
3 children	1	4	-	-	-
Adults per vehicle 2.44 ± SD 1.0 (range 1-5)					
Children per vehicle 0.27 ± SD 0.74 (range 0-3)					

### Organised Tour Visitors

Twenty-eight respondents (15.5% of the total sample) indicated they were members of an organised tour to Mamu Rainforest Canopy Walkway (Table 6). During the survey period a number of tour companies visited the site including Down Under Tours, Wooroonooran Safaris and Go Bush Safaris. Other groups visiting the site during the survey period included People to People (a US based student exchange program), the Australian Agricultural College, Bartle Frere State School, Atherton Seniors and the Vintage Car Club. Almost half of all organised tour groups (both commercial and other) reported having more than 30 guests (n = 13).

**Table 6:** Information about survey respondents who were part of an organised tour group visit to Mamu Rainforest Canopy Walkway (n = 28).

Tour Operator / Group Name	Number of guests on each tour				Total No. of Respondents
	6 or less	7-14	15-30	More than 30	
Down Under Tours	-	1	-	1	2
The Traveller	-	-	1	-	1
People to People	-	-	-	7	7
Atherton Seniors	-	-	-	4	4
Australian Agricultural College	-	4	-	-	4
Wooroonooran Safaris	3	-	-	-	3
Go Bush Safaris	-	1	-	-	1
Bartle Frere State School	-	-	4	-	4
Vintage Car Club	-	-	1	1	2
<b>Total No. of Respondents</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>13</b>	<b>28</b>



Interpretive signage (Photo: Julie Carmody)

### Travel Flow

Respondents were asked about their travel patterns on the day of the survey, including where they had been and where they intended to go after leaving Mamu Rainforest Canopy Walkway. Results are outlined in Tables 7 and 8. Those travelling from Innisfail (19.3%), Cairns (11.1%) and home (6.3%) were the largest groups.

Two travel patterns can be identified from survey results. Firstly, respondents tended to have travelled directly from their place of residence ('home') to Mamu Rainforest Canopy Walkway. Secondly, Mamu Rainforest Canopy Walkway was one of a number of sites and towns within the Cassowary Coast region on respondents' trip itineraries.

**Table 7:** Visitors' reported previous stop before arriving at Mamu Rainforest Canopy Walkway (n = 171).

	Frequency (n)	Percent (%)
<b>Towns</b>		
Innisfail	33	19.3
Cairns	19	11.1
Mission Beach	6	3.5
Mena Creek	4	2.3
Townsville	4	2.3
Cardwell	3	1.8
Babinda	3	1.8
Ingham	3	1.8
South Johnstone	2	1.2
Mourilyan	2	1.2
Port Douglas	2	1.2
Palm Cove	1	0.6
Dunk Island	1	0.6
Etty Bay	1	0.6
Tully	1	0.6
Kurrimine Beach	1	0.6
Silkwood	1	0.6
Miriwinni	1	0.6
Alice Springs	1	0.6
<b>Atherton Tablelands and Outback</b>		
Atherton	10	5.7
Millaa Millaa	8	4.7
Ravenshoe	4	2.3
Mareeba	2	1.2
Tolga	1	0.6
Herberton	1	0.6
<b>Natural Attractions</b>		
Upper Murray Falls National Park	7	4.1
Mungalli Falls	4	2.3
Josephine Falls	3	1.8

	Frequency (n)	Percent (%)
Granite Gorge	2	1.2
Crawford's Lookout	1	0.6
<b>Other Attractions</b>		
Nowhere/ Mamu is the first stop	11	6.3
Home	11	6.3
Paronella Park	6	3.5
School	4	2.3
Crocodile farm	3	1.8
Great Barrier Reef and Rainforest Centre	2	1.2
Gallo's Cheese and Chocolate Factory	2	1.2
<b>Total</b>	<b>171</b>	<b>100.0</b>

Table 8 highlights respondents' travel intentions after leaving the Mamu Rainforest Canopy Walkway. Again, two travel patterns can be identified: respondents travelling home (11.5%) and those travelling to other towns and attractions on the Atherton Tablelands via the Palmerston Highway (37.7%).

**Table 8:** Intention of survey respondents to visit other places within the region after Mamu Rainforest Canopy Walkway (n = 174).

	Frequency (n)	Percent (%)
<b>Towns</b>		
Innisfail	22	12.6
Cairns	12	6.9
Babinda	7	4.0
Mission Beach	6	3.4
Charters Towers	5	2.9
Etty Bay	2	1.1
Ingham	2	1.1
Mena Creek	2	1.1
Townsville	2	1.1
Brisbane	1	0.6
Cooya Beach	1	0.6
Bramston Beach	1	0.6
<b>Atherton Tablelands and Outback</b>		
Tablelands	13	7.5
Millaa Millaa	12	6.9
Yungaburra	7	4.0
Atherton	5	2.9
Mungalli	4	2.3
Ravenshoe	3	1.8
Herberton	3	1.8
Tolga	2	1.1

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	Frequency (n)	Percent (%)
Mareeba	2	1.1
Malanda	2	1.1
Chillagoe	1	0.6
<b>Natural Attractions</b>		
Waterfalls	4	2.3
Babinda Boulders	3	1.8
Lake Barrine	2	1.1
Nandroya Falls	2	1.1
Crawford's Lookout	2	1.1
Josephine Falls	1	0.6
Henrietta Creek	1	0.6
<b>Other Attractions</b>		
Home	20	11.5
Don't know	8	4.6
Paronella Park	7	4.0
Mungalli Dairy	2	1.1
Accommodation	2	1.1
Bottleshop	1	0.6
Restaurant	1	0.6
Crocodile Farm	1	0.6
<b>Total</b>	<b>174</b>	<b>100.0</b>

### Visits to Other Canopy Walks

Respondents were asked if they had previously visited other canopy walks similar to Mamu Rainforest Canopy Walkway. Forty-four percent of respondents (n = 59) indicated that they had visited other canopy walks including the Valley of the Giants Treetop Walk in Western Australia (24 responses), the Daintree Discovery Centre in Queensland (15 responses) and the Tahune Airwalk in Tasmania (10 responses) (Table 9).

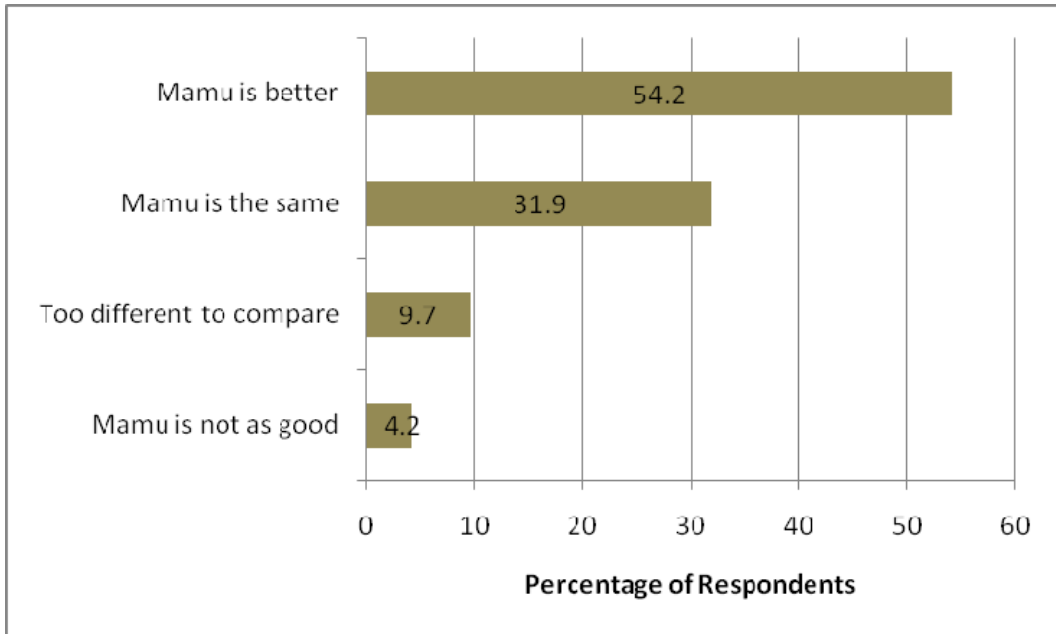
**Table 9:** Previous visits to similar attractions to the Mamu Rainforest Canopy Walkway (n = 59).

	Frequency (n)
<b>Within Australia</b>	
Valley of the Giants Treetop Walk, Western Australia	24
Daintree Discovery Centre, North Queensland	15
Tahune Air Walk, Tasmania	10
O'Reilly's Treetop Walk, Queensland	5
Otway Fly, Victoria	5
Illawarra Fly Tree Top Walk, Victoria	3
Blue Mountains, New South Wales	3
Skyrail walks, Queensland	3
Dorrigo National Park Rainforest Centre, New South Wales	2
<b>Non-specific</b>	
Canada	2
New South Wales	2
Malaysia – Tana Meera Forest	1
Australia	1
New Zealand	1
Victoria	1
Rainforest Centre	1
Rainforest in Cairns	1
<b>Total</b>	<b>80*</b>

\* Note: Multiple responses were given by some individual respondents.

### **Comparisons to Mamu Rainforest Canopy Walkway**

Respondents who had visited other canopy walks were asked to compare the Mamu Rainforest Canopy Walkway to the walkways they had visited. Figure 7 indicates more than half of the visitors (54.2%) who responded to this question thought Mamu was better than other canopy walks, while 31.9% indicated it was the same. Only 4.2% considered the Mamu Rainforest Canopy Walkway was not as good as other canopy walks they had visited.



**Figure 7:** Survey respondents' perceptions of the Mamu Rainforest Canopy Walkway compared to other similar attractions (n = 72).

### **Reasons for Visiting Mamu Rainforest Canopy Walkway**

Respondents were asked to respond to given statements about their motives for visiting the Mamu Rainforest Canopy Walkway using a six-point Likert scale of 1 = 'not important' to 6 = 'very important'. The mean values reported in Table 10 indicate the level of importance given by respondents for each motivation. As illustrated, the three most important reasons for visiting the Mamu Rainforest Canopy Walkway were to 'see natural features and scenery' (mean = 5.15), 'be close to/experience nature' (5.05) and 'to experience tranquillity' (4.80). While still important, 'socialising with friends and family' was given the lowest ranking (mean = 3.85).

Fifteen respondents provided additional reasons for visiting the site, however these were not rated on a Likert scale: birdwatching (3 responses), the rainforest (3 responses), to observe Australian standards of structural design (2 responses) and to see the after affects of Tropical Cyclone *Larry* (2 responses). One response each was received for educating students about the Mamu attraction and culture; to see orchids; to visit somewhere not previously visited; historical pioneer context; and to support the ethos behind the construction of the attraction.

**Table 10:** Visitors' motivations to visit Mamu Rainforest Canopy Walkway.

Reasons for visiting Mamu Rainforest Canopy Walkway	n	Overall Mean
See natural features and scenery	165	5.15
To be close to/ experience nature	160	5.01
To experience tranquillity	158	4.80
Learn about native animals and plants	158	4.56
Because it is a National Park	159	4.52
Because it is a World Heritage Area	157	4.45
Outdoor exercise	160	4.42
Rest and relax	158	4.33
Opportunities for short walks	159	4.31
Opportunities for long walks	151	3.95
Learn about Aboriginal culture	155	3.92
Socialise with family or friends	158	3.85

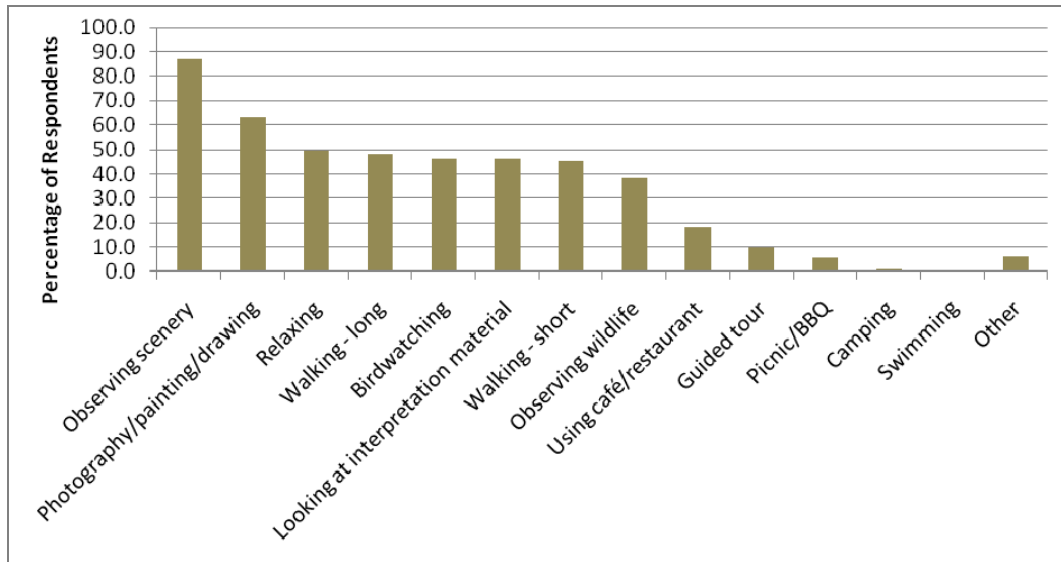
The results outlined in Table 11 show the level of importance ascribed to each motive on a scale from 'not important' to 'very important'. 'Seeing the natural features and scenery' was important to 9% of respondents. The only motives that attracted a rating of 'not important' of 20% or more were 'socialising with friends or family', 'opportunities for long walks' and 'to learn about Aboriginal culture'. While the site's status as a World Heritage Area was important it attracted fewer 'most important' responses than many of the other motives.

**Table 11:** Survey respondents' most cited reasons for visiting Mamu Rainforest Canopy Walkway.

Reasons for visiting Mamu Rainforest Canopy Walkway	Percentage of survey respondents					
	Not important	Slightly important	Moderately important	Important	Quite important	Very important
See natural features and scenery	0.6	0.6	4.8	21.8	21.8	50.4
Be close to/ experience nature	1.3	1.9	5.0	24.4	21.9	45.5
Experience tranquillity	4.4	2.5	5.7	20.3	30.4	36.7
Outdoor exercise	8.1	4.4	14.4	16.9	23.1	33.1
Rest and relax	7.6	6.3	12.0	22.8	22.2	29.1
Because it is a National Park	4.4	8.2	10.1	23.2	16.4	37.7
Opportunities for short walks	6.3	5.7	16.4	21.4	23.2	27.0
Because it is a World Heritage Area	3.8	9.6	10.2	24.8	17.8	33.8
Socialise with family or friends	18.4	8.9	10.8	20.9	13.9	27.1
Learn about native animals and plants	5.7	1.9	14.6	17.7	28.5	31.6
Opportunities for long walks	12.6	7.9	18.5	15.9	23.2	21.9
Learn about Aboriginal culture	12.3	6.5	20.6	22.6	14.2	23.8

**Activities**

Respondents were asked to indicate which activities they had undertaken at Mamu Rainforest Canopy Walkway based on a list of given possible site activities. Results are outlined in Figure 8. The most popular activities were observing the scenery (87.0%), photography (63.3%), relaxing (49.7%), long walks (48.0%), looking at interpretation material (46.3%) and short walks (45.2%).



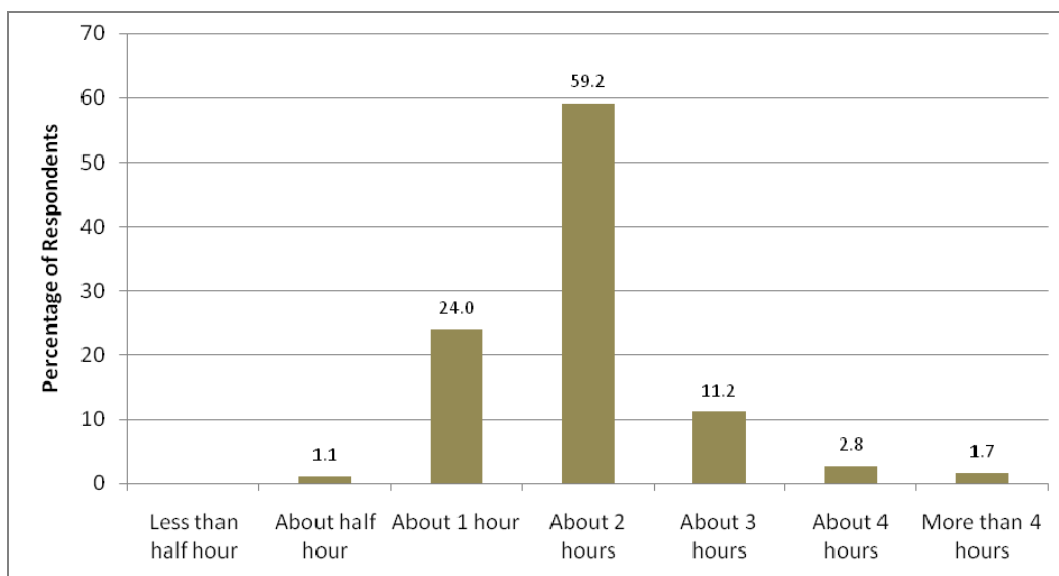
**Figure 8:** Activities undertaken at Mamu Rainforest Canopy Walkway as cited by survey respondents (N = 181) in response to a multiple-response survey question.

Respondents were also asked to list activities that they would like to have participated in if the opportunity was available. An open-ended question format was used for this question. Twenty-one responses were received (12.1% of the sample) and are presented in Table 12. The most significant responses included a desire for a café, and an interpretative centre at the site (6 responses).

**Table 12:** Activities which survey respondents indicated were desirable as part of their visit to Mamu Rainforest Canopy Walkway (n = 21).

Activity	Frequency (n)	Percent (%)
Sit down at an indoor café and interpretive centre	6	28.5
Observe birdlife	3	14.3
See a cassowary	2	9.4
Fly	2	9.4
Swimming	1	4.8
See wildlife	1	4.8
Bush tucker tour	1	4.8
Stay longer	1	4.8
More information	1	4.8
See ripe fruits	1	4.8
Go higher	1	4.8
Purchase a postcard / souvenir	1	4.8
<b>Total</b>	<b>21</b>	<b>100.0</b>

Figure 9 illustrates the length of time visitors spent at Mamu Rainforest Canopy Walkway. More than half of all respondents stayed for about two hours (59.2%) followed by 24.0% who spent about one hour at the site. Overall most respondents stayed for two hours or less (84.3%).



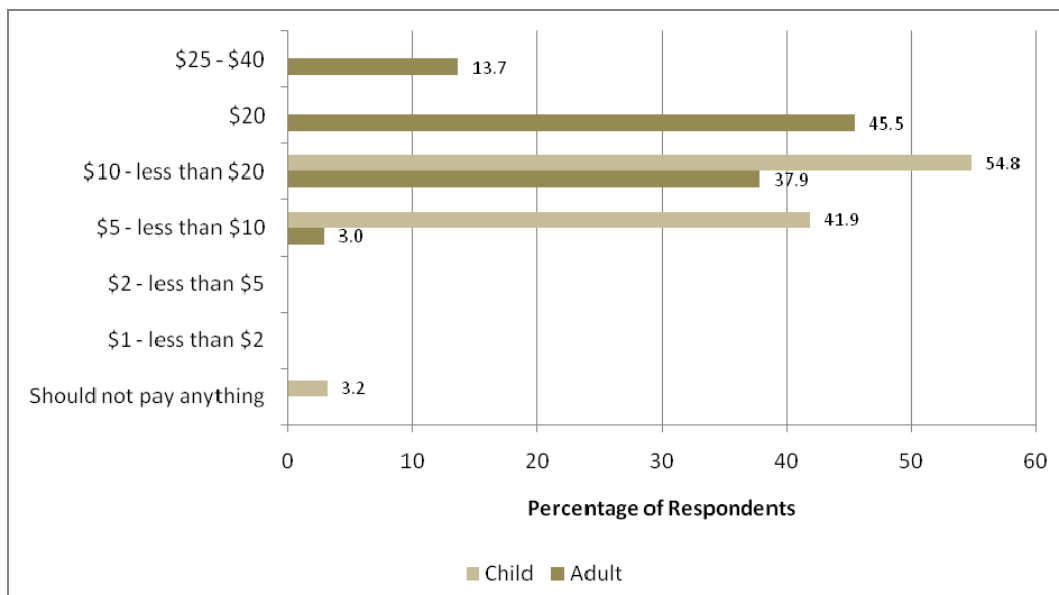
**Figure 9:** Approximate time spent at Mamu Rainforest Canopy Walkway by survey respondents (n = 179).

### Willingness to Pay

Visitors to the Mamu Rainforest Canopy Walkway are charged an entrance fee. Current admission fees are \$20 for adults, \$10 per child, \$50 per family of two adults and two children and \$16 concession, with a 20% discount applicable for residents living in the Cairns, Cassowary Coast and Tablelands Regional Council areas.

Two questions were included in the survey to enquire firstly if the current entrance fee was considered reasonable by respondents, and secondly how much respondents would be willing to pay per adult and per child if the fee was not considered reasonable. The majority of respondents (92.6%) indicated the current fees were reasonable. Only 7.4% (n = 13) thought the fee structure was not reasonable.

Results in Figure 9 show that respondents were generally comfortable with the admission fees already in place, with 54.8% indicating that the children’s admission should be between \$10 and \$19, and 45.5% indicating that the adult admission should be \$20. Only 13.7% (n = 9) of survey respondents indicated they were willing to pay a higher admission fee per adult than currently charged.



**Figure 10:** Survey respondents’ willingness to pay an access/entrance fee to visit Mamu Rainforest Canopy Walkway (n = 66).

### 3.2 Perceptions of the Natural Environment

A series of statements were used to gather respondents' views on the natural environment at Mamu Rainforest Canopy Walkway. Respondents were asked to indicate their views using a Likert scale where 1 = 'strongly disagree' and 6 = 'strongly agree'. The mean value of each statement is provided in Table 13. Respondents considered the natural environment to be very interesting (mean = 5.59), well-managed (5.57), appealing (5.57) and in good condition (5.43). Concerns about the site being disturbed or impacted were relatively low (mean = 2.40).

**Table 13:** Visitors' perceptions of the natural environment at Mamu Rainforest Canopy Walkway.

Perceptions of the natural environment at Mamu Rainforest Canopy Walkway	n	Overall Mean
The natural environment at this site is interesting.	168	5.59
The natural environment at this site is well managed.	167	5.57
In terms of natural attractions and scenic beauty this site is appealing.	167	5.57
The condition of the natural environment at this site appears to be good.	167	5.43
I would like to spend more time exploring this natural environment.	164	5.07
I am concerned about the impacts of human activity on the natural environment at this site.	165	3.52
This site appears to be disturbed and impacted.	162	2.40

Levels of agreement/disagreement with statements about the natural features of the site measured as a percentage are summarised in Table 14. There was almost unanimous agreement that the site is interesting and well managed. Negative responses were related to concerns about human impacts on the site (48.4%). Seventy-four percent (74.0%) of respondents did not think the site appeared to be disturbed or impacted.

**Table 14:** Survey respondents' perceptions of the natural features at Mamu Rainforest Canopy Walkway.

Perceptions of the natural environment at Mamu Rainforest Canopy Walkway	Percentage of survey respondents					
	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The natural environment at this site is interesting.	-	-	0.6	6.5	26.2	<b>66.7</b>
The natural environment at this site is well managed.	-	3.0	-	4.2	22.2	<b>70.6</b>
The condition of the natural environment at this site appears to be good.	-	1.8	2.4	7.2	28.1	<b>60.5</b>
In terms of natural attractions and scenic beauty this site is appealing.	-	0.6	0.6	6.6	25.7	<b>66.5</b>
I would like to spend more time exploring this natural environment.	0.6	1.8	1.2	20.7	37.2	<b>38.5</b>
I am concerned about the impacts of human activity on the natural environment at this site.	<b>22.4</b>	12.1	13.9	14.5	16.4	20.7
This site appears to be disturbed and impacted.	<b>43.8</b>	21.6	8.6	10.5	7.4	8.1

### 3.3 Perceptions and Use of the Site Facilities

Survey respondents were asked to comment on given statements about the site facilities using a Likert scale of 1 = 'strongly disagree' to 6 = 'strongly agree'. As shown in Table 15, there was a high level of agreement with all aspects of the site's facilities. The overall condition of the facilities was considered good (mean = 5.62), well-managed (5.54), adequate (5.49) and appealing (5.45). There was strong support for a ranger presence at the site (mean = 4.99).

**Table 15:** Visitors' perceptions of the site facilities at Mamu Rainforest Canopy Walkway.

Perceptions of the site facilities at Mamu Rainforest Canopy Walkway	n	Overall Mean
The overall condition of the facilities at this site appears to be good.	164	5.62
The facilities and infrastructure at this site are well managed.	164	5.54
The facilities at this site are adequate.	164	5.49
This site is appealing in terms of the character and attractiveness of the facilities.	164	5.45
The presence of a ranger at sites like this is important to me.	163	4.99



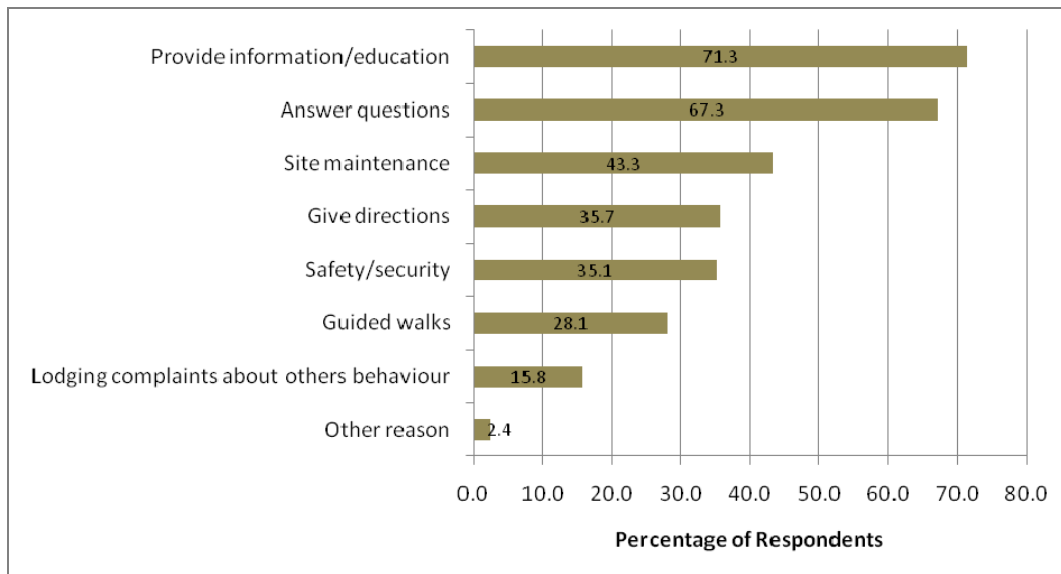
The percentages for agreement/disagreement with each statement are shown in Table 16. Low levels of disagreement were evident with statements relating to the condition (1.2%), management (4.2%), appeal (3.0%) and adequacy (1.2%) of the Mamu Rainforest Canopy Walkway's facilities. The importance of a ranger presence at the site was supported by 84.7% of the sample.

**Table 16:** Survey respondents' perceptions of the site facilities at Mamu Rainforest Canopy Walkway.

Perceptions of the site facilities at Mamu Rainforest Canopy Walkway	Percentage of survey respondents					
	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The overall condition of the facilities at this site appears to be good.	0.6	0.6	-	4.3	24.4	70.1
The facilities and infrastructure at this site are well managed.	0.6	2.4	1.2	3.0	23.8	69.0
The facilities at this site are adequate.	0.6	-	0.6	9.1	28.0	61.7
This site is appealing in terms of the character and attractiveness of the facilities.	0.6	1.2	1.2	8.5	26.2	62.3
The presence of a ranger at sites like this is important to me.	4.3	4.3	6.7	10.4	21.5	52.8

**Presence of a Ranger On-site**

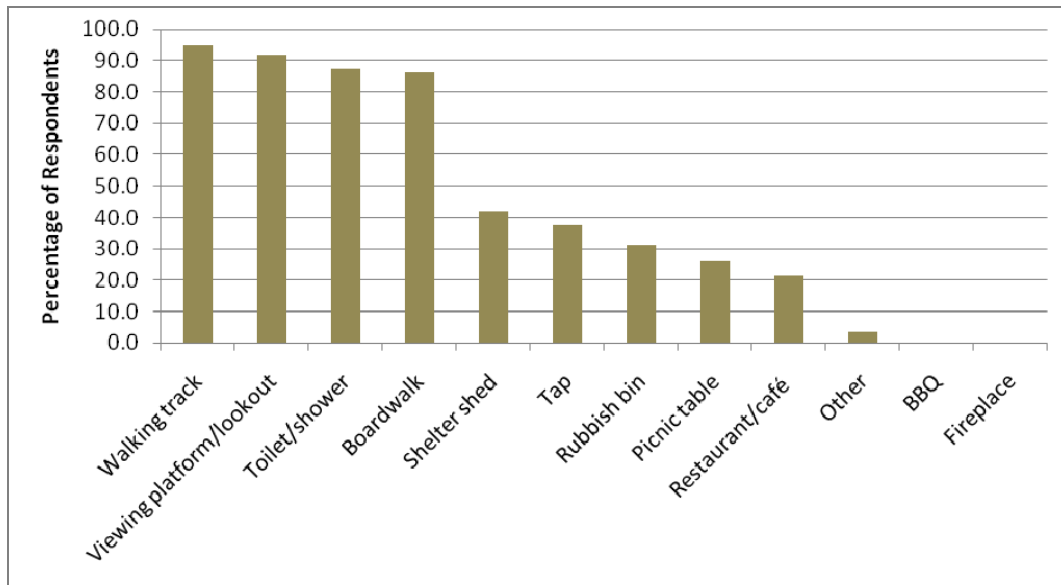
Figure 11 illustrates responses to given statements about the perceived advantages of having a ranger employed at the site. The ability to provide information/education received the highest support (71.3%) as well as the ability to answer questions (67.3%) and site maintenance (45.3%). Lodging complaints about others' behaviour was the least supported reason for on-site ranger presence (15.8%). The provision of general information was another reason given in support on on-site ranger presence, and the need for more Aboriginal rangers was also highlighted (one response each).



**Figure 11:** Survey respondents' suggested uses of an on-site Park Ranger at Mamu Rainforest Canopy Walkway in response to a multiple-response survey question (n = 118).

### Use of Site Facilities

A multiple-response format was used to ensure respondents had the opportunity to indicate the facilities they had used at the Mamu Rainforest Canopy Walkway. Figure 12 illustrates high usage patterns for the walking track (94.8%), the viewing platform/lookout (92.0%), the toilets (87.4%) and boardwalk (86.2%). The least used facilities were the restaurant/café (21.3%) and the picnic table (26.2%). It should be noted that the site has a coffee/snack cart rather than a café, as well as barbeques, and that fireplaces are not available at this site.



**Figure 12:** Most popular Mamu Rainforest Canopy Walkway site facilities used by survey respondents, cited in response to a multiple-response survey question (N = 181).

### **Expected Site Facilities**

Using an open-ended survey question, respondents were asked to indicate if there were facilities that they would have liked to have seen at Mamu Rainforest Canopy Walkway. Thirty-four respondents (18.8% of the sample) provided 37 responses. The results outlined in Table 17 reveal visitor support for a souvenir/coffee shop (19 responses) and an interpretive centre (6 responses).

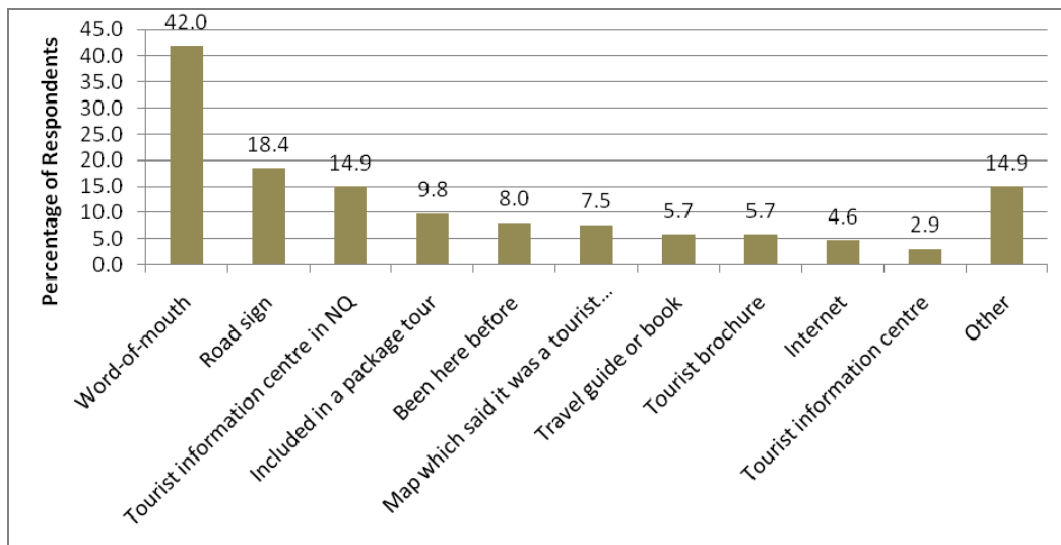
**Table 17:** Facilities expected to be available at Mamu Rainforest Canopy Walkway by survey respondents (n = 34).

Expectation	Frequency (n)
Souvenir/ craft shop /coffee shop	19
Interpretation centre	6
Toilet at end of walkway	3
Rubbish bin	2
Barbeque	2
Seating	1
Guided tour	1
Signage	1
Walkway through the canopy	1
Bottleshop	1
<b>Total Responses</b>	<b>37</b>

\* Note: Multiple responses were given by some individual respondents.

**Information about Mamu Rainforest Canopy Walkway**

Survey respondents were asked to indicate the sources they had used to gain information about Mamu Rainforest Canopy Walkway prior to their visit. Figure 13 illustrates that the main source of information used was word-of-mouth (42.0%) followed by road signage (18.4%), tourist information centres in North Queensland (14.9%) and other information sources (14.9%). The majority (69.1%, n = 125) indicated that the information they used was accurate. Three respondents stated the information they had obtained was inaccurate. Two of these same respondents indicated the information received prior to their visit was very brief and that on arrival at the site they found more facilities were available than they had expected. One respondent reported that the walkway was below the canopy, suggesting a misinterpretation of information received.



**Figure 13:** Sources of information consulted by survey respondents prior to visiting Mamu Rainforest Canopy Walkway (N = 181).

Other information sources (14.9%) used by survey respondents to locate the Mamu Rainforest Canopy Walkway are listed in Table 18. Local knowledge (seven responses), television (five responses), newspapers (four responses) and school (three responses) were the most common responses.

**Table 18:** Other sources of information about Mamu Rainforest Canopy Walkway consulted by survey respondents (n = 26).

Comments/feedback received	Frequency (n)
Local knowledge/ local showing me around	7
Television	5
School	3
Sunday Mail travel section	2
Australian newspaper	2
Caravan Park	2
Interest in the area, always wanted to come here	1
Didn't get a lot of information, just that it's here	2
It's not as appealing as I had imagined	1
Didn't say to access the walk through Henrietta Creek	1
Map showed other waterfalls along the road	1
<b>Total Responses</b>	<b>26</b>

### **On-site Signage**

Interpretative and directional signs are important features of the infrastructure at any visitor site. At the Mamu Rainforest Canopy Walkway, the majority of the respondents (85.5%, n = 130) reported using the on-site interpretative information. Visitors were asked to comment on aspects of the on-site interpretative signage using a Likert scale of 1 = 'strongly disagree' to 6 = 'strongly agree'. Table 19 provides the respondents' level of agreement with information provided at the site. Items with the highest responses were: signage was easy to understand for safety aspects (mean = 5.52) and information about natural features is considered interesting and informative (mean = 5.49).

**Table 19:** Survey respondents' perceptions of on-site signage at Mamu Rainforest Canopy Walkway.

Perceptions of on-site information at Mamu Rainforest Canopy Walkway	n	Overall Mean
<b>Signs, maps and directions</b>		
Were easy to find	156	5.37
Helped me to find my way around	154	5.36
<b>The rules and safety information</b>		
Were easy to understand	155	5.52
Addressed my interests and concerns	152	5.36
<b>The information about natural features and values</b>		
Was interesting and informative	157	5.49
Helped me to better appreciate the special natural features of the area.	156	5.42
<b>The Aboriginal cultural information</b>		
Was interesting and informative	151	4.97
Helped me to understand the significance of this area for rainforest Aboriginal people	151	4.88

Table 20 outlines the percentage of responses for each level of agreement/disagreement to statements about on-site information at Mamu Rainforest Canopy Walkway. Low levels of disagreement were expressed by respondents with all aspects of the on-site signage. There were high levels of agreement with statements that the Aboriginal cultural information was interesting and informative (91.5%) as well as signage assisting people to understand the significance of the area to rainforest Aboriginal people (90.1%).

**Table 20:** Survey respondents' perceptions of on-site tourism information provided at Mamu Rainforest Canopy Walkway.

Perceptions of on-site information at Mamu Rainforest Canopy Walkway	Percentage of survey respondents					
	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
<b>Signs, maps and directions</b>						
Were easy to find	1.3	1.3	0.6	12.2	25.6	59.0
Helped me to find my way around	0.6	0.6	1.9	11.7	28.6	56.6
<b>The rules and safety information</b>						
Were easy to understand	-	-	1.3	11.0	21.9	65.8
Addressed my interests and concerns	-	1.3	2.0	12.5	28.3	55.9
<b>The information about natural features and values</b>						
Was interesting and informative	0.6	-	2.5	8.3	23.6	65.0
Helped me to better appreciate the special natural features of the area.	0.6	-	3.2	10.3	24.4	61.5
<b>The Aboriginal cultural information</b>						
Was interesting and informative	2.6	1.4	4.6	23.2	23.8	44.4
Helped me to understand the significance of this area for rainforest Aboriginal people	3.3	1.4	5.3	25.8	22.5	41.7

Using an open-ended question, survey respondents were asked for suggestions on additional interpretative information they would like to see at the site. Fifty-three respondents (29.3% of the sample) provided 54 responses, with results outlined in Table 21. Fifteen suggestions for additional interpretative information on Aboriginal culture were recorded as well as another 15 suggestions for additional information on the flora and fauna of the area. Further suggestions included the opportunity to purchase souvenirs and guidebooks.

**Table 21:** Survey respondents' suggested additional visitor information that could be made available at Mamu Rainforest Canopy Walkway (n = 53).

	Overall (n)
<b>Aboriginal Culture</b>	
Aboriginal culture and rainforest information/ traditional use of plants	10
Recorded indigenous names of flora, fauna, habitat	2
More aboriginal cultural information at start of walk	1
Indigenous tour	1
Indigenous dance/ cooking	1
<b>Flora and Fauna</b>	
More plant identification/ tree identification marks	8
More wildlife information	3
Recorded information of bird names and calls	2
Wildlife identification charts	1
More information about natural features and wildlife	1
<b>Historical Information</b>	
Discovery dates and by who; simple heritage information and age of environment	2
Explorers and pioneers information	1
Less on Cyclone <i>Larry</i>	1
<b>Other</b>	
Souvenirs	7
Guided walks	3
Handguides with information	2
Anything	2
Interpretative centre and restaurant	2
Safety procedures	1
Design plans for future extension	1
Engineering information at Mamu	1
Less preaching, more objective information	1
<b>Total Responses</b>	<b>54*</b>

\* Note: More than one response was given by a survey respondent.

### 3.4 Visitor Experience

Visitors were asked to comment on aspects of their visit that enhanced or increased their enjoyment of the site. An open-ended question was used and 107 responses were received from 105 respondents. Results were grouped into four categories: 'natural', 'facilities', 'psycho-social' and 'others' (Table 22). The walkway tower (18.7%), helpful staff (16.0%), views (8.5%) and wonderful information (8.5%) were given as outstanding aspects of the visitor experience.

**Table 22:** Aspects that visitors considered enhanced or increased their enjoyment of Mamu Rainforest Canopy Walkway (n = 105).

	Frequency (n)	Percentage (%)
<b>Natural</b>		
Views	9	8.5
Rainforest	3	2.8
Snake encounter	2	1.9
Nature: plants and wildlife	2	1.9
Sighting Ulysses butterfly	2	1.9
Shade	1	0.9
Viewing bird species	1	0.9
Our encounter with a 2cm long ant	1	0.9
Great weather	1	0.9
Rain	1	0.9
<b>Facilities</b>		
Tower	20	18.7
Wonderful information about the site	9	8.5
Boardwalk	7	6.5
Availability of buggy for elderly parents	3	2.8
Presentation/condition of canopy walk	2	1.9
Seating	2	1.9
Platforms helping for a better view & photo	1	0.9
Walking track – so natural	1	0.9
Binoculars	1	0.9
Picnic shelters	1	0.9
<b>Psycho-social</b>		
Peace and tranquillity	2	1.9
Socialising/friend's company	2	1.9
Beautiful place	2	1.9
More than we expected it to be	2	1.9
The walk	1	0.9
Everything was well planned and thought out	1	0.9
Wonderful experience	1	0.9

	Frequency (n)	Percentage (%)
<b>Other</b>		
Staff were very helpful	17	16.0
Tour guide information	3	2.8
Assessing the park facilities against the Australian standards	2	1.9
Juxtaposition of cleared land beside rainforest	1	0.9
Everything was well planned and thought out	1	0.9
Child friendly and safe	1	0.9
Helpful information from Ravenshoe Visitor Centre	1	0.9
<b>Total Responses</b>	<b>107</b>	<b>100.0</b>

\* Note: Multiple responses were given by some individual respondents.

Respondents were also asked for their views on aspects of Mamu Rainforest Canopy Walkway that detracted from their enjoyment. Table 23 shows the response rate to this question was low (15.2% of the sample). Comments were divided into four categories generally paralleling the categories used to indicate the aspects of the site that respondents found appealing: 'nature', 'facilities', 'psycho-social' and 'other'. Of concern to site visitors were the extensive "flashy" facilities and use of steel structures, all detracting from the natural environment (three responses), and noises inconsistent with the general ambient sounds of the rainforest (three responses).

**Table 23:** Aspects visitors considered took away or detracted from their enjoyment of Mamu Rainforest Canopy Walkway (n = 13).

	Frequency (n)	Percentage (%)
<b>Natural</b>		
Wish to see a more pristine and aesthetic environment	1	7.7
<b>Facilities</b>		
Extensive flashy facilities and metal detract from natural beauty, need to blend in more	3	23.1
No gift shop	1	7.7
<b>Psycho-social</b>		
My noisy children	2	15.4
Chainsaw noise ruined the ambience	1	7.7
Unsupervised children	1	7.7
Too many visitors but can't be helped – too beautiful	1	7.7
Only other people	1	7.7
A person was smoking even though no smoking signs	1	7.7
<b>Other</b>		
Taking early white settlement out of context	1	7.7
<b>Total Responses</b>	<b>13</b>	<b>100.0</b>

The conclusions that can be drawn from the results reported in Tables 22 and 23 are that respondents considered the Mamu Rainforest Canopy Walkway an enjoyable tourism site with few areas of concern.

### Other Visitors

The behaviour of other visitors at a site can affect the level of enjoyment an individual derives from visiting that site. In circumstances where overcrowding occurs the overall level of enjoyment could be expected to fall. However, the link between perceived crowding and satisfaction is weak and is dependent on personal norms, situational variables and site infrastructure (West, 1981; Stankey and McCool, 1984; Kalisch and Klaphake, 2007). A series of statements were presented in the survey and respondents were asked to comment using a Likert scale of 1 = 'strongly disagree' to 6 = 'strongly agree'. As detailed in Table 24, some concerns were raised by visitors to Mamu Rainforest Canopy Walkway about the behaviour of other visitors not being consistent with responsible environmental behaviour (mean = 3.43). However, respondents were not concerned with overcrowding (mean = 1.67), the presence of other people (1m=.53) or the behaviour of other visitors detracting from their overall enjoyment of the site (mean = 1.47).

**Table 24:** Domestic and international visitors' perceptions of other site visitors.

Perceptions of other site visitors at Mamu Rainforest Canopy Walkway	n	Overall Mean
The behaviour of other visitors at this site has been on the whole environmentally responsible.	168	3.43
There were too many people at this site today.	169	1.67
The presence of other people at this site prevented me from doing what I wanted to.	169	1.53
The behaviour of some visitors at this site detracted from my enjoyment of this site.	167	1.47

Table 25 provides respondents' levels of agreement/disagreement with statements relating to perceptions of other visitors at the site. Only half of all survey respondents considered that the behaviour of other visitors was environmentally responsible (51.2%). There were few concerns about the number of people at the site (9.0%) or other visitors preventing them from enjoying the site (5.4%).

**Table 25:** Perceptions of other visitors at Mamu Rainforest Canopy Walkway.

Perceptions of other site visitors at Mamu Rainforest Canopy Walkway	Percentage of survey respondents					
	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The behaviour of other visitors at this site has been on the whole environmentally responsible.	39.3	7.1	2.4	2.4	20.2	28.6
There were too many people at this site today.	66.2	17.7	7.1	3.0	3.0	3.0
The presence of other people at this site prevented me from doing what I wanted to.	71.0	16.5	7.1	1.8	0.6	3.0
The behaviour of some visitors at this site detracted from my enjoyment of this site.	74.8	15.0	4.8	1.2	1.8	2.4

### 3.5 Additional Comments

The survey instrument provided respondents with the opportunity to record comments on any aspect of their visit to the Mamu Rainforest Canopy Walkway. Comments were received from 27 respondents (14.9% of the sample). Generally, comments were predominantly positive and focused on the great experience on offer at the Walkway.

Date	Comment
No date	'A café is an important thing to have [on site in order] to bring in tourists, so we can stay a while and relax after.' <i>Far North Queensland visitor, female, 38 years</i>
No date	'Both my husband and I really enjoyed the two hours here. Today was my first introduction to a rainforest first hand.' <i>Western Australian visitor, female, 53 years</i>
No date	'Thanks, a great experience.' <i>New South Wales visitor, female, 63 years</i>
11 April 2009	'We are here for a long weekend and this attraction made our trip worthwhile.' <i>North Queensland visitor, female, 65 years</i>
25 April 2009	'A lovely experience, well done. Well worth the money. Locals' discount was excellent. Reception staff friendly and helpful. Thank you.' <i>Far North Queensland visitor, female, 36 years</i>
27 April 2009	'At Mamu, the 'Vehicles with trailers/caravan' sign needs to be at the entrance.' <i>Far North Queensland visitor, female, 54 years</i>
4 May 2009	'As a retired university staff member (zoologist), I found the experience fantastic – nothing like it in the UK.' <i>UK visitor, male, 74 years</i>
8 May 2009	'Very beautiful, would definitely come again.' <i>Western Australian visitor, female, 48 years</i>
8 May 2009	'Very well presented site, the area has been laid out in such a way that it is beautiful and relaxing.' <i>Western Australian visitor, male, 51 years</i>
31 May 2009	'This site is a wonderful tourist attraction which allows visitors to our area to appreciate the rainforest and views. Well done, the scenery took my breath away.' <i>Far North Queensland visitor, female, 49 years</i>
31 May 2009	'Need toilet along the way and at each end.' <i>Other Queensland visitor, female, 71 years</i>

<b>Date</b>	<b>Comment</b>
2 June 2009	'Lack of birds and wildlife.' <i>New South Wales visitor, male, 68 years</i>
14 June 2009	'Amazing experience.' <i>Australian visitor, female, 62 years</i>
21 June 2009	'Very much enjoyed the outing. Had a lot of fun and really enjoyed the elevated walkway and tower with wonderful views.' <i>Far North Queensland visitor, female, 33 years</i>
22 June 2009	'Visited site late in the day which would have had an impact on the wildlife in the forest. Wouldn't enjoy nearly as much when visiting at peak visitor times.' <i>North Queensland visitor, female, 30 years</i>
25 June 2009	'It would be better if the main track was reduced in width and re-routed to a winding walk. The steel structure is excessive and overrides the natural experience. Elevated walkway needs to be painted green.' <i>Far North Queensland visitor, male, 50 years</i>
28 June 2009	'Like nothing I have experienced in Southern Queensland.' <i>Other Queensland visitor, male, 82 years</i>
28 June 2009	'Mother nature at its best. Wonderful addition having the golf buggy available for those who need it.' <i>Other Queensland visitor, male, 84 years</i>
2 July 2009	'I look forward to coming back when the addition to this park is completed.' <i>Victorian visitor, female, 29 years</i>
2 July 2009	'Can't wait for the cultural tours and the bush tucker farm.' <i>Far North Queensland visitor, male, 41 years</i>
27 July 2009	'We really enjoyed the walk along the elevated walkway. It was much better than I had anticipated. It was wonderful slowly walk along and look out at the flora and butterflies.' <i>New South Wales visitor, male, 48 years</i>
27 July 2009	'If possible, cultural guides would be great.' <i>Far North Queensland visitor, male, 21 years</i>
27 July 2009	'Fantastic overall couple of hours. Well worth the drive from Cairns.' <i>New South Wales visitor, male, 50 years</i>
27 July 2009	'A great alternative to spending \$80 on Skyrail.' <i>New South Wales visitor, male, 47 years</i>
27 July 2009	'A world class, environmentally friendly and sustainable attraction.' <i>Far North Queensland visitor, male, 48 years</i>

Date	Comment
27 July 2009	'We visited early before the tour buses arrived.' <i>Other Queensland visitor, female, 58 years</i>
27 July 2009	'Keep up the excellent work, will recommend to all we meet.' <i>New South Wales visitor, male, 24 years</i>

## 4. Management Considerations

The findings presented in this report indicate a number of issues that should be considered by the protected area management agencies responsible for this site.

- There is support for the construction of a permanent café, interpretative centre and souvenir shop incorporating the admission booth. This will value-add to the existing attraction.
- Attention should be paid to the marketing strategies currently in place. Word-of-mouth (42.0%) was the main source used for obtaining information about the site prior to visiting. To increase knowledge about the site, consideration should be given to running regular familiarisation tours for travel agents and volunteers from Visitor Information Centres.
- Signs identifying rainforest tree species could be placed at the base of trees.
- Involvement of the Ma:Mu traditional owners in cultural tours and bush tucker food tours should be considered.
- Many visitors to the site are independent tourists who travel by car. Partnering with other attractions in this area for marketing is suggested. Examples include working with Paronella Park and the Mungalli Dairy.
- Encourage local residents to visit the Mamu Rainforest Canopy Walkway through more extensive promotion of the discounts already offered. This may encourage local residents to visit and to bring visiting family and friends when the opportunity arises.
- The lack of international visitors detected in the survey sample may indicate that either this group was not picked up during the survey period or that current marketing has not been effective in reaching this segment.
- The Mamu Rainforest Canopy Walkway is currently not included on the Great Tropical Drives website which represents a significant lost opportunity.
- Consideration should be given to diversifying the product by including specialist guided birdwatching tours at dawn or dusk.

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# Appendix 1: Site Survey Instrument



## Visitor Site Survey in the Wet Tropics World Heritage Area

Interviewer: .....

Survey Location: .....

Survey Date: ..... Time: .....

Weather:  Sunny  Overcast  Raining  Hot  Warm  Cool

Other Comments: (e.g. windy, smoky, mist) .....

.....

Dear Visitor,

We are researchers from James Cook University, School of Business – Tourism, and on behalf of the Wet Tropics Management Authority we are exploring visitors’ expectations and experiences of this Wet Tropics site. We would be very grateful if you would participate in the study by completing this questionnaire.

Your participation will help to improve visitor services and the continued management of sites by understanding visitors’ needs and views.

The questionnaire is **voluntary** and all **responses remain completely anonymous**.  
The questionnaire will take approximately **15 minutes** to complete.  
Thank you very much for your participation.

If you would like any more information about this project please contact the project manager. If you would like to discuss any ethical matters regarding this project please contact the Ethics Administrator. This project has Human Ethics approval H3100 from James Cook University.

**PLEASE DETACH AND RETAIN THIS INFORMATION  
PAGE ONLY FOR YOUR FUTURE REFERENCE**

**Project Manager:**

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9. In your travels today, where did you **previously visit** before coming to this site?  
(e.g. township, visitor site)

.....  
 .....

10. In your travels today, where do you plan to go **after leaving this site**?

.....  
 .....

11. Have you visited **any other canopy walk attractions** similar to the Mamu Rainforest Canopy Walkway before?

Yes

No

If you answered 'Yes', which attraction/s did you visit?

.....

12. How would you compare Mamu Rainforest Canopy Walkway with other canopy walks you have visited?

Mamu Rainforest Canopy Walkway is not as good.

Mamu Rainforest Canopy Walkway is about the same.

Mamu Rainforest Canopy Walkway is better.

**SECTION C: REASONS FOR VISITING**

13. Please indicate how important the following **reasons** were for you **visiting this site** today.

	Not important	Slightly important	Moderately important	Important	Quite important	Very important
See natural features and scenery	1	2	3	4	5	6
Be close to / experience nature	1	2	3	4	5	6
Social with family or friends	1	2	3	4	5	6
Rest and relax	1	2	3	4	5	6
Experience tranquility	1	2	3	4	5	6
Outdoor exercise	1	2	3	4	5	6
Opportunities for short walks	1	2	3	4	5	6
Opportunities for long walks	1	2	3	4	5	6
Because it is a World Heritage Area	1	2	3	4	5	6
Because it is a National Park	1	2	3	4	5	6
Learn about native animals and plants	1	2	3	4	5	6
Learn about Aboriginal culture	1	2	3	4	5	6
Other (please specify)	1	2	3	4	5	6

14. What **activities** did you engage in at this site today?

- |   |   |
|---|---|
| <input type="checkbox"/> Observing scenery                | <input type="checkbox"/> Walking – short (1 hour or less)   |
| <input type="checkbox"/> Bird watching                    | <input type="checkbox"/> Walking – long (1-6 hours)         |
| <input type="checkbox"/> Observe wildlife                 | <input type="checkbox"/> Swimming                           |
| <input type="checkbox"/> Photography / painting / drawing | <input type="checkbox"/> Guided tour                        |
| <input type="checkbox"/> Picnic / barbeque (BBQ)          | <input type="checkbox"/> Looking at interpretation material |
| <input type="checkbox"/> Using café / restaurant          | <input type="checkbox"/> Relaxing                           |
| <input type="checkbox"/> Camping                          | <input type="checkbox"/> Other (please specify):            |

.....  
 .....

15. Were there particular things you wanted to do today at this site which you were unable to do?

- Yes  
 No

If you answered 'Yes', please specify:

.....  
 .....

16. How **long** have you spent at this site today?

- |  |  |
|--|--|
| <input type="checkbox"/> Less than half an hour      | <input type="checkbox"/> About 3 hours     |
| <input type="checkbox"/> About half an hour          | <input type="checkbox"/> About 4 hours     |
| <input type="checkbox"/> About 1 hour                | <input type="checkbox"/> More than 4 hours |
| <input type="checkbox"/> About 2 hours               | <input type="checkbox"/> Overnight         |
| <input type="checkbox"/> Days (please specify) ..... |  |

17. Do you think the **entrance fee** you paid to enter the Mamu Rainforest Canopy Walkway today is reasonable?

- Yes  
 No

18. How much would you be **willing to pay** to access the Mamu Rainforest Canopy Walkway?

\$.....per Adult \$.....per Child

**SECTION D: NATURAL ENVIRONMENT**

19. The following statements are about the **natural features** of this site. Please rate the extent to which you agree or disagree with each statement.

	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The natural environment at this site is interesting.	1	2	3	4	5	6
I would like to spend more time exploring this natural environment.	1	2	3	4	5	6
In terms of natural attractions and scenic beauty this site is appealing.	1	2	3	4	5	6
The condition of the natural environment at this site appears to be good.	1	2	3	4	5	6
The natural environment at this site is well managed.	1	2	3	4	5	6
I am concerned about the impacts of human activity on the natural environment at this site.	1	2	3	4	5	6
This site appears to be disturbed and impacted.	1	2	3	4	5	6

**SECTION E: SITE FACILITIES**

20. What facilities have you used at this site today? (Tick as many as applicable)

- |   |   |
|---|---|
| <input type="checkbox"/> Picnic table                 | <input type="checkbox"/> Walking track              |
| <input type="checkbox"/> Shelter shed                 | <input type="checkbox"/> Boardwalk                  |
| <input type="checkbox"/> Restaurant / café            | <input type="checkbox"/> Viewing platform / lookout |
| <input type="checkbox"/> Rubbish bin                  | <input type="checkbox"/> Fire place                 |
| <input type="checkbox"/> Toilet / showers             | <input type="checkbox"/> Barbeque                   |
| <input type="checkbox"/> Tap                          |   |
| <input type="checkbox"/> Other (please specify) ..... |   |
| .....   |   |

21. Were there particular **facilities at this site you were expecting** to find which were not available?

Yes

No

If you answered 'Yes', please specify:

.....  
 .....

22. Please rate the extent to which you agree or disagree with each of the following statements about the **facilities and management** at this site.

	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The site is appealing in terms of the character and attractiveness of the facilities.	1	2	3	4	5	6
The facilities at this site are adequate.	1	2	3	4	5	6
The overall condition of the facilities at this site appears to be good.	1	2	3	4	5	6
The facilities and infrastructure at this site are well managed.	1	2	3	4	5	6
The presence of a ranger at sites like this is important to me.	1	2	3	4	5	6

23. If you **agreed the presence of a ranger was important**, what are the reasons for this?

To provide information / education

To give directions

To answer questions

For lodging complaints about others' behavior

To take us on guided walks

For site maintenance

For safety / security

Other (please specify) .....

.....

**SECTION F: INFORMATION**

24. How did you **find out about this site**?

- |   |   |
|---|---|
| <input type="checkbox"/> Have been here before                          | <input type="checkbox"/> Travel guide or book                         |
| <input type="checkbox"/> Road sign                                      | <input type="checkbox"/> From the web                                 |
| <input type="checkbox"/> Word of mouth                                  | <input type="checkbox"/> The trip here was included in a package tour |
| <input type="checkbox"/> Map which said it was a tourist site           | <input type="checkbox"/> Tourist brochure (which one?)                |
|   | .....   |
| <input type="checkbox"/> Tourist information centre in North Queensland | <input type="checkbox"/> Tourist information centre (other)           |
|   | .....   |
| <input type="checkbox"/> Other (please specify): .....                  |   |

25. If you obtained **prior information** about this site, was the information accurate?

- Yes  
 No

If you answered 'No', please specify:

.....  
 .....

26. Did you refer to any of the information available at this site today?  Yes  
 No

27. Please rate the extent to which you agree or disagree with the following statements about **information available** at this site.

	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
<b>Signs, maps and directions...</b>						
were easy to find	1	2	3	4	5	6
helped me to find my way around	1	2	3	4	5	6
<b>The rules and safety information...</b>						
were easy to understand	1	2	3	4	5	6
addressed my interests and concerns	1	2	3	4	5	6
<b>The information about natural features and values...</b>						
was interesting and informative	1	2	3	4	5	6
helped me to better appreciate the special natural values of the area	1	2	3	4	5	6
<b>The Aboriginal cultural information...</b>						
was interesting and informative	1	2	3	4	5	6
helped me to understand the significance of this area for Rainforest Aboriginal people	1	2	3	4	5	6

28. If you were to visit this site again, is there any **additional information** you would like?

Yes

No

If you answered 'Yes', please specify:

.....  
 .....

**SECTION G: VISITOR EXPERIENCE**

29. Were there any particular aspects of your visit that **increased / enhanced your enjoyment** of this site?

Yes

No

If you answered 'Yes', please specify:

.....  
 .....

30. Were there any particular aspects of your visit that **took away / detracted from your enjoyment** of this site?

Yes

No

If you answered 'Yes', please specify:

.....  
 .....

31. Please rate how strongly you agree or disagree with the following statements about **other visitors at this site** today.

	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
There were too many people at this site today.	1	2	3	4	5	6
The presence of other people at this site prevented me from doing what I wanted to do.	1	2	3	4	5	6
The behavior of other visitors at this site has been on the whole environmentally responsible.	1	2	3	4	5	6
The behavior of some visitors at this site detracted from my enjoyment of this site.	1	2	3	4	5	6

**ADDITIONAL COMMENTS:**

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**THANK YOU VERY MUCH FOR YOUR PARTICIPATION**

## Appendix 2: Site Photographs

### Mamu Rainforest Canopy Walkway site signage and facilities

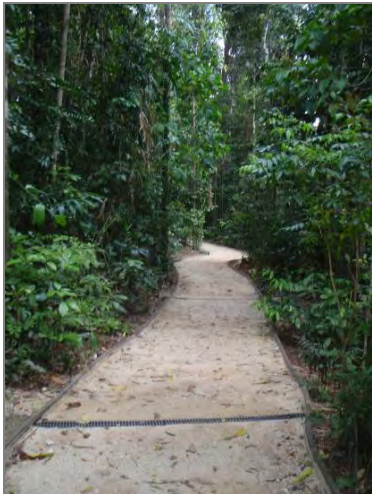


Photographs by Queensland Department of Environment and Resource Management



Photographs by Julie Carmody

APPENDIX 2 – SITE PHOTOGRAPHS



Photographs by Julie Carmody