

# Assessment of the Economic Value of Heritage Tourism in Three Western Australian Locations

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## Executive Summary

This study estimated the direct yearly tourist expenditure at three locations in Western Australia considered to have significant cultural heritage values - the cities of Fremantle and Albany and the Town of New Norcia.

Visitor expenditure surveys were used to estimate the average expenditure per visitor per day in Fremantle and Albany. The annual expenditure of all tourists was then calculated by multiplying this figure by the average number of annual overnight visitors (domestic and international) and then multiplying by the average length of stay in the respective cities. Data for New Norcia were taken primarily from secondary sources as a visitor survey was not possible. Subsequently, no individual daily spend figure could be calculated, only total annual expenditure could be estimated.

In order to determine the proportion of the total overnight visitor expenditure which could be directly attributable to cultural heritage, an attribution factor was generated using a number of variables derived from the visitor surveys and secondary sources. The attribution factor was multiplied by the total annual visitor expenditure to create a best estimate of the economic value of heritage tourism. The main findings for each location are outlined in the table below.

### Summary of Direct Tourist Expenditure Attributable to Heritage

	Case study location		
	Albany	Fremantle	New Norcia
Average expenditure per person/ per day	\$69.49	\$124.95	-
Overnight visitors (average last four years)	376,425	107,650	10,000 (est)
Average length of stay (nights)	5.1	2.8	2
<b>Total Direct Visitor Expenditure (\$million)</b>	<b>133.4</b>	<b>37.7</b>	<b>2.12</b>
Attribution factor (%)	62.83%	73.01%	75%
<b>Attribution of Visitor Expenditure (\$million)</b>	<b>81.2</b>	<b>27.5</b>	<b>1.6</b>

The attribution figures are conservative estimates which primarily measure attribution through visitor's primary reason for holidaying in each city. The amount of direct expenditure therefore attributable to the heritage evident within each location is a conservative estimate.

### Attribution of Annual Direct Visitor Expenditure to Heritage:

- Albany \$81.2 million
- Fremantle \$27.5 million
- New Norcia \$1.6 million

### Acknowledgements

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# 1 Introduction

This study aims to measure the economic value of cultural heritage through direct tourism expenditure in locations with recognised cultural heritage significance. This report presents the results of three case study locations in Western Australia – the City of Fremantle, the City of Albany and the Town of New Norcia as determined in consultation with the Heritage Council of WA and Tourism WA. Analysis of the significant economic value for cultural heritage tourism will contribute to the proposal that expenditure of public funds on the development of heritage places and events is warranted. There are a number of valuation techniques that are used to estimate the contribution of tourism activity to the economy of a region. Although economic impacts of tourism include direct, indirect and induced effects, this study concentrates on direct tourist expenditure due to difficulties using multipliers (see Selected Methodology). The direct tourism expenditure measurements carried out as part of this study is intended to provide a tool for future economic assessments of cultural heritage in order to manage and allocate resources to ensure the sustainability of heritage oriented tourism.

Heritage is a broad, subjective term that may be applied to ‘anything that someone wishes to conserve or collect’ (Howard, 2003). This definition may include anything from small personal items to large wilderness areas. However, this study is confined to what may be termed cultural heritage, or the products of past human activity conserved for a greater good (Howard, 2003, Baram & Rowan, 2004). Cultural heritage products may include both tangible aspects, such as buildings, memorials and landscapes; and intangible aspects, such as cultural practices, oral traditions and knowledge (McKercher & Cros, 2002, Heritage Council of Western Australia, 2005). The draft Heritage Tourism Strategy for Western Australia recommends a definition of heritage based, in part, on that included in the Victorian Heritage Tourism Plan that provides some prescription in this regard. In the draft Heritage Tourism Strategy for WA, indigenous heritage is deemed to fall under the responsibility of other government and non-government organisations (McCulloch, 2005). Valuation of heritage tourism in this study is confined to non-indigenous cultural heritage relating to locations with tangible evidence of historical human activity and events.

Heritage tourism may be defined as tourist activity in locations where historic products are present and act as the main foci for tourists (Garrod & Fyali, 2000). The draft Heritage Tourism Strategy for Western Australia has adopted a broad definition along these lines: “...tourism activity that is, or can be, aligned to physical or tangible heritage” (Heritage Council of Western Australia, 2005). Poria et al {2004} argue that the mere presence of tourists in heritage places does not necessarily equate to heritage tourism. They prefer a more personal definition based on the relationship between the individual tourist, the heritage presented and how the tourist relates this to their own heritage. This definition encompasses the motivations for visiting heritage places and perceived relevance as an important component of establishing whether heritage tourism is in fact taking place. While a debate regarding the true nature and meaning of heritage tourism falls outside the scope of this report, the data on which it is based encompasses tourist perceptions of the importance of heritage to their visit. This takes into account Poria et al’s (2004) personal concept of heritage tourism rather than assuming the presence of tourists in places containing cultural heritage artefacts amounts to heritage tourism.

## 1.1 Economic values of specific tourism resources

Although economic values studies commonly focus on a tourist destination and estimate the total expenditure of tourists in that area, policymakers are sometimes interested in the economics generated by a specific tourism resource. Johnson and Moore (1993) stated that to accurately

estimate economic values of specific resources it is necessary to know the expenditures that are associated solely with that resource. Additional information about multiple destinations and substitution behaviour are needed to calculate accurate estimates of the economic value of a specific resource, including:

- Whether the trip was solely to visit the resource or whether it was combined with other destinations;
- What other tourist attractions were visited during the trip; and
- What proportion of the trip was devoted to the resource.

Estimates of economic values for specific tourism resources may be overstated if calculations use total trip expenditures rather than the proportion of the trip devoted solely to the resource, referred to as the attribution factor (Johnson & Moore, 1993).

## 1.2 Measuring the value of Tourism

Two broad groups of economic indicators can be used to measure the value of tourism and recreation (Driml & Common, 1996). These are presented in Figure 1-1. The first group describes the values of direct expenditure associated with tourism and recreation, generating activity and employment in the economy. These indicators are concerned with visitor expenditure on items associated with their travel to a region including and not limited to transport, recreational equipment, accommodation and commercial tours. The direct values of visitor spending also leads to indirect impacts resulting from purchases from other sectors and induced impacts when workers spend income on goods and services. Direct values are multiplied where successive rounds of employment and income are generated by the initial expenditure. Some of these values also leak out of the economy through purchases made outside the region.

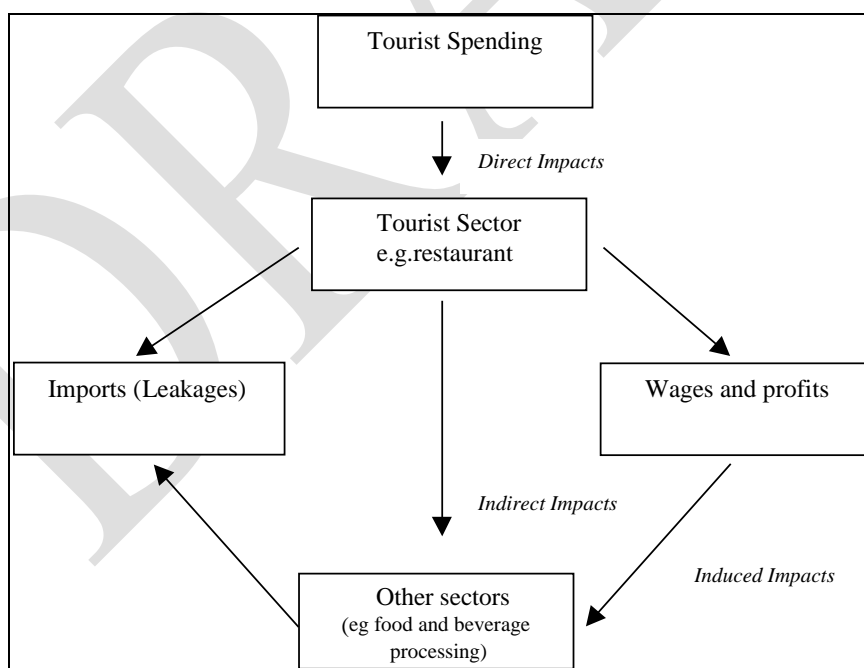


Figure 1-1: The multiplier effect (Lindberg et al., 2001)

The second group of economic indicators is measured as net economic benefits or the total benefits derived by tourism and the businesses that service the tourism market minus any costs to society in the provision of those benefits (Driml & Common, 1996). The benefits to visitors are measured in terms of consumer surplus. The measure records how much a visitor is willing to pay above the price currently determined by market forces.

### **1.3 The Case Study Locations**

This study used visitor surveys conducted in December 2004 and January 2005 in two Western Australian case study locations, Fremantle and Albany, in order to determine average visitor expenditure. The proportion of total annual visitor expenditure that can be directly attributable to the cultural heritage at these locations was then determined using a number of indicators derived from the visitor surveys. A third location, New Norcia, was included using secondary data analysis to determine heritage value (see map, Figure 1-2). This approach was used as carrying out visitor surveys was determined to be undesirable, at the time of data collection, by stakeholders in New Norcia. A brief description of each of the case study locations follows.

#### ***City of Fremantle***

Fremantle is the major sea port for Western Australia located at the mouth of the Swan Estuary. It is approximately 18 kms west of the state capital, Perth and has a population of about 26,000. Fremantle was established in 1829 as the port for the Swan River Colony and was the major city in Western Australia for some time after colonisation. Much of the city's original architecture is still evident, ranging from one of the first major structures built by colonists (the Round House Prison) to entire late 19<sup>th</sup> and early 20<sup>th</sup> century streetscapes. There are numerous museums that focus on various aspects of Fremantle and Western Australian maritime and settlement history. Many of the heritage buildings are used for contemporary resident accommodation and business activity (Anon, 2005). Fremantle receives approximately 108,000 overnight visitors annually. About one quarter of these are international visitors (<http://www.westernaustralia.com>, accessed 31/3/2005).

#### ***City of Albany***

Albany is located on the southern coast of Western Australia about 400km south of Perth and has a population of 31,000. It was the first colony in Western Australia, established in 1826 as a British military outpost. While the central business district has undergone some modification, there is still ample evidence of historic architecture in the form of streetscapes, churches, museum buildings and military installations. Albany was the embarkation point for the Australian and New Zealand armed forces expedition to Gallipoli during the First World War and so has a significant military heritage (<http://www.albanyadvantage.com.au>, accessed 31/3/2005). Albany receives about 376,000 overnight visitors annually, of which about 12-16% are international in origin (<http://www.westernaustralia.com>, accessed 31/3/2005).

#### ***Town of New Norcia***

New Norcia is a small town with a population of 70 residents and is located about 130km north of Perth in an inland, primarily agricultural region. New Norcia is unique in that it is the only privately owned monastic town in the Southern Hemisphere. The town was established by Benedictine Monks in 1846 as a Catholic mission. It was at its peak during the 1920s as a centre for religion and education (with a boys and girls boarding school) in an isolated farming district. It has extensive, impressive architecture in the Spanish Mediterranean style and a small and still active, though aging, population of Benedictine Monks (McKenzie, 2004). New Norcia has 27 buildings classified by the National Trust and the town as a whole is registered on the national estate. It is also home to a significant collection of priceless European Art and is also a significant repository for Indigenous, European and Western Australian religious material (<http://www.westernaustralia.com>, accessed 31/3/2005). New Norcia receives about 60,000 visitors annually, the vast majority of which are self drive Perth Metropolitan residents (McKenzie, 2004).

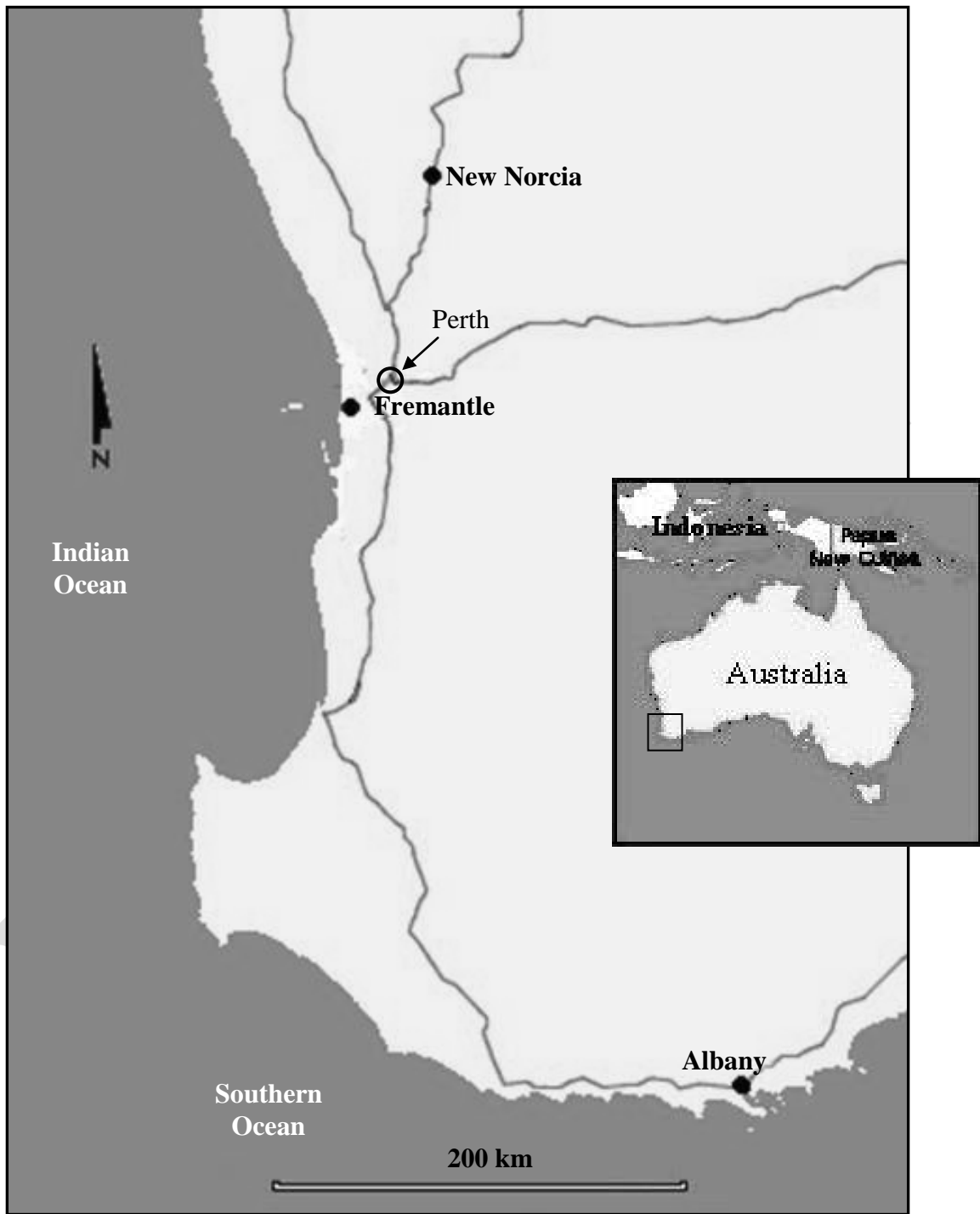


Figure 1-2: Map of Western Australian heritage valuation case study locations



## 2 Method

Data was collected from Fremantle and Albany using the same questionnaire format. Albany questionnaires were primarily distributed for later completion by tourists and returned using a reply paid envelope. Fremantle surveys were conducted through face to face interviews with tourists, using the questionnaire as the structured format for the interview. Data for New Norcia was gathered from secondary sources owing to the inability to conduct visitor surveys in the town.

### 2.1 Measuring Economic Value of Tourism

There are a variety of methodologies that can be used to assess the economic value of tourism. Each of these methodologies has their advantages and disadvantages and each suit different types of projects, depending on the amount of data available, the scale of the area to be studied and the available project budget.

The majority of projects measuring economic impact use input-output analysis in order to determine the indirect and induced effects of tourism activity. Input-output analysis is reliant on the use of extensive data about economic multipliers. Although data is available at a national level, the small scale of the selected case study areas would mean that using this data would be highly inaccurate as a basis to measure the indirect and induced impacts of tourism. The use of multipliers in measuring secondary impacts has also been questioned on the basis that:

- Multipliers assume that extra output can be produced without constraints on the supply of labour, capital, land, good or service. The factors of production are assumed to be limitless in supply and therefore can be sourced without any price increase.
- Multipliers assume that households consume goods and services in exact proportion to their initial budget shares. No allowance is made for purchasers' marginal preferences. For example the household budget share of some goods might increase or fall as household income increases.
- An increase in demand for a product implies an equal increase in production. In reality however, if domestic demand increases it might be more efficient for industries to divert some exports to local consumption or import to some extent rather than increasing local production by the full amount;
- Multipliers are often misused when evaluating industry assistance proposals because they refer to changes in the economy caused by a change in final demand for a product, while requests for government assistance are usually framed in terms of increasing the production of an industry.

Although multipliers can be a useful way of summarising and quantifying inter-linkages within the economy, they are more often abused than used correctly. Multipliers can be considered as a method of inflating the output of an industry to more impressive levels.

### 2.2 Fremantle and Albany Data

This study used visitor spending to measure the direct economic value of tourism and recreation to the cities of Fremantle and Albany. Visitor spending was determined by a visitor expenditure survey which asked tourists to record their amounts of expenditure on different items during their holiday in the selected regions. Measuring spending through visitor surveys has several advantages over using business sales. For example:

- Visitor surveys generally have a much higher response rate than business surveys;
- Visitor surveys can collect additional data about visitor characteristics and behaviour;

Table 2.1 demonstrates how the mean daily expenditure per person per day was calculated for each expenditure item. In the case of accommodation, the number of nights was determined subtracting 1 to the number of days visitors stayed in the region. For example it is assumed that a visitor that stayed 2 days stayed 1 night. In some cases overnight visitors reported that they have stayed 1 day, in this case the figure was transformed to 2 days, because if 1 day is subtracted by 1 equals 0 nights and that is not valid. For the other cases (№2 to №7), the formula has been applied to each item separately. The sum of each expenditure item average separately (№1 to №7) computes the average expenditure per person/ per day ( $\bar{x}$ epp).

**Table 2-1: Formulae for calculating mean daily expenditure per person**

Expenditure item	Calculation ( $\bar{x}$ =average)
<b>1- Accommodation</b>	$\frac{\bar{x} \text{ Accommodation expense}}{\bar{x} \text{ № of people figures cover} \times \bar{x} \text{ nights in the region } (\bar{x} \text{ Length of stay}-1)}$
<b>2-Food and drink in restaurants/ hotels</b> <b>3-Food and drink in supermarkets</b> <b>4-Travel</b> <b>5-Activities</b> <b>6-Equipment</b> <b>7-Other (souvenirs etc.)</b>	$\frac{\bar{x} \text{ Expenditure item (№ 2-7 separately)}}{\bar{x} \text{ № of people figures cover} \times \bar{x} \text{ Length of stay}}$
<b>Average expenditure per person / per day (<math>\bar{x}</math>epp)</b>	
$\bar{x}$ epp = $\Sigma$ of the $\bar{x}$ of each expenditure item	

### 2.2.1 Visitor Expenditure Survey

In order to measure visitor expenditure in Albany, a visitor sample was obtained by distributing mail back questionnaires to places of accommodation, the visitor centre and nearby national park car parks and heritage attractions. Surveys were also distributed directly to tourists by the researchers at various locations around the city. The questionnaires were distributed during the Western Australian Summer school holidays in order to capture a maximum number of visitors and

ensure a good response rate. 160 surveys were returned out of a total of 800 distributed (20% return rate). The data represents a snap shot of Albany tourists during a peak visitation period.

In order to obtain a viable sample of tourists from Fremantle, Curtin University students conducted structured personal interviews during December 2004, using a survey format similar to the Albany questionnaire. Students were requested to interview ten tourists each, resulting in a sample of 290 Fremantle visitors. As with the Albany data, the Fremantle data collected by students was a snap shot of visitors to Fremantle. The student-collected data was supplemented by data collected over the course of a year by Savant Surveys and Strategies between November 2003 and October 2004. The data collected by Savant's was commissioned by the Fremantle Chamber of Commerce and provided to the researchers by Savant Surveys and Strategies in December 2004. While the questionnaire used by Savant's differed somewhat from the student survey format, there were similarities, such as length of stay, demographic data and spend data, enabling triangulation of results.

The visitor expenditure of each of the samples was measured by asking respondents to indicate:

- The approximate amount of money (in Australian dollars) they spent on their trip with reference to the categories of 'travel', 'accommodation', 'food and drinks', 'activities', 'equipment' and 'other';
- How much was spent 'in the location';
- Whether these expenditure figures were per day or for the total trip;
- How many people were covered by these expenditure figures; and
- Their length of stay in the location (in days).

The nature of asking visitors to record their own spending gives rise to a limitation in the accuracy of the data. Common difficulties arise in visitors misinterpreting expenditure questions and in their inability to estimate holiday expenditure. Response results from previous expenditure surveys undertaken in both case study areas were used to inform the framing of the questions to ensure maximum understanding and responsiveness.

## **2.2.2 Estimating direct tourist spend**

### ***2.2.2.1 Total Visitor Expenditure***

Respondents were asked to detail their expenditure on a range of items. The survey data also provided estimates of average daily expenditure per visitor per day using average length of stay and adjustment of total expenditure to account for the number of persons the expenditure covered. The average daily expenditure per person was then extrapolated using the estimates of total visitors to the study region in 2003, the average expenditure per visitor per day and the average length of stay as follows.

$$\textit{Total visitor expenditure} = \textit{average daily visitor expenditure} \times \textit{average length of stay} \times \textit{total number of visitors}$$

Note: There are several organizations who collect data about the number of visitors to the case study locations of Fremantle and Albany. Overnight visitors to each city are BTR's figures provided by the Tourism WA, these numbers were averaged over the last four years. It is acknowledged that those figures in some periods denote a confidence interval of 50% and over.

### ***2.2.2.2 Attribution factor***

An estimation is required as to the amount of individual expenditure that can be attributed to the heritage present in each of the locations. Using a range of motivational, behavioural and importance variables from the surveys, the proportion of visitors that identified heritage (museums, historic buildings, historic streetscapes, monuments, etc.) was used to estimate the attribution factor.

$$\text{Total attributable visitor expenditure} = \text{total visitor expenditure} \times \text{attribution factor (\%)}$$

It is acknowledged that this method is somewhat rudimentary in approach, however in the absence of accurate and reliable data on the attribution of individual tourist expenditure to heritage it provides a best estimate approach.

### **2.2.3 Data Treatment**

Treatment of data sources for the purposes of estimation required some decisions about ‘outliers’ (that is ‘extreme’ values of some variables in the primary data set) and the accuracy of secondary data. The approach employed in the study was to use the most conservative estimates and measures available for the key variables of visitation, length of stay and average daily expenditure. It was important to recognise how sensitive the estimates were to changes in any of these key variables to ensure that the study provided robust and reliable estimates of the economic value of heritage tourism. The following section outlines the approach used to estimate key variables and includes a discussion of the treatment of the data in order to provide the best estimates for visitation, length of stay and average daily expenditure.

#### **2.2.3.1 Estimation of visitation**

One of the key variables used in estimation of economic value of tourism is visitation, as measured in number of visitors to the location (domestic and international). The main source for domestic and international overnight visitor data is the Bureau of Tourism Research, National Visitor Survey (NVS) and International Visitor Survey (IVS). It has been acknowledged that there is some margin of error in the visitation data for the case study locations. This data was obtained through Tourism WA. In order to reduce the standard error and improve the estimates, a four year rolling average was used as the basis for estimation of visitation. This had the effect of increasing the sample size and reducing the standard error to the order of 20 percent or less. This was considered acceptable for the purposes of extrapolation and estimation.

#### **2.2.3.2 Estimation of length of stay**

Length of stay data can be influenced by visitors that choose to stay much longer than the average. These extended stays (outliers) had the effect of skewing the average length of stay data so a decision was made to remove them from the data set. The basis for deciding outliers was calculated using the value of two standard deviations from the mean length of stay. Using this rule, it could be expected that statistically there is a 95 percent probability that any visitor selected at random would have a length of stay within the two standard deviations of the mean. That is, the length of stay data is representative of an estimated 95 percent of the visitor population. The other 5 percent would be considered outliers for the purposes of analysis and extrapolation.

It should be recognised that length of stay influences average daily expenditure because it is based on an estimate of total expenditure by all visitors divided by total number of days in the region. Removing the outliers in the length of stay data had the effect decreasing the average length of stay and increasing the average daily expenditure estimate.

#### **2.2.3.3 Estimation of average daily expenditure**

Table 2 describes the basis for estimation of average daily expenditure. Again it was necessary to ‘clean’ the data set to remove outliers for each expenditure item, so that representative estimates of the mean expenditure for each item could be calculated. The sum of the mean expenditure per item per person provided the estimate of overall average expenditure. This figure was then divided by the average length of stay. The lower average length of stay figure obtained after removal of outliers had the affect of increasing the average expenditure per person per day. To check this, a higher average length of stay figure was estimated before the removal of outliers. It was found that

average length of stay and average daily expenditure are inversely related. Furthermore the net effect of the estimation of total expenditure was found to be neutral in that the extrapolated estimate was not affected by the decision to use a higher average length of stay and a lower average daily expenditure, or vice versa. As previously stated, the approach in the study was to use the most conservative and representative data as the basis for estimation, so outliers for the key variables of length of stay and expenditure were removed.

### **2.3 New Norcia Secondary Data**

Given the time frame of the project, there was a restricted window of opportunity to collect visitor data from New Norcia using the same method as that employed in Fremantle and Albany. Unfortunately, the New Norcia community representatives indicated that data collection during this period was not favourable as it may disrupt the residential community and negatively impact on the visitor experience. This stance was based on past experience with survey distribution in the town. Fortunately, some data from the past survey was able to be accessed as a secondary source.

While data at the individual tourist level could not be obtained, information regarding general visitor characteristics, annual visitation and spending was available. Past work by Fiona McKenzie and others provided a considerable visitor sample (1682) from which to draw visitor demographics, main activities and impressions of New Norcia. The past survey data also provided an attribution factor for the heritage in New Norcia with about three quarters of visitors focussed on this aspect. Inquiries by phone and email to the Hotel, Monastery and Road House enabled information relating to accommodation costs, overnight visitor numbers and average stay length and average cost of meals to be obtained.

### 3 Results

This section provides the results for each of the case study locations respectively. The Albany results are primarily based on the visitor expenditure questionnaire distributed in January 2005 and supplemented with some visitor statistics provided by Tourism WA. The Fremantle results are a combination of the visitor expenditure survey conducted in December 2005 and data collected by Savant Surveys and Strategies between November 2003 and October 2004. Fremantle visitor data provided by Tourism WA is also incorporated. New Norcia results are sourced from the Shire of Victoria Plains Tourism Strategy report (Goodall & McKenzie, 2003) and reports based on a 2003 New Norcia visitor survey by McKenzie. Some primary data was gathering using personal communications by phone and email with accommodation and eating establishment operators in the town.

#### 3.1 Value of Heritage Tourism: Albany

Eight hundred questionnaires were distributed across the City of Albany during January 2005. Questionnaires were left at accommodation establishments, the visitor centre and directly handed to tourists. Of these, 160 (20%) were return via reply paid envelopes.

##### 3.1.1 Albany Visitor Characteristics

Table 3.1 summarises the characteristics of visitors who completed and returned the questionnaire. Data relating to visitor characteristics gathered through this survey approximates the TWA and BTR data for the Albany region.

Table 3-1: Summary of Albany survey respondent characteristics

Category	No.	% response	Category	No.	% response
<b>Place of origin</b>			<b>Age Group</b>		
WA	79	59.8%	Under 20	0	-
Interstate	21	15.9%	20 to 40	53	39.6%
International	32	24.2%	41 to 60	55	41.0%
			Over 60	26	19.4%
<i>Total responses</i>	<i>132</i>	<i>100%</i>	<i>Total responses</i>	<i>134</i>	<i>100%</i>
<b>Length of stay</b>			<b>Nature of visitor group</b>		
1-3 days	53	39.0%	With partner	58	42.6%
4-7 days	51	37.5%	Family or friends	52	38.2%
8-14 days	23	16.9%	Alone	24	17.6%
15+ days	9	6.6%	Club/tour group	2	1.5%
<i>Total responses</i>	<i>136</i>	<i>100%</i>	<i>Total responses</i>	<i>136</i>	<i>100%</i>
<b>Transportation</b>			<b>Accommodation type</b>		
Own motor vehicle	80	60.2%	Hotel/motel	55	39.9%
Hire vehicle	25	18.8%	Caravan park	38	27.5%
Scheduled bus	24	18.0%	Backpackers	21	15.2%
Package tour bus	3	2.3%	Other	19	13.8%
plane	1	0.8%	Campsite	5	3.6%
<i>Total responses</i>	<i>133</i>	<i>100%</i>	<i>Total responses</i>	<i>138</i>	<i>100%</i>

Most (66.4%) of the respondents were between 30 and 59 years of age and were residents within Western Australia (54.9%). Visitors originating over seas constituted almost one quarter (24.2%) of

the respondents. The dominant age range indicated by this survey is that most likely to be interested in heritage attractions.

The average length of stay based on the survey results was between 7 and 8 days with a minimum of 2 days and a maximum of 200. However, the majority (76.5%) of respondents were staying for 7 days or less, while 93.4% of respondents were staying for 14 days or less. With unusual lengths of stay removed from the data (outliers) the average length of stay is 5.1 days. Survey respondents were most commonly staying in motels or hotels, followed by caravan parks

Most respondents were either travelling with another person (42.6%) or as part of a group of family and/or friends (38.2%). Group size averaged between 3 and 4 people with 69% travelling in a group of 3 or less and 82% travelling in a group of 4 or less. Almost 80% of respondents were self drive with most driving their own vehicle while 18.8% drove a hire vehicle. Of those using hire vehicles, approximately equal proportions were interstate and international visitors. The vast majority of visitors arriving in their own vehicle were resident within WA.

### 3.1.2 Attribution Factors:

#### 3.1.2.1 Why do people visit Albany?

Respondents were asked to rate a series of possible focal points of visitation to Albany in terms of the respective importance using a rating scale from 1 (not important) to 5 (extremely important) summarised in Table 3-2. The natural attractions received a considerably higher average rating of importance than the remaining potential foci of visitation (4.14). Heritage attractions were the second highest rated aspect, receiving an average rating reflecting a moderate importance.

**Table 3-2: Respondents' importance rating of various aspects of the Albany experience**

Aspect	No.	Rating			
		Min	Max	Mean	Std. Dev.
Natural attractions	134	1	5	4.14	1.03
Heritage attractions	131	1	5	2.73	1.33
Family and friends	125	1	5	2.14	1.65
hotels/restaurants	132	1	5	2.11	1.16

Statistical analysis comparing the mean ratings for each of the four aspects revealed significant differences. A Wilcoxon Signed Ranks statistical test for related data indicates that the average importance rating for “Natural Attractions” is significantly higher than that for “Heritage attractions” ( $\alpha = 0.05$ ,  $z = -7.89$ ,  $p = 0.000$ ). Similarly, the importance rating of “Heritage attractions” is significantly higher than the remaining aspects ( $\alpha = 0.05$ ,  $z = -2.73$ ,  $p = 0.006$ ).

#### 3.1.2.2 Importance of Heritage Attractions to Albany Visit

When specifically rating the importance of visiting heritage attractions during their stay in Albany, 9.9% rated heritage as extremely important while 21.4% rated heritage as very important (Table 3-3). Most visitors rated heritage as having some importance to their visit while 26.7% indicated heritage was not important.

**Table 3-3: Frequency of respective heritage importance ratings as allocated by respondents**

<b>Heritage Importance</b>	<b>No.</b>	<b>% response</b>
Not important	35	26.7%
Somewhat important	19	14.5%
Moderately important	36	27.5%
Very important	28	21.4%
Extremely important	13	9.9%
n = 131		

### 3.1.2.3 Activities during stay in Albany

Most respondents indicated they had visited beaches during their stay in Albany (84.6%). The heritage sites most commonly visited were Whale World (47.8%), museums other than Whale World (44.1%) and monuments or memorials (41.2%). Princess Royal Fortress was visited by 37.5% of respondents (Table 3-4).

**Table 3-4: Respective numbers of respondents visiting nominated locations in Albany**

<b>Location visited</b>	<b>No.</b>	<b>% of response</b>
Beaches	115	84.6%
Whale World	65	47.8%
National Parks	60	47.2%
Other Museums	60	44.1%
Monuments/memorials	56	41.2%
Princess Royal Fortress	51	37.5%
Historic Houses	30	22.2%
Historic Walks	26	19.1%
Historic Churches	21	15.4%
n = 136		

If the responses were categorised according to the number visiting one or more heritage locations or experiences, the majority of visitors had done so (81.5%). This indicates that while most respondents visit the beach, they do so in conjunction with visiting one or more heritage sites (Table 3-5).

**Table 3-5: Respective numbers of respondents who did and did not visit a heritage site in Albany**

<b>Activity</b>	<b>No.</b>	<b>% of response</b>
Visited a heritage attraction	110	81.5%
Did not visit a heritage attraction	25	18.5%
n = 135		

### 3.1.3 Visitor Expenditure in the City of Albany

Respondents were asked to detail their holiday expenditure in order to generate an estimate of the direct tourist spend in the City of Albany. The total average daily spend per person in Albany was \$69.49. The results are summarised in Table 3-6.



**Table 3-6: Mean daily spending of survey respondents staying overnight in Albany**

<b>Expenditure Item</b>	<b>Per person/per day</b>
Accommodation in Albany	\$35.07
Food and drinks in Albany	\$20.11
Travel to Albany	\$10.45
Activities in Albany	\$8.21
Other	\$7.94
Equipment in Albany	\$3.40
<b>Total Spend</b>	<b>\$69.49</b>

To estimate the annual expenditure of all tourists in Albany, the average number of overnight visitors (domestic and international) per year (376,425) was multiplied by the average daily expenditure per person (\$69.49). The average number of annual overnight visitors was calculated using the past four years of Tourism WA data, which is sourced from the BTR. This figure was multiplied by the average length of stay in the region (5.1 days).

$$376,425 \times \$69.49 \times 5.1 \text{ days} = \$133.4 \text{ million}$$

Thus, estimated average annual value of direct spend of overnight visitors to Albany is \$133.4 million.

### **3.1.4 Attribution of Visitor Expenditure to Albany Heritage Attractions**

The questionnaire gathered information that enabled an estimation of how much of the total visitor spend is attributable to heritage attractions in Albany. Based on the data collected, the following variables indicate how significant heritage is to the visitor experience in Albany:

- 81.5% of respondents visited one or more heritage sites and/or experiences during their stay in Albany.
- 70.6% of respondents indicated that heritage attractions had some level of importance to their visit.
- 30.4% of respondents indicated that heritage was the main focus of their visit by rating it as very important or extremely important

From this data, it is estimated that 62.83% of visitor expenditure (based on the average of the values cited above) could be attributed to the heritage attractions in Albany. Thus, the estimated expenditure of visitors to Albany attributable to the heritage attractions is equal to:

Annual number of overnight visitors x 62.03% x daily spend by visitors x average length of stay

$$376,425 \times 62.83\% \times \$69.49 \times 5.1 \text{ days} = \$81.2 \text{ million}$$

Thus the total annual direct expenditure that may be attributable to heritage in Albany is \$81.2 million annually. This represents a significant proportion of the total visitor expenditure.

### 3.2 Value of Heritage Tourism: Fremantle

A group of Curtin University Tourism Planning student interviewed 290 tourists during December 2005. Further data was obtained from a sample of 1,253 Fremantle visitors gathered by Savant Surveys and Strategies between November 2003 and October 2004 who provided the results for use in this report.

#### 3.2.1 Fremantle Visitor Characteristics

Table 3-7 presents a summary of Fremantle survey respondent characteristics. The data presented accords with BTR averaged data.

**Table 3-7: Summary of Fremantle survey respondent characteristics**

<b>Category</b>	<b>No.</b>	<b>% response</b>	<b>Category</b>	<b>No.</b>	<b>% response</b>
<b>Place of origin</b>			<b>Age Group</b>		
WA	143	49.1%	Under 20	24	4.1%
Interstate	84	28.9%	20 to 40	230	39.2%
International	64	22.0%	41 to 60	232	39.5%
			Over 60	101	17.2%
<i>Total responses</i>	<i>593</i>	<i>100%</i>	<i>Total responses</i>	<i>587</i>	<i>100%</i>
<b>Length of stay</b>			<b>Nature of visitor group</b>		
1-3 days	431	72.7%	with family or friends	109	38.0%
4-7 days	91	15.3%	with partner	90	31.4%
8-14 days	38	6.4%	alone	48	16.7%
15+ days	33	5.6%	with club/tour group	40	13.9%
<i>Total responses</i>	<i>593</i>	<i>100%</i>	<i>Total responses</i>	<i>287</i>	<i>100%</i>
<b>Transportation</b>			<b>Accommodation type</b>		
Own motor vehicle	228	38.7%	hotel/motel	187	65.2%
Public transport	155	26.3%	Self catering	44	15.2%
Hire vehicle or taxi	115	19.5%	backpackers	19	6.5%
Walking	65	11.0%	caravan park	19	6.5%
Other	11	1.9%	B&B	12	4.3%
Package tour bus	8	1.4%	other	6	2.2%
Bicycle	7	1.2%			
<i>Total responses</i>	<i>589</i>	<i>100%</i>	<i>Total responses</i>	<i>287</i>	<i>100%</i>

Most surveyed visitors were either resident within WA (49.1%) or had originated from interstate (28.9%) with just under a quarter originating from overseas. A considerable proportion of surveyed visitors were between the ages of 41 and 60 (39.5%) with the bulk of remaining visitors aged between 20 and 40 years.

The average length of stay in Fremantle was 2.8 days. The majority of overnight visitors stayed for three days or less (72.7%) with 88% staying for 7 days or less. Most surveyed visitors were with family, friends or their partner and travelled to Fremantle using their own vehicle or public transport (train or bus). The summary data in Table 3-7 indicates that the vast majority of visitors using commercial accommodation were staying in a hotel or motel. However, the sub group using commercial accommodation represented less than one third of the total sample population (32.8%).

When asked where they stayed the previous night, most surveyed visitors indicated they had stayed at their own home. A similar response was given when enquiring about where visitors were staying the next night (Table 3-8)

**Table 3-8: Response to question relating to accommodation use on the previous and following nights.**

Accommodation type	Stayed last night		Staying tonight	
	No.	% response	No.	% response
own home	119	43.4%	118	43.4%
commercial accommodation	90	32.8%	91	33.5%
with friends/relatives	65	23.7%	63	23.2%
<i>Total responses</i>	<i>274</i>	<i>100.0%</i>	<i>272</i>	<i>100.0%</i>

In addition, a greater number of surveyed visitors indicated they were staying in commercial accommodation outside the Fremantle area (Table 3-9). This may be a result of the limited availability of accommodation within the City of Fremantle. Thus, a significant portion of the survey respondents were making a day trip to Fremantle but were not necessarily spending all of their money on accommodation and other services within the Fremantle area.

**Table 3-9: Proportion of respondents using commercial accommodation staying within and outside the Fremantle area.**

Commercial Accommodation	Accommodation Location		Total
	Fremantle	Other than Fremantle	
hotel/motel	17.4%	47.8%	<b>65.2%</b>
Self catering	7.6%	7.6%	<b>15.2%</b>
backpackers	5.4%	1.1%	<b>6.5%</b>
caravan park	6.5%	-	<b>6.5%</b>
B&B	3.3%	1.1%	<b>4.3%</b>
other	-	2.2%	<b>2.2%</b>
<i>Total response</i>	<i>40.2%</i>	<i>59.8%</i>	<i>100.0%</i>

### 3.2.2 Attribution Factors:

#### 3.2.2.1 Why do people visit Fremantle?

Survey respondents were requested to indicate their reasons for visiting Fremantle by ticking one or more options provided. The historic precinct (36.9%) and food related establishments (33.2%) were most commonly selected followed by shopping (Table 3-10).

**Table 3-10: Reasons indicated for visiting Fremantle.**

Reason for visit	No.	% response
Historic precinct	220	36.9%
Eat at restaurant/cafe/tavern	198	33.2%
Shopping	140	23.5%
Family and friends	86	14.4%
Drink at hotel/pub/tavern	62	10.4%
Business	53	8.9%
Catch Rottnest ferry	43	7.2%
Conference or trade fair	37	6.2%
Special event	23	3.9%
Educational seminar or workshop	17	2.9%
Involved in government services	6	1.0%
n = 596		

#### 3.2.2.2 Importance of Heritage Attractions to Fremantle Visit

When specifically rating the importance of visiting heritage attractions during their stay in Fremantle, 13.4% rated heritage as extremely important while 30.2% rated heritage as very important (Table 3-11). Most visitors rated heritage as having some importance to their visit while 18.2% indicated heritage was not important.

**Table 3-11: Respondent rating of the importance of heritage to their Fremantle visit.**

Importance	No.	% response
Not important	53	18.2%
Somewhat important	37	12.7%
Moderately important	67	23.0%
Very important	88	30.2%
Extremely important	39	13.4%
n = 284		

#### 3.2.2.3 Visitor Activities during stay in Fremantle

When requested to indicate locations visited while in Fremantle, more than three quarters (77%) of respondents indicated the 'cappuccino strip' (area with a concentration of cafes). This area is built on the city's ethnic mix with a range of establishments representing various cultural groups. The two markets (Fremantle and E-shed) followed by the fishing boat harbour were subsequent popular locations. The percentage of response is a proportion of the number of respondents. Each respondents commonly indicated more than one location (Table 3-12).

**Table 3-12: Frequency of respondents visiting various locations in Fremantle**

<b>Location visited</b>	<b>No.</b>	<b>% response</b>
Cappuccino strip	224	77.0%
Fremantle Markets	193	66.3%
E-shed Markets	162	55.7%
Fishing boat Harbour	153	52.6%
Maritime Museum	117	40.2%
Round House	103	35.4%
Fremantle Prison	91	31.3%
South Beach	73	25.1%
Arts Centre	56	19.2%
Ship Wreck Galleries	48	16.5%
Army Museum	36	12.4%
Tram Tour	33	11.3%
World of Energy Museum	26	8.9%
Motor Museum	26	8.9%
Submarine Ovens	26	8.9%
n = 291		

The markets are situated within heritage buildings while the fishing boat harbour has strong historic industry and ethnic associations. Thus, arguably, such locations have some heritage aspect to the experience. Of the destinations focussed primarily on heritage experiences and artefacts, the Maritime Museum (40.2%), Round House (35.4%) and Fremantle Prison (31.3%) were the most commonly visited.

If the responses were categorised according to the number of respondents visiting one or more heritage locations or experiences, the majority of visitors had done so (Table 3-13). This indicates that while visitors most often visit the Cappuccino strip and Fremantle Markets, they do so in conjunction with visiting one or more heritage sites. Of the heritage sites, the Maritime Museum and Round House were the most commonly visited.

**Table 3-13: Respondents who indicated who did or did not visit a heritage location in Fremantle.**

<b>Activity</b>	<b>No.</b>	<b>% of response</b>
Visited a heritage attraction	559	93.8%
Did not visit a heritage attraction	37	6.2%
n = 596		

#### **3.2.2.4 Visitor Impressions of Fremantle**

Survey participants were requested to indicate whether they had negative or positive response to a list of aspects provided in the questionnaire (Figure 3-1). There was also a 'don't know' response for those who hadn't visited a particular location or activity or did not want to offer an opinion. More than 70% of respondents indicated a positive impression of the heritage aspects of Fremantle.

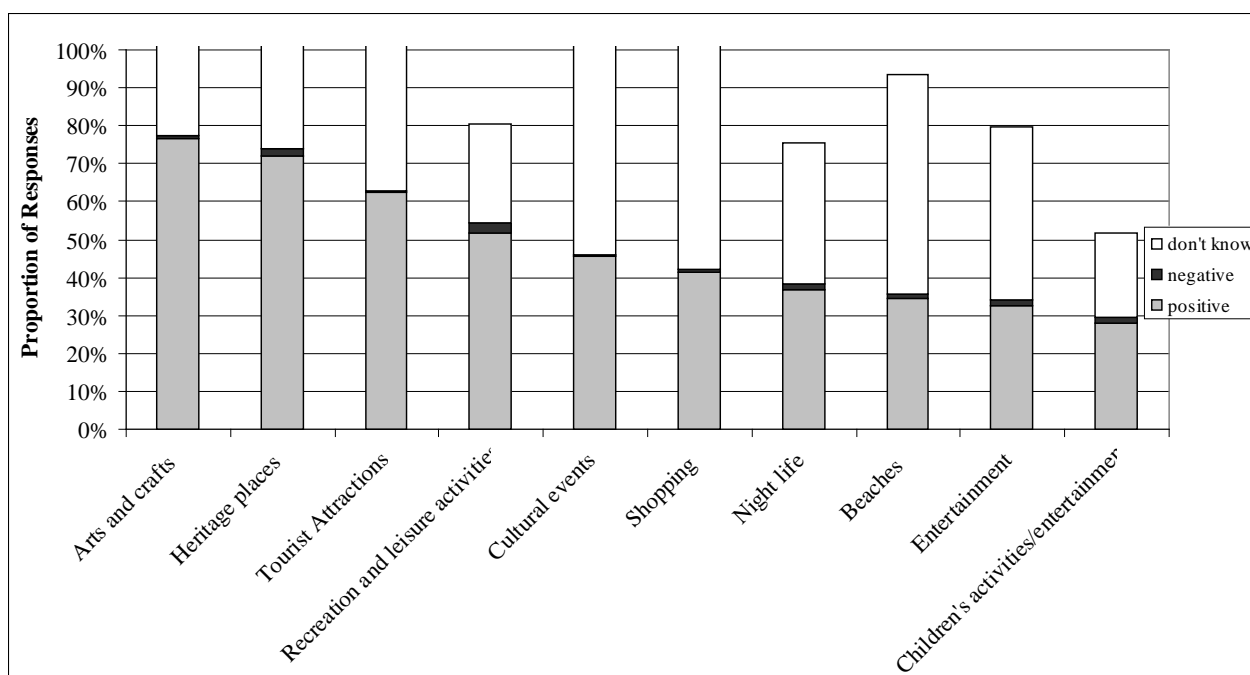


Figure 3-1: Impressions of various aspects of Fremantle as indicated using a negative-positive rating.

### 3.2.3 Visitor Expenditure in the City of Fremantle

Respondents were asked to detail their holiday expenditure in order to generate an estimate of the direct tourist spend in the City of Fremantle. The following figures are mean direct spend of visitors who stayed overnight within the City of Fremantle (Table 3-14).

Table 3-14: Mean daily spending of visitors staying overnight in Fremantle.

Expenditure Item	Per person/per day
Accommodation in Fremantle	\$59.08
Food and drinks from Fremantle supermarkets	\$19.32
Food and drinks in Fremantle restaurants	\$33.43
Travel to Fremantle	\$5.75
Activities in Fremantle	\$23.02
Retail in Fremantle	\$49.42
<b>Total Spend</b>	<b>\$124.95</b>

The total average daily spend per person staying overnight in Fremantle was \$124.95. To estimate the annual expenditure of all tourists in Fremantle, the average number of overnight Fremantle visitors (domestic and international) per year (107,650) was multiplied by the average daily expenditure per person (\$124.95). The average number of annual overnight Fremantle visitors was calculated using the past four years of Tourism WA data, which is sourced from the BTR. This figure was multiplied by the average length of stay in the city (2.8 days).

$$107,650 \times \$124.95 \times 2.8 \text{ days} = \$37.7 \text{ million}$$

Thus, estimated average value of direct spend of overnight visitors to Fremantle is \$37.7 million per year.

### 3.2.4 Attribution of Visitor Expenditure to Heritage in Fremantle

The questionnaire gathered information that enabled an estimation of how much of the total visitor spend is attributable to heritage attractions in Fremantle. Based on the data collected, the following variables indicate how significant heritage is to the visitor experience in Fremantle:

- 93.8% of respondents visited one or more heritage sites and/or experiences during their stay in Albany.
- 81.8% of respondents indicated that heritage attractions had some level of importance to their visit.
- 43.6% of respondents indicated that heritage was the main focus of their visit by rating it as very important or extremely important
- 72.2% of respondents who expressed an opinion indicated they had positive impressions of their experience of the heritage places in Fremantle

From this data, it is estimated that 73.01% of visitor expenditure (based on the average of the values cited above) could be attributed to the heritage attractions in Fremantle.

This attribution factor may then be used to calculate the estimated spend relating to heritage based on the two total daily spend figures presented in Tables 3-14a and 3-14b. It is important to note that the spend figure presented for all visitors to Fremantle in 3-14b is also associated with a much larger number of visitors (not just overnight visitors to Fremantle).

Thus, the estimated expenditure of visitors staying in Fremantle attributable to the heritage attractions is equal to:

Annual number of overnight visitors x 73.01% x daily spend by visitors x average length of stay

$$\text{Fremantle (a): } 107,650 \times 73.01\% \times \$124.95 \times 2.8 \text{ days} = \$27.5 \text{ million}$$

Thus, \$27.5 million of direct overnight visitor spend in Fremantle is attributable to the heritage component of the Fremantle experience.

### 3.3 Value of Heritage Tourism: New Norcia

A survey of visitors to New Norcia was not possible at the time of this study. Subsequently, secondary data from previous surveys in combination with personal communications with tourist related enterprises in the town and some desk top research enabled an estimate of heritage tourism value. This data enabled 'order of magnitude' estimations of annual over night visitor expenditure.

Based on past data, the estimated total number of annual visitors to New Norcia is about 60,000. Most of them were Perth Metropolitan residents who use their own vehicle to get there (84%). However, only about 17% of visitors (10200) stay overnight in the town. Most of these are single adults or couples with no children.

For visitors staying in the town of New Norcia, there are two primary types of accommodation, the hotel and the monastery. Annually, about 6000 overnight visitors stay at the monastery while about 4000 stay at the only hotel and approximately 200 use their own caravan. The average length of stay is about 2 nights. Table 3-15 provides data relating to possible avenues for expenditure in New Norcia.

**Table 3-15: Avenues of visitor expenditure in New Norcia**

<b>Item</b>	<b>Cost</b>
<b>Accommodation</b>	
Hotel single	\$66 per night
Hotel double	\$77 per night
Monastery	\$50 per night including meals
<b>Activities</b>	
Walking Tour	\$13.50 per adult
Museum visit	\$6.50 per adult
<b>Meals</b>	
Roadhouse	\$15 (average)
Hotel Breakfast	\$9 (average)
Hotel lunch	\$12 (average)
Hotel Dinner	\$18 (average)

There are two main activities in town that visitors are required to pay a fee to participate in: the museum and the walking tour. Meals may be purchased at the hotel or roadhouse while visitors staying at the monastery have their meals included in the tariff. The average cost of meals and accommodation was obtained by contacting staff at the various establishment in the town. It was assumed that all overnight visitors were adult, stayed 2 nights, paid to enter the museum and took part in a walking tour. Based on this information, estimates of annual over night visitor expenditure were made as described in Table 3-16.

**Table 3-16: Estimated total annual expenditure of overnight visitors to New Norcia**

<b>Expenditure Item</b>	<b>Annually</b>
Accommodation in New Norcia	\$1.22 million
Food and drinks in New Norcia	\$292,000
Travel to New Norcia	\$31,000
Activities in New Norcia	\$204,000
<b>Total Annual Spend</b>	<b>\$2.12 million</b>



Past survey data indicates that approximately 75% of visitors to New Norcia are primarily interested in the heritage related aspects. Using this as an attribution factor suggests that 75% of the total annual expenditure of \$2.12 million is attributable to the heritage attractions in New Norcia.

**Total annual spend of overnight visitors to New Norcia = \$2.12 million**

**Amount of overnight visitor expenditure attributable to heritage**

**75% x \$2.12 million = \$1.6 million**

Thus it is estimated that the amount of annual overnight visitor direct spend attributable to heritage in New Norcia is about \$1.6 million.

DRAFT

## 4 Conclusion

This report provides estimates of the direct expenditure attributable to heritage tourism in three locations in Western Australia.. The study found that tourism generates significant revenue in the case study locations of Fremantle, Albany and New Norcia. Direct annual tourist expenditure is estimated to provide approximately \$133.4 million for Albany, \$37.7 million for Fremantle and \$2.12 million for the small town of New Norcia.

Not all of this expenditure is attributable to the existence of heritage attractions so it was necessary to estimate an attribution factor for each case study. It was possible to attribute a proportion of total direct tourism expenditure in each case study region using a range of motivational, behavioural and importance variables. In the case of Albany the attribution factor was estimated to be 63%, that is, 0.63 of total direct tourism expenditure or about \$81.2 million of direct tourist expenditure is attributable to heritage. In the case of Fremantle the attribution factor was about 73%, so 0.73 of total direct tourism expenditure or about \$27.5 million of direct tourist expenditure is attributable to heritage. The attribution factor for New Norcia was about 75%, so 0.75 of total direct tourism expenditure, or about \$1.6 million of the total tourism expenditure. The results of the heritage valuation case studies indicates that a considerable proportion of direct tourist spending may be attributable to heritage in each of the case study locations.

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