



ACG Heritage Valuation Replication Results

Version

05.08.2017, Version 1.12 - Final

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Preface

This research report has been commissioned by Heritage Victoria and the Heritage Council of Victoria.

The views in this report reflect those of SurveyEngine GmbH and not necessarily those of Heritage Victoria and the Heritage Council of Victoria or their respective governments.

This report is part of a broader project 'Valuing Victoria's Heritage' also commissioned by Heritage Victoria and the Heritage Council of Victoria.



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Executive Summary

This study faithfully replicates the methodology of the 2005 research report “Valuing the Priceless: The value of historic heritage in Australia” a report conducted by the Allen Consulting Group to measure Australians' value of Historic Heritage.

While every attempt was made to faithfully reproduce the methods and analysis, this study differed in a few key respects from the 2005 study, principally in that the sample was drawn from Victorians only rather than Australia-wide.

In general, the results 12 years on marry well with the 2005 results. For most results, the rank-order of importance of aspects of heritage remains unchanged.

A few key changes are apparent, namely a seemingly greater ambivalence towards heritage issues than in 2005. This is evident several places: in the higher incidence of 'don't know' answers, approximately double the number of respondents selecting the 'no change' option in the models and a lower significance in some model estimates. This general trend is reinforced with the majority response that heritage protection is 'about right' rather than 'not enough is being done' as it was in 2005. Finally reported rates of volunteerism for heritage activities, causes and club membership has experienced a 50% decline since 2005 when comparing Victoria in 2017 to Australia-wide in 2005.

This report is not intended to be a detailed comparison of the two studies, rather a standalone 'point in time' reflecting the current state of heritage value in Victoria in 2017 compared to 2005.

Nevertheless, this report has been structured to allow maximum ease of comparison with the 2005 study with the salient results Chapter 4 and Appendices in the 2005 report being replicated using same structure and naming conventions.

Chapter 1 - Background and Context

This study was conducted within the framework of a larger heritage valuation project 'Valuing Victoria's Heritage' commissioned jointly by Heritage Victoria and the Heritage Council of Victoria in 2017.

One of the aims of this project was to replicate the 2005 report "Valuing the Priceless. The Value of Historic Heritage" undertaken in 2005 by the Allen Consulting Group for the Heritage Chairs and Officials of Australia and New Zealand.

While the main 2017 study will introduce new methods and cover a broader array of heritage valuations, it was felt a faithful and independent replication of the 2005 ACG study should be performed and be reproduced in 2017 'as-is', so that any changes could be inferred without introducing incidental bias.

The principal difference in this replication is that only Victorian residents would be used in this valuation, however a commensurate number of Victorian respondents were used as were reported in the 2005 study.

This report is intended to be a standalone analysis of the current valuation of heritage using the 2005 methodology. A detailed comparison of the differences and interpretation of the causes is beyond the scope of this document, however, differences to the 2005 ACG study will be noted throughout this report.

Structure of this report

The ACG report contained chapters (1,2 and 3) that were concerned with definitions of heritage, economic valuation and previous measures to value heritage. These are not included in this report.

Chapter 4 and the appendix of the ACG report match Chapter 4 and the appendices of this report. For readability and comparison with the 2005 ACG report, the format, structure, order and labelling of tables and figures in this report are identical.

Chapter 2 - Differences to the 2005 study

This section outlines relevant changes to technology and demographics in Victoria since the original 2005 study. Some of these changes have impacted how this replication study was conducted and some may have an effect on interpretation of reasons the results may differ.

Omissions and Discrepancies

The original data used in the analysis of the ACG report was unavailable as were certain details about the specific methodology used to calculate Willingness-To-Pay. Where assumptions have been made in the analysis, they are noted within the report.

Two omissions and one discrepancy were found by replicating the study. These involved the raw model results (page 49 of the ACG report). Two critical model estimates (the number of places protected and the tax levy) were listed as 0.0000 making it not possible to re-calculate the WTP from the model provided. In addition an undocumented model estimate for 'Development Control levels' (line 5 of the model) was discovered that may be a typographical error in the report. As such any comparison in WTP should use the Attribute Implicit Prices (Table 4.3, page 33 of the 2005 ACG report) which agree with our WTP calculations, rather than the models.

In some cases in the ACG report, it is unclear how the ratings scales have been collapsed to infer the summary statements, in particular Box 4.1 and Box 4.2 on Page 30 of the ACG report. Where an ambiguity exists in the analysis method, the method used in this report is made explicit.

Respondent Sample

The original ACG study was conducted Australia-wide whereas this study was conducted on Victorian adults only. While the ACG report includes Victorian specific results the appendix, the modelling, Willingness-to-Pay estimates were calculated for from the Australia-wide responses. Care should therefore be taken comparing the above Australia-wide results from the ACG report with the same results in this report which are for Victoria only.

In addition, the sampling technique used in 2005 did not appear to actively quota to ensure representability as the key demographics variables were included in the latter part of the survey. It is therefore likely the ACG analysts used respondents weighting to maximise the use of the data collected while maintaining representation by age and gender. While the raw sample collected differs by no more than 2% from the census statistics of age and gender, we used weighting to ensure the sample more closely matches the Victorian population.

Smartphones

Apple released the iPhone in 2007 and the intervening years we have seen a large rise in primary online access being through a smartphones or small screen device. Gartner group estimates 50% of all internet access by 2018 will be via smartphones.¹

The 2005 study, particularly the choice experiment was not designed for small screens, consequently smartphone users were excluded from the fieldwork in this study.

1 Gartner Group, 2014. <http://www.gartner.com/newsroom/id/2939217>

Internet Use

Internet use in Australian has risen from approximately 50% in 2005 to over 90% in 2017². Combined with the rise in online panels it is suggested that the use of panels in 2017 may be more generally representative of the Victorian population than in 2005.

Online Panels

The 2005 study used respondents drawn from an online panel with a reported response rate of 79%. This study used a similar technique yielding an effective response rate of 65%.

However, since 2005, the technology for recruiting and managing online panels has increased, as has the number of Australians participating in online research. While this has led to a larger pool of respondents for market research, it has also seen the rise of the 'professional respondent'. A number of measures were taken in this study to ensure this sample was free of such respondents. The data was manually searched for illogical, inconsistent and nonsensical responses which were removed from the final data set.

Analytical Methods

Methods used to design and analyse Choice Experiment data have improved dramatically since 2005. At the time of the ACG report, a relatively simple fractional factorial design was used to control the choice scenarios and the data was analysed using a Multinomial Logit model. In this study we have faithfully used the same technique so that the results could be comparable but also analysed the data using newer superior methods for comparison.

2 Australian Bureau of Statistics

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/0/EC6E4AB45631E20ECA2573B600186F04?opendocument>

Chapter 3 - Fieldwork Collection

Fieldwork for the survey and experiment was conducted over a 2 week period in September 2017 to reduce possible day-of-week bias.

The key demographic quota variables of Age and Gender were actively managed to ensure the final sample was close to the Victorian population census 2016 figures.

Respondents were recruited from ResearchNow, an ESOMAR accredited online panel and incentivised to participate in the survey.

Panels were instructed to disallow respondents accessing the survey from a small screen device such as a smart phone. Respondents devices were again tracked within the survey and rejected in the case they were using such a device as 'technical screenouts'.

A timeout of 30 minutes was applied to the survey. This meant that any respondent who paused for more than 30 minutes between responses was screened from the survey.

Post data collection, all open ended responses were manually checked. Respondents providing illogical or nonsense responses were marked as low quality responses and screened-out as 'Quality screenouts'

Table 3.1

SURVEY SAMPLE STATISTICS

Completion Status	Number
Complete	566
Quality screenout	113
Technical screenout	9
Incomplete	372
Total Sample	1060

Review of the total completions (including those that were post-collection removed) shows an effective response rate of 65%,

Data was analysed post collection to review how closely the sample matched the Victorian population by gender and age.

Table 3.2

SAMPLE GENDER REPRESENTATION

	Raw data	Weighted	Census 2016
Male	46%	48%	48%
Female	54%	52%	52%
Total	100%	100%	100%

Table 3.2

SAMPLE AGE REPRESENTATION

	Raw data	Weighted	Census 2016
18-34	29%	32%	32%
35-54	33%	34%	34%
Over 55	38%	34%	34%
Total	100%	100%	101%

From the analysis of gender and age of the raw data, a weighting factor was calculated for each respondent to be used in all subsequent analysis.

Chapter 4 - Chapter 4 - Data Analysis

This chapter presents the findings from the survey of 566 of Victorian adults conducted in September 2017. The survey sought both to replicate as closely as possible the methods and structure in a survey conducted in 2005 by the ACG group.

The original 2005 ACG study sought to:

- quantify the values that people attach to a number of attributes of protection afforded to heritage places; and
- identify people's views on a number of matters which would point to the social capital associated with heritage place protection.

The value of heritage protection

As with the 2005 study, two approaches were taken to ascertain the value of heritage protection from adult Victorians:

- simple attitudinal questions; and
- choice modelling.

The results from each of these approaches follows.

4.1 Simple attitudinal questions

As with the 2005 ACG study, one of the questions in the survey asked people to agree or disagree with a series of statements. Some of these statements could be mapped against the types of values identified in figure 2.1 of the ACG report.

In the ACG report, 16.6% of the community strongly agreed with the statement 'Looking after heritage is important in creating jobs and boosting the economy'. In this study a commensurate 23% were found to strongly agree with the statement.

Table 4.1

COMMUNITY VIEWS AND PERCEPTIONS OF HERITAGE-RELATED VALUES

Value type	Statement	'Strongly Agree and Agree'	'Strongly Disagree and Disagree'	Neither agree nor disagree
Direct use value	Looking after our heritage is important in creating jobs and boosting the economy	66.3%	6.0%	27.7%
Indirect use value	My life is richer for having the opportunity to visit or see heritage	70.9%	5.2%	23.9%
Option value	It is important to protect heritage places even though I may never visit them	82.3%	1.5%	16.2%
Existence value	Heritage is a part of Australia's identity	83.0%	1.9%	15.1%
	The historic houses in my local area are an important part of the area's character and identity	73.3%	5.4%	21.3%
Other non-use values	It is important to educate children about heritage	89.2%	0.7%	10.0%

The comparative results with a similar UK study from 2003 are presented below. The results from this study closely follow both the ACG study and the UK one.

Table 4.2

COMPARISON OF AUSTRALIAN AND UNITED KINGDOM ATTITUDES (PROPORTION OF RESPONDENTS WHO AGREED OR STRONGLY AGREED WITH THE FOLLOWING STATEMENTS — PER CENT)

Australian question (and United Kingdom question in brackets where the question is Different)	Victoria (2017)	Australia (2005)	United Kingdom (2003)
It is important to educate children about heritage	89.2	96.9	95.0
It is important to keep historic features wherever possible when trying to improve towns and cities	88.9	94.7	91.7
Built heritage can mean small and modest places as well as grand historic buildings and churches (Heritage can mean my local area as well as historic castles and stately homes)	84.2	92.8	89.7
The historic buildings in my local area are worth saving and are important parts of heritage (The heritage in my local area is worth saving)	75.6	84.1	86.0
Celebrating heritage is important	80.3	81.5	76.0
Heritage can mean recent as well as old buildings	62.5	62.4	59.3
I don't know what heritage activities are taking place in my area	48.5	39.7	50.0
There's never any information on the heritage topics of interest to me	32.7	21.2	30.0
Australia's heritage is not relevant to me or my family (Heritage is not relevant to me or my family)	17.3	5.0	12.3

Source: MORI 2003, Making Heritage Count? Research Study Conducted for English Heritage, Department for Culture, Media and Sport and the Heritage Lottery Fund, October, pp. 23-26. Note: The MORI survey was of Bradford, Cornwall and London. Survey responses do not appear to be weighted.

Victorians generally believe 'enough is being done' to protect historic heritage. This is a significant difference with an additional 16% of the community agreeing with this statement compared to the 2005 ACG study. Also of note, and as can be seen in other results, there is a larger proportion of the community apparently more ambivalent to heritage than in 2005 as is seen in the 8% 'Don't know' compared to the 2% in 2005 in Figure 4.1.

Figure 4.1

DO YOU THINK THAT ENOUGH IS BEING DONE TO PROTECT HISTORIC HERITAGE ACROSS AUSTRALIA?

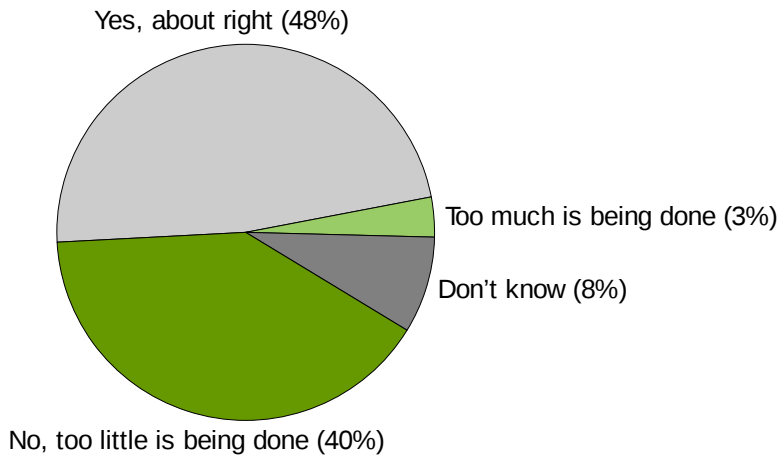
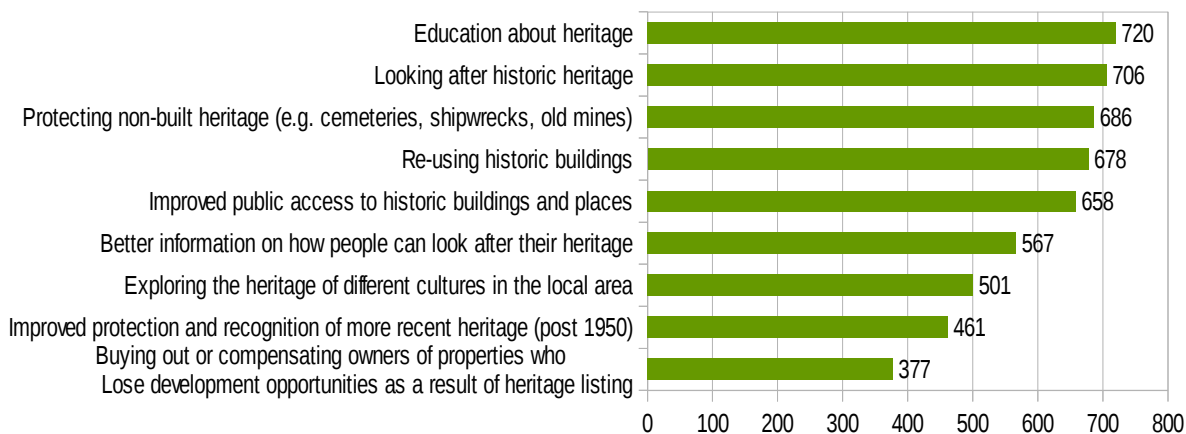


Figure 4.2 agrees with the 2005 study insofar as having a similar rank ordering of where additional government money should be spent educating and protecting heritage.

Figure 4.2

IF MORE MONEY WAS TO BE SPENT ON HERITAGE ISSUES, WHICH OF THE FOLLOWING WOULD YOU CHOOSE TO SPEND IT ON?



Box 4.1

VIEWS OF THOSE WHO OWN OR LIVE IN A HERITAGE-LISTED PROPERTY

The survey asked people to identify whether or not they own or live in a heritage-listed property. These respondents comprised 2.3 per cent of the respondents of the total sample. This number is regarded as too low to perform any further meaningful statistical analysis or to compare against the Australia wide summary in the 2005 study.

Responses by different age groups were analysed. In general there was commonality across the groups. A principal difference to the 2005 study was that the 'enough was being done' to protect heritage in Victoria was the most common response across all age groups. Typically, as with the 2005 study, seniors tended to be more pessimistic that heritage was being looked after.

Box 4.2

SURVEY RESPONSES BY AGE GROUP

The most common response across all age groups (youth, middle age and senior) was that enough was being done in Australia to protect historic heritage, with 55% of youth, 42% of the middle aged and 47% of seniors. This was in contrast to the 2005 results. As with the 2005 study, all age groups agreed that heritage plays an important part in Australia's culture*.

Other results were:

- Agreeing with the 2005 study, seniors would prefer to direct additional funding to places of national significance (60 per cent) compared with around 50 per cent for those that are younger;
- Agreeing with the 2005 study, seniors were more likely to consider that looking after our heritage is important in creating jobs and boosting the economy (67 per cent compared with around 60 per cent of those who are younger);
- Agreeing with the 2005 study, the youth are less likely to know what heritage activities are taking place in their local area (57 per cent) compared with seniors (41 per cent)
- Agreeing with the 2005 study, up to 40 per cent of the youth group thought that there was never enough information on the heritage topics of interest compared with around 29 per cent with those aged over 36 years of age.)

Also agreeing with the 2005 study, the three age groups had similar rankings for allocating additional money to the ten choices that they had available in the survey.

Note: Age groups were defined as: youth (18 to 34 years of age); middle aged (35 to 54 years of age) and senior (55 years of age and above).

* In all cases, it was assumed that 'strongly agree' and 'agree' counted both as agreeing.

4.2 Choice Modelling

As with the 2005 ACG study, choice modelling was undertaken to look behind general statements about heritage to see the degree to which the population is willing to financially support the call for a greater commitment to heritage protection, and which historic heritage conservation outcomes they particularly value.

General Observations

All the heritage protection attributes (Cost, Places Protected, Condition, Accessibility and Development Control) are statistically significant at 95% or more in explaining respondent choice. The only exception is the Age-Mix (see the reasons explained below).

The general conclusions marry well with the 2005 study:

- Respondents were conscious of the financial impost a heritage levy would mean for them should they choose a different level of heritage protection than currently provided.
- Respondent utility is increased by:
 - an increase in the number of heritage places protected;
 - an increase in the proportion of places that are in good condition; and
 - an increase in the proportion of places that are accessible to the public.
- The MNL estimates for Age-Mix were not significant at the 90% level. Deeper analysis using the more advanced Mixed Logit (MXL) model and dummy-coded attribute levels showed the optimal mix of old buildings to new buildings was between 50% and 100% with a point estimate optimal of 95%, which partly agrees with the 2005 MNL results. This means that respondents' utility is increased as the Age-Mix approaches 95% then declines towards 100%. It should be noted that the figure of 95% is a point estimate used in the experiment and not necessarily the optimal. Forcing a linear specification to this U-shaped relationship (as the 2005 study did) results in the parameter estimate for age apparently being insignificant rather than significant but non-linear.
- No modifications permitted (vs. no control), Minor modifications permitted (vs. no control) and Substantial modifications permitted (vs. no control) were all positive and significant. In line with the 2005 study we found that Development Control with Minor modifications permitted was the most preferred and that development control with both No modifications permitted and Substantial modifications permitted are perceived as better to the no development control option (that could involve demolition subject to assessment). Unlike the 2005 study, however, we found that the preference ordering for development control with no modifications permitted and substantial modifications permitted has changed. Currently, citizens prefer the former to the latter.
- The results of the most accurate MXL model with dummy-coded attribute levels shows that overall people display support for the new protection policy (a general disutility associated with the status quo when the new policy becomes an option). This is evidenced with the positive coefficient with alternative specific constant (ASC) associated with the improvement options. It is not possible to compare this result with the 2005 study, as the necessary details are not reported, and because using the MNL model is known to result in biased estimates, particularly with respect to alternative specific constants.

Box 4.3

ANALYTICAL METHOD 3 — ‘CHOICE MODELLING’ AND THE SURVEY OF HISTORIC HERITAGE VALUES

Below is a reproduction of the outline of choice modelling described in the 2005 report³.

Choice modelling involves eliciting a respondent's stated preference in a hypothetical setting. Used commonly in the natural resources field, and by consumer product companies when developing new goods and services, survey respondents are presented with several different sets of two or more resource use options and asked to indicate which option they prefer in each of these 'choice sets'. One of the resource use options usually corresponds to the do-nothing option and is held constant over all sets of choices. The levels of the attributes characterising the different options varies according to an 'experimental design'. In many valuation applications, one attribute always involves a monetary payment and there would typically be two or more attributes. By observing and modelling how people change their preferred option in response to the changes in the levels of the attributes, it is possible to determine how they trade-off between the attributes. In other words, it is possible to infer people's willingness to pay some amount of an attribute in order to achieve more of another. In this case, the survey presented respondents with a series of choice sets in which they were asked to indicate their preferred option. The attributes related to:

- the number of heritage places protected from loss (Places Protected)— one aspect of managing our heritage is to protect important places from being lost. Listing places on an official heritage register is one way of helping this to happen. But it does not guarantee against loss;
- condition and integrity of places (Condition) — this refers to the: structural and physical soundness of a place; and whether the place has been preserved in a way that is faithful to the original features of the place. Places in poor condition may become an 'eyesore' and a public safety hazard. Similarly, places that have been poorly restored and managed may not maintain their heritage character;
- the age mix of places (Age Mix) — this attribute is a measure of the proportion of listed places that come from different historical periods;
- public accessibility (Accessibility) — this refers to whether or not the public is able to visit a historic place and get a hands-on experience at the place (e.g. photography, guided tours, workshops, open days, etc). Accessibility is more than just being able to view a place. It includes the opportunity to get a deeper appreciation of the place's value and meaning;
- development controls (Development Control) — this attribute refers to the level of controls on development in and around heritage places (including buildings, gardens, monuments, etc). Some form of control is necessary to protect heritage places, but the level of control could vary depending on the heritage outcomes being sought; and
- the respondent's additional levy payment each year (Cost) — the amount of money that the respondent would be required to contribute each year via a levy to achieve the outcomes specified by a particular option.

By specifying different values for each of the attributes, different policy alternatives were constructed for managing the national system of heritage protection, and alternative 20 year outcomes for heritage conservation were specified. In this case, each choice set had three options, including a 'no-change' option and two alternatives. The no-change option referred to the outcomes that would eventuate if the current system of heritage protection remained intact, with no additional funding made available. It was included in the choice experiment as a benchmark against which to measure respondents' willingness to pay for changes in attribute provision.

The attributes and their values were developed by The Allen Consulting Group, in conjunction with representatives of the Heritage Chairs and Officials of Australia and New Zealand, following focus group meetings in Perth, Sydney and Dubbo

³Box 4.3 Page 32, 2005 ACG study

The choice modelling allows implicit prices to be assigned each of the changes associated with the attributes. Table 4.3 summarise the implicit prices estimated for each attribute.

These agree with the 2005 ACG study insofar as the rank ordering of the attributes is identical. Two anomalies are noted:

1. Firstly the age-mix of properties is not significant at 90%. (see appendix B, table B.4).
2. Secondly, there is a more negative effect of 'no modification' allowed, compared to demolition with permit. This is commensurate with the findings from 2005 that 'no modifications' would reduce utility compared to minor or substantial modifications being allowed. That is, demolition with a permit is generally preferred to 'retention with modifications being allowed'.

Table 4.3

ATTRIBUTE IMPLICIT PRICES

Attribute	Annual price per person	Units
Places protected	\$4.64	per 1000 additional heritage places protected
Condition of places	\$0.33	per 1% increase in the proportion of places in good condition
Age mix of places	\$0.14 *	per 1% increase in the proportion of places that are over 100 years of age
Accessibility of places	\$1.86	per 1% increase in the proportion of places that are publicly accessible
Development control		
- Change to level 1	\$18.58	Change from 'demolition permitted' to 'substantial modifications permitted but no demolition'
- Change to level 2	\$46.51	Change from 'demolition permitted' to 'minor modifications permitted only'.
- Change to level 3	\$26.55	Change from 'demolition permitted' to 'no modifications permitted'.

*Age-Mix Willingness to pay is not significant

The implications from this study agree with the 2005 ACG study, albeit with updated WTP estimates.

In general :

Average willingness to pay for the protection of additional places from loss is estimated to be \$4.64 per person each year for every 1000 places protected, compared to \$5.53 in 2005.

Respondents are also willing to pay for improvements to the condition and public accessibility of places.

- A one percentage point increase in the proportion of places that are accessible to the public is valued at \$1.86 per person per year compared to \$3.60 in 2005.
- As in 2005, this result indicates that people, on average, value accessibility more highly than condition.

With respect to Age-Mix, while the MNL results were not statistically significant, the more powerful MXL model (table B.4b) with dummy-coded attribute levels showed that reducing the share of buildings of over 100 years old from the current 85% to 50% would mean average decrease in respondents' welfare of \$4.21. Increasing it to 95% would be worth \$8.25 for an average respondent, while increasing it to 100% would mean a decrease of welfare of \$6.07 in comparison with the current 85%.

Regarding Development Control, on average, respondents are willing to pay \$26.55 per person per year to change the level of development control from one of 'demolition permitted' to a slightly more stringent protection policy of 'substantial modifications permitted — but no demolition'. This is commensurate with the 2005 value of \$39.50 per person. Respondents are willing to pay an additional \$19.96 per person for a further tightening of controls such that only 'minor modifications' are permitted, this compares well with the 2005 figure of \$13.57 per person. Finally, going the next step to 'no modifications permitted' reduces utility in comparison with the 'minor modifications permitted' option. Relative to the 'no change' scenario in which demolition is permitted, it is worth \$18.58 to respondents. This is in line with the results of the 2005 study, however, in 2005 it was estimated that this option to be worth a relatively negligible amount of \$2.38. These results suggest that people perceive development controls to be an important policy instrument for protecting heritage and are not in favour of demolition but value a system that allows property developers/owners the flexibility to undertake minor modifications, and are more supportive towards the cases that impose 'no modifications permitted' option than in 2005.

Valuation of alternative historic heritage outcomes

A number of different outcome scenarios can be evaluated in terms of respondent willingness to pay for changes relative to a 'no change' scenario using the willingness to pay estimates above – as they have since 2005.

Table 4.4 provides an updated example of how the implicit prices can be used in this way.

Table 4.4

EXAMPLE SCENARIO VALUATION

Attribute	Current Level	Change by 2020	Implicit price (per person per year)	Units of attribute change	Annual aggregate value (per person)	
Places protected from loss	200 000 places on heritage lists	8000 places	\$4.64	Per 1000	\$37.12	
Proportion of sites in good condition	20%	20% point increase	\$0.33	Per 1% increase	\$6.60	
Age Mix (proportion of sites over 100 years old)	80%	15% point reduction	\$0.14	Per 1% reduction	-\$2.10	*not sig
Proportion of places accessible to the public	10%	5% point increase	\$1.86	Per 1% increase	\$9.30	
Development control	Substantial modifications permitted	Only minor modifications permitted	\$19.96		\$19.96	
TOTAL					\$70.88	

An updated figure for the estimate of social capital from this study is below in Figure 4.3. This result differs from the 2005 one in that a larger proportion (14%) of people are ambivalent about heritage compared to 2005 (8%), a common theme in this replication study.

Figure 4.3

COMMUNITY (ADULT) RESPONSE TO 'HERITAGE IS A PART OF AUSTRALIA'S IDENTITY'

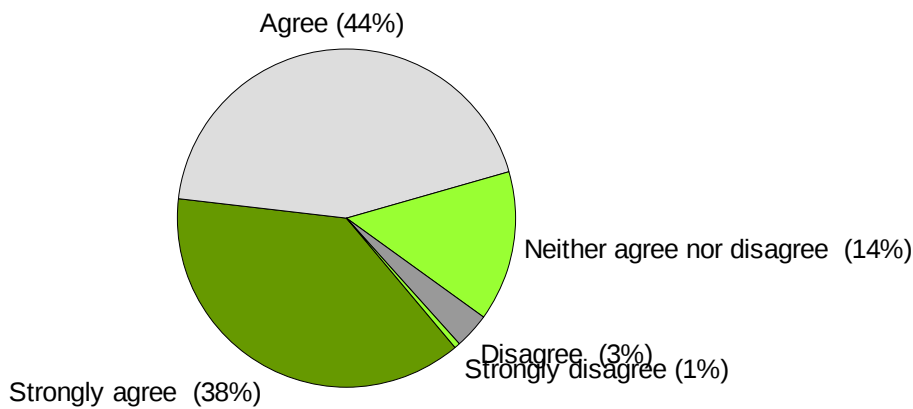


Table 4.5 below shows the 2017 figures for indicators of social capital. The values below show an approximate 50% decline in volunteerism to heritage issues since 2005.

Table 4.5

INDICATORS OF SOCIAL CAPITAL

Form of reciprocity	Percentage of adult population
Volunteered your time for heritage activities?	5.5%
Donated to heritage causes in the last 12 months?	5.6%
Indicators of community support for heritage activities	
Member of a historic society or club?	3.4%

In the 2005 study, each of these figures was between 25% and 100% higher than in 2017. The 2005 report notes that while their value is limited as standalone indicators, their value will emerge if the indicators are monitored over time.

In this respect, social capital can be viewed as having declined since 2005 for each of the indicators measured both in 2005 and 2017..



Appendix A - Abbreviations

ACG Allen Consulting Group

DCE Discrete Choice Experiment

MNL Multinomial Logit

MXL Mixed Logit

WTP Willingness to pay

Appendix B - Choice Modelling Technical Details

The Choice Modelling Discrete Choice Experiment used in this study replicated the method used in the 2005 ACG study. The policy context, attribute selection, attribute levels, questionnaire design and data analysis were reproduced from Appendix B (page 39) and Appendix C (page 51) of the 2005 ACG report.

Salient 2017 results differing to the original report are below. The attributes and levels used in the 2017 study were the same as those used in 2015. The table of attributes B.2 is reproduced from the 2005 ACG report below.

Table B.2

ATTRIBUTES

Attribute	Future levels (as at 2020)		
	Approximate current level	No change to current management	Range of levels under change options
Additional number of places protected from loss	200,000 places currently listed on official registers	5000	2,000 5,000 8,000 10,000
Per cent of places in good condition and high integrity	20%	15%	15% 20% 40% 80%
Age mix of listed places	80% over 100 years old and 20% more recent	Many over 100 years old, some (15%) more recent	All over 100 years old Almost all over 100 years old, few (5%) more recent Many over 100 years old, some (15%) more recent Half over 100 years old, half more recent
Per cent of places publicly accessible	10%	5%	5% 15% 20% 25%
Development control	Substantial modifications permitted but no demolition	Demolition permitted subject to assessment	No modifications permitted Minor modifications permitted Substantial modifications permitted but no demolition Demolition permitted subject to assessment
Annual heritage levy	\$0	\$0	\$0 \$20 \$50 \$200

B.4 Questionnaire design and administration

The questionnaire part of the study was reproduced faithfully from Appendix C of the 2005 ACG report. As this was a replication, there was no need for stakeholder input or respondent testing.

The questionnaire was built on the SurveyEngine research platform and designed for responsive browsers. The survey was tested using an automated suite of simulations to confirm data collection was as expected and the survey was operable on most modern internet browsers.

Respondents were sourced from ResearchNow – an ESOMAR accredited panel provider. Respondents were selected from the panel according to age (18 or above on January 2017) Residence (Victoria) and device type (tablet or desktop) as well as initial age and gender quota requirements.

Respondents were additionally screened a second time within the survey for age, gender, location and device type.

Respondents were incentivised by the ResearchNow panellist incentive scheme. No personally identifiable information about respondents was recorded by the survey platform and no responses provided to the SurveyEngine platform were provided to the panel provider.

A 'Late Screening' method was used to mark respondents that already filled age and gender quotas. Due to the structure of the original ACG study, this meant that more respondents than were necessary completed the study.

A final response rate of 65% of all respondents who started the survey was achieved.

Post data collected, a number of respondents were removed from the data analysis for quality reasons.

A total of 566 usable respondents completed the survey. This is commensurate with the numbers achieved for Victoria in the 2005 ACG study, which are estimated at not more than 500. This assumes that Victorians comprise 25% of the population of Australia⁴ and that a similar proportion existed in the 2024 Australian sampled in the 2005 study.

4 Australian Bureau of Statistics, 2017 <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0>

B.5 Analysing the choice modelling results

As in the 2005 study, each respondent completed 8 choice tasks, yielding 4528 individual choice observations.

Of these, 58 (or 10%) consistently selected the 'no change option (compared to 5% for the 2005 study). Table B.3 shows the reasons given for this consistent selection.

Table B3

REASONS FOR CONSISTENT SELECTION OF THE 'NO CHANGE' OPTION

Reason for selecting 'no change'	% of 'no change' respondent sub-set	Interpretation (ACG 2005)
I believe that historic heritage is already well managed	22	Zero value for additional for additional heritage protection
I support more protection but can't afford to contribute to the cost	19	Zero value for additional for additional heritage protection
I oppose the idea of a heritage levy.	28	Protest zero
I am prepared to pay for additional heritage outcomes but distrust that my payment into a fund will be wisely spent.	14	Protest zero
I didn't know which option was best so I stuck with the 'no change' option.	17	Confusion and possible poorly formed preferences

As in the 2005 study, there was a vocal minority opposing the idea of introduction of a 'heritage levy'. This was a methodological concern during this study since the requirement that heritage be valued meant introducing a fictitious government taxation levy. Nevertheless, this was a relatively small number of respondents.

Selected responses from open-ended comments in this study on this objection are reproduced in Box B.1 below.

Box B.1

CONCERNS ABOUT INCREASED GOVERNMENT SUPPORT FOR HERITAGE PLACES

- an interesting survey but we are always being asked to pour more money in to things. As a retiree I am on a fixed low income. Perhaps big business could help out here.
- I agree with protecting our heritage but I don't agree with yet another levy being imposed on people - the government could easily cover costs if they stopped frittering away taxpayer money or getting tax dodgers to pay their fair share.
- If collecting extra funding through local council, then a proportion of the funding should go to local historical sites for improvement, and council should be audited to see that this is happening.
- I don't think any tax payer should have to pay a levy for heritage listed to preserve...gov't should look after that...we pay enough tax. When you buy a property and you know it is heritage listed or part of...that is something you need to deal with, not the tax payers.
- I think the suggestion of personal levy charged to help with the upkeep of historic heritage buildings might discourage many

Statistical Analysis of the data

Analysis of the choice data proceeded as per the 2005 study. The principal analysis tool used was a MNL modelling technique as used in the 2005 study to estimate the model coefficients.

Two additional modern methods were used to verify the modelling was valid. These were variants of the MXL (mixed-logit) variety.

While these methods produced arguably more accurate results, in order to compare the 2017 results with the 2005, as the original datasets were unavailable, the standard MNL as used in 2005 was used to calculate the WTP values.

Table B.4

MULTINOMIAL MODEL COEFFICIENT ESTIMATES

Attribute	Annual price per person (in \$100 units)	sig	Units
Places protected	0.05	***	per 1000 additional heritage places protected
Condition of places	0.00	***	per 1% increase in the proportion of places in good condition
Age mix of places	0.00		per 1% increase in the proportion of places that are over 100 years of age
Accessibility of places	0.02	***	per 1% increase in the proportion of places that are publicly accessible
Development control			
- Change to level 1	0.27	***	Change from 'demolition permitted' to 'substantial modifications permitted but no demolition'
- Change to level 2	0.47	***	Change from 'demolition permitted' to 'minor modifications permitted only'.
- Change to level 3	0.19	**	Change from 'demolition permitted' to 'no modifications permitted'.
Cost	-0.76	***	In 100 AUD
Alternative specific constant	-0.49	**	Change options associated with introducing a new policy
Individual characteristics			
Gender	-0.12		Interactions with the ASC Male
Pro heritage	1.21	***	Heritage active
Heritage house	2.61	***	Owns heritage house
Age	-0.06	*	Age (normalised)
Education	-0.14		Education lower than "Certificate"
Income	0.04		Income (normalised)
Citizen	-0.01		Australian citizen
Metropolitan resident	0.23	**	Greater Melbourne
Model diagnostics			
LL at convergence	-4534.35		
LL at constant(s) only	-4900.57		
McFadden's pseudo-R ²	0.0747		
Ben-Akiva-Lerman's pseudo-f	0.4186		
AIC/n	2.0068		
BIC/n	2.0308		
n (observations)	4536		
r (respondents)	567		
k (parameters)	17		

Table B.4b (additional modelling to 2005 ACG Report)

MIXED LOGIT MODEL COEFFICIENT ESTIMATES

dummy-coded attribute levels, in WTP-space, standard errors in parentheses

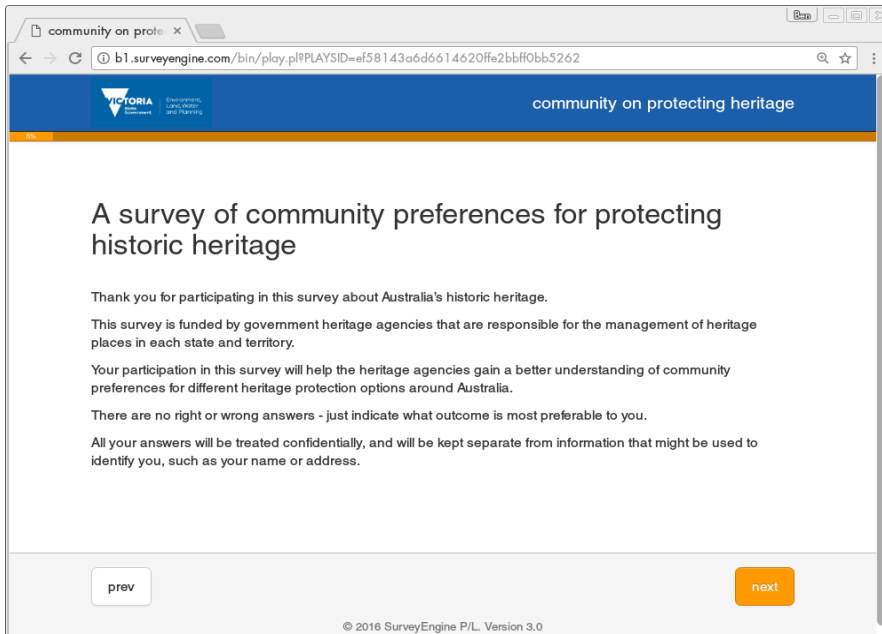
Attribute	Distribution	Mean of the annual price per person	Standard deviation of the annual price per person
Places - 2000 (vs. 5000)	n	-0.2830*** (0.0121)	0.3002*** (0.0078)
Places - 8000 (vs. 5000)	n	0.0876*** (0.0139)	0.1326*** (0.0090)
Places - 10000 (vs. 5000)	n	0.1039*** (0.0161)	0.1893*** (0.0076)
Condition - 20% (vs. 15%)	n	0.1055*** (0.0130)	0.0995*** (0.0069)
Condition - 40% (vs. 15%)	n	0.0649*** (0.0164)	0.1120*** (0.0061)
Condition - 80% (vs. 15%)	n	0.2077*** (0.0155)	0.1782*** (0.0136)
Age - 50% 100y+ (vs. 85%)	n	-0.0421*** (0.0145)	0.1267*** (0.0099)
Age - 95% 100y+ (vs. 85%)	n	0.0825*** (0.0183)	0.2237*** (0.0144)
Age - 100% 100y+ (vs. 85%)	n	-0.0607*** (0.0159)	0.2656*** (0.0084)
Accessibility - 15% (vs. 5%)	n	0.1927*** (0.0159)	0.2061*** (0.0097)
Accessibility - 20% (vs. 5%)	n	0.1578*** (0.0163)	0.1867*** (0.0050)
Accessibility - 25% (vs. 5%)	n	0.2364*** (0.0182)	0.2270*** (0.0114)
No modifications permitted (vs. no control)	n	0.2184*** (0.0163)	0.2827*** (0.0068)
Minor modifications permitted (vs. no control)	n	0.3193*** (0.0209)	0.3461*** (0.0134)
Substantial modifications permitted (vs. no control)	n	0.1760*** (0.0190)	0.3797*** (0.0168)
- Cost (100 AUD)	l	1.4218*** (0.1697)	4.3681* (0.4313)
Alternative specific constant	n	-0.4114*** (0.0121)	0.7421*** (0.0164)
Model diagnostics			
LL at convergence		-3858.52	
LL at constant(s) only		-4900.57	
McFadden's pseudo-R ²		0.2126	
Ben-Akiva-Lerman's pseudo-R ²		0.4862	
AIC/n		1.7762	
BIC/n		2.0168	
n (observations)		4536	
r (respondents)		567	
k (parameters)		170	

Note: *, **, *** represent statistical significance at 0.90%, 0.95%, 0.99%, respectively

Appendix C - The Survey Instrument

The survey instrument used was identical in structure to that specified in the 2005 study (appendix C page 51). No indication in that appendix was given to the specific graphical look.

Below are two example screenshots from the 2017 study.



community on protecting heritage

A survey of community preferences for protecting historic heritage

Thank you for participating in this survey about Australia's historic heritage.

This survey is funded by government heritage agencies that are responsible for the management of heritage places in each state and territory.

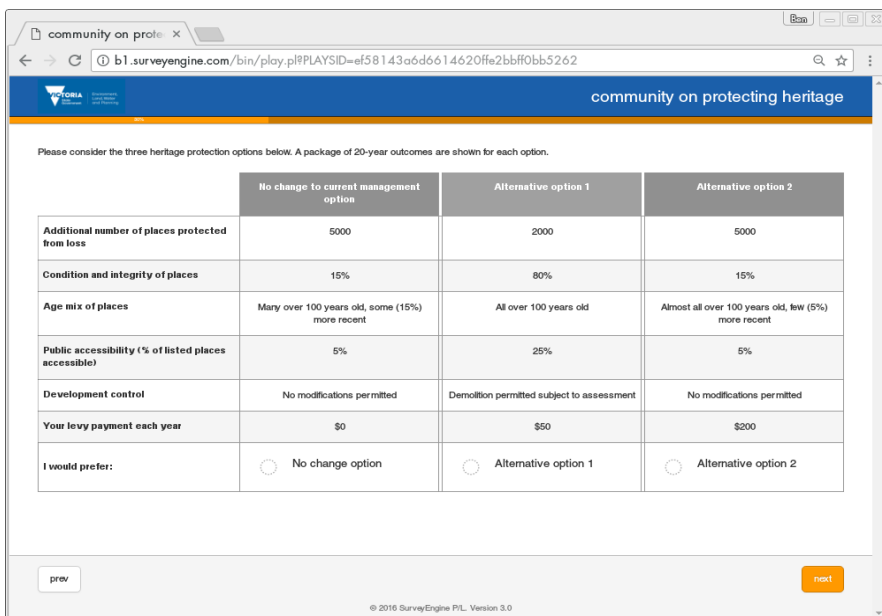
Your participation in this survey will help the heritage agencies gain a better understanding of community preferences for different heritage protection options around Australia.

There are no right or wrong answers - just indicate what outcome is most preferable to you.

All your answers will be treated confidentially, and will be kept separate from information that might be used to identify you, such as your name or address.

prev next

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community on protecting heritage

Please consider the three heritage protection options below. A package of 20-year outcomes are shown for each option.

	No change to current management option	Alternative option 1	Alternative option 2
Additional number of places protected from loss	5000	2000	5000
Condition and integrity of places	15%	80%	15%
Age mix of places	Many over 100 years old, some (15%) more recent	All over 100 years old	Almost all over 100 years old, few (5%) more recent
Public accessibility (% of listed places accessible)	5%	25%	5%
Development control	No modifications permitted	Demolition permitted subject to assessment	No modifications permitted
Your levy payment each year	\$0	\$50	\$200
I would prefer:	<input type="radio"/> No change option	<input type="radio"/> Alternative option 1	<input type="radio"/> Alternative option 2

prev next

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Appendix D - Further National Results From the Survey

Appendix D in the 2005 report provided results aggregated Australia-wide. This study only sampled Victoria.

For ease of matching the 2005 results with this report, this appendix is included but intentionally left blank.

Appendix E – State Results

Below are results from the demographic and usage & attitudinal sections from the study.

E.1 New South Wales

New South Wales was not included in this study. This section is included but intentionally left blank so that the sections and tables may easily be matched with the 2005 ACG report.

Tables E.1 through E.4 and figure E.1 are not included in this report

E.2 Victoria

Table E.5

PROPORTION OF RESPONDENTS WHO ANSWERED: DO YOU THINK ENOUGH IS BEING DONE ACROSS AUSTRALIA TO PROTECT HISTORIC HERITAGE? (PER CENT)

	No, too little is being done	Yes, about right	Too much is being done	Don't know	Total
VIC. Metro	38.3	48.2	2.8	10.8	100
VIC. Regional	41.0	47.7	3.6	7.6	100
TOTAL VIC.	40.5	47.8	3.4	8.3	100

Table E.6

PROPORTION OF RESPONDENTS WHO ANSWERED: HISTORIC HERITAGE PROTECTION IS FUNDED BY ALL LEVELS OF GOVERNMENT. IF MORE FUNDS WERE TO BECOME AVAILABLE, WHERE DO YOU THINK THE ADDITIONAL MONEY SHOULD BE SPENT? (PER CENT)

	Places of significance to the nation	Places of significance to your State or Territory	Places of significance to your local area	Don't know	Total
VIC. Metro	49.1	27.1	14.9	9.0	100
VIC. Regional	51.0	32.6	8.8	7.7	100
TOTAL VIC.	50.6	31.4	10.1	7.9	100

Table E.7

PROPORTION OF RESPONDENTS WHO ANSWERED: TO WHAT EXTENT DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS ABOUT HERITAGE?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	TOTAL
It is important to educate children about heritage						
VIC. Metro	46	40	13	1	0	100
VIC. Regional	48	42	9	0	0	100
TOTAL VIC.	47	42	10	1	0	100
It is important to keep historic features wherever possible when trying to improve towns and cities						
VIC. Metro	49	42	10	0	0	100
VIC. Regional	47	41	10	1	0	100
TOTAL VIC.	47	42	10	1	0	100
Built heritage can mean small and modest places as well as grand historic buildings and churches						
VIC. Metro	50	39	10	0	0	100
VIC. Regional	37	45	15	2	0	100
TOTAL VIC.	40	44	14	1	0	100
The historic buildings in my local area are worth saving and are important parts of heritage						
VIC. Metro	42	38	18	2	0	100
VIC. Regional	33	41	21	3	1	100
TOTAL VIC.	35	40	21	3	1	100

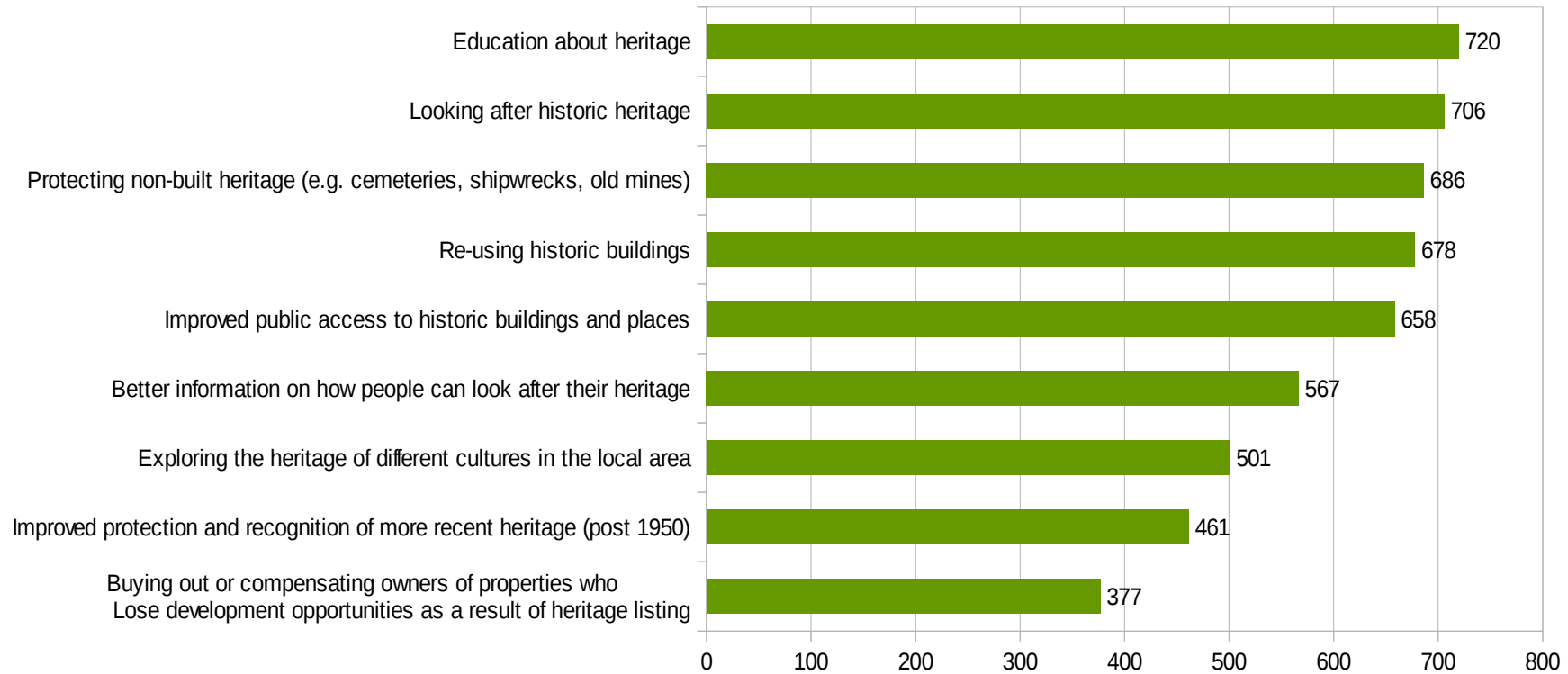
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	TOTAL
The historic houses in my local area are an important part of the area's character and identity						
VIC. Metro	34	42	17	7	0	100
VIC. Regional	31	41	22	3	2	100
TOTAL VIC.	32	41	21	4	1	100
Celebrating heritage is important						
VIC. Metro	36	40	22	3	0	100
VIC. Regional	41	41	15	3	1	100
TOTAL VIC.	40	40	16	3	1	100
Heritage can mean recent as well as old buildings						
VIC. Metro	21	40	27	12	0	100
VIC. Regional	24	39	28	7	2	100
TOTAL VIC.	23	39	28	8	2	100
Looking after our heritage is important in creating jobs and boosting the economy						
VIC. Metro	25	40	30	5	0	100
VIC. Regional	23	44	27	5	1	100
TOTAL VIC.	23	43	28	5	1	100

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	TOTAL
Heritage plays an important part in Australia's culture						
VIC. Metro	34	45	15	5	0	100
VIC. Regional	39	43	14	3	1	100
TOTAL VIC.	38	44	14	3	1	100
We protect too much heritage						
VIC. Metro	9	13	30	29	19	100
VIC. Regional	5	17	26	36	17	100
TOTAL VIC.	6	16	26	34	17	100
It is possible to keep heritage places and provide for the needs of today						
VIC. Metro	26	52	22	0	0	100
VIC. Regional	29	50	19	2	0	100
TOTAL VIC.	28	51	19	1	0	100
My life is richer for having the opportunity to visit or see heritage						
VIC. Metro	29	41	25	5	1	100
VIC. Regional	27	44	24	4	1	100
TOTAL VIC.	28	43	24	4	1	100

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	TOTAL
I don't know what heritage activities are taking place in my area						
VIC. Metro	12	32	36	16	4	100
VIC. Regional	13	36	38	10	2	100
TOTAL VIC.	13	36	38	11	3	100
There's never any information on the heritage topics of interest to me						
VIC. Metro	9	20	42	24	5	100
VIC. Regional	10	24	43	19	4	100
TOTAL VIC.	10	23	43	20	4	100
Australia's heritage is not relevant to me or my family						
VIC. Metro	10	5	23	35	28	100
VIC. Regional	5	13	23	36	23	100
TOTAL VIC.	6	11	23	36	24	100
Heritage is a part of Australia's identity						
VIC. Metro	42	43	14	0	0	100
VIC. Regional	40	43	15	2	1	100
TOTAL VIC.	40	43	15	1	1	100
It is important to protect heritage places even though I may never visit them						
VIC. Metro	37	44	19	0	0	100
VIC. Regional	37	46	15	1	1	100
TOTAL VIC.	37	45	16	1	0	100

Figure E.2

VICTORIA'S OVERALL FOR THE QUESTION: IF MORE MONEY WAS TO BE SPENT ON HERITAGE ISSUES, WHICH OF THE FOLLOWING WOULD YOU CHOOSE TO SPEND IT ON? (UNITS)



Note: The maximum number of units for a category is 1000, which is equivalent to 100 per cent of respondents ranking the category as their first priority. The lower bound may vary because of the opportunity provided to respondents to nominate an optional category. In practice, the lower bound is close to 100 units.

Table E.8

PROPORTION OF RESPONDENTS WHO RANKED THE FOLLOWING ISSUES FOR THE QUESTION: IF MORE MONEY WAS TO BE SPENT ON HERITAGE ISSUES, WHICH OF THE FOLLOWING WOULD YOU CHOOSE TO SPEND IT ON? (PER CENT)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total
Education about heritage											
VIC. Metro	26	12	13	13	9	12	6	6	3	0	100
VIC. Regional	28	11	10	14	11	9	6	4	5	2	100
TOTAL VIC.	28	11	11	14	11	9	6	4	4	1	100
Re-using historic buildings											
VIC. Metro	14	16	19	15	12	4	8	5	6	0	100
VIC. Regional	11	23	15	10	11	8	8	8	6	1	100
TOTAL VIC.	11	21	16	11	11	7	8	7	6	1	100
Protecting non-built heritage (e.g. cemeteries, shipwrecks, old mines)											
VIC. Metro	8	20	22	23	7	8	8	4	1	0	100
VIC. Regional	11	17	22	9	11	11	8	7	5	1	100
TOTAL VIC.	10	18	22	12	10	10	8	6	4	1	100
Improved public access to historic buildings and places											
VIC. Metro	8	8	16	16	23	18	6	4	3	0	100
VIC. Regional	8	17	14	19	13	7	11	7	4	1	100
TOTAL VIC.	8	15	15	18	15	10	10	6	4	1	100

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total
Better information on how people can look after their heritage											
VIC. Metro	1	12	7	16	16	18	13	12	4	0	100
VIC. Regional	2	8	9	15	16	20	11	10	7	0	100
TOTAL VIC.	2	9	9	16	16	20	12	11	6	0	100
Exploring the heritage of different cultures in the local area											
VIC. Metro	3	9	6	7	11	18	25	9	11	1	100
VIC. Regional	2	4	8	10	15	17	16	17	11	1	100
TOTAL VIC.	2	5	7	9	14	17	18	15	11	1	100
Looking after historic heritage											
VIC. Metro	24	14	11	7	15	8	16	4	0	0	100
VIC. Regional	27	13	10	8	8	11	13	5	5	0	100
TOTAL VIC.	26	14	11	7	9	10	13	5	4	0	100
Improved protection and recognition of more recent heritage (post 1950)											
VIC. Metro	9	5	3	1	5	9	11	29	27	1	100
VIC. Regional	4	5	6	11	7	10	17	27	12	2	100
TOTAL VIC.	5	5	5	8	7	10	16	27	15	1	100
Buying out or compensating owners of properties who lose development opportunities as a result of heritage listing											
VIC. Metro	7	2	2	3	3	6	7	25	41	6	100
VIC. Regional	5	3	6	4	6	6	9	14	43	5	100
TOTAL VIC.	5	2	5	3	6	6	8	16	42	5	100

Appendix F – Sources

The Allen Consulting Group 2005, *Valuing the Priceless: the Value of Historic Heritage in Australia*. Research Report ,2005, pp. 26-133.

The Australian Bureau of Statistics, *Household Use of Information Technology*, Australia, 2005-06 , reference 8146.0

The Australian Bureau of Statistics, *Australian Demographic Statistics*, Mar 2017, reference 3101.0 -

The Gartner Group, *Predicts 2015: Mobile and Wireless.*, Stamford Conn. US, 2014