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# Department of Environment and Conservation

And

## Bibbulmun Track Foundation

### 2008 Bibbulmun Track User Research Report

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# 1. Executive Summary

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## 1.1 STUDY BACKGROUND, OBJECTIVES AND METHODOLOGY

### Background

The Bibbulmun Track is one of the world's great long distance walking tracks, stretching 963km from the eastern outskirts of Perth to Albany on the south coast of Western Australia. The track in its current form was opened in 1998, and a number of smaller scale projects to provide an indication of user numbers were undertaken by the (then) Department for Conservation and Land Management (CALM – now the Department of Environment and Conservation, DEC).

In 2003 Colmar Brunton Research (CBR) was commissioned by CALM and the Bibbulmun Track Foundation (BTF) to design and execute a study that could generate reasonable estimates to total track usage, and be repeated at future times. CBR recommended the use of a systematic observation and data collection methodology that we had developed and employed to estimate usage of a number of other similar recreational facilities.

This methodology has been expanded and replicated with a 12-month data collection phase in 2007-2008. This report documents the processes and outcomes of this second whole-of-track usage study. Where possible, it provides comparisons to the 2003 study (but the 2007-08 study does not include the community telephone survey or business survey components that were in the 2003 study).

Colmar Brunton Social Research would like to acknowledge the dedicated efforts of the Bibbulmun Track Foundation, and its members who volunteered to conduct the observation and interviewing for the study. This is a huge undertaking, and the study could not have been carried out without the dedication of the volunteers and the people who co-ordinated them.

### Objectives

To provide updated estimates of usage of the Bibbulmun Track, and to identify any changes in the current attitudes of users to the experience the Track offers.

There were a number of very specific informational objectives to be addressed:

- Primary usage estimate of total number of track users during a 12 month period (measured in 'user days')
- Secondary usage estimate of total number of visits and individual visitors to the track in the same period
- Pattern of usage of the track
- Satisfaction with the track
- Expectations of the track
- Intention to re-use the track
- Expenditure of track users

## Methodology

The methodology used for this study was one which Colmar Brunton had developed for previous projects for the Department for Sport and Recreation and CALM in 2000 and 2001, and which was used in the earlier 2003 Bibbulmun Track usage study.

The central component of this method is a systematic schedule of detailed observation and interviews with users. The track was broken down into 54 'functional sections' and these were allocated to five different 'classes' of section: Tourist destination (T-Sites), High volume (H-Sites), Medium volume (M-Sites), near a Population centre (P-Sites) and long Distance(D-Sites).

18 typical sections across these five categories were identified and used for observations and interviews. A systematic schedule of sessions covering all times of the day and week was outlined for each section, and 458 of these sessions were completed by BTF volunteers between September 2007 and October 2008. 6,179 walkers in 2,201 walking groups were observed during these sessions, and 592 walkers were interviewed.

The methodology is explained in much more detail in section 4 of the main body of this report. This section also contains a discussion of the limitations and assumptions associated with the project, and the reader is strongly encouraged to read this discussion in conjunction with the summary of key results provided here.

## 1.2 KEY RESULTS

### Primary Estimate of Usage: Days on Track<sup>1</sup>

The key measure of usage of the track is the number of days spent on the track each year. The observational data suggests that **around 434,736 visits are spent on the track each year**. This represents an increase of 55% on the 2003 estimate of 280,000 days spent on the track.

It is estimated that 35% of total use occurs in the H-Site category, 27% in the P-Sites, and 25% in the T-Sites. D-Sites (8%) and M-Sites (5%) contribute just 13% between them.

### Secondary Estimate of Usage: Walks<sup>2</sup>

69% of walkers interviewed on the track were doing day-walks, 15% for 2-3 days, and 16% were walking for more than 3 days. There were more walkers interviewed walking from 4+ days in 2007-08 than in 2003 (8%).

The average duration of a walk (calculated by the number of days spent on the track in the last 12 months divided by the number of visits) in 2007-08 was 2.6 days, compared to 2.0 days in 2003.

Thus, the 434,736 visits is the equivalent of around **167,206 walks on the track each year**. This is an increase of 22% from the 2003 estimate of 137,250.

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<sup>1</sup> Days on Track are the basic unit of observation for the study, as during a multi-day walk it is possible that a walker would be observed on more than one occasion. A 'day on track' does not refer to any specific length of time spent on the track, but rather refers to a walker spending some time on the track on that day (the walking duration could be anything from a minute to the full 24 hours)

<sup>2</sup> A Walk is the unit which captures the number of trips to and from the track which are made by users. A walk could be a single day visit, or a multi-day use of the track.

## Patterns of Usage

### Profile of walkers and group composition

53% of observed walkers were male, and 47% female. It was estimated by the observers that 81% of observed walkers were over the age of 18. The age and gender profile of the five categories of track was largely consistent – with the D-Sites being the only variation to this with a higher proportion of males.

The average group size was 2.8. 23% of observed groups consisted of a single person walking alone – T-Sites and H-Sites tended towards slightly larger groups, while D-Sites tended towards smaller groups.

### **Age and gender of observed track users, and average group sizes**

	Observed Groups			
	% Male	% Female	% Adult	Average group size
<b>Total</b>	<b>53%</b>	<b>47%</b>	<b>81%</b>	<b>2.8</b>
T Sites	51%	49%	79%	3.1
H Sites	53%	47%	84%	2.6
M Sites	57%	43%	73%	2.0
P Sites	53%	47%	87%	2.1
D Sites	68%	32%	89%	1.2

The interviewed walkers were younger than those seen in 2003, with 30% aged under 25, 53% aged 25-39, and 18% aged 40+.

66% of interviewed walkers (who were not walking alone) reported that they were walking with family or friends, and 24% were walking with their spouse / partner only. 5% were walking in a non-commercial group, 4% in a school / youth group, and 1% in a commercial tour. These figures were largely unchanged from 2007-08.

### When the track is used

Different classes of section are used in different ways. The results from the 2007-08 study are more reliable in this analysis, as many more observation sessions were completed across a full 12 months.

*T-Site*: has by far the highest peak load; weekday use is minimal, and primarily in the middle of the day; Saturday midday and afternoons, and especially these timeslots on Sundays, are the peak use periods for this type of section, but also for the track as whole.

*H-Sites*: have the highest use on Saturdays, especially afternoons. Weekday use peaks in the later timeslots, while Sunday use is consistently moderate.

*M-Sites*: were only ahead of the D-Sites in terms of overall usage; usage was low, but relatively consistent across the weekends and the midday on weekday slots; if anything it tended to peak in the midday slot on weekdays and Saturday, but was more consistent across all of Sunday.

*P-Sites*: had the most consistent use across all times and days; overall levels of use was generally between the higher H-Sites and the lower M-Sites.

*D-Sites*: lightly used compared to the other categories; if peaks occur anywhere it appears to be midday on weekdays, and early on Sundays, perhaps suggesting times when people are most likely to access these types of sections.

### Duration and distance

69% of people interviewed on the track indicated that they were doing a day-walk (40% <4 hours; 29% >4 hours). These figures are not significantly different from 2003, when the total was 72%. However, there were also slightly fewer who were walking for 2-3 days (15%, down from 19%) – and this leaves an increase in the proportion walking for 4+ days from 8% to 16% in 2007-08.

The average reported duration of a visit over the past 12 months was 2.6 days – up from 2.0 days in 2003.

In terms of length of walk, as opposed to duration, the mean distance being walked increased from 70km in 2003 to 105km in 2007-08. However, the mean is highly affected by a relatively small number of very long walks, and so the median<sup>3</sup> is a better indication of the 'typical' length of walk. The median walk in 2007-08 was 15km, up slightly from 14km in 2003.

The median walk varies considerably across the categories of track. D-Sites had the highest median (410km), ahead of M-Sites and H-Sites (16km), T-Sites (12km), and P-Sites had the lowest median at 10km.

The proportion of walkers who reported doing an 'out-and-back' walk as opposed to a one-way walk to a different end point was higher in 2007-08 than in 2003 (74% vs 57%).

### Method of accessing the track

Methods of getting to the track did not appear to have changed substantially since 2003, with nearly 83% of walkers who accessed the track by private vehicle (63% on their own car, 20% being 'dropped off').

8% reported walking or jogging to the track, and this was mostly seen at P-Sites (91%) while it did not get above 2% for any other category.

D-Sites had a slightly higher proportion of private vehicle arrivals – but unlike other categories, half of these were drop offs.

### Where walkers came from

87% of walkers interviewed in 2007-08 were from WA (compared to 89% in 2003), 6% from interstate (7%) and 7% from overseas (4%). One-in-three interstate and overseas visitors had decided to walk the Track before they arrived in WA, a figure that is consistent with 2003.

### Accommodation

31% of walkers on the track reported using some form of accommodation as a part of their walk on the track in 2003 – and this figure was slightly higher at 36% in 2007-08 (which probably reflects the high proportion of longer duration walkers in the 2007-08 survey).

81% of nights spent in some form of accommodation were spent in track campsites, exactly the same as in 2003. Hotel/motels (4%), Backpackers (5%) and other campsites (5%), as was the case in 2003, picked up the bulk of the rest of the nights.

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<sup>3</sup> The median is the point at which half the people fall above and half below, and as such is not as heavily influenced as the mean by a skewed data shape such as we see here.

## Track Campsites

40% of walkers had visited a campsite on their walk. Males (43%) were more likely than females (35%) to have done so; and younger walkers were more likely than older walkers to have visited a campsite. Walkers interviewed in D-Sites (88%) and M-Sites (66%) were most likely to have visited a campsite, while those in the T-Site (24%) and P-Sites (29%) were least likely to have done so. Of the people who were intending to stay at least one night in a track campsite on their walk, 80% had already visited a campsite on the walk.

63% of people who had visited a campsite had recorded their details in a log book, and 84% of people who were staying overnight had done so.

Only 12% of walkers who had visited a campsite reported some overcrowding. This figure was highest in the D-Sites (24%, 11 out of 45 walkers), but between 7%-10% for the other categories.

## **Attitudes and Knowledge of Users**

### Reasons for use

In 2003 nearly a third of all users indicated that a combination of the *pleasure, enjoyment and challenge* that they got from using the track was the major reason for their using it, while 16% indicated something to do with *health and exercise* was their main motivation. In 2007-08, walkers reported a more even range of reasons for walking – with the *health and exercise* responses leading the way at 15%. The *pleasure and enjoyment* category, dominant in 2003, was ranked 5<sup>th</sup> at 8%.

However, when asked to nominate their expectations for the walk, 40% indicated that the *natural environment and landscapes* was an expectation, while only 29% nominated *getting fit and losing weight*. 21% nominated the *challenge* of the walk, and 20% expected *peace and tranquillity*.

### Prompts to use the Track

56% of walkers interviewed were prompted to first walk on the track by 'word of mouth', with no other specific factor mentioned by more than 11%.

### Knowledge of the Bibbulmun Track Foundation

90% of walkers were aware of the BTF / Friends (up from 82% in 2003), including 17% who were current members (14% in 2003).

### Leave No Trace minimum impact principles

40% of interviewed walkers reported being aware of the *Leave No Trace* minimum impact principles.

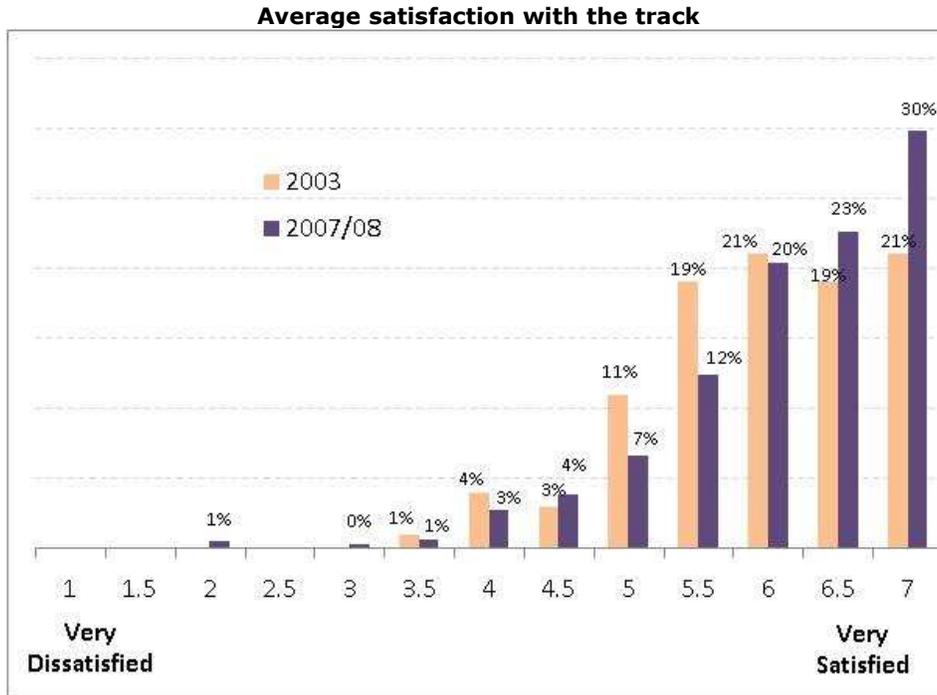
There was a trend for younger walkers to be more likely of being aware of these principles, and 43% of males said they were, compared to 35% of females. Walkers in the less used D-Sites (88%) and M-Sites (64%) were most likely to be aware of the principles, while those in the T-Site (23%) and P-Sites (25%) were the least likely to have heard of them.

Day trippers (22%) were much less likely to have heard of them than those walking for longer (2-3 days: 80%; 4+ days: 77%).

### Satisfaction with the track

Satisfaction with the track amongst users has increased from 2003 to 2007-08. 87% of users rated the track as a 6 or 7 out of 7 in terms of how pleased they were with their walk (increased slightly from 82% in 2003), while 72% rated it as a 6 or 7 out of 7 for exceeding their expectations (increased from 59% in 2003).

Averaging these two ratings to obtain an overall satisfaction rating for the track gives the results shown in the chart below. 73% of walkers gave an average rating of 6 out of 7 or higher (increased from 61% in 2003), and the 'average' average rating was 6.1 / 7.0 (increased from 5.9 / 7.0 in 2003).



Base: All walkers (2003: n=280; 2007-08: n=588)

Average of:  
Q11: How do you feel about your walk so far?  
Q22: How would you rate your walk overall?

### Future use of the track

89% of walkers on the track indicated that they expected to use the track again in the future (93% in 2003) – including some 98% of WA based walkers.

### **Economic activity associated with the track**

Walkers were asked to indicate how much money they personally spent as a result of their walk (preparing, travelling to and from, and during).

These results suggest that an average day walker who walks for less than 4 hours spends around \$50 in total as a result of their walk and those who walk from 4 hours to 1 day spend about \$60 (down from the 2003 estimate of \$72). Walkers on a 2-3 day walk average around \$198 (unchanged from \$203), while those on 4 day or longer walks average around \$1,031 (up from \$738 – possibly reflecting at least partly a longer typical duration of walking for this group in 2007-08 than in 2003, and hence this groups are broken down into detailed groups for the overall calculation). The

major areas in which differences occur with increased duration on the walk are still food / meals, accommodation and equipment.

Based on the 167,206 walks estimated to take place on the track each year, multiplying these expenditure figures out suggests that around \$39 million is spent each year as a result of walkers on the Bibbulmun Track. The 2003 estimate was approximately \$21 million spent across the various categories identified above. The 2007-08 increase is due to the estimated number of visits, an increase in the spend of 4+ days visitors, and an increase in the proportion of the 4+ day visitors. The estimated total expenditure minus equipment is \$28 million in 2007-08, up from \$13 million in 2003.

#### Estimated annual expenditure by walkers

<b>2007-08</b>				
Total visitor days	100%	100%	<b>167,206</b>	
<b>Duration</b>	<b>Average spend</b>	<b>Proportion</b>	<b>Number of walks</b>	<b>Expenditure</b>
<4 hours	\$49.77	40%	66,882	\$3,328,737
4 hrs – 1 day	\$60.37	29%	48,490	\$2,927,326
2-3 days	\$197.79	15%	25,081	\$4,960,751
4-6 days	\$509.28	4%	6,688	\$3,406,187
7-27 days	\$792.82	4%	6,688	\$5,302,570
4-6 weeks	\$1,394.83	2%	3,344	\$4,664,479
6+ weeks	\$1,452.10	6%	10,032	\$14,567,990
<b>TOTAL</b>				<b>\$39,158,040</b>

### 1.3 CONCLUSIONS

As in 2003, there are two areas in which this report needs to draw conclusions: with respect to usage of the track; and with respect to the methodology utilised.

#### **With respect to use of the track**

The 2003 study concluded that it was clear that the Bibbulmun Track is a significant recreational facility in Western Australia - well known, heavily used, and generating a not insignificant level of economic activity.

The 2007-08 study has reinforced this. The full 12-month data collection process undertaken and much greater number of observation sessions completed has given us more robust data for estimating usage and usage patterns. Where the 2003 data required an estimate of seasonal variation to be made and was not able to average out changes in usage patterns for the periods during which no data was collected, the 2007-08 study overcomes these issues. Post hoc analysis suggested that 23% of observation sessions were completed during the 25% of the year which is 'off peak' for different parts of the track.

The estimate of total number of days spent on the track, which is the most reliable usage estimate being based purely on observed use, indicates a 55% increase from the 2003 estimate, at 434,736 days on track. A third of these visitor days are estimated to be spent in the H-Site categories (35%), and around a quarter in each of the P-Sites around population centres (27%) and the Tourist T-Sites (25%). The other two categories contribute just 13% .

With an average duration of 2.6 days per visit (a figure that reflects a high proportion of single day visits, but an increased proportion of very long walks), it is estimated that there would be around 167,206 walks made on the track in 2007-08 (a 22% increase from 2003). This secondary estimate of walks also relies on information from the interviews completed with walkers, and while the characteristics of this sample appear to be generally consistent with the observed use, some care needs to be taken when using this data source, as the sample cannot be proven to be representative of all walkers.

The track clearly has a profile beyond WA, with a third of interstate and overseas visitors interviewed on the track in both surveys having planned to walk on the track before they came to WA.

Satisfaction with the Track was high in 2003 - and has increased amongst walkers interviewed in 2007-08. In 2007-08, three quarters of walkers interviewed gave an average rating of 6 or higher out of 7 for the two measures that are average to give overall satisfaction - up from 61% in 2003. Of the 87% of track users from WA, 98% intend to walk on the track again.

Estimates of expenditure associated with visits to the track are necessarily indicative only, and rely on a combination of the observation data and interview data. Regardless, it is clear that walking on the track is responsible for a large amount of economic activity, and the 2007-08 estimate is that walkers would spend around \$39 million per year on their walks (including getting to and from the track, preparing for their walk, and accommodation used). This figure is significantly higher than the \$21 million estimated in 2003, reflecting a higher estimated volume of usage, increased individual spending on 2-3 and 4+ day walks, and a higher proportion of 4+ days walkers.

Overall, the 2007-08 study has further demonstrated the significance of the Bibbulmun Track as a recreational facility in WA. Observed usage has increased in terms of both number of days on track and walks. Patterns of usage for the various track categories do vary, and data in this study may assist in tailoring elements of the experience to the users of these sections. That said, the track attracts males and females across a spectrum of ages. Users are satisfied, and intending to re-use the

track. Users spend a substantial amount of money during and in support of their walking, estimated to be in the range of approximately \$39 million per year.

### **With respect to the methodology**

The methodology used in 2003 was somewhat experimental, in that although components had been successfully used in other studies, never had it been applied to a facility as long and diverse as the Bibbulmun Track. The three elements of the methodology used in 2003 each had their strengths and weaknesses in execution. The 2007-08 study focussed only on the observation and walker survey component, but did this on a larger and better scale.

An important improvement was the use of a full 12 month data collection process – meaning that estimates of seasonal variation were not required, and that many more observations were used to form estimates of volume. Post hoc analysis of the data showed that there were different three-month off-peak periods for the northern and southern halves of the track, resulting in 25% of the year being 'off peak'. As the overall observation schedule was consistent across the year, there were 23% of sessions during this time, demonstrating the value of the consistent observation program in proportionally representing seasonal variations in the summary data.

The primary estimate of track usage – days on track – is based purely on the observational data, and with the much greater number of observations, we can be more confident of the 2007-08 estimate than we were with the 2003 estimate. The use of different sites for the observations and the addition of the M-Site category do not negatively impact on the 2007-08 estimate nor the comparison to 2003, as both are the best estimate based on our knowledge of the track at each time period.

While the observational component was strong, attempting to compare the 2003 and the 2007-08 interview samples was more challenging. In this case, the impact of different sites does have some potential impact, but perhaps less so than the potential variations in individual interviewers across the two studies. Without any clear basis for weighting the survey data, it has to be taken largely at face value. However, likely inconsistencies in the way data is gathered in different sites and different years means that variations in the data cannot automatically be attributed to differences in actual walker attitudes or behaviour.

Attitudinally this is less of an issue, but data such as the frequency and duration of walks is used to calculate the secondary estimate of usage (walks), and to do this reliably it is necessary for the sample to be robustly representative. As it may not be, this impacts on the reliability of this estimate.

If there is an opportunity to further improve the methodology, it lies in providing a solution to how to calibrate the interview sample more effectively. To do this, it requires the collection of some robustly representative data about usage that can be a reliable start point. Ideally, this would consist of the collection of critical baseline data from every (or every  $n^{\text{th}}$  walker) from a number of selected sites over time. There would only need to be a relatively small amount of data collected – frequency of visit, duration and origin would probably suffice to calibrate the interview sample. This would require a more rigorous sampling process to be followed during this data collection, but would then allow the less structured interview data to be more confidently interpreted. It should even be possible to back-apply this calibrating data to the existing interview data if it was available in a sufficiently timely manner, allowing estimates of usage made here to be refined.

Overall though, we are confident that the systematic observation and interview process remains the best available method for estimating use of the track, and given the very large commitment to these sessions expended over the 12 months to gather a suitable sample of observations, we are satisfied with the final outcomes derived from the data.

### **Colmar Brunton**