

**Assessment of the Economic Value of Cultural Heritage Tourism in the
City of Perth, Western Australia**

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Executive Summary

This study measured the direct annual overnight visitor expenditure attributable to cultural heritage in the City of Perth local government area. Appendix 1 provides the project terms of reference.

A visitor expenditure survey was used to estimate the average expenditure per visitor per day in the City of Perth. The annual expenditure of all visitors 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 order to determine the proportion of the total visitor expenditure directly attributable to cultural heritage, an attribution factor was generated using a number of variables derived from the visitor survey. 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 are summarised in the table below.

Summary of Direct Visitor Expenditure Attributable to Cultural Heritage in the City of Perth

Item	value
Average expenditure per person per day	\$116.02
Mean Annual Overnight Visitors	1,249,337
Average length of visit (days)	6.44
Total Annual Direct Visitor Expenditure	\$939.5 mil
Cultural heritage attribution factor (%)	37.28%
Attribution of visitor expenditure (upper bound)	\$350.2 mil
Substitution value (lower bound)	\$22.7 mil

The amount of direct expenditure attributable to the cultural heritage attractions in the City of Perth provides an upper bound estimate of value based on the importance visitors place on cultural heritage during their visit, the cultural heritage places visited and activities they undertake while in the city.

Annual direct visitor expenditure
attributable to cultural heritage in
the City of Perth = \$350.2 million

The state substitution value provides a lower bound estimate of value based on the direct visitor expenditure that is retained or generated in Western Australia by City of Perth cultural heritage. In other words, the amount of direct visitor expenditure that would not occur if City of Perth cultural heritage did not exist.

Substitution value for annual direct
visitor expenditure associated with
City of Perth cultural heritage = \$22.7 million

Appendix 4 provides a local government area substitution value for the City of Perth.

Acknowledgements

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1 Introduction

This study measured the economic contribution of cultural heritage to Western Australia based on attribution of direct tourism expenditure in the City of Perth local government area. In the context of this report, cultural heritage includes both tangible aspects, such as buildings, memorials and landscapes; and intangible aspects, such as cultural practices, oral traditions and knowledge conserved for a greater good.¹ Cultural heritage tourism may be defined as tourist activity in locations where historic assets are present and act as the main foci for tourists.² The draft Heritage Tourism Strategy for Western Australia³ has adopted a broad definition along these lines: "...tourism activity that is, or can be, aligned to physical or tangible heritage". Poria et al (2004) argued 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. With this in mind, the analysis in this report factors in visitor perceptions of the importance of heritage to their visit when measuring value. See Appendix 1 for the project terms of reference.

There are a number of valuation techniques that can be used to estimate the contribution of tourism activity to the economy of a region. These may include direct, indirect and induced effects. This study concentrates on direct tourist expenditure. Direct expenditure provides a conservative reliable value from which further economic analysis may be applied. The direct tourism expenditure measurement 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.

The Case Study Location: City of Perth

The City of Perth local government area is within the Greater Perth Metropolitan area, the capital of Western Australia (Figure 1). Located on the Swan Coastal plain in the southwest of the state, the region was colonised in 1829 by a British expedition with the establishment of the Swan River Colony. The area in which the city is located has a long history of indigenous occupation prior to European settlement. The Perth Metropolitan Area now runs approximately 125km north to south and 50km east to west with a population of just under 1.5 million people. The City of Perth local government area is located on the Swan River in the approximate centre of the greater metropolitan area. It encompasses the central business district and covers an area of approximately 9km² with a resident population of about 13,440. The City of Perth is adjacent to Kings Park, a significant natural and cultural attraction with extensive park and natural bush areas combined with a variety of monuments and cultural experiences. The City also contains various cultural heritage related assets. Appendix 3 provides a comprehensive list of City of Perth state heritage places. More information may be sourced from <http://www.cityofperth.wa.gov.au>, <http://www.westernaustralia.com/>, <http://www.heritage.wa.gov.au/> and <http://www.heritageperth.com.au/>

¹ Baram & Rowan, 2004; Heritage Council of Western Australia, 2005; Howard, 2003; McKercher & Cros, 2002

² Garrod & Fyall, 2000

³ Heritage Council of WA, 2005

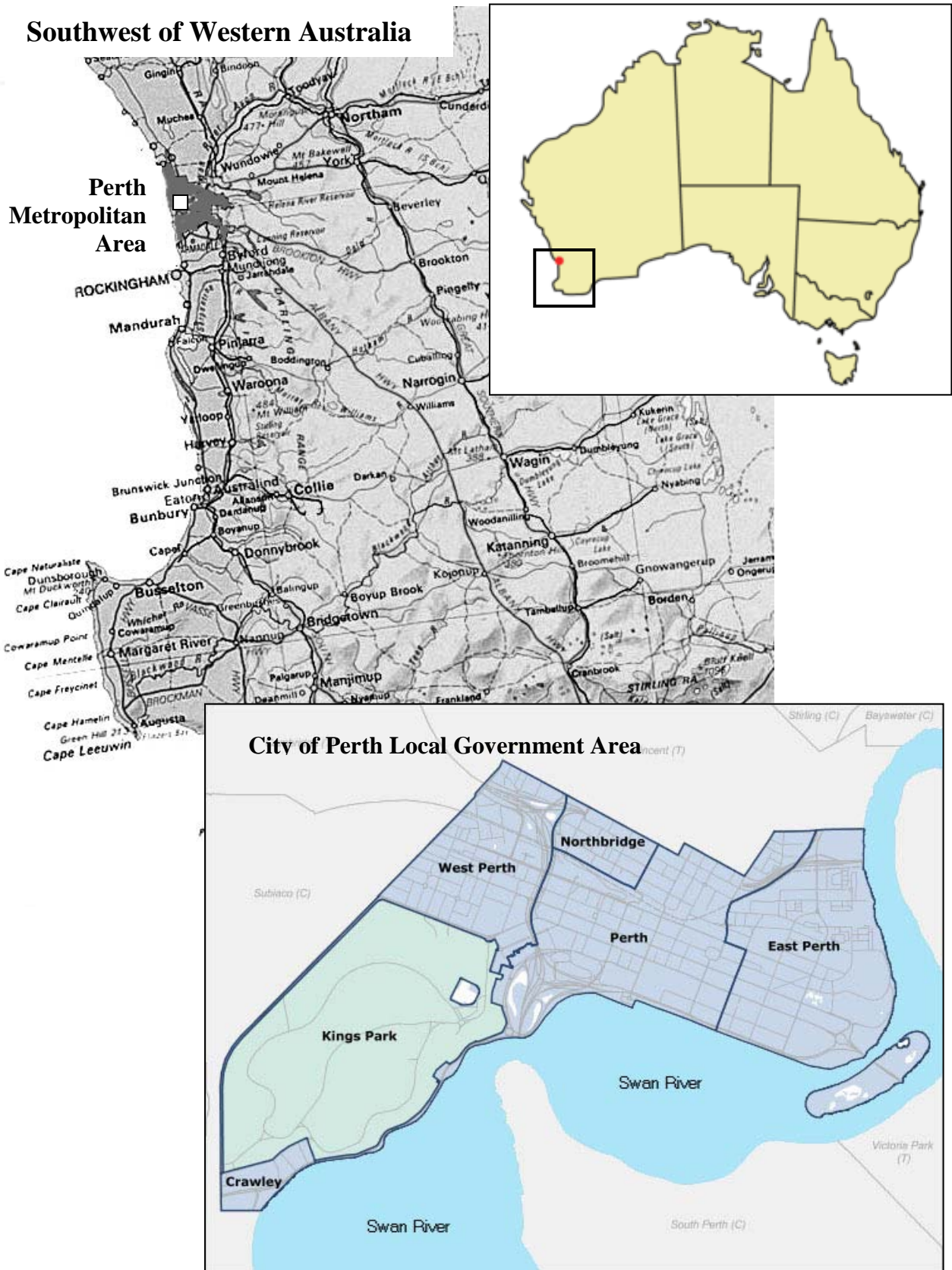


Figure 1: Study area location and detail

2 Method

This study used a multiple choice self completed visitor survey to determine average visitor expenditure, attribution factors and demographics (see Appendix 2 for questionnaire example). Data was collected from the City of Perth local government area between May 2007 and February 2008 using a self complete questionnaire format. Questionnaires were initially distributed for later return using a reply paid envelopes. However, a low response rate prompted the use of an alternative approach where visitors were given a questionnaire for immediate completion and return to researchers on site. This resulted in an improved response rate.

2.1 Measuring Economic Contribution of Tourism

There are a variety of methods that can be used to assess the economic value or contribution of tourism. Each of these methods has their advantages and disadvantages and each suit different contexts depending on the amount of data available, the scale of the area to be studied and the available project budget. The various economic valuation methods are not comparable as they include different variables and factors and thus represent different economic concepts. The direct expenditure method establishes a conservative but reliable value from which further economic analysis may be extrapolated.

Many projects measuring economic impact include the indirect and induced effects of tourism activity. This approach is reliant on the use of extensive data about economic multipliers. Although data is available at a national level, using this data for smaller scale local government areas would produce inaccurate results. It is also difficult in a capital city location to isolate the factors related to tourists and day visitor activity from other influences. 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 good(s) and service(s) 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.⁴

This study used the direct expenditure method that produces a conservative but reliable value based on primary data. Visitor direct expenditure also provides a foundation for further extrapolation using economic multipliers if desired. It is important to note that the various forms of economic valuation are not comparable as they include different variables and factors and so represent

⁴ Lindberg et al, 2001

different economic concepts.

2.2 Visitor Expenditure Survey

In order to measure visitor expenditure in the City of Perth, a visitor sample was obtained by distributing self completion questionnaires directly to visitors at various locations in the city area. People visiting the city for holiday or leisure were targeted. City workers and commuters were not included in the sample. Hotels in the Perth Central City area were approached with a request to assist with distribution of the survey forms to guests but were reluctant to participate. An initial mail back survey distributed to visitors approaching the Visitor Information Kiosk in Forrest Place provided a low response rate. Consequently, researchers were employed to approach City of Perth visitors at key locations and request completion of the questionnaire on site. Locations were selected in consultation with the steering committee based on the likelihood of tourists being present and included the following:

- The Bell Tower
- Kings Park War Memorial and adjacent areas
- Perth Mint
- Perth Arts Precinct and adjacent areas
- Constitution Centre and adjacent areas

A total of 115 viable questionnaires were returned completed.

2.3 Calculating direct tourist expenditure

The visitor expenditure was measured by asking respondents to indicate:

- The approximate amount of money (in Australian dollars) they spent during their visit with reference to the categories of 'travel', 'accommodation', 'food and drinks', 'activities', 'equipment' and 'other'
- 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 City of Perth (in days).

The nature of asking visitors to record their own expenditure 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. However, requesting visitors write an itemised list of expenditure improves the accuracy of estimates.⁵

2.3.1 Calculation of average daily expenditure per person

Each of the 115 survey respondents provided an itemised list of expenditure for their stay in the City of Perth. They also indicated how many people the expenditure figures covered and how long they were staying in the City of Perth area. From this, a mean daily expenditure per person figure could be calculated for each response then an average expenditure value for the total sample.

An expenditure figure per person per night for accommodation was initially calculated for each respondent using the following equation:

⁵ Pearce, 1981

$$\text{Accommodation expenditure per person per night} = \frac{[\text{accommodation expenditure}]}{(\text{no. persons covered} \times \text{length of stay in nights}^*)}$$

* length of stay in nights = length of stay in days - 1

Expenditure per person per day was calculated for each respondent based on the remaining items of expenditure using the following equation:

$$\text{Total expenditure per person per day} = \left[\frac{\text{Sum (Travel, Food and drink, Activities, Equipment, Other)}}{(\text{no. persons covered} \times \text{length of stay in days})} \right] + \text{Accommodation expenditure per person per night}$$

An average daily visitor expenditure per person figure was calculated from the sum of individual respondent total expenditure values divided by the sample size as follows:

$$\text{average daily visitor expenditure per person} = \frac{\text{Sum (Total expenditure per person per day)}}{\text{Sample size (115)}}$$

For the purposes of reporting, itemised expenditure per person per day was calculated for each respondent using the following equation:

$$\text{Item expenditure per person per night} = \frac{[\text{Item expenditure}]}{([\text{no. persons covered}] \times [\text{length of stay in days}])}$$

An itemised average daily expenditure per person value could then be calculated from the sum of individual respondent values divided by the sample size. The sum of the average expenditure on each item does not equal the average total expenditure as not all respondents indicated spending on all items.

2.3.2 Total Annual direct visitor expenditure

The total annual visitor expenditure was calculated using expenditure data from the City of Perth visitor survey where analysis provided the average expenditure per visitor per day and the average length of stay. The total annual number of overnight visitors to the City of Perth was obtained from the Tourism WA fact sheet for the City of Perth local government area. A four year rolling average was used. The total annual expenditure was calculated as follows:

$$\text{Total annual direct visitor expenditure} = \text{average daily visitor expenditure per person} \times \text{average length of stay (days)} \times \text{annual number of overnight visitors to the City of Perth (4 year rolling average)}$$

2.3.3 Total annual attributable visitor expenditure

An estimation is required as to the amount of visitor expenditure that can be attributed to the heritage present in the City of Perth. The attribution factor provides a value that is based on the importance of cultural heritage to the visit as well as the proportion of visitors attending cultural heritage places and events. The attribution factor was calculated from percentage of responses rather than percentage of survey participants. Survey participants often selected more than one option in response to the attribution questions. For example, a given survey participant may provide a main reason for visiting Perth that simultaneously includes a heritage related and non-heritage related factors, as with the activities undertaken in the city. Consequently, the heritage related response represents a fraction of that survey participant's total reason for visiting rather than a whole response in itself. This effectively represents a pro-rata approach to counting the proportion of heritage related responses. Using the percentage of responses (or percentage of total number of all options selected), functions as a means of weighting the data to better represent the status of heritage as part of the City of Perth tourism experience. Once the attribution factor has been measured, the attributable expenditure is calculated as follows:

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

2.3.4 State Substitution factor

The state substitution factor provides a lower bound estimate of direct visitor expenditure value. It represents the amount of direct expenditure generated or retained within Western Australia by cultural heritage tourism in the City of Perth. The substitution factor is generated using a scenario question. With multiple choice options. The question asks respondents to indicate their behavioural intention in the event that cultural heritage places and experiences did not exist. Survey responses indicating spending would not have occurred in the state (chose to stay at home or visit another state or country), represent expenditure generated or retained in the state explicitly by City of Perth cultural heritage. The substitution value is calculated as follows:

$$\text{Substitution value} = \frac{\text{Annual attributable visitor expenditure}}{\text{total annual direct visitor expenditure}} \times \text{substitution factor (\%)}$$

2.4 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 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.

2.4.1 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). The data were 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.

2.4.2 Average length of stay

Average length of stay can be influenced by visitors who choose to stay much longer than the average. This may then skew the total expenditure figures in subsequent calculations. Length of stay values provided by survey participants more than two standard deviations from the sample mean were identified as outliers. Two standard deviations is considered to be inclusive of 95 percent of data in a normally distributed sample.

2.4.3 Average daily expenditure

Total expenditure per person was calculated for each survey response and a sample average calculated. As with length of stay, values that were greater than two standard deviations from the sample mean daily expenditure per person were excluded from the analysis to avoid skewing results.

3 Findings

It is important to note that owing to the sampling approach, responses may be biased toward tourists who tend to visit locations where cultural heritage is present. This approach was deemed necessary to boost the response rate within a short period given the limited time frame for the project. It resulted in 82 completed questionnaires (additional to the 33 mail back forms received), providing a total of 115 viable completed questionnaires.

3.1 Survey respondent characteristics

Over half of the respondents indicated Perth was their main destination while most were staying for seven days or less (71.1%). The average length of stay (6.4 days) was in approximate accord with the figure published by Tourism WA for the Perth LGA (6.18). Over half of the sample indicated they were staying in the City of Perth local government area. International visitors comprised the largest group in the sample (48.7%) followed by interstate and WA residents. In terms of age, 71% of respondents were 45 years or older while close to half were travelling with a partner. Of the specific accommodation categories provided, '3-4 star hotel' was the most frequent response. The 'Other' category for accommodation included friends and family residences, bed and breakfasts and billets.

In terms of place of origin, while the sample proportion of intrastate, interstate and international visitor respondents does not synchronise with figures published by Tourism WA, they are proportionally approximate corresponding visitor nights proportions for each group in the City of Perth reported by Tourism WA (2007a) as follows:

- WA nights = 18%,
- Interstate nights = 22%,
- International nights = 60%

Table 1: Summary of City of Perth survey respondent characteristics

Category	Frequency	%	Category	Frequency	%
Place of origin			Age Group		
WA	22	19.1%	18-24	14	12.3%
Interstate	37	32.2%	25-34	9	7.9%
International	56	48.7%	35-44	10	8.8%
			45-54	17	14.9%
			55-64	42	36.8%
			65+	22	19.3%
			No response	1	
<i>Total responses</i>	<i>115</i>	<i>100%</i>	<i>Total responses</i>	<i>114</i>	<i>100%</i>
Length of stay			Nature of visitor group		
1-3 days	39	35.1%	Alone	27	23.7%
4-7 days	40	36.0%	Partner	53	46.5%
8-14 days	14	12.6%	Club or tour group	27	23.7%
15+ days	18	16.2%	Other	7	6.1%
No response	4		No response	1	
<i>Total responses</i>	<i>111</i>	<i>100%</i>	<i>Total responses</i>	<i>114</i>	<i>100.0%</i>
Mean length of Stay	6.44 days				
Transportation			Accommodation type		
Private vehicle	35	36.8%	5 star hotel	5	4.7%
Scheduled bus / train	28	29.5%	Unit / apartment	18	16.8%
Hire vehicle	12	12.6%	3-4 star hotel	34	31.8%
Package tour	10	10.5%	Backpackers	18	16.8%
Other	10	10.5%	Other	40	37.4%
No response	20				
<i>Total responses</i>	<i>95</i>	<i>100.0%</i>	<i>Total responses</i>	<i>115</i>	
City of Perth main travel destination?			Accommodation in City of Perth area?		
Yes	52	61.1%	Yes	63	59.4%
No	33	38.8%	No	43	40.6%
No response	30		No response	9	
<i>Total responses</i>	<i>85</i>	<i>100%</i>	<i>Total responses</i>	<i>106</i>	<i>100</i>

3.2 Attribution factor

The attribution factors are variables that indicate how significant cultural heritage is in the context of the survey respondents' visit to the City of Perth. These include the main reason for visiting the City of Perth, types of activities undertaken and the importance of various aspects of the City of Perth experience. Percentage of responses rather than percentage of survey participants was used to calculate the attribution factor. Using the percentage of responses (or percentage of total number of all options selected) functions as a means of weighting the data to better represent the status of heritage as part of the City of Perth experience.

In terms of the key attribution factors drawn from the survey, 12.9% of responses indicated that cultural heritage was a main reason for visiting the City of Perth, 52.3% of responses rated cultural heritage as important to the visit and 46.6% of responses indicated a visit to one or more heritage

places or experiences while in the city. Tables 2 - 6 provide details of the response to the attribution questions.

Respondents indicated their main reason for visiting the City of Perth by ticking one of several options in a multiple choice question. The options included and ‘Other’ category for which alternative reasons may be written. Tables 2 and 3 detail the responses.

Table 2: Main reason for Perth City visit

Reason	Responses	
	Frequency	Percent
Natural attractions	42	22.58%
Other	41	22.04%
History / heritage	24	12.90%
River / beaches	22	11.83%
National / State parks	21	11.29%
Shopping for pleasure	16	8.60%
Pubs / nightclubs / restaurants	12	6.45%
Convention / business / meeting	8	4.30%
Total Responses	186	100%

The most frequent response for main reason for visitation was natural attractions. These may include Kings Park and the Swan River. History and heritage received 12.9% of responses. A significant number of respondents opted to indicate a reason for visit other than those categories provided. Table 3 details the various responses included in the other category.

Table 3: Other main reasons provided for visiting the City of Perth

“Other” reasons provided for visit	Frequency	Percent
Visiting friends and/or relatives	7	18.42%
Holiday	4	10.53%
Stopping off point on holiday	4	10.53%
City in general	3	7.89%
Wedding	3	7.89%
A job	2	5.26%
Study	2	5.26%
Exchange visit with friendship force	2	5.26%
Hash - international	2	5.26%
Backpacking	1	2.63%
For the pleasure of seeing a big and quiet city	1	2.63%
Galleries	1	2.63%
Hang out at King’s Park	1	2.63%
In Australia for 2 months, wanted to see Perth	1	2.63%
Organised golf trip	1	2.63%
Specialist appointment	1	2.63%
Theatre	1	2.63%
We’ve never been before	1	2.63%

Respondents were requested to rate the importance of six aspects of their City of Perth visit. Table 4 demonstrates that parks and natural areas received the highest positive response. More than half of the respondents (52.3%) indicated heritage places were important to their visit. In order to boost the sample size in a short time frame, places where tourists were considered to congregate were targeted in sampling. This included a significant number of heritage related sites. Thus, it is

possible that the sampling technique may have resulted in a bias toward heritage places in the response.

Table 4: Respondents' importance rating of various aspects of the Perth City experience (n=99)

Aspect	Not important	neutral	Important
Parks/natural areas	6.4%	12.8%	80.7%
Heritage places	15.8%	31.7%	52.3%
Visiting Family/friends	49.4%	6.0%	44.4%
Hotels/bars/restaurants	32.6%	24.4%	42.8%
Shopping for pleasure	42.4%	34.3%	23.2%
Entertainment venues	49.4%	31.1%	19.3%

Respondents were requested to tick one or more activities they participated in from a list provided in the questionnaire. As more than one response could be selected, the total responses were greater than the number of survey participants (115). Table 5 provides the frequencies of response for each item with a percentage of the total number of items selected by participants.

Table 5: Activities during stay in Perth (n=115)

Activity	Responses	%
Parks / gardens	94	18.1%
Bell Tower	64	12.3%
Restaurants / pubs / nightclubs / bars	54	10.4%
Monuments / memorials	50	9.6%
Historic walks / Guided tours	47	9.0%
Historic buildings / churches	45	8.6%
Shopping for pleasure	44	8.4%
Galleries / museums	42	8.1%
Perth Mint	36	6.9%
Other	24	4.6%
Movie / entertainment	18	3.4%
Total Responses	518	100

Parks and gardens received the most frequent response followed by the Swan Bells (Bell Tower) and restaurants/pubs/ nightclubs/bars. The activity items were amalgamated into heritage places and non-heritage places (within the terms of reference of this project). Just under half of the total number of responses indicated a visit to one or more heritage places or experiences during their visit to the City of Perth. Table 6 details the percentage of responses indicating a visit to one or more heritage places.

Table 6: Visited heritage place or experience during city visit

Response	Frequency	%
Other non-heritage place or activity	110	53.4%
Visited heritage place or experience	96	46.6%
Total Response	206	100

3.3 Direct average tourist expenditure in the City of Perth

Respondents were asked to detail their expenditure in order to generate an estimate of the direct tourist expenditure in the City of Perth. The average total daily expenditure per person in Perth City was \$116.02. The results are summarised in Table 7.

Table 7: Average visitor expenditure per person per day

Item	N	Minimum	Maximum	Mean
Travel	40	\$0.13	\$62.50	\$12.70
Accommodation	40	\$6.52	\$107.14	\$50.21
Food and Drinks	51	\$0.83	\$56.25	\$20.93
Activities	33	\$0.77	\$33.33	\$8.75
Equipment	12	\$0.00	\$10.00	\$3.79
Other Items	29	\$0.00	\$25.00	\$8.12
Average total expenditure per person per day	59	\$1.00	\$293.33	\$116.02

The mean total expenditure is based on the sum of the total expenditure for each respondent divided by the number of responses. It differs slightly from the sum of the means of each item as not all respondents spent money on all items in the list. The daily spend per person figure accords with data published by Tourism WA (2007b) for domestic tourists to the Perth Metropolitan Area with a daily expenditure per person of \$118.16. The daily spend per person figure calculated from the survey data is slightly higher than the national average figure available for international tourists (\$82.1 per person per day) sourced from the International Visitor Survey. The IVS data may not be specific to activities in Perth.

To estimate the total direct expenditure of tourists to the City of Perth, a four year rolling average number of annual overnight international and domestic visitors was calculated using Tourism WA (2007a) data (1,249,337). Given the mean length of stay is 6.44 days and the mean daily expenditure per person is \$116.02, the total direct tourist expenditure in the City of Perth may be calculated as follows:

[Total annual overnight visitors] x [mean length of stay] x [average daily expenditure per person]

$$1,249,337 \times 6.44 \times \$116.02 = \$939,537,342.44$$

Based on the results of this survey, the estimated total direct expenditure of overnight visitors to the City of Perth is \$939.5 million.

3.4 Attribution of visitor expenditure to cultural heritage (upper bound estimate)

In order to estimate the upper bound estimate of total annual expenditure associated with cultural heritage tourism, an attribution factor is applied. The attribution factor is based on the proportion of visitors for whom cultural heritage forms a significant and important part of their City of Perth experience. The attribution factor represents an upper bound expenditure estimate. It is obtained by averaging the response to three attribution variables. In this respect, the key attribution values from the survey data are as follows

:

- 12.9% of responses indicated cultural heritage was a main reason for visiting
- 52.3% of respondents rated cultural heritage as important to their visit
- 46.6% of responses indicated visitation to a cultural heritage place or experience during the visit

This provides a mean attribution factor of 37.28 percent (0.3728). The upper bound of annual direct tourist expenditure attributable to cultural heritage tourism is calculated by applying the attribution factor as follows:

$$[\text{annual direct tourist expenditure}] \times [\text{attribution factor}]$$

$$\mathbf{\$939,537,242.44 \times 37.28\% = \$350,248,399.01}$$

Thus, the upper bound estimate of annual direct tourist expenditure in the City of Perth attributable to cultural heritage is \$350.2 million.

In order to boost the survey response rate, locations where tourists tended to congregated were targeted for distribution of questionnaires. Consequently, a significant number of questionnaires were distributed at tourism sites in the study area where cultural heritage assets or products were present. This should be taken into consideration when interpreting the values provided.

3.5 State substitution value of cultural heritage in the City of Perth (lower bound estimate)

The state substitution value represents the amount of attributable direct expenditure that is generated or retained within Western Australia by cultural heritage attractions in the City of Perth. This is a lower bound estimate of direct expenditure that otherwise would not have occurred in the absence of cultural heritage attractions. The substitution value is estimated based on the response to a scenario question about what tourists would choose to do if the City of Perth cultural heritage did not exist. From this, a substitution factor is calculated from the sum of key variables. Responses were as follows (Table 8):

Table 8: Substitution factor scenario question: 'If heritage attractions did not exist'

Option	Responses	%
Stay at home	5	4.6%
Go to another state	1	0.9%
Go to another country	1	0.9%
Travel elsewhere in WA	7	6.5%
Travel to Perth City anyway	94	87.0%
No response	7	
<i>Total responses</i>	<i>108</i>	<i>100.0%</i>

} Key state substitution variables

The state substitution factor is calculated by summing the key variables as indicated (4.6% + 0.9% + 0.9% = 6.48%). To obtain the lower bound estimate of cultural heritage direct expenditure value, the substitution factor is applied to the attributable direct expenditure value as follows:

$$[\text{attributable direct expenditure}] \times [\text{substitution factor}]$$

$$\mathbf{\$350,248,399.01 \times 6.48\% = \$22,701,285.12}$$

The estimated amount of annual direct tourist expenditure generated or retained in Western Australia as a result of the existence of cultural heritage tourism in the City of Perth is \$22.7 million. This represents a lower bound estimate of cultural heritage tourism value for the City of Perth. A local government area substitution value may be calculated for the City of Perth using the same technique. This value may be less reliable given expenditure data provided by tourist and visitors may have occurred outside the defined study area. This may have been a function of survey respondents viewing the City of Perth as including the entire Perth Metropolitan Area despite inclusion of a map and a brief explanation provided by those distributing the survey. See Appendix 4.

4 Conclusion

Based on the results of a visitor survey in the City of Perth local government area, the upper bound value of annual direct tourist expenditure attributable to cultural heritage tourism is estimated to be \$350.2 million. The amount of annual direct tourist expenditure generated or retained in Western Australia by cultural heritage tourism in the City of Perth is estimated to be \$22.7 million. This represents a lower bound value for cultural heritage tourism in the City of Perth postcode area.

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Appendix 1: Terms of Reference

AN ANALYSIS OF HERITAGE TOURISM IN THE CITY OF PERTH

Background:

Representatives from the City of Perth, the City of Perth Heritage Fund and the Heritage Council of Western Australia have previously discussed projects that can increase awareness of, generate enhanced interest in, and provide direction for investment in the City of Perth's heritage assets.

Two reports commissioned by the Heritage Council were germane to these discussions, in terms of quantifying visitor perceptions of Perth's cultural heritage and identifying broad areas of specific interest. These reports were:

- *Key Heritage Tourism Thematic Assessment* - identified key heritage themes with tourism potential, noted global benchmarks, and provided a geographical template.
- *Economic Value of Heritage Tourism* - evaluated direct economic value of heritage tourism in Albany, Fremantle and New Norcia, confirming heritage as an important motivator for visitors and generator of significant revenues.

A subsequent meeting was held with, in addition to those cited above, representatives from Tourism Western Australia and the Curtin Sustainable Tourism Centre. The latter were the authors of the Economic Value report.

After due discussion on the adaptability of the Curtin methodology to the City of Perth's specific interests, potential costs and timelines, Curtin considered the project was feasible and requested a brief in order to consider it further and respond accordingly.

Objectives:

The primary objectives of this study are to:

- Measure the direct value of expenditure by visitors staying within the Perth 6000 postcode where heritage or historic interests or activities are a factor;
- As visitors are unlikely to recognise postcode boundaries, the interests and activities factors should encompass a wider metropolitan definition (perhaps defined by public transport termini or reasonable taxi distances);
- Heritage interests and activities should be posited to 3 or 4 dominant heritage tourism themes, chosen on the basis of relevance to the metropolitan region. Selection will in part be determined through a City of Perth assessment of 50 key buildings/places.

Methodology:

In addressing the study the consultant will:

- Apply the methodology first developed for the 2003 study *Assessment of the Economic Value of Recreation and Tourism in Western Australia's National Parks, Marine Parks and Forests*, and subsequently adapted for the *Economic Value of Heritage Tourism*;
- Refine the methodology for the specific measurements sought by the City of Perth;

- Access available statistical and economic information sources as appropriate, including visitor information, and advise where gaps may exist and what measures are available to address these gaps;
- Contingent on Objectives and Methodology requirements, construct a questionnaire that is sufficiently compact to elicit higher response rates.

Outcome:

The study proponents require data on the percentage of visitors to Perth with specific or general interests and/or who pursue activities in heritage, to better define development and promotional projects relating to Perth's heritage tourism assets.

Management:

A Steering Committee comprising representatives from the City of Perth, the City of Perth Heritage Fund, the Heritage Council of Western Australia and Tourism Western Australian will oversee the consultancy and ensure that the objectives are met.

Appendix 2: Survey Questionnaire

PERTH CITY VISITOR SURVEY 2007

I am a researcher from Curtin University undertaking a study to establish the significance of tourism in the Perth City centre and would appreciate your participation. The information we gather is important to the future planning and management of this city.

When completing the questionnaire, please only think about your **current visit to the Perth central city area as indicated on the map**. Thank you for sparing the time to complete the survey.

This survey should be completed by a person over the age of 18.

City of Perth Study Area Map



1. Is City of Perth your main destination for this trip (circle one)? **Yes** **No**

2. What is your MAIN REASON for visiting Perth City on this trip (tick one)?

Visit history / heritage buildings	<input type="checkbox"/> ₁
Go to the river / beach	<input type="checkbox"/> ₂
Visit national / state parks	<input type="checkbox"/> ₃
Visit natural attractions e.g. Kings Park / public gardens	<input type="checkbox"/> ₄
Go shopping for pleasure	<input type="checkbox"/> ₅
Attend convention / business / meeting	<input type="checkbox"/> ₆
Visit pubs / nightclubs / restaurants	<input type="checkbox"/> ₇
Other (specify).....	<input type="checkbox"/> ₈

3. Which of the following Perth City activities have you done or plan to do during this visit? (**You may tick more than one box**)

Visit the Perth Mint	<input type="checkbox"/> ₁
Go Shopping for pleasure	<input type="checkbox"/> ₂
Visit Galleries/Museums (eg WA Museum, Art Gallery of WA)	<input type="checkbox"/> ₃
Visit Historic buildings / churches	<input type="checkbox"/> ₄
Visit bell tower (Swan Bells)	<input type="checkbox"/> ₅
Historic Walk Trails / guided tours (eg Perth tram)	<input type="checkbox"/> ₆
Visit Monuments/ Memorials (eg Kings Park War Memorial)	<input type="checkbox"/> ₇
See a movie or other entertainment (eg live theatre, music)	<input type="checkbox"/> ₈
Visit restaurants / pubs / nightclubs / bars	<input type="checkbox"/> ₉
Visit parks/gardens (eg Kings Park)	<input type="checkbox"/> ₁₀
Other (specify).....	<input type="checkbox"/> ₁₁

4. If the heritage attractions of Perth City did not exist, would you have chosen to (tick one box):

- | | | | |
|-----------------------------|---------------------------------------|------------------------------------|---------------------------------------|
| Stay at home | <input type="checkbox"/> ₁ | Travel to another Australian state | <input type="checkbox"/> ₄ |
| Travel to Perth City anyway | <input type="checkbox"/> ₂ | Travel to another country | <input type="checkbox"/> ₅ |
| Travel elsewhere in WA | <input type="checkbox"/> ₃ | | |

5. How much have you spent / intend spending in the City of Perth during this visit? Please indicate/estimate figures **for the total visit in \$Aus.**

Expenditure item (\$AUS) In Perth Central City area

- Travel
(bus fares, car hire, fuel, etc.)
- Accommodation
- Food and drinks:
(local hotels/restaurants, local stores/supermarkets)
- Activities
(entry fees, guided tours etc...)
- Equipment purchased for your trip
(film, camera etc...)
- Other
(clothing, merchandise, souvenirs etc.)

6. How many people do these spend figures include? person(s)

7. How important are the following to you when visiting Perth City?

	Not important		Very important		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visiting Family/friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heritage places <i>(e.g. museums, monuments, historic buildings)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entertainment venues <i>(movies, theatre arts etc...)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping for pleasure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hotels/bars/restaurants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parks/natural areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8.. How did you travel to Perth Central City Area?

- Private vehicle ₁ Package tour ₄
- Scheduled bus/train ₂
- Hire vehicle ₃ Other (specify) ₅

9. Who are you visiting with?

- Alone ₁ With family or friends ₄
- With partner ₂ With a club or tour group ₅
- Other (specify) ₃

10 How many days will you spend visiting the Perth City Centre?

11. What is your normal place of residence?

Country or Australian state

12. During this visit, where did you stay and for how long?

Accommodation type	No. of nights	Located in City of Perth area?	
		Yes	No
5 star hotel	<input type="checkbox"/>	Yes	No
Unit/Apartment	<input type="checkbox"/>	Yes	No
3-4 star hotel	<input type="checkbox"/>	Yes	No
Backpackers	<input type="checkbox"/>	Yes	No
Other (specify).....	<input type="checkbox"/>	Yes	No

13.. Please indicate your age in years (tick one box)

- 18-24 ₁ 35-44 ₃ 55-64 ₅
- 25-34 ₂ 45-54 ₄ 65 and over ₆

THANK YOU. Please return this survey or (if supplied) insert it into the pre-paid envelope and post.

Appendix 3: List of State heritage places in the City of Perth

Number	Name	Address		Tourism Experience
1330	W D & H O Wills Warehouse (fmr)	464-468	Murray St	?
1627	Baird's Building (fmr)	491-493	Wellington St	Retail
1784	Mitchells Building	136-142	William St	Retail, Cafes
1943	St John's Lutheran Church	16	Aberdeen St	Ecclesiastical
1947	Supreme Court Buildings and Gardens, Old Court House, Stirling Gardens		Barrack St	Gardens, Court
1950	The Weld Club	3	Barrack St Cnr The Esplanade	Club
1953	Perth Town Hall	Cnr	Hay & Barrack Sts	Interp Display
1954	Bon Marche Arcade	74-84	Barrack St	Retail
1959	Railway Hotel (remains of facade & balcony)	130-132	Barrack St	Retail
1962	Art Gallery & Museum Buildings		Beaufort St	Visual Art & interp displays
1963	Perth Court of Petty Sessions	Cnr	Beaufort & Roe Sts	?
1965	Old Court House & Gaol	Cnr	Beaufort & Francis Sts	?
1969	Protestant Hall (fmr), Perth	160-162	Beaufort St	Retail
1973	Central Government Offices	50	Barrack St	Curtin Uni
1975	Atlas Building	8-Oct	The Esplanade	Offices?
1976	St Brigid's Convent (fmr)		John St	Offices?
1979	Perth General Post Office	3	Forrest Place	Offices? Retail, Photo Op
1980	Swan Barracks		Francis St	Offices?
1985	St George's Hall Facade	508	Hay St (25 Irwin St)	Façade, Photo Op
1988	Cremorne Arcade	572-578	Hay St	Retail
1989	Criterion Hotel	560	Hay St	Food & Beverage
1990	McNess Royal Arcade	613-619	Hay St	Retail
1991	Connor Quinlan Building	612-616	Hay St	
1993	Theatre Royal & Metropole Hotel (fmr)	637-645	Hay St	Performing Arts
1998	London Court	647-653	Hay St	Retail
2000	Devon House	729	Hay St	Retail?
2002	Gledden Building	723	Hay St	Retail?
2003	Wesley Church	75	William St Cnr Hay St	Ecclesiastical
2005	Melbourne Hotel (fmr)	942	Hay St	Food & Beverage
2006	His Majesty's Theatre	825-839	Hay St Cnr King St	Performing Arts

Valuation of Cultural Heritage Tourism in the City of Perth

Number	Name	Address		Tourism Experience
2007	Harper's Buildings	810-820	Hay St	Retail, Cafes
2023	18 & 20 Howard Street	18 & 20	Howard St	Retail, Offices
2024	21 Howard Street	21	Howard St	Offices
2025	Art Gallery Administration Building	47	James St	Visual Arts
2026	Hackett Hall	40	James St	Offices?
2027	Chung Wah Association Hall	128	James St	Offices, Café
2028	PICA & Arts House	51	James St, 2 Roe St	Performing Arts
2030	St Brigid's Group, Perth		John, Fitzgerald & Aberdeen Streets	?
2043	The Terraces	63	Mount St	Residential
2048	Royal Perth Hospital Administration Bldg		Murray St	Hospital
2049	Royal Perth Hospital (Kirkman House)	10	Murray St	Hospital
2051	Fire Brigade No 1 Station	25	Murray St cnr Irwin St	Museum
2052	Young Australia League and House	45 & 55	Murray St	Dance Studio, Offices, Photo Op
2053	Chief Secretary/Public Health Department (fmr)	57	Murray St	?
2056	Perth Government Stores (fmr)	70-74	Murray St	Offices?
2064	Commonwealth Bank Building	242	Murray St Cnr Forrest Place	Retail
2065	Piccadilly Theatre and Arcade	700-704	Hay St	Retail, Cinema
2081	1 Museum Street	1	Museum St, 25 Aberdeen St	Residential? Offices?
2084	Salvation Army Headquarters & Congress Hall (fmr)	48-54	Pier St & 69 Murray St	Retail? Offices?
2089	Lieut. General Sir J.J. Talbot Hobbs Memorial		Riverside Dr	Monument
2090	West Australian Rowing Club		Riverside Dr □	Rowing Club
2092	Lawson Flats		Sherwood Court	Residential?
2093	Bishop's House		Spring St	Ecclesiastical
2094	St George's House	235-239	St Georges Tce	Ecclesiastical
2095	Government House	13	St Georges Tce	Tour
2096	Government House Ballroom	13	St Georges Tce	Tour
2097	Council House, Perth	27-29	St Georges Tce	Photo
2099	St Andrew's Church	36	St Georges Tce	Ecclesiastical
2100	The Deanery	Cnr	St Georges Tce & Pier St	Ecclesiastical
2101	Burt Memorial Hall	38A	St Georges Tce	Retail

Valuation of Cultural Heritage Tourism in the City of Perth

Number	Name	Address		Tourism Experience
2102	St George's Cathedral	cnr	St George's Tce & Cathedral Ave	Ecclesiastical
2103	Alexander Forrest Statue	Cnr	St Georges Tce & Barrack St	Monument
2105	Trinity Uniting Church Group	70-72	St Georges Tce	Ecclesiastical
2110	Western Australian Club	101-103	St Georges Tce	Club
2112	Newspaper House Group & Perth Technical College	123-137	St. George's Tce	Offices? Retail
2114	Palace Hotel (fmr)	108	St Georges Tce & Cnr William St	Bank?
2117	Old Perth Boys School	139	St Georges Tce	Café
2119	The Cloisters	202	St Georges Tce	Café
2120	Barracks Arch	Junct	St Georges Tce, Malcolm & Elder Sts	Monument
2121	Victoria Square Cottages	23-29	Victoria Sq	Residential
2124	St Mary's Roman Catholic Cathedral	41	Victoria Sq	Ecclesiastical
2126	Archbishop's Palace		Victoria Sq	Ecclesiastical
2130	St Johns Pro-Cathedral	18	Victoria Av	Ecclesiastical
2131	Perth Dental Hospital Main Block	189	Wellington St Cnr Lord St	Hospital
2132	St John's Ambulance Building	298-300	Wellington St	Offices?
2133	Perth Railway Precinct	376	Wellington St	Transport
2140	Wellington Buildings	150-160	William St (509-515 Wellington St)	Retail
2143	Wesfarmers Building (fmr)	569	Wellington St	Retail? Offices?
2146	Railways Institute Building (fmr)	591-605	Wellington St	Offices?
2148	Royal Hotel	531	Wellington St cnr William St	Retail, Accommodation
2153	Horseshoe Bridge		William St	Road Bridge
2154	Brass Monkey	209	William St Cnr James St	Food & Beverage
2155	Rechabite Hall	222-224	William St	Retail
2158	The New Church (fmr)	176	Adelaide Tce	Ecclesiastical
2159	Perth Girls' Orphanage (fmr)	108	Adelaide Tce	Offices
2161	Carlton Hotel	248-260	Hay St	Food & Beverage
2164	East Perth Cemetery	2	Bronte St	Cemetery
2166	The Perth Mint	310	Hay St	Interprep Displays, Tours
2170	Gloucester Park	40	Nelson Cr	Trots
2173	Perth Girls School (fmr)	2	Wellington St Cnr Plain St	Offices?

Valuation of Cultural Heritage Tourism in the City of Perth

Number	Name	Address		Tourism Experience
2174	East Perth Primary School (fmr)	76	Wittenoom St Cnr Bennett St	?
2186	Old Swan Brewery Precinct		Mounts Bay Rd	Food & Beverage
2232	Edith Dircksey Cowan Memorial		Kings Park Rd	Memorial
2236	Meerilinga	1186	Hay St	Offices
2239	Parliament House & Grounds		Harvest Tce	Garden, Tour
2240	Old Observatory	4	Havelock St	Offices
2242	Hale School (fmr)	45	Parliament Pl Cnr Havelock St	Hall?
2665	Nurses Memorial Centre	34	Kings Park Rd	Offices
2695	Three Cottages	62, 64 & 66	Aberdeen St	Residence
2905	Lexbourne House (fmr)	18	Colin St	Residential/Offices?
3048	Western Australian Police Service Complex	2	Adelaide Tce	Offices
3235	Hills' Residence (fmr)	292	Hay St	Residential/Offices?
3264	Savoy Hotel	636-644	Hay St	Retail
3294	Fitzgerald Hotel (fmr)	64	Fitzgerald cnr John St	Food & Beverage?
3298	Low Level Sewage Pumping Stations No.s 1 & 2, Perth		Causeway & Langley Park	Photo Op?
3299	Aston Clinic Stables	19A	Mayfair St	Photo Op?
3470	Government Printing Office (fmr)	78	Murray St cnr Pier St	Curtin Uni
3480	Central Government Offices & Town Hall Precinct		Barrack St	Offices
3494	Houses (fmr), 257 & 259 Adelaide Terrace	257 & 259	Adelaide Tce	Residence
3515	Boans Furniture Factory (fmr)	Cnr	Saunders & Glyde Sts	Offices
3519	Hackett Memorial Buildings	off	Mounts Bay Rd, University of Western Australia	UWA
3545	Park Avenue Building	Cnr	Park & Crawley Avs	Offices?
3631	Causeway Bridges		Over Swan River	Road/Bridge
3795	William Street Precinct	178-282	William St	Retail, Cafes
3801	Royal King's Park Tennis Club		Kings Park Rd	Tennis Club
3845	151-165 Beaufort Street	151-165	Beaufort St	
3849	Dumas House	2	Havelock St	Offices, Café
3850	Esplanade Reserve	Encompassed	by The Esplanade/Barrack St & Riverside Dv/William St	Park, Offices

Valuation of Cultural Heritage Tourism in the City of Perth

Number	Name	Address		Tourism Experience
3854	Two Attached Houses & Separate House	219-223	Newcastle St	Residential?
4031	Barrack Square	S end of	Barrack St	Cafes, Retail, Bell Tower - Interp
4241	Harold Boas Gardens	bounded by	Wellington, Colin & Delhi Sts	Garden
4317	Tower House, Northbridge	115	Francis St Cnr Parker St	Residential?
4331	Ho33 Wellington St	33	Wellington St	Residential
4342	Residence, 52 Mount Street	52	Mount St	Residential
4506	Outram Street Terraces	74-82	Outram St	Offices
4559	Graham Flats	1217	Hay Street	Residential
4571	Perth Concert Hall	5	St Georges Tce	Performing Arts
4572	Queen's Gardens		Hay St	Garden
4587	P & O Building (fmr)	56-60	William St	Retail, Offices
4601	Aberdeen Hotel & St Johns Building	76-88	Aberdeen St	Food & Beverage
4633	No 6 Electricity Sub Station (fmr)	Cnr	Brown & Glyde Sts	Sub Station?
4641	Cathedral of St Constantine & St Helene	18	Parker St Cnr Francis St	Ecclesiastical
4652	Houses at 51-53 Goderich Street	51-53	Goderich St	Residential
6101	ANZ Bank (fmr)	938-940	Hay St Cnr Milligan St	Café?
6102	Site of Buildings, Burt Way	3-Aug	Burt Way & 96-98 & 102-104 Terrace Rd	Residential
8783	Delaney Gallery	74	Beaufort St	Offices
11509	Aberdeen Street Precinct	154-186	Aberdeen St	Residential
11595	First Church of Christ, Scientist, Perth	264	St Georges Tce	Ecclesiastical
14888	Globe Hotel	495-497	Wellington St	Food & Beverage
14892	Three Attached Houses	17-21	Palmerston St	Residence
15026	Shops & Offices	109	Fitzgerald St & 377-387 Newcastle St	Retail, Offices
15226	Commercial Building & Attached Residence	309	Newcastle St	Retail?
15761	Flats 72-74 Thomas Street	72-74	Thomas St	Residence, Photo Op
15783	Tom Burke House	191-195	Newcastle St	Offices?
15850	Solidarity Park	Cnr	Parliament Pl & Harvest Tce	Memorial
16722	Art Gallery of Western Australia Complex		James St	Visual Arts
16743	William & Wellington Street Precinct	90-160	& 97-145 William St, & 493-537 Wellington St	Retail, Cafes

Appendix 4: Calculation of City of Perth substitution value

Substitution factor scenario question: 'If heritage attractions did not exist'

Option	Responses	%
Stay at home	5	4.6%
Go to another state	1	0.9%
Go to another country	1	0.9%
Travel elsewhere in WA	7	6.5%
Travel to Perth City anyway	94	87.0%
No response	7	
<i>Total responses</i>	<i>108</i>	<i>100.0%</i>

} Key City of Perth substitution variables

The City of Perth substitution factor is calculated by summing the key variables as indicated (4.6% + 0.9% + 0.9% + 6.5% = 12.9%). To obtain the City of Perth substitution value, the substitution factor is applied to the attributable direct expenditure value as follows:

[attributable direct expenditure] x [substitution factor]

$$\mathbf{\$350,248,399.01 \times 12.9\% = \$45,182,043.47}$$

The estimated amount of annual direct tourist expenditure generated or retained within the City of Perth as a result of the existence of cultural heritage tourism is \$45.2 million. This represents an alternative lower bound estimate of cultural heritage tourism value for the City of Perth.