

**Oxford Brookes University
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**DEVELOPING A SUSTAINABILITY
APPRAISAL FOR BUILT HERITAGE
ATTRACTIONS IN AN EMERGING
MARKET: LESSONS FROM THE UK
AND CHINA**

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Abstract

This research has developed a sustainability appraisal approach in relation to built heritage attractions in a mature market, with the possibility of applying it to an emerging heritage market. An approach involving stakeholders (attraction managers, third parties and visitors) was used to reduce assessment bias. A cross-national comparison approach using case studies in China and the UK has been employed in this research to identify the similarities and variability of sustainability management for built heritage attractions across widely different national contexts.

This research can be divided into four stages. *Firstly*, the research developed a theoretical framework to understand the concepts of built heritage attractions and sustainability appraisal methodologies. Indicators in four areas of sustainability for built heritage were suggested: the economic dimension (employment, financial health and numbers of visitors), the environmental dimension (environmental management systems and heritage conservation), the social dimension (stakeholders' involvement and attitudes), and the governance dimension (planning, troubleshooting and management). *Secondly*, a questionnaire-based survey was designed to provide information concerning the sustainability assessment of built heritage attractions across both China and the UK. Then, a six-step method for built heritage attraction sustainability appraisal was proposed, including: identifying sustainability indicators; identifying the key stakeholders; assigning weights to the indicators; scoring the indicators, calculating the overall weighted scores and examining the results. *Thirdly*, this appraisal approach was applied by comparing its practical application in four built heritage attractions: Chastleton House and Oxford Castle Heritage Site in the UK; Mountain Jieshi and Shanhai Pass in China. The *fourth* stage involved identifying the potential value, acceptability, implementation and international transferability of the developed approach. The findings identified several important variations and similarities in the cross-national context and made further recommendations for the development of a sustainability appraisal methodology for the management of built heritage attractions.

This research has opened up new directions for both theoretical and empirical studies in the field of sustainability appraisal, which could substantially enhance the initial foundation established in this work. This research proposes a holistic approach to heritage tourism strategies in emerging heritage markets to help heritage attraction managers assess sustainability performance, to help authorities to design a set of heritage indicators, to help those involved in heritage conservation to involve stakeholders appropriately and to guide and monitor heritage conservation funding allocation.

Table of Contents

Acknowledgments	I
Abstract.....	III
List of Tables	XII
Chapter One: Introduction	1
1.1 Introduction	1
1.2 Background problem statement	2
1.2.1 Nature of heritage	4
1.2.2 Heritage tourism	5
1.2.3 Built heritage attractions	6
1.2.3.1 Classification of built heritage attractions	7
1.2.3.2 Characteristics of built heritage tourism	8
1.2.3.3 Definition of built heritage	13
1.2.4 Tourism impacts.....	13
1.2.5 Sustainable Tourism	17
1.2.6 Sustainability Assessment approaches.....	19
1.2.7 Reviewing the existing sustainable tourism indicators	21
1.2.8 Analysing indicators designing principles.....	27
1.2.9 Designing sustainable indicators for built heritage attractions	29
1.3 Research impetus	31
1.4 Research aim and objectives	31
1.4.1 Research aim.....	32
1.4.2 Research objectives.....	32
1.5 Methodology.....	32
1.5.1 Research stages.....	35
1.5.2 Data collection and analysis	38
1.6 Structure	38
1.7 Summary.....	40
Chapter Two: Literature review and conceptual framework	40
2.1 Introduction	41
2.2 Economic Dimension of Heritage Tourism	43
2.2.1 Introduction	43
2.2.2 Employment.....	44
2.2.2.1 Seasonality.....	44
2.2.2.2 Limitations of tourism employment.....	45
2.2.3 Financial health.....	46
2.2.3.1 Revenues.....	46
2.2.3.2 Motivation of built heritage attractions management teams.....	47
2.2.4 Visitors.....	48
2.2.4.1 Characteristics of visitors.....	48
2.2.4.2 Motivation of visitors	50
2.2.4.3 Tourism carrying capacity	51
2.2.5 Analysis of heritage tourism economic impacts between the UK and China..	52
2.2.6 Designing economic sustainability indicators for built heritage attractions..	53
2.3 Environmental Dimension of Heritage Tourism	55
2.3.1 Introduction	55
2.3.2 Environmental management.....	55
2.3.2.1 Environmental management system	56
2.3.2.2 Environmental awareness	57
2.3.2.3 Utilities consumption and waste management	57

2.3.3 Historic buildings' conservation and preservation.....	58
2.3.3.1 Built heritage conservation	59
2.3.3.2 Scope of built heritage conservation.....	59
2.3.3.3 Conservation methods.....	61
2.3.3.4 Heritage planning	63
2.3.3.5 Financial resources	67
2.3.3.6 Heritage authorities.....	69
2.3.4 Analysis of heritage conservation systems between England and China	71
2.3.5 Designing environmental sustainability indicators for built heritage attractions	73
2.4 Social Dimension of Heritage Tourism	75
2.4.1 Introduction	75
2.4.2 Social value of built heritage attractions.....	75
2.4.3 Social Issues.....	76
2.4.3.1 Loss of authenticity	76
2.4.3.2 Commercial community.....	78
2.4.3.3 Culture clashes	79
2.4.3.4 Overcrowding and infrastructure pressures.....	79
2.4.3.5 Social tension.....	81
2.4.4 Stakeholders.....	81
2.4.4.1 Importance of stakeholders' participation	82
2.4.4.2 Challenges in stakeholders' participation.....	84
2.4.5 Analysing of heritage tourism social impacts between the UK and China	85
2.4.6 Designing social sustainability indicators for built heritage attractions	85
2.5 Governance Dimension of Heritage Tourism.....	88
2.5.1 Introduction	88
2.5.2 Planning	88
2.5.2.1 Spatial planning	90
2.5.2.2 Tourism planning approaches	91
2.5.2.3 Tourism development planning	94
2.5.2.5 Sustainable heritage tourism.....	95
2.5.3 Trouble-shooting ability	97
2.5.3.1 Issues of heritage	97
2.5.3.2 Dealing with development and conservation.....	98
2.5.4 Attraction management.....	101
2.5.4.1 Management of built heritage attractions	101
2.5.4.2 Ownership of built heritage attractions	102
2.5.5 Analysing of heritage tourism governance impacts between the UK and China	103
2.5.6 Designing governance sustainability indicators for built heritage attractions	103
2.6 Summary.....	106
Chapter Three: Methodology.....	109
3.1 Introduction to the four-stage research strategy	109
3.2 Stage one: developing the theoretical framework	111
3.2.1 Reviewing the literature	111
3.2.2 Initial questionnaire for built heritage attractions.....	112
3.3 Stage two: developing a structured and procedural method	118
3.3.1 Step one: identifying sustainability indicators	119
3.3.2 Step two: identifying the key stakeholders.....	125
3.3.3 Step three: assigning weights to the indicators.....	126
3.3.4 Step four: scoring the indicators.....	126
3.3.5 Step five: calculating the overall weighted scores.....	126
3.3.6 Step six: examining the results.....	127
3.4 Stage three: applying the appraisal methodology to four case studies	127
3.4.1 Selection of the case studies	128

3.4.2 Data collection for case studies.....	131
3.4.3 Data analysis of the case studies.....	134
3.5 Stage four: identifying the potential value, acceptability, implementation and transferability	134
3.5.1 Feasibility study.....	134
3.5.2 Comparative study	135
3.5.3 Data analysis-coding scheme	135
3.5.4 Verification and validation.....	136
3.5.4.1 Methodological coherence	138
3.5.4.2 Checking by participants	138
3.5.4.3 Triangulation	138
3.6 Strengths and limitations of the methodology	138
3.7 Summary.....	139
Chapter Four: Research Findings from the Survey Responses	141
4.1 Introduction.....	141
4.2 Research findings from the survey responses.....	144
4.2.1 Variations in the importance of key sustainability indicators between the UK and China.....	144
4.2.2 Variations in the importance of key sustainability indicators according to attraction size (annual tourist numbers and staff numbers).....	149
4.2.3 Variations in the importance of key sustainability indicators in terms of attraction ownership and management styles	152
4.3 Summary and future development.....	159
Chapter Five: Empirical studies.....	161
5.1 Introduction	161
5.2 Sustainability Appraisal for a Pilot Built Heritage Attraction in the United Kingdom ----- Case Study of Chastleton House	161
5.2.1 Introduction	161
5.2.2 Indicators Assessment.....	167
5.2.2.1 Economic dimension	167
5.2.2.2 Environmental dimension	170
5.2.2.3 Social dimension	178
5.2.2.4 Governance dimension.....	181
5.2.3 Summary.....	187
5.2.3.1 Dimensions	187
5.2.3.2 Overall scores of all sub-indicators.....	188
5.2.3.3 Weighting	188
5.2.3.4 Scoring	188
5.2.3.5 Lessons and limitations	189
5.2.4 Case statement.....	189
5.3 Sustainability Appraisal of a Second Built Heritage Attraction in the United Kingdom----- Case Study of Oxford Castle Heritage Site	191
5.3.1 Introduction	191
5.3.2 Indicators assessment.....	197
5.3.2.1 Economic dimension	198
5.3.2.2 Environmental dimension	201
5.3.2.3 Social dimension	205
5.3.2.4 Governance dimension.....	212
5.3.3 Summary.....	218
5.3.3.1 Dimensions	218
5.3.3.2 Overall scores of all sub-indicators.....	218
5.3.3.3 Weighting	218
5.3.3.4 Scoring	219
5.3.3.4 Lessons and limitations	219
5.3.4 Case statement.....	220

5.4 Sustainability Appraisal for a Built Heritage Attraction in China-----Case study of Mountain Jieshi.....	221
5.4.1 Introduction	221
5.4.2 Indicators assessment.....	227
5.4.2.1 Economic dimension	227
5.4.2.2 Environmental dimension	230
5.4.2.3 Social dimension	236
5.4.2.4 Governance dimension.....	239
5.4.3 Summary.....	247
5.4.3.1 Dimensions	247
5.4.3.2 Overall scores of all sub-indicators.....	247
5.4.3.3 Weighting	248
5.4.3.4 Scoring	248
5.4.3.5 Lessons and limitations	248
5.4.4 Case statement	249
5.5 Sustainability Appraisal for Second Built Heritage Attraction in China-----Case study of Shanhai Pass, the Great Wall of China	251
5.5.1 Introduction	251
5.5.2 Indicators assessment.....	257
5.5.2.1 Economic dimension	257
5.5.2.2 Environmental dimension	260
5.5.2.3 Social dimension	265
5.5.2.4 Governance dimension.....	269
5.5.3 Summary.....	278
5.5.3.1 Dimensions	278
5.5.3.2 Overall scores of all sub-indicators.....	278
5.5.3.3 Weighting	279
5.5.3.4 Scoring	279
5.5.3.5 Lessons and limitations	279
5.5.4 Case statement	280
5.6 Summary.....	281
Chapter Six: Assessment of Data	282
6.1 Introduction	282
6.2 Analysing the feasibility of the assessment methodology and indicators ..	282
6.2.1 Introduction	282
6.2.2 Indicators' assessment criteria	284
6.2.2.1 Economic dimension	285
6.2.2.2 Environmental dimension	292
6.2.2.3 Social dimension	297
6.2.2.4 Governance dimension.....	302
6.2.3 Comparison and analysis of the different dimensions	308
6.2.4 Stakeholder perspectives on the sub-indicators when comparing the four cases.....	312
6.2.5 Key influencing factors	314
6.2.6 Feasibility summary of overall methodology.....	315
6.2.6.1 Step one identify sustainability indicators	316
6.2.6.2 Step two identify the key stakeholders.....	317
6.2.6.3 Step three assign weights for indicators	319
6.2.6.4 Step four score indicators	319
6.2.6.5 Step five calculate overall weighted scores.....	319
6.2.6.6 Step six examine the results.....	319
6.3 Comparative Studies of Built Heritage Attractions	320
6.3.1 Introduction	320
6.3.2 Comparison of built heritage attractions in the UK (CH and OCUA)	320
6.3.2.1 Background	321
6.3.2.2 Comparison of sub-indicators between CH and OCUA	321

6.3.3 Comparison of built heritage attractions in China (MJ and SPGWC)	324
6.3.3.1 Background	324
6.3.3.2 Comparison of sub- indicators across the four dimensions	325
6.3.4 Comparison of built heritage attractions in the UK (OCUA and CH) and China (MJ and SPGWC)	326
6.3.4.1 Dimensions comparison	328
6.3.4.2 Comparison of stakeholder perspectives on the sub-indicators between the UK and China	331
6.3.5 Comparison of large (OCUA and SPGWC) and small (CH and MJ) attractions' sustainability performance	333
6.3.5.1 Dimensions comparison	333
6.3.5.2 Stakeholder perspectives on the sub-indicators	336
6.4. Summary.....	338
Chapter Seven: Conclusions and Recommendations	341
7.1 Introduction	341
7.2 Summary of key findings	341
7.3 Overall evaluation of the research.....	352
7.3.1 Evaluation of the research strategy.....	352
7.3.2 Evaluation of the multi-method approach to data collection	354
7.3.3 Evaluation of the feasibility of the analytical framework	357
7.3.4 Evaluation of the usefulness, validity and transferability of this research....	360
7.4 Original contribution to knowledge	362
7.5 Recommendations	365
7.6 Concluding statement	369
References.....	370
Appendix 1: Built Heritage Attractions Sustainability Survey	392
Appendix 2: Major Built Heritage Attractions Sustainability Appraisal Interview Questions and Questionnaire for Chastleton House (Pilot Study)	403
Appendix 3: Major Built Heritage Attractions Sustainability Appraisal Interview Questions and Questionnaire for Oxford Castle Heritage Site ..	410
Appendix 4: Major Built Heritage Attractions Sustainability Appraisal Interview Questions and Questionnaire for Mountain Jieshi	415
Appendix 5: Major Built Heritage Attractions Sustainability Appraisal Interview Questions and Questionnaire for Shanhai Pass, Great Wall of China.....	423
Appendix 6: Major Built Heritage Attractions Sustainability Survey (Responses)	430
Appendix 7: Oxford Castle Street Statistical Survey.....	432
Appendix 8: Potential research papers to be published.....	436
Appendix 9: List of Publications.....	437

List of Figures

All figures are prepared by the author except where noted

Chapter One

Figure 1. 1 Overall summary of this research.....	3
Figure 1. 2 Structure of research problem statement	4
Figure 1. 3: Hawaii travel poster.....	11
Figure 1. 4: Vintage Egyptian tourism posters	11
Figure 1. 5: Tower Bridge.....	14
Figure 1. 6: Osbornel Palace	14
Figure 1. 7: West Lake Cultural Landscape of Hangzhou.....	14
Figure 1. 8: Ashmolean Museum.....	14
Figure 1. 9 Mountain Jieshi and Water Rock Temple Source: Ren, 2014.....	14
Figure 1. 10 Sacred Mount Tai	14
Figure 1. 11: Water level of Lake Crescent since the 1950s	18
Figure 1. 12: Sustainable tourism planning	19
Figure 1. 13: Driving-Force, Pressure- State- Impact- Response (DPSIR) Frameworks	30
Figure 1. 14: Research stages.....	36
Figure 1. 15: Four areas of sustainability impacts for built heritage	37
Figure 1. 16: Sustainability appraisal process for case studies	37
Figure 1. 17: Multi-method data collection approach.....	38

Chapter Two

Figure 2. 1: Literature and conceptual framework.....	42
Figure 2. 2: Diagram showing the linkage of economic dimension of heritage tourism in conceptual framework.....	44
Figure 2. 3: Tourist Numbers of Visitors to Attractions in Northern Ireland (2010) Source: Department of Enterprise, Trade and Investment, 2010.....	45
Figure 2. 4: Maslow's Hierarchy of Needs Sources: Maslow, 1943.....	50
Figure 2. 5: Diagram showing the linkage of environmental dimension of heritage tourism in conceptual framework	55
Figure 2. 6: the central government level executive agencies relating to heritage conservation in England.....	70
Figure 2. 7: the central government level executive agencies related to heritage conservation in China	71
Figure 2. 8: Diagram showing the linkage of social dimension of heritage tourism in conceptual framework.....	75
Figure 2. 9: Tourists in 'traditional' clothes of Scotland, 2012	77
Figure 2. 10: Street in Bicester Village Outlet.....	79
Figure 2. 11: Stakeholders of built heritage attraction.....	83
Figure 2. 12: Diagram showing the linkage of governance dimension of heritage tourism in conceptual framework	88
Figure 2. 13: Built heritage tourism planning framework	89
Figure 2. 14: The Tourism development plan stages	94

Chapter Three

Figure 3. 1 Diagram showing the linkage between research steps and development of indicators in conceptual framework.....	110
Figure 3. 2: The four areas of sustainability for built heritage	112

Figure 3. 3 Sketch maps of surveyed responding attractions in the UK Scale: 1:100km	115
Figure 3. 4: Sketch maps of surveyed responding attractions in China Scale: 1:375 km	116
Figure 3. 5: Sustainability appraisal process for case studies	118
Figure 3. 6: Set of indicators for pilot case study	121
Figure 3. 7: Development of indicators in this research	122
Figure 3. 8: Multi-method data collection approach.....	131

Chapter Four

Figure 4. 1: Diagram showing the linkage of questionnaire survey in conceptual framework	142

Chapter Five

Figure 5. 1: Diagram showing the linkage of CH in conceptual framework.....	162
Figure 5. 2: Chastleton House in Southeast England Source: Digimap 2015a.....	164
Figure 5. 3: Chastleton House in Chastleton Village Source: Digimap 2015b	165
Figure 5. 4: Chastleton House Map Source: Digimap 2015c	166
Figure 5. 5: Chastleton House, 2013.....	167
Figure 5. 6: Historic building in Chastleton Garden, 2013.....	167
Figure 5. 7: Local St Mary's Church provides refreshment for visitors, 2013	178
Figure 5. 8: Stakeholders of Chastleton House.....	180
Figure 5. 9: Layout plan of Chastleton House, 2013	183
Figure 5. 10: Additional parking, 2013.....	183
Figure 5. 11: Reports on conflicts between Villagers and Chastleton House.....	185
Figure 5. 12: OCQ in the south east region of England Source: Digimap 2015d.....	193
Figure 5. 13: OCQ in Oxford City Source: Digimap 2015e.....	194
Figure 5. 14: OCQ Map Source: Digimap 2015f.....	195
Figure 5. 15: Oxford Castle, Birds eye view from Loggan's map 1675.....	196
Figure 5. 16: Loggan's Map of Oxford 1675	196
Figure 5. 17: Malmaison Hotel, 2014	197
Figure 5. 18: Oxford Castle Wall, 2014.....	197
Figure 5. 19: Paradise Road Gate, 2014	197
Figure 5. 20: Redeveloped Oxford Castle with some modern design elements, 2014	203
Figure 5. 21: Stakeholders of OCQ and QCUA	209
Figure 5. 22: A residential area around Oxford Castle, 2014	210
Figure 5. 23: Oxford Castle Key Learning Centre, 2014.....	216
Figure 5. 24: MJ in north east China Source: Esri, 2015a	223
Figure 5. 25: MJ on east of Beijing Source: Esri, 2015b	223
Figure 5. 26: MJ in the north of Changli County Source: Google Map, 2015a.....	224
Figure 5. 27: Gate of WRT, 2015	224
Figure 5. 28: Figure of the Buddha in WRT, 2015.....	224
Figure 5. 29: Aerial photo of WRT Source: Changli County Annals, 2011.....	225
Figure 5. 30: MJ area Source: Changli County Annals, 2011	225
Figure 5. 31: WRT in 1970 Source: Changli County Annals, 2011	226
Figure 5. 32: Rebuilt buildings in WRT in 2010s, 2015.....	226
Figure 5. 33: Recycling bins in WRT, 2015	232
Figure 5. 34: Waste recycle in heritage attractions.....	233
Figure 5. 35: Classification of general waste.....	234

Figure 5. 36: Hanwengong Temple in 1928	235
Figure 5. 37: Yufen Temple in the 1970s	235
Figure 5. 38: Hangwengong Temple rebuilt in 1987	236
Figure 5. 39: WRT rebuilt after 2000s, 2015	236
Figure 5. 40: Draft plan by WRT Sources: Changli government planning bureau, 2015	242
Figure 5. 41: Draft plan by Changli government	242
Figure 5. 42: The army building's ruins in front of WRT, 2015	243
Figure 5. 43: SPGWC in North Eastern China	252
Figure 5. 44: SPGWC in North Eastern Hebei Province	252
Figure 5. 45: SPGWC in the District of Shanhai Pass	253
Figure 5. 46: Sketch Map of SPGWC	254
Figure 5. 47: The First Pass under Heaven, 2015	255
Figure 5. 48: Sketch Tourist Map of the First Pass under Heaven	255
Figure 5. 49: Old Dragon's Head	256
Figure 5. 50: Sketch Tourist Map of the First Pass under Heaven	256
Figure 5. 51: Visitors at the attractions, 2015	260
Figure 5. 52: A rebuilt historic town with modern materials, 2015	264
Figure 5. 53: Dragon head rise festival in SPGWC: Lion dances, 2015	267
Figure 5. 54: Dragon head rise festival in SPGWC: Sedan chair, 2015	267
Figure 5. 55: Dragon head rise festival in SPGWC: Yangko, 2015	267
Figure 5. 56: Dragon head rise festival in SPGWC: Dragon dance, 2015	267
Figure 5. 57: Dragon head rise festival in SPGWC: Ancestor worship, 2015	267
Figure 5. 58: Dragon head rise festival in SPGWC: Local snack, 2015	267
Figure 5. 59: Master plan SPGWC heritage regeneration development	271
Figure 5. 60: Certifications and awards of SPGWC, 2015	272

Chapter Six

Figure 6. 1: Diagram showing the linkage of feasibility analysing in conceptual framework	283
Figure 6. 2: Feasibility summary of overall methodology	316
Figure 6. 3: Diagram showing the linkage of comparative studies of built heritage attractions in conceptual framework	320

Chapter Seven

Figure 7. 1: Diagram showing the linkage of conclusion in conceptual framework	342
Figure 7. 2: Conceptual framework for sustainability appraisal of built heritage attractions	343
Figure 7. 3: Sustainability appraisal process for case studies	344
Figure 7. 4: Overall structure of this research	353
Figure 7. 5: Multi-method approach data collection	354
Figure 7. 6: Development of indicators in this research	361
Figure 7. 7: Sustainability margin capacity theory hypothesis	367

Appendix

Figure Appendix 7. 1: Oxford Castle Statistical Survey conducted at New Street Gate in the morning, 2014	433

List of Tables

All tables are prepared by the author except where noted

Chapter One

Table 1. 1 The Types of Cultural Heritage	8
Table 1. 2: World Tourism Organization Suggested Indicators for Destination Areas	22
Table 1. 3: Spanish System of Environmental Tourism Indicators	23
Table 1. 4: English Tourism Council Sustainable Tourism Indicators	24
Table 1. 5: Green Globe21 Indicators	25
Table 1. 6: Minimum Scores for each A Level Attraction Rating	26
Table 1. 7: The indicators of China Tourist Attraction Assessment System	27
Table 1. 8: Bellagio principles	28
Table 1. 9: Sustainable community indicators checklist	29
Table 1. 10: The indicators checklist	29
Table 1. 11: Indicator design consideration	29
Table 1. 12: Driving-Force, Pressure- State- Impact- Response Framework	30

Chapter Two

Table 2. 1: Common revenue sources for built heritage attractions	47
Table 2. 2: Economic sustainability indicators for built heritage attractions	54
Table 2. 3: Comparison of Heritage Conservation Systems in England and China	72
Table 2. 4: Environmental dimension	74
Table 2. 5: Social dimension	87
Table 2. 6: Tourism Planning Approaches	92
Table 2. 7: Impacts of Heritage Tourism	98
Table 2. 8: Governance dimension	105

Chapter Three

Table 3. 1: Sustainability indicators for built heritage attractions management used in the research	114
Table 3. 2: Main Case Studies Selection Matrix	129
Table 3. 3: Coding scheme for the interviews	137
Table 3. 4: Coding Scheme Terms for Organizations	137

Chapter Four

Table 4. 1: Surveyed attractions in the UK	143
Table 4. 2: Surveyed attractions in China	145
Table 4. 3: Indicator importance weighting results from attraction managers	146
Table 4. 4: Two sub-sets of attractions --with different annual visitor numbers	151
Table 4. 5: Indicator importance weighting of different size attractions in the UK and China	152
Table 4. 6: Indicator importance weighting of different ownership in the UK and China	156

Chapter Five

Table 5. 1 Economic dimension (2013/2014)	169
Table 5. 2: Annual visitor numbers and operating results after cost of CH	170
Table 5. 3: Environmental dimension (2013/2014)	171
Table 5. 4: Chastleton House EMS Action Plan 2014	172

Table 5. 5: National Trust Environmental Standard for Parks and Gardens 2012	174
Table 5. 6: CH CPI Report Key Points	177
Table 5. 7: Social dimension (2013/2014)	179
Table 5. 8: Governance dimension (2013/2014)	182
Table 5. 9: Chastleton House Property Business Plan Key Points	187
Table 5. 10: Regeneration Time Table	192
Table 5. 11 Economic Dimensions (2013/2014)	435
Table 5. 12 Environmental dimension (2013/2014)	202
Table 5. 13: Sustainability and good conservation techniques	203
Table 5. 14: Oxford Castle Conservation Plan Policies for conservation and repair	206
Table 5. 15: Social dimension (2013/2014)	208
Table 5. 16: Governance dimension (2013/2014)	213
Table 5. 17 Economic Dimension (2013/2014)	228
Table 5. 18: Environmental dimension (2013/2014)	231
Table 5. 19: Social dimension (2013/2014)	237
Table 5. 20: Governance dimension (2013/2014)	241
Table 5. 21: Economic dimension (2013/2014)	258
Table 5. 22: Environmental dimension (2013/2014)	261
Table 5. 23: Social dimension (2013/2014)	266
Table 5. 24: Dragon head rise festival events and activities	268
Table 5. 25: Governance dimension (2013/2014)	270

Chapter Six

Table 6. 1: Levels of sub-indicators	284
Table 6. 2: Average dimension scores of case studies	284
Table 6. 3: Indicators of employment	285
Table 6. 4: Indicators of Financial Health	288
Table 6. 5: Indicators of Visitors	291
Table 6. 6: Indicators of environmental management	294
Table 6. 7: Indicators of historic buildings conservation and preservation	295
Table 6. 8: Indicator of key stakeholders' involvement	299
Table 6. 9: Indicators of stakeholders' attitudes	301
Table 6. 10: Indicator of planning	303
Table 6. 11: Indicator of trouble-shooting ability	305
Table 6. 12: Indicator of attraction management	307
Table 6. 13: Summary for Indicators Appraisal in Four Case Studies	310
Table 6. 14: Average sub-indicators in four cases	312
Table 6. 15: Key influencing factors for sustainability	314
Table 6. 16: Feasibility of sub-indicators	318
Table 6. 17: Comparison of sub-indicators between CH and OCUA	322
Table 6. 18: Comparison of sub-indicators between MJ and SPGWC	325
Table 6. 19: Comparison of sub-indicators between attractions in the UK and China	327
Table 6. 20: Significant scores differences from the stakeholder perspective between the attractions in the UK and China	331
Table 6. 21: Comparison of sub-indicators between large and small attractions	334
Table 6. 22: Significant score difference on the sub-indicators from the stakeholder perspectives between large and small attractions	336

Chapter Seven

Table 7. 1: Validation summary.....	363

Appendix

Table Appendix 7. 1: Oxford castle site pedestrian traffic statistic	433
Table Appendix 7. 2: Oxford castle pedestrian traffic statistic validation	435

Chapter One: Introduction

1.1 Introduction

The sustainability of built heritage attractions in this research is defined as the idea that a built heritage attraction should consider long term development and effective conservation at the same time as considering the interests of the attraction management team, visitors and other stakeholders. Sustainability performance can be assessed in terms of economic, social, environmental and governance dimensions by using an appropriate weighting and scoring system.

The sustainability of built heritage sites is a global challenge for many countries, both developed and emerging (Barthel-Bouchier, 2012). An ‘emerging market’ in this research has been defined as an economy that is progressing towards becoming more mature and advanced, usually by means of rapid growth. This is different to developed and traditional developing countries, being in between both categories. China, Russia, Brazil and India are four of the largest emerging economies by nominal or PPP-adjusted GDP. Other emerging countries include Mexico, The Philippines, Indonesia, Morocco, Turkey, Hungary, Saudi Arabia, South Africa, Zambia, Colombia and Vietnam. In relation to the management of built heritage attractions, emerging countries have realised the importance of sustainable development. However, most emerging countries prioritise economic development over heritage conservation and management. On the one hand, some Asian countries have experienced a great deal of heritage tourism growth (e.g. Vietnam, Cambodia and the Philippines) so some emerging markets are becoming more advanced in heritage management, by means of rapid economic growth, urbanization and industrialisation. On the other hand, this rapid development is causing various issues in terms of the sustainability of built heritage attractions. The purpose of this thesis is to develop a practical mechanism by which to appraise sustainability systems for built heritage attractions in an emerging market.

The sustainability appraisal approach of built heritage was applied using evolutionary logic to show the learning process from developed country to emerging market and from small site to larger site. Chastleton House (CH) and Oxford Castle Heritage Site (OCHS) were selected in the UK to represent the application of the

approach in developed countries and Mountain Jieshi (MJ) and Shanhai Pass, Great Wall of China (SPGWC) were selected in China to show the application of the developed approach in an emerging market. This thesis proposes four dimensions of sustainability for built heritage attractions, it identifies several significant variations and similarities in the cross-national context and makes recommendations for the further development of a sustainability appraisal methodology for the governance of built heritage attractions. It has also opened up new directions for both theoretical and empirical studies in the field of sustainability appraisal for both developed and less developed countries, which could substantially enhance the initial foundation established in this work.

Chapter One introduces the core concepts of this research, defines the background problem, and proposes an appropriate strategy for identifying and understanding the issues. The overall aim and objectives state the focus, interests and sequence of the investigation. The methodology summarises the research strategies and explains the stages of the methodology which were implemented to achieve the objectives of the research.

The structure of the thesis outlines the chapters and how they develop. Visual support is incorporated to clarify the research process, connecting the research aims and objectives (Figure 1.1).

1.2 Background problem statement

This section aims to identify the background problem by introducing the core heritage tourism elements. It provides a literature review in relation to the nature of heritage, heritage tourism, built heritage attractions, tourism impacts, sustainable tourism, sustainability appraisal approaches and existing sustainable tourism indicators (Figure 1.2).

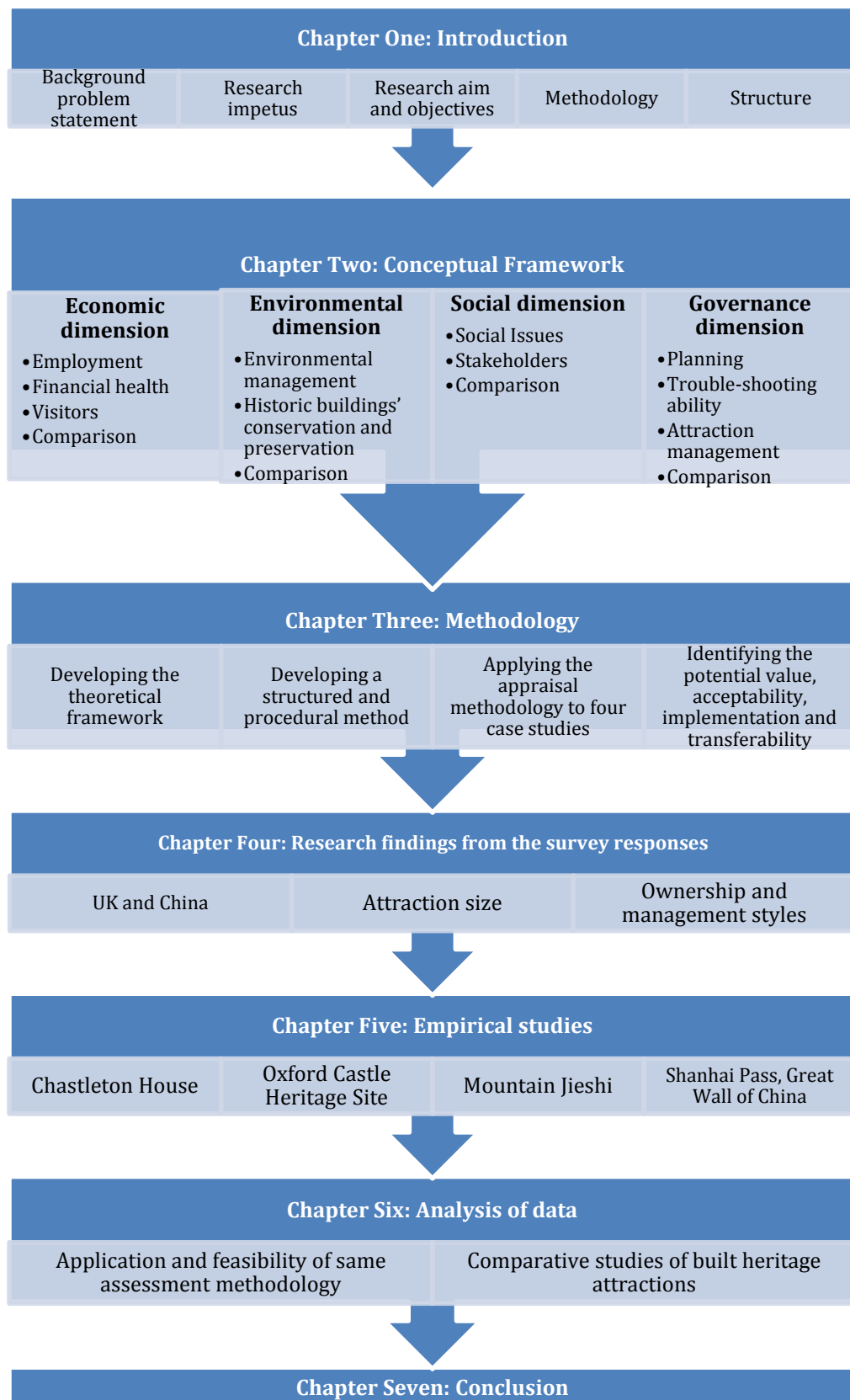


Figure 1. 1 Overall summary of this research

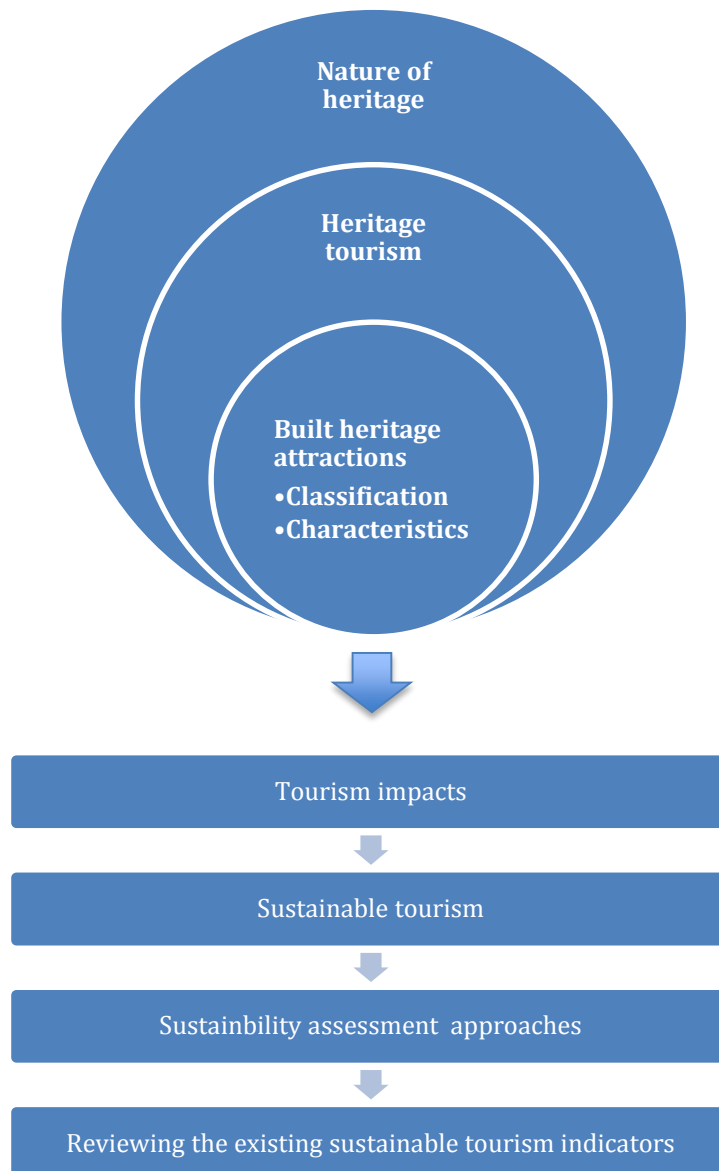


Figure 1. 2 Structure of research problem statement

1.2.1 The nature of heritage

There are a large number of definitions of the term *heritage* (some of which are quite vague) and they vary depending on different observers. For example, Johnson and Thomas (1990) argued that heritage is the inherited value of past things. Ashworth and Tunbridge (1999) maintained that heritage encompasses buildings, historical sites, entire landscapes, people and traditions. Generally, heritage is the valuable historical inheritance that can be passed down from one generation to the next. The Oxford English Dictionary defines *physical heritage* as “*property that is or may be inherited*”. Physical heritage often refers to historical places; it can also be referred to as *immoveable* heritage in order to describe the nature of historical buildings, sites

and landscapes which have significant value. The existence of heritage may be important to certain individuals or organizations for its historic value, cultural value, commemorative value or commercial value. In terms of cultural dimensions, heritage represents inherited culture and may exist in an intangible form. Millar (1999) demonstrated that heritage involves people's lives, accommodating one's version of wellbeing, delivering symbols of identity and places for enjoyment, pleasure, and enlightenment.

1.2.2 Heritage tourism

Heritage tourism has witnessed considerable growth since the Second World War with people keen to explore the authentic experience of history. Taking built heritage tourism as a product, it often refers to tangible attractions and associated tourism services. The built heritage product can be analysed in terms of its attractiveness, amenities and accessibility (Holloway, 1994); when a built heritage has the above three characteristics, it becomes a potential tourist attraction.

The majority of an attraction's attractiveness relates to its physical features and unique characteristics (e.g. the aesthetics of the built heritage; the authenticity of heritage buildings); tourists are motivated to visit particular built heritage sites for their unique attractiveness (Turtureanu, 2005). Attractiveness may be the factor which prompts tourists to choose one attraction over another. The physical and historical characteristics may be the determining factors for attracting tourists to visit a built heritage attraction which has an interesting history.

Amenities refer to tourism support services to meet the tourist demand (e.g. toilets, audio guides, restaurants, accommodation and transport). Amenities are necessary elements to support tourists in enjoying a more comfortable experience of built heritage attractions (Holloway, 1994). An audio guide at a site enables tourists to acquire knowledge about the history of historical buildings; accommodation can provide a good environment for tourists to have a rest, restaurants can serve good quality local food and drink and toilets are required to meet the basic needs of tourists. In addition, a heritage building is an amenity in itself, providing the core tourist services and knowledge support.

Accessibility includes the ease with which tourists can physically access tourist resources and the completeness of tourism information distribution channels (Holloway, 1994). Although some tourist attractions are well worth visiting, this may mean nothing if the geographical location is inaccessible. If the attractions cannot be easily reached by most people, the economic value will be affected as it will attract fewer visitors and investors.

1.2.3 Built heritage attractions

The term *heritage* tourism means “not only the physical buildings and cultural traditions, but also, these things can be portrayed for promotion as tourism products.” (Millar, 1999: 66). Within the concept of heritage attraction, built heritage is a majority category; it can be described as any heritage that represents the history of the built environment. A growing amount of built heritage is involved in the tourism industry acting as practical tools for urban and rural tourism. The transformation of built heritage into tourist attractions is one of the major aspects of the tourism industry. Given the unique cultural values and outstanding design of some heritage attractions, numerous visitors are attracted to them, for example, Warwick Castle, Buckingham Palace and Windsor Castle are all famous and top ranked heritage tourist attractions in the UK. There are significant numbers of built heritage attractions in the tourism industry. According to the UK-based Association of Leading Visitor Attractions (2015), the most popular attractions are built heritage attractions. For example, in 2015, Somerset House attracted 3,235,104 visitors, the Tower of London attracted 2,785,249 visitors and Westminster Abbey attracted 1,664,850.

The value of built heritage attractions encompasses social, cultural, environmental, economic and political aspects, and these are linked to recognizing heritage values. Heritage can be treated as “a driving tool for economic growth, attracting investment and tourism, and providing a focus for successful regeneration” (Lake District National Park Authority, 2001:76). A study by English Heritage (2008) categorized the value of built heritage attractions into four categories:

- *Evidential Value: the potential of a place to yield evidence about past human*

activity.

- *Historical value: the ways in which past people, events and aspects of life can be connected through a place to the present.*
- *Aesthetic value: the ways in which people draw sensory and intellectual stimulation from a place.*
- *Communal value: the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory (English Heritage 2008: 31)*

1.2.3.1 Classification of built heritage attractions

The International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM, 2010) argued that the term *built heritage* can be classified based on typology and the factors which determine values. The different types of heritage attraction can be divided according to the heritage function, whether it is tangible or intangible and whether human beings participate in it. Millar (1999) classified six types of heritage:

- Natural attraction (e.g. natural reserve);
- Living cultural attraction (e.g. street artist);
- Built heritage (e.g. historical building);
- Industrial heritage (e.g. malthouse);
- Personal heritage (e.g. castle);
- Dark heritage (e.g. Jack the Ripper in London)

UNESCO produced a list of *types* of cultural heritage during the United Nations' Year for Cultural Heritage (UNESCO, 2002). It may not be a comprehensive list, but it demonstrates the diversity of heritage from the official viewpoint (Table 1.1). According to Graham (2002), UNESCO was criticized for focusing too much on built and natural heritage in the Western World, such as churches, walled cities, palaces, cathedrals, artefacts, and national parks, whereas heritage in the African and Asian world is often envisaged as intangible forms of traditions and cultures, for example, music, languages, dance, food and rituals.

Table 1. 1 The Types of Cultural Heritage

Type	Example
Cultural heritage sites	Archaeological sites, ruins, historic buildings
Historic cities	Urban landscapes and their constituent parts as well as ruined cities
Cultural landscapes	Parks, gardens and other ‘modified’ landscapes such as pastoral lands and farms
Natural sacred sites	Places that people revere or hold important but that have no evidence of human modification, for example sacred mountains
Underwater cultural heritage	Shipwrecks
Museums	Cultural museums, art galleries and house museums
Movable cultural heritage	Objects as diverse as paintings, tractors, stone tools and cameras
Handicrafts	Chip carving
Documentary and digital heritage	The archives and objects deposited in libraries, including digital archives
Cinematographic heritage	Movies and the ideas they convey
Oral traditions	Stories, histories and traditions that are not written but passed from generation to generation
Languages	Cuneiform
Festive events	Festivals and carnivals and the traditions they embody
Rites and beliefs	Rituals, traditions and religious beliefs
Music and song	Love
The performing arts	Theatre, drama, dance and music
Traditional medicine	Chinese Medicine
Literature	Books
Culinary traditions	Indian cuisine
Traditional sports and games	Sumo

Source: UNESCO, 2002

1.2.3.2 Characteristics of built heritage tourism

Built heritage attractions have both tourism and heritage value. The characteristics of built heritage attractions include variations in value and identity, the selective nature of heritage, image-based marketing, perishability, seasonality, inseparability and heterogeneity.

Variations in value

The value of heritage may vary from one person to another; thus, its definition may vary according to different observers. Different forms of heritage have varying significance to individuals, organizations and communities tied to their attitudes, values, situations and the nature of the heritage. It may also be interpreted differently within any one culture at any one time, and between cultures and through time (Haley *et al.*, 2005). The Department for Cultural Media and Sport in England (2010:1) stated that “the value of the historic environment is recognized by all who have the power to shape it”.

The same heritage may assume different meanings on a variety of scales (Haley *et al.*, 2005). For instance, *Potala Palace* in Tibet was originally built for religious activities and still serves as a place of spiritual enlightenment for *Vajrayana Buddhists*. It was designated as a World Heritage Site in 1994. Although almost everyone accepts it is a heritage site, it may have varying functions and meanings for different individuals: the monks living in the palace may see it as a place for prayer, accommodation and living; the tourist visiting the palace may see it as a place for touring and enjoying the unique culture and peace of Buddhism; the local residents may see it as presenting an opportunity to attract substantial numbers of tourists who can contribute to the local economy. The Great Wall of China, for example, stretches 8,850 km across from the East China Sea to the northeast of China; tourists treat it as a wonderful heritage tourist attraction, but, in the opinion of local residents, it is just the ruins of innumerable years. Thus, individuals may have varied opinions on the same heritage tourism site owing to the fact the each person is looking at the site from a different cultural, economic and social perspective.

Identity

The sense of belonging to a place is the basis for identity. The heritage connotation implies quality, security and an aura of confidence (Millar, 1999). It witnesses the

“Past as being integral both to individual and communal representations of identity and its connotations of providing human existence with meaning, purpose and value.” (Graham 2002:1008)

Some famous heritage sites draw the local residents closer together; a sense of belonging is often stimulated by local heritage. Most individuals are proud of their local heritage and believe that they may have some connection with the heritage from geography, family history or activities. The heritage site may also be a place for local residents to get together to hold traditional ceremonies and festivals. In some small towns, for example, although not all the individuals are religious, they may still get together in a church to have certain ceremonies which have become the traditions of local residents; then the sense of belonging related to the heritage site grows among the local residents (Howard, 2016). The sense of ‘ownership’ of heritage also exists when individuals leave their hometowns to go elsewhere; they proudly discuss the heritage in their hometown with others and treat the heritage as

‘their’ heritage. They feel close when they meet others who share the same heritage as they do; the feeling is like meeting old friends from home.

The selective nature of heritage

Built heritage is the contemporary use of the past (Ashworth and Tunbridge, 1999). Although some features may have existed for a long time, these may not be included in the general concept of heritage. The function of built heritage may be similar to the initial aim for the buildings in the past, or it may vary.

Timothy (2011) claimed that heritage is selective and that it is kept for its social value. It is selected by human beings based on their current values and meanings. Buildings, material artefacts, mythologies, memories and traditions are selected and become heritage tourism resources for the present (Graham, 2002). Therefore, the concept of heritage is defined by modern society based on individual demands. People require that heritage should be representative and interpretative of their culture. Hall (1997) claimed that culture is essentially concerned with the production and exchange of meaning and real, practical effects. Heritage has both cultural and physical material, but the uniqueness of cultural identity tends to be associated more with historical stories which attract tourists to explore. The cultural value of the heritage makes the physical characteristics alive and vivid.

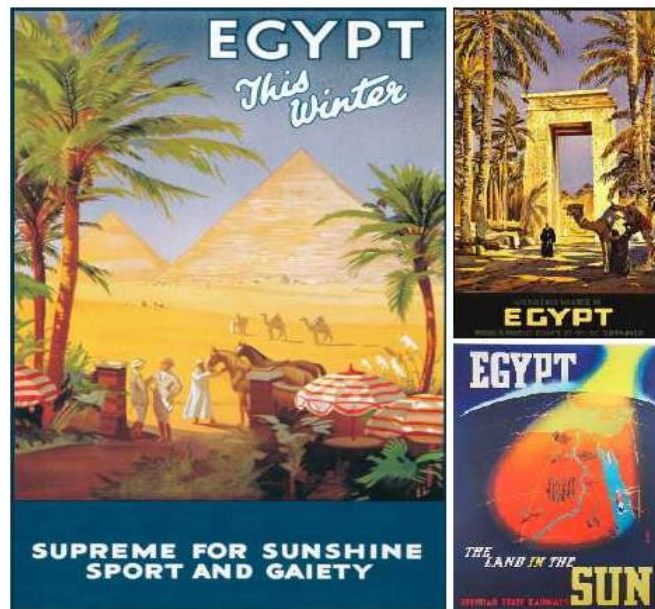
Image-based marketing

Although a built heritage attraction may be a living environment for the resident community, it is often treated as a consumer product with a specific image when it comes to attracting tourists. Some very attractive and *picturesque* built heritage attractions may simply seem old and dilapidated to the residents (Orbasli, 2000). Thus, the image of a built heritage attraction is one of the most important factors in tourism marketing and this often provides the first mental picture which the majority of tourists recall when the built heritage attractions are mentioned. The interpretation of a built heritage attraction emerges from the image of the heritage for new visitors. In addition, the interpretation is often formulated into a representative image for promotion; this is important to attract both tourists and business investment (Fisher, 1994). Marketing relies heavily on images when preparing the marketing plan. For example, when Hawaii is mentioned, the image of a beach and the sea appear in

most people's minds, whereas, when asked about Egypt, many will think of the pyramids (Figure 1.3, Figure 1.4).



Figure 1. 3: Hawaii travel poster
Source: www.enjoyart.com, 2012



(images via: Art-Canyon, Mythic Journeys and Posterteam)

Figure 1. 4: Vintage Egyptian tourism posters
Source: Art-Canyon, Mythic Journal and Posterteam, 2012

Perishability

The service of heritage tourism is perishable; the service cannot be stored (Leask and Yeoman, 1999). For most visitors, the core product of heritage tourism that they can purchase is the image of built heritage attractions and their experience of the attractions at the time. The experience goes so quickly that the most common things that they bring home after a visit are images, memories and souvenirs.

Seasonality

Although certain types of heritage tourism may suffer less of a seasonal effect than other types of tourism, economic, political and other factors may also contribute to tourism demand. The promotion of heritage tourism may reduce seasonal differences within the tourism industry. More details of seasonality will be introduced in section 2.2.2.1.

Inseparability

The tourism industry is not like other industries which consume physical products; it cannot be separated into the process of producing and consuming. Tourism services are first sold according to tourist demand, and then they are produced and consumed simultaneously (Harrison, 1992). When tourists visit a built heritage attraction, the attraction produces the heritage environment; meanwhile, tourists spend the time and money needed to reach the attraction and they pay for the entrance fee or other types of consumption such as food and drink (Holloway, 1994).

Heterogeneity

Heritage tourism tends to have variable, non-standard outputs and inconsistencies in standards and quality over time (Leask and Yeoman, 1999). Although the experience offered by service providers may be similar, the experience of tourists may vary due to visiting different built heritage attractions on different occasions. The built heritage attractions allow all tourists to visit after paying the entrance fee. However, the service quality in built heritage attractions may be different when tourists visit the same attraction at peak and off-peak times. In addition, the weather also plays a significant role on a day out; rainy and cloudy weather may have a negative impact on tourists' mood and experience.

Owing to the fact that tourism services are people-based, tourism is variable; the interaction between tourists and heritage tourism providers may vary depending on personality, age and situation (Leask and Yeoman, 1999). Service providers vary and the same individual may not perform the same services in the same way every time. This research argues that the communication approach should be different with a child, teenagers, adults and senior citizens because they have different market

requirements.

1.2.3.3 Definition of built heritage

Built heritage may be defined and categorized depending on the attitudes and values of various individuals and organizations. It may be important to one group, but argued against by others; the value of built heritage may be shared or contested (ICCROM, 2010).

This research defines ‘built heritage attractions’ as inherited sites which can be promoted as heritage tourism products and which have architectural, historical, or other significant value which requires protection. Built heritage attractions are among the most important elements of heritage tourism. Some heritage sites exist alongside the natural landscape; rebuilt heritage buildings may also be deemed as built heritage attractions due to their being promoted as heritage tourism products. Built heritage attractions encompass unique heritage features and help promote the rich culture of a site’s traditions, ethnic backgrounds and landscapes. The scope of built heritage includes castles, museums, churches, gardens and parks, monuments, historic buildings, archaeological sites, cultural landscapes and settings such as mountains (Figure 1.5-1.10).

1.2.4 Tourism impacts

Tourism is the temporary movement of people to destinations outside their normal places of work and residences for more than 24 hours (Wall and Mathieson, 2006). It includes the activities undertaken during their stay in those destinations, and the facilities created and services provided to cater to their needs (Wall and Mathieson, 2006). A tourist attraction is “a place of interest that tourists visit, typically for its inherent or exhibited cultural value, historical significance, natural or built beauty, or amusement opportunities; it is an essential part of tourism research” (Lew *et al.*, 2008: 37).

Examples of Built Heritage Attractions



Figure 1. 5: Tower Bridge
Source: Ren, 2014



Figure 1. 6: Osborne Palace
Source: Ren, 2014



Figure 1. 7: West Lake Cultural Landscape of Hangzhou Source: Vincent Ko Hon Chiu, 2012



Figure 1. 8: Ashmolean Museum
Source: Art Fund, 2016



Figure 1. 9 Mountain Jieshi and Water Rock Temple Source: Ren, 2014



Figure 1. 10 Sacred Mount Tai
Source: Sacred sites, no date

Yale (1998) argued that accessibility, opening hours and amenities make an attraction successful. As to the successful elements for an attraction, location, accessibility to the marketplace and the ability to identify potential competitive advantages are key success considerations among other factors.

As one of the fastest growing economic activities globally, tourism has the benefit of being resilient to political violence and natural disasters, rebounding quite rapidly once these have passed in most tourism destinations (Wall and Mathieson, 2006). There are at least three types of impact related to tourism that can be categorized as follows: economic, environmental and social impacts. It is believed that tourism impacts can be analyzed from both positive and negative aspects.

Economic impacts encompass the monetary benefits and costs that result from the development and use of tourism facilities and services. Mason (2015) claimed that tourism can contribute to the local economy and job creation, but it can also lead to increases in the prices of land, housing, and food. Tourism can earn more foreign exchange, increase government revenue, and improve regional development; however, tourism might lead destinations to lose opportunity costs and become over-dependent on the tourism industry.

Environmental impacts include alterations to the natural environment including air, water, soil, vegetation, and wildlife, as well as changes in the built environment (Wall and Wright, 1977). Mason (2015) suggested that the revenue generated from tourism can maintain attractions, foster an interest in and a willingness to protect the environment and promote the establishment of national parks and the preservation of buildings and monuments. However, the pollution issue cannot be ignored; tourists are likely to drop litter, contribute to congestion in terms of the overcrowding of people as well as traffic, contribute to footpath erosion, lead to the damage and disturbance of wildlife habitats and to the creation of unsightly human structures

such as buildings that do not fit within the established architecture (Timothy, 2011; Mason, 2015).

Social impacts include changes to the way of life of residents of the destination area. Mason (2009) claims that tourism may lead to the revival of traditional arts or other handicraft activities, the revitalization of poor or non-industrialized regions, the revival of the social and cultural life of local people, and to the renewal of local architectural traditions. However, it may also lead to a loss of cultural identity, the demonstration effect, overcrowding in resort areas, and a reduction in the diversity of global culture (Timothy, 2011; Mason, 2015).

Each category is so closely linked to the others that the measurement of and planning for tourist impacts is rendered complex and difficult (Wall and Mathieson, 2006). The evaluation of positive and negative impacts may depend upon the value position of an observer; there may be considerable disagreement as to what is actually desirable or undesirable because tourism takes many forms and the communities in which it takes place have diverse characteristics (Mason, 2009). Take local residents as an example; some residents who are involved in the tourism industry and who receive revenues and benefits from tourism directly or indirectly, will tend to believe that the positive benefits of tourism outweigh its negative impacts. Other residents who do not receive any benefits from tourism directly but who suffer the same negative impacts, such as congestion, noise and pollution, tend to support the opinion that the negative impacts of tourism are more obvious than its positive impacts. Therefore, the concept of trade-off was introduced where people tend to tolerate some negative impacts in return for what they regard as desirable positive impacts (Mason, 2015). Nevertheless, the revenue generated from tourism helps preserve the cultural heritage, it establishes and reinforces local identity, and brings harmony and increased understanding to different people. However, one cannot ignore the negative aspects of heritage tourism, such as local congestion, pollution, damage to heritage buildings, inflation and an increased crime rate (Timothy, 2011). More details on the impacts of tourism will be explained in Chapter 2.

1.2.5 Sustainable Tourism

“A sustainable tourism industry requires a commitment by all parties involved in the planning process to sustainable development principles. Only through such widespread commitment can the long-term integration of social, environmental and economic goals be attained.” (Hall, 2008:67)

The term ‘sustainable development’ has been a core issue in academic research since the early 1990s (Ruhanen, 2008). The tourism industry is growing at increasing speed. Environmental degradation, economic leakage, economic dependence and threats to local customs and culture are all direct and indirect results of global tourism. Sustainable tourism is seen as the solution to these difficulties (Hall, 2008). Sustainable tourism is a complex process with sub-sets of tourism, planning and sustainable development. The World Commission on the Environment and Development (UN, 1987: 49) maintained that sustainable development should: “meet the needs of the present without compromising the ability of further generations to meet their own needs.” Sustainable tourism (Murphy, 1994: 279) involves:

“Management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, and biological diversity and life support systems.”

The fundamental difference between sustainable tourism planning and conventional tourism planning is the attitude to the environment. Conventional tourism planning relies on regulatory procedures to tackle the issues. It lacks flexibility in adapting to changing conditions, does not involve the residents and community in the process and has poor links between planning and implementation (United Nations Economic and Social Commission for Asia and the Pacific, 2009). The nature of conventional tourism planning is to optimize profit for the developer and meet tourist demand, with little or no consideration of the environment. There is no doubt that tourism can stimulate the economy and increase the employment rate in tourist destinations. A classic example of this is *Crescent Lake* near Dunhuang, China, which has been a popular attraction for years because the spring has never dried up despite being in the desert so its hydrology resources are a mystery. However, once the local government started exploiting it as a tourism attraction in 1990, a large number of people crowded into the area and the size of *Crescent Lake* is now gradually

diminishing due to the water resource demands from the increasing numbers of tourists, which in turn has meant that the number of tourists has reduced dramatically (Figure 1.11). This has destabilised the local economy and many people have lost their jobs as a result (Zhang and Zeng, 2004).



Figure 1. 11: Water level of Lake Crescent since the 1950s
Source: Geographic News, 2006

The nature of sustainable tourism planning is to satisfy tourist demand without harming the environment, achieving perfect harmony between nature and society. Sustainable tourism planning should meet three objectives: maintenance and improvement of the intergenerational standards of living; management of natural resources and biodiversity; and efficiency in production and services (United Nations Economic and Social Commission for Asia and the Pacific, 2009). Sustainable tourism planning should be determined case by case by adopting different approaches based on different situations, which should holistically integrate economic, environmental and socio-cultural aspects, preserving human heritage and biodiversity and ensuring intergenerational equity (Figure 1.12).



Figure 1. 12: Sustainable tourism planning

Source: Adapted from United Nations Environment Programme, 2003

Calls for the development of sustainable tourism have already become popular, but it remains an ambiguous term (Schumann, 2008). However, most tourism destinations and attractions have not yet met the standards of sustainable development as a result of economic interests. In countries with strong environmental impact systems, large tourism projects must pass stringent environmental impact assessments before being built and operated; monitoring by the community is also required after implementation as well as raising awareness of sustainable tourism among local residents and tourists. Residents' awareness of tourism is quite important; any tourist project may be hard to develop without support from residents. Tourists should also participate by raising their awareness of protected environments. Tourism planning should integrate social, economic and cultural needs through community control and monitoring systems. An interactive and cooperative programme will help to change the perspective of the local community which leads to a *win-win* model (Wight, 1998). When such a system is in place, the benefits of tourism development can be distributed more equitably between local residents and developers; tourists can also benefit from a better tourism environment.

1.2.6 Sustainability Assessment approaches

Despite global acceptance of the concept of 'sustainability', its nature and scope are somewhat confused territory (Faber *et al.*, 2005). Glasson *et al.* (2013) argue that one of the most acceptable definitions of 'sustainability' is the triple bottom line (TBL), reflecting the importance of environmental, economic and social factors in decision-making. However, assessing the synergies between these factors presents

particular challenges. Research on sustainability is less well-established in the management of built heritage attractions than in other areas of the tourism industry. Various methodologies have been proposed to assess sustainability performance. These have involved trade-offs at different levels and in different sectors (World Tourism Organization, 2005; Ness, 2007; Organisation for Economic Co-operation and Development, 2008). Applying a set of sustainability indicators may provide a valid means of making such an appraisal. Initial indicators for sustainable tourism have been developed by various organizations and scholars (European Environment Agency, 2002; English Tourism Council, 2002; Stubbs, 2004; World Tourism Organization (WTO), 2005). In practice, there are few indicators which are universally accepted for the appraisal of the sustainability of built heritage attractions.

Assessment tools are vital for promoting the effectiveness of sustainability assessment. Gasparatos and Scolobig (2012) suggested sustainability assessment tools could be categorized into three broad groups: monetary, biophysical and indicator-based. Monetary tools are based on neoclassical monetary valuation in order to capture an individual's willingness to benefit from consuming goods and services. Biophysical tools aim to measure the quality of natural resources that have been consumed during the actions taken, for example, the ecological footprint (Gasparatos *et al.*, 2008). Indicator-based approaches are associated with the selection of different sustainability indicators and weighting, normalizing and aggregating them. Of course, there are overlaps between these groups and, for example, monetary valuation and eco-footprinting could be built into the indicator approach. Sustainability is not a 'black and white' issue for built heritage attractions; it involves various stakeholders and needs to measure a variety of issues. Thus, the basic monetary, biophysical and indicator-based approach may not measure the sustainability of built heritage attractions holistically.

Sustainability indicators have the potential to be a powerful approach for evaluating and communicating complex phenomena, if carefully defined and applied appropriately (Bell and Morse, 2008; Rametsteiner *et al.*, 2011). However, authors have raised several challenges associated with using sustainability indicators, for example, Valentin and Spangenberg (2000) queried whether environmental,

economic, social, and institutional dimensions should have equal importance. Rametsteiner *et al.* (2011) have argued that complexity in the design of indicators impairs their effectiveness in practice. Nevertheless, the application of sustainability indicators is widely used in assessing different developments. This can facilitate the evaluation and monitoring of sustainability performance, providing vital knowledge for the design of future programmes (Fernandez-Sanchez and Rodriguez-Lopez, 2010).

The indicators can be employed in the planning system to measure performance towards sustainable development (Carmona and Sieh, 2008); to provide an early warning system to reduce losses in the economic, social and environmental dimensions (United Nations Economic and Social Commission for Asia and the Pacific, 2009); to ensure efficient communication between policy-makers and those responsible for implementation by setting realistic and scientific goals and to facilitate effective action by simplifying, clarifying and making information available to policy-makers (Perdicoulis and Glasson, 2011). Specific types of indicator sets have been designed for specific functions (OECD, 2003).

1.2.7 Reviewing the existing sustainable tourism indicators

An indicator is defined by the European Environmental Agency (2002) as a measure, generally quantitative, that can be used to demonstrate and communicate complex phenomena simply, including trends and progress over time. Environmental indicators should be measureable, validated and should clearly imply the environmental symptom. They may show the changes in environmental quality after the implementation of environmental planning. Most sustainability indicators are used at international, national and regional levels (Canter and Atkinson, 2011); few sets of indicators are specifically designed for measuring built heritage attractions. The performance of built heritage attractions can be evaluated by employing a set of specific indicators, which can provide information on the current trends and conditions of the attractions, and track progress towards sustainability objectives. The following sections review the existing sustainable tourism indicators from the literature review and existing practice, and will propose a set of specific indicators

for built heritage attractions. The built heritage attraction indicators are comprised of four dimensions: the economic, social, environmental and governance.

Table 1. 2: World Tourism Organization Suggested Indicators for Destination Areas

Indicators	Sub-indicators
Wellbeing of Host Communities	Local Satisfaction With Tourism. Effects of Tourism on Communities. Access by Local Residents to Key Assets. Gender Equality. Sex Tourism
Sustaining Cultural Assets	Conserving Built Heritage
Community Participation in Tourism	Community Involvement and Awareness
Tourist Satisfaction	Sustaining Tourist Satisfaction. Accessibility
Health and Safety	Health. Coping with Epidemics and International Transmission of Disease. Tourist Security. Local Public Safety
Capturing Economic Benefits from Tourism	Tourism Seasonality. Leakages. Employment. Tourism as a Contributor to Nature Conservation. Community and Destination Economic Benefits. Tourism and Poverty Alleviation. Competitiveness of Tourism Businesses
Protection of Valuable Natural Assets	Protecting Critical Ecosystems
Managing Scarce Natural Resources	Sea Water Quality
Limiting Impacts of Tourism Activity	Energy Management. Climate Change and Tourism. Water Availability and Conservation. Drinking Water Quality
Controlling Tourist Activities and Levels	Sewage Treatment. Solid Waste Management. Air Pollution. Controlling Noise Levels. Managing Visual Impacts of Tourism Facilities and Infrastructure
Destination Planning and Control	Controlling Use Intensity
Designing Products and Services	Managing Events
Sustainability of Tourism Operations and Services	Integrating Tourism into Local/Regional Planning. Development Control . Tourism-Related Transport. Air Transport - Responding to Changes in Patterns and Access
	Creating Trip Circuits and Routes. Providing Variety of Experiences. Marketing for Sustainable Tourism. Protection of the Image of a Destination
	Sustainability and Environmental Management Policies and Practices at Tourism Businesses

Source: WTO, 2005

This researcher believes that heritage tourism could be a driving force in sustainable development, and that the effectiveness and efficiency of tourism management implementation should be monitored to assess its performance. Sustainability indicators provide critical benchmarks for measuring the change in current trends and conditions, helping to track progress towards an objective (Gahin *et al.*, 2003). An increasing number of organizations have proposed sets of sustainable tourism indicators. The World Tourism Organization (2005) developed 40 baseline indicators and other indicators in *Indicators of Sustainable Development for Tourism Destinations: A Guidebook*, including the effects of tourism on communities,

sustaining tourist satisfaction, local satisfaction with tourism, tourism seasonality, energy management, the economic benefits of tourism, water availability and conservation, solid waste management, drinking water quality, development control and controlling intensity of use (Table 1.2). However, the WTO indicators are mainly used for the broader tourist destination level rather than the more specific tourist attraction.

The European Environment Agency (EEA) (2002) developed a group of 37 core environmental indicators; the indicators in the tourism theme include household expenditure for tourism and recreation, tourism intensity, tourism eco-labelling, and tourism travel by transport mode. The limitation of the EEA indicators is that they over-emphasise current issues and have little consideration of future issues and, therefore, it is difficult to accurately measure sustainability from a developmental viewpoint. Furthermore, such indicators focus more on evaluating sustainable tourism at a national destination level, rather than at the attraction level.

Table 1. 3: Spanish System of Environmental Tourism Indicators

Average number of bed spaces in tourist accommodations per establishment
Annual distribution of tourism inflow
Total annual tourism expenditure
Percentage employment in hotel and restaurant sector
Percentage of tourism population equivalent
Collective accommodation establishments
Potential pressure on natural habitats
Tourist density in urban areas
Tourist enthroneization factor
Distance from airports to urban inhabited areas
Presence of second homes
Visitors to places of cultural and historical interest
Tourism and sport activities in natural environments
Equipped beaches
Moorings offered in sport harbours
Tourism urban waste generation
Tourist consumption of urban drinking water supplies
Electric power consumption due to tourism
Modal distribution of tourist arrivals
Degree of naturalness of the environment
Continental bathing water quality
Marine bathing water quality
Wastewater purification capacity per tourism population equivalent in main tourist towns
Percentage of protected areas having controlled accesses and itineraries
Hotel establishments certified according to environmental management regulation systems
Selective collection of containers generated by tourism activities
Incorporation of environmental criteria to tourism and territorial planning and legislation

Sources: OECD 2005

A Spanish system of Environmental Tourism Indicators (2005) was developed for the purpose of evaluating the effects of tourism on the environment (Table 1.3). The Spanish system of Environmental Tourism Indicators includes many practical indicators which were also designed for the tourist destination level and focused more on current performance than projections. In addition, the indicators are not classified in relation to specific dimensions (such as environmental, social and others).

The English Tourism Council (2002) provided a set of indicators for the management of sustainable tourism classified under three objectives: to protect and enhance the built and natural environment; to support local communities and their culture; and to benefit the economies of tourism destinations (Table 1.4).

Sustainable tourism indicators have been developed for travel and tourism operators in the Green Globe21 programme. This set of indicators has been developed for tourism companies, but some of the indicators may be employed by built heritage attractions (Table 1.5).

Based on a range of national quality management standards, China National Tourism Administration promulgated the A-level Quality Standard of Tourist Attractions to manage tourism environmental planning. According to the standard, tourist attractions can be ranked on five levels from best to worst, from AAAAA (5A) which is the best through AAAA (4A), AAA (3A), AA (2A) to A (1A) which is the worst.

Table 1. 4: English Tourism Council Sustainable Tourism Indicators

Indicators	Measures
Group 1: Protect and enhance the built and natural environment	
Number of businesses signed up to environmental management schemes	Number of businesses with e.g. David Bellamy Conservation Award, ISO14001, EMAS, GTBS, Green Lanterns etc.
Number of English beaches with a Blue Flag and a Seaside Award.	Number of beaches, reported annually
Carbon dioxide savings made by the hotel industry.	CO2 savings by hotels as a result of installing energy efficiency measures.
Transport used on England holiday trips by UK residents.	% of trips by mode of transport (Public, private car, hired car, other)
Local authorities with Tourism Action Plans.	% of Local Authorities with Tourism Action Plans
Ratio of the land and historic buildings protected by national agencies against the amount of money spent on protection of these assets.	Ratio
Group 2: Support local communities and their culture	
Workforce employed in tourism.	% of total workforce
Average hourly earnings in tourism versus the average national hourly wage.	Ratio
Local authorities with LA 21 strategies that include sustainable tourism elements.	% of Local Authorities
Audit of community perceptions of tourism	No further information available
English adults not taking a holiday of four nights or more.	% of English adults
Accommodation registered as meeting National Accessible Scheme criteria for disabled people.	Percentage
Local authorities with tourism strategies that incorporate cultural and heritage considerations.	Percentage
Group 3: Benefit to the economies of tourism destinations	
Tourism accommodation enterprises in the tourism sector participating in Welcome Host training.	Number of tourism accommodation enterprises
Accommodation registered with ETC, AA or RAC Quality Assurance Scheme.	Percentage of accommodation
Extent of visitor satisfaction.	Survey with 6 point scale from 'not at all' to 'completely' satisfied.
Domestic tourism spend by region.	No further information available
Contribution of English tourism to UK economy	Tourism contribution as a percentage of UK GDP
Composition of tourism sector by business turnover	No further information available
Trips to England by UK residents.	Total number of trips per month
Net domestic holiday spend by UK tourists.	(English domestic holiday spend + Spent by other UK residents in England + Overseas' visitors spend in England) – Spend abroad on tourism

Sources: English Tourism Council, 2002

Table 1. 5: Green Globe21 Indicators

Indicator	Measure
Sustainability Policy	Develop policy
Energy consumption	Total energy consumed/equivalent persons
Potable water Management	Total water consumed/equivalent persons
Solid waste reduction	Total solid waste to land fill/ equivalent persons
Environmental investment	Environmental expenditure/total council expenditure
Resource conservation	Use of eco-labels/total product used by lead agency
Biodiversity	Habitat conservation area/total area
Water quality	Number of tests meeting guidelines/total water tests
Soil quality	Number of sites on contaminated land register
Carbon dioxide	Green house gas produced/ equivalent persons (Optional)
Community Measure	Number of enterprises certified by Nature and Ecotourism Accredited Program / all tours run in the Shire
Equivalent persons	Total resident population plus visitors

Sources: Green Globe21, 2015

According to this evaluation system, three types of scoring guidance are included: service and environmental quality, landscape quality and tourist opinion questionnaires. All attractions who wish to undergo assessment for the A-level Quality Standard of Tourist Attractions are assessed according to these three types of guidance, each type of guidance is assessed independently and three scores are given based on the guidance. Different A level attractions will be awarded their level according to their assessed scores (Table 1.6). To be a 5A level attraction, the minimum score of the attraction in relation to service and environmental quality should be 950; in terms of landscape quality, the minimum score should be 90 and in relation to tourist opinion questionnaires, the minimum score should be 90. If an attraction fails to achieve the minimum score for 5A level in any of the three areas, it cannot be awarded the rating of a 5A level attraction, but it will be awarded an A level according to its lowest score in the three areas of guidance. For example, if an attraction achieves a score of 769 for service and environmental quality according to the guidance (achieving 3A level, but not achieving 4A level), then it scores 82 for landscape quality (achieving 3A level, but not achieving 4A level), but it only scores 69 on the tourist opinion questionnaires (achieving 2A level, but not achieving 3A level), then, overall, the attraction will be rated as a 2A level attraction.

Table 1. 6: Minimum Scores for each A Level Attraction Rating

	Service and environmental quality scoring guidance	Landscape quality scoring guidance	Tourist opinion questionnaire scoring guidance
5A attractions	950	90	90
4A attractions	850	85	80
3A attractions	750	75	70
2A attractions	600	60	60
1A attractions	500	50	50

Source: China National Tourism Administration, 2009

The indicators of the Chinese tourist attraction assessment system can be classified into three guidance sets of indicators (Table 1.7) The full score for service and environmental quality is 1000. The indicators employed to evaluate attractions according to the guidance comprise transportation (140), quality of tours (210), safety (80), cleanliness (140), postal service (30), shopping (50), management (195), resource and environmental protection (155). The maximum score that can be achieved from tourist opinion questionnaires is 100. The indicators employed to evaluate attractions in this area comprise accessibility (5), inner itinerary (5), facilities for sightseeing (5), signs for directions (5), introduction board (5), information material (5), visiting guide (5), service quality (5), safety and security (5), environmental hygiene (5), toilets (5), phone and postal services (5), souvenirs and shopping (5), food and beverages (5), public order (5), scenery and relic protection (5) and overall impression (20). The overall score is added as the final score of the attractions and the paper work is then submitted to the local tourism administration for approval.

The A-level Quality Standard of Tourist Attractions has had a strong influence on the Chinese tourism industry, especially in relation to tourist attractions. It forces tourist attractions to pay more attention to their environment, or the government will punish them. The A-level Quality Standard of Tourist Attractions promotes environmental protection in tourist attractions and enhances their capability for sustainable development (Yuan, 2000), which can also enhance the management of the tourism industry and safeguard the lawful rights and interests of tourists (Zhou, 2006). In order to be an 5A tourist attraction, the attraction must achieve the environmental management standard, enhancing the management of the environment.

Table 1. 7: The indicators of China Tourist Attraction Assessment System

Service and environmental quality scoring guidance	Landscape quality scoring guidance	Tourist opinion questionnaire scoring guidance
Transportation	Tourism value	Accessibility
Tour	Historical value	Inner itinerary
Safety	Scale	Facilities for sightseeing
Clean	Significant value	Signs for directions
Post service	Comprehensive	Introduction board
Shopping	Famous	Information material
Management	Reputation	Visiting guide
Resource and environmental protection	Marketing influence	Service quality
	Theme	Safety and security
		Environmental hygiene
		Toilet
		Phone and post service
		Souvenir and shopping
		Food and beverage
		Public order
		Scenery and relic protection
		Overall impression

Source: China National Tourism Administration, 2009

However, the main purpose of some tourist attractions is to make a profit from obtaining the A-level Quality Standard of Tourist Attractions rather than providing a high-level of service to the tourist. So the attractions may do a great deal of work before being evaluated, but once they pass the standards, their environmental outlook and service may deteriorate (Deng, 2007). At the same time, some tourist attractions lack self-examination because they cannot abide all the regulations of environmental protection (Wang, 2007). In addition, the standard takes too much account of economic data, leading to the numbers of 5A Level attractions in economically developed regions outweighing those in economically underdeveloped regions.

1.2.8 Analysing indicators designing principles

Although some sets of indicators have considered the development of built heritage, none of the indicators developed above have been specifically designed for built heritage attractions. This research proposes to develop a set of indicators for assessing the sustainability of built heritage attractions. Built heritage attractions are heavily visited worldwide; they are normally linked to a variety of additional services to produce built heritage tourism products, such as accommodation, souvenirs and cultural performances. However, they suffer threats from physical, economic and cultural damage. In addition, the indicators previously mentioned tend to evaluate the sustainability of attractions based on three dimensions: social, economic and environmental. However, in terms of the value of management, it is

more efficient to gather all the heritage resources together and re-use the building or other resources to make a built heritage attraction; thus, governance plays a significant role in the sustainability of built heritage attraction development.

Prakash and Hart (2000) argued that a good indicator alerts a manager to a problem before it gets too bad, and helps him or her to recognise what needs to be done to fix the problem. The existing research on indicators includes The Bellagio Principles 1997 (Table 1.8), the sustainable community indicators checklist by Prakash and Hart in 2000 (Table 1.9), Brunner and Glasson in 2015 (Table 1.10) and Perdicoulis and Glasson in 2011 (Table 1.11). A good set of indicators for appraising sustainability should be as follows:

- An expression of major concerns, vision, targets and action;
- Simple, clear, transparent and understandable;
- Reliable and practical;
- Evidenced from both the application and creation side;
- Holistic across different dimensions, and should
- Consider future development.

Sources: Adapted from Hardi and Zdan, 1997; Prakash and Hart, 2000; Brunner and Glasson, 2015 and Perdicoulis and Glasson, 2011

Table 1. 8: Bellagio principles

Bellagio principles
Be guided by a clear vision of sustainability and clear goals;
Be holistic in nature;
Include equality, ecological considerations and economic/non-market activities;
Be board in scope;
Be practical;
Be transparent to public scrutiny;
Be engaging enough to elicit stakeholder interest;
Involve a board cross section of residents
Be periodically reviewed and adjusted; and
Be integrated into decision-making framework

Sources: Hardi and Zdan, 1997

Table 1. 9: Sustainable community indicators checklist

Sustainable community indicators checklist
Address the capability of the nature resources – renewable or non- renewable, local or non – local, that community reply on
Address the capability of the ecosystem services upon which the community relies, whether local, global, or from distant sources?
Address the capability of the aesthetic qualities – the beauty and life-affirming qualities of nature
Address the capability of a community's human capital- the skills, abilities, health and education of people in the community
Address the capability of a community's social capital – the connection between people in a community: the relationships of friends, families, neighbourhoods, social groups, businesses, governments and their ability to co-operate, work together and interact in positive, meaningful ways.
Address the capability of a community's built capital – the human-made materials (buildings, parks, playground, infrastructure, and information) that are needed for quality of life and the community's ability to maintain and enhance those materials with existing resources.
Provide a long-term view of the community
Address the issues of economic, social or biological diversity in the community.
Address the issues of equality of fairness- either between current community residents (intra-generational equality) or between current and further residents.
Understandable to and useable by its intended audience
Measure a link between economy and environment
Measure a link between environment and society
Measure a link between environment and economy
Measure sustainability that is at the expense of another community or at the expense of global sustainability

Source: Prakash and Hart, 2000

Table 1. 10: The indicators checklist

The indicators checklist
Conceptual: encompassing the evolving nature of sustainability
Design considerations: for example, adopting the Bellagio principle of relevant, clarity and reliability
Policy consideration relating to the evolving approaches in the political/policy domain in which the checklist will be used
Data consideration including the availability of the relevant indicators, with accessible data sources
Development consideration providing the basis for subsequent development and refinement of the approach in the context of evolving concepts, policies and practical/data availability <i>etc</i>

Source: Brunner and Glasson, 2015

Table 1. 11: Indicator design consideration

Indicator design consideration
Compensated simplification
The expression of a major concern
Evidenced from the application side
The expression of vision
The expression of targets and action
Evidenced from the creation side

Sources: Perdicoulis and Glasson, 2011

1.2.9 Designing sustainable indicators for built heritage attractions

The application of indicators in heritage conservation and tourism management aims to achieve more sustainable development. However, most sustainability indicators are used at international, national and regional levels (Canter and Atkinson, 2011); few sets of indicators have been specifically designed for measuring built heritage attractions.

A widely used Pressure-State-Response (PSR) model was developed into a Driving-Force-Pressure-State-Impact-Response (DPSIR) (Figure 1.13, Table 1.12) framework to be applied as a causal ‘chain’ model (Niemeijer and de Groot, 2008). Although this model has some shortcomings (for example: ambiguity, poor linkage between causal issues, not sufficiently pro-active for policymaking and abandoned by some organizations), it is more complete than the simpler PSR model and it provides a causal chain instead of a causal network, which ensures that the system is more realistic (Smeets and Weterings, 1999; United Nations Economic and Social Commission for Asia and the Pacific, 2009; Perdicoulis and Glasson, 2011).

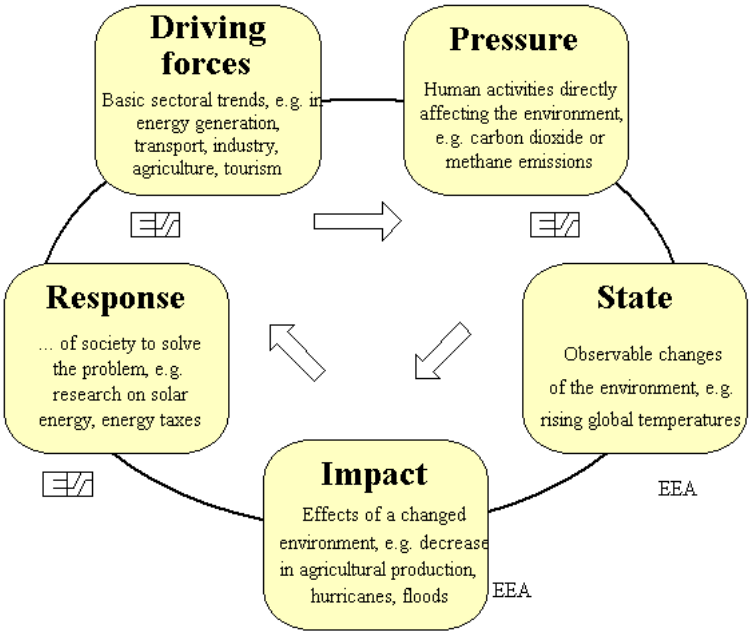


Figure 1. 13: Driving-Force, Pressure- State- Impact- Response (DPSIR) Frameworks
Sources: Niemeijer and de Groot, 2008

Driving-Force, Pressure- State- Impact- Response Framework
D <i>Driving forces</i> are underlying factors influencing a variety of relevant variables.
P <i>Pressure</i> indicators describe the variables which directly cause environmental problems.
S <i>State</i> indicators show the current condition of the environment.
I <i>Impact</i> indicators describe the ultimate effects of changes of state.
R <i>Response</i> indicators demonstrate the efforts of society (i.e. politicians, decision-makers) to solve the problems.

Source: Niemeijer and de Groot, 2008

The model type indicator, for example, DPSIR, combined the alarm and input-output function. It is useful for understanding the situation of environmental planning for built heritage attractions, and also their sustainability. When applied to this research, the ‘driving forces’ are the decision to develop the built heritage and turn it into a tourist attraction and the demands of tourism; the ‘pressure’ is the fact that tourism directly affects the environment and the built heritage attraction; then the ‘state’ represents the effects on the environment and the built heritage attraction; the ‘impacts’ will be the analysis of the dimensions of sustainability; and the ‘response’ is how to deal the issues, which form the recommendations for this research.

1.3 Research impetus

According to Wall and Mathieson (2006), much of the research in this area lacks a multidisciplinary perspective on the impacts of tourism; for example, sometimes, a study will focus on the economic impacts more than the environmental and social impacts. There is no apparent strategy for putting the three types of impact together and only a limited vision of the overall picture to which they might contribute. It is difficult to identify the types of tourism that are involved and the characteristics of the community in which impacts occur. Most studies on the impacts of tourism are backward looking. To date, such measures have usually been employed after the damage has been done; however, this should ideally be replaced by a more precautionary approach to development. There are a number of appraisal methods which focus on built heritage assessment. For example, Townscape Heritage Initiatives Evaluation (THIE), a methodology proposed for assessing the effectiveness of Heritage Lottery Fund projects in the United Kingdom (2004) and measuring the effectiveness of the Townscape Heritage Initiatives (2010). Guidance on Heritage Impact Assessments for Cultural Heritage was proposed by ICOMOS (2011) to evaluate effectively the impact of potential development on the Outstanding Universal Value of World Heritage properties. In addition, Bond and Worthing (2014) have examined how the significance of built heritage is assessed and used as an effective driver and focus for built heritage management strategies and processes. However, this researcher found the above research tended to lack sufficient consideration of how to integrate built heritage and tourist attractions’ planning and management. Therefore, there is no universally acceptable

methodology for evaluating the impacts of built heritage tourism using a more sustainability-related approach, including economic, environmental and social aspects. Furthermore, there is a research impetus in the area as to how to use a practical and specific appraisal methodology that can integrate the sustainability appraisal approach into built heritage attraction planning and management. The lack of a universal sustainability appraisal mechanism is not only an issue in developed countries, but also in less developed countries, in particular, in the emerging cultural heritage market.

1.4 Research aim and objectives

1.4.1 Research aim

The aim of this research is to develop a mechanism to appraise sustainability systems for built heritage attractions in a mature market, with the possibility of applying it to an emerging heritage market.

1.4.2 Research objectives

Four objectives are proposed in order to address the research aim:

- To develop a theoretical framework to understand the concepts of built heritage attractions and sustainability appraisal methodologies through: a review of the existing literature on the economic, environmental, social and governance dimensions of heritage tourism governance and impacts, and by identifying and explaining the strengths and weaknesses of the appraisal methodology.
- To develop a structured and procedural mechanism for built heritage attraction sustainability appraisal.
- To apply this appraisal methodology by comparing its practical application in four built heritage attractions selected as case studies representative of those facing the issue of how to balance economic success, environmental protection and social equality.
- To identify the potential value, acceptability, implementation and international transferability of the developed approach. To analyse the data and findings in order to generate new knowledge in relation to the

sustainability of heritage management both in developed and less developed countries.

1.5 Methodology

The methodology and plan of work for achieving the research objectives have been carried out in the stages explained and illustrated below (Figure 1.2). Cross-national comparisons are employed in this research to identify the similarities and variability of sustainability management for built heritage attractions. Kohn (1989) distinguishes between four approaches to cross-national comparison: (1) the nation as an object of study (idiographic understanding of each country in its own terms); (2) the nation as a context of study (testing an abstract hypothesis or dimension across countries); (3) the nation as a unit of analysis (seeking relationships among the dimensions on which nations vary); and (4) the nation as part of a larger international/global system (interpreting each country as part of a transnational system).

According to the literature review conducted by the researcher, few research studies have compared the People's Republic of China (China) and the United Kingdom (the UK) in terms of sustainability management for built heritage attractions. This research has been conducted in China and the UK according to the first, second and third of Kohn's approaches.

- a) Both countries have been treated as objects of analysis using an idiographic approach to understand via comparison what provides a useful strategy for determining what is good practice (or not) about a country. This principle compares countries with similar features. The integrity and comprehensiveness of built heritage management were key factors which needed to be considered as a similar feature in both countries. China has 48 World Heritage sites of which 34 are cultural heritage sites and 4 are mixed heritage sites; there are also a large number of heritage attractions which have not been nominated but still have unique significance. China has some of the most famous World Heritage sites in the developing world (UNESCO, 2016). The history and civilization of China has influenced surrounding countries. By comparison, the UK has 29 World Heritage sites

of which 24 are cultural heritage sites, and 1 is a mixed heritage site (UNESCO, 2016).

- b) Both countries can be used as contexts for examining a sustainability assessment framework for built heritage attractions. This approach tests a proposed theoretical sustainability assessment model across nations. The sustainability indicator-based multiple-criteria decision analysis approach was applied into both countries to maximize diversity.
- c) The two countries vary in terms of their economic backgrounds and built heritage attraction management systems and so it is worth comparing their stages of development. This approach seeks to explain patterns of differences between countries that systematically explain how and why nations vary. There are four areas of difference between the two countries.
 - Firstly, the researcher aimed to identify similarities and differences between less developed and developed countries. The World Bank defines the gross national income (GNI) per capita of a country over US\$12,275 as a 'developed' country while countries with a GNI below this figure are classified as 'less developed' (World Bank, 2012). The GNI per capita of China is US\$7,536 (Word Bank, 2012), while the GNI per capita of the UK is US\$35,860 (World Bank, 2012). Therefore, China is categorized as a less developed country and the UK is categorized as a developed country according to their GNI.
 - Secondly, they have different heritage attractions management systems. Built heritage attractions in China are mostly owned by the government, and operated by the government directly or indirectly. However, attractions in the UK have various ownership and operating styles which are influenced by various Charities/Trusts, the government and the private sector. Heritage attractions are supervised by different authorities and various local laws and regulations are applied in these two countries.
 - Thirdly, they have a different political, economic and social development history at their various stages of development. The UK was one of the first capitalist countries and was the first global economic superpower; it maintains a stable economic growth rate. China is a socialist country which experienced a Cultural Revolution between 1968-1978. After the

economic reform which followed, it became the fastest developing country in the world and it still maintains a high economic growth rate.

- Fourthly, the UK has a long-established heritage conservation system, but some of its heritage faces the problem of a lack of funds. China has developed so quickly that some of its heritage has been demolished or is not well protected.

- d) Hantrais (1995) argued that language and local culture can present a major obstacle to comparative studies, with the third consideration being the accessibility of data. The researcher was born and worked in China prior to 2010 so he has the ability to carry out the research in China. Furthermore, the researcher is undertaking his doctoral programme in the UK, after gaining an MSc degree in Environment Tourism and Development at Oxford Brookes University. Thus, he was able to conduct the research in the UK. The researcher has been trained to conduct research and report the findings in both languages, so he can access the relevant research data in both countries.

After considering the benefits of a cross-national comparative approach and the accessibility of data within a wide range of majority English-speaking and Chinese-speaking countries, the UK and China were selected as suitable countries for this research. Given that heritage management and status in England, Wales, Scotland and Northern Ireland share significant similarities, England was selected as the key case study country in order to avoid repetition. With the aim of identifying the similarities and differences across built heritage attractions, the comparative approach can also be used to compare attractions within the same country, between large and small attractions, and between those which are publicly and privately owned.

1.5.1 Research stages

The study is divided into four stages in order to address the four objectives (Figure 1.14):

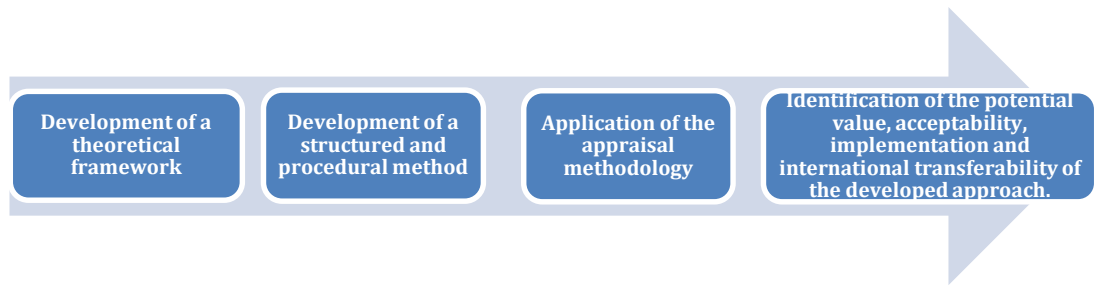


Figure 1. 14: Research stages

Firstly, the researcher developed a theoretical framework to understand the concepts of built heritage attractions and sustainability appraisal methodologies through: a review of the existing literature on economic, environmental, social and governance dimensions of heritage tourism governance and impacts and by identifying and explaining the strengths and weaknesses of the appraisal methodology. The four areas of sustainability for built heritage suggested are (Figure 1.15): the economic dimension (employment, financial health and numbers of visitors), the environmental dimension (environmental management system and heritage conservation), the social dimension (stakeholders' involvement and attitudes), and the governance dimension (planning, troubleshooting and management).

Secondly, based on the results of the literature review, a questionnaire-based survey was designed to provide information concerning sustainability assessment for a substantial sample of built heritage attractions. Across both China and the UK, 93 attractions were invited to participate and 36 responded before the deadline. As a result, a six-step structured and procedural method for built heritage attraction sustainability appraisal has been proposed (Figure 1.16).

Thirdly, this appraisal methodology has been applied by comparing its practical application in four built heritage attractions selected as case studies: Chastleton House and Oxford Castle in the UK; Mountain Jieshi and Shanhai Pass, the Great Wall of China in China.

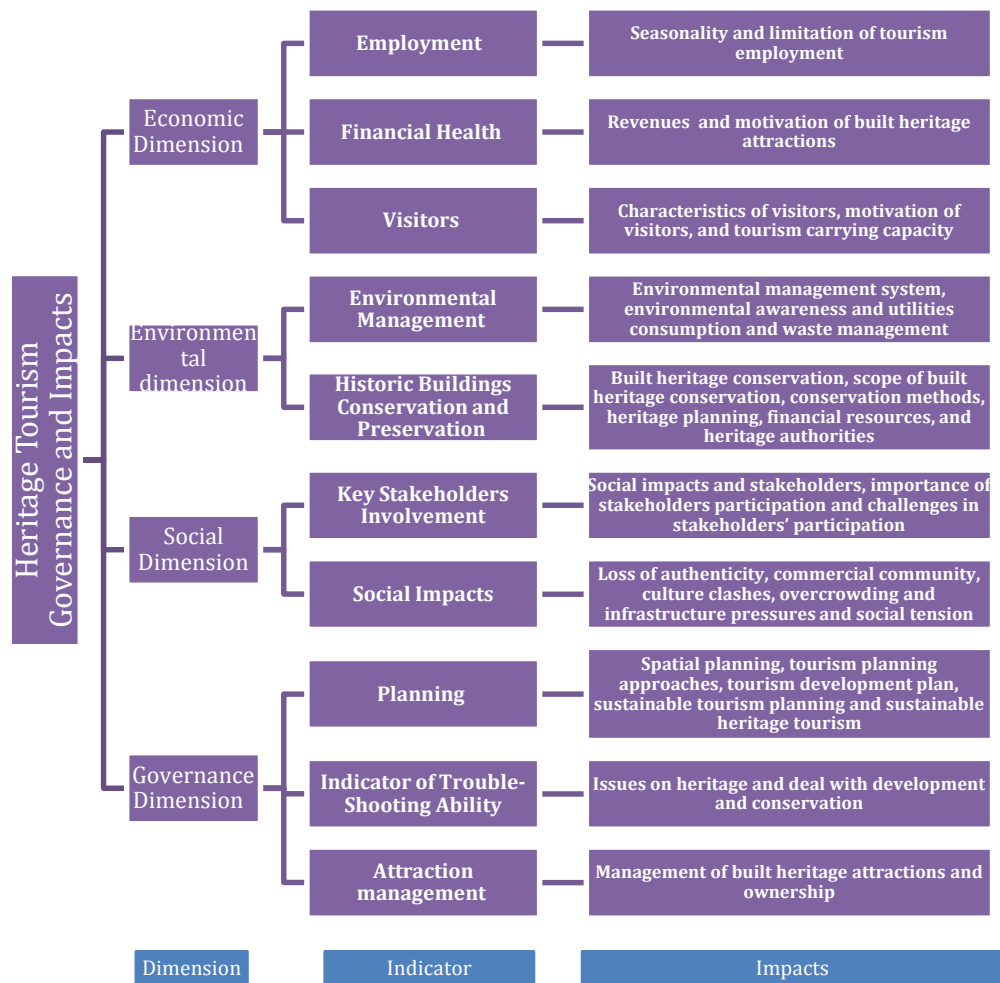


Figure 1. 15: Four areas of sustainability impacts for built heritage

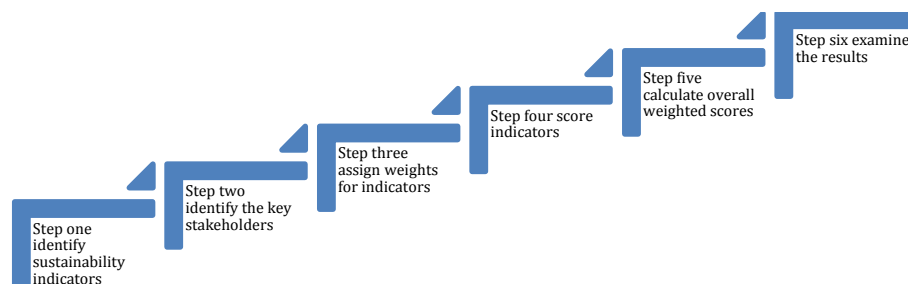


Figure 1. 16: Sustainability appraisal process for case studies

The fourth stage involved identifying the potential value, acceptability, implementation and international transferability of the developed approach using analysis and synthesis of the data from the case studies and the earlier stages of the research. Emails were sent to participants presenting the final findings for collecting their opinions for verification and validation. This enquiry was utilized to examine the acceptability, transferability and feasibility of the sustainability appraisal

methodology for built heritage attractions and to generate new knowledge in relation to the sustainability of heritage management both in developed and less developed countries, and encourage them to learn from each other.

1.5.2 Data collection and analysis

A multi-method data collection approach was used (Figure 1.17). The literature review established the conceptual framework, while a questionnaire study was used among professionals working for the attractions and stakeholders of the four case study attractions who were interviewed in China and the UK respectively. Then, the appraisal methodology was applied and an email verification process with key stakeholders identified implementation issues.

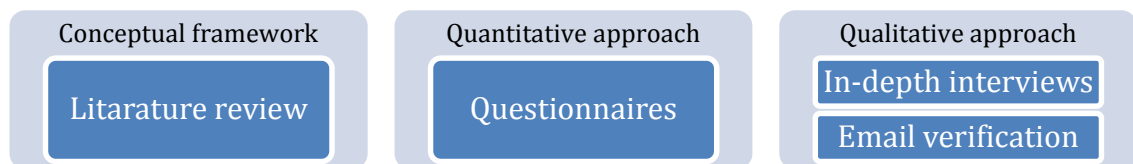


Figure 1. 17: Multi-method data collection approach

A questionnaire survey collected data from built heritage attractions to include information on the sustainability dimensions of built heritage attractions. A set of questionnaires was distributed to track the attractions that showed interest in the survey. This stage incorporated a revision of the first draft of the methodology. At the end of this stage, a group of indicators from economic, environmental and social aspects was generated from previous research as the alternative selection indicators for a further appraisal approach. The data were collected via in-depth interviews, seminars and other reliable sources. The criteria and thresholds for the selection of the main case studies considered their willingness to take part, annual tourist numbers, employee numbers, how long the attractions had been established and their location.

1.6 Structure

The remainder of the thesis is organized into seven chapters which respond to the research questions and fulfil the objectives of this research. This section illustrates the role of each chapter in the overall structure and summarizes their contents.

Chapter 1 introduces the research background, identifies the research impetus, describes the research aim and objectives and proposes the methodology and overall structure. The research objective of *developing a theoretical framework to understand the concepts of built heritage attractions and sustainability appraisal methodologies through: a review of the existing literature on economic, environmental, social and governance dimensions, and by identifying and explaining the strengths and weaknesses of the appraisal methodology* is addressed in Chapters 1 and 2. Chapter 1 introduces the background to built heritage tourism and identifies the main issues which are raised in tourism development; it introduces the nature of built heritage, its definition, classification and characteristics plus it reviews existing appraisal methodologies and their strengths and weaknesses. The following chapter, Chapter 2, reviews the existing literature on the economic, environmental, social and governance dimensions and their corresponding impacts. Chapter 2 establishes the theoretical framework used to understand the concepts of built heritage attractions and the four dimensions of sustainability.

The research objective of *developing a structured and procedural method for built heritage attraction sustainability appraisal* is addressed in Chapters 3 and 4. Chapter 3 establishes the rational considerations of the research methodology, lays out the details of the research plan, presents the research plan implementation for the fieldwork and details what research method will be used for data collection. Attention is also paid to the criteria for case study selection. Chapter 4 introduces the study which was conducted in the form of a questionnaire survey. A questionnaire survey was distributed to built heritage attractions in the UK and China to identify the dimensions of sustainability from the perspective of attraction managers.

The research objective of *applying this appraisal methodology by comparing practical application in four built heritage attractions as case studies representative of those facing the issue of how to balance economic success, environmental protection and social equality* is met in Chapter 5. This chapter introduces how the appraisal methods have been applied in the four case studies. Consideration is given to the development of the research design, research instruments and data collection technology.

The research objective of *identifying the potential value, acceptability, implementation and international transferability of the developed approach* is addressed in Chapters 6 and 7. Chapter 6 analyses the data from the case studies to compare the application and feasibility of the same assessment methodology. It also uses a comparative approach to identify significant differences between built heritage attractions in the same country, built heritage attractions in the UK and China, and large and small attractions. Chapter 7 examines the overall research process to identify the original contribution of this research, and the issues to be addressed in future research. This research comprises the conceptual framework and empirical studies of sustainability appraisal for built heritage attractions in the UK and China. It illustrates the main findings in relation to the research aim and each objective; fulfilling each stage of the research has produced relevant findings. Moreover, it evaluates the overall research work. This chapter also discusses the contribution to knowledge derived from the research in terms of its potential value for built heritage attractions' management teams, authorities, developers and academics. Finally, it recommends the future direction for research in this area.

1.7 Summary

For most authorities, heritage tourism is an eco-friendly alternative through which to achieve economic development, employment creation, and heritage conservation. Nevertheless, the realities of heritage tourism should be recognized, especially concerns regarding environmental protection and the types of employment involved. This chapter has described the initial rationale for the research and it demonstrates the background for the research based on built heritage attractions and tourism impacts, the nature of heritage, heritage tourism, the classification and characteristics of built heritage attractions; it then identifies the research implications, introduces the research aim, objectives and methodology; finally, it illustrates the structure of the remaining chapters.

Chapter Two: Literature review and conceptual framework

2.1 Introduction

This research proposes an analysis of heritage tourism impacts to help establish the foundations of sustainability appraisal of built heritage attractions. This chapter will analyse the tourism impacts on heritage in terms of economic, environmental, social and governance dimensions in order to establish the conceptual framework to address the first objective of this research (Figure 2.1). A set of sustainability indicators is proposed after reviewing each dimension of heritage tourism impacts in this chapter and the existing sustainable tourism indicators in Chapter 1.

There are various impacts and issues of built heritage attractions which are likely to be considered when designing a holistic planning strategy (Timothy, 2011). For each dimension, this research only focuses on the most significant and measurable impacts. This research has not deeply investigated other factors, not because they are less important, but because not all heritage impacts are suitable to apply to the conceptual framework for appraising the sustainability of built heritage attractions in this research, especially if the impacts cannot realistically be measured. Within this research, the set of indicators has been divided into indicators and sub indicators, with short explanations of the functions of each sub-indicator. The scoring measures have been developed on five levels, which have been developed to evaluate the indicators based on the assumptions of the author and after reviewing the existing literature and having conducted the questionnaire survey and the pilot study. The assessments need to calculate the weighting from the managers', tourists' and third parties' perspectives to obtain the overall scores for each indicator, which will be explained in section 3.3.

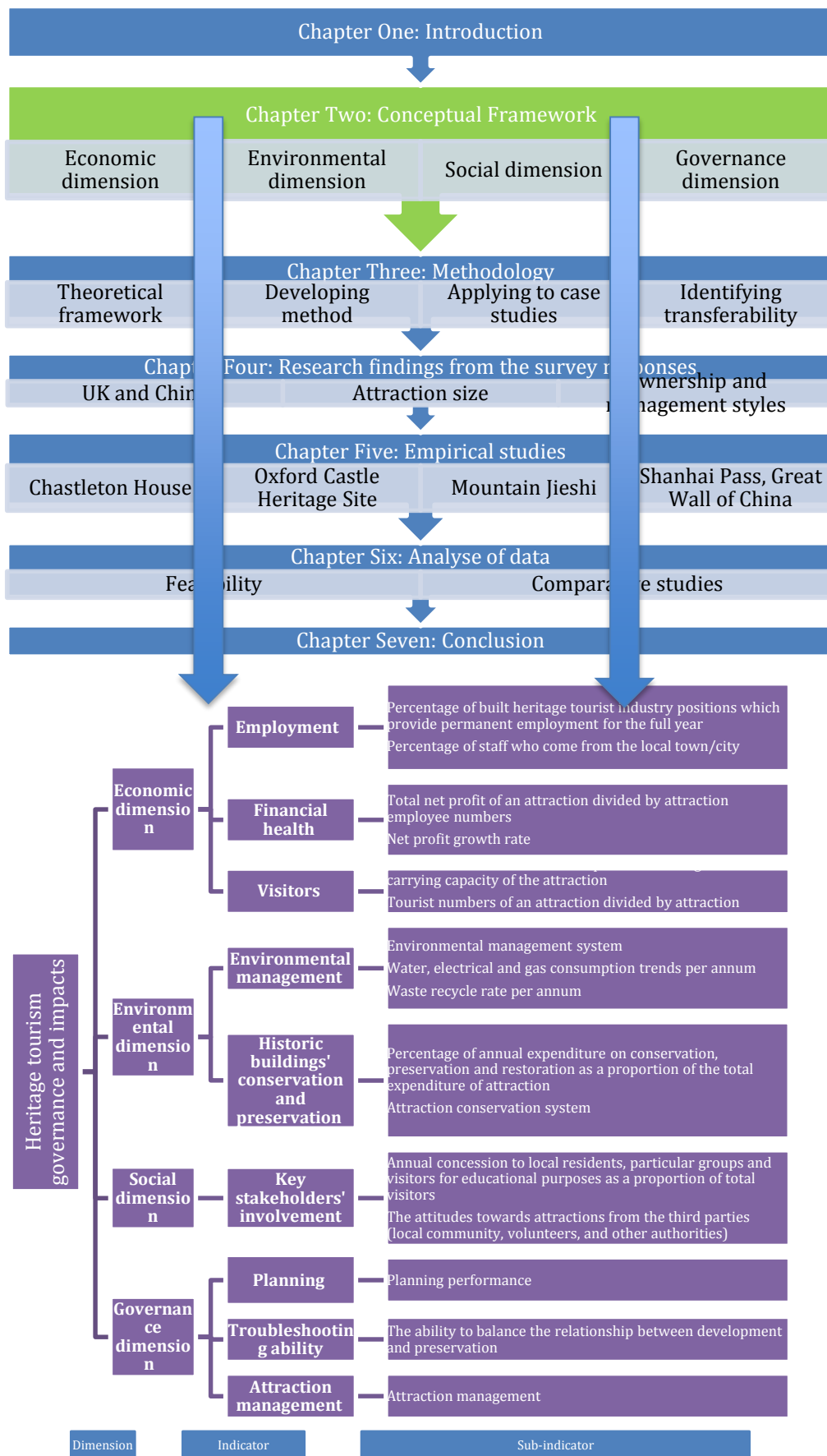


Figure 2. 1: Literature and conceptual framework

2.2 Economic Dimension of Heritage Tourism

2.2.1 Introduction

The economic impacts of tourism have been brought into research since the 1970s (Glasson *et al.*, 1995); some early studies on the direct economic impacts of tourism focused on the international and national level (Mathieson and Wall, 2006). A growing number of studies that examined regional and local impacts have been developed (Walpole and Goodwin, 2000). Meanwhile, there are a growing number of studies that assess the economic impacts of tourism initiatives and specific events (Hall, 2008). A number of works have evaluated the economic impacts of tourism, covering a range of direct, indirect, and induced effects, such as leakage, economics modelling based on input-output analysis from national and regional levels, tourism satellite accounts and multiplier effects (Archer and Cooper, 1998; Eadington and Redman, 1991; Lomine and Edwards, 2007). Research has increased substantially (Bull, 1991; Howard, 2003; Mathieson and Wall, 2006). However, there is still a lack of research on the evaluation approach to the economic impacts of built heritage attractions.

Understanding the economic dimension of built heritage is essential for heritage tourism decision making. The indicators and standards are linked to built heritage attractions' management objectives. They are essential for fundamental support when undesired change is taking place at a built heritage attraction. From a positive perspective, heritage tourism visitors bring positive fiscal outcomes for the local area, and boost the local economy by spending on accommodation, food, services and souvenirs; international tourists bring currency for the hosting country. Heritage tourism generates many kinds of tax, so the revenue is an impetus for local government. From a negative perspective, heritage tourism may cause local inflation, and increase the prices of local goods and property. An overdependence on tourism for its economic benefits may put the local area into a highly vulnerable position (Hall, 2008). This chapter introduces the three key factors in the economic dimension of heritage tourism governance in terms of employment, financial health and numbers of visitors (Figure 2.1). The economic impacts of tourism are also identified in order to suggest areas for future research.

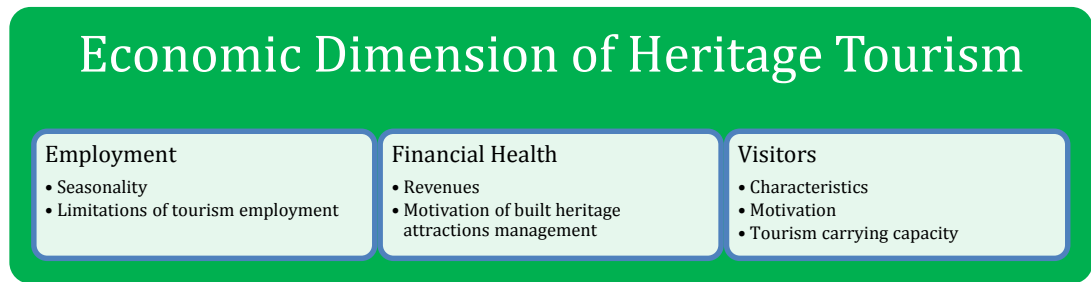


Figure 2. 2: Diagram showing the linkage of economic dimension of heritage tourism in conceptual framework

2.2.2 Employment

There is no doubt that heritage tourism can increase the employment rate within built heritage attractions (Hall, 2008). Tourism is usually treated as a labour-intensive industry that generates direct and indirect job positions. Direct employment includes the commonly visible positions that are created directly by tourism, by the need to serve visitors in terms of various tourism sectors. The indirect and induced employment that accrues in relation to built heritage attractions and the surrounding area is caused by tourism ripple effects into other sources (Timothy, 2011).

2.2.2.1 Seasonality

The majority of businesses in the tourism industry cannot avoid the seasonality effect; thus, peak and off-peak times occur throughout the year and tourism services and facilities may be strained at peak times and some resources may be wasted during off-peak periods. Although Cuccia and Rizzo (2011) argued that heritage tourism might be less affected by seasonality than other types of tourism (e.g. beach and sea), built heritage attractions are also greatly influenced by the seasonality of tourism. According to tourist numbers of visitors to attractions in Northern Ireland (2010), even for historic properties and visitor/heritage centres, the tourist numbers were substantially affected by seasonality. This research believes most built heritage attractions have both peak and off-peak seasons; the peak season tends to have more visitors. This seasonality is likely to affect the stability of tourism employment due to the limitation of tourism positions. If the capacity of a built heritage attraction is ignored, the costs of maintaining and managing it tend to be similar in peak and off-peak times, but the peak time will attract more tourists than the off-peak times. Thus, more income is generated for the attraction during the peak times. However, running

or closed, there is a real dilemma for most attractions during off-peak times. If the attraction is running, there are still maintenance and staff costs to pay even though there are fewer tourists. If the attraction dismisses the staff and closes the attraction, this may lead to an increase in the unemployment rate and many social problems, the opportunity costs of training a new team for the next year may be expensive and the facilities at the attraction may no longer be in working order if they are not maintained while the attraction is closed. Therefore, all tourism services should be integrated by proactive management for capacity management to meet both peak and off-peak tourist demand.

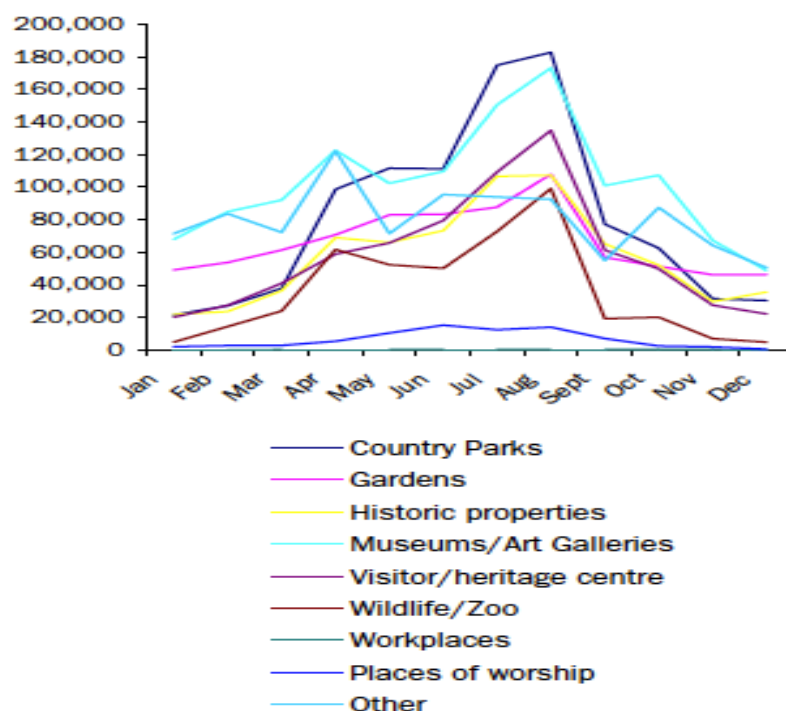


Figure 2. 3: Tourist Numbers of Visitors to Attractions in Northern Ireland (2010)
Source: Department of Enterprise, Trade and Investment, 2015

2.2.2.2 Limitations of tourism employment

Although the existing research indicates that heritage tourism may increase the employment rate by providing employment related to maintaining the heritage attraction (Mason, 2015), Zhang *et al.* (2005) argued that most of the benefits are relatively short term. For example, the employment provided should consider the types of roles on offer, as some tourism-associated positions are low paid and temporary as they are affected by seasonality. Certain positions created in tourism

may also attract people from outside rather than locals, and then there is a debate on how much heritage tourism is contributing to local employment (World Tourism Organization and the International Labour Organization, 2014). The percentage of local employment is also considered to be a measureable index. The World Tourism Organization (2005) suggested that indicators for tourism destination areas should include tourism seasonality, employment, community and destination economic benefits.

2.2.3 Financial health

Stable financial support is a vital factor for heritage conservation, and the various revenues generated from built heritage attractions are the cornerstone for establishing financial health. The motivation of the built heritage attractions' management team to generate revenue is likely to affect the financial sustainability of heritage sites.

2.2.3.1 Revenues

Funding for conservation has been seen as essential for built heritage attractions (Wall and Mathieson, 2006). Internal financial gains mainly come from the operation of heritage tourism, to ensure long-term stable development. Murphy (1994) suggests the scope of sustainable tourism should involve management of all resources in such a way that economic, social and aesthetic needs are met. The appropriate management of built heritage attractions would maximise benefits and minimise impacts through competent management (Orbasli, 2000). The World Tourism Organization (2005) suggested financial indicators for destination areas should be framed in terms of the competitiveness of tourism businesses. The sources of revenue for heritage preservation developed for built heritage conservation include both internal and external sources. This section will focus on internal financial gains by built heritage attractions. The external funding for conservation will be addressed in the next chapter in the section on heritage conservation institutions in the UK and China.

Table 2. 1: Common revenue sources for built heritage attractions

Internal sources	External sources
Admission fees	Donations
Retail sales	Sponsorships
Food and accommodation	Grants
Interpretation	
Hosting special events	

Sources: Adapted from Timothy, 2011

Admission fees are among the most significant internal revenue sources for built heritage attractions (Timothy, 2011). Fyall *et al.* (2008) support the idea that admission fees will likely be appropriate as the fees will cover any damage to the heritage, and the fees would also help towards preservation and repair costs, reducing traffic in peak times, and controlling the number of visitors.

Retail sales are a very popular way of generating revenue in heritage attractions worldwide. Visitors like to shop while visiting these destinations in order to bring home some memories from their trip. Retail outlets sell souvenirs related to the heritage site as well as normal products. It is not surprising to be able to buy a plastic model of the Tower of London in the city of Oxford, and for this souvenir to be made in China. The income from souvenirs enrich the heritage site.

Certain heritage buildings with historic value and history provide various kinds of hospitality services to generate additional revenue. For example, there are significant numbers of historic castles and heritage buildings which rent out their main hall for weddings, accommodation, restaurant services, filming, exhibitions and other types of applications.

2.2.3.2 Motivation of built heritage attractions management teams

The management team of built heritage attractions realize the need to subsidize their mandate to protect heritage attractions (Timothy, 2011). A stronger motivation to secure funding would lead management teams to explore more ways of making financial gains. Traditionally, in most countries, heritage funding comes from national grants, but these funds may be significantly cut after government budgetary deficits. The motivation to identify funding sources varies in the different contexts of the UK and China; built heritage attractions in the UK have more external/non-

governmental funding support than those in China, which will be explained more in section 4.3.5.

2.2.4 Visitors

Visitors are commonly accepted as an important part of the management of heritage sites, as well as a means of supporting conservation and education. Visitors may have multiple impacts on built heritage attractions; the core contribution from visitors is to increase incomes for heritage sites in the economic dimension. This section focuses on the economic impact of visitors; the environmental and social impacts of visitors will be explored in section 2.3 and 2.4. The characteristics and motivation of visitors are analysed here in order to promote the visitor's experience and to generate additional funding through increased numbers of visits and greater public appreciation, leading visitors to respect conservation.

2.2.4.1 Characteristics of visitors

The demand for heritage is less elastic than for other types of tourism (Timothy, 2011). It tends to be less variable than general tourism; for example, the resources of sunshine and beaches can be found at a substantial number of locations, while there is only one Great Wall of China, one Tower of London and one Indian Taj Mahal in the world. Some forms of heritage tourism may have less seasonal variation than many other types of tourism because the motivation to visit may be evident regardless of weather and season (Timothy, 2011). From a marketing perspective, visitors to built heritage attractions can be divided up based on their demographic, geographic and psychographic characteristics (Timothy, 2011).

Demographic data will help built heritage marketers to determine people's desires based on an understanding of the characteristics of people who participate in heritage tourism. It is generally accepted that levels of education, income, gender, age, and employment type are among the most important visitor attributes (Bassey and Vivian, 2009; Timothy, 2011).

Geographical segmentation is dominated by a classification based on where tourists live or where tourists visit. However, Swarbrooke (2012) argued that marketing

should target these people not by where they live but by where they travelled from because many people do not travel directly from their home to heritage attractions, but from other places such as holiday accommodation or the homes of friends and relatives. Heritage visitors can be divided into three groups based on their places of origin and residence (Robinson *et al.*, 1994). Local residents are the first group; these are people who live within the vicinity of the attraction and so they are able to take day trips there. Domestic tourists are the second group who visit heritage sites; they may stay overnight. International tourists are the third group who generally stop by a historic attraction on their way to somewhere else. Richards (2001) showed that 60 per cent of tourists visiting built heritage attractions in the UK were domestic and international tourists, and 40 per cent were local residents.

Psychographic characteristics are based on the attitudes of tourists, which may influence their behaviour, lifestyle, social class and personality (Middleton, 2012). Tourist attractions will attract different types of individuals with varying psychographic characteristics. Plog (1991) showed that tourists might fit into two extreme poles on a psychographic spectrum: one towards the comforts of home nearness, and familiarity in their surroundings, while the other extreme tends to seek out distant, unusual and challenging experiences. In the realm of heritage tourism, the 'nearness' type of tourist may prefer to visit well-established urban tourist places. In contrast, the allocentric tourist may tend towards new experiences, such as being among the first to visit an archaeological ruin in a remote rainforest. Heritage exploration is becoming an important motivation for tourists and there exists demand which can satisfy both ends of the psychographic spectrum.

There are many other visitor patterns and trends outlined. The first is the group type of heritage tourism attenders; most tourists attend heritage sites in groups, which can be divided into family groups, which comprise the largest group of heritage visitors. School groups organized by education institutions are an integral part of the formal education system, particularly those associated with certain disciplines (such as history, anthropology and archaeology). Church youth groupings, boy and girl scout troops and hobby associations are more likely to visit certain built heritage attractions that are associated with their individual interests (Newsome *et al.*, 2001; Page and Dowling, 2002).

2.2.4.2 Motivation of visitors

Maslow's hierarchy of needs was proposed in 1943 to illustrate individuals' motivations in the shape of a pyramid with the need for self-actualization at the top and the most fundamental needs at the bottom (Figure 3.2). Tourism demand often goes along with sufficient financial and free time support; it is a desire to explore and enjoy, therefore, it is located in the esteem level of this model. The majority of heritage visitors are driven by two motivations: the pursuit of knowledge and of personal benefits (Chen *et al.*, 1998).

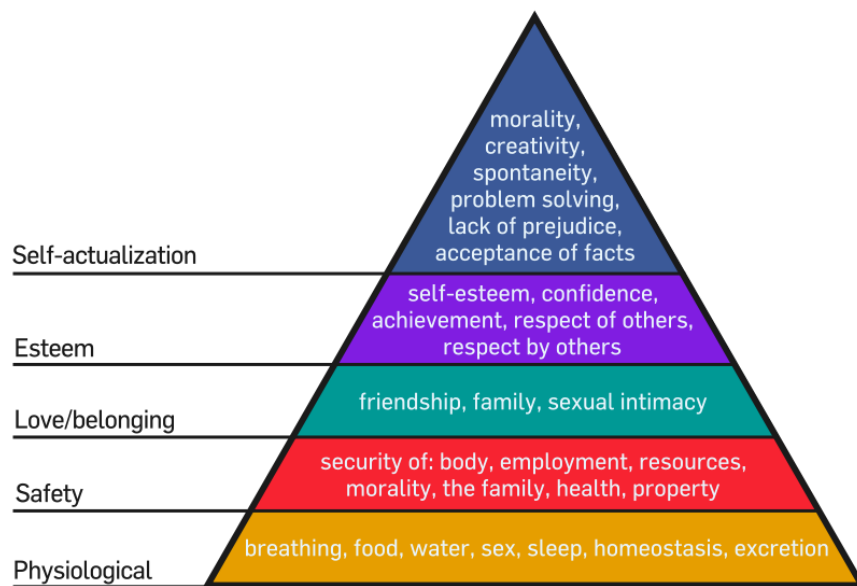


Figure 2. 4: Maslow's Hierarchy of Needs Sources: Maslow, 1943

The primary motivation for heritage tourism is learning about culture as well as enriching personal knowledge, which is the main distinction between heritage tourists and other types (Timothy, 2011). Through heritage tourism, tourists can acquire new knowledge and satisfy their curiosity about historic places (Chen *et al.*, 1998). In terms of personal benefits, Chen *et al.* (1998) reported that the individual desire to visit heritage attractions is motivated by enjoyment of sightseeing, gaining some kind of spiritual reward, relaxation and recreational activities. Richards (2001) supported Chen's research which demonstrated that some tourists visit heritage sites not only because of their own interest, but also because they might wish to accompany friends and relatives.

Although there are some common reasons to seek out heritage exploration, different types of tourists desire different types of heritage experiences. Religious individuals may travel to sacred sites to seek blessings and affirm their faith; individuals who like archaeology and history may appreciate experiences at ancient ruins. Tourists at commemorative attractions might be motivated by a fascination with famous people. To visit an attraction associated with one's personal heritage might lead to a great sense of nostalgia on discovering one's roots. Krakover and Cohen (2001) concluded that adult tourists might have a stronger feeling about visiting built heritage attractions if they visited the heritage sites as children with school groups or their family, which may be due to the traditions and memories from their childhood days which have led them to develop a desire to see the heritage places again after they have grown up. Motivation may also come from the tourists who visit heritage attractions with the aim of understanding themselves and relating their experiences of heritage attractions to their personal lives. Thus, both the educational and other personal reasons for visiting heritage attractions are integrated to create various levels of demand for heritage tourism.

2.2.4.3 Tourism carrying capacity

One of the key concepts in relation to controlling tourism impacts is carrying capacity. The World Tourism Organisation (WTO) defines the concept of carrying capacity as:

“The maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic and socio-cultural environment and an unacceptable decrease in the quality of the visitors’ satisfaction.” (World Tourism Organisation, 1981:7)

Three forms of carrying capacity are summarized below: environmental (or physical) carrying capacities usually refer to physical space and numbers of individuals in a particular place. Ecological carrying capacity is a threshold measure, which if exceeded will lead to actual damage of plants and animals’ habitats (Busby *et al.*, 1996). ‘Perceptual carrying capacity is the level of crowding that a tourist is willing to tolerate before he or she decides a particular location is too full and then goes elsewhere’ (Mason, 2015:59). The perceptual carrying capacity is difficult to assess because capacity varies according to management strategies. The proposed use of

carrying capacity evolved with a better understanding of the relationship between the number of visitors and the impacts they cause (Pedersen, 2002). The existing research focuses on developing a 'setting limits' system to the number of visitors to built heritage attractions. However, there are feasibility studies to determine the point at which adverse impacts are likely to start in heritage sites.

The *Limits of Acceptable Change* (LAC) were developed based on management and stakeholder concerns. It focuses on limits to impacts rather than visitation (Stankey *et al.*, 1985). Built heritage management teams need to understand both the numbers of visitors in an area and possible impacts on natural and cultural resources. To establish an LAC system, management goals and objectives in relation to controlling impacts must be set by quantifiable measures, as well as considering inventory in order to reveal the degree to which current conditions measure up against desired conditions. Baseline data is significant to the establishment of realistic monitoring indicators.

2.2.5 Analysis of heritage tourism economic impacts between the UK and China

According to El Beyrouty and Tessler (2013:2-6),

“Heritage makes a vital contribution to the UK economy. It is estimated that built heritage tourism directly accounted for £5.1 billion in GDP in 2011. The combined direct, indirect and induced impact contributed £14 billion to GDP. Heritage tourism provides a significant number of employments in the UK. It is estimated that there were 134,000 jobs in built heritage tourism in the UK in 2011. The combined direct, indirect and induced impacts of built heritage tourism provided 393,000 jobs in 2011.”

Although China has an established tourism statistics system initiated by China National Tourism Administration to provide the number of visitor arrivals, no reliable data on heritage tourism economic impacts exist which can be accessed by the public. Nevertheless, heritage tourism plays a vital role in China; more than 60% of the leading tourism attractions in China are heritage attractions (China National Tourism Administration, 2009).

2.2.6 Designing economic sustainability indicators for built heritage attractions

The economic dimension is essential for heritage tourism as its function is to provide fundamental support when undesired change is taking place at a built heritage attraction, and most economic impacts are positive for both local residents and business investors, and also to help satisfy tourist demand. Sections 2.2.2 to 2.2.4 discuss the economic dimensions of heritage tourism in terms of employment, financial health and visitor numbers. This section considers the features of the above factors and translates them into sub-indicators which can be used to appraise sustainability performance. It also proposes a measurable index for scoring indicators (Table 2.2).

Table 2. 2: Economic sustainability indicators for built heritage attractions

			Indicators of Employment (2013/2014)		Indicators of Financial Health (2013/2014)		Indicators of Visitors (2013/2014)	
Sub Indicators			Percentage of built heritage tourist industry positions which provide permanent employment for the full year	Percentage of staff who come from the local town/city	Total income of an attraction divided by the attraction’s employee numbers	Total income growth rate	The actual visitor numbers compared to the designed tourism carrying capacity of the attraction	Tourist numbers of an attraction divided by the attraction’s employee numbers
Function			Measure how an attraction contributes towards stable employment	Measure how an attraction contributes to local employment.	Measure the human resources efficiency of an attraction by calculating how much profit/income can be earned by each employee.	Measure the financial growth ability of the attraction	Measure the performance of tourism carrying capacity of the attraction	Measure the attraction’s visitor number management by estimating how many visitors can be managed by each employee, within the attraction management aspect.
Scores	Sub-Indicator score levels	5	81-100%	81-100%	More than £75,000	More than 10%	In the capacity	More than 8,000
		4	61-80%	61-80%	£50,001-£75,000	6.7%-10%	0-10% of over capacity	6,001-8,000
		3	41-60%	41-60%	£25,001-50,000	3.4%-6.6%	11-30% of over capacity	4,001-6,000
		2	21-40%	21-40%	£1-£25,000	0-3.3%	31-50% of over capacity	2,001-4,000
		1	Less than or equivalent to 20%	Less than or equivalent to 20%	Less than or equivalent to £0	Less than or equivalent to 0%	More than 50% over capacity	Less than or equivalent to 2,000
	Results from analysis							
	Sub-Indicator Scores							
Weighting	Manager’s Weighting							
	Tourists’ Weighting							
	Third Party’s Weighting							
	Average Weighting							
Overall Scores								

2.3 Environmental Dimension of Heritage Tourism

2.3.1 Introduction

Built heritage generates economic benefits, but the economic exploitation of heritage tourism may lead to negative environmental impacts in various forms. To achieve the sustainability of built heritage attractions, the environmental dimension provides support with the long-term aim of development. Research into the environmental impacts of tourism has developed in various directions: for example, resource use (Energy Information Administration, U.S. Department of Energy (EIA/DOE), 1998); pollution and waste outputs (Seabloom *et al.*, 1989); habitat/ecosystem alteration and fragmentation (Andereck, 1993) and wildlife (Gartner, 1996). The conservation of heritage is promoted in order to preserve the historic fabric and the past that it represents. This research suggests that the three core dimensions of heritage in the context of conservation and planning are: preservation, conservation and exploitation. This chapter aims to discuss the concepts of heritage, environmental management and conservation (Figure 2.5).

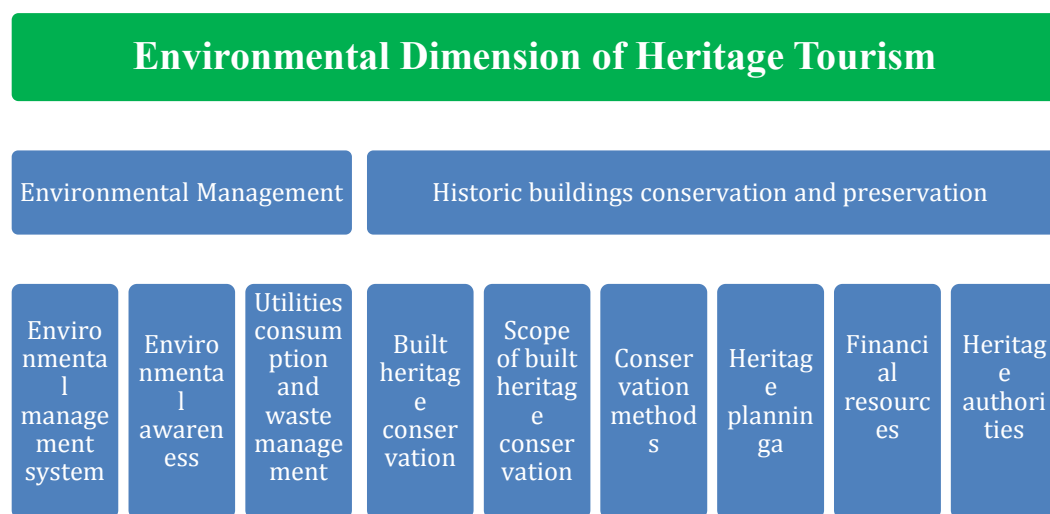


Figure 2. 5: Diagram showing the linkage of environmental dimension of heritage tourism in conceptual framework

2.3.2 Environmental management

The negative impacts of heritage tourism are that it generates pollution, increases litter, causes heritage road erosion and leads to damage to and disturbance of wildlife habitats (Andereck, 1993; Gartner, 1996; Glasson *et al.*, 1995; Solley, 1997). Mason (2009) argued that the revenue generated from tourism could maintain the attractions

and enhance the level of interest in and willingness to protect the environment. International organizations have been promoting initiatives designed to address environmental performance, such as: waste reduction, efficient energy consumption, local purchasing, and Environmental Management Systems (EMS) (Leslie, 2005). The effectiveness of environmental management is also very important. Orbasli (2000) suggested that certain tourist operators and attractions are trying to look green and environmentally friendly tourism is promoted to meet customer demand. The key factors which restrain environmental management practices are cost and time; the high cost of investing in environmental management would affect the financial performance of built heritage attractions, and the investment may generate only limited returns. This section narrows the scope of environmental management for built heritage attractions in terms of the application of EMS, environmental awareness, the use of resources and waste management.

2.3.2.1 Environmental management system

The application of EMS for built heritage attractions involves establishing a framework that helps a built heritage attraction achieve its environmental goals through evaluation, review, and improvement of its internal environmental performance. The evaluation and review are likely to identify opportunities for improving the environmental performance of the built heritage attraction. The United States Environmental Protection Agency (2015) commented on the basic function of an EMS as follows:

- *“Reviewing the organization's environmental goals*
- *Analyzing its environmental impacts and legal requirements*
- *Setting environmental objectives and targets to reduce environmental impacts and comply with legal requirements*
- *Establishing programs to meet these objectives and targets*
- *Monitoring and measuring progress in achieving the objectives*
- *Ensuring employees' environmental awareness and competence*
- *Reviewing progress of the EMS and making improvements”*

An EMS would help a built heritage attraction address its environmental regulatory demands in a cost-effective manner. An EMS is usually used to ensure a built heritage attraction maintains the environmental quality of built heritage attractions strategically, which can reflect a willingness to contribute to environmental protection, and environment policy can regulate an attraction's environmental behaviours at a management level. This research found certain numbers of built

heritage attractions have a formal environmental/sustainability policy, where one of the management team takes charge of environmental management implementation.

2.3.2.2 Environmental awareness

The environmental awareness of built heritage attractions and heritage tourism is promoted in the media, to educate and improve awareness of environmental management. Moore *et al.* (2003) suggested that the environmental performance of a destination is likely to influence the choice of attraction because of public attitudes. Awareness of environmental concerns is reflected in many sets of indicators by various organizations. For example, the English Tourism Council's (2005) Sustainable Tourism Indicators includes the number of businesses signed up to environmental management schemes. The WTO (2005) suggests taking sustainability and environmental management policies and the practices of tourism businesses as indicators of a sustainable destination. China integrated the assessment of environmental management standards and the enhancement at the management level in terms of the environment into the AAAAA attraction standard (Deng, 2007). Green Globe 21 takes the development of a sustainability policy as one of its indicators. Details of indicators will be explained more in section 7.2.

The recognition of environmental management can influence the effectiveness of environmental practice and implementation; environmental issues which receive a high level of concern are more likely to be addressed. Environmental practices which are easy to implement and low cost have a tendency to operate more smoothly.

2.3.2.3 Utilities consumption and waste management

Progress towards sustainable development requires a substantial reduction in resource consumption (Erdmenger, 2000). Internal environmental management for built heritage attractions mainly concerns utilities consumption and waste management. Reducing utilities consumption (water, electricity and gas) is a key measurable index to reduce the immediate cost of operations. The application of utilities consumption efficiency technologies received certain support from environmental professionals, but newly installed technologies are also likely to increase costs significantly. Energy efficiency technologies reduce consumption;

they include the low-energy light bulb, energy efficiency heating systems, roof water recycling systems and other applications. The implementation of energy efficiency technologies can be a dilemma for built heritage attraction managers. Passive Design Strategies, the Building Research Establishment Environmental Assessment Method (BREEAM), and Leadership in Energy and Environmental Design (LEED) approaches may be used at certain appropriate heritage sites to improve their consumption efficiency, but the high cost may deter/discourage heritage site managers.

Waste management receives high environmental awareness from the public in many countries. Authorities and consultants have suggested that built heritage attractions should separate recycling and non-recycling bins. To reduce utilities consumption and waste would not only benefit the attractions by reducing their costs, it would also contribute to protecting the environment. The indicators on reducing and considering utilities consumption, wastewater purification capacity and tourism urban waste generation were integrated into *the Spanish System of Environmental Tourism Indicators* by the Organization for Economic Co-operation and Development (OECD) (2005) for electric power consumption due to tourism; *Green Globe21 Indicators* include energy consumption, total energy consumed/equivalent persons, solid waste reduction and total solid waste to land fill/equivalent persons. The WTO (2005) includes energy management, sewage treatment, solid waste management and air pollution.

2.3.3 Historic buildings' conservation and preservation

Heritage faces the danger of being damaged after becoming involved in the tourism industry so the social-economic benefits from the tourism sector must integrate with heritage conservation and planning. Within this context, one of the main aims of heritage conservation is to maintain historic forms and the fabric of the built heritage, to restore major historically significant sites or to develop the existing sites. This section starts by introducing built heritage conservation in terms of its scope, conservation methods, planning policies, financial resources and operational agencies.

2.3.3.1 Built heritage conservation

Millar (1989) suggested heritage attractions are irreplaceable resources for tourism, thus conservation is a significant component of their management. However, the value of rural heritage conservation is growing, for the authenticity and availability of rural heritage is reducing due to rapid urbanization (Timothy and Boyd, 2003). The conservation should ensure continuing heritage authenticity (Orbasli, 2000). The system for built heritage conservation includes legislation, designation, funding and other attraction management approaches. Securing a future for historical buildings' conservation is highly dependent on funds, so tourism may contribute to built heritage conservation by providing financial support.

The heritage conservation systems in the UK and China have certain similarities and differences. Overall, both countries have legislation and authorities to conserve built heritage; however, their approaches to financial allocation and conservation management are different.

Awareness of heritage conservation has increased and has been converted into legislation in Western countries since the 1960s. Official heritage conservation frameworks were adopted in the Netherlands (1961), France (1962), Britain (1967), and Italy (1970) (Ashworth, 2011). The idea of conservation has then extended further, to less developed countries, in recent years. For example, China first adopted the *Principles for the Conservation of Heritage Sites* in 2002.

2.3.3.2 Scope of built heritage conservation

The key issue for the scope of built heritage conservation is the criteria for selection, which raises the issues of how to decide which categories of built heritage are eligible to be protected, what are the characteristics of historic buildings and the extent of the conservation regime to be considered. England is selected to present the heritage conservation system of the UK due to its representativeness.

England

Different sorts of heritage assets are selected and protected through national designation; the heritage conservation system operates under the *Planning (Listed Buildings and Conservation Areas) Act 1990*. The latest heritage selection guides for buildings and structures were published in 2007 and revised in 2011.

The typology of built heritage includes Scheduled Monuments, Listed Buildings, Local Designations, Registered Battlefields, Registered Parks and Gardens (English Heritage, 2011).

The scope of listed buildings is associated with the special architectural or historic interest of a building. Three grades are classified according to the architectural and historic interest of buildings in the UK :

- *Grade I buildings are of exceptional interest;*
- *Grade II* buildings are particularly important buildings of more than special interest;*
- *Grade II buildings are of special interest, warranting every effort to preserve them.*

The general principle for listed buildings' selection requires consideration of the factors of age and rarity; aesthetic merits; selectivity and national interest (Department for Culture, Media and Sport (DCMS), 2010). There are approximately 376,099 *Listed Building* entries in England (Historical England, 2015a). The scope of *monument* is often associated with archaeological heritage and includes unexcavated archaeological sites, upstanding remains, industrial and pre-industrial artefacts and structures (DCMS, 2010). Local designation identifies and manages the historic environment valued by local communities; it encompasses both local listing and conservation areas (English Heritage, 2012a). Furthermore, there are some other sorts of heritage conservation approaches that may include built heritage; for example, 43 important *English battlefields* are registered for conservation with the aim of promoting a better understanding (English Heritage, 2012b); over 1,600 parks and garden sites are assessed to be of national importance in terms of the *Register of Historic Parks and Gardens* of special historic interest in England (English Heritage, 2012c).

China

The *Law of the People's Republic of China on the Protection of Cultural Relics* was launched in 2002; it provides for heritage to be divided into moveable heritage and immovable heritage; the protection of immovable heritage is selected in the form of heritage sites from:

“..... among the ones protected for their significant historical, artistic or scientific value at the provincial, city or county level and designate them as major sites to be protected for their historical and cultural value at the national level, or shall directly designate as major heritage conservation sites, and report them to the State Council for verification and announcement.”(Law of the People's Republic of China on the Protection of Cultural Relics: Article 13)

The scope of immovable heritage includes heritage ruins, historic tombs, historic buildings, grotto ruins, temples, stone inscriptions, wall paintings and heritage sites. There were 766,722 immovable heritage sites registered with the *Chinese State Administration of Cultural Heritage* in 2011 (Chinese State Administration of Cultural Heritage, 2011). This law also requires that the cities and towns associated with sites of historic interest shall be verified by the *State Council* as famous cities of historical and cultural value.

2.3.3.3 Conservation methods

The *EU Core Data Standard for archaeology sites and monuments* was proposed by the Council of Europe (1999) that requires establishment of methods and approaches to identify immovable heritage in terms of lists, schedules, inventories and records of the information and data according to legislation (Pickard, 2001). In addition, the preservation methods highlighted in the relevant legislation includes appropriate supervision and authorization approaches.

England

The term ‘heritage conservation’ has been defined as the process of managing change to a significant place in its setting in ways that will best sustain its heritage values, while recognizing opportunities to reveal or reinforce those values for present and future generations (Historic England, 2015b: 71).

Methods of conservation include registration, listing, scheduling and inscription, which are founded on appropriate routine management and maintenance. More specifically, Historic England (2015) listed periodic renewal, repair, intervention to increase knowledge of the past, restoration, new work and alteration, integrating conservation with other public interests and enabling development as methods of heritage conservation.

- *“Periodic renewal of elements of a heritage site only if its heritage value is harmed and it cannot be recovered.*
- *Repair is employed for sustaining the values of a heritage site if the impact of a proposal can be understood comprehensively and there is sufficient information; the long-term impact may be benign based on previous experience; the alternative solutions are taken into consideration, and the proposal is designed for sustaining particular heritage values.*
- *Intervention in heritage should normally be acceptable if preservation in situ is impractical or the potential increase in knowledge cannot be achieved using non-destructive techniques or destruction is inevitable if the heritage is moved to another place or the value of a proposal is predicted to outweigh the loss of the primary resource.*
- *Restoration of a heritage site should normally be acceptable if the value of a proposal is predicted to outweigh the values of those that would be lost or the proposal is justified by compelling evidence of the evolution of the heritage or the heritage is not deemed to have historically-significant value or the proposal respects previous forms and the proposal is considered to be sustainable.*
- *New work or alteration to a heritage site should normally be acceptable if the proposal would not harm but would reinforce the heritage value and the proposal is considered to be sustainable.*
- *Integrating conservation with other public interests and enabling development.”*

Historic England (2015a: 51-62)

Listed buildings and scheduled monuments have no statutory position for inventories but non-statutory guidelines have been developed (Pickard, 2001). The *Heritage at Risk* programme undertaken by Historic England aims to identify endangered historic places and help secure them for the future. The scope includes 'designated' heritage assets that are at risk as a result of neglect, decay or inappropriate development (Historic England, 2015b: 1). The key statistics encompass:

- *“The number of each type of heritage asset that is assessed as at risk.*
- *The percentage of each designated asset type at risk.*
- *The number of additions and assets removed from the Register each year.”*

China

The central government, provinces, autonomous regions, municipalities, cities and counties have set up the necessary areas of protection, management signs and notices, and established records and inventories for historical and cultural sites. The special conservation office and full-time conservation officers must be authorized for control over these sites. The specific protective rules and regulations for the immovable heritage sites to be protected and uncertain heritage sites are formulated and implemented by administrative departments for cultural relics at county level or above.

2.3.3.4 Heritage planning

The planning system plays a significant role in heritage conservation, land-use, spatial planning, action plans, sustainability strategy and legal frameworks which are integrated together to assist in the conservation and regeneration of historic buildings (Historic England, 2015a). The planning system involves conservation information, advice, monitoring and limited grant aid to the public and regulates the degree of construction work relating to heritage conservation.

England

Britain adopted the *Ancient Monuments Act* for conservation in 1882, and has integrated conservation into its planning process since 1967 according to the *Civic Amenities Act* (Thurley, 2013). The achievement of heritage conservation in England has received wide social recognition over the last 120 years; the preservation and protection of heritage not only includes scheduled monuments, but also listed buildings, registers of historic parks and gardens, battlefields and world heritage sites (Historic England, 2015a).

Listed buildings are the major typology of heritage that can be reused in developing tourism by becoming tourist attractions, accommodation, restaurants or other facilities (Thurley, 2013). The protection of listed buildings from modification needs to consider the condition of the building; the cost of repairing and maintaining it; the value derived from its continued use; the adequacy of the efforts made to maintain the building in use and the merits of alternative proposals.

However, although the current system of heritage protection has worked well, it is not perfect. There is still a large amount of built heritage which is uncontrolled and some built heritage went unprotected before its historic value was irreparably damaged. *Planning Policy Guidance 15: Planning and the Historic Environment* advised local planning authorities on the treatment of historic buildings and the wider historic environment within the planning process; it was cancelled and superseded in 2010 by *The Planning Policy Statement 5 (PPS5)*. The Institute of Historic Building Conservation, 2016). *PPS5* was launched in 2010, representing a significant milestone in the drive towards a heritage protection system. The key aim of *PPS5* that was ‘the historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations’ (Department of Communities and Local Government (DCLG), 2012: 2). The objectives of *PPS5* listed three aspects to achieve historic environment protection by planning (DCLG, 2012: 3):

- “To deliver sustainable development by ensuring that policies and decisions consider the historic environment;
- To conserve England’s heritage assets in a manner appropriate to their significance;
- To contribute to our knowledge and understanding of our past by ensuring that opportunities are taken to capture evidence from the historic environment and to make this publicly available, particularly where a heritage asset is to be lost.”

Although the *Heritage Protection Bill 2008* underwent pre-legislative scrutiny in 2008, the *Planning Policy Statement 5* and *Historic Environment Planning Practice Guide* were introduced to integrate promotion and protection, and outline the steps for determining and recording significance. *Heritage Environment Records (HERs)* are required by the *Planning Policy Statement 5* including up-to-date and high quality historic environmental information. The local planning authorities are tasked with maintaining and ensuring HERs are used properly in planning and development. In order to deliver heritage protection reform, the *World Heritage Site Circular* was adopted in 2009, setting out the responsibility for *Designation and Scheduled Monument Consent* which was transferred from the DCMS to English Heritage. Training programmes for the *Heritage Partnership Agreement* and *Heritage Environment Local Management* were conducted in 2009 and are still continuing.

The Sites and Monuments Record to Historic Environment Record: Local Authority Case Studies was published in 2010; the online application form to designate a heritage asset was activated in 2010 (English Heritage, 2012d).

The New *National Planning Policy Framework (NPPF)* in England emphasizes sustainable development in the planning system; conservation of heritage can be viewed as part of the work to achieve sustainable development (DCLG, 2012). The NPPF replaced the previous Planning Policy Statements and other planning guidance. The new theme focuses on sustainable development and sets out twelve core land-use planning principles which underpin both plan-making and decision-taking (English Heritage, 2012e). Its section on *Conserving and Enhancing the Historic Environment* has superseded PPS 5, which required that local planning authorities should ‘set out in their Local Plans a positive strategy for the conservation and enjoyment of the historic environment; consider the significance of heritage assets and area justifies.’ Different adjectives are used with the word ‘weight’ to describe significance at different levels. For example, ‘great weight’ was introduced to conserve landscape and scenic beauty in these designated areas (Planning Practice Guidance, 2014). However, most policies and intent in the NPPF are very similar, thus the Practice Guide can still be used in the application of the NPPF. Furthermore, the implementation of the NPPF is still at an early stage, so this may not reflect its effectiveness so far.

China

The *Law of the People's Republic of China on the Protection of Cultural Relics* was adopted in 1992 and revised in 2002. The heritage conservation and planning considerations are clearly explained in Articles 16 to 20.

The planning policy and master plan must consider and include the requirements and practical situation of heritage conservation at all levels of government. Protective measures for historical and cultural sites must be formulated through consultation between the administrative departments for construction planning and heritage conservation.

No construction project operations (such as blasting, drilling and digging) are allowed to be conducted within major heritage conservation sites unless under special circumstances; all the projects must guarantee heritage safety, and the detailed plan must have approval permission from the higher administrative department for heritage conservation. Construction projects in major heritage conservation sites of national interest must be subject to consultation and approved by the provincial government, autonomous region or municipality and the administrative department for heritage conservation under the State Council.

A buffer zone for the control of construction is allowed to be delimited and announced around major heritage conservation sites. All construction projects within the zone must be submitted for permission to the local administrative department for heritage conservation before being submitted to the local planning administrative department for planning permission, and construction cannot deform the historical features of the major heritage conservation site. Facilities and activities are only allowed to exist when they do not harm the original historic environment and safety of major heritage conservation sites.

Construction projects should not take place in immovable heritage sites; if the construction projects must be conducted, the work must pay attention to protecting the original major heritage conservation site. Where an original major heritage conservation site is to be protected, the construction unit must propose protective measures with a feasibility study report to be submitted for approval to the local heritage administrative department for heritage conservation.

Where it is impossible to protect the original major heritage conservation site but it needs to be moved to another place or dismantled, its purpose must be submitted for approval to the administrative department for heritage conservation at the level of province, autonomous region, or municipality.

Local government at the level of county or above in famous cities of historical and cultural value, or famous neighbourhoods, villages or towns of historical and cultural value have the responsibility of designing a special planning policy for heritage protection.

2.3.3.5 Financial resources

Funding for heritage conservation has been seen as the fundamental aspect of heritage development. Conservation plans cannot be conducted without sufficient funding; however, the funding always seems to be insufficient when it comes from only one source, thus, alternative funding may come from government, grant aid, loans, reuse of the heritage for tourism and other possible sources.

England

Funding schemes for individuals and organizations seeking to repair, restore or convert for a new use any historic building in the United Kingdom has been provided by both public and private organizations, which include: Historic England (former English Heritage), Heritage Alliance, Heritage Lottery Fund, the Architectural Heritage Fund, Historic Scotland Fund and Environment and Heritage Service's Directory, and the National Heritage Memorial fund, which provides funding according to the National Heritage Protection Plan. Grants available to individuals are for:

- *“People who own or manage individual historic sites and need to repair them or understand them better;*
- *Local authorities with historic sites in their care;*
- *Organisations who want to encourage better understanding, management and conservation of the historic environment in its many and varied forms.”*

English Heritage, 2012f

Funding may also come from the income of the built heritage attraction's commercial activities. English Heritage and the National Trust have a wide range of heritage tourist attractions across England. Income may be generated from other services also supporting conservation funding, such as the reuse of heritage for accommodation, shops, conferences and other functions.

The Heritage Lottery Fund (HLF) aims to help people protect heritage across the UK. It was established in 1994, based on the Lottery-distribution arm of the National Heritage Memorial Fund (NHMF). HLF is a non-departmental public body which reports to and is subsidized by the Department for Culture, Media and Sport (DCMS). Although HLF reports to Parliament, it claims to be entirely independent of the Government (HLF, 2016). The National Trust is a charity which is completely

independent of government with over 350 historic houses, gardens and ancient monuments. Although professional staff manage the properties on a daily basis, the National Trust also recruits about 4.5 million members and 62,000 volunteers to serve on a range of groups intended to support its operations. More than 120 million people visit NT pay-for-entry and open air properties annually (National Trust, 2016).

Expenditure by heritage funding bodies is used for heritage conservation. Not all the funding comes directly from the government; some conservation funding comes from charities and public organizations. Expenditure by English Heritage was £182.2 million in 2011, £186.7 million in 2010 and £180.87 million in 2009 (English Heritage, 2012f). Expenditure by the Heritage Lottery Fund was £249.2 million, £225.7 million and £249.8 million in 2011, 2010 and 2009 respectively (Heritage Lottery Fund, 2013). Expenditure by the National Trust was £441.6 million, £406.1 million and £423.1 million in 2011, 2010 and 2009 respectively (National Trust, 2012).

China

Funding for built heritage conservation mainly comes from the public sector in China; a few private systems are available to support conservation funding. The central government provides special funding for different built heritage conservation schemes, and local authorities are responsible for distributing the funding. The majority of heritage funding schemes are supported by central government and set up for major built heritage sites across China. The priority is to support the urgent, unique character of built heritage programmes.

The local government at county level or above lists its conservation spend in the annual financial budget, but the funding may be extremely small or vary according to different governments. The cost of protecting, moving to another place or dismantling an original heritage conservation site must be paid by the construction unit.

Similar to England, there is some income generated from reuse of the heritage sites in the form of tourism, accommodation and other functions. Expenditure for heritage protection was about £7 billion in total in 2013 (Ministry of Finance of People's Republic of China, 2013).

2.3.3.6 Heritage authorities

Some special agencies have been established according to law and regulation for heritage conservation only, and some parts of existing authorities share the responsibility for integrated conservation with central and local government. Volunteers, private trusts, not for profit organizations and charities also provide support and are involved in heritage management, but the extent of their involvement varies between the countries.

England

At the central government level, DCMS is responsible for the identification and administration of scheduled monuments, and listed buildings; DCLG is responsible for conservation planning; Historic England responds to consultations operated by government departments on various planning and environmental matters within the built heritage environment for conservation; English Heritage Trust directly manages more than 420 historic properties (Department for Culture, Media and Sport, 2015) (Figure 2.6).

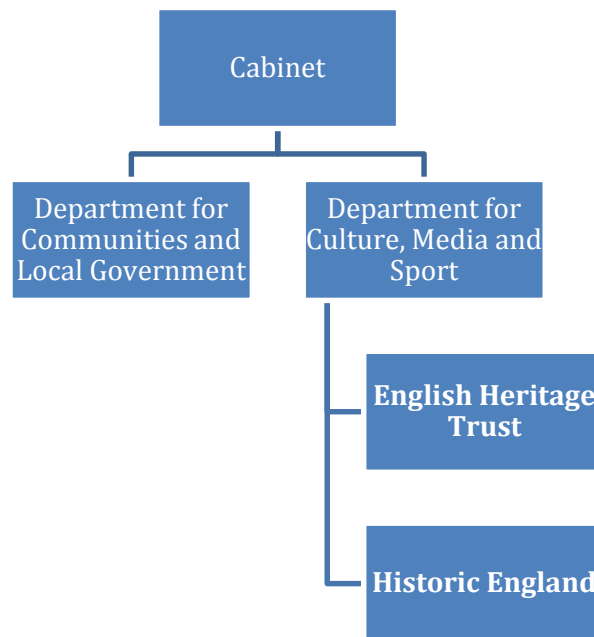


Figure 2. 6: the central government level executive agencies relating to heritage conservation in England

At the local authority level, conservation officers are employed by the local authorities and have a duty to protect built heritage and provide up-to-date information and maintain the listed buildings, scheduled monuments and other built heritage conservation as scheduled. Most administrative work is conducted by local authorities, such as responding to planning applications.

China

Various agencies are involved in heritage conservation management in China (Shepherd and Yu, 2012). The *State Administration of Cultural Heritage* takes responsibility for the conservation, protection and management of built heritage sites; and the *International Council on Monuments and Sites on World Heritage Management and Application*, work with the *Ministry of Housing and Urban-Rural Development* on heritage planning policy design and implementation (Figure 4.3). The *State Administration of Cultural Heritage* has branches at all levels of government in China; the branches take responsibility for the conservation, protection and management of the built heritage sites in their administrative districts.

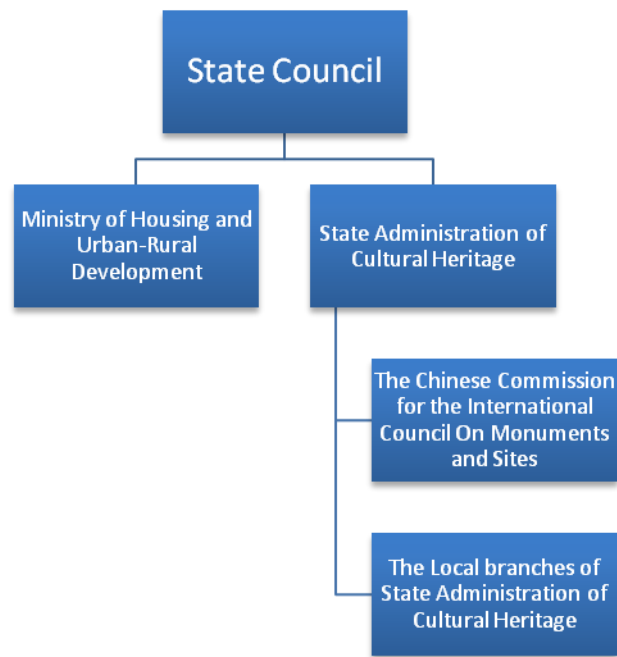


Figure 2. 7: the central government level executive agencies related to heritage conservation in China

The *Chinese Commission for the International Council on Monuments and Sites* belongs to the *State Administration of Cultural Heritage* who takes responsibility for built heritage conservation research methodology, promotion and education; it is a consultant organization for heritage conservation and protection.

2.3.4 Analysis of heritage conservation systems between England and China

The basic difference between England and China is the attitude to sustainable development; England highlights the importance of sustainable development and involves conservation policies and methods, especially in the new NPPF; while China has not yet realized the importance of sustainable development in heritage conservation and no planning and conservation regulations require sustainable development (Table 2.3).

Although the scope and methods of heritage conservation between England and China are similar, the political systems between the two countries differ in relation to executive agencies and financial sources. The government takes the majority of the responsibility for managing heritage conservation and provides financial support in

China; in England, there is a greater tendency to use a wider range of approaches by involving non-governmental organizations, such as the HLF and National Trust.

Table 2.3: Comparison of Heritage Conservation Systems in England and China

	England	China
Scope	Scheduled monuments, listed buildings, local designation, registered battlefields, registered park and gardens	Heritage ruins, Historic Tombs, Historic buildings, grotto ruins, temples, stone inscriptions, wall paintings and heritage sites.
Methods	Lists, schedules, inventories and records	Lists, schedules, inventories and records
Planning	The historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations.	The planning policy and master plan must consider and include the requirements and practical situation of heritage conservation at all levels of government.
Principle		
The Executive Agencies	Allow public involvement, but government takes the main responsibility, such as the Department for Culture, Media and Sport, Communities and Local Government, English Heritage and Local Planning Authority.	Little public involvement; the government takes the main responsibility, such as the State Administration of Cultural Heritage, Ministry of Housing and Urban-Rural Development, Chinese Commission for the International Council On Monuments and Sites
Financial Sources	Diverse, government. HLF, National Trust	Majority from government.

Source: English Heritage, 2012a; English Heritage, 2012d; English Heritage, 2012f; Department for Culture, Media and Sport, Communities, 2010; Shepherd and Yu, 2012

Although the heritage conservation of England has been supported by laws and policies, the conservation actions and management of conservation areas have been questioned for insufficiently dealing with the extensive and complex scope of heritage. This researcher holds the opinion that, as a result of a lack of fixed heritage conservation rules, the current system of heritage conservation leads to confusion in management and poor compromises for the public.

On the other hand, as a unitary state, the different levels of government in China take more responsibility for heritage conservation, and few private and non-government organizations (NGOs) are allowed to participate in heritage management. Meanwhile, although laws and regulations have been launched for heritage protection, the practical implementation of these is still sometimes outside of supervision and the public has not been sufficiently involved in the heritage conservation process.

The trend is for the built heritage estate to grow both in England and in China. While the trend in England has been stated earlier and is stable, China has witnessed

a fast growth in its built heritage estate in recent years to meet the demand of the tourism market and heritage conservation.

2.3.5 Designing environmental sustainability indicators for built heritage attractions

Tourism causes environmental impacts. Built heritage attractions attract many tourists as well as generating a substantial amount of waste, carbon dioxide, ecological changes and other unknown impacts. Compared to the economic benefits of the attraction as well as the destination, environmental impacts are usually negative and are treated as the cost of tourism. To achieve the sustainability of built heritage attractions, the environmental dimension must provide green support for long-term development. Sections 2.3.2 to 2.3.3 discuss the environmental dimensions of environmental management and historic buildings' conservation and preservation. This section considered the features of the above factors and translated them into sub-indicators by which to appraise sustainability performance. It also proposed a measurable index for scoring indicators (Table 2.4).

Table 2. 4: Environmental dimension

Indicators of Environmental Management (2013/2014)						Indicators of Historic Buildings’ Conservation and Preservation (2013/2014)	
Sub Indicators			Environmental management system	Water, electrical and gas consumption trends per annum	Waste recycling rate per annum	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	Attraction conservation system
Function			Measure the performance of the environmental management system in terms of quality, effectiveness and standard of environmental management in the attraction	Measure the performance of utilities consumption efficiency by assessing increase and decrease rates	Measure the waste recycling rate	Measure the investment in the conservation, preservation and restoration of attractions	Measure the performance of tourism conservation management in terms of heritage conservation, technologies, methods and management structures; the standards of the technologies, conservation quality and implementation
Scores	Sub-Indicator score levels	5	The quality, effectiveness and standard of environmental management in the attraction (Where ‘5’ is the best and ‘1’ the worst)	Reduced by more than 20%	More than 60%	More than 25% of total expenditure	Provides heritage conservation, technologies, methods and management structures (conservation management); the standards of the technologies, methods and management structures (conservation quality); the attraction implements efficiently (conservation implementation) (With the 5 is best and 1 is the worst).
		4		Reduced by 11%-20%	41%-60%	21-25% of total expenditure	
		3		Reduced by 0%-10%	21%-40%	16-20% of total expenditure	
		2		No change	1%-20%	11-15% of total expenditure	
		1		Increased consumption	Less than or equivalent to 0%	Less than or equivalent to 10% of total expenditure	
	Results from analysis						
	Sub-Indicator Scores						
Weighting	Manager’s Weighting						
	Tourists’ Weighting						
	Third Party’s Weighting						
	Average Weighting						
Overall Scores							

2.4 Social Dimension of Heritage Tourism

2.4.1 Introduction

Sociocultural impacts include changes to the way of life of residents of the destination area. Heritage tourism induces both beneficial and adverse social impacts; these social impacts appear to be qualitative, subjective and intangible (Haley, *et al.*, 2005). Built heritage attractions generate social impacts for the surrounding physical environment and to their stakeholders. This chapter will identify key social impacts from the literature, and analyse the concepts of stakeholder and social impacts (Figure 2.8).



Figure 2. 8: Diagram showing the linkage of social dimension of heritage tourism in conceptual framework

2.4.2 Social value of built heritage attractions

Built heritage is an irreplaceable cultural asset; it plays a significant role in:

- *Maintaining community identity;*
- *Enhancing the image of the area and local neighbourhoods;*
- *Contributing to the quality of life for residents and communities;*
- *Assisting with economic development and tourism initiatives; and*
- *Initiating conservation-led regeneration.* (Falkirk Council, 2006:2)

Heritage cannot only help communities establish their identity, it can also educate people through its cultural value. Heritage can be seen simultaneously as knowledge and as a cultural product (Graham, 2002). Lowenthal (1996) stated that heritage can interpret history and it confers social benefits and costs. Heritage can be treated as

the link between the contemporary and the ancient; it underpins social development and cultural evolution. For example, fine works of art have been preserved for our descendants for their unique cultural value.

2.4.3 Social Issues

Mason (2009) claims that tourism may lead to the revival of traditional arts or other handicraft activities, the revitalization of poor or non-industrialized regions, the revival of the social and cultural life of local people and the renewal of local architectural traditions. It may also lead to a loss of cultural identity, a demonstration effect, overcrowding in resort areas, and the reduction of the diversity of global culture (Whitman, 1999; and Deery *et al.*, 2011). Mason (2009) suggested that who is involved and the activities engaged in are the key influences on socio-cultural impacts. Assessing and measuring socio-cultural impacts is not straightforward and most research has relied on measuring the attitudes of respondents among locals and tourists. Social impacts are perceived differently by different individuals and organizations and have tended to be based more on qualitative than quantitative methods. Furthermore, it is difficult to identify the types of tourism which are involved and the characteristics of the communities in which impacts occur. Social assessment methods include the broad field of Socio-Economic Impact Assessment and more specific approaches such as Irritation Index (Doxey, 1975). The negative impacts include likely social issues in relation to the relocation of traditional communities, an increase in crime, enclaves of prostitution aimed at tourists and local young people being influenced by Western style (Gjerald, 2005). The key negative social impacts from tourism were identified by various parties (Mbaiwa, 2005). The major issues involved in heritage tourism are as follows:

2.4.3.1 Loss of authenticity

In order to meet the demands of tourists who seek a sense of heritage, a substantial amount of loss of authenticity may occur. The authenticity of built heritage attractions is becoming a debated issue worldwide.

Local shops become tourist souvenir shops, the high cost of maintenance and tourism demand forces some of the local shops to move out; instead, they are

replaced by tourist souvenir shops. The tourist souvenir shops tend to sell their products in the name of local production, while most of their products are not original. In Edinburgh for example, they may claim their products are made in Scotland, but when you buy, the label of the product may say *Made in China*. A *romantic* image is being built up of what has been well documented to feed the demands of tourists. All tourists wish to see something interesting and unique/original when they are touring. Yet, there are not many *original* products due to the global supply chain; some well documented fake images may be carefully designed to feed tourist demand. In Edinburgh, for example, one of the largest ‘local’ shops is the traditional woollen clothes craft exhibition. People want to try on kilts and take photos as souvenirs, so the shop provides this service and charges for it. However, if anyone can wear the traditional clothes of Scotland just by paying, then the sense of authenticity may disappear (Figure 2.9).



Figure 2. 9: Tourists in ‘traditional’ clothes of Scotland, 2012

The issue of loss of authenticity can be found in China. Take the World Heritage Site of Lijiang in China, for example. The commercial development of the site has led to authenticity issues as the majority of the business premises are owned by immigrants from other cities in China (Su and Teo, 2009). Thus, the local Naxi people’s wedding rituals are performed as entertainment for all visitors who buy tickets (Zhu, 2012).

2.4.3.2 Commercial community

As a result of tourism development, supermarket chains are replacing an increasing number of the local shops. Local shops firmly support local economies; they provide traditional culture and employment for local residents. Some small local shops and crafts move out because they can no longer compete with mass production by supermarket chains. Also, the higher cost of maintaining the local shops forces them to move out. The traditional commercial composition of small-scale labour-intensive workshops are often family-run organizations that are easily accessible, ensuring sales production takes place in the same area. They are good for locals because they need little running capital yet they provide much-needed employment and economic activity. When tourism emerges, they are forced to compete with the tourist traders and they may be unable to generate sufficient resources to maintain their shop units as the tourist traders take over. Therefore, the daily but locally needed shops are replaced by tourist shops.

Tourism drives historic towns to develop new patterns of land use to fit the demands of tourists, including retail, leisure and entertainment facilities and the revival of multipurpose use (Orbasli, 2000). However, if too much land use focuses on developing tourism, it may affect the residential land use if the city centre is overused for tourism.

Bicester is a historic market town in the Cherwell District of the county of Oxfordshire; its history dates back over a thousand years and was recorded in the Domesday Book (Victoria County History, 1959). This town is now home to one of the fastest growing retail outlets in Europe with sales of about £1,000 per square foot. Business opportunities around the historic town of Bicester have created many jobs for local residents, but the commercialised activities may be destroying the local lifestyle (Figure 2.10).



Figure 2. 10: Street in Bicester Village Outlet.
Source: Bicester Village Outlets, 2012

A similar commercial community can also be found in China, in the case of the Old Town of Lijiang. Large numbers of residential houses have been converted into business units after this small town was awarded UNESCO World Heritage Site status and this site has been developed into a tourist city leading to a large number of residents moving out (Su and Teo, 2009).

2.4.3.3 Culture clashes

Given that tourism attracts a large number of people from different geographical locations to the same destination, a new heritage tourist attraction is likely to bring different people together. Culture clashes can take place as a result of differences between religious groups, cultures, ethnic values, lifestyles and languages. The attitudes of certain stakeholders towards heritage tourism development are likely to lead to a growth of anti-tourist feeling beginning among local people.

2.4.3.4 Overcrowding and infrastructure pressures

Overcrowding not only congests built heritage attractions for tourists, it also disrupts local lifestyles. From the perspective of tourists, the quality of tourism in built heritage attractions will be affected by the range of tourism facilities and resources. Once the attraction is overcrowded, it will block some potential tourists and the attraction may lose popularity due to the fact that “nothing annoys some tourists more than the presence of other tourists” (Tunbridge and Ashworth, 1996:134).

In terms of local development, urban spatial use and functional changes for tourism services, local residents may be deterred from using central areas, and those residents

who are directly exposed to tourists may feel frustration and irritation. The cumulative effects of land use pattern changes may be an issue for residents (Gartner, 1996). From the perspective of built heritage attractions, a large number of tourists crowded into an attraction may contribute to the high cost of preservation and conservation of the heritage attraction (Deery *et al.*, 2011). The physical destruction of attractions is a primary impact of overcrowding (e.g. erosion and damage of surfaces of heritage, litter, traffic fumes).

As the result of time constraints for most tourists, the recognized ‘highlight’ of must-see built heritage attractions are intensively visited by mass tourists, while other surrounding less famous attractions are ignored (Orbasli, 2000). Every built heritage attraction has carrying capacity, “if that level is exceeded, the costs of tourism begin to outweigh the benefits” (Young, 1973:111), Jansen-Verbeke (1995: 26) listed the potential negative impacts caused by overcrowding:

- *“A decline in the number of overnight visitors;*
- *A growing absence of the original target groups;*
- *An over-capacity in the hotels, which leads to ‘price-dumping’ campaigns;*
- *A loss of quality of products and services;*
- *A decreasing interest in the city from project developers, investors and sponsors of events;*
- *An indifferent or even an antagonistic attitude of the locals towards tourism and tourists. ”*

The seasonal characteristics of tourism can cause a dilemma with the public facilities and services being inadequate in the peak season, but with there also being a need to maintain the infrastructure and staff during the off-peak season at high cost. As a result of an increasing number of tour buses, trains and cars, traffic jams become one of the primary issues to be faced both by tourists and local residents. Traffic jams cause disruption and destruction to the historic environment, not only immediately around built heritage attractions but also in surrounding historic towns. The fumes can blacken the surfaces of historic buildings and may lead to irreversible damage to heritage ruins. For example, narrow stone streets were designed for carriages in olden times; when modern automobiles are driven on such streets, they may be easily damaged, particularly by large delivery vehicles used to supply tourism retail outlets and particularly if speed limits are ignored and oversized vehicles attempt tight corners. Parking places are limited for tourism, both in town and on the street. Many

famous built heritage attractions are located in the centre of historical towns, and most of these destinations cannot provide large spaces for parking. If new parking spaces are built, green space may be lost and other public services for residents may be affected.

2.4.3.5 Social tension

Crime generation may increase due to the fact that many tourists bring large sums of spending money, and they often carry valuables. The large numbers of tourists also attract more drug dealing and robberies if local authorities do not manage this appropriately. For many positions in the emerging market, young children may be recruited because they are cheap and flexible employees. The potential commercial sexual exploitation of children has increased along with the growth of tourism in many areas.

2.4.4 Stakeholders

The social impact of heritage tourism needs more research (Haley, *et al.*, 2005). The existing work mainly concerns the social impacts on local communities. Residents are concerned about the poor level of economic returns from hosting tourists and that there is a need to improve community relations. Ross (1992) suggested that the impacts are felt more at community than individual level. Glasson (1995) emphasized that the advantages of tourism are recognized more keenly by those with tourism-related jobs, while those living in the city centre and those not employed in tourism feel the costs of tourism outweigh the benefits. Gilbert and Clark (1997) claimed that although heritage tourism creates job opportunities, these opportunities are not valued and they do not increase the overall standard of living. Haley, *et al.*, (2005) identified and examined the attitudes of residents in Bath towards tourism development and drew conclusions on the degree of local involvement. With more scope on the social dimensions, tourism can benefit an area by establishing more local infrastructure and improving social services such as banking, health and telecommunications (Mbaiwa, 2005).

2.4.4.1 Importance of stakeholders' participation

Participation and involvement in the conservation of heritage is very important,

“The residents are essential for the success of the conservation programme and should be encouraged. The conservation of historic towns and urban areas concerns their residents first of all” (ICOMOS 1987, Article 3).

Heritage tourism must work with stakeholders, or interested parties. The range of stakeholders of built heritage attractions includes international, national and local government agencies, non-governmental organisations, conservation and planning authorities, attraction management teams, scholars, communities, the media and other organisations who may be affected by built heritage attractions (Figure 2.11). international, national and local government agencies may provide the funding for conservation; international and national government may guide heritage conservation; local government has the responsibility to manage or supervise built heritage attractions directly or indirectly. Non-governmental organisations and other organisations that may be affected by built heritage attractions may also provide the funding and research support for built heritage attractions. Conservation and planning authorities guide and manage the conservation and planning policies and their implementation. Attraction management teams ensure the daily operation of built heritage attractions. Local communities who live around the attractions may affect their operation in terms of local planning, opening times, local employment and policies. Scholars and the media may support or criticize the actions of built heritage. Tourism-related public participation in the planning and management process is a vital approach to avoiding unnecessary conflicts.

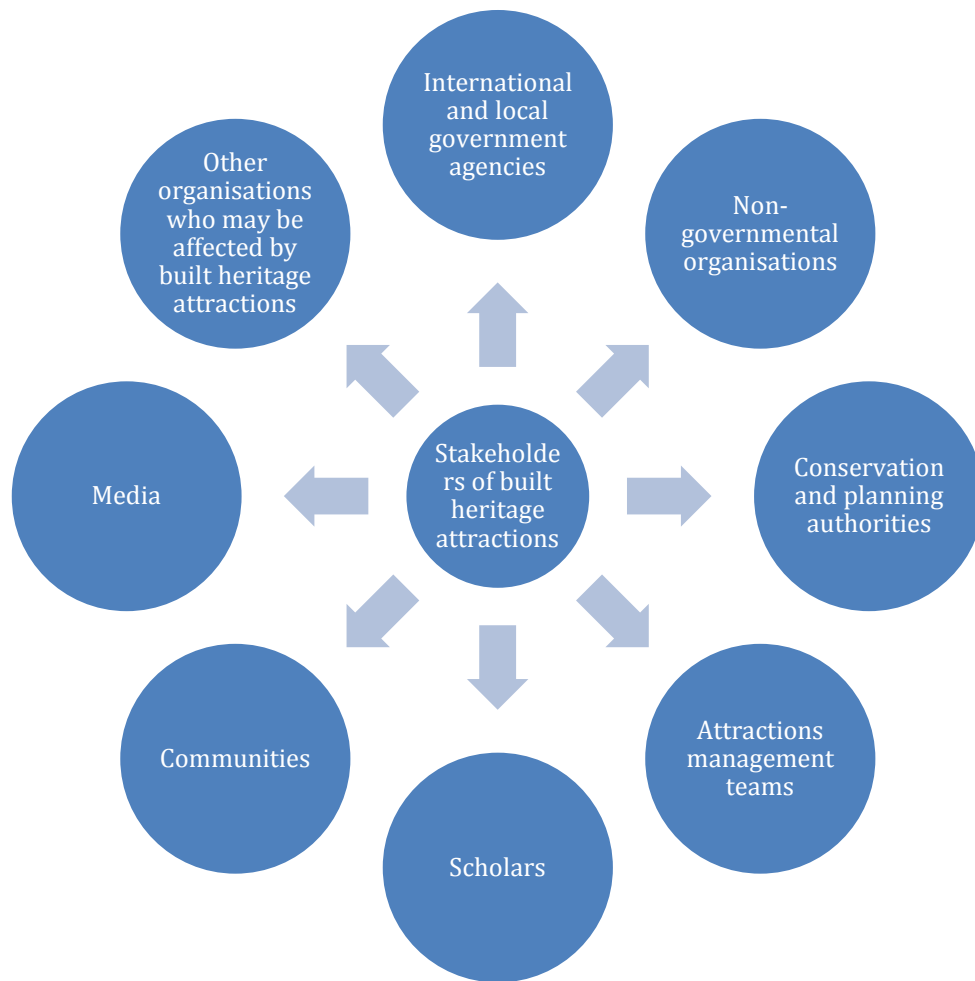


Figure 2. 11: Stakeholders of built heritage attraction

Pedersen (2002:29) identified five key reasons to involve stakeholders in decision-making.

- *“Involving stakeholders saves time and money.*
- *Failure to understand stakeholder positions can delay or block projects*
- *Stakeholders can inform managers about easily misunderstood local cultural differences.*
- *Stakeholders can help identify problem areas that may have been overlooked by the experts.*
- *Stakeholders can provide useful input regarding desired conditions at a site.”*

Sirisrisak (2009) argued that stakeholders’ participation in cultural heritage management would resolve development conflicts. The stakeholders’ attitudes would be a factor in measuring the social contribution of the heritage. In industry, Falkirk Council (2006) suggest that built heritage plays a significant role in enhancing the image of an area and local neighbourhoods and contributes to the quality of life for

residents and communities. A *Community Oriented Approach* on tourism was proposed, which concerns fostering community control and understanding community attitudes towards tourism (Getz, 1987; Hall, 2008).

2.4.4.2 Challenges in stakeholders' participation

The idea of stakeholders' participation poses challenges during implementation. Coeterier (2002) argued that criticism of the reliability of public opinion is due to the fact that insufficient information is provided to the public and they lack an adequate understanding of conservation. Townshend and Pendlebury (1999) doubted that stakeholders' perceptions of heritage conservation could extend the scope in planning legislation and policy. Yung and Chan (2010) examined issues related to public participation in built heritage conservation with two cases in Hong Kong; the findings showed ineffective public participation in heritage conservation.

The major issues in public participation in heritage conservation in Hong Kong were as follows:

- *“Different preferences on heritage conservation between the general public and the government.*
- *Inadequate knowledge for the public to evaluate the historic buildings.*
- *Conflicts of interest from the different stakeholders.*
- *Lack of effective public participation mechanisms (mainly consultations and workshops) and supportive government framework.*
- *Power disparity.”*

Yung and Chan, 2000: 460

Pedersen (2002) listed concerns about stakeholders' participation, including the fact that it is difficult to formulate clear ideas between different stakeholder groups; sharing views in an open discussion may be deemed a threat to one's power and control; certain critics are likely to dominate the participation process which leads to large numbers of people being overlooked; hierarchical structures may constrict stakeholder participation in decision making; public participation may tend to be a form of appeasement rather than a way to consult stakeholders; and an overemphasis on involving stakeholders can lead to a failure to identify certain effects.

2.4.5 Analysing of heritage tourism social impacts between the UK and China

Both the UK and China are facing similar social issues of heritage tourism. Heritage-led regeneration projects developed earlier in the UK than in China; an increasing number of Chinese developers have been looking for heritage-led regeneration opportunities in China recently. Two important differences between them are noted here:

- The conservation and maintenance of built heritage sites. Built heritage sites in the UK have a tendency to keep their original materials and fabrics as much as possible; the repair and maintenance cost for heritage projects are normally very high and time-consuming. In China a significant number of built heritage sites were destroyed after the 1950s; however recently built heritage sites have been treated as valuable treasures for booming local economies. In China the repair and maintenance of heritage projects are normally completed very quickly, but primary attention is often paid to the appearance of built heritage; the authenticity was doubtful in many cases as modern building technology and modern materials were used to rebuild heritage sites.
- In the UK, stakeholders' participation is encouraged for heritage-led regeneration projects. For almost all heritage sites the local community are consulted and involved as are a wide range of stakeholders before/during the conservation project. In China, since most heritage sites belong to the local government, the development of heritage involves a limited scope of stakeholders, mainly government officers, the developers and experts. Representatives of the local community may be consulted on certain projects, but their opinions and interests are largely ignored by decision makers.

2.4.6 Designing social sustainability indicators for built heritage attractions

The social impacts of built heritage attractions may influence local residents, tourists, business investors and other stakeholders. Tourism usually causes lifestyle changes for stakeholders as well as for the whole destination. It can have both positive and negative impacts, in the present and future, in the short term and long

term, for this generation and the next. Thus, measuring the social impacts of heritage tourism is important in order to avoid or reduce the negative impacts of tourism in advance. Section 2.4.2 to section 2.4.4 discusses the social issues and stakeholders of social dimensions. This section considered the features of the above factors and transferred them into sub-indicators by which to appraise sustainability performance. It also proposed a measurable index for scoring indicators. Social indicators have a tendency to be too complex to express by numerical indices. So the attitudes of third parties and visitors were used to measure the social performance of built heritage attractions (Table 2.5).

Table 2. 5: Social dimension

			Indicators of Key Stakeholders' Involvement (2013/2014)		Indicators of Key Stakeholders' Attitudes (2013/2014)	
Sub Indicators			Attraction's social involvement	Annual concessions for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	Attitudes towards attractions from third parties (local community, volunteers, and planning authorities)	Attitudes towards attractions from visitors
Function			Measure the performance of the attraction's annual concessions and its social contribution	Measure involvement with local stakeholders in terms of attitudes across all parties; locals involved when development decisions made; and the attraction contributes to the local area	Measure attitudes towards attractions from third parties	Measure attitudes towards attractions from visitors
Scores	Sub-Indicator score levels	5	Shows positive/negative attitudes across all parties; Locals are sufficiently/hardly involved when development decisions are made; the attraction contributes significant/few benefits to the local area (Where '5' is the best and '1' the worst)	More than 6% of visitors are concessions	The degree of attitudes towards attractions from third parties (local community, volunteers, and planning authorities)	The degree of attitudes towards attractions from the visitors
		4		4.1%-6% of visitors are concessions		
		3		2.1%-4% of visitors are concessions		
		2		0%-2.0% of visitors are concessions		
		1		None		
	Results from analysis					
	Sub-Indicator Scores					
Weighting	Manager's Weighting					
	Tourists' Weighting					
	Third Party's Weighting					
	Average Weighting					
Overall Scores						

2.5 Governance Dimension of Heritage Tourism

2.5.1 Introduction

If there were no interaction and integration among the economic, environmental and social dimensions, it would be difficult to achieve sustainability or to appraise it. The meaning of ‘governance’ was transferred from traditional management practice within organizations to extend to a larger scope in planning practice. It can refer to the arrangement of certain policies and services (Khan *et al*, 2015). To achieve a holistic assessment, appropriate management is the key catalyst to sustainable development in practice. The scope of heritage tourism governance comprises the external and internal management of heritage tourism. External management refers to planning, funding, regulations and links with other agencies and internal management refers to attraction management. Trouble-shooting ability involves both external and internal heritage management (Figure 2.12).

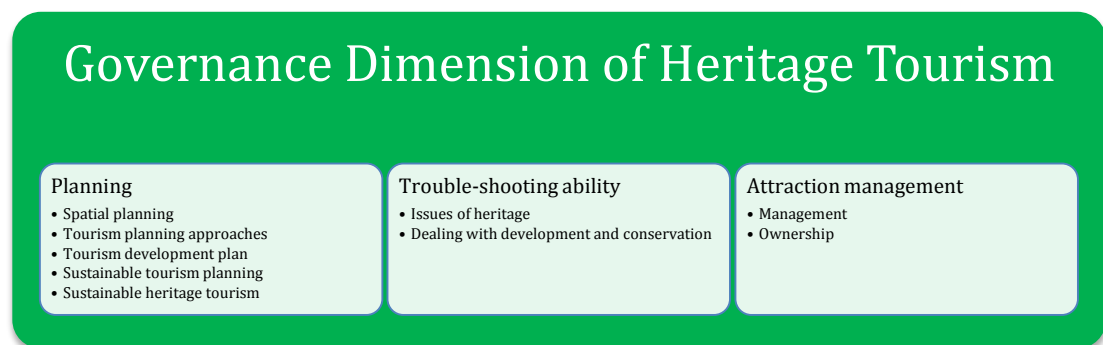


Figure 2. 12: Diagram showing the linkage of governance dimension of heritage tourism in conceptual framework

2.5.2 Planning

The growth of tourism may be rapid and sudden at historic destinations; the impacts of tourism may be unexpected in the absence of forward planning. Forward planning plays a significant role in the long-term success of a built heritage attraction, and it is an essential tool for tourism preparedness. Thus, this research has summarised the concepts of heritage, tourism and planning in Figure 2.13. Planning in this research considers various types of plans, land use and planning permission, tourism development planning, and sustainable tourism planning. England and China have different planning and legislation systems, which have been introduced in the

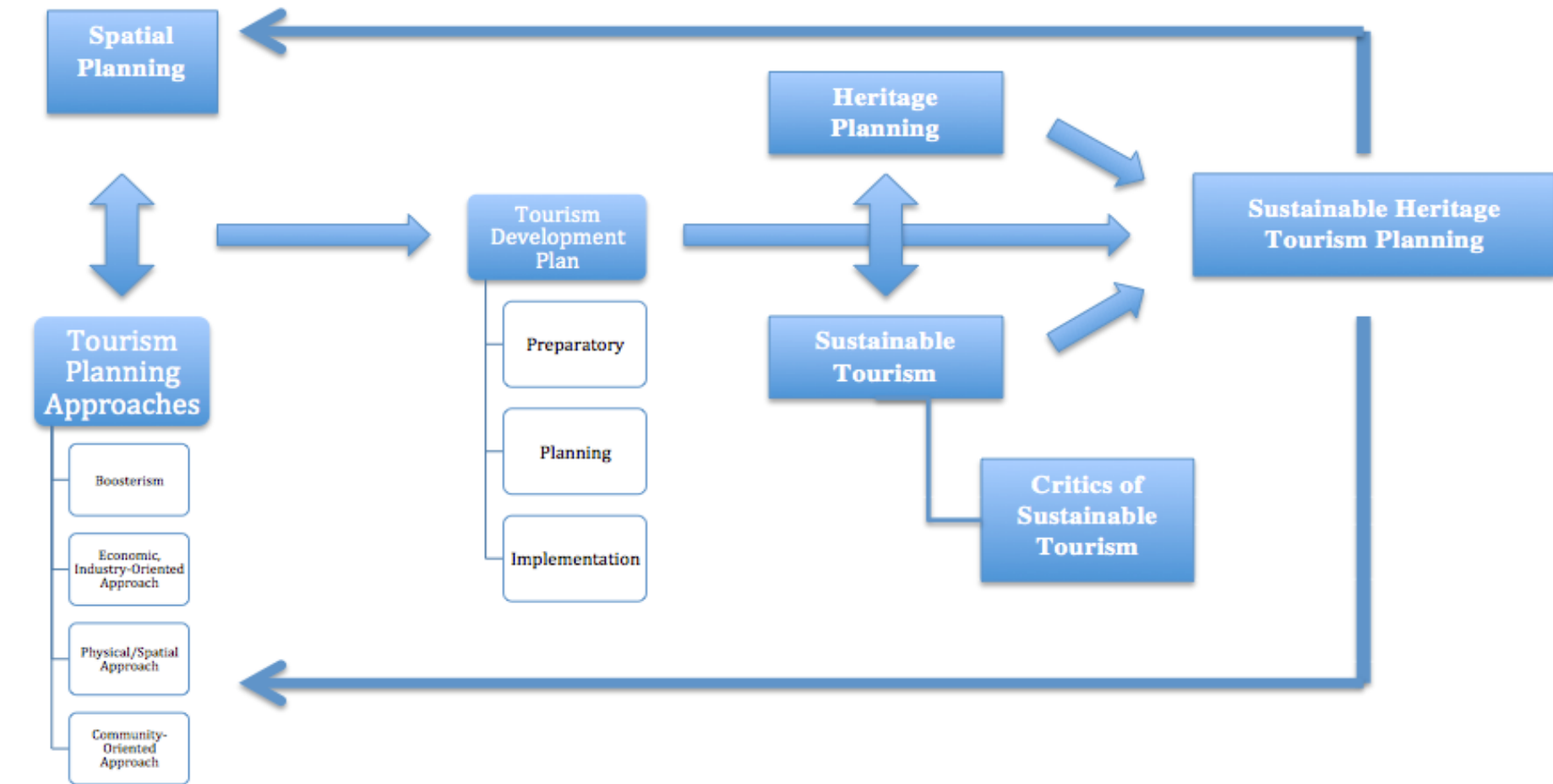


Figure 2. 13: Built heritage tourism planning framework

conceptual framework. Orbasli (2000:123) presented outline objectives for tourism planning in historical towns that is “to ensure long-term benefits and sustainability of tourism activities, while encouraging continuity in the urban environment.” However, sustainable planning may be facing similar criticisms to the concept of sustainability. Sustainable planning is defined so vaguely that it is too easy to make promises but without any real consequences (Laszlo, 2010). Therefore, the argument has been raised that sustainable planning may have failed to achieve its goal of diversity, having faced difficulties addressing a wide range of issues including planning scale, regionalism, planning, transportation and marketing.

2.5.2.1 Spatial planning

Within the process of spatial planning, tourism tends to become an issue if the tourism market has been over developed and generates too much pressure for local residents. To balance tourism development and local pressures, conservation becomes the interface between spatial planning and tourism (Orbasli, 2000). For example, in terms of land use, conflicts often come from how to balance the demands of different functions. Local residents may wish the heritage conservation area to be used to protect the heritage assets while developers may wish the land to be built on as more real estate for commerce. Therefore, success in spatial tourism planning decision makers needs to satisfy the demands of stakeholders, while ensuring overall maximum fulfilment of land use. When the land resource has been identified, the planning process involves the utilization and management of resources; community involvement also plays a vital role in planning (Murphy, 1994). In the realm of tourism, planning should consider the socio-cultural and physical impacts of any intervention, evaluate the demand for new land use and infrastructure, use spatial models for development, assess empty and redundant sites and project future development (Hall, 2008). The objectives for tourism development should balance the socio-cultural, environmental and economic elements, which must assist the built heritage attractions to move towards objectives that sensitively integrate conservation of built heritage attractions with tourism development. Orbasli (2000:163) presented the following outline objectives for tourism planning in historical towns:

- “To ensure long-term benefits and sustainability of tourism activities, while encouraging continuity in the urban environment.
- To develop and maintain a high-quality product;
- To develop a sustainable base for tourism growth
- To market the product to the ‘right’ market effectively;
- To maximise benefits and minimise impacts through competent management. ”

2.5.2.2 Tourism planning approaches

Tourism planning approaches can be described, historically, as going through four waves of development; each superseding the previous one to a certain extent. These are: 1) *Boosterism*, 2) *the Economic Industry-Oriented approach*, 3) *the Physical (or spatial) approach* and 4) *the Community-Oriented approach* (Hall, 2008). These concepts are listed in terms of the dimensions of tourism in Table 2.6 (Hall, 2008). The table shows assumptions, tourism planning problems, methods and models. According to Getz (1987:5), “such tourism planning traditions are not mutually exclusive, nor are they necessarily sequential.” Moreover, these four approaches occur in different backgrounds. Therefore, implementation depends on different situations.

Boosterism tourism development seems inherently good and of benefit to the local residents. However, this approach promotes a tourism attraction or destination without consideration of the potential economic, cultural and environmental effects, with all tourism resources being regarded as resources to be exploited with little consideration of the social impact (Hall, 2008). Accordingly, *Boosterism* can be described as a form of non-planning without considering the carrying capacity. Furthermore, local residents are often not consulted in the tourism planning and evaluation process, but they are strongly influenced directly by tourism development. Under *Boosterism*, tourism resources are exploited until they run out (Getz, 1987). Research within *Boosterism* concentrates on forecasting tourism demand, with the aim of promoting and developing an area rather than ensuring all levels of tourists’ demands are met (Hall, 2008). Nevertheless, boosterism, as the earliest tourism planning approach, was the first to introduce planning to tourism, and provided the foundations of the tourism planning approaches which followed.

Table 2. 6: Tourism Planning Approaches

Approaches	Tourism planning problems	Methods	Models
Boosterism	Number of tourists to be attracted and accommodated Convincing hosts to be good to tourists	Promotion Public relations Advertising Growth targets	Demand forecasting models
Economic, Industry-Oriented Approach	Can tourism be used as a growth pole? Maximization of income and employment multipliers Influencing consumer choice Providing economic value for externalities Providing economic values for conservation purposes	Supply-demand analysis Benefit-cost analysis Market segmentation	Management processes Tourism master plans Economic multipliers Hedonistic pricing
Environmental planning	Physical carrying capacity Manipulating travel patterns and visitor flows Visitor management Concentration or dispersal of visitors Perception of natural environment Wilderness and national park management Designation of environmentally sensitive areas	Ecological studies Environmental impact assessment Regional planning	Spatial patterns and processes LAC ROS TOS Destination lifecycles
Community-Oriented Approach	How to foster community control? Understanding community attitudes towards tourism	Community development Awareness and education Attitudinal surveys Social impact assessment	Ecological view of community Social carrying capacity Social multiplier

Source: Adopted from Getz (1987), Hall, *et al.* (1970), Hall (2008)

Under the *Economic industry-oriented approach*, tourism is regarded as a panacea for economic ills, as an industry which can achieve the goals of economic growth, improving the employment rate, attracting foreign revenue and improving the terms of trade and regional development (Hall, 2008). Local government and industry use a marketing and promotion-based approach to increase the numbers of tourists in order to generate the greatest profit. Hence, *the industry-oriented approach* places an emphasis on the economic impacts of tourism, with government support in terms of both regulation and finance (Lew *et al.*, 2008). Such a planning strategy pays attention to economic increases rather than regional development (Malecki, 2004). Although awareness of the opportunity costs and visitors' satisfaction are enhanced among local residents, few residents' opinions are adopted by tourism developers and managers. Research within the *industry-oriented approach* focuses on

marketing, such as *marketing segmentation*, *cost-benefit analysis*, *supply-demand analysis* and *development incentives*. The *industry-oriented approach* forms a relatively complete marketing system for tourism development, which is also responsible for tourism overdevelopment.

The *environmental planning approach* tends to be used in spatial planning and geographical components, with the aim of providing a spatial structure of activities (Hall, 1992). Tourism planning has increasingly sought to integrate the social and cultural impact during decision-making, trying to achieve sustainable development (Gunn and Var, 2002). This approach can also be deemed as physical or spatial planning to some extent, as it was conceived as an integrated and holistic approach to the environment with the aim of securing the long-term goal of sustainability.

Negative impacts from tourism came to be recognised in both developing and developed countries (Harrison, 1992) and an increasing number of individuals began to recognize the importance of the environment. Thus, the *community approach* highlighted the social and physical context within which tourism occurred (Eadington and Smith, 1992; Hall, 2008). Murphy (1994) suggested using an ecological approach to tourism planning; this is an approach focusing on local control processes, achieving a *win-win* model both for tourists and for local residents. One of the major obstructions to implementing a *community approach* is political interference (Singh *et al.*, 2003), which hinders community partnerships in the tourism planning and development process (Tosun *et al.*, 2003). In addition, community participation tends to function under the control of certain individuals and organizations who know how to use it to reach their overall goals. *Community-oriented* tourism planning shows the beginning of the realization of the important role of local residents' participation and public awareness.

The above approaches are defined as *conventional planning* by Gunn (2002: 24). Although the planning approach has developed, some of the planning approaches have often been oriented only to a plan, and have ignored encompassing all stakeholders in sustainable development.

2.5.2.3 Tourism development planning

Getz (1987: 3) defines tourism planning as a process, based on research and evaluation, which seeks to optimize the potential contribution of tourism to human welfare and environmental quality. Different from an urban development plan, the tourism development plan is not simply a blueprint or bound report that only refers to small and specific aspects of a town; rather, it incorporates many wider dimensions aiming to achieve sustainable development. It involves:

“An operational framework of development and implementation objectives, with established links to the urban mechanism from policy and physical planning to design, city centre management and marketing.”(Orbasli, 2000:109)

The tourism development plan can be divided into three main stages: the preparatory stage identifies the tourism resource and sets objectives; the planning stage involves the community and developer assessing the feasibility and desirability of different options; and the implementation stage maintains and monitors by periodic review (Figure 2.14).

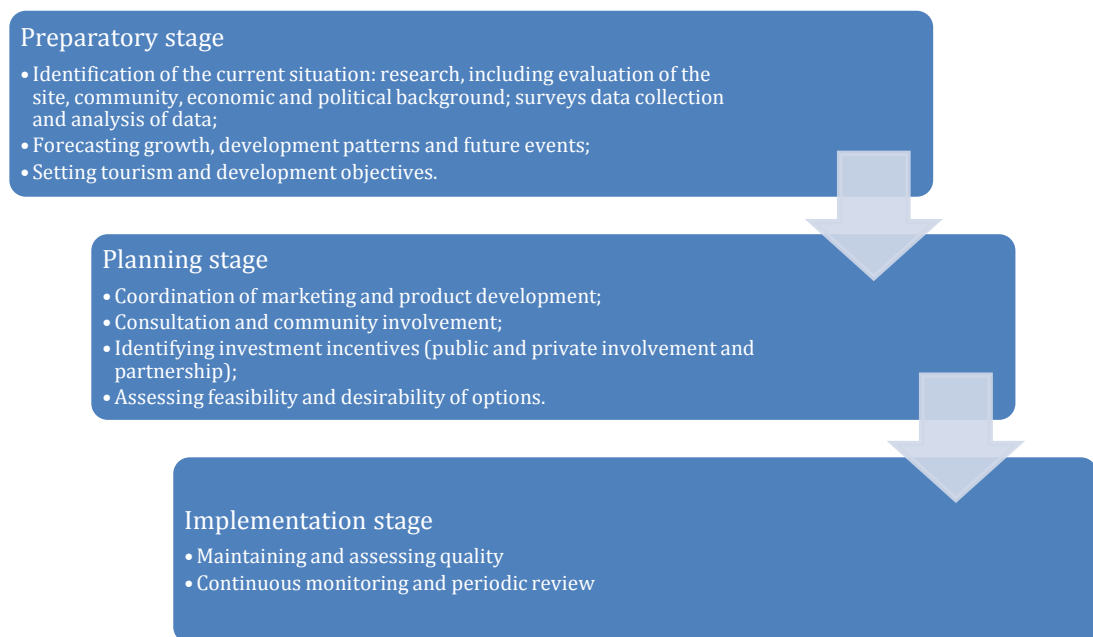


Figure 2. 14: The Tourism development plan stages

Sources: adapted from Page and Dowling, 2002; Feilden 1990; Orbasli, 2000.

In the planning process, efficient communication is important to decision making, as it enables all participants to understand each other well and reduce hindrances to

sustainable development (Hall, 1997). The communication structure involves all levels, between the visitors and community, developers and investors, regional and local authorities, built heritage attractions' owners and managers. The decision making process should be regarded as a forward thinking creative approach, avoiding disproportionate intervention and focusing on long-term positive change (Hall, 2008).

The strategic planning system involves a circular process of development and assessment, which requires a global understanding of the development of the heritage tourism industry and contributes to local satisfaction through excellent planners and residents' interaction (Murphy, 1994). Different individuals may have a different vision in the tourism planning process. Elected members and planning professionals may expect the planning decisions to be different from each other and neither of them is outstandingly qualified for the task (Hall, 2008). Thus, clear leadership should be established to identify the urgent demands of the development, maximising the requirement for multidisciplinary teams and balancing the conflict across all levels.

To ensure the quality of the planning process, the quality control mechanisms should include monitoring and evaluation. Monitoring and evaluation processes are conducted when the planning implementation is finished, to ensure the development is under control. The planning process should be able to react effectively to new occurrences; the objectives of planning should remain open to review and development.

2.5.2.5 Sustainable heritage tourism

Long-term heritage sustainable tourism should adopt a strategic approach, combining physical planning, heritage conservation and market planning. The policy should be carefully designed and efficiently implemented. Although the objectives for development may exist at different levels of scale, all of them should be working together towards sustainable targets.

There are two ways of implementing sustainable development for built heritage attractions: *market intervention* and *planning control* (Orbasli, 2000). *Market intervention* aims to attract *quality* tourists to visit attractions, while *planning control* aims to reduce the negative tourism impacts through various planning approaches. Both approaches are complementary and are integrated. Furthermore, the alternatives for sustainable development for built heritage attractions are still being explored. In terms of historic towns, the complexity of the planning system and economically orientated goals can hinder forward-looking decisive planning in order to earn more economic benefits.

Sustainable development heritage planning should start with an understanding of urban form, heritage, value, socio-economic impacts and market strategy. Then the planning decision is made based both on heritage conservation and tourism development dimensions. As a diminishing resource, heritage may be rapidly consumed. The planning strategy related to heritage tourism should:

- “*React effectively to immediate needs*
- *Be made more thought provoking, collaborative and continuous for sustainable and balanced development*
- *Become strategic and visionary for the future.*
- *Incorporate global, non-linear and visionary planning;*
- *Break down established time barriers;*
- *Bring together discipliners, organizations and individuals through partnerships;*
- *Incorporate action planning responding to a place’s immediate needs;*
- *Incorporate continuous assessment and quality control ensuring that action is a response to community, use and clients’ needs.* ”(Orbasli, 2000:151)

For sustainable goals to be achieved in heritage tourism, not only should the community be involved in decision making for tourism development, but also the planning and management process has to move from being a reactive to a proactive approach, incorporating action planning and flexibility to cope with change (Hall, 2008). However, sustainable tourism has developed by increasing awareness of environmental protection, under growing pressure and concern about the environment. Tourism operators and attractions are trying to look *green* and environmentally friendly tourism is promoted to meet customer demand (Orbasli, 2000). Sometimes, however, so called *green* tourism is only a marketing strategy to attract more ‘rich’ tourists to visit an ‘unspoilt’ attraction (Self *et al.*, 2010).

When integrated with heritage tourism, ‘greenwashing’ methods can apply in various forms; for example, using a built heritage attraction for tourist accommodation without having to provide all the modern facilities that may damage the historic buildings, such as air conditioning. However, heritage tourism as a complex industry involves complex resources, which may lead to major immeasurable and inevitable impacts on the environment. Therefore, the planning process must consider how to integrate environmental protection and tourism development.

2.5.3 Trouble-shooting ability

Many types of issues exist for the management of built heritage attractions. The key is how to deal with development and conservation, as well as promoting effective stakeholder participation. The negative environmental impact of tourism development can be minimized as it addresses, for example, physical and social carrying capacity (Mathieson and Wall, 2006), environmental thresholds (Hill and Rosier, 1989), and limits to or acceptable/desirable rates of change (McCool, 1994; Wight, 1998). Overall, Priskin (2001) suggested that tourism planning should be based on regional natural resources and capacity. Environmental impact and social impact assessments and statements are required under planning legislation when building large infrastructure projects and tourism resorts (Warnken and Buckley, 2000).

In Hong Kong, Yung and Chan (2010) have identified the various and conflicting interests of stakeholders leading to issues of public participation. These include the lack of an effective public participation mechanism, lack of knowledge of heritage conservation, and lack of an integrated heritage conservation approach for decision-making; propaganda and mobilisation of interest groups and power disparity.

2.5.3.1 Issues of heritage

To identify the issues surrounding built heritage attractions, the impacts of tourism should be analysed to narrow down both the negative and positive impacts. The issues tend to be incorporated into the negative impacts. There are three impact types of tourism that can be categorized (Table 2.7): economic impacts, environmental impacts and social impacts. Although tourism impacts can be analysed from many

Table 2. 7: Impacts of Heritage Tourism

Dimension	Author	Positive	Negative
Social impacts	Mason, 2009	Revival of traditional art or handicraft activity; improved employment rate; revitalization of poor or non-industrialized regions; revival of social and cultural life of local people; the renewal of local architectural traditions; the promotion of the need to conserve areas of outstanding beauty which have aesthetic and cultural value; encouragement of greater social mobility.	Loss of cultural identity; demonstration effect; overcrowding in resorts; over dependence on tourism, reduction in the diversity of global culture; lost authenticity
	Tomljenovic and Faulkner, 2000	Acts as a positive global force in the promotion of international understanding.	
	Krippendorf, 1987		Misunderstanding rather than understanding different people.
	Wall, 1997	Better opportunities for children.	
Environmental impacts	Mason, 2009	Generates revenue from visitors to maintain the attraction; enhances interest and willingness to protect the environment; stimulates measures to protect the environment; promotes the establishment of national parks; promotes the preservation of building/monuments.	Generates pollution, litter; contributes to congestion in terms of overcrowding of people as well as traffic congestion; footpath erosion; leads to damage and disturbance to wildlife habitats; leads to the creation of unsightly human structures such as buildings that do not fit in with vernacular architecture.
Economic impacts	Mason, 2009	Contributes to the local economy and job creation.	Increases in prices of land, housing and food.
	Lickorish, 1994	Foreign exchange earnings; government revenue, increased employment and regional development.	
	Pearce 1989		Leads to inflation; lost opportunity costs and over-dependence on tourism.
	Wall, 1997	Increase in jobs, higher incomes and tax revenues.	

other dimensions such as short term and long term, direct and indirect, reversible and irreversible and actual and perceived, the dimensions of positive and negative are most frequently and easily understood and used. Each category is so closely linked to

the others that the measurement of and planning for tourism impacts is rendered complex and difficult (Wall and Mathieson, 2006).

Key factors contributing to the nature of the impacts are the type of tourism activities being engaged in, the characteristics of the host community in the destination region and the nature of the interaction between the tourists and residents (Wall, 1997). Davison (1996) highlighted the importance of time and location in relation to tourism impacts, because the production and consumption of tourism take place in the same location. Meanwhile, the seasonality of tourism makes time important, which is caused by climate and holiday periods (Burton, 1995; Davison, 1996). Mason (2009) maintains that there are seven key factors that influence the impacts of tourism, including the location of the tourist attraction, the scale of tourism development (tourist numbers), the origins of tourists, tourism activities, infrastructure, the duration of the tourist attraction establishment (life cycle of tourist attraction) and seasonality.

The evaluation of positive and negative impacts may depend upon the value position of an observer; there may be considerable disagreement as to what is actually desirable or undesirable because tourism takes many forms and the communities in which it takes place have diverse characteristics (Mason, 2009). Take local residents as an example. Some residents who are involved in the tourism industry and who receive revenues and benefits from tourism directly or indirectly tend to believe that the positive benefits of tourism outweigh its negative impacts. Meanwhile, some residents who do not receive any benefits from tourism directly, but who suffer the same negative impacts, such as congestion, noise and pollution, tend to support the opinion that the negative impacts of tourism are more obvious than its positive impacts. Therefore, in this research, the concept of trade-off was introduced where some people tended to put up with some negative impacts in return for what they regard as desirable positive impacts.

2.5.3.2 Dealing with development and conservation

Among all the issues of built heritage attraction development within the existing literature, this research has summarised two key findings. The first is that all the impacts of heritage attraction development affect or relate to stakeholders, and the

second is that the core of built heritage attractions is balancing development and conservation.

Certain built heritage attractions achieve UNESCO world heritage status and similar recognition as a method for promoting heritage, and take the built heritage as a development resource. Authorities aim to meet the expectations of the selection requirement and promote the preservation through spatial segregation (Shepherd and Yu, 2012). Such actions are likely to lead to the displacement of local residents from their daily lives. This research found many residents in China were resettled into newly built towns when their previous villages were incorporated into the major development plan of a tourist area. When this happens, the homes of residents may be demolished to construct new tourist facilities. Although residents receive a certain amount of economic compensation for resettlement, there have still been many small-scale protests about compensation in recent years. On the other hand, another part of the local community in the tourism development area, such as officials and local government, may benefit from such a plan by the value of land increasing and attracting more visitors. This is a significant reason why most local authorities wish to promote heritage preservation and development projects.

The major development versus heritage conservation argument has generated heated debates between opponents and proponents both at domestic and international level concerning its impact on the environment, economy, stakeholders and cultural heritage. In the case of the construction of the Three Gorges Dam, the proponents' strong support for it was based on the idea that it would generate a great deal of electricity and would control flooding. Opponents argued this project would only provide 4% of the country's electricity and 1,282 above ground cultural heritage sites were reportedly identified and inventoried in the areas to be submerged (Liu and Guo, 1999). Since they lacked funding, many archaeological teams could only document the heritage sites before these were flooded. Another development issue is that when a built heritage site is transformed into an attraction, the daily life and environment of the area will change. In the case of Lijiang, which became a world heritage site in 1997, the small town has become one of the most popular tourist destinations in China. The local Naxi residents moved out and the loss of the local community has been strongly criticized. On the other hand, heritage development

regeneration projects provide the funding for heritage conservation. Certain numbers of heritage buildings are ruins and lack protection because of funding restrictions, although various sources of funding may support a few heritage sites in the public sector. Heritage regeneration provides heritage conservation by attracting visitors; visitors pay to protect and maintain heritage sites. Heritage tourism also helps locals in terms of employment and infrastructure, which are mentioned in Chapter 3.

2.5.4 Attraction management

Millar (1989) argued that heritage management is an essential ingredient for successful heritage tourism. It is efficient management to gather all the heritage resources together and reuse the buildings or other resources to make a built heritage attraction; thus, the attractions' management play a significant role in the sustainability of built heritage attraction development.

2.5.4.1 Management of built heritage attractions

The fundamental mission, the factors impacting decisions related to charging for entry and the role of heritage managers are major constraints relating to the management of built heritage attractions (Garrod and Fyall, 1989). This research has defined good management practice as concerned with understanding the mission of the development, enhancing visitor appreciation, providing clear interpretation and presentation, excellent facilities and services, well preserved heritage and caring for its employees.

Built heritage attractions should fully understand the mission of the development, to preserve the heritage and achieve the mission. To meet the mission of development would strongly ensure that the management has the operations under control and that the attraction brings benefits to locals and owners. Heritage conservation and preservation are the core aims of most built heritage attractions, the heritage attraction management would be able to provide conservation methods and technologies. Enhancement of visitor appreciation and the visitor experience involves managing the visitors carefully, and ensuring that their expectations are met by providing excellent facilities and services. Visitors are the main source of income for certain attractions, so ensuring visitor satisfaction will attract more visitors and

encourage them to spend. However, this is not to say that visitors' demands should be met at all costs, the key should be to satisfy visitors' reasonable expectations without harming the heritage or the community. Millar (1989) suggested that good heritage management should focus on heritage interpretation and presentation. Heritage interpretation would use a variety of media to make visits enjoyable and informative. Facilities and services are essential for any heritage site. The design and plans for facilities and services should, first, not harm the heritage, and secondly, meet the needs of visitors. Last but not least, the management of the built heritage attraction must care for employees. The employee is the key element providing the services and management. Caring for employees is part of a strategic approach to achieve sustainable development.

2.5.4.2 Ownership of built heritage attractions

There are three dominant types of built heritage attractions: private, public and non-profit (Timothy, 2011). The three types of attraction have different management models, aims, financial situations and visitor management approaches. All built heritage attractions are included in one of the above three types, but most built heritage attractions in China are owned by the state. Timothy (2011) commented that the primary aim of major private owned attractions and non-profit sector owned attractions is to increase income, while the primary aims of major publicly owned attractions are conservation and education. There is a lack of evidence to support whether these primary aims hold true, but heritage tourism potentially provides funding for conservation.

The ownership of an attraction also influences its operation; most government-owned heritage attractions are managed by the government directly or indirectly. Some public owned heritage sites are managed by professional Trusts. Trusts' management styles may be of benefit to the controller of the heritage when applying for external heritage funding, and to save tax in western countries. For example, a charity can get certain tax relief. Some owners of built heritage may establish a charity to manage the buildings, rather than establishing a limited company. In addition, charity organizations that own heritage attractions have a tendency to pay less tax but receive more public funds than limited companies who perform the same function in the UK.

2.5.5 Analysing of heritage tourism governance impacts between the UK and China

Both the UK and China use a planning system to regulate heritage tourism planning, although they have various and differing planning authorities which are mentioned in Chapter four. The concept of sustainable planning has been introduced into both countries. There are, however, differences between the issues they have faced and their management:

- Heritage tourism has developed gradually in the UK, although it is difficult to adequately maintain heritage development and conservation. When heritage development meets a problem, attractions in China have a stronger tendency to address these faster, while the same problem may take more time and cost than in the UK. However, China has a tendency to pay more attention to economic benefits, which harms the interests of the local community and destroys the heritage site in some cases.
- Ownership and governance of built heritage attractions vary hugely between these two countries. Built heritage sites belong to and are operated by different parties in the UK: government, private, charity and trust and other public sector parties. This research found trust-managed heritage sites have become a strong trend in the UK and they seem to have an increasing number of heritage sites. Meanwhile, in China, most heritage sites belong to the government or are operated by the government, directly or indirectly, rather than the private sector. However, few trusts take charge of heritage sites.

2.5.6 Designing governance sustainability indicators for built heritage attractions

If there were no interaction and integration among economic, environmental and social factors, it would be difficult to appraise the holistic sustainability performance of built heritage attractions. Therefore, governance indicators are employed to measure the management's ability to achieve sustainable development at a governmental and public services level. Section 2.5.2 to section 2.5.4 discusses planning, trouble shooting and attraction management within the governance dimension. This section considered the features of the above factors and transferred

them into sub-indicators by which to appraise sustainability performance. It also proposed a measurable index for scoring indicators (Table 2.8).

Table 2. 8: Governance dimension

			Indicators of Planning (2013/2014)	Indicators of Troubleshooting Ability (2013/2014)	Indicators of Attraction Management (2013/2014)
Sub Indicators			Planning Performance	The ability to balance the relationship between development and preservation	Attraction management
Function			Measure planning performance in terms of regulatory compliance, planning transparency, accountability and effectiveness	Measure the management’s ability in terms of attraction response, address and results.	Measure the performance of the management of the attraction in terms of development vision, financial forecasting, human resources and staff satisfaction
Scores	Sub-Indicator score levels	5	Regulatory compliance, planning transparency, accountability and effectiveness (Where ‘5’ is the best and ‘1’ the worst)	Where there are issues in relation to development and preservation, the attraction needs to respond to the issues quickly, address the issues practically, and the results should be acceptable to most stakeholders (Where ‘5’ is the best and ‘1’ the worst)	The attraction should have a clear vision for development, practical financial forecasting, use the staff and working resource efficiently and enable the majority of staff to describe themselves as satisfied with the attraction’s management (Where ‘5’ is the best and ‘1’ the worst)
		4			
		3			
		2			
		1			
	Results from analysis				
Sub-Indicator Scores					
Weighting	Manager’s Weighting				
	Tourists’ Weighting				
	Third Party’s Weighting				
	Average Weighting				
Overall Scores					

2.6 Summary

This chapter provides a broad overview of the four impact dimensions of sustainability appraisal for built heritage attractions. At the end of each section, realistic indicators based on these impacts have been developed to measure the sustainability of built heritage attractions.

Three key factors in the economic dimension of built heritage attractions have been identified. The discussion has also described many of the economic impacts of heritage sites. Economic impacts encompass the monetary benefits and the costs that result from the development and use of heritage tourism facilities and services. Mason (2015) claims that tourism contributes to the local economy and job creation, but it may also influence the price of land, housing, and food. Lickorish (1994) maintained that tourism can help a destination earn more from foreign exchange, can increase government revenue and improve regional development. However, Pearce (1989) argued that it might lead destinations to lose opportunity costs and to an over-dependence on the tourism industry.

In the environmental dimension, the aim of conservation and environmental protection is to achieve sustainable development by keeping heritage forms. Although tourism may harm the quality of built heritage, tourism may also contribute to the environmental management and conservation of heritage by providing economic support.

The social impacts of built heritage tourism and stakeholder theory in relation to built heritage attractions were covered in the social dimension. The various social impacts are both positive and negative. A range of potentially impacted stakeholder audiences were identified in relation to built heritage attractions, and the importance and challenges of built heritage attractions were introduced to cover the key existing research.

In the governance dimension, although planning approaches have developed, some planning approaches have only been oriented towards devising a plan and they have not involved all relevant stakeholders. In the existing literature, the governance

dimension of sustainable development appears to be of less concern than the economic, environmental and social dimensions. However, governance can be integrated with the above dimensions to achieve long-term results. The appropriate governance approach and the indicators of heritage should be fully noted and developed.

Furthermore, this research also identifies the interrelationship between heritage and tourism. There is a dichotomy between tourism development in built heritage attractions; on the one hand, as a product, tourism should respond to the market to attract more visitors to generate income; on the other hand, the arrival of large numbers of tourists may destroy the built heritage attraction and destination. The conflict between tourism development and built heritage conservation may be summarised in this research as follows:

- Plans for new development versus heritage conservation;
- Modernization versus maintaining the heritage attraction;
- Tourist culture versus local culture;
- The quality of the urban environment versus the quantity of tourists.

However, tourism also may feed development and conservation if it is properly managed; methods include tourism planning, management, and creative intervention. Heritage buildings can be viewed as both property and commodity; it is a resource that can serve tourism development, while the income generated through tourism can be used for heritage buildings' maintenance, conservation and management. Orbasli (2000) notes that securing a future for historical buildings' conservation is highly dependent on funds. Most funding for heritage conservation comes from central and local government; when they are facing budget cuts, the funding may disappear. Thus, when building, heritage conservation integrates with tourism, the income generated from tourists becomes more important as a financial resource. Although there has been funding from international organizations (e.g. UNESCO), it tends to focus on limited major built heritage sites rather than common community-based heritage. Investment in infrastructure may not directly benefit heritage conservation, but it may contribute to conservation by benefitting the local economies. For example, investment in roads to access heritage buildings may be costly and vehicles

driving on the new road may not pay for it, however, the new road can increase the accessibility for heritage attractions and attract more tourists, then more income may be generated for conservation.

From the perspective of community, urbanization is enhancing the quality of life of citizens and tourism should benefit local communities (Feilden, 1990). Thus, tourism should integrate with local development to enhance community value, then awareness of conservation may be raised within the local community and this may drive heritage conservation. Another direct benefit of tourism to heritage building conservation is the reuse of heritage buildings for tourist functions, particularly as tourist attractions, according to Orbasli (2000), benefits include:

- Enabling the heritage building to be restored;
- Providing a living function for the heritage building;
- Generating income to maintain the heritage;
- Decreasing the number of empty properties;
- Providing employment to maintain the heritage attraction;
- Retaining the authenticity of the buildings;
- Attracting more tourists.

Tourism may contribute to built heritage conservation. However, if the conservation is over-dependent on tourism development, the built heritage attraction may become a superficial exercise devoid of cultural significance. If the historic asset becomes over commercial, some buildings may be hastily restored and a series of pleasing facades may be put in place for financial gain (Mathieson and Wall, 2006).

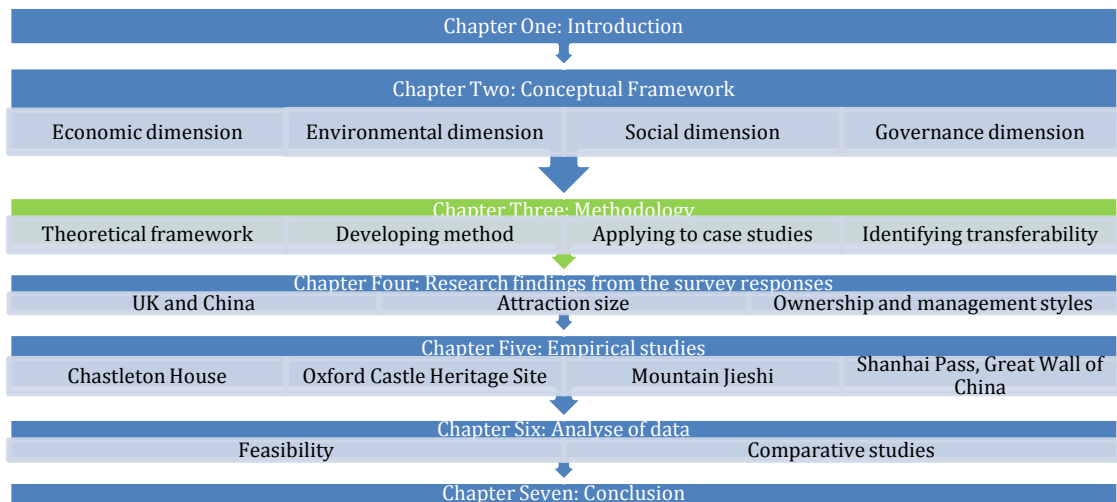
A built heritage attraction should not only be open to fulfil visitors' desires; it must remain independent from financial direction. Conservation planning for built heritage should be ahead of tourism development; otherwise the heritage buildings may be in danger of becoming solely a tourism product for income generation.

Chapter Three: Methodology

3.1 Introduction to the four-stage research strategy

Although there has been significant research on sustainability and built heritage attractions undertaken by scholars in recent years, the integration of these two research areas remains weak. Previous chapters have introduced the idea of assessing the sustainability performance of built heritage attractions in terms of economic, environmental, social and governance dimensions. This chapter introduces the main research methods used for the sustainability appraisal of built heritage attractions in this research. It demonstrates how different research methods have been used to address the aims and objectives. The process involved in the questionnaire survey, the pilot study, the selection of the main case studies and the case study assessment are described. Cross-national comparisons are employed to identify the similarities in and variations between sustainability management for built heritage attractions in the UK and China. This section introduces the approach to the synthesis of the results of previous work together with the case study data analysis and it discusses the strengths and limitations, reliability and validity of this research.

This research focuses on analysing and understanding the interaction between built heritage attractions and sustainability appraisal. This section describes the research strategies employed to establish the appraisal methods through four research stages (Figure 3.1).



Methodology

Stage one: Developing the theoretical framework

- Conceptual framework
- Questionnaire survey

Stage two: Developing a structured and procedural method

- Step one: Identifying the sustainability indicators
- Step two: Identifying the key stakeholders
- Step three: Assigning weights to the indicators
- Step four: Scoring the indicators
- Step five: Calculating the overall weighted scores

Stage three: Applying the appraisal methodology to four case studies

- In-depth interviews with key stakeholders
- Questionnaire survey for attraction visitors
- Data analysis

Stage four: Identifying the potential value, acceptability, implementation and international transferability of the developed approach.

- Feasibility study
- Comparative study
- Verification
- Validation

Figure 3. 1 Diagram showing the linkage between research steps and development of indicators in conceptual framework

3.2 Stage one: developing the theoretical framework

The theoretical framework was developed to understand the concepts of built heritage attractions and sustainability appraisal methodologies, in terms of examining the existing literature on economic, environmental, social and governance dimensions of heritage tourism governance and impacts, and identifying and explaining the strengths and weaknesses of the appraisal methodology. A literature review and questionnaire survey approach were used to establish the theoretical framework for appraising the sustainability of built heritage attractions.

3.2.1 Reviewing the literature

The aim of a literature review is to situate the current research within the body of existing literature (Neuendorf, 2002). A comprehensive literature review was carried out on existing academic work, reports, legal frameworks, policies and guidance from government authorities. Conceptually, it helped to identify the research impetus in relation to key aspects of the theoretical framework including the nature of built heritage attractions, the dimensions of sustainability and sustainability appraisal approaches.

As discussed in Chapter 1, built heritage is more than a real estate building; it has unique and multidimensional cultural value (Indre *et al.*, 2011). Built heritage can be divided into different categories based on its original purpose and it can generate direct, indirect and induced impacts (McDonald *et al.*, 2009). A trade-off is sometimes used, where negative impacts are accepted in return for what are regarded as desirable positive impacts (Mason 2009). The concept of sustainable development has been introduced to minimize negative impacts. A number of approaches are used to assess the economic, environment and social impacts of tourism. This research integrates the above assessment methods, making particular use of Multiple-Criteria Decision Analysis (MCDA) methods and the four dimensions of sustainability to develop an appraisal methodology for built heritage attractions.

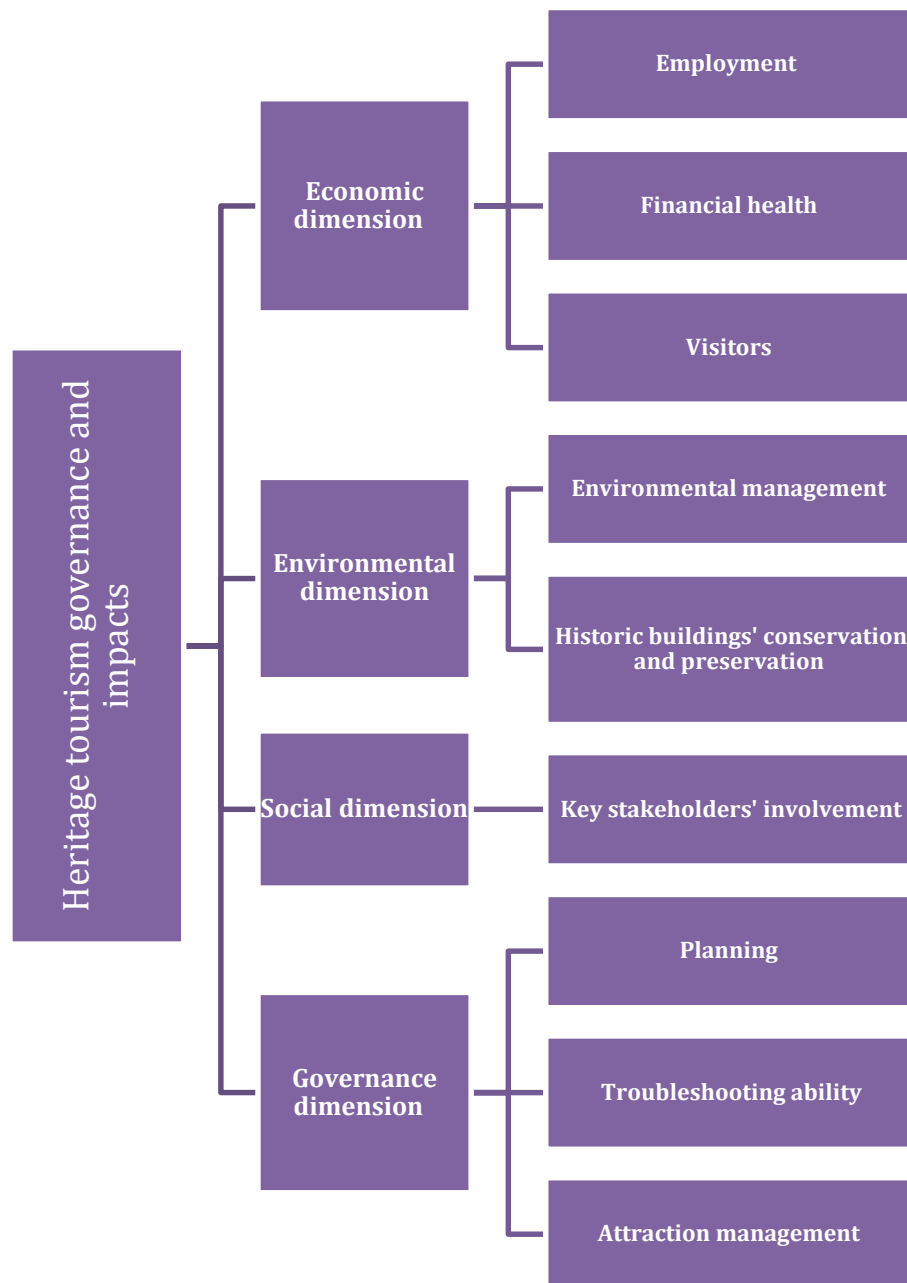


Figure 3. 2: The four areas of sustainability for built heritage

Four areas of sustainability for built heritage are suggested (Figure 3.2): the economic dimension (employment, financial health and numbers of visitors), the environmental dimension (environmental management system and heritage conservation), the social dimension (stakeholders' involvement and attitudes), and the governance dimension (planning, troubleshooting and management). In addition, the literature review has contributed to developing an initial conceptual framework, the research methods to be employed and the case study selection.

3.2.2 Initial questionnaire for built heritage attractions

Based on the results of the literature review, a questionnaire-based survey was designed to provide information concerning sustainability assessment for a substantial sample of built heritage attractions. A total of 93 attractions were invited to participate and 36 responded before the deadline in China and the UK.

The survey uses a short list of indicators based on a combination of material from relevant indicator sets in the literature, and feedback from practice. A set of fourteen sustainability indicators was designed specifically for assessing the sustainability of built heritage attractions. The indicators cover the four key dimensions of sustainable development, namely: economic, social, environmental and governance. The indicators are listed in Table 3.1, along with the reason for selection. The built heritage attraction in this research is defined as a place that is of special physical or cultural significance in the UK and China. For example, historic buildings include houses, museums and castles; ancient towns and cities, historical mountains with buildings, gardens and parks. The attraction sets were chosen to include a range of annual tourist numbers, attractions with different ownership and management styles, and small and large attractions. Figure 3.3 and Figure 3.4 show the location of the case studies in both countries.

A survey questionnaire (Appendix 1) was designed based on the key factors of sustainable development for built heritage attractions. The questionnaire was divided into three sections: (i) basic information on the attractions, (ii) the importance of the key indicators of sustainability, and (iii) planning and management for sustainable heritage attractions. Section (i) was used to collect background information on the attractions surveyed, which included the attractions' tourist numbers, human resources management, contacts and organizational structure. Section ii aimed to examine the relative importance of a set of built heritage sustainability indicators (Table 3.1) for heritage attraction site managers, which was selected by the researcher after reviewing various existing sets of sustainable tourism indicators. This section requested that participants rated the importance of the indicators from the most to the least important in terms of five levels: extremely important, important,

Table 3. 1: Sustainability indicators for built heritage attractions management used in the research

Dimensions	Indicators	Reasons for Selection
Economic	Providing local employment	Having qualified employees to provide services and to operate the facilities helps the attraction to achieve sustainable development. Meanwhile, one of the main benefits of a built heritage attraction is that it can provide employment, promote prosperity and transform the economic typology of the surrounding communities (Wall and Mathieson, 2006; Mason, 2009).
	Growth in annual gross income of the attraction	Heritage tends to be regarded as more valuable when it becomes a source of revenue. The utilization of heritage has shifted from a cultural and aesthetic appreciation to a way of increasing income. Income cannot directly improve sustainability, but greater income may mean that attractions have more resources to invest in sustainability (Ho and McKercher, 2004).
	External funding support for the built heritage attraction	External funds may be used as an index to measure support from other sources rather than tourism incomes.
	Efficient amenities	Green initiatives and new technology enable water and energy use to become more efficient, to promote a greener management model.
Environmental	Waste and pollution management	Waste management includes different factors to reduce negative environmental impacts as much as possible. Solid waste is the main pollution source to the environment and of the destination; a good environment will meet the tourists' sanitary demands and attract more tourists.
	Possessing an environmental management system	Environmental management provides a systematic, planned approach to the management of environmental issues at a built heritage attraction and should be adopted as part of the overall operations.
	Historic buildings' conservation and preservation	Conservation and preservation maintain and increase the value of historic buildings by keeping their original architectural elements and built forms. Integrating tourism and conservation at a public authority or government level is becoming a significant issue for stakeholders.
Social	Support for the attraction from local communities	Residents play an important role in sustainable development; destinations and attractions draw tourists who can benefit the residents. Most of the local residents react to tourist activities with positive attitudes.
	Local residents' satisfaction with the operation of the attraction	Mason (2009) suggested that the inclusion of local residents in the activities being engaged in are the key influences on socio-cultural impacts. Assessing and measuring socio-cultural impacts is not straightforward, and most research has relied on measuring the attitudes of locals and tourists.
	Traffic congestion during peak tourism periods	Traffic congestion during peak tourism periods will lead the local communities to make complaints about adverse tourism impacts.
	Involvement of key stakeholders	To establish a win-win system for heritage tourism and sustainable development, the views of all stakeholders should be considered and catered for as much as possible. Encouraging their participation will reduce resistance to further development.
Governance	Producing sustainability documents	Sustainability documents provide an appropriate heritage planning strategy to facilitate heritage tourism management
	Urban planning	Planning is a vital tool in regulating heritage conservation and tourism development, integrating the commercial value of built heritage attractions in proactive ways. When planning decisions are made they should be based both on heritage conservation and tourism development dimensions.
	Legal basis for heritage protection	All heritage development should ensure full regulatory compliance as the baseline of all actions.

moderately important, of little importance and unimportant. Section (iii) aimed to identify the participants' views of planning and management for built heritage attractions. Open questions were used to ask participants to comment on the sustainability indicators, and the importance of sustainability appraisal for built heritage attractions. The research targeted the management team of the attractions listed.



Figure 3. 3 Sketch maps of surveyed responding attractions in the UK Scale: 1:100km



Figure 3. 4: Sketch maps of surveyed responding attractions in China Scale: 1:375 km

In China, the researcher planned to use the Google Documents website, but it was not working in China, thus, the researcher visited the participants and the questionnaires were sent electronically via email and fax. A total of 27 attractions were invited to take part in this research, and 21 attractions responded. The response rate was 77.77%. The questionnaire survey was conducted via a fieldtrip undertaken between 12th July to 20th August 2013. The researcher forwarded 16 questionnaires to built heritage attractions via Xinjiang Uyghur Aptonom Rayoni Tourism Administration, Qing Huangdao City Tourism Administration and Yichang Planning Committee, and 14 completed questionnaires were received. The researcher visited ten built heritage attractions to meet the attractions' managers and asked them to fill in the questionnaire; six questionnaires were received. The researcher also telephoned the Ancient Town of Fenghua Xikou with regards to the questionnaire survey; the attraction manager refused to fill in the questionnaire online but he answered all the questions via a phone interview.

In the UK, the researcher employed the Google Documents website to design and distribute the questionnaire. In the event, 66 UK attractions were invited to take part in this research and 15 attractions responded. The response rate was 22.73%. Some attractions showed interest in this survey but did not follow up in time to participate. The online survey was conducted twice, the first time via a Google Documents Website between 12th to 28th June 2013 in the UK. The researcher sent an email with a link to the Google Documents questionnaire to 25 built heritage attractions; eight attractions filled in the questionnaire. Then, the second survey was conducted between 28th June to 12th July 2013 because of low response rates, and only Stirling Castle replied. In order to have more responses after the survey in China, another 17 attractions were selected. The survey requested the attraction managers to participate in an interview or fill in the questionnaire answering the same questions, and six attractions accepted. The list of responding attractions will be detailed in section 4.1.

The main participants in both China and the United Kingdom were professionals who work in built heritage attractions as managers who take charge of sustainable management. Most of the relevant contact details were publicly available through

the websites of public bodies. Other contacts were already known to the researcher from work, publishing and conferences.

3.3 Stage two: developing a structured and procedural method

This research considers various approaches for appraising the sustainability performance of four built heritage attractions and canvassing the opinions of stakeholders. The Multiple-Criteria Decision Analysis (MCDA) approach was selected so that it would incorporate the opinions of stakeholders and generate clear scores for the results. The sustainability appraisal methodology incorporates MCDA and sustainability indicators, to apply to the cases for assessment. MCDA is both an approach and a set of techniques, as described below:

“.....goal of providing an overall ordering of options, from the most preferred to the least preferred option. The options may differ in the extent to which they achieve several objectives, and no one option will be obvious best in achieving all objectives. In addition, some conflict or trade-off is usually evident amongst the objectives; options that are more beneficial are also usually more costly, for example. Costs and benefits typically conflict, but so can short-term benefits compared to long-term ones, and risks may be greater for the otherwise more beneficial options.” (Department for Community and Local Government, 2009:46)

MCDA can apply to many complex decisions. The most frequent application of this mechanism is solving problems that are characterized as making a choice from among a number of options. When it is used for group decision making, MCDA can ensure group members have the opportunity to express their decisions in terms of the values that each perceives as important. This research integrates, adopts and adapts existing *Multiple-Criteria Decision Analysis (MCDA)* methods for the sustainability appraisal of built heritage attractions. It can assess the sustainability dimensions of individual attractions/options from different stakeholder perspectives. It can also be used to compare results across the four case study sites and to compare progress over time at each of the sites. Central to the approach is the application of MCDA to built heritage attraction assessment; a six-step structured and procedural method for built heritage attraction sustainability appraisal has been proposed (Figure 3.5).

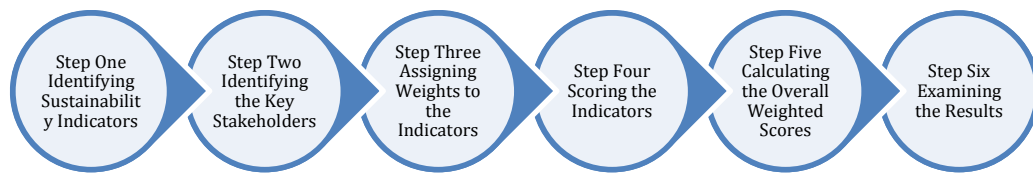


Figure 3. 5: Sustainability appraisal process for case studies

3.3.1 Step one: identifying sustainability indicators

This research reviewed many impact assessment approaches, and finds an indicator based approach is suitable for appraising the sustainability performance of built heritage attractions. However, almost all approaches are based on sustainability indicators, and the indicator is a powerful approach which results in more realistic, meaningful and achievable results, highlighting the different information and measuring why and how change has happened (Glasson *et al.* 2013). This chapter first reviews the range of possible approaches, before focusing on the indicator approach.

Carefully defined and applied appropriately, sustainability indicators can be the key to sustainability assessment (Agol *et al.* 2014). The sustainability indicators selected should consider multiple factors including scale, data, resource availability, and timing (Bauler, 2012; Agol *et al.* 2014). A good set of indicators for appraising the sustainability of developments should express any major concerns, the overall vision, targets and action; they should be simple, clear, transparent and understandable; reliable and practical; be holistic in terms of different dimensions, and provide scope for further development (Prakash and Hart, 2000; Perdicoulis and Glasson, 2011)

Deciding on sustainability indicators to incorporate in the MCDA is very much a matter of assessment, and can require some loss in the directness with which the value is expressed in order to facilitate measurement. The section below on scoring the options indicates measurement can include the direct expression of preference

assessment. These are further broken down into indicators, some of which can be measured numerically (such as monetary valuation), others can be rated and some can only be described in qualitative terms. Thus, identifying indicators requires consideration of the nature of built heritage and the core values of sustainable development. In this research, the assessment indicators have been classified in the questionnaire in terms of four dimensions: social, environmental, economic and governance. Six indicators and supporting sub-indicators have been selected after reviewing existing sustainability indicator systems and a questionnaire survey. The existing sustainability indicator systems reviewed included the Indicators of Sustainable Development for Tourism Destinations by the World Tourism Organization (2005), sustainability indicators by The European Environment Agency (EEA) (2002), a Spanish system of environmental tourism indicators (2005), a set of indicators for the management of sustainable tourism by The English Tourism Council (2002), assessment indicators formulated by the Tourist Attraction Rating Categories of China (2009), and Phillips' (2014) work on the adaptive capacity of the management of cultural heritage sites to respond to climate change.

An initial set of indicators was developed to apply to the pilot case study. A number of changes were made to the research approach after the site survey was conducted in the Chastleton House and Garden.

The set of indicators has been revised three times since it was developed. The first time was at the stage of designing the questionnaire for built heritage management professionals, the second was at the stage of assessing the pilot study at CH, and the final time was at the stage of assessing the three main case studies (Figure 3.6).

The final version of the indicators was developed based on conceptual frameworks of the economic, environmental, social and governance dimensions of heritage tourism, the results of the questionnaire survey among built heritage management professionals and from assessing the pilot study at CH (Figure 3.7).

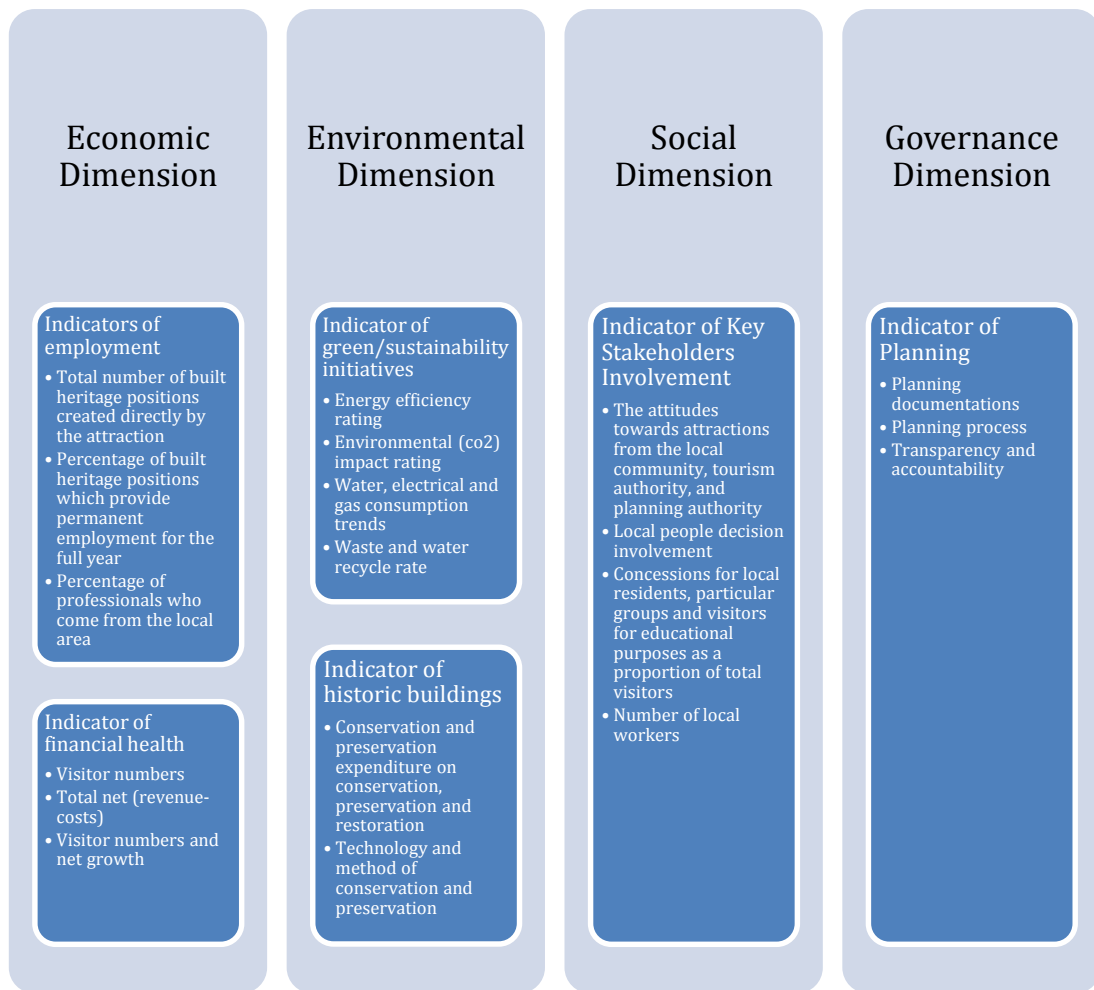


Figure 3. 6: Set of indicators for pilot case study

Some changes were made to the research approach after the site survey was conducted at Chastleton House and Garden. The initial indicators were developed from the attraction managers' questionnaire survey in 2013. The researcher could not collect full, accurate data according to the initial research design and this meant that a case study analysis became impractical. Therefore, the indicators were revised after the pilot study in relation to the scoring criteria and the weighting. Given that the revised indicators were based on the data collected from the pilot study, there were almost no changes to the scoring criteria for the indicators when applied to the other three cases, but the weighting was changed from the initial version. The researcher re-weighted the value of the revised sub-indicators by using the means of the other sub-indicators within the same dimension.



Figure 3. 7: Development of indicators in this research

Notes: Highlight means revised indicators than latest version

After the pilot study, in the economic dimension, the sub-indicator of *the total number of built heritage employment positions created directly by the attraction* was deleted because large attractions may provide more positions than small attractions which would lead to an unfair comparison. Instead, the study uses *the percentage of built heritage tourist industry positions which provide permanent employment for the full year* to represent this number. This puts large and small attractions on the same level, and the data on employee numbers could be collected and not influence the scores of the revised indicators. The indicator of *financial health* was divided into two sub-indicators: the indicator of *financial health* and the indicator of *visitors*. The sub-indicator of *visitor numbers and total net profit (revenue-costs)* was deleted as this might lead to an unfair comparison between large and small attractions by using the pure numbers. The sub-indicator measurements were changed into a percentage. For example, the sub-indicator of *total net profit of an attraction divided by the attraction's employee numbers* considers the relationship between visitor numbers and total net profit; the sub-indicator of *tourist numbers of an attraction divided by the attraction's employee numbers* considers the relationship between visitor numbers and employee numbers. All the above data were collected from the pilot study, and these indicators can be used as an index for measuring the financial efficiency of the employee contribution within human resources management. In other words, how much net profit would be contributed to an attraction by one employee, and how many visitors would one employee be able to manage? The revised sub-indicator of *actual visitor numbers compared to the designed tourism carrying capacity* of the attraction considers the ability to manage the number of visitors to an attraction. In the final research, employment, financial health and visitors were selected to be the indicators for assessing the economic performance of built heritage attractions.

In the environmental dimension, the wording of the indicator of *green/sustainability initiatives* changed to the indicator of *environmental management* because the latter suggested a more specific focus on environmental management. The *sub-indicator of energy efficiency rating* and *environmental (CO2) impact rating* received more popularity in the housing assessment sector in the UK, but not all historic housing has both ratings. These two *sub-indicators* were then merged into the *environmental management system* because data on the latter would be more accessible and it

would be practical and more easily understandable for the majority of stakeholders. The *indicator of historic buildings' conservation and preservation* changed from expenditure on conservation to the percentage spent on conservation as a proportion of total expenditure for the same reason as above; it was thought that a percentage rate comparison between different sizes of attraction would be fairer than just using the numbers. However, it was still difficult to collect data for this indicator. The question of conservation and preservation technologies also presented a challenge during data collection and it did not cover the full scope of attraction conservation, so it was changed to 'attraction conservation system'. In the final research, environmental management and historic buildings' conservation and preservation were selected to be the indicators for assessing the environmental performance of built heritage attractions.

In social dimension, the *indicator of key stakeholders' involvement* was divided into two sub-indicators to improve its measurability: the *sub-indicators of social involvement* and the *sub-indicators of annual concessions to local residents, particular groups and visitors for educational purposes as a proportion of total visitors*. The *sub-indicator of local peoples' involvement in decisions* was changed to the *sub-indicator of social involvement* to enlarge the scope of local influence. The *sub-indicator of the number of local workers* was deleted because it overlapped with indicators in the economic dimension. The *indicator of key stakeholders' attitudes* includes two sub-indicators on attitudes: *attitudes towards the attractions from third parties (local community, volunteers, and other authorities)* and *attitudes towards the attractions from visitors*. In the final research, key stakeholders' involvement and attitudes were selected to be the indicators for assessing the social performance of built heritage attraction.

In governance dimension, the *indicator of planning* was divided into three sub-indicators: the *indicator of planning*, the *indicator of troubleshooting ability* and the *indicator of attraction management*. It was difficult to collect data on the sub-indicators of *planning documentation, planning process, transparency and accountability, effectiveness and efficiency* in the pilot study, and the criteria for measuring the planning indicators were difficult to set up and apply. Thus, the *sub-indicator of planning performance* was used to replace all the previous indicators in

planning, to consider the performance on regulatory compliance, planning transparency, accountability and effectiveness. Also, a new *indicator of troubleshooting ability* was added, with the aim of measuring the ability to balance the relationship between development and preservation of an attraction using the following criteria: in relation to issues of development and preservation, the attraction can respond to issues quickly, address the issues practically, and the results will be acceptable to most of the stakeholders. A new *indicator of attraction management* was also added, with the aim of measuring the attraction's management using the following criteria: The attraction should have a clear vision for development, practical financial forecasting; it should use staff and working resources efficiently, and maintain staff satisfaction with the attraction management. In the final research, planning performance, the ability to balance the relationship between development and preservation and attraction management were selected to be the indicators for achieving holistic assessment of the governance dimension.

3.3.2 Step two: identifying the key stakeholders

Key players are chosen to represent all the important perspectives on a given subject for the purpose of the analysis. These people are often referred to as stakeholders: people who have an investment, financial or otherwise, in the consequences of any decisions taken. The stakeholders for the sustainability appraisal of built heritage attractions include attraction managers, local planners, tourists, and representatives of local residents. In some cases, the environmental manager/advisor may also be involved in the environmental planning. They have also been selected as stakeholders. For each case study, the researcher interviewed attraction managers; third parties (planners, local communities, or scholars) and distributed 50 questionnaires to visitors to the attractions. The researcher believes the visitor sample of 50 questionnaires adequately reflects the views of visitors and this was a practical sample size for data collection purposes. A larger sample than 50 would have increased the data collection costs and timings and fewer than 50 copies may not have fully reflected visitors' interests.

3.3.3 Step three: assigning weights to the indicators

This step aims to assign weights to each indicator to reflect its importance. Equating the units of preference is formally equivalent to assessing the relative importance of the scales. The swing weighting method was employed for eliciting weights for the indicators. These swing between 1 to 5 on a preference scale and stakeholders are encouraged to take into account the difference between the least and most preferred options. All the participants in each case study were requested to weight the importance of the indicators when responding to the survey; the results for the weighting were used in the future assessment stages. For example, as all the sub indicators have five degrees and can represent scores from 1 to 5 (e.g. Unimportant = 1, of little importance = 2, Moderately Important = 3, Important = 4, and Extremely Important = 5). Then, presume a participant marks one sub indicator A as ‘extremely important’ by giving it a score of 5, then marks another sub indicator B as ‘important’ with a score of 4 and so on.

3.3.4 Step four: scoring the indicators

This step aims to convert the indicators into scores according to their relative strength of preference. Based on data collected from previous research, for each sub indicator, the most preferred option is assigned a preference score of 5, and the least preferred a score of 1. Scores are assigned to the remaining options so that differences in the numbers are representative of differences in strength of preference. The details of the indicator measurement criteria are summarized below based on the six indicators and their sub indicators. These are further broken down into indicators, some of which can be measured numerically (such as monetary valuation), others can be rated and some can only be described in qualitative terms. The weighting sheet and interview questions for stakeholders are attached in the appendices.

3.3.5 Step five: calculating the overall weighted scores

Based on data and information collected from previous stages, each attraction is assigned an overall score for sustainability performance. In other words, the researcher multiplies the score for an indicator by the importance weight of the indicator; this calculation is carried out for all the key indicators and then the sum of the products is calculated to give the overall preference scores for that attraction. The

equation for the overall preference score for each attraction is as follows: Overall preference scores for an attraction = scores of key indicator one $\times$ weight of the indicator + scores of key indicator two $\times$ weight of the indicator + ...+ scores of key indicator six $\times$ weight of the indicator and so on.

3.3.6 Step six: examining the results

Such an assessment system with MCDA can yield results that need to be discussed before decisions are taken. It may be necessary to construct a temporary decision making system to handle unexpected results and to consider the implications of new perspectives. If there are no discrepancies between the MCDA results and the decision maker's intuition has been taken into account, it is tempting to demean the final analysis and find other evidence to support decisions. However, if discrepancies exist, further research should be conducted to re-examine the impacts and data previously employed and to re-allocate the data through the results to ensure that subsequent decisions are taken with full awareness of possible impacts. This step documents the results from the case studies and previous research, analyses the results of previous research, reviews relevant environmental impact documents and refines and revises the developed approaches and indicators. To avoid bias, the researcher also conducted email validation with other professionals, which will be explained in section 3.5.

3.4 Stage three: applying the appraisal methodology to four case studies

This step involves applying this appraisal methodology by comparing its practical application in four built heritage attractions as case studies. A pilot case study of Chastleton House was selected in the UK; then a further two case studies of Mountain Jieshi and Shanhai Pass, the Great Wall of China in China were selected in China and one case study of Oxford Castle Heritage Site was selected in the UK. Existing documents related to the surveyed attractions were reviewed, then the researcher integrated existing MCDA methods in order to appraise the sustainability of these built heritage attractions.

3.4.1 Selection of the case studies

The case studies were selected to allow the researcher to study attractions, which have some features or processes which are of interest (Silverman, 2013). The results from the questionnaire survey narrowed the case study selection and the selection criteria were fully developed after the results of the previous research were reviewed. The built heritage attractions selected for the case studies have both common characteristics and variations in characteristics. A set of selection criteria were developed as follows.

Common characteristics:

- A built heritage attraction in this research is defined as an inherited site which can be promoted as a heritage tourism product and which has architectural, historical, or other significant value which requires protection. For example, historic buildings including houses, museums and castles; ancient towns and cities, mountains, gardens and parks. The attraction sets should cover a range of annual tourist numbers, including attractions with different ownership and management styles, small and large sizes.
- The annual tourist numbers of the survey sites should be more than 20,000. As the research wishes to investigate attractions which have an influence on the surrounding environment, if the annual tourist numbers of the survey sites were too small, they would be likely to have only a limited impact on the environment, thus, this researcher set the threshold for annual tourist numbers at 20,000 or more.
- The attractions should be willing to participate in the research when considering the data accessibility.
- The attractions should be willing to adopt innovative sustainability practices (e.g. willing to introduce new sustainability practices, be at the forefront of sustainability initiatives)

Variations in characteristics

- The survey sites should include historic buildings in both the UK and China.
- The attractions should have varied characteristics in terms of size, covering large and small attractions by visitor numbers (This research classified all

attractions into large and small size attractions based on the median of all the responding attractions. The visitor numbers of large attractions should exceed or be equal to 30,000; the visitor numbers of small attractions should be below 30,000¹⁾)

Based on the questionnaire survey and the selection criteria, 13 attractions were selected as potential case studies (Table 3.2).

Table 3. 2: Main Case Studies Selection Matrix

Attraction	Special physical or cultural significance	Tourist Numbers	Willingness to participate	Willingness to adopt new sustainability practices	Attraction visitor numbers
UK Sites					
Greys Court	√	√		√	Small
Kensington Palace	√	√		√	Large
Dennis Severs House	√			√	Small
Hughenden Manor	√	√		√	Small
Hampton Court palace	√	√		√	Large
University Church Oxford	√	√		√	Small
St Paul's Cathedral	√	√		√	Large
Cotswold wildlife park	√	√		√	Small
Royal Botanic Gardens, Kew	√	√		√	Large
Chastleton House	√	√	√	√	Small
Edinburgh Castle	√	√		√	Large
Stirling Castle	√	√		√	Large
Oxford Castle Heritage Site	√	√	√	√	Large
Highclere Castle	√	√		√	Small
Broughton Castle	√			√	Small

¹ Oxford Castle is considered a large attraction with 2.8 million visitors annually, including visitors to Oxford Castle Quarter. This research defines built heritage attractions as inherited sites which can be promoted as heritage tourism products and which have architectural, historical, or other significant value which requires protection. Oxford Castle Quarter was developed based on heritage contexts and also serves for tourism. Thus, this research defines Oxford Castle Quarter as a built heritage attraction.

Table Continued

Chinese Sites					
Museum of Han Princess	√			√	Small
Museum of Lizexu	√	√		√	Small
Shanghai Pass of Great Wall	√	√	√	√	Large
The Wang's Grand Courtyard	√	√		√	Small
Mountain Jieshi	√	√	√	√	Small
The Three Gorges	√	√		√	Large
Minggu City	√	√		√	Large
Lama Temple	√	√		√	Large
Heaven Lake of Tian Shan	√	√		√	Large
Cui Lake	√	√		√	Large
Gezi Wo Park	√	√		√	Large
Kansas National Parks	√	√		√	Large
West Lake World Heritage	√	√		√	Large
Guan Du Ancient Town	√	√		√	Small
Hong Ancient Village	√	√		√	Large
Jiang Keer Ancient Town	√			√	Small
Hui Yuan Ancient Town	√	√		√	Small
Ancient Town of Fenghua Xikou	√	√		√	Large
Mountain Changshou	√	√		√	Small
Mountain Fengming	√	√		√	Small
Mountain Zu	√	√		√	Small

After considering the main case studies for variance in attraction significance, ownership and management styles, four attractions were identified as the most achievable cases, with one pilot case study and three main case studies. *Chastleton House* was selected as the pilot study, and *Oxford Castle Heritage Site* (including *Oxford Castle Quarter* and *Oxford Castle Unlocked Attraction*) were selected as the other case study in the UK. *Mountain Jieshi attraction* (including *Water Rock Temple*) and *Shanghai Pass, Great Wall of China attraction*, are the two case studies in China. The detailed background of each case will be introduced in chapter 5. The most difficult aspect of selecting the case studies was persuading the attractions'

management to participate. For the case studies, in both countries, it was very difficult to invite more than one stakeholder (managers, third parties or visitors) to find the time to participate in a survey. Some stakeholders of the attractions accepted the survey, but other important stakeholders did not wish to participate, resulting in the researcher having to abandon that particular case. Therefore, although the researcher approached more than ten attractions, only four attractions fitted all the selection criteria and agreed to take part in this research.

3.4.2 Data collection for case studies

A multi-method data collection approach was used during the case study stage (Figure 3.8); literature reviews of existing documents, a questionnaire study for attractions' visitors and interviews with stakeholders of the four case studies in both China and the UK.



Figure 3. 8: Multi-method data collection approach

The data were collected through in-depth interviews and other reliable sources. Data from the four cases were collected from existing reports and documents in relation to the case studies, and these were used for scoring the indicators in the economic, environmental, social and governance dimensions. In each case, interviews were conducted with some key stakeholders, and 50 questionnaires were completed with visitors, undertaken around the attractions' exit gate. The interview questions and questionnaires are attached in Appendix 2 to 5. The major built heritage attractions who participated in sustainability survey are attached in Appendix 6.

In China, the researcher approached the interviewees to participate in the survey, but it was difficult to collect all the data for the indicators due to Chinese interviewees' sensitivity towards research interviews being conducted on behalf of a western country. Some of them honestly expressed concerns that their bosses might chastise

them if their names were to appear in the press. In the UK, it was very difficult to convince more than one stakeholder of a site to engage in each case study. The researcher approached two cases with the help of Professor John Glasson, Professor Brian Goodey and Dr Michael Stubbs. Most attractions refused the research offer immediately or did not respond after a few initial conversations. Some attractions accepted the survey, but they would only allow a limited number of stakeholders to participate in the research. For example, Royal Botanic Gardens, Kew accepted the offer with the condition that the researcher could not interview its visitors. Cogges Manor Farm and Stowe House accepted the offer, but they have few visitors in winter and both sites have low numbers of visitors annually. While conducting the questionnaire survey on both sites, it was very cold outdoors and so hard to use a pen to fill in the questionnaire. Thus, the researcher had to fill in most of the questionnaires himself to keep the visitors happy.

Chastleton House

Given that Chastleton House faced protests from the local community about their decision to extend the attraction's opening time without consulting them, Chastleton House agreed to participate during June 2014 on the condition that the researcher did not disturb the local community. The researcher interviewed six people:

From the attraction management:

- The Visitor Operations Manager of Chastleton House;

From third parties:

- The Lead Consultant and Land Use Planning Adviser of the National Trust;
- Four volunteers who help at Chastleton House.

The researcher also conducted a site survey; to obtain 50 completed visitors' questionnaires, undertaken around the attractions' exit gate.

Oxford Castle Heritage Site

Oxford Castle Quarter and Oxford Castle Unlocked Attraction were jointly taken as the second case study in the UK after all stakeholders agreed to participate during December 2014. The research interviewed the following four respondents:

From the attraction management:

- The Operations Manager, Oxford Castle Quarter Management Office

- The Deputy Manager of Oxford Castle Unlocked attraction

From third parties:

- The Chartered Surveyor of Oxford Preservation Trust
- The Director of the Oxford Preservation Trust.

The researcher also conducted a site survey, to obtain 50 completed visitors' questionnaire around Oxford Castle Quarter and the exit gate of the Oxford Castle Unlocked Attraction.

Mountain Jieshi

Mountain Jieshi and Water Rock Temple were jointly taken as the first case study in China after all stakeholders agreed to participate during January 2015. The researcher interviewed five people:

From the attraction management:

- The Deputy Manager of Mountain Jieshi Attraction;
- The Director of General Office of Jieshi Mountain;
- The Head Lay Buddhist in Water Rock Temple

From third parties:

- The Deputy Director of Changli Tourism Bureau;
- The Chairman of Changli Federation of Literary and Art Circles

The local planning committee provided the draft plans for the Mountain Jieshi and Water Rock Temple area development. The research also involved a site survey, to obtain 50 completed visitors' questionnaire among those who visited the Mountain Jieshi and Water Rock Temple in the previous year.

Shanghai Pass, Great Wall of China

Shanghai Pass, Great Wall of China was taken as the second case study in China after all stakeholders agreed to participate during February 2015. The researcher interviewed the following:

From the attraction management:

- The Deputy District Head of Shanghai Pass district;
- The Deputy Head of Shanghai Pass Tourism Bureau and management teams;

From third parties:

- The Deputy Head of Qinhuangdao (who takes charge of the Shanhai pass bureau) Tourism Bureau;
- The Local Associate Professor at Hebei Normal University of Science and Technology

The researcher also conducted a site survey, to obtain 50 completed visitors' questionnaires, undertaken around the attractions' exit gate.

There are some limitations for site questionnaire survey conducted in both countries and all four cases studies as the weightings from visitors seem to have less variation among all indicators. The details will be explained in the conclusion chapter.

3.4.3 Data analysis of the case studies

First, Excel and Google Documents were used to analyse the initial questionnaire survey data. The data were stored on both the hard disk of a MacBook and Google Documents. The initial questionnaire survey provided a very useful professional perspective and a context of sustainability implementation in practice for built heritage attractions. Data collected in that survey also helped to supplement data from other sources to ensure validation of the research.

The qualitative data collected from the case study interviews and document reviews were analysed using coding to identify the common themes in the respondents' answers, by using NVivo software, which is a tool specifically designed to help in the coding of qualitative data. Then, the different codings were used to develop the conceptual framework; the details are explained in section 8.5.3.

3.5 Stage four: identifying the potential value, acceptability, implementation and transferability

The findings were synthesised from all the elements of the research programme to establish the final framework for assessing the sustainability of built heritage attractions.

3.5.1 Feasibility study

The aim of the feasibility study was to examine the overall methodology, indicators'

function, key influencing factors and the results of the case study. Four sustainability dimensions, plus stakeholder perspectives on the sub-indicators, were compared and analysed. Finally, the key influencing factors in the sustainability of built heritage attractions were identified.

Based on the data collected from earlier stages, the study analysed and synthesised the case studies to test the acceptability and implementation of the sustainability appraisal methodology. The suggested approach was refined based on previous research; especially learning from the experience of the literature review, web search, the survey with the attractions, the pilot study and the case studies, to establish the key considerations involved in developing the final framework for assessing the sustainability of built heritage attractions. The researcher has written up the thesis by summarizing the methodologies, approaches, the process of data collection and by analysing the issues in the research project.

3.5.2 Comparative study

Comparative research is a social science research methodology aimed at making comparisons across different countries or various features.

“Comparisons have served as a tool for developing classifications of social phenomena and for establishing whether shared phenomena can be explained by the same causes. For many sociologists, comparisons have provided an analytical framework for examining (and explaining) social and cultural differences and specificity” (Hantrais 1995:13).

Cross-national comparisons are employed in this research to identify the similarity and variability of sustainability management for built heritage attractions in terms of different societies, their structures and institutions. To date, little research has compared built heritage attractions in the UK and China.

3.5.3 Data analysis-coding scheme

“The coding is the process of defining what the data are about. Unlike quantitative coding, which means applying preconceived codes to the data, qualitative coding means creating the codes as you study your data.” (Charmaz, 2000:37).

The researcher sorted all the interviewees’ transcripts into a coding scheme designed for the criterion analysis method; the interview texts were assigned a specific letter

code according to its categorization. Categories were used to classify the more detailed case study responses; interviewees and organizations were given a code number to facilitate referencing for each interview (Table 3.3 and Table 3.4). The indicator scores were either derived from the survey findings from each site, or they were based on the opinions of the researcher.

3.5.4 Verification and validation

Silverman (2013) argued that one approach to obtaining generalizability is to combine qualitative research with quantitative measures from a given population. However, the nature of built heritage attractions is varied and those in this research have been selected purposively based on particular criteria. Guba and Lincoln (1981) suggested validity can be understood as trustworthiness, authenticity and credibility for qualitative research. Creswell (2009) supported the core function of validity as determining whether the findings are accurate from the perspective of the participants, the researcher, and the users of the research. Cutcliffe and McKenna (1999) encouraged researchers to return to the participants for verification because checking back with participants would benefit researchers by allowing them to use the words of the participants in the emerging conceptual framework. The process of using several methods of checking the data should identify the findings that are not recognised and any disagreements which exist among the participants. Guba and Lincoln (1981) supported the idea that qualitative data are credible if participants can recognize their experiences within the data collection. Enquiry was utilized to examine the acceptability, transferability and feasibility of the sustainability appraisal methodology for built heritage attractions. The sustainability appraisal methodology developed was tested with various participants.

With the purpose of ensuring both the reliability and the validity of the data, verification strategies were conducted to ensure sampling sufficiency, methodological coherence, collecting and analysing data concurrently, developing theory and thinking theoretically. Three strategies have been used for verification: checking for methodological coherence, checking by participants and triangulation.

Table 3. 3: Coding scheme for the interviews

Num ber	Position and Interviewee's Department	Acronym	Interview Date
1	The Visitor Operations Manager of Chastleton House	CHM	27/6/2014
2	The Lead Consultant and Land Use Planning Adviser of National Trust	CHP	3/7/2014
3	Volunteer of Chastleton House	CHV1	27/6/2014
4	Volunteer of Chastleton House	CHV2	27/6/2014
5	Volunteer of Chastleton House	CHV3	27/6/2014
6	Volunteer of Chastleton House	CHV4	27/6/2014
7	Operations Manager, Oxford Castle Quarter Management Office	OCQM	23/12/2014
8	Deputy Manager of Oxford Castle Unlocked attraction	OCUVM	22/12/2014
9	Chartered Surveyor of Oxford Preservation Trust	OPTCS	4/12/2014
10	Director of the Oxford Preservation Trust	OPTD	17/12/2014
11	Deputy Manager of Mountain Jieshi Attraction	MJDM	23/1/2015
12	Director of General Office of Mountain Jieshi Attraction	MJDGO	23/1/2015
13	Head Lay Buddhist in Water Rock Temple	WRTLb	7/3/2015
14	Deputy Director of Changli Tourism Bureau	CTBDD	6/3/2015
15	Chairman of Changli Federation of Literary and Art Circles	CFLACC	7/3/2015
16	Deputy District Head of Shanhai Pass District	SHGDD	16/2/2015
17	Deputy Head of Shanhai Pass Tourism Bureau And Management Teams	SHGVTB	16/2/2015
18	Deputy Head of Qinhuangdao Tourism Bureau	QHDVTB	19/2/2015
19	Local Associate Professor in Great Wall	GWLAP	19/2/2015

Table 3. 4: Coding Scheme Terms for Organizations

Number	Terms	Acronym
1	National Trust	NT
2	Chastleton House	CH
3	Oxford Castle Quarter	OCQ
4	Oxford Castle Unlocked attraction	OCUA
5	Trevor Osborne Group	TOG
6	Oxford Castle Ltd	OCL
7	Mountain Jieshi	MJ
8	Water Rock Temple	WRT
9	Shanhai Pass, Great Wall of China	SPGWC

3.5.4.1 Methodological coherence

Meadows and Morse (2001) claimed that methodological coherence in research is assured by adhering to the hypothesis and the particular ways in which strategies are implemented. This research has ensured internal congruence through the connected relationship between the aims, objectives, sampling strategies, research strategies, data collection methods, data analysis, coding techniques and other research methods used.

3.5.4.2 Checking by participants

Checking by participants has been achieved by conducting email verification with research participants from each case study. This approach is traditionally deemed as an opportunity to share opinions, gain insights, reactions and clarifications. Participants are able to provide additional understanding, and check the researcher's interpretation (Meadows and Morse, 2001).

3.5.4.3 Triangulation

Creswell (2009) suggested using a triangulation approach to add validity to research by examining various data sources to establish a coherent justification. The information conveyed by the interviews with key stakeholders has been verified by studying official documents. The preliminary findings of the research with other professionals were triangulated during the email validation process. After writing up the first draft of the thesis, a summary report was produced and distributed to individuals who participated in this research for validation. Therefore, evidence from different sources and participants has been cross-examined in order to support the findings.

3.6 Strengths and limitations of the methodology

The original contribution of this research was to identify sustainability and environmental planning issues for built heritage attractions, and to develop a mechanism to appraise sustainability systems for built heritage attractions in a mature market, with the possibility of applying it to an emerging heritage market.

This research assesses the sustainability of attractions across four dimensions, and uses different stakeholders' opinions as the assessment criteria integrated with the MCDA method. The application for this research may be as an assessment tool in the sustainability development of built heritage attractions by government and charities, or it may be used in sustainability annual reviews carried out for built heritage attractions.

The limitation of this methodology should be considered in many ways. The MCDA method can measure the indicators and yield the results numerically. However, in practice, not all the significant aspects of sustainability can be expressed by the indicators, and not all the indicators can be measured numerically without bias. Even when the scores for different indicators are the same, the same score may not represent the same significance in terms of sustainability. Furthermore, arguments also arise regarding the accuracy of indicator measurement. The scores for the indicators have been generated based on the stakeholder interviews and document reviews; since the stakeholders come from different positions, it is difficult to ensure that there is no bias in their answers. Although some attractions were willing to participate in the research and provide the data, the accuracy of their data may need attention. Some attractions may not wish to show their weakest sides to the public, so they may provide inaccurate data or fake data. Another concern in comparative research is that the data sets in different countries may not use the same criteria for indicator scoring; the contexts of China and the UK are different and vary. More details on the limitations of the methodology will be addressed in the section 16.3.

3.7 Summary

This chapter introduces the main methodology framework of this research and demonstrates how the research aims and objectives can be addressed by integrating a literature review, questionnaires, interviews and email verification. It involves the MCDA method and dimensions of sustainability to develop an appraisal approach, using a pilot study and three case studies. The strengths and limitations, and reliability and validity of this research have been identified. The researcher reported on an initial built heritage attractions questionnaire survey, narrowed the initial assessment indicators, and selected the potential pilot study and the main case

studies. Details of the application of the indicators will be discussed in the case study and feasibility analysis chapters. The next chapter sets out the key findings of the questionnaire survey.

Chapter Four: Research Findings from the Survey Responses

4.1 Introduction

This chapter proposes a set of built heritage sustainability indicators and examines their relative importance for heritage attraction site managers in the UK and China. The chapter also compares the important variations of manager assessment of indicator types between the UK and China, between different sizes of tourist attractions, and between different management styles and ownership. The application of sustainability indicators for built heritage attractions provides a means to advance a more holistic sustainability assessment approach for the management of this important type of attraction (Figure 4.1).

Across both China and the UK, 93 attractions were invited to participate and 36 responded before the deadline. Responding attractions included four of the five UK built heritage attraction categories; none of the attractions in the *museum* category participated in the survey; the categories of *historic house and castle* had more responding attractions than other categories (Table 4.1). In China, the responding attractions included six of the seven Chinese built heritage attraction categories; none of the *mausoleum combined heritage* category participated in the survey; and the categories of *historic house, garden and parks and ancient towns* had more responding attractions than other categories (Table 4.2).

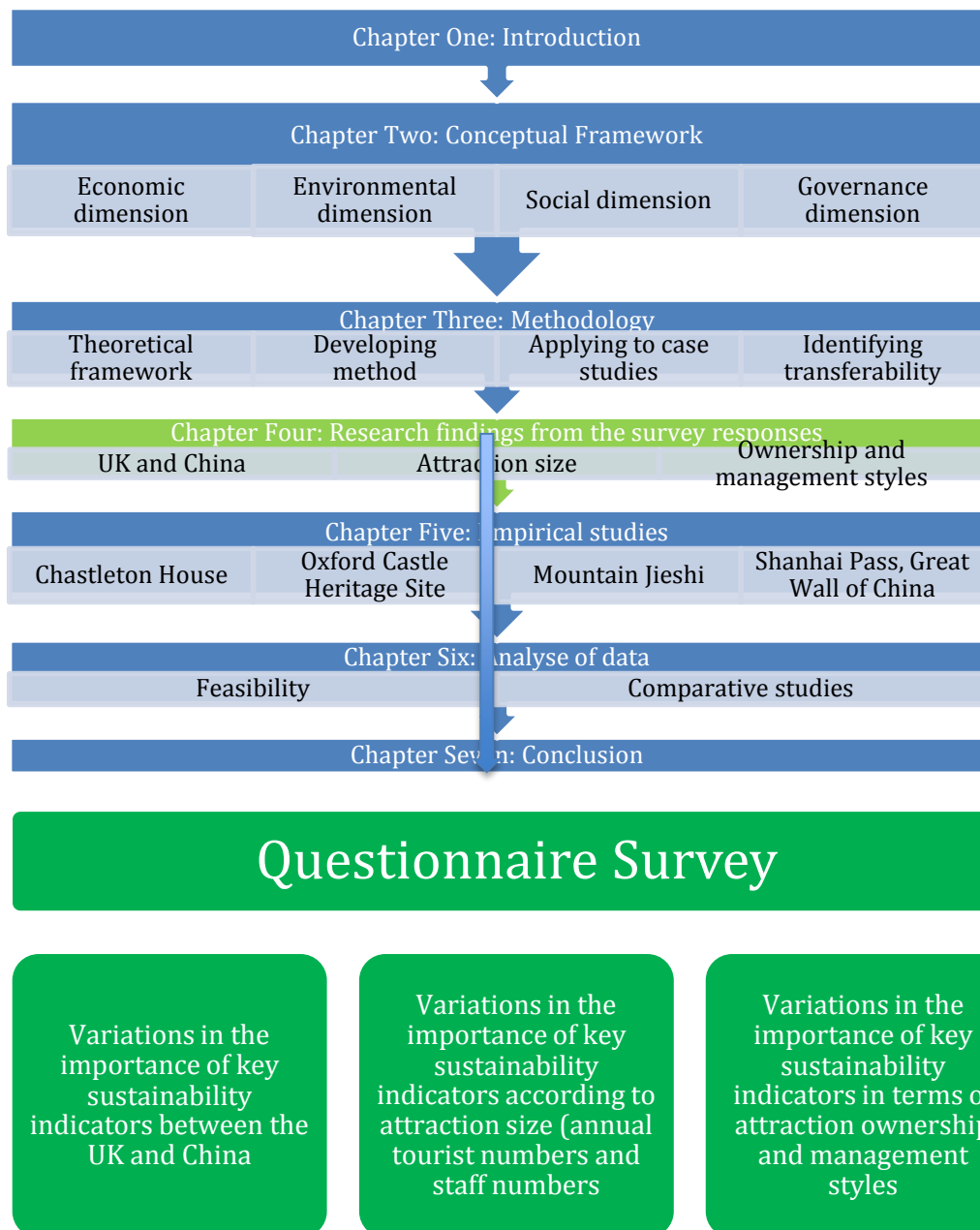


Figure 4. 1: Diagram showing the linkage of questionnaire survey in conceptual framework

Table 4. 1: Surveyed attractions in the UK

Attractions	Types	Response
British Museum	Museum	Not Respond
National Portrait Gallery	Museum	Not Respond
Ashmolean Museum (OUM)	Museum	Not Respond
Oxford University Museum of Natural History (OUM)	Museum	Not Respond
Museum of the History of Science (OUM)	Museum	Not Respond
St Mungo Museum of Religious Art (Glasgow Museums)	Museum	Not Respond
Imperial War Museum Duxford	Museum	Not Respond
Pitt Rivers Museum (OUM)	Museum	Not Respond
National Railway Museum	Museum	Not Respond
National Museum of Scotland (National Museums Scotland)	Museum	Not Respond
Didcot Railway Centre	Museum	Not Respond
Museum of the History of Science, Oxford	Museum	Not Respond
Imperial War Museum	Museum	Not Respond
Tower of London (HRP)	Historic House	Not Respond
Old Royal Naval College Greenwich	Historic House	Not Respond
Blenheim Palace	Historic House	Not Respond
Highclere castle.	Historic House	Respond
Dunham Massey (NT)	Historic House	Not Respond
Polesden Lacey (NT)	Historic House	Not Respond
Wakehurst Place (NT)	Historic House	Not Respond
Hampton Court Palace (HRP)	Historic House	Not Respond
Roman Baths & Pump Room Bath	Historic House	Not Respond
Upton House	Historic House	Not Respond
Farnborough Hall(National Trust)	Historic House	Not Respond
Buscot House(National Trust)	Historic House	Not Respond
Hughenden Manor	Historic House	Respond
Greys Court	Historic House	Respond
Dennis Severs House	Historic House	Respond
Kensington Palace	Historic House	Respond
Hampton court palace	Historic House	Respond
Tower of London	Historic House	Not Respond
Banqueting House	Historic House	Not Respond
Westminster Abbey	Religious	Not Respond
St Paul's Cathedral	Religious	Respond
Stonehenge (EH)	Religious	Not Respond
Christ Church Cathedral	Religious	Not Respond
University Church of St Mary, the Virgin	Religious	Respond
Canterbury Cathedral	Religious	Not Respond
York Minster	Religious	Not Respond
Fountains Abbey & Studley Royal (NT)	Religious	Not Respond
Anglesey Abbey (NT)	Religious	Not Respond
Fountains Abbey & Studley Royal (NT)	Religious	Not Respond
Anglesey Abbey (NT)	Religious	Not Respond
Chester Zoo	Garden and Park	Not Respond
Royal Botanic Gardens Kew	Garden and Park	Respond
University of Oxford Botanic Garden	Garden and Park	Not Respond
Costume Museum and Gardens	Garden and Park	Respond
Buscot Park	Garden and Park	Not Respond
Dyrham Park (NT)	Garden and Park	Not Respond

Table Continued

Nymans Garden (NT)	Garden and Park	Not Respond
Sheffield Park (NT)	Garden and Park	Not Respond
ZSL London Zoo	Garden and Park	Not Respond
Eden Project	Garden and Park	Not Respond
Oxford Botanic Garden	Garden and Park	Not Respond
Chastleton House and Garden (National Trust)	Garden and Park	Respond
Waddesdon Manor	Garden and Park	Not Respond
Cliveden	Garden and Park	Not Respond
Edinburgh Castle (Historic Scotland)	Castle	Respond
Windsor Castle	Castle	Not Respond
Broughton Castle	Castle	Respond
Dover Castle (EH)	Castle	Not Respond
Oxford Castle Unlocked	Castle	Respond
Bodiam Castle (NT)	Castle	Not Respond
Penrhyn Castle (NT)	Castle	Not Respond
Castle Drago Estate (NT)	Castle	Not Respond
Leeds Castle (THE)	Castle	Not Respond
Stirling Castle (Historic Scotland)	Castle	Respond

The Chinese response rate was high at 78%; the UK response rate was much lower at 23%. The Chinese rate benefitted particularly from the use of tourism networking, and personal contacts, but some attractions still did not fully complete the questionnaire because environmental issues remain sensitive. In the UK, further announcements were made to generate a set of responses of similar size to that obtained for China.

4.2 Research findings from the survey responses

4.2.1 Variations in the importance of key sustainability indicators between the UK and China

The research findings indicated several important variations in response to the relative importance of the key sustainable indicators. These variations in responses are considered firstly in terms of differences between the UK and China. A second aim was to compare the sustainability performance of different sizes of built heritage attractions. Finally, the third research aim was to compare the importance of key sustainability indicators across different management styles and types of ownership of attractions.

Table 4. 2: Surveyed attractions in China

Attractions	Location	Category	Annual Visitors
West Lake World Heritage	Zhejiang Province	Garden and Park	21,998,500
Cui Lake	Yunnan Province	Garden and Park	12,000,000
Fenghua Xikou	Zhejiang Province	Ancient Town	5,437,000
Minggu City	Shangdong Province	Historic House	3,000,000
Shanghai Pass	Hebei Province	Historic House	2,236,172
Kansas National Parks	Xinjiang Region	Garden and Park	1,680,000
Three Gorges	Hubei Province	Historic House	1,500,000
Gezi Wo Park	Hebei Province	Garden and Park	939,000
Heaven Lake of Tian Shan	Xinjiang Region	Garden and Park	899,200
Hong Ancient Village	Anhui Province	Ancient Town	350,000
Lama Temple	Beijing Municipality	Religious	340,000
Wang's Grand Courtyard	Hebei Province	Historic House	205,000
Jie Yang, also name as	Hebei Province	Historic House	200,000
GuanDu	Yunnan Province	Ancient Town	200,000
Mountain Zu	Hebei Province	Mountain	118,000
Mountain Fengming	Hubei Province	Mountain	110,000
Mountain Changshou	Hebei Province	Mountain	105,000
Museum of Lizexu	Xinjiang Region	Museum	100,000
Hui Yuan	Xinjiang Region	Ancient Town	80,000
Museum of Han Princess	Xinjiang Region	Museum	63,000
Jiang Keer	Xinjiang Region	Ancient Town	25,000

The findings, as assessed by built heritage attraction managers, for the relative importance of key sustainability indicators in both countries are listed in Table 4.3. In the economic dimension, attractions in the UK tend to emphasize local employment and the growth in annual gross income more strongly, while attractions in China emphasize external funding. This may be due to the different social construction and legislation systems in the two countries. Attractions in the UK tend to show a stronger willingness to take more social responsibilities and make more social contribution to the local areas. Attractions in China have more external funding because attractions in China are owned by the government. In the environmental dimension, there are barely any differences between the countries on efficient water and energy systems. The attractions in China tend to have a stronger view on possessing environmental management systems while attractions in the UK tend to emphasize waste and pollution management, and historic buildings

Table 4. 3: Indicator importance weighting results from attraction managers

Economic Dimension						
Indicators	Country	Extremely important	Important	Moderately important	Of little importance	Unimportant
Providing local employment	<i>i (UK)</i>	40%	47%	13%	0%	0%
	<i>ii (China)</i>	30%	30%	20%	20%	0%
	<i>iii (Both)</i>	34%	37%	17%	11%	0%
Growth in annual gross income of attraction	<i>i</i>	57%	36%	7%	0%	0%
	<i>ii</i>	43%	43%	10%	5%	0%
	<i>iii</i>	49%	40%	9%	3%	0%
External funding support for the built heritage attraction	<i>i</i>	31%	38%	23%	0%	8%
	<i>ii</i>	38%	38%	24%	0%	0%
	<i>iii</i>	35%	38%	24%	0%	3%
Environmental Dimension						
Efficient water and energy systems	<i>i</i>	67%	20%	13%	0%	0%
	<i>ii</i>	57%	29%	14%	0%	0%
	<i>iii</i>	61%	25%	14%	0%	0%
Waste and pollution management preventing	<i>i</i>	67%	13%	20%	0%	0%
	<i>ii</i>	62%	29%	10%	0%	0%
	<i>iii</i>	64%	22%	14%	0%	0%
Possessing Environmental Management System	<i>i</i>	15%	23%	46%	8%	8%
	<i>ii</i>	33%	33%	29%	5%	0%
	<i>iii</i>	26%	29%	35%	6%	3%
Historic buildings conservation and preservation	<i>i</i>	93%	0%	0%	7%	0%
	<i>ii</i>	71%	29%	0%	0%	0%
	<i>iii</i>	81%	17%	0%	3%	0%
Social Dimension						
Support from attraction to local communities	<i>i</i>	40%	60%	0%	0%	0%
	<i>ii</i>	33%	48%	14%	5%	0%
	<i>iii</i>	36%	53%	8%	3%	0%
Local residents' satisfaction with the operation of the attraction	<i>i</i>	60%	20%	20%	0%	0%
	<i>ii</i>	38%	29%	33%	0%	0%
	<i>iii</i>	47%	25%	28%	0%	0%
Traffic congestion on peak tourism periods	<i>i</i>	23%	31%	38%	8%	0%
	<i>ii</i>	62%	19%	14%	5%	0%
	<i>iii</i>	47%	24%	24%	6%	0%
Governance Dimension						
Legal basis for heritage protection	<i>i</i>	47%	33%	20%	0%	0%
	<i>ii</i>	43%	43%	14%	0%	0%
	<i>iii</i>	47%	39%	14%	0%	0%
Involvement of key stakeholders	<i>i</i>	57%	21%	14%	7%	0%
	<i>ii</i>	29%	29%	38%	5%	0%
	<i>iii</i>	34%	31%	29%	6%	0%
Producing sustainability documents	<i>i</i>	60%	13%	13%	0%	13%
	<i>ii</i>	29%	43%	24%	5%	0%
	<i>iii</i>	44%	28%	19%	36%	0%
Urban planning	<i>i</i>	23%	46%	23%	8%	0%
	<i>ii</i>	29%	43%	29%	0%	0%
	<i>iii</i>	29%	41%	26%	3%	0%

Note: i = UK; ii = China; iii= Combination of both

conservation and preservation, more strongly. Attractions in China tend to have a stronger view on environmental documentation management while attractions in the UK tend to have a stronger view on environmental practices. The attractions' management systems vary between the two countries. Tourist authorities in China tend to intervene and regulate their attractions more, while the UK appears to have less intervention. Furthermore, attractions in the UK tend to have a more mature system and more experience in environmental management than those in China.

In the social dimension, both countries value indicators of support for the attractions within local communities, although UK attractions tend to place more emphasis on the value of support. Attractions in China tend to have a stronger view on traffic congestion during peak tourism periods. This difference may be because attractions in China are still in the development stage, and need to deal with an increasing number of tourists visiting by vehicle, while attractions in the UK have developed a relatively mature management system after many years of operation.

In the governance dimension, the legal basis for heritage attractions has the highest importance score in both countries. There is virtually no difference between Chinese and British views on urban planning; attractions in the UK tend to have a stronger view on the involvement of key stakeholders, producing sustainability documents and the legal basis for heritage protection. The planning and legal systems differ markedly between the two countries; the UK attractions tend to emphasize social equality more than in China, and they have established more mature heritage management systems than built heritage attractions in China.

To summarize the findings from the importance weighting of the sustainability indicators: attraction managers in the UK tend to have a stronger view on income and local employment, growth in annual gross income, waste and pollution management, historic buildings' conservation and preservation, satisfaction with the operation of the attraction, support for the attraction within local communities, involvement of key stakeholders, producing sustainability documents and involvement of the legal basis for heritage protection. Attraction managers in China emphasize more strongly external funding, possessing environmental management systems and managing traffic congestion during peak tourism periods.

Some conclusions on the reasons for the results can be drawn. There are significant differences in the social construction and legal systems between the two countries. For example, in the UK attractions need support from local residents because local residents may influence decisions on the attractions; the UK planning system seeks residents' views and the wider involvement of stakeholders. Attractions in the UK are also less financially tied into local government than in China, and are more responsible for their own profit and loss. In China, most historic attractions are owned by government bodies; attractions receive financial support from government, and therefore their managements have fewer financial pressures.

There is pressure in both countries to pay more attention to environmental management. For example, in the UK, most buildings need to apply for an *Energy Performance Certificate* (Gov. UK, 2015); in China, local government also encourages buildings to use energy and water efficiency systems by giving financial subsidies. The *Standard of rating for quality of tourist attractions* is used to determine the quality and performance of the attraction based on their safety, sanitation, cleanliness and transportation. This system also enables more attractions in China to possess environmental management systems (China National Tourism Administration, 2009). Attractions in the UK also tend to have more heritage and attractions management experience than in China.

The attraction managers were also invited to comment on *Sustainability Appraisal* for built heritage attractions. Participants in both countries confirmed the importance of sustainability, but support was stronger in the UK. Overall however, knowledge of *sustainability appraisal* is limited in perspective, normally focusing on environmental and partly on social aspects. Few participants linked sustainability to social, economic and governance areas. This may be because current systems to promote sustainability overemphasise environmental aspects, and ignore the holistic nature of sustainable development.

4.2.2 Variations in the importance of key sustainability indicators according to attraction size (annual tourist numbers and staff numbers)

Attractions in China tend to have higher annual tourist numbers than those in the UK; the average annual tourist numbers of the responding attractions was almost 2,500,000 in China, compared to an average of just below 400,000 in the UK. Generally speaking, this is due to the fact that the larger population in China produces more travel demands. In both countries, most of the attractions with large annual tourist numbers are close to or in large cities. For example, compare the Royal Botanic Gardens (Kew) with 1.4 million annual visitors in London, and the Chinese West Lake with 21.9 million annual visitors close to Shanghai. Furthermore, World Heritage Sites usually receive more annual visitors than non-World Heritage Sites. The average annual visitor numbers to World Heritage Sites in both countries was about 4,000,000, compared to non-World Heritage Sites which averaged about 900,000. One reason why some UK attractions have fewer tourist numbers may be because they control daily visitor numbers for heritage protection, and some attractions only open during certain periods and times of the year. For example, the UK National Trust property of Chastleton House allows 200 maximum visitors per day for conservation reasons and it is closed during the winter months. Many of the UK properties are setting limits of a maximum number of visitors per day. There are few reports on controlling daily visitor numbers in China.

The staff numbers of the responding attractions ranged from as low as four to over 11,000 across both countries; the average was approximately 700 in China, compared to about 160 in the UK. Higher annual tourist numbers normally require more staff; thus, attractions in China tend to have more staff. There are some attractions in China which have large numbers of staff because of the method of calculation. For instance, Kansas National Parks have over 11,000 employees, and West Lake World Heritage site has about 8,000 employees. Such attractions in China are owned and operated by local government bodies, normally known as *the local tourist destination management committee*, which is part of the legacy of China's planned economy. The committees not only take charge of tourism management, but also local affairs in terms of managing local education, business development, planning and other local authorities. Thus, they need more employees to service the attractions and social management of the destination area.

When average annual tourist numbers are divided by total staff numbers for each country, a number can be calculated which represents how many annual tourists each employee might manage; 7,850 in China, and 5,130 in the UK. The results can be used as a crude measure of the human resource efficiency for individual attractions. Although the tourist management systems vary between the countries, employees manage roughly similar average numbers.

Not all the attractions completed the question about seasonal employee numbers; this may be because seasonal employees' numbers are not always recorded, or treated seriously. Generally, attractions with more employees overall also have more seasonal employees. The findings show that 54% of attraction staff were seasonal in China compared with 40% in the UK. As full-time permanent positions can provide more stability than seasonal positions, the results indicate that the staff numbers working in built heritage attractions in the UK were rather more stable than in China. A total of 29 of the 36 attractions completed the question about local employee numbers. The definition of local area in this research was an area within 10 miles' radius of the attraction. When the total employee numbers are divided by the number of local employees for each attraction, the results show that 93% of the staff at the attractions in China, and 81% in the UK, were local. This research found employing more local staff can contribute to the social development of the local area. Using more local employees may also be environmentally beneficial in terms of saving travel energy and contributing towards sustainability.

To compare attitudes to sustainability in terms of visitor numbers, two sub-sets of attractions were used: those where annual visitor numbers were more than 1,000,000; and those with a relatively small number of visitors, where the annual visitor numbers were less than 100,000. The attractions selected are set out in Table 4.4. Interestingly there was little difference in the assessment of importance of most indicators when comparing the two sub-sets. The findings suggest that the attitude of built heritage attractions' management is similar across all sizes of attraction. Heritage conservation and economics are the priority strategy for most attractions, and they have a certain understanding of sustainability. However, they tend to

emphasize environmental dimensions rather than social, economic and governance dimensions when referring to sustainability.

Table 4. 4: Two sub-sets of attractions --with different annual visitor numbers

Attractions with the annual visitors' number more than 1,000,000		Attractions with the annual visitors' number less than 100,000	
Attractions Name	Annual Visitors Number	Attractions Name	Annual Visitors Number
West Lake World Heritage	21,998,500	Hughenden Manor	93,500
Cui Lake	12,000,000	Highclere Castle Newbury Berks	90,000
Ancient Town of Fenghua Xikou	5,437,000	Greys Court	88,000
Minggu City	3,000,000	Hui Yuan Ancient Town	80,000
Shanghai Pass	2,236,172	Oxford Castle Unlocked	71,000
Kansas National Parks	1,680,000	Museum of Han Princess	63,000
The Three Gorges	1,500,000	Chastleton house and garden	36,000
International Tourism Resort	1,400,000	Jiang Keer Ancient Town	25,000
Royal Botanic Gardens, Kew	1,230,177	Broughton Castle	12,000
Edinburgh Castle		Dennis Severs House	10,000

Few indicators show significantly divergent results between large and small attractions (Table 4.5). For indicators related to providing local employment, local residents' satisfaction and involvement of key stakeholders, the small attractions tend to have stronger views than the large attractions. The results indicate that small attractions tend to lack financial resources when compared to large attractions, but are well-managed in terms of human resources and operating profits. For better survival when competing with large attractions, small attractions appear to pay more attention to local residents' satisfaction and the involvement of key stakeholders, working alongside their local neighbours to reduce inconvenience.

With regards to external funding support, large attractions have stronger views on the importance of possessing an environmental management system and reducing traffic congestion. Accordingly, the large attractions also tend to have more ability to use public resources; for example they apply for external funding support earlier than small attractions. The large attractions also tend to establish a more formal environmental management system according to the requirement of the authorities and they promote it.

Table 4. 5: Indicator importance weighting of different size attractions in the UK and China

Indicators	Size	Extremely important	Important	Moderately important	Of little importance	Unimportant
Economic dimension						
Providing local employment	<i>i(large)</i>	22%	44%	11%	22%	0%
	<i>ii(small)</i>	60%	10%	20%	10%	0%
Growth in annual gross income of attraction	<i>i</i>	33%	56%	0%	11%	0%
	<i>ii</i>	56%	33%	11%	0%	0%
External funding support for the built heritage attraction	<i>i</i>	67%	22%	11%	0%	0%
	<i>ii</i>	11%	44%	44%	0%	0%
Environmental dimension						
Efficient water and energy systems	<i>i</i>	78%	0%	22%	0%	0%
	<i>ii</i>	50%	30%	20%	0%	0%
Waste and pollution management preventing	<i>i</i>	67%	33%	0%	0%	0%
	<i>ii</i>	70%	10%	20%	0%	0%
Possessing Environmental Management System	<i>i</i>	44%	11%	33%	0%	0%
	<i>ii</i>	0%	25%	50%	13%	13%
Historic buildings conservation and preservation	<i>i</i>	78%	22%	0%	0%	0%
	<i>ii</i>	100%	0%	0%	0%	0%
Social dimension						
Support from attraction to local communities	<i>i</i>	44%	33%	22%	0%	0%
	<i>ii</i>	30%	50%	10%	10%	0%
Local residents' satisfaction with the operation of the attraction	<i>i</i>	33%	44%	22%	0%	0%
	<i>ii</i>	50%	30%	20%	0%	0%
Traffic congestion on peak tourism periods	<i>i</i>	67%	22%	0%	11%	0%
	<i>ii</i>	11%	44%	33%	11%	0%
Governance dimension						
Legal basis for heritage protection	<i>i</i>	56%	33%	11%	0%	0%
	<i>ii</i>	20%	80%	0%	0%	0%
Involvement of key stakeholders	<i>i</i>	33%	33%	33%	0%	0%
	<i>ii</i>	40%	50%	10%	0%	0%
Producing sustainability documents	<i>i</i>	44%	33%	11%	11%	0%
	<i>ii</i>	50%	20%	10%	0%	10%
Urban planning	<i>i</i>	33%	33%	33%	0%	0%
	<i>ii</i>	13%	50%	25%	13%	0%

Note: *i* = large size; *ii* = small size

4.2.3 Variations in the importance of key sustainability indicators in terms of attraction ownership and management styles

Attitudes to sustainability in the attraction management team also reflect the ownership and management style of the attractions. Built heritage attractions in this research can be divided into four types based on ownership and management, as follows: (i) owned by government/public bodies and run by government/government associated companies, (ii) owned by government/public bodies and run by private

companies, (iii) charity owned and operated attractions and (iv) privately owned and operated attractions.

Substantial numbers of attractions owned by *government/public bodies and run by government/government associated companies* exist in both countries, but China tends to have proportionately more with large numbers of built heritage attractions belonging to governments or public bodies; the management of large attractions is influenced also by the government directly or indirectly. In China, all significant built heritage attractions are described as Immovable Historical Relics; they have been gradually nationalized since the People's Republic of China was established in 1949. Some attractions are *owned by the government and managed by tourism companies*; the tourism companies take charge of tourism management for the attractions, similar to some attractions in the UK.

In China, the type of attractions belonging to government are referred to as *enterprises owned by the people*; most of these types of attraction are managed by government directly or indirectly. In both countries, organizations with a government background have been established to take charge of the daily operation of attractions. For example, in the UK, Edinburgh Castle belongs to Historic Scotland, which is an agency within the Scottish Government (Historic Scotland, 2014). In China, all local governments have tourism development bureaus; most attractions are supervised by a tourism development bureau or a destination management committee within local government which will take over certain of the local authority's rights. They not only take charge of management of the attraction directly, but also local social affairs indirectly, such as managing local education, business development, planning and other local social affairs. Thus, attractions managed by the destination management committee need a large number of employees to service the attractions and social management of the destination area. Attractions like West Lake World Heritage site are organized in this manner, in this case managed by Hangzhou West Lake Scenic Area Management Committee. It has many functional organizations and associated companies with about 8,000 employees, and is directly responsible to the Hangzhou Municipal Government.

Minggu City is the original, largest, and most famous of the temples of Confucius in China. The site has been developed as a tourism attraction. It is government owned, but in this case it is managed by a government owned company, the Qufu Sankong Tourism Service Related Service Corporation, which also invests in and holds a series of support companies. Although government owned attractions can be managed by both government agencies and companies, the management style appears similar based on their weighting of the indicators.

Attractions owned by government/public bodies and run by private companies can be found in both countries, although mainly in China. The size of these attractions is smaller and their influence is limited when compared to government owned and operated attractions. All major heritage sites belong to the government in China, but some private companies work with local government to manage the attractions for profit.

In China, although the government allows *private companies or individuals to own attractions*, this is normally restricted to the entertainment industry, such as theme parks and resorts. There are no major built heritage attractions fully owned by private organizations. In the UK, some historic properties are freehold. Private attractions are normally managed directly by attraction managers; they may be associated with or work for the owner of the properties. These types of attractions tend not to have many employees.

The attractions *owned by government/public bodies and run by private companies* tend to have weaker views on local residents' satisfaction with the operation of the attraction. For example, some Chinese private companies make a contribution to the local government or area, in terms of financial aid or making a certain amount of local infrastructure investment to meet local government demands. The local government does not normally become involved in the daily management of the attractions, leaving this to the private companies. For example, a private company, Zhong Kong Group, worked with Yi County government to establish Jing Yi Tourism Development Ltd in 1997; this company manages the world heritage site Hong Village and it has the exclusive management and administration rights of this site. Due to the limited information accessible in China, there is little practical

information on the extent of government and private cooperation in this type of attraction.

A large number of *built heritage attractions belong to charities* in the UK, but there is nothing similar in China. The charities referred to in this research are National Trust properties and Historic Royal Palaces. The charities acquired the attractions from private owners; some attractions were donated to the charities when the owner faced financial crises caused by burdensome death duties, or insufficient income. Some attractions were donated to the charities by government bodies. The charities offer holistic management of the entire attraction; taking charge of marketing, conservation, human resources and other management matters.

From the survey responses, the *Charity owned and operating attractions* tend to have stronger views on many sustainability indicators, including efficient water and energy systems, providing local employment, growth in annual gross income of attractions, historic buildings' conservation, waste and pollution management, the involvement of key stakeholders, including local residents and organizations, producing sustainability documents and the legal basis for heritage protection. These attractions receive less external financial support compared to *government/public owned and run attractions*; they focus on their financial control responsibility and have to be financially efficient. Charity-owned attractions tend to have stronger views on environmental management than other types of attractions. From the survey responses, these types of attractions appear to have more mature environmental documentation and management systems; this may be due to the fact that they are more publically accountable and charity management is normally transparent and efficient. Those attractions within the National Trust which make more profit support those which make less. Resources are shared between the attractions, and there are Regional Environmental Practice Advisors who deal with environmental planning issues related to attractions in a particular region, allowing attraction managers to focus on the daily management of their attractions.

The *privately owned and operated attractions* tend, amongst other interests, to have strong views on efficient water and energy systems. Similar to the *charity-owned attractions*, these attractions receive less external support, so they have sole

responsibility for their own profit and loss, which means they have to be financially efficient. Highclere Castle and Broughton Castle in the UK are two such privately owned properties. Highclere Castle is the home of the Earl and Countess of Carnarvon; Broughton Castle is home to the 21st Lord and Lady Saye and Sele. Both properties have been developed for mixed-use purposes, including as tourist attractions, wedding venues, location hire and exhibition venues. For example, Highclere Castle is used as the main location in the British period drama television series *Downton Abbey*. From the survey responses, privately owned attractions receive less government funding for conservation, and some of them tend to be less sensitive and less interested in developing advanced sustainable solutions.

Table 4.6 shows how the assessment of sustainability indicators varies across the four types of management and ownership. In terms of the economic dimension, the charity and private attractions have a stronger view than government owned attractions on local employment and growth in annual gross income. This may be because these two ownership/management types need more support from local communities than government attractions, and the charity and private attractions also tend to pay more attention to their financial efficiency. Government owned and operated, and charity attractions tend to have a stronger view on external funding than privately owned and operated attractions and government owned but privately operated attractions.

Table 4. 6: Indicator importance weighting of different ownership in the UK and China

Indicators	Size	Extremel y importa nt	Importa nt	Moderatel y important	Of little importan ce	Unimporta nt
Economic Dimension						
Providing local employment	<i>i</i>	40%	20%	40%	0%	0%
	<i>ii</i>	40%	20%	0%	40%	0%
	<i>iii</i>	60%	20%	20%	0%	0%
	<i>iv</i>	40%	60%	0%	0%	0%
Growth in annual gross income of attraction	<i>i</i>	40%	60%	0%	0%	0%
	<i>ii</i>	20%	60%	20%	0%	0%
	<i>iii</i>	80%	20%	0%	0%	0%
	<i>iv</i>	50%	50%	0%	0%	0%

Table Continued

External funding support for the built heritage attraction	<i>i</i>	40%	60%	0%	0%	0%
	<i>ii</i>	40%	0%	60%	0%	0%
	<i>iii</i>	30%	60%	20%	0%	0%
	<i>iv</i>	40%	0%	40%	0%	20%
Environmental Dimension						
Efficient water and energy systems	<i>i</i>	60%	20%	20%	0%	0%
	<i>ii</i>	40%	60%	0%	0%	0%
	<i>iii</i>	80%	20%	0%	0%	0%
	<i>iv</i>	80%	20%	0%	0%	0%
Waste and pollution management preventing	<i>i</i>	80%	20%	0%	0%	0%
	<i>ii</i>	0%	80%	20%	0%	0%
	<i>iii</i>	100%	0%	0%	0%	0%
	<i>iv</i>	60%	0%	40%	0%	0%
Possessing Environmental Management System	<i>i</i>	20%	60%	20%	0%	0%
	<i>ii</i>	0%	40%	60%	0%	0%
	<i>iii</i>	50%	0%	50%	0%	0%
	<i>iv</i>	0%	40%	20%	20%	20%
Historic buildings conservation and preservation	<i>i</i>	80%	20%	0%	0%	0%
	<i>ii</i>	40%	60%	0%	0%	0%
	<i>iii</i>	100%	0%	0%	0%	0%
	<i>iv</i>	80%	0%	0%	20%	0%
Social Dimension						
Support from attraction to local communities	<i>i</i>	60%	20%	20%	0%	0%
	<i>ii</i>	20%	80%	0%	0%	0%
	<i>iii</i>	20%	80%	0%	0%	0%
	<i>iv</i>	20%	80%	0%	0%	0%
Local residents' satisfaction with the operation of the attraction	<i>i</i>	60%	40%	0%	0%	0%
	<i>ii</i>	40%	20%	40%	0%	0%
	<i>iii</i>	40%	40%	20%	0%	0%
	<i>iv</i>	60%	20%	20%	0%	0%
Traffic congestion on peak tourism periods	<i>i</i>	60%	20%	20%	0%	0%
	<i>ii</i>	60%	0%	40%	0%	0%
	<i>iii</i>	20%	60%	20%	0%	0%
	<i>iv</i>	25%	0%	50%	25%	0%
Governance dimension						
Legal basis for heritage protection	<i>i</i>	40%	60%	0%	0%	0%
	<i>ii</i>	40%	20%	40%	0%	0%
	<i>iii</i>	80%	20%	0%	0%	0%
	<i>iv</i>	20%	60%	20%	0%	0%
Involvement of key stakeholders	<i>i</i>	40%	60%	0%	0%	0%
	<i>ii</i>	0%	40%	40%	20%	0%
	<i>iii</i>	50%	50%	0%	0%	0%
	<i>iv</i>	40%	20%	20%	20%	0%
Producing sustainability documents	<i>i</i>	60%	40%	0%	0%	0%
	<i>ii</i>	0%	40%	60%	0%	0%
	<i>iii</i>	100%	0%	0%	0%	0%
	<i>iv</i>	20%	0%	40%	0%	40%
Planning	<i>i</i>	60%	20%	20%	0%	0%
	<i>ii</i>	20%	20%	60%	0%	0%
	<i>iii</i>	20%	60%	0%	20%	0%
	<i>iv</i>	0%	75%	25%	0%	0%

Note: *I* =Government owned and operated; *ii*=Government owned but private operated; *i i i* Charity owned and operated; *iv*=Private owned and operated

In the environmental dimension, there are few differences in views on waste and pollution management and historic buildings' conservation and preservation; all display strong views on the importance of these issues, especially on the conservation and preservation of historic buildings. Charity-owned attractions tend to have stronger views on waste and pollution management. The government owned and operated attractions tend to have a weaker view than other categories on efficient water and energy systems. Both types of attraction have strong views on possessing an environmental management system.

In the social dimension, there are few differences in views of the support from local communities; all four ownership/management types have strong views on its importance, but government owned and operated attractions tend to have a stronger view. Government owned but privately operated attractions have a weaker view than other categories on local residents' satisfaction with the operation of the attraction. Government owned and operated attractions and government owned attractions tend to have a stronger view on traffic congestion during peak tourism periods. Generally, government owned and operated attractions tend to have a stronger view on the social dimension.

In the governance dimension, government owned and operated attractions and charity owned and operated attractions tend to have a stronger view on the involvement of key stakeholders, producing sustainability documents and the legal basis for heritage protection. Government owned and operated attractions tend to have a stronger view on urban planning. Generally, government owned and operated attractions tend to have a stronger view on the social dimension.

Overall, the research indicates that management and ownership types do appear to have a certain influence on views of the importance of the four dimensions of sustainability. The attractions owned by government/public bodies and run by government/government associated companies tend to have stronger views on external funding support, possessing an environmental management system, traffic congestion during peak tourism periods and urban planning, but with weaker views on support for the attraction within local communities. These types of attractions tend to apply for more external funding than other types of attraction, especially

Chinese government attractions which may receive more financial support from government and share certain social responsibilities with local government. These types of attractions also have more mature environmental documentation and management systems; the actions taken may be due to the fact they suffer from more pressure from the public sector. Due to the considerable size and influence of these types of attraction, they tend to be less influenced by local communities; however, the large number of employees within these types of attractions can lead to increased bureaucracy, especially in China. The fact that publicly managed attractions have a weaker view on efficient water and energy systems may suggest that they may be better at window dressing environmental management rather than more practical work. Nevertheless, government owned and operated attractions tend to have a stronger view on public benefits in terms of social and governance dimensions because government owned and operated attractions work closely with government bodies.

4.3 Summary and future development

The main contributions of the questionnaire-based survey are the development of a set of built heritage indicators and the examination of their relative importance from an attraction management perspective. The research compared the important variations between indicator types in the UK and China, between large and small tourist attractions, and between different management styles and ownership.

The contribution of the survey must of course be seen in the context of a number of limitations; in conclusion, four points are noted here. *Firstly*, the selection of the set of indicators is based on the perspective of attraction managers only, without the involvement of other stakeholders, such as visitors, local government officers, developers, and local communities. The indicators and their weightings might have been interpreted differently by different stakeholders. *Secondly*, the findings reported here can only assess the importance of indicators based on the views of the 36 responding attractions and cannot extrapolate the views of the attractions that did not respond. *Thirdly*, whilst the achievement of 36 responses was welcome, given the sensitivity of the sustainability issue for some attraction managers, it should be noted that the size of the sample restricts the authority of some of the observations and

conclusions, especially pertaining to sub-samples. *Fourthly, and finally*, given that the development of built heritage sustainability indicators is still at an early stage, further analyses may use more advanced quantitative techniques. The following chapter (Chapter 5) discusses the detailed case studies.

Chapter Five: Empirical studies

5.1 Introduction

The case study approach is a research strategy that employs empirical inquiry to investigate a phenomenon within its social context. The case study approach may rely on multiple sources of evidence, both quantitative and qualitative, and may be generated from the prior development of theoretical propositions. This research analysed four case studies by employing a sustainability appraisal approach devised by the author and it has generated research results for each case. The appraisal methodology was applied using evolutionary logic to show the learning process from a developed country to an emerging market and from a small site to a larger site. Two cases were selected in a developed country; these are Chastleton House and Oxford Castle Heritage Site in the UK. Chastleton House was the pilot study and is a small rural built heritage attraction under the management of the National Trust, one of the largest heritage management charities in the UK. The Oxford Castle Heritage Site is an urban site; it was selected in order to test the application of this appraisal methodology to a larger case. The experience gained from these two attractions in a developed country was then applied to two cases from an emerging market (China). The latter cases were Mountain Jieshi which is a small site, and then the larger and more complex site of Shanhai Pass, Great Wall of China.

5.2 Sustainability Appraisal for a Pilot Built Heritage Attraction in the United Kingdom ----- Case Study of Chastleton House

5.2.1 Introduction

Chastleton House (CH) was selected as a pilot case study to test applied assessment methodologies in the context of the United Kingdom. This section will analyse the case study findings in terms of the attraction's background and indicators across four dimensions (Figure 5.1). Since the assessment methodology faced some difficulties when applied in practice, the indicators and sub-indicators changed somewhat after the pilot study. Details of the changes are noted in the methodology chapter.

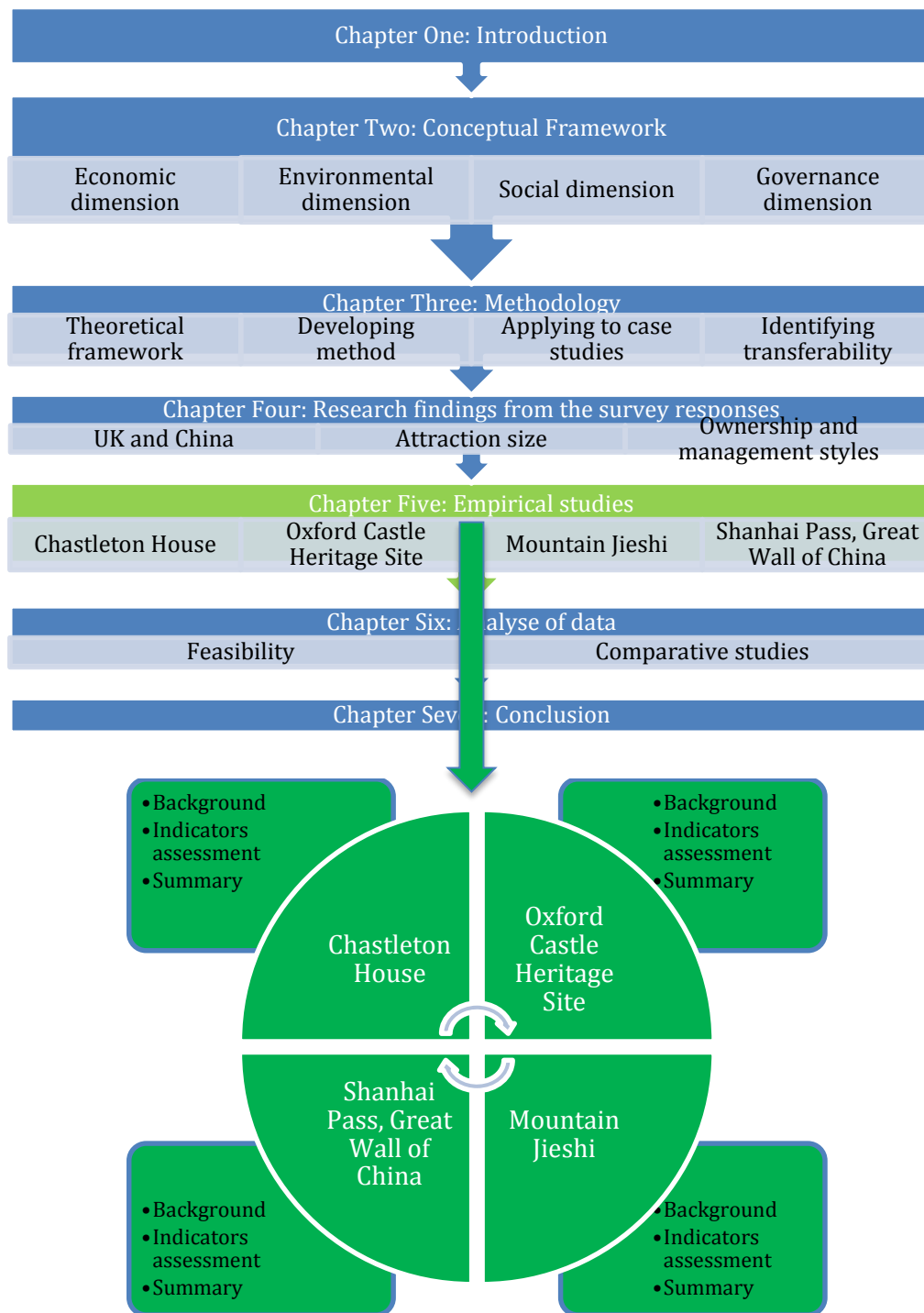


Figure 5. 1: Diagram showing the linkage of CH in conceptual framework

The Jacobean country house, Chastleton House, is located in South East England (Figure 5.2, Figure 5.3 and Figure 5.4). The house has an array of rare artefacts accumulated over the years: rare tapestries, furniture, portraits and personal belongings. It was built between 1607 and 1612 for Walter Jones, a prosperous wool merchant, as an impressive statement of wealth and power. The house was possibly

built according to the design of Robert Smythson (1535–1614 AD), and it has remained largely unaltered since completion (National Trust, 2015a; Figure 5.5 and Figure 5.6). The house was owned by descendants of the same increasingly impoverished family until 1991. It remained essentially unchanged for nearly 400 years as the interiors and contents gradually succumbed to the ravages of time. CH was given to the NT by the National Heritage Memorial Fund in 1991. NT conserved the house between 1991 and 1997, and then reopened it as a built heritage attraction. The NT is a charity completely independent of government. The NT takes responsibility for the conservation and operation of CH (NT, 2015b). CH is located in the Cotswolds Area of Outstanding Natural Beauty (AONB); this is one of the most beautiful areas of England. This area contains a wealth of historic buildings, archaeological sites and landscapes, and has a human activity history of more than 6,000 years. Two world heritage sites are located in this area: Blenheim Palace and the City of Bath. CH is in Chastleton village in northwest Oxfordshire, on the boundaries of both Gloucestershire and Warwickshire. It is a small village of 153 people (Office for National Statistics, 2015).

The researcher interviewed six people from the attraction's management and third parties, including The Visitor Operations Manager of Chastleton House, the Lead Consultant and Land Use Planning Adviser of the National Trust and four volunteers from Chastleton House. The researcher also conducted a site survey undertaken around the attraction's exit gate to obtain 50 completed visitors' questionnaires.

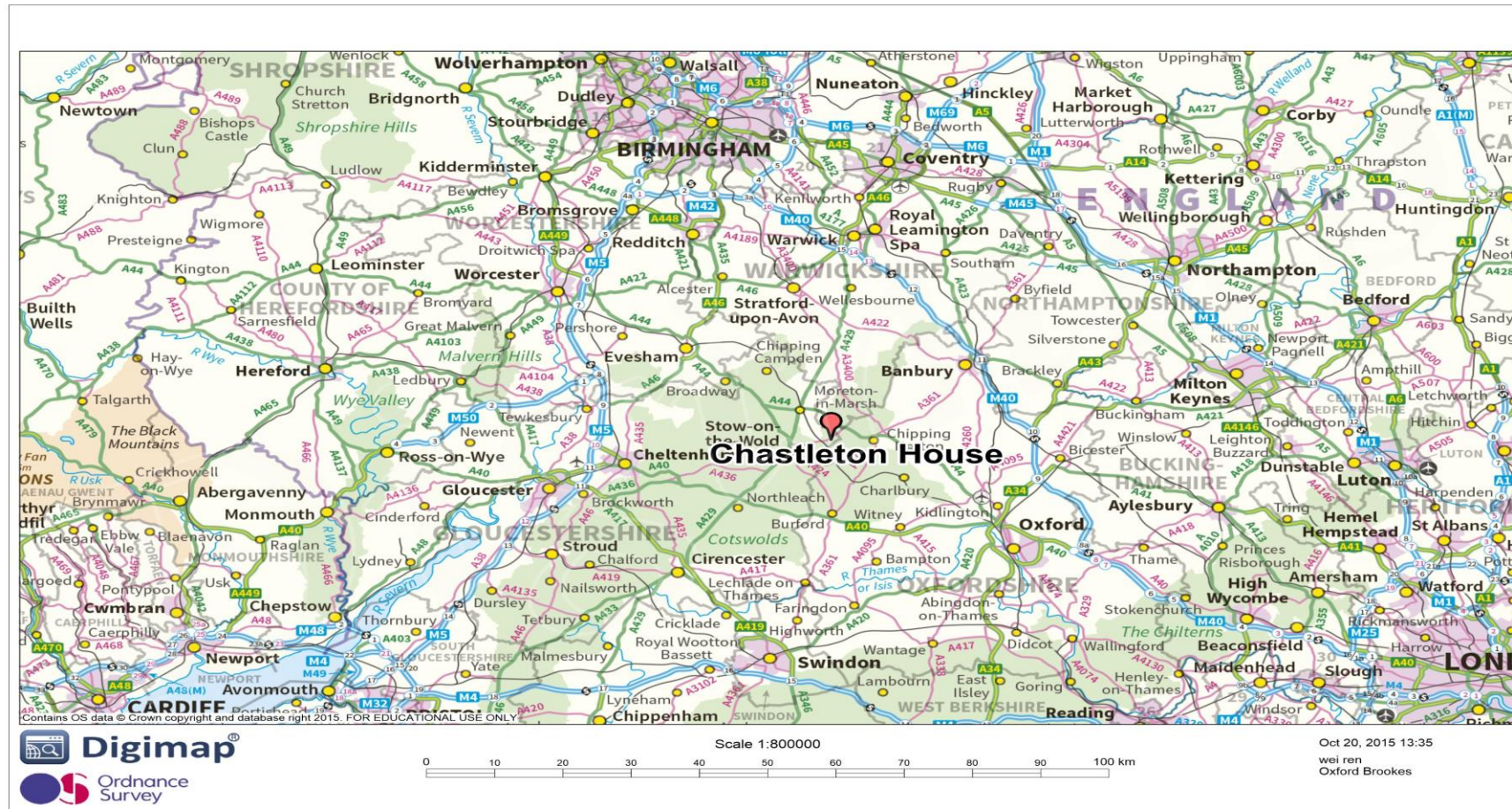


Figure 5. 2: Chastleton House in Southeast England Source: Digimap 2015a



Figure 5. 3: Chastleton House in Chastleton Village Source: Digimap 2015b

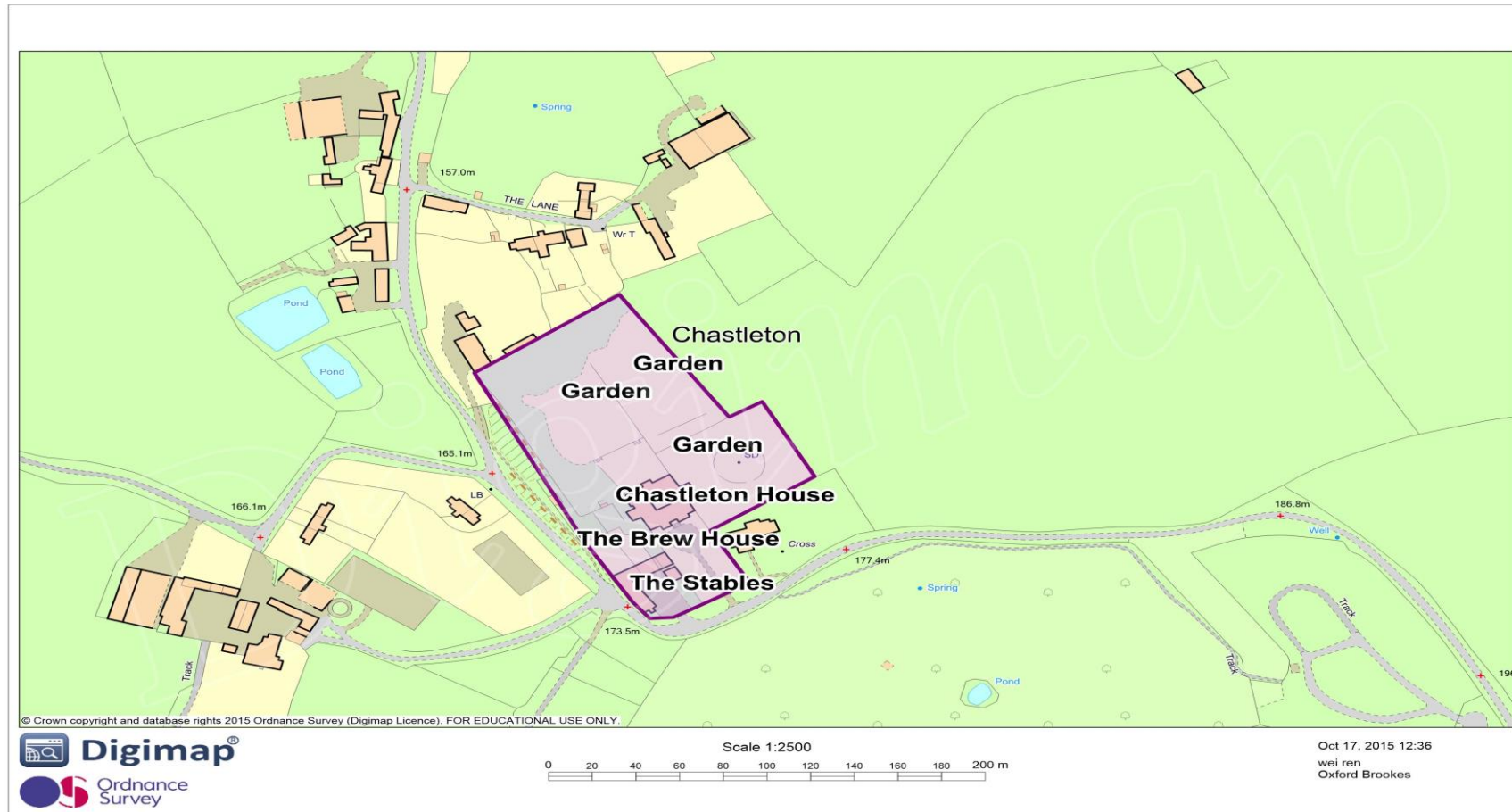


Figure 5. 4: Chastleton House Map Source: Digimap 2015c



Figure 5. 5: Chastleton House, 2013



Figure 5. 6: Historic building in Chastleton Garden, 2013

5.2.2 Indicators Assessment

This section analyses the case study data in terms of background information and the indicators across four dimensions.

5.2.2.1 Economic dimension

Three indicators will be used to assess economic performance: employment, financial health and visitor numbers. Each indicator has different sub-indicators; the data collected from the survey site has been converted into relevant weightings and scores during the analysis process. The overall scores for the above indicators are listed in Table 5.1.

In terms of the employment indicator, the number of employees at the attraction is nine and the number of permanent positions is four. Thus, the percentage of built heritage tourist industry positions which provide permanent employment for the full year is 4 divided by 9 to give 44.4%, which lies in the sub-indicator score level of 3 (41-60%). The percentage of staff who come from the local city/town is 100% because all the employees live in an area approximately 20 miles around the attraction; this lies in the sub-indicator score level 5 (81-100%).

The overall score for each sub-indicator is equal to the sub-indicator multiplied by its average weighting. The overall score for the indicator of the percentage of built heritage tourist industry positions which provide permanent employment for the full

year is 11.1 out of 25, and the indicator of the percentage of staff who come from the local town/city is 19.5 out of 25. For example, based on the above analysis, the sub-indicator score for sub-indicators of the percentage of built heritage tourist industry positions which provide permanent employment for the full year is 3; its average weighting is 3.7. Thus, the overall scores for the indicator of the percentage of built heritage tourist industry positions which provide permanent employment for the full year is 3 multiplied by 3.7, which gives a result of 11.1.

In terms of the financial health indicator, the operating profit was £511,146 in 2013/2014 and the number of employees at the attraction is nine. Therefore, in this case, the operating profit of the attraction divided by the attraction's employee numbers is $\text{£ } 511,146 / 9 = \text{£ } 56,794$, which lies in the sub-indicator score level 4 (£50,000-£75,000). The operating profit was £506,991 in 2012/2013, so the operating profit growth rate over 2013/2014 was $(511,146 - 506,991) / 506,991 = 0.8\%$, which lies in the sub-indicator score level 2 (0-3.33%).

Table 5. 1 Economic dimension (2013/2014)

			Indicators of Employment		Indicator of Financial Health		Indicators of Visitors	
Sub Indicators			Percentage of built heritage tourist industry positions which provide permanent employment for the full year	Percentage of staff who come from the local town/city	Total income of an attraction divided by attraction employee numbers	Total income growth rate	The actual visitor numbers compare to the designed tourism carrying capacity of the attraction	Tourist numbers of an attraction divided by attraction employee numbers
Scores	Sub-Indicator score levels	5	81-100%	81-100%	More than £75,000	More than 10%	In the capacity	More than 8,000
		4	61-80%	61-80%	£50,001-£75,000	6.7%-10%	0-10% of over capacity	6,001-8,000
		3	41-60%	41-60%	£25,001-50,000	3.4%-6.6%	11-30% of over capacity	4,001-6,000
		2	21-40%	21-40%	£1-£25,000	0-3.3%	31-50% of over capacity	2,001-4,000
		1	Less than or equivalent to 20%	Less than or equivalent to 20%	Less than or equivalent to £0	Less than or equivalent to 0%	More than 50% over capacity	Less than or equivalent to 2,000
	Results from analysis		44.4%	100%	£56,794	0.8%	24.8%	4,159
	Sub-Indicator Scores		3.0	5.0	4.0	2.0	3.0	3.0
Weighting	Manager’s Weighting		4.0	4.0	5.0	4.0	4.3	4.0
	Tourists’ Weighting		4.1	4.2	4.1	3.9	4.1	3.9
	Third Party’s Weighting		3.0	3.5	3.5	4.0	3.5	4.3
	Average Weighting		3.7	3.9	4.2	4.0	3.9	4.0
Overall Scores			11.1	19.5	16.8	8.0	11.7	12.0

In terms of the indicator related to visitor numbers, the visitor carrying capability of the attraction is about 30,000 per year, while the visitor numbers were 37,431 in 2013. The actual visitor numbers compared to the tourism carrying capacity designed for the attraction is $(37,431-30,000) / 30,000 = 24.8\%$, which lies in the sub-indicator score level 3 (11-30%). The number of employees is nine, and the result of the tourist numbers of the attraction divided by the attraction's employee numbers is $37,431/9 = 4,159$, which lies in the sub-indicator score level 3 (4,000-5,999) (Table 5.2).

The attraction realizes the importance of its visitor carrying capability, but it is hard to achieve because of the conditions at the property. A staff member comments on the visitor carrying capability as follows:

“We do have what is called a conservation assessment toolkit, which enables us to review the number of people coming through the house in a more scientific way, so that we can measure the impacts of more visitors, particularly on more small space and small rooms. But this property isn't complete..... because we are busy..... and we have a very small team.”
(Interview with a member of staff at CH, 2014)

Table 5. 2: Annual visitor numbers and operating results after cost of CH

Year	Annual Visitor Numbers	Operating Results after Cost	Notes
2009	19,878	Null	Conservation/access audit
2010	25,424	Null	Increased access
2011	Null	Null	Null
2012	24,634	£445,837	Garden only ticket introduced
2013	37,431	£506,991	5 days opening/ dry summer
2014	33,000 estimated	£511,146	National settlement anticipated

Sources: Interview with a member of staff at CH, 2014

5.2.2.2 Environmental dimension

Two indicators will be used to assess environmental performance: environmental management, and historic buildings' conservation and preservation. The overall scores for the above indicators are listed in Table 5.3.

Based on one of the interviews, environmental management is made up of an Environment Management System (EMS) Action Plan 2014 (Table 5.4) and the NT Environmental Standard for Parks and Gardens Guidance (2012). The attraction is

Table 5. 3: Environnemental dimension (2013/2014)

Indicators of Environmental Management					Indicators of Historic Buildings Conservation and Preservation		
Sub Indicators			Environmental management system	Water, electrical and gas consumption trends per annum	Waste recycle rate per annum	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	Attraction conservation system
Scores	Sub-Indicator score levels	5	The quality, effectiveness and standard of environmental management in the attraction	Reduced by more than 20%	More than 60%	More than 25% of total expenditure	Provides heritage conservation, technologies, methods and management structures (conservation management); the standards of the technologies, methods and management structures (conservation quality); the attraction implements efficiently (conservation implementation) (With the 5 is best and 1 is the worst).
		4		Reduced by 11%-20%	41%-60%	21-25% of total expenditure	
		3		Reduced by 0%-10%	21%-40%	16-20% of total expenditure	
		2		No change	1%-20%	11-15% of total expenditure	
		1		Increased consumption	Less than or equivalent to 0%	Less than or equivalent to 10% of total expenditure	
	Results from analysis		The assessor rated the environmental management system of this attraction in medium level	Increased consumption	41%-60%	About 30% of total expenditure	Work under the supervision of the NT, this attraction has high standard conservation system and practice, the CPI score for this case is 81.3%.
	Sub-Indicator Scores		3.0	1.0	4.0	5.0	5.0
	Weighting	Manager’s Weighting		4.0	5.0	5.0	4.0
Tourists’ Weighting		3.6	3.9	4.0	3.8	4.0	
Third Party’s Weighting		4.2	4.3	4.7	5.0	4.3	
Average Weighting		3.9	4.4	4.6	4.3	4.4	
Overall Scores			11.7	4.4	18.4	21.5	22.0

aiming to establish a practical and high quality environmental management system and to ensure that the implementation of environmental policies is effective. Firstly, the attraction realized that electricity and gas consumption were increasing, and it tried to reduce consumption by following the recommendations from an energy management audit.

Table 5. 4: Chastleton House EMS Action Plan 2014

Area	Issue/Opportunity	Comment	Actions required
General	Exemption for wormery	Property has a wormery but it is not currently registered for an exemption	Register for exemption
Property wide	Potential exists for biomass boiler	Conservation heating of house is currently provided by electric, oil filled radiators. System is old and not working at full efficiency. Plug in heaters are used to supplement conservation heating and to provide comfort heating. A suitable location for a biomass boiler exists in the current wood store.	Consider installation of a biomass boiler in the wood store. Link to a biomass mechanical services to provide a district heating system for the property.
Let Estate - Blue Row Cottages	Potential exists for biomass boiler	The planned refurbishment of the Blue Row cottages would present an ideal opportunity to install a biomass boiler to supply heat and hot water to the cottages	Consider installation of a biomass boiler in the outhouse.
Stable Yard	Water Harvesting	No gutters fitted, old water storage tank (rotten) is adjacent to the public toilets	Opportunity to put guttering on buildings as historic plans show guttering was once present. Introduce rainwater harvesting and use old water tank at the back of the visitor toilets to install grey water toilets and also to water the garden. Would reduce water use and water bills. Visitor toilets also require push taps.
Public Toilets	Reduction in energy	Toilets are currently serviced by on/off switches	Replace passive infra-red (PIR) to reduce potential for lights to be left on
Sub Meters	Improve understanding of which meter covers which area	At present there are two fiscal meters (both Smart although only one communicates) There are at least 7 sub meters in the property although it is unclear (with the exception of two for the conservation heating) what is fed from which meter	Commission a survey to establish which sub meter feeds which area of the property. Resolve the communication problem with the smart meter
Timers	Improve understanding of use of timers	There are a significant number of timers in the various distribution systems around the property. In general these are not rated. It is noted that the electric charges are on six separate tariffs	Carry out a survey to determine what the timers are for. Review the energy use profile to confirm whether the six tariffs are the most cost efficient way of paying for electricity
General	Waste Management	Waste currently goes into domestic waste stream No central register of Duty of Care Paperwork	Sort out correct disposal route Establish central (property) register

Brew House	Energy Reduction	Brew house currently used for low level tea and cakes catering. Has potential to be expanded once holiday let transfer to staff accommodation.	Consider installation of log burner in fireplace
Visitor Centre	Energy Reduction	Heat currently provided by 2 x plug in heaters. Large gaps in doors/open door policy causes high heat loss	Consider installation of a quartz/ceramic radiant heater over the work area. Consider installation of glass panel inside main doors, which will also improve security
Gardens	Potential use of Ash	Property is considering the use of ash in compost/soil.	Will require: incorporating ash into soil exemption if carrying out this activity
General	Drainage Plans	Plans not held on site	Obtain copy of drainage plans and hold on site (either hard copy or electronically) Consider marking of drains
Legal Compliance	Discharge Exemptions/Permits	No records seen to show that compliance with permit/exemptions for discharge from STP/Septic Tanks are being complied with	Need to establish records of maintenance and disposal of sludge
Security Lights	Energy Reduction	External security lights are currently on a timer and switch off at around midnight	Consider installation of Photo-Ionization Detection (PID) to ensure that lights only go on with movement.
Legal Compliance	Air Source Heat Pump	No evidence could be provided to show that annual leak testing has been carried out.	System contains >8.5kg of R410A refrigerant and therefore requires annual leak testing by accredited company and certified engineer, under F Gas requirements and appropriate records to be maintained. System is rated at 5kw therefore does not need an Air Conditioning Inspections (TM44) energy assessment.

Sources: NT, 2014a

Furthermore, it is aiming to use energy more efficiently by relocating the conservation monitors. According to the EMS Action Plan 2014, a range of environmental management problems and appropriate actions have been identified. Secondly, the attraction was awarded the Bronze standard of the NT Environmental Standard for Parks and Gardens (2012) for trying to meet the Bronze Environmental Requirement (Table 5.5).

Table 5. 5: National Trust Environmental Standard for Parks and Gardens 2012

Environmental Standard

Bronze Level Standards

- Use energy efficiently
- Use water efficiently
- Optimise use of rainwater
- Compost garden waste
- Re-use or recycle materials
- A full integrated pest management programme

Silver Level Standards

- Use low energy management techniques
- Recycle greywater
- Reduce water demand
- Compost catering waste
- Reduce use of synthetic chemicals

Gold Level Standards

- Increase use of renewable energy
- 100% mains free for garden activities
- 100% of garden and catering waste composted
- No synthetic chemicals used under IPM
- Climate change adaptation plan (for garden and plant collection) in place for future planting
- Links with the wider estate (for example, as a source of bio-fuel and edible crops)



Sources: NT, 2012

Thirdly, the attraction involves both internal and external environmental/sustainability professionals to improve its environmental performance. For example, by following the suggestions of internal environmental practice officers and an external sustainability consultant, CH would be able to reduce its use of utilities. A member of staff comments on using both internal and external environmental/sustainability professionals thus:

“Yes, we have the environmental practice officers, and I made an appointment with the environmental practice officers to come to have a look at our electricity meters to check if they are all working effectively..... I think it is a tool for the organization with the targets for improving their efficiency and sustainability on energy.”(Interview with a member of staff at CH, 2014)

However, because of the nature of heritage buildings' conservation, it is difficult to significantly reduce energy consumption. For example, the heating system in the attraction is convection heating working on humidity so the heating will come on on a humid day. Furthermore, its small size and limited budget restrict the attraction's financial ability to apply for a higher level than the bronze standard. To go to the silver standard needs more investment in conservation facilities. Nevertheless, the attraction still needs to improve its energy usage and enable the environmental policy to be applied more efficiently and practically.

To summarize the environmental management of this site, CH is working with medium standard environmental and sustainability management systems and needs to ensure implementation efficiency. Based on the overall consideration and the above evidence, the assessor rated the environmental management system of this site as in the sub-indicator score level 3.

Water, electrical and gas consumption have increased in the last few years due to more visitors coming, which lies in the sub-indicator score level 1 (Increased consumption). About 60% of the waste is being recycled at the attraction, which lies in the sub-indicator score level 4 (40%-60%). Although utilities consumption at the attraction has increased in the last few years, there is still a willingness to improve:

"Because we have high electricity costs, the house doesn't have any other form of heat and fuel, and so we do our best to improve our water and waste management. For example, we plan to collect the water from the roof, store it and reuse it for flushing toilets." (Interview with a member of staff at CH, 2014)

In terms of indicators of historic buildings' conservation and preservation, based on the interview and Conservation Performance Indicators (CPI) Report (NT, 2014b), about 30% of CH's annual expenditure is on conservation, preservation and restoration as a proportion of the total expenditure of the attraction. This sub-indicator score was assigned as 5, in the sub-indicator score level 5 (more than 25% of total expenditure). Under the supervision of the NT, CH has taken many actions on heritage conservation. The main conservation framework is the CPI system. CPI measures the condition of each of the conservation's assets and sets a target for improvement within the NT (Table 5.6). According to the results, the overall score of

the CPI is 81.3%. The CPI score can somewhat reflect the conservation of this attraction. Additional information indicated that the attraction has a clear management system for its conservation under the supervision of the NT. The main house of CH is a grade one listed building and the house has been preserved as if in a time capsule; there have been no significant changes to the building since it was given to the NT. Therefore, after converting 81.3% into the scoring system for this research, and considering the high standard of heritage conservation, technologies, methods and management structures used by CH, as well as the fact that the attraction implements these efficiently, the sub-indicator of the attraction conservation system was rated as 5.

Table 5. 6: CH CPI Report Key Points

Features and delivery scores	Objectives	Actions
House Interior: Floors, panneling, fire places, plaster work, wall paintings, painted/decorated surfaces finishes, ironwork, windows, joinery, plumbing, historic services Delivery score: 81.8%	All historic features are present and in sound condition.	Programme of work based on QQ needs establishing and timetable setting for works based on urgency. Commission plaster survey (2012) and implement recommendations. Complete Tankerdale recommendations from 2012 Report regarding bottom of West stairs - top East stairs
	All work has been carried out in line with the principles outlined in the statement of significance, the memorandum of 1991, and the updated conservation plan, as identified by the QQ and the conservation surveys.	Monitor and review the impact of increasing visitor numbers, additional opening hours and other activities eg: filming, events, group visits. Use C4A Toolkit and Preventative Conservation Audit
	Where features have been lost they have been preserved by record.	93/95 archaeological recording on interior of the house needs report completing.
Spirit of place : Continuity of links with family, sense of ancientness, civil war links, sense of managed decay and proud poverty, feels like a home, dusty domesticity Delivery score: 85.0%	The application of a rigorous measure of a spirit of place has revealed no decline compared to that described in the statement of significance and the conservation plan	Impact of increased visitors and associated continually monitored. Draft and complete Spirit of Place statement
Collection: Important collection of Textiles, amalgam of many generations of family collections, 1633 inventory, middle-english collection of furniture, library of locally produced books, family portraits, dispersed collection, archaeological collection derived from works to the house. Archives owned by the Trust in the care of Oxfordshire county record office. Delivery score: 95.0%	All indigenous items in the inventory of chattels 2008 and in the archaeological inventory are present	Acquisition of indigenous items as opportunities arise/ Completed full inventory check/ Complete object marking/ Specialist cataloguing to enhance knowledge of the collection./ Preventative Conservation Audit Action list is prioritised and agreed Actions delivered within 12 months Establish a prioritised list of Remedial Conservation requirements of the collection, secure funding and address urgent priority items
	The acquisitions and disposal policy has been implemented	We meet the standards of Museum Accreditation through the implementation of our Acquisitions and Disposal Policy
	All recommendations of conservation surveys have been carried out in the timescales recommended, subject to the principles outlined in the statement of significance and the conservation plan.	Archaeological archive to be relocated to Chastleton by the end of March 2013, to include the archive resulting from the restoration of the Bakehouse and Hayloft.
Bats: Six species of bats, one of the most important sites on the region, long history of presence Ancillary Buildings Brewhouse grade 2*, Stables grade 2 *, Dovecot grade 2*, Walls grade 2, Barn, Privys, Gates, Carriage house, Green house, House (Structure) Jacobean, Grade 1 listed, sense of ancientness. Delivery score: 90.0%	All of the species of bat present in 2006 are still present in at least the same numbers.	Monitor new bat loft and repeat monitoring of house roosts - spring and autumn Obtain bat monitoring report from contractors following Hayloft completion Provide house team with advice for mitigating disturbance of bats in the house roof void, during regular inspections
	The buildings are structurally sound with works only having been carried out in line with the principles outlined in the statement of significance, the memorandum of 1991, and the updated conservation plan, as identified by the QQ.	Make the Dovecote weathertight - instruct architect and obtain listed building consent To monitor structural movement of Brewhouse and carry out works to stabilise wall and roof
	All historic features are still present or have been preserved by record.	Archaeological archive resulting from the restoration of Bakehouse and Hayloft to be deposited at the property.
	The building is structurally sound with works only having been carried out in line with the principles outlined in the statement of significance, the memorandum of 1991, and the updated conservation plan, as identified by the QQ.	To form a view on the future approach of stonework repairs in line with QQ recommendations Commission Survey of the top of the East Stairs. Undertake Remedial work to the bottom of the West stairs/ Undertake feasibility study for environmental improvement in the House - particularly heating
	All historic features are still present or when lost have been preserved by record.	Complete write-up of the 1993-5 archaeological building record by 2012.
Garden: Grade 2* registered, much modified neo-jacobite (including terraces and croquet lawns), wild tulip Delivery score: 91.9%	The form and layout are as specified in the conservation plan of 1993 and subsequent plans.	Review works to date on CMP 93 and GMP 2011 and create a 5 year management plan for the garden which clarifies the role and capacity along with issues such as weather dependency
	The planting schemes are in line with the principles and policies laid down in the Conservation Management Plan dated March 2012	Look at the feasibility of possible reinstatement of the green house - create a business case - consider reason, options and budget Undertake repairs to current greenhouse - glazing bars failing and pointing on brickwork
	Improve environmental sustainability of the garden in line with Environmental Standards for Gardens and Parks	Achieve Bronze Standard for ESGP by installing water butts in the West Garden Achieve ESGP Bronze standard for plant health by creating a quarantine area for plants
Setting: The old estate, 22 acre park, 12th c church, village, areas of ridge and farrow, evidence of past cultivation practices, unpaved road, Cotswolds AONB, house is part of the village, conservation area, Blue row, fish ponds, kitchen garden, ancient hedges, wider landscape Delivey score: 55.0%	The desired state as specified by the conservation statement, to be in place by 2010, exists.	Ensure future NT development does not detract from but is sympathetic to the setting - eg.(Blue Row and disabled car park improvements) Continue to pursue a solution to the run off with Oxfordshire District Council.
Archaeology: Extensive earthworks within the park relating to past cultivation, field divisions and landscaping. Buried evidence within the park relating to former Greenwood house. Buried evidence within gardens, forecourt and stable yard relating to occupation since at least the Saxon period. Collection of artefacts arising from previous excavations Delivery score: 70.0%	No loss or damage of any archaeological features or the collection save where fundamentally necessary works have been carried out and losses have been preserved by record. All recommendations for management in relevant reports have been carried out. (100%)	Complete archaeological report for the gardens and wider landscape and implement agreed recommendations arising from the report. Monitor disabled car park project and access route across parkland in terms of archaeological impact Re do geophysics on garden

Sources: National Trust, 2014b

5.2.2.3 Social dimension

Two indicators will be used to assess social performance: key stakeholders' involvement and stakeholders' attitudes. The overall scores for the above indicators are listed in Table 5.7.

Based on the interviews, the attraction aims to benefit the local area, but the obvious benefits still appear limited. The attraction provides local jobs, boosts the local tourism economy by attracting more visitors to the local area, and improves the value of local houses. Furthermore, the attraction has a close relationship with the local church next door which receives income by providing refreshments for visitors (Figure 5.7). A member of staff of CH commented:

“..... we are part of Cotswold Outstanding Natural Beauty; we provide the local jobs..... We are also part of the local tourism economy, people come to the area to visit us.....

.....NT members come to our property, but will spend in the area, they will stay in the area and use our restaurants, pubs, hotels.....

.....we think we also improve the value of local housing, because if you are a neighbour of NT, that means you have protected the natural environment.....

..... we also have a local relationship in the church next door, they provide refreshment for our visitors in the week. So local charity will provide that service and pay the church towards the conservation project..... So they are benefiting from our visitors” (Interview with a member of staff of CH)



Figure 5. 7: Local St Mary's Church provides refreshment for visitors, 2013

The attraction also plans to host more events for educational purposes and students in the future. Given the size of the attraction, it cannot provide significant improvement to the local area. The attraction provides local jobs, but it has

Table 5. 7: Social dimension (2013/2014)

			Indicators of Key Stakeholders Involvement		Indicators of Key Stakeholders' Attitudes	
Sub Indicators			Attraction's social involvement	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	Attitudes towards attractions from third parties (local community, volunteers, and planning authorities)	Attitudes towards attractions from visitors
Scores	Sub-Indicator score levels	5	Shows positive/negative attitudes across all parties; Locals are sufficiently/hardly involved when development decisions are made; the attraction contributes significant/few benefits to the local area (With 5 is the best and 1 the worst)	More than 6% of visitors are concessions	The degree of attitudes towards attractions from third parties (local community, volunteers, and planning authorities)	The degree of attitudes towards attractions from the visitors
		4		4.1%-6% of visitors are concessions		
		3		2.1%-4% of visitors are concessions		
		2		0%-2.0% of visitors are concessions		
		1		None		
	Results from analysis		The attraction is trying to benefit the local area, but the obvious benefits still limited	1%	According to the survey results survey, third parties rated their average satisfaction with the attraction as 8.8/10	According to the survey results, the tourists rated their average satisfaction with the attraction as 7.7/10
	Sub-Indicator Scores		3.0	2.0	4.4	3.9
Weighting	Manager's Weighting		3.3	3.0	3.3	3.3
	Tourists' Weighting		3.8	3.8	3.8	3.8
	Third Party's Weighting		4.0	3.6	4.0	4.0
	Average Weighting		3.7	3.5	3.7	3.7
Overall Scores			11.1	7.0	16.3	14.4

fewer than 10 employees, and some of them are employed on a seasonal or part-time basis. Although visitors come, most of them only stay in the local area for a limited time, so the economic benefits for the local area are limited. Moreover, some residents are not satisfied with the longer opening times and increasing traffic from visitors. Many stakeholders are involved in this attraction (Figure 5.8). Nevertheless, the attraction benefits the local area, although the actual benefits are limited. Another staff member of the NT argued about the limited benefits:

“Yes, but quite limited, because CH is restricted by the original gift..... CH provides limited access.....you cannot have thousands of people coming around, you’ve got a limit to the people who can visit the property.....”(Interview with a member of staff of CH)



Figure 5. 8: Stakeholders of Chastleton House

Most participants show positive attitudes towards the attraction; locals are certainly involved when development decisions are made; the attraction contributes limited benefits to the local area. The author assigned the score in the sub-indicator score

level 3. Approximately 1% of tickets are concession tickets, which is in the sub-indicator score level 2.

In relation to the indicators of attitudes towards attractions from third parties and visitors, the researcher asked all participants (CHM, CHP, CHV1, CHV2, CHV3, CHV4 and 50 visitors) to rate their satisfaction with the attraction's management, with 10 being the most satisfied and 1 being the most dissatisfied. The third parties (CHP, CHV1, CHV2, CHV3 and CHV4) rated their average satisfaction with the attraction as 8.8 out of 10, in the sub-indicator score level 4. The average satisfaction with the attraction across the 50 tourists was 9.7 out of 10, in the sub-indicator score level 4.

5.2.2.4 Governance dimension

Three indicators will be used to assess governance performance: planning, troubleshooting ability and attraction management. The overall scores for the above indicator are listed in Table 5.8.

In terms of the indicator of planning, based on the interviews, the attraction was aware of and took steps to comply with relevant laws and regulations during its development. The tourist plan of the attraction is welcoming to visitors and well interpreted (Figure 5.9). The attraction submitted plans to upgrade the housing office beforehand. The attraction had difficulty in applying for planning permission during the period of interview, as a minority of residents protested about the decision regarding longer opening times and other relevant matters due to the fact that they were not kept well informed. More details will be introduced in the next section. Furthermore, space for additional parking may not have been well designed at this stage (Figure 5.10). Overall, this attraction ensures regulatory compliance and aims to deliver transparency, accountability and effectiveness in its planning, but more work is needed in terms of involving locals. Therefore, the sub-indicator score level of planning performance was rated as 4 by the assessor.

Table 5. 8: Governance dimension (2013/2014)

			Indicator of Planning	Indicator of Troubleshooting Ability	Indicator of Attraction Management
Sub Indicators			Planning Performance	The ability to balance the relationship between development and preservation	Attraction management
Scores	Sub-Indicator score levels	5	Regulatory compliance, planning transparency, accountability and effectiveness (With 5 is the best and 1 the worst)	There are issues in relation to development and preservation, the attraction needs to respond to the issues quickly, address the issues practically, and the results can be accepted by most stakeholders	The attraction should have a clear vision for development, practical financial forecasting, use the staff and working resource efficiently and enable the majority of staff to satisfy the requirements of attraction management
		4			
		3			
		2			
		1			
	Results from analysis		Overall, this attraction ensures regulatory compliance, aims towards planning transparency, accountability and effectiveness, but there is more work to do on involving locals.	The main problem of this site is how to work with locals. Overall, the site needs to respond to issues quickly, try to address the issues practically by communicating more with locals and the results should be accepted by most stakeholders.	This attraction has a clear vision for development; practical financial forecasting, uses the staff and working resources relatively efficiently most of the time, and enable the majority of staff are satisfied with the attraction management. However, there are some problems with bureaucracy.
Sub-Indicator Scores		4.0	3.0	3.0	
Weighting	Manager’s Weighting		5.0	5.0	5.0
	Tourists’ Weighting		3.9	3.9	3.9
	Third Party’s Weighting		4.3	4.3	4.3
	Average Weighting		4.4	4.4	4.4
Overall Scores			17.6	13.2	13.2



Figure 5. 9: Layout plan of Chastleton House, 2013



Figure 5. 10: Additional parking, 2013

In relation to the indicator of troubleshooting abilities, the questionnaire with local volunteers and external reports and documents reveal the main issue is that of the

resistance of residents to the attraction opening for longer on Sundays (Figure 5.11). The residents claimed the Sunday opening time would affect the peace of the local area, and they felt they had not been consulted before the decision was made. The attraction responded that most NT attractions are open at the weekend. The attraction aims to settle future arguments by increasing its communication with residents and providing more benefits to the local area, but the dispute was still ongoing at the time of this study. There are no online reports about this dispute after July 2014. A member of staff of CH commented as follows:

“We have difficulty in opening on Sunday, the extra day. The consultation processes could have been better with locals; I think it was a matter of a change of staff, and perhaps the process not having been audited. So, at the moment, we have a small number, but a number of people are disappointed because they weren't consulted before the property opened on an extra day..... but the majority of people are happy that we made this decision (to open for an extra day), because it means that they can visit when they are not working. The majority of NT property is open on the weekend and CH was out of step for not being available” (Interview with a member of staff at CH)

The main problem of this site is how to work with locals. Overall, the survey suggests that the attraction should respond to issues more quickly, should try to address the issues in a practical way by communicating more with locals and then the results can be accepted by most of the stakeholders. Therefore, the sub-indicator score level of trouble shooting was assigned as a medium level.

Villagers anger at National Trust decision to open Cotswold country house on a Sunday

- Charity accused of spoiling 'tranquility' of their picturesque village
- Residents fear extended opening hours will lead to influx of visitors
- National Trust promises to protect 'special' quality of village

By SHARI MILLER

PUBLISHED: 17:32, 5 April 2013 | UPDATED: 17:32, 5 April 2013



38
View comments

Residents in a small village of just 30 homes have accused the National Trust of ruining their tranquillity after allowing a country manor house to open on Sundays.

Locals in Chastleton, near Moreton-in-Marsh, Gloucester, say keeping Chastleton House open all weekend will overwhelm the village.

They fear the village will be swamped with traffic and have accused the National Trust of a lack of consultation.



Uproar: Villagers are concerned the extended opening hours of Chastleton House, Gloucester, will lead to an influx of visitors

But the charity says that extending the opening hours will see visitors to the Jacobean manor jump from 26,809 last year to an estimated 30,500.

At a parish council meeting with the trust, some of the village's 75 residents aired their views.

Councillor Garry Jones said the plan would change the character of the unspoiled Cotswold village.

He said: 'How can the village trust the National Trust?'

Figure 5. 11: Reports on conflicts between Villagers and Chastleton House
Sources: Daily Mail online, 2013

In relation to attraction management, CH is under the supervision of the NT. CH is a charity owned and operated attraction. NT is a charitable organization dedicated to ensuring the preservation of historically significant cultural heritage, spaces and places. NT offers holistic management of the CH; they take charge of marketing, conservation, human resources and other management matters. Those attractions within the NT which make more profit support those which make less. Resources are

shared between the attractions, and there are Regional Environmental Practice Advisors who deal with environmental planning issues related to attractions in a particular region, allowing attraction managers to focus on the daily management of their attractions.

NT prepared the Chastleton House Property Business Plan (2013-16) (Table 5.9) to cover its vision and forecasting. Furthermore, the business plan shows overall staff satisfaction at this attraction reached as high as 67% in 2011/2012. However, due to the nature of the attraction and its location, the attraction is over-reliant on endowment income. The main income comes from NT investment income, rather than income from tickets, so it still needs more resources for development and support. There is limited information on plan implementation. The staff and volunteers show a positive attitude towards the attraction management, but there is still room for improvement for the NT to enhance their staff and volunteers' satisfaction. However, there is an issue of lack of efficient communication within the management team which may lead to bureaucracy. A member of staff of CH commented on the attraction management as follows:

*“because the property has been managed by different managers, you don't always get the information you need in terms of how the property is managed. Managers work at various times of the year, and changes are made to the system.....
..... Some managers are also quite confused and complicated. (After returning back to work), they cannot find the original documentation, and understand how the electricity works, how the water works, and where is the drainage..... ”(Interview with a member of staff of CH)*

Some visitors commented about the attraction's management as follows:

*“It is a great place to visit, with historic forms unchanged in the last hundred years.....
Very good conserved house.....
It is quite dark and narrow; it may need more lights in the house.....
It is quite boring.....when compared to attractions in London.....
It is a nice house, but difficult to drive to because of the narrow road
It needs more shopping space.....needs better parking
It is a peaceful place.....
It is a good place to visit but opening times are too short and late”
(Interview with visitors, 2015)*

Table 5. 9: Chastleton House Property Business Plan Key Points

Plan Key Points	
Vision	All visitors are moved by their experience of this unique time-capsule house where the story of 400 years of family occupation are brought to life – and the emotional impact stays with them.
Objectives and measures of success for 2013-16	Strategic priorities • Our strategy remains unchanged and continues to be reflected in our strategy wheel with its four quadrants. Our aim is to turn the strategy wheel green which will mean delivering against all of our key performance indicators. • By focusing on two key areas – visitor enjoyment and volunteer recommendation - we're confident that we will drive up performance in other areas. So these two areas will be the priority for 2013/14.
	Externally facing objectives • Inspire visitors through the quirky rather than conventional • Exploit opportunities within the garden to develop new offers • To be part of the local and wider community, recognised and trusted
	Internally facing objectives • Avoid over reliance on endowment income by developing appropriate, alternative income streams • Stay true to the spirit of Chastleton
Business risk management	Description/ Impact/ Likelihood/ Mitigating action
Plan resources	Financial summary – operating performance Headcount summary

Source: NT, 2013

Overall, this attraction has a clear vision for development, it uses practical financial forecasting, uses the staff and working resources relatively efficiently under the supervision of the NT, and the majority of staff is satisfied with the attraction management according to interviews. However, there are some management problems in the form of bureaucracy and over-reliance on endowment income, as well as limited information on plan implementation. Therefore, the sub-indicator score level for attraction management was assigned as 3.

5.2.3 Summary

5.2.3.1 Dimensions

To summarise the average indicator score across the four dimensions, the environmental dimension (15.6) received the highest average indicator score compared to all other dimensions. Then comes the governance dimension (14.7), followed by the economic dimension (13.9) and the social dimension (12.0). This finding indicates that this site pays close attention to environmentally associated management issues and somewhat less attention to its social contribution. The NT manages this site, and so its management system is used, similar to other sites in the

NT. The management system tends to be bureaucratic because there is a lack of efficient communication, for example, in the case of attractions where more than one manager takes charge of different aspects at different times of the year. Over time, this type of management has a tendency to become confused and complicated. The environmental dimension receives attention and CH appears to be making more progress on waste recycling than on efficient energy and water consumption. Meanwhile, on the social aspect, this site tries to involve the local community, but this seems to be limited in terms of effectiveness. Conflict about the attraction opening times has led to local concerns. Although the attraction has taken some remedial measures, the scores for the social involvement indicators are still quite low.

5.2.3.2 Overall scores of all sub-indicators

Attraction conservation management (22.2) received the highest overall score and consumption trends (4.4) received the lowest overall score. Overall heritage conservation indicators also showed good performance maybe because concerns about heritage conservation are shared by many individuals. However, water, electrical and gas consumption trends received less attention. Furthermore, the existing method of indicator assessment could not obtain more accurate data.

5.2.3.3 Weighting

The waste recycling rate (4.6) received the highest composite weighting, and the annual concession percentage (3.5) received the lowest. Weighting is associated with the importance of each aspect in the mind of participants. The waste recycling process has been highly developed and promoted; all participants seem to link waste recycling to sustainability very closely. The annual concession percentage aims to evaluate the attraction's contribution to the local community in terms of concession tickets. However, in participants' minds, it may not be very popular to offer concessions as they may consider concessions to be a marketing strategy.

5.2.3.4 Scoring

The percentage of local professionals, the percentage of annual conservation expenditure and the conservation system received the highest scores (all 5), and utilities consumption trends (1) received the lowest score. Scoring is associated with

the sustainability performance of the site. As a smaller site, it tends to employ proportionately more locals, and all stakeholders pay significant attention to conservation management and much less attention to utilities consumption trends, with fewer measures put in place to tackle the latter issue. Utilities consumption trends is a weakness of this site; this may be due to many reasons, such as inflation, cost increases or receiving more visitors, but it does influence the sustainability performance of this site.

5.2.3.5 Lessons and limitations

There is an impetus in sustainability understanding between the different stakeholders. Stakeholders had different thoughts on the attraction's policies. The stakeholders represent a variety of personal values and backgrounds, which may contribute to the variation in results, for example, on the indicators in the governance dimension. The managers have a tendency to assign a higher weighting to most indicators than do third parties. It may indicate that managers have more confidence in their management than do others.

The aim of the pilot case study was to test the sustainability assessment methodology. The overall research progressed well after CH agreed to participate in the research. The most important lesson from the CH case was learning how to develop the final set of indicators for the sustainability appraisal. Some changes were made to the indicators and to the research approach after the site survey was conducted at CH; the detailed changes are mentioned in the methodology chapter. The changes mainly came out of considerations regarding data accessibility; some data were not provided by interviewees, which meant certain data were not available for the researcher to use in the appraisal and the researcher believed that it might not be easy to collect similar data from other sites. The revised final set of indicators was based on the data collected from the pilot study. There were almost no changes to the scoring criteria for the indicators when applied to the other three cases.

5.2.4 Case statement

CH does well on maintaining sustainability performance. Under NT supervision, the NT improves the sustainability of built heritage attractions by establishing and

applying much detailed guidance in relation to the environmental, social, economic and governance dimensions. For example, the NT has developed an EMS Action Plan, the National Trust Environmental Standard for Parks and Gardens, the Property Business Plan and Conservation Performance Indicators Management. NT conducts an annual appraisal of businesses, conservation and environment management, to ensure CH is operating well. CH conserves and preserves its heritage, and has developed its heritage as a resource at the same time.

However, the negative impacts are that CH should involve local communities more by appropriate methods. CH wants to improve its relationship with local communities, but it does not seem to fully satisfy their requirements. The local community argued that CH did not consult them before extending the attraction's opening times on Sunday. According to the law, CH believed it did not need to canvass local opinions before the decision was made. Other NT attractions open on Sunday, and so this should mean that CH can also open on Sunday. CH tried to address the arguments by holding a series of meetings with the local community and by promising to protect the special quality of the village. After April 2014, there are no public reports or news of CH being accused of spoiling the tranquillity of the picturesque village where it is located.

The NT has established comprehensive and detailed management systems for the operation of individual attractions and it has many regional offices. CH is under the management of Southeast Regional Office, and shares certain resources with other attractions in this region. On the one hand, the NT uses limited staff and resources to operate an attraction to save cost. On the other hand, the NT may have an undue influence on the operation of CH, which then leads to bureaucracy and weaknesses in implementation. For example, the interviews for CH needed to be approved by many different managers of the NT. There are different managers and departments which deal with planning permission, environmental management, conservation and other aspects which may waste human resources. Some small attraction line managers may feel exhausted and may have less influence on the attraction they work for, and it may take longer than expected to respond and address issues.

Nevertheless, this researcher believes that the NT model should be promoted. NT

shares a vision of transparency in conserving and preserving many historic fabrics and houses, and developing them as tourist attractions open to the public. It is a charity rather than a commercial organization and government body. The nature of the NT ensures that most attractions can be considered to be doing well in respect of significant values and they are conserved using appropriate approaches.

5.3 Sustainability Appraisal of a Second Built Heritage Attraction in the United Kingdom----- Case Study of Oxford Castle Heritage Site

5.3.1 Introduction

This section analyses the data collected for the case study of Oxford Castle Heritage Site; this site includes the Oxford Castle Quarter (OCQ) and Oxford Castle Unlocked Attraction (OCUA). In contrast to the previous study, OCHS is an urban site in the major tourist city of Oxford with a very substantial throughput of visitors. Charities are involved in the running of both CH and OCHS. CH is under the management of the NT, while the regeneration of the OCHS has involved the Oxford Preservation Trust. Charities play a different role in the development and management of heritage attractions. As an urban site, OCHS is not only a built heritage attraction, but it is also a heritage commercial development site and open space. It has built heritage attractions, hotels, cafes, residential flats and other public facilities. The OCHS is a more complex site than CH, so the application of the sustainability appraisal methodology to the OCHS entails more challenges and opportunities.

This site is located in the west of Oxford (Figure 5.12, Figure 5.13 and Figure 5.14). Oxford Castle was originally built for William the Conqueror, and served as a home to kings and sheriffs. The site is located in the heart of Oxford over five acres and has several Scheduled Ancient Monuments, Grade I, Grade II* and Grade II Listed Buildings and Structures, such as two of the oldest remaining structures in Oxford – St George's Tower and the Castle Mound (Oxfordshire County Council, 1999). The site was used as a prison for about 1,000 years. In 1997, Oxfordshire County Council purchased the castle site from the Home Office after the HM Prison closed.

The OCQ and OCUA are owned by Oxfordshire County Council, and the County Council takes responsibility for the structure of the buildings and provides a Learning and Access Officer for the Key Learning Centre. The OCQ was developed by the Trevor Osborne Group (TOG) and then set up as Oxford Castle Ltd (OCL) for its daily management. The OCUA is leased to the Oxford Preservation Trust (OPT). OPT has involved an independent commercial operator, Continuum, in establishing Heritage Projects (Oxford Castle) Ltd to take responsibility for the daily management of the OCUA (Table 5.10).

Table 5. 10: Regeneration Time Table
Regeneration Time Table

• 1996 - Oxford Prison closes for the last time • 1997 - Oxfordshire County Council buys back the site from the Home Office • 1997 to 2001 - Oxfordshire County Council funds the upkeep of the empty prison by renting it out to film and television companies. Many feature films and television series have been filmed on the site including 101 Dalmatians and Bad Girls • 1997 to present day - Archaeological investigation reveals much about the city's history • 1998 to 2000 - Partnerships between the County Council, OCL and OPT are put in place. Plans put out for public consultation • 1999 – The County Council and OPT jointly commission a Conservation Plan. • 2001 - Planning permission and grant-funding from the South East England Development Agency, Heritage Lottery Fund, English Heritage and Trust for Oxfordshire's Environment are secured; demolition and restoration starts • 2004 - the site receives a blessing from the Right Reverend Richard Harries, Bishop of Oxford, to commemorate the site's history and celebrate the progress and future of this prestigious scheme • September 2005 - Last intensive phase of construction commences • November 2005 - First businesses open, including restaurants and the Malmaison Hotel • OPT appoints Continuum as operators of the heritage attraction, and a partnership with the County Council to provide an education officer is agreed. • May 2006, Her Majesty Queen Elizabeth II performs the official opening ceremony for the Oxford Castle Heritage Site • May 2006 – "Unlocked" the heritage visitor attraction opens its doors to customers • September 2006 – the Oxford Castle Education Centre opens

Source: OPT, 2014

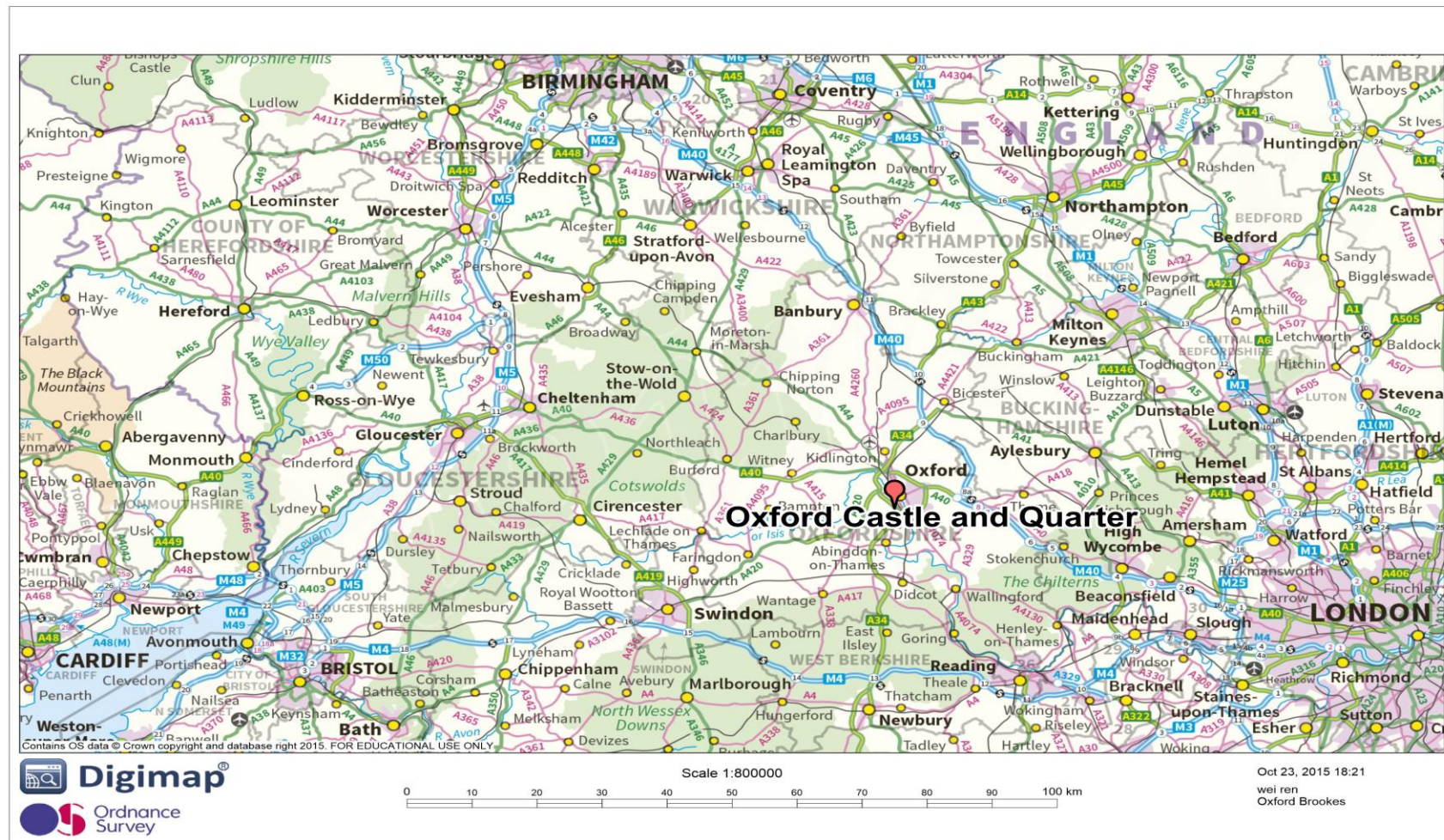


Figure 5. 12: OCQ in the south east region of England Source: Digimap 2015d

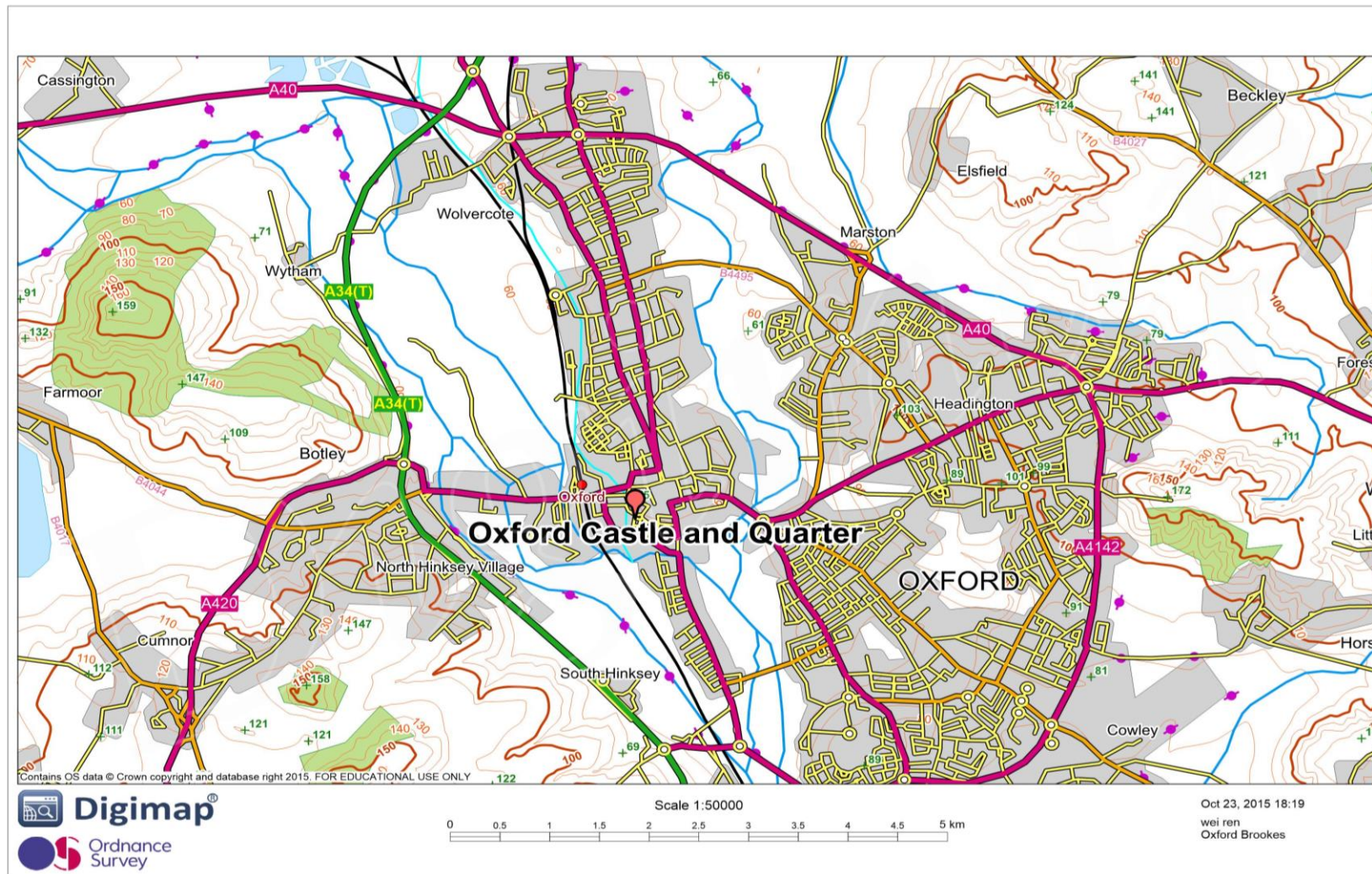
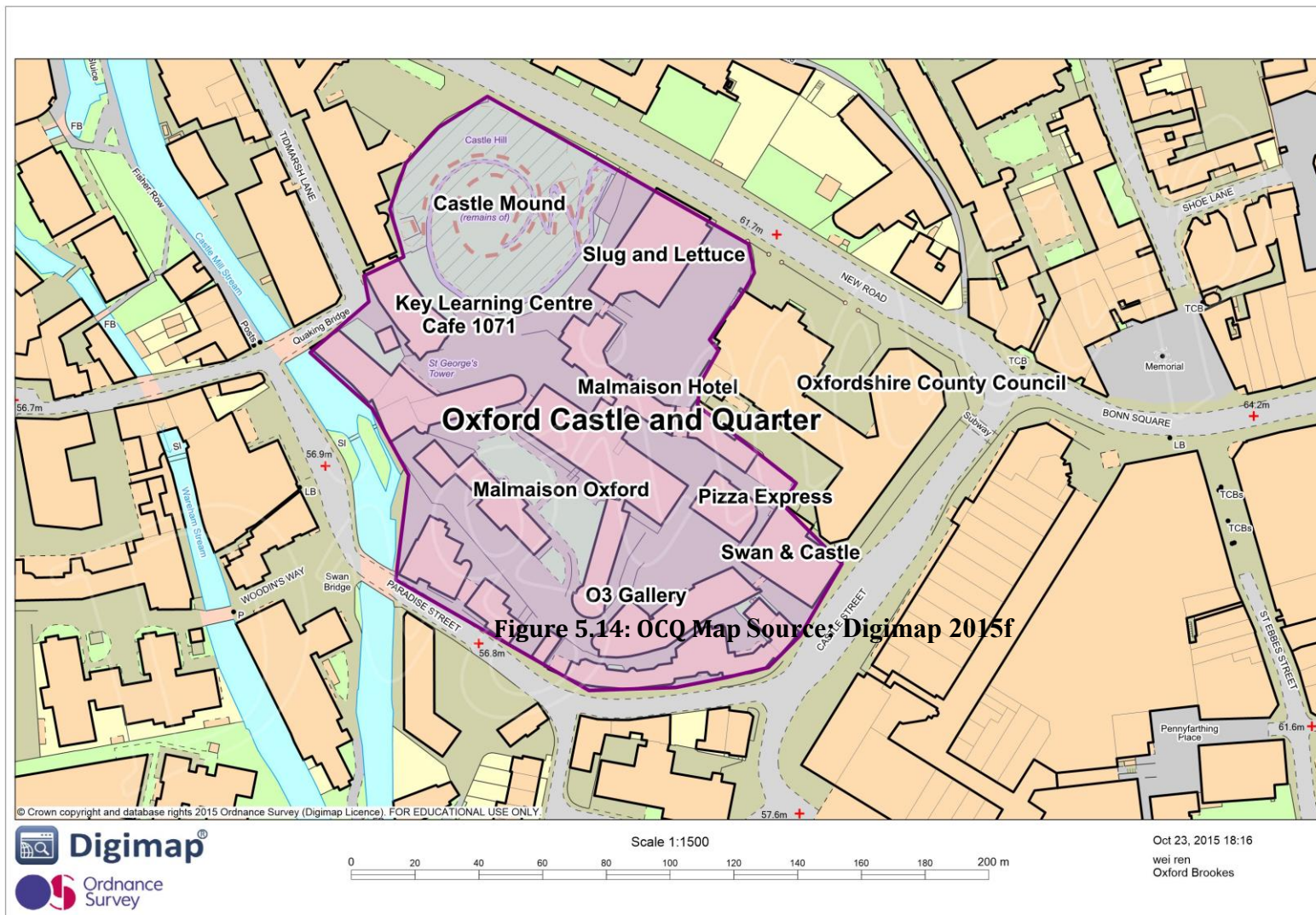


Figure 5. 13: OCQ in Oxford City Source: Digimap 2015e



Oxford Castle is located in the city of Oxford; which is the county town of Oxfordshire in the South East region of England. Oxford is an historic town with a population of 159,994 (The Geographist, 2015). Oxford is the home of the University of Oxford, one of the oldest and best-known universities in the English-speaking world (Sager, 2005). Oxford started with the establishment of a river crossing around AD 900 and the city has conserved much of its architecture from the arrival of the Saxons to the modern day. Although Oxford Castle stands in the city of Oxford which has experienced a number of wars and changes since it was constructed, the plans of the city and the castle show only minor changes in the last hundred years (Figure 5.15, Figure 5.16).

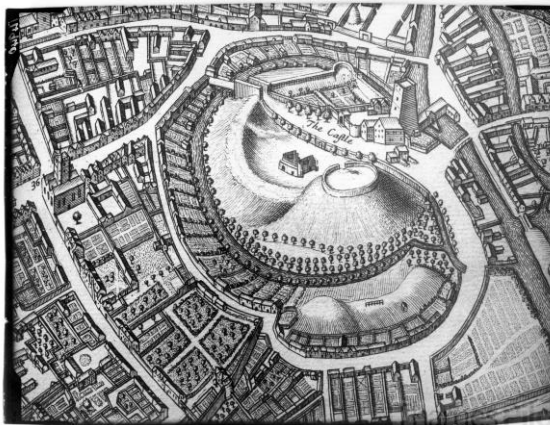


Figure 5. 15: Loggan's Map of Oxford Castle 1675

Source: ThamesPilot, 2015



Figure 5. 16: Loggan's Map of Oxford 1675

Source: Chance, et al., 1979

Oxfordshire County Council aimed to redevelop the site as a sustainable mixed-use location without harming its historic significance (Figure 5.17, Figure 5.18 and Figure 5.19). Oxford Castle Heritage Site aims to be a social and cultural hub for visitors and residents. The current site includes a heritage visitor attraction, restaurants and a hotel, an art gallery, an education centre and residential apartments. The regeneration of the site engaged with partners in the public, private and third sectors in order to conserve the historic elements of this unique site while creating a sustainable commercial development (OPT, 2014). The tenants on this site include Café 1071, Prezzo, O3 Gallery, The Swan and Castle, 1855 Bistro Wine Barista, Brasserie, Malmaison Hotel, La Tasca and the Slug and Lettuce. The Creation Theatre Company holds open-air performances at the site, together with other groups. Oxford Castle Heritage Site holds many family focused events and provides an outdoor ice-skating rink during the winter season.



Figure 5. 17: Malmaison Hotel, 2014



Figure 5. 18: Oxford Castle Wall, 2014



Figure 5. 19: Paradise Road Gate, 2014

Due to the fact that this researcher was not able to access all the relevant data from either attraction on an individual basis, OCQ and OCUA were jointly taken as the second case study in the UK after stakeholders agreed to participate during December 2014. Although treated as a joint case study, OCUA was selected as the main data source for analysis; it was considered that OCQ might provide some data which the OCUA could not provide. In this case study, it is recognised that the two organizations may have different contexts for analysis, which may distort the data if comparing very different elements of the case study. However, after many attempts to obtain the relevant data, this mixed-method approach was considered to be the only way forward to ensure that most indicators were analysed.

The researcher interviewed four people from the attraction management and third parties, including the Operations Manager at Oxford Castle Quarter Management Office, the Deputy Manager of Oxford Castle Unlocked Attraction, the Director of the Oxford Preservation Trust and the Chartered Surveyor of the Oxford Preservation Trust. The research also conducted a site survey undertaken around the attractions' exit gate to gather 50 completed visitors' questionnaires.

5.3.2 Indicators assessment

This section analyses the data of the case study in terms of the background of the attractions and the indicators across four dimensions.

5.3.2.1 Economic dimension

Three indicators were used to assess economic performance: employment, financial health and visitor numbers. Each indicator has different sub-indicators; the data collected from the survey site has been converted into relevant weightings and scores during the analysis process. The overall scores for the above sub-indicators are listed in Table 5.11.

Based on the interviews, the OCUA provides permanent employment for the full year for 23 employees. Around June and July each year, they may employ another 5 seasonal employees. Therefore, full employment at the attraction is about 28. Thus, the percentage of built heritage tourist industry positions which provide permanent employment for the full year is 82.1%, which lies in the sub-indicator score level 5 (81-100%). The attraction tends to only employ local people in off peak season, but from the start of the holidays, they may employ some students. About 80% of employees are local people who live within twenty miles of the attraction. Thus, the percentage of staff who come from the local city is 80%, which in the sub-indicator score level 4 (61-80%).

Although neither the OCQ nor the OCUA provided any financial information directly to the researcher, the researcher obtained key financial data from the Companies House online database. The OCUA is operated by Heritage Projects (Oxford Castle) Ltd; its profit (loss) for the year shows a profit of £2,296 in 2014 and £2,843 in 2013. The OCUA's profit (loss) for the year divided by the attraction's employee numbers is $\text{£}2,296/28 = \text{£}82$, which lies in the sub-indicator score level 2 (£1-£25,000). The profit (loss) for the year growth rate between 2013/2014 was $(2,296-2,843) / 2,296 = -18.9\%$, which lies in the sub-indicator score level 1 (Less than or equal to 0%).

The OCUA has not previously estimated the official visitor carrying capacity numbers, but the OCUEM estimated the visitor carrying capacity of the attraction during the interview. Based on the interview with the management team of the OCUEM, combining the interior of the OCUA and exterior, open space of OCUA, the carrying capacity reaches about 1,300 per day during the summer, about 474,500 per

year. The author estimated the annual visitor numbers of OCQ to be 2.8 million (Appendix 7). Given that the OCUA only received 80,000 visitors in 2014, the actual visitor numbers are well within the tourism carrying capacity of the attraction. The tourist numbers of the attraction divided by the attractions' employee numbers is $80,000/28=2,875$.

Table 5. 11 Economic Dimensions (2013/2014)

			Indicators of Employment		Indicators of Financial Health		Indicators of Visitors	
Sub Indicators			Percentage of built heritage tourist industry positions which provide permanent employment for the full year	Percentage of staff who come from the local town/city	Total income of an attraction divided by attraction employee numbers	Total income growth rate	The actual visitor numbers compare to the designed tourism carrying capacity of the attraction	Tourist numbers of an attraction divided by attraction employee numbers
Scores	Sub-Indicator score levels	5	81-100%	81-100%	More than £75,000	More than 10%	In the capacity	More than 8,000
		4	61-80%	61-80%	£50,001-£75,000	6.7%-10%	0-10% of over capacity	6,001-8,000
		3	41-60%	41-60%	£25,001-50,000	3.4%-6.6%	11-30% of over capacity	4,001-6,000
		2	21-40%	21-40%	£1-£25,000	0-3.3%	31-50% of over capacity	2,001-4,000
		1	Less than or equal to 20%	Less than or equal to 20%	Less than or equivalent to £0	Less than or equivalent to 0%	Over More than 50% of over capacity	Less than or equivalent to 2,000
	Results from analysis		82.14%	80%	£82	-18.9%	In the capacity	2,875
	Sub-Indicator Scores		5	4	2	1	5	3
Weighting	Manager’s Weighting		4.0	2.5	4.5	5.0	4.5	4.5
	Tourists’ Weighting		3.6	3.5	4.2	4.1	4.1	4.4
	Third Party’s Weighting		3.5	3.5	4.0	3.0	4.5	4.0
	Average Weighting		3.7	3.2	4.2	4.0	4.4	4.3
Overall Scores			18.5	12.8	8.4	4.0	22.0	12.9

5.3.2.2 Environmental dimension

Two indicators will be used to assess environmental performance: environmental management, and historic buildings' conservation and preservation. The overall scores for the above sub-indicators are listed in Table 5.12.

One of the objectives of the Oxford Castle Development Project is to encompass sustainable commercial use as well as a full interpretation of the site's history and heritage. A series of actions were taken to ensure that sustainability techniques were employed throughout the construction (Table 5.13).

For example, eco-friendly materials were used for renovations, conversions and conservation works. Existing historic materials were re-used, and the building was repaired by original structures. At the same time, some repaired historic buildings also included modern design elements, considering both aesthetic and practical values, for instance, using glass to link two historic buildings (Figure 5.20).

Along with Oxford City Council, OCQ aims to reduce private car use by encouraging the use of public transportation. The site provides excellent public transport links, and provides 150 cycle parking spaces. Car parking on-site is limited; the hotel uses 20 underground car park spaces. The OCUA also wishes to reduce utilities consumption to save energy, but a clear plan has not been developed so far. A staff member at OCUA commented on the environmental management system as follows:

Table 5. 12 Environmental dimension (2013/2014)

Indicator of Environmental Management					Indicators of Historic Buildings Conservation and Preservation		
Sub Indicators			Environmental management system	Water, electrical and gas consumption trends per annum	Waste recycle rate per annum	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	Attraction conservation system
Scores	Sub-Indicator score levels	5	The quality, effectiveness and standard of environmental management in the attraction	Reduced by more than 20%	More than 60%	More than 25% of total expenditure	Provides heritage conservation, technologies, methods and management structures (conservation management); the standards of the technologies, methods and management structures (conservation quality); the attraction implements efficiently (conservation implementation) (With the 5 is best and 1 is the worst).
		4		Reduced by 11%-20%	41%-60%	21-25% of total expenditure	
		3		Reduced by 0%-10%	21%-40%	16-20% of total expenditure	
		2		No change	1%-20%	11-15% of total expenditure	
		1		Increased consumption	Less than or equivalent to 0%	Less than or equivalent to 10% of total expenditure	
	Results from analysis		The assessor rated the environmental management system of this attraction in medium-high level	Increased consumption	More than 60%	No data	The assessor rated the conservation management system of this attraction in medium-high level
	Sub-Indicator Scores		4	1	5	No data	4
	Weighting	Manager’s Weighting		3.0	3.5	4.0	5.0
Tourists’ Weighting		3.6	3.6	4.0	4.2	4.5	
Third Party’s Weighting		4.0	4.0	4.5	4.5	5.0	
Average Weighting		3.5	3.7	4.2	4.6	4.8	
Overall Scores			14.0	3.7	21.0	No data	19.2

Table 5. 13: Sustainability and good conservation techniques

Conservation Techniques

- Use of lime mortar and mortar based plaster.
- Use of Bath stone (the fabric of the existing structures) to carry out repairs to buildings and to build new structures
- Re-use of existing materials in the works, for example, where stone was taken out of one building it was re-used in another location
- Re-use of granite blocks in the Castle site main entrance which were salvaged from elsewhere in the city centre

Source: OPT, 2014



Figure 5. 20: Redeveloped Oxford Castle with some modern design elements, 2014

“..... (Most of our environmental management systems concern) waste management, in conjunction with our safety and health policies..... We have a deliberate lighting system, which turns on depending on what we are doing..... during the summer, we would ensure the air conditioning turns on or down reasonably..... Recycling, where the café uses quite a lot of card, paper and plastic, we have a recycling system throughout the year.....”(Interview with a staff member at OCUA, 2014)

The OCUA aims to establish environmental and sustainability management systems. OCUA tries to take sustainability into account in their daily management and site redevelopment. The standard of environmental management was assigned at a medium-high level based on the overall consideration and the above evidence. The

assessor rated the environmental management system of this site within the sub-indicator score level 4.

Based on the interview with the OCUVM, water, electrical and gas consumption costs (bills) at the OCUA have increased by about 15%-20% over the last three years, which lies in the sub-indicator score level 1 (increased). However, the reasons for this increase include more visitors, more activities and cost inflation. OCUA can recycle about 70%-75% of all waste per annum; which lies in the sub-indicator score level 5 (More than 60%).

In terms of the indicators of historic buildings' conservation and preservation, based on the interviews with the OCQM, OCUVM, OPTCS and OPTD, there were no accurate data provided on the percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of both the OCQ and OCUA. However, the funding application for heritage conservation has been provided and shows major investment in the heritage regeneration project; the funding came from both the public and private sectors. The total private sector funding for the OCQ and OCUA was about £34.2 million, compared to funding from the public sector, which was about £10 million. According to the interview, under the partnership between Oxford County Council, the developer, OCL and the OPT, the project applied for a grant from the Heritage Lottery Fund, South East England Development Agency, English Heritage and Trust for Oxfordshire's Environment for historical restoration. The indicator of expenditure on conservation as a percentage of annual expenditure cannot be estimated because there were no accurate data provided on total annual expenditure for each year, and some heritage funds came from different organizations for special conservation projects.

For heritage conservation, OCUA provides high quality heritage conservation technologies, methods and management structures; and the attraction implements conservation efficiently. Funding for the conservation of OCQ and OCUA was about £34.2 million, so it would be enough to cover the regeneration project. Conservation management was clearly identified in the conservation plans. The Oxford Castle Conservation Plan was developed by the OPT and Oxford County Council in 1999,

followed by the West End Area Action Plan (2008) and the Oxford Heritage Plan (2012). The standards of the conservation technologies, methods and management structures were high. The Oxford Castle Conservation Plan (1999) listed the guidance and requirements for historic restoration and conservation, comprising how to use materials, the assessment of significance, conservation policies, the retention of architectural features and gazetteer. Within the conservation plan, five policies for conservation were identified (Table 5.14). These plans ensure that as much of the original heritage fabric of the historic structures and buildings is maintained as possible and brings them into new uses. Most of the conservation implementation was efficient and conducted by professionals. When dealing with the heritage conservation implementation, the OCQ's conservation works were based on English Heritage guidelines. The conservation works were assigned to professionals and not all the management participated. A member of staff at OCQ comments on the conservation as follows:

“..... We don't use any particular technology and methods, we work out the conservation based on English Heritage Guidelines.....”(Interview with a member of staff at OCQ, 2014)

A member of staff at OCUA commented on the conservation management system as follows:

“.....About the conservation, the actual fabric of the building and the mount, that are associated with OPT..... ” (Interview with member of staff at OCUA, 2014)

Therefore, the assessor rated the conservation management system of this attraction at a medium-high level based on the assessment criteria (conservation management, quality and implementation), which lies in the sub-indicator score level 4.

5.3.2.3 Social dimension

Two indicators will be used to assess social performance: key stakeholders' involvement and stakeholders' attitudes. The overall scores for the above sub-indicators are listed in Table 5.15.

Table 5. 14: Oxford Castle Conservation Plan Policies for conservation and repair

Oxford Castle Conservation Plan Policies for conservation and repair
• To ensure that all works of whatever natures are informed by a clear and detailed understanding of the site. • To establish programmes of repair and conservation for the historic buildings of the castle, with planned monitoring, inspection and maintenance. • To make decisions and carry out works of repair and alteration in a manner which retain significance, avoid erosion or destruction of evidence, and follows historical accuracy in design, materials and workmanships. • To adopt a cautious approach to the removal of any fabric • To ensure that full conservation records are made of interventions and alterations in the historic fabric of the site, and maintained as part of a permanent site archive.

Source: Oxfordshire County Council, 1999

Based on the interviews with the OCQM, OCUVM, OPTCS and OPTD and existing documentation, the majority of stakeholders support the redevelopment project. Although some people raised objections to the decision to redevelop the OCQ and OCUA and it was difficult to involve stakeholders in the early stages, the stakeholders finally reached agreement on the options for redeveloping the OCQ and OCUA.

Initially, according to the interviews, Oxford City Council did not grant planning permission for the redevelopment of the OCQ and OCUA because of the proposal to involve the private sector in a public project. English Heritage was also concerned about the changes to the redevelopment of the site. Oxfordshire County Council involved different parties, especially the OPT, residents, concerned parties, the universities and colleges, environmental and heritage professionals and local authorities (Figure 5.21). The regeneration of the site engaged different partners within the public, private and third sectors and conserved the unique historic elements while creating a sustainable commercial development. For example, the site is owned by Oxfordshire County Council, the OCQ was developed and managed by TOG, the OCUA is leased to the OPT and managed by Continuum. The redevelopment planning permission was finally granted by the local planning authority. The project was put into operation after an adjoining participants group formulated, and a huge amount of information had been made available online to

improve transparency. Overall, the site has attracted an estimated 600 jobs, more than 10 businesses and an education centre to deliver learning opportunities.

Table 5. 15: Social dimension (2013/2014)

			Indicator of Key Stakeholders Involvement		Indicator of Key Stakeholders' Attitudes	
Sub Indicators			Attraction social involvement	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	The attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	The attitudes towards attractions from the visitors
Scores	Sub-Indicator score levels	5	Shows positive/negative attitudes across all parties; Locals are sufficiently/hardly involved when development decisions are made; the attraction contributes significant/few benefits to the local area (With 5 is the best and 1 the worst)	More than 6% of visitors are concessions	The degree of attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	The degree of attitudes towards attractions from the visitors
		4		4.1%-6% of visitors are concessions		
		3		2.1%-4% of visitors are concessions		
		2		0%-2.0% of visitors are concessions		
		1		None		
	Results from analysis		The attraction largely benefits the local area.	More than 6% of visitors are concessions	On average, OPTCS rated their satisfaction as 7 out of 10	According to the results of the survey, the average satisfaction with the attraction of the 50 tourists
	Sub-Indicator Scores		5	5	3.5	4.4
Weighting	Manager's Weighting		4.5	4.0	4.5	5.0
	Tourists' Weighting		3.8	3.7	4.2	4.1
	Third Party's Weighting		4.5	4.5	5.0	5.0
	Average Weighting		4.1	4.1	4.6	4.7
Overall Scores			20.5	20.5	16.1	20.7

A member of staff at OCQ commented on the interrelationship between the key parties as follows:

*“..... Oxford Castle Quarter has been developed by Trevor Osborne, who is the lease owner of the site. Trevor Osborne Group owns the buildings on site, the County Council still has freehold of the land, then Trevor Osborne Group rents to commercial tenants, such as 1854 and so on.
 We (OCQ) take the rents from tenants and pay them to Trevor Osborne Group, and tenants need to pay the service charge for maintenance and operations, we also have a privately owned department to maintain the common area in the building.....
 Oxford Castle Unlocked is owned by the OPT, run by the Continuum, they also have a very long lease. From my point of view, the Trevor Osborne Group and Oxford Castle Limited, and all the business units on the site, they are cooperating (with each other).” (Interview with a staff member at OCQ, 2014)*

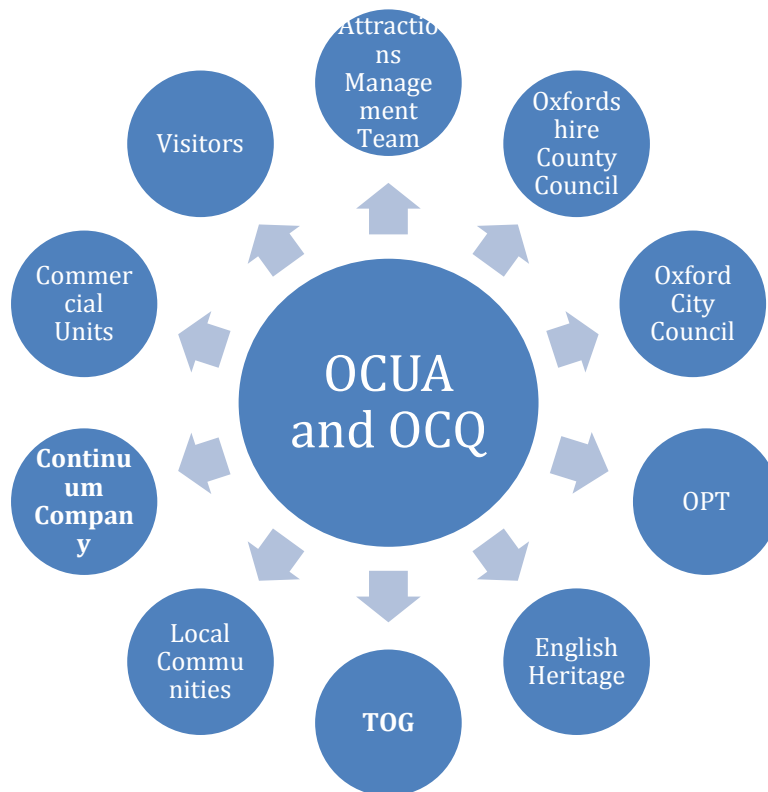


Figure 5. 21: Stakeholders of OCQ and QCUA

Furthermore, the project consulted stakeholders through a range of public meetings, user groups and consultation exercises. The *Castle Consultative Forum* established by the County Council involved the key representatives of different parties. A newsletter was published to keep residents and commercial businesses informed and

engaged, there was a community notice board at the site entrance, appropriate media releases, and public open days kept the wider public up-to-date. The project also involved a family panel for receiving advice and evaluating activities for families in the education centre; the lifelong learning programme was formulated to explore the history of the castle prison and its links to the town. Former prisoners, prison staff and local residents were invited to compile an oral history of the prison. The redevelopment also influenced the development of new residential flats around Oxford Castle (Figure 5.22). A member of staff at OCQ commented on the site's social contribution as follows:

*“..... It has hugely contributed to the local area. The impacts possibly come from the regeneration... It has been regenerated West End (Area of Oxford City).....
It has made the West End Area become much (more) welcoming, it provides jobs.....
 Our buildings add value to the property in the area.....
So it contributes to the whole site.....”* (Interview with a staff member at OCQ, 2014)



Figure 5. 22: A residential area around Oxford Castle, 2014

A member of staff at OCUA commented on its social contribution as follows:

*“.....We (OCUA) have a charity prize giving every year, and we donate tickets each month.
We are engaged with schools in the local area through the education programme.....
 It (OCUA) is for the visitors who are amazed to see the wall behind the prison, and what is inside, as well as to gain knowledge about Oxford”* (Interview with a staff member at OCUA, 2014)

Two staff members at OPT commented on its social contribution as follows:

Interviewee 1:

*“.....Yes, hugely. When it was a prison, nobody really went down that part so the project has been hugely successful regenerating the area.....
..... Evidence would be the college opposite the site, Nuffield College. There were no local tourists visiting the college before, but they have many visitors now there are some modern residential developments. (Lands) and a BT telephone exchange around Paradise Street, St. Thomas Street has been converted into flats..... Cooper Cellars is going to be a hotel..... The West Gate shopping centre is now now bringing a John Lewis to Oxford’
..... (Oxford Castle Heritage Site) is a fantastic place for history going back to the 11th century and raising the sense of awareness of history.....
..... we also have an education programme..... school children in Oxfordshire visit the attraction at least once in their school life.....And we have an education officer..... and that has been really successful.”*

Interviewee 2:

*“First of all, opening the (Oxford Castle Heritage Site) provides several ways through the site for local people.
It has conserved and maintained one of the most historical buildings in Oxford, which the local residents value very much.
It provides employment, and provides education and cultural facilities, which would benefit local people..... ”* (Interview with two members of staff at OPT, 2014)

The OCQ and QCUA show positive attitudes across all parties; locals are sufficiently involved when development decisions are made; and the attraction contributes significant benefits to the local area. Therefore, the assessor rated the attraction’s social involvement at a high level based on the evidence above, in the sub-indicator score level 5.

Based on the interviews with the OCUVM, the OCQ is an open space and free to visit; about 65% of visitors hold concessions to OCUA because many of their visitors are students. Therefore, more than 6% of visitors are concessionary, which lies in the sub-indicator score level 5.

In terms of the indicator of key stakeholders’ attitudes, although the researcher interviewed the OPTCS and OPTD, the OPTD did not answer the questions directly and the OPTCS rated the question as 7 out of 10. They commented on the success of

the projects and pointed out some problems. Based on the researcher's observations and the stakeholders' answers during the interviews, the researcher assigned their scores on this sub-indicator as 4. For example,

".....I think it is a fantastic project, it is sustainable, and it allows the users to change..... " (Interview with OPTD, 2014)

".....The management of it has been good, although with a few small issues..... " (Interview with OPTCS, 2014)

Based on the questionnaire with the 50 tourists, visitors gave an average satisfaction score for the attraction of 8.7 out of 10, which lies in the sub-indicator score level 4.

5.3.2.4 Governance dimension

Three indicators were used to assess governance performance: planning, troubleshooting ability and attraction management. The overall scores for the above sub-indicators are listed in Table 5.16.

Oxford Castle regeneration projects were regulatory compliant. It is located in a conservation area, and has two scheduled ancient monuments and several Grade I and Grade II* Listed Buildings. Several plans and development strategies have been published with regards to how to use the site, for example, the Oxford Castle Conservation Plan (1999), the West End Area Action Plan (2008) and the Oxford Heritage Plan (2012). The plans are available online, including public opinions in the consulting, scoping and drafting processes.

The regeneration of the site has been submitted for the necessary consents, including Listed Building Consent, Scheduled Monument Consent, Conservation Area consent and other relevant planning consents. English Heritage, Oxford City and County Councils take separate statutory responsibilities in the consent processes. A member of staff at OPT commented on planning application as follows:

Table 5. 16: Governance dimension (2013/2014)

			Indicator of Planning	Indicator of Troubleshooting Ability	Attraction management
Sub Indicators			Planning performance	The ability to balance the relationship between development and preservation	Attraction management
Scores	Sub-Indicator score levels	5	Regulatory compliance, planning transparency, accountability and effectiveness (With 5 is the best and 1 the worst)	The issues for development and preservation, the attraction can respond to the issues quickly, address the issues practically, and the results can be accepted by most stakeholders	The attraction should have a clear vision for development, practical financial forecasting, use staff and working resources efficiently and enable the majority of staff to satisfy the requirements of the attraction
		4			
		3			
		2			
		1			
	Results from analysis		Good regulatory compliance, provided excellent planning documents; the standards of the planning practice are transparency and accountability; implements planning practices quite efficiently	The OCUA and OCQ responded to the development relatively quickly, addressing the issues and practices, and the results were accepted by most of the stakeholders. It might have worked better if the stakeholders were involved at an earlier stage.	The attraction has a clear vision for development, practical financial forecasting, and enables the majority of staff are satisfied with the attraction management, but it is difficult to assess the efficiency of these staff and working resources externally.
Sub-Indicator Scores		5	4	4	
Weighting	Manager’s Weighting		4.5	4.0	4.5
	Tourists’ Weighting		4.2	3.9	4.7
	Third Party’s Weighting		5.0	4.5	5.0
	Average Weighting		4.6	4.1	4.7
Overall Scores			23.0	16.4	18.8

“..... All of those planning applications were submitted to Oxford City Council.

.....We worked very closely with English Heritage. Initially, they were resistant to any changes to the buildings, but over time, they worked with us.

..... The intention is to invest money to bring these buildings back in to use and conserve them for the future. So, English Heritage in that, change their attitudes considerably

..... and we don't have any difficulty complying with the planning conditions” (Interview with a staff member at OPT, 2014)

This attraction complied with regulatory requirements and provided excellent planning documents; the planning practice was transparent and accountable; the attraction implements planning practices quite efficiently. Overall, the assessor rated the planning performance of this attraction at a high level, which lies in the sub-indicator score level 5.

In terms of troubleshooting ability, the main problem for this site was how to develop working relationships with other stakeholders. Oxfordshire County Council did not initially have the experience, the planning application was rejected by Oxford City Council and concerns about the potential changes to this site were raised in the local press and by the OPT, English Heritage and other interested groups. Furthermore, funding was urgently needed because the public sector could not provide sufficient funds for it. Thus, it needed to involve the private sector, but this raised more concerns among others. Two members of staff at OPT commented on the difficulties as follows:

Interviewee 1:

“.....we did have difficulty at the start, because Oxford City Council was looking for something of a commercial site to come in. But, the local community and groups think the commercial developers would not do things with their (locals') interests in mind. Then a huge group of people came together to lobby the County Council not to do something commercially...

..... the developer also set up an overseeing group, which we were part of to take care of all the various interests and we met regularly with them during the project..... our involvement as time input, to become a partner.....brought together artists and people with an interest in local history, local residents, and everyone we can think about. To keep them informed and invited, and work with them. ”

Interviewee 2:

“They seemed to have difficulty with the private developer using the site for commercial reasons.....” (Interview with two members of staff at OPT, 2014)

Oxfordshire County Council developed a Partnership Approach with other stakeholders, to enable the professional bodies to do an excellent job. *The Castle Action Group* formed to address these concerns involves a stakeholder participation method, to establish understanding and decision making. The regeneration of Oxford Castle is proud of its use of a partnership approach, involving the other parties as much as possible. Afterwards, OPT became a tenant, with the County taking responsibility for the structure of the buildings and the developers taking a service charge towards the costs of management. In partnership with OPT, the visitor attraction is run by commercial operators Continuum and the County provides a Learning and Access Officer for the Key Learning Centre (Figure 5.23). In the private sector, the Oxford Castle Heritage site approached many businesses and has a number of different partners, according to the OPT. Overall, the site has attracted an estimated 600 jobs and many business opportunities.

A staff member at OCQ commented on involving stakeholders with the planning permits as follows:

“.....When we were applying for the planning permits, the OPT was extremely helpful. We worked with the County Council and English Heritage was extremely helpful as well. We work with stakeholders quite closely.....” (Interview with a member of staff at OCQ, 2014)

A member of staff at OPT commented on involving stakeholders as follows:

“..... Trevor Osborne is the private sector, we are from the charity sector, so we have every kind of mix, and we have a strong working relationship with commercial tenants.....” (Interview with a member of staff at OPT, 2014)



Figure 5. 23: Oxford Castle Key Learning Centre, 2014

OCQ also experienced other issues in management. For example, they are not allowed to put up signs in their listed buildings and it is difficult to deal with pigeons at heritage sites. OCUA reported that their problem was bringing more people to the site. However, these issues did not hugely harm its sustainability.

The OCUA and OCQ responded to the development relatively quickly, addressing the issues and practices, and the results were accepted by most of the stakeholders. It might have worked better if the stakeholders were involved at an earlier stage. Overall, the assessor rated this indicator at a medium-high level, which is in the sub-indicator score level 4.

In relation to the indicator of attraction management, the Conservation Plan indicated a clear vision for the site development. Implementation of most of the plan went well and practically. Although the development and management of the entire site involves various parties, including the NGO, public and private sectors, each party holds different responsibilities. The owner of the freehold of the site is Oxford County Council, which leases the site on a 200-year basis to OCL for daily management. The tenants in the OCQ include many business units. They signed up to a payment agreement and have committed to at least 20-year leases.

The funding agreements for the site redevelopment enabled the development of practical financial forecasting; Oxford County Council could benefit from commercial success. Oxford County Council receives payments based on a share of the rental income by OCL from the hotel, Malmaison, and above a specified base rental level, will also receive 55% of the development profit on condition that profits exceed 18.5%. Based on the interviews with the OCQ and the OCUA, the managers of OCUA and OCQ gave an average satisfaction score for the attraction of 8.5 out of 10.

A member of staff at OCUA commented on its management as follows:

“..... I think in terms of attitudes, the management of the whole site ensures that we are quite forward thinking and determined. Where challenges come up, it may be not very easy to do..... I think what is good about it is the Trevor Osborne Group and OPT. We maintain the site integrity, that is important and not easy.” (Interview with a staff member at OCUA, 2014)

Some visitors commented on the attractions’ management in the following terms:

*“Good heritage site.....
It is conserved well, and it is a vivid place for gathering together many commercial units in a heritage site.
It is quite slippery to climb the mountain; it may need more handrails.....
Too many shops.....and few attractions.....
It’s OK.....
It needs more marketing.....
It is difficult to find a parking space”* (Interviews with visitors, 2014)

The objectives for the Oxford Castle Heritage Site have been achieved after some years’ development. The project enabled historic buildings to be conserved, to be publicly accessible, to be able to convey heritage interpretation and education to all, and it encompasses sustainable commercial use at the same time.

The attraction has a clear vision for development, practical financial forecasting, and the staff are satisfied with the attraction management, but it is difficult to assess the efficiency of these staff and working resources externally. Overall, the assessor rated the management of this attraction at a medium-high level, which lies in the sub-indicator score level 4.

5.3.3 Summary

5.3.3.1 Dimensions

To summarise the average indicator score across the four dimensions, the social dimension (19.6) received the highest average indicator score compared to all other dimensions. This is followed by the governance dimension (19.4), environmental dimension (14.5) and economic dimension (13.1). This site pays great attention to its social contribution. The complexity of the redevelopment forced the key developer (Oxfordshire County Council) to involve many different stakeholders, including OCL and the OPT, Oxford City Council, residents and the community, the Heritage Lottery Fund, the South East England Development Agency, English Heritage and the Trust for Oxfordshire's Environment for historical restoration. Their attitudes and actions influenced the progress and success of the redevelopment. However, the site redevelopment required significant financial investment, which Oxfordshire County Council did not have. When the private sector became involved, more concerns were raised. Therefore, relative transparency, accountability and efficient methods were explored. The decisions and actions of the redevelopment were open to the public and stakeholders, and the final works resulted. Therefore, the findings indicate that this site pays great attention to the social dimension.

5.3.3.2 Overall scores of all sub-indicators

Planning effectiveness and efficiency, and transparency and accountability (23) received the highest overall scores, and utilities trends (3.7) received the lowest overall score. The complexity of the redevelopment forced the involvement of different stakeholders, and effectiveness and efficiency, and transparency and accountability are the most significant factors in the redevelopment. Similar to the Chastleton case study, utilities consumption trends received less attention. The existing data collection methods for utilities trends cannot provide more accurate data.

5.3.3.3 Weighting

Attraction conservation management (4.8) received the highest attention, and the percentage of staff that come from the local town/city (3.2) received the lowest attention. The weighting links to the importance in the minds of the participants. The

attraction pays more attention to conservation management maybe because most stakeholders realized the importance of heritage conservation. Fewer concerns about local employees may be the result of the hospitality industry having a high turnover rate in most places.

5.3.3.4 Scoring

The waste recycling rate, annual concessions for local residents, particular groups and visitors for educational purposes as a proportion of total visitors, local stakeholder involvement and planning performance received the highest scores (all 5), and utility trends (1) again received the lowest score. Scoring is associated with the sustainability performance of the site.

The waste recycling rate has become more of a public concern recently, and the city of Oxford does well in terms of recycling and sustainable development. The OCS is free to visit and the OCUA also holds many events for students, so annual concessions received high scores. Local stakeholder involvement and planning performance received a high score because the redevelopment positively involved many stakeholders.

5.3.3.4 Lessons and limitations

This research has some limitations in terms of case assessment. Firstly, the weighting and scores involve two organizations, the OCQ and OCUA, which were jointly taken as the second case study. The OCUA was selected as the main data source for analysis, but the OCQ was used to provide data which the OCUA could not provide. This may distort the data if comparing very different elements of the case study. Secondly, although this research estimated the visitor numbers of the case study attraction and considered the error rate, this result may be distorted upwards because the research was conducted during the Christmas period (20th-22nd December 2014). More people visit the OCQ and fewer visit the OCUA during this time of year. Thirdly, the increase in utilities consumption costs (bills) may be because the attraction received more visitors and held more activities, as well as economic inflation. Fourthly, there were no accurate data provided on the percentage of annual expenditure on conservation, maybe because some of the heritage funds came from different organizations for certain special conservation projects.

OCQ and OCUA were jointly taken as the second case study after all the attractions' stakeholders agreed to participate. OCHS is a mixed site involving a range of stakeholders. It took years for them to agree to jointly contribute to the Oxford Castle Heritage Regeneration Project and it took months for them to agree to participate in this research project. The most important lesson from the Oxford Castle Heritage Regeneration Project was how to deal with cases involving multiple stakeholders working in collaboration. The Oxford Preservation Trust, Oxford Castle Quarter Management Office, OCUA, Oxford City Council, Oxford County Council, EH and local people have different perspectives; however, most wish to maintain high conservation and sustainable standards for the Oxford Castle Heritage Regeneration Project. How to develop the site with conservation and sustainable principles in mind was the most significant topic among stakeholders, although negotiations also discussed how to satisfy the economic demands of most of the stakeholders. Oxford County Council developed this site using grants from both the public and private sectors. The Oxford Preservation Trust received economic benefits by renting Oxford Castle to Continuum as a tourist attraction. Continuum received economic benefits by operating OCUA and a café. The Trevor Osborne Group received economic benefits by developing this area as the leaseholder and renting most of the premises it developed on this site as other business units and flats. Therefore, conservation, sustainable development and economic benefits appear to be the most important factors for stakeholders involved in a mixed management heritage site.

5.3.4 Case statement

Although with some research limitations and conflicts, Oxford heritage redevelopment is seen as a relatively successful case in terms of sustainability performance. OCQ and OCUA were divided into two parts for entertainment and historic tourism. As an open space, this site developed as a sustainable mixed-use location, without harming its historic significance. This site has become a social and cultural hub for visitors and residents; it holds many family-focused events and opens an outdoor ice-skating rink for the winter season. In terms of environmental and conservation concerns, the redevelopment overcame protestors' objections by

using a partnership approach and involving stakeholders. The attraction repaired the heritage buildings with original materials and structures as much as possible. The governance of the site management seems complicated but works by promoting cooperation among different parties, to address issues and share the responsibilities with clear boundaries. This development approach has worked well. Co-operation between the public and private sectors benefit all if managed well, in order to ensure the transparency and effectiveness that are important factors in success.

The application of the sustainability appraisal methodology in the UK moved from CH, which is a small rural heritage attraction to the Oxford Castle Heritage Site which is urban and large; the latter is more complex in terms of management, public participation and stakeholder involvement. The sustainability appraisal methodology worked well overall in the UK, which suggests it may work well in other developed countries. Applying the methodology to these cases in a developed country provides valuable experience to apply it in an emerging market.

5.4 Sustainability Appraisal for a Built Heritage Attraction in China-----Case study of Mountain Jieshi

5.4.1 Introduction

After analysing the case studies in a developed country, the research then moved on to apply the same methodology to cases in the emerging market. In an emerging market, the sustainability appraisal approach was applied to a small rural project, namely the Mountain Jieshi Attraction (MJ) and the Water Rock Temple (WRT); then the next stage of achieving the research aim was to test the approach in a complex site in an emerging market, namely the Shanhai Pass, Great Wall of China site.

The scope of the MJ case mainly comprises the MJ and the WRT. The majority of the data required for the assessment of indicators has been collected after discussions with interviewees, although some interviewees did not initially wish to participate. This chapter will analyse the data of this case study in terms of its background and indicators across the four dimensions will be evaluated.

MJ is located in the ancient town of Changli, Changli is a historic town in the north eastern Hebei province of China (Figure 5.24, Figure 5.25). The town was built during *the Spring and Autumn period* (approximately 771 to 476 BC) (Zhaoxinpeng, 2015). The town was renamed Changli by Emperor Shizong of Jin (1123 to 1189 AD) in 1189 AD. The town of Changli has a population of about 89,000 and covers an area of 57.9 square kilometre (Town of Changli government, 2009) (Figure 5.26).

MJ is a famous ancient mountain; it was known as a *Holy Mountain*. Many ancient Chinese emperors came to the MJ to worship. There are some historic heritage buildings standing on MJ, but the local government has limited funds for conservation and redevelopment of the site. The historic buildings around the MJ include the *Hanwengong Temple* and the *Jieyang Lake* (Figure 5.27, Figure 5.28, Figure 5.29 and Figure 5.30). The attractions were first developed in the 1990s, but there has been no significant improvement in the last 20 years.

MJ is the highest mountain in the Nearshore Zone of Bohai Sea. The earliest records can be found in China's earliest geographical masterpiece of *Shan Hai Jing (Classic of Mountains and Seas)* and *Yugong Shangshu* about 4th century BC. MJ attracted many emperors who came to climb the mountain to view the sea, while Emperor Qin Shi Huang (259 to 210 BC) and Emperor Wu of Han (156 to 87 BC) visited MJ to search for immortality. A well-known poem called *Viewing the Deep Blue Sea* was written by Emperor Wu of Wei (155 to 220 AD) to describe climbing MJ. Another immortal poem entitled *Beidaihe to the melody of Langtaosha* was written by Chairman Mao Zedong (1893-1976) to describe his feelings on watching the sea and MJ (China Hotel. Com, Non date).



Figure 5. 24: MJ in north east China Source: Esri, 2015a

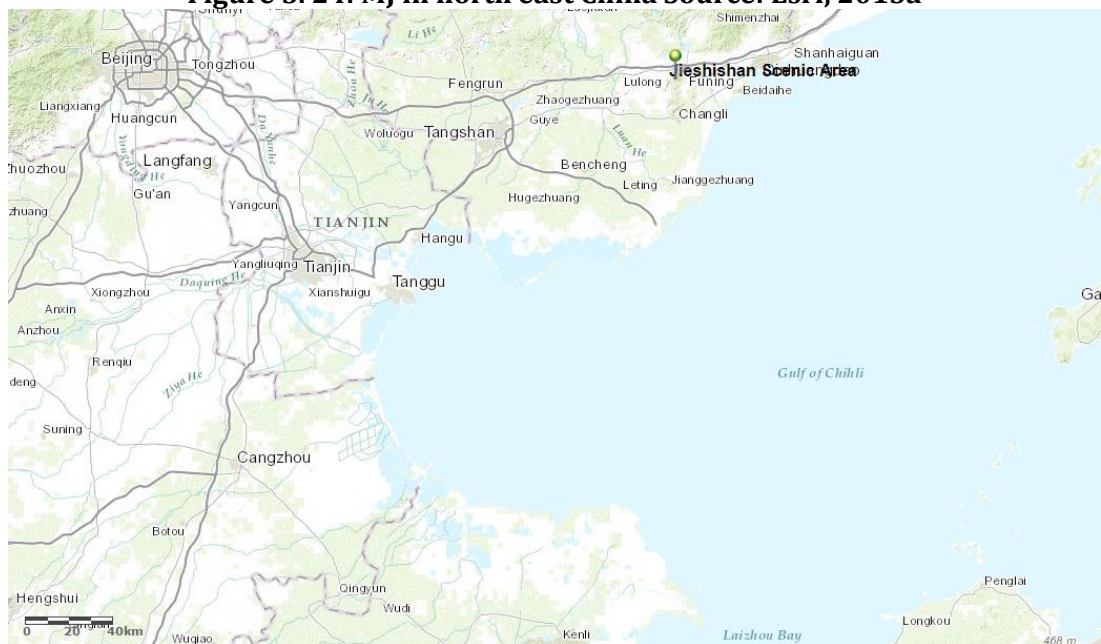


Figure 5. 25: MJ on east of Beijing Source: Esri, 2015b

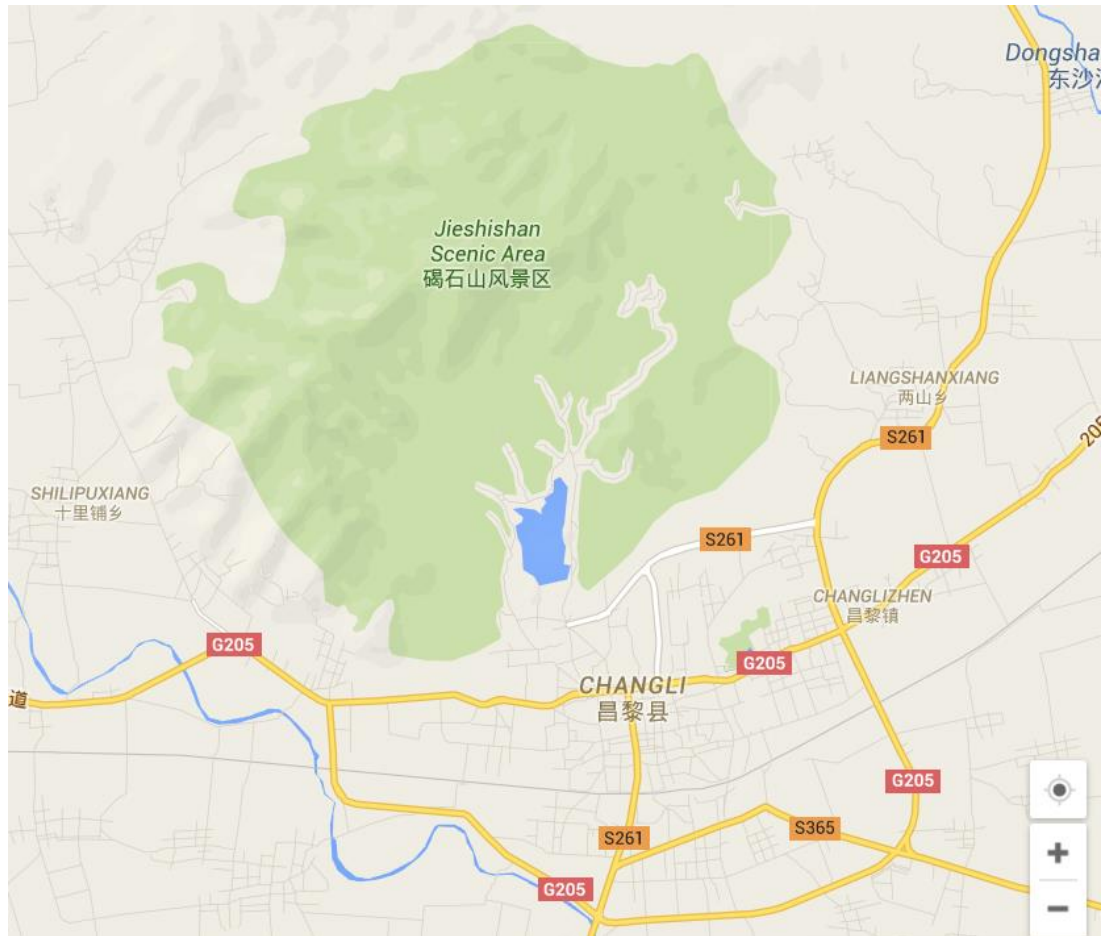


Figure 5. 26: MJ in the north of Changli County Source: Google Map, 2015a



Figure 5. 27: Gate of WRT, 2015



Figure 5. 28: Figure of the Buddha in WRT, 2015



Figure 5. 29: Aerial photo of WRT Source: Government of Changli, 2011

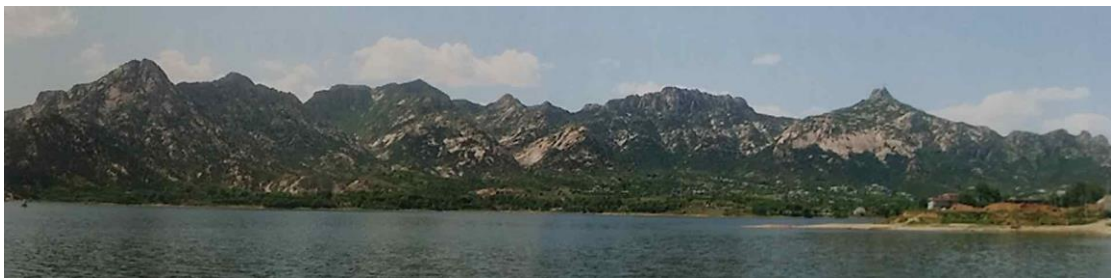


Figure 5. 30: MJ area Source: Government of Changli, 2011

The WRT stands in front of MJ, which may have been first established during the Sui Dynasty (581 – 619 AD) according to archaeological research, and has been rebuilt and repaired over the last 1000 years (China Hotel.Com, Non date). The original temple was almost fully destroyed in previous decades, but it has been rebuilt over the last ten years under the leadership of Monk Cun Hai, with the support of the locals (Figure 5.31, Figure 5.32).

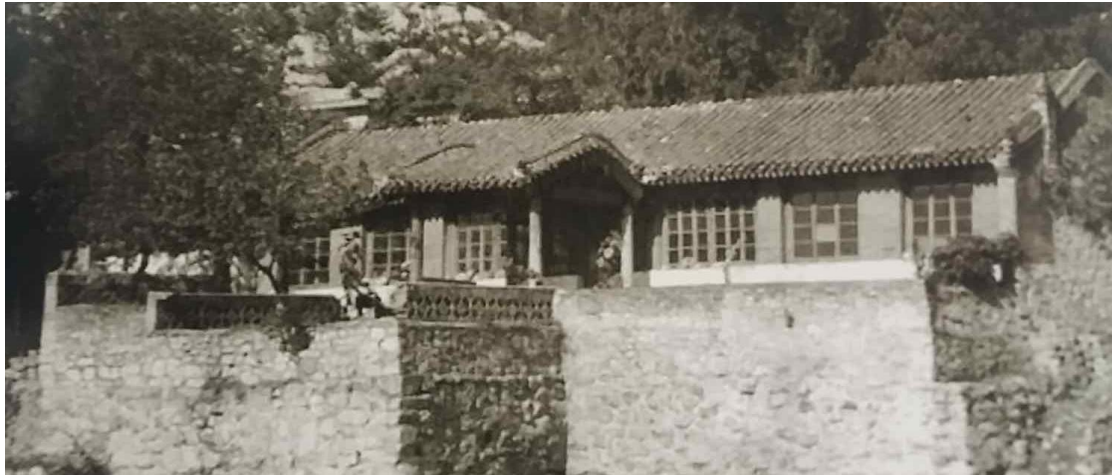


Figure 5. 31: WRT in 1970 Source: Government of Changli, 2011



Figure 5. 32: Rebuilt buildings in WRT in 2010s, 2015

The management for this site involves various parties, namely:

- The MJ attraction is managed by the MJ attraction management office; this office belongs to Changli County Government.
- The WRT is a self-managed site under Monk Cun Hai. The WRT is not managed by Changli County Government, but it needs to report to the *Qinhuangdao Buddhist Association*. Monk Cun Hai is the head of the *Qinhuangdao Buddhist Association*.

The local government wishes to develop this area and integrate all tourism resources into a single tourist destination. The scope of the draft tourism development plan comprises the historic buildings of the MJ, WRT, *Jieyang Lake* and the *Apricot Orchard Village*. WRT has a willingness to develop this area into a *Buddhist*

Cultural Site.

The researcher interviewed five people from the attraction's management and third parties, including the Deputy Director of Changli Tourism Bureau, the Deputy Head of Mountain Jieshi Scenic Management Committee, the Dean of Mountain Jieshi Scenic Management Committee administrative office, the Principal Lay Buddhist of Water Rock Temple and a local scholar. The researcher also conducted a site survey to obtain 50 completed visitors' questionnaires.

5.4.2 Indicators assessment

This section analyses the data of the case study in terms of background information and indicators across four dimensions. Since two independent sites are involved in this case study, and the priority of this research is to analyse built heritage attractions, the data analysis shall use data from MJ first, and use the data from WRT as a supplement.

5.4.2.1 Economic dimension

Three indicators are used to assess economic performance: employment, financial health and visitor numbers. Each indicator has different sub-indicators; the data collected from the survey site will be converted into relevant weightings and scores during the analysis process. The overall scores for the above sub-indicators are listed in Table 5.17.

Based on the interviews with MJDM and MJDGO, the number of employees at the attraction is about 24 and they have not recruited any seasonal employees so far. Thus, the percentage of built heritage tourist industry positions which provide permanent employment for the full year is 100%, which lies in the sub-indicator score level 5 (81-100%). All the employees live in an area approximately 20 miles around the attraction. Thus, the percentage of staff that comes from the local town/city is 100%, which lies in the sub-indicator score level 5 (81-100%).

Table 5. 17 Economic Dimension (2013/2014)

			Indicators of employment		Indicator of Financial Health		Indicators of Visitors	
Sub Indicators			Percentage of built heritage tourist industry positions which provide permanent employment for the full year	Percentage of staff who come from the local town/city	Total income of an attraction divided by attraction employee numbers	Total income growth rate	The actual visitor numbers compared to the designed tourism carrying capacity of the attraction	Tourist numbers of an attraction divided by attraction employee numbers
Scores	Sub-Indicator score levels	5	81-100%	81-100%	More than £75,000	More than 10%	Within capacity	More than 8,000
		4	61-80%	61-80%	£50,001-£75,000	6.7%-10%	0-10% of over capacity	6,001-8,000
		3	41-60%	41-60%	£25,001-50,000	3.4%-6.6%	11-30% of over capacity	4,001-6,000
		2	21-40%	21-40%	£1-£25,000	0-3.3%	31-50% of over capacity	2,001-4,000
		1	Less than or equivalent to 20%	Less than or equivalent to 20%	Less than or equivalent to £0	Less than or equivalent to 0%	More than 50% of over capacity	Less than or equivalent to 2,000
	Results from analysis		100%	100%	£679	More than 10%	0-10% of over capacity	1,041
	Sub-Indicator Scores		5.0	5.0	2.0	5.0	4.0	1.0
Weighting	Manager's Weighting		4.0	4.5	2.5	3.0	3.0	3.5
	Tourists' Weighting		4.1	4.1	4.2	3.9	4.0	4.0
	Third Party's Weighting		4.0	4.0	5.0	3.0	4.5	4.0
	Average Weighting		4.0	4.2	3.9	3.3	3.9	3.8
Overall Scores			20.0	21.0	7.8	16.5	15.6	3.8

Based on the interviews with MJDM and MJDGO, data on profit is not available. However, they provided the approximate income of the attraction in 2014, which was an income of about RMB 150,000 (about £15,460). The number of employees at the attraction is 24. Thus, the total income of the attraction divided by the attraction's employee numbers in 2014 is $150,000/24 = \text{RMB } 6,250$, which is approximately equal to £644, which lies in the sub-indicator score level 2 (£0-£25,000).

Based on the interviews with MJDM, MJDGO and WRTLb, MJ has had a small increase in income in recent years, and they shared limited information on this question. Since the data was not available from MJ, the researcher will consider the WRT as an example. Investment in the temple has reached about RMB 40,000,000 (about £4,123,000) in the last ten years. Its income started from nothing then rose to about RMB 5,000,000 (about £515,000) each year so that the rate of increase is more than 10%. Therefore, the income growth rate lies in the sub-indicator score level 5 (more than 10%).

During the interviews with MJDM and MJDGO, they claimed that the actual visitor numbers compared to the tourism carrying capacity of the attraction is at capacity. However, after interviewing CTBDD and CFLACC, the researcher found that there were serious car parking and traffic jam problems whenever the WRT organized activities and events. The WRT has not previously identified its tourism carrying capacity; the researcher estimated the number to be 0-10% of overcapacity due to some stakeholders' complaints and concerns about overcrowding. The result lies in the sub-indicator score level 4 (0-10% of overcapacity).

Based on the interviews with MJDM and MJDGO, the tourist numbers were 25,000 in 2014, while the number of employees is 24. So the results of the tourist numbers of the attraction divided by the attraction's employee numbers is $25,000/24 = 1,041$, which lies in the sub-indicator score level 1 (less than or equivalent to 2,000).

5.4.2.2 Environmental dimension

Two indicators will be used to assess environmental performance: environmental management, and historic buildings' conservation and preservation. The overall scores for the above sub-indicators are listed in Table 5.18.

This research is based on interviews with MJDM, MJDGO and WRTL B; all of these organizations are aiming to establish a practical environmental management system within their attraction. Firstly, they realize the importance of having an environmental management system. Secondly, they are trying to do well in terms of cleaning and waste management. However, this researcher only interviewed those at a senior management level, without speaking to the operational staff who take charge of environmental management more directly, so the opinions of the senior management may be subjective. After visiting the site for observation purposes, the researcher saw that the attraction is tidy and clean in most spaces. The waste has been separated into recyclable and non-recyclable waste, although some recycling bins have not been put to use at all (Figure 5.33). However, the concept of an environmental management system should involve a wider scope, not only limited to cleaning and waste management. For example, the rebuilt built heritage neither uses sustainable materials and structures nor re-uses existing materials. The rebuilt temple did not clearly employ energy-saving technologies; does not establish a comprehensive environmental management system and no external environmental audit has been conducted. A member of staff at MJ commented on its environmental management system as follows:

“We have the development office, who takes charge of environmental management, mainly for cleaning and dealing with waste.” (Interview with a member of staff at MJ, 2015)

Table 5. 18: Environmental dimension (2013/2014)

Indicator of Environmental Management					Indicators of Historic Buildings Conservation and Preservation		
Sub Indicators			Environmental management system	Water, electrical and gas consumption trends per annum	Waste recycle rate per annum	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of the attraction	Attraction conservation system
Scores	Sub-Indicator score levels	5	The quality, effectiveness and standard of environmental management in the attraction	Reduced by more than 20%	More than 60%	More than 25% of total expenditure	Provides heritage conservation, technologies, methods and management structures (conservation management); the standards of the technologies, methods and management structures (conservation quality); the attraction implements efficiently (conservation implementation) (With the 5 is best and 1 is the worst).
		4		Reduced by 11%-20%	41%-60%	21-25% of total expenditure	
		3		Reduced by 0%-10%	21%-40%	16-20% of total expenditure	
		2		No change	1%-20%	11-15% of total expenditure	
		1		Increased consumption	Less than or equivalent to 0%	Less than or equivalent to 10% of total expenditure	
	Results from analysis		The assessor rated the environmental management system of this attraction in lower medium level	Increased consumption	41%-60%	More than 25% of total expenditure	The assessor rated the attraction conservation system of this attraction in low medium level
	Sub-Indicator Scores		2.0	1.0	4.0	5.0	2.0
	Weighting	Manager’s Weighting		5.0	2.0	3.0	4.7
Tourists’ Weighting		4.5	3.7	4.7	4.4	4.4	
Third Party’s Weighting		4.0	3.5	4.5	4.5	4.5	
Average Weighting		4.5	3.0	4.0	4.5	4.6	
Overall Scores			9.0	3.0	16.0	22.5	9.2



Figure 5. 33: Recycling bins in WRT, 2015

A member of staff at Changli Tourism Bureau commented on its environmental management system as follows:

“We always attach great importance to the environmental protection of MJ, the scope includes to keep its green vegetation, soil and some other ecological aspects. it is a historic location for sea viewing. So we must protect the surrounding natural environment. There are no production factories around this area, and also guide the resident’s behaviors on environmental protection. The environmental protection for this area is very strict, to forbid any kind of actions to exhausting pollution, harm to green space, and damage soil and water.....

.....We designed a set of management tools specially for this site, such as protecting frosty policy.....There are no trees and grass has been cut without approval, and the next stage integrated plan also consider the environmental protection as a key factor.” (Interview with a member of staff at Changli Tourism Bureau, 2015)

After considering the quality, effectiveness and standard of environmental management at the attraction, the researcher feels that MJ still needs better environmental protection facilities. There is still some room for improvement, such as addressing concerns about consumption of utilities and applying more energy-saving technologies. Therefore, the assessor rated the environmental management systems of this attraction at a low to medium level, which lies in the sub-indicator score level 2.

Based on the interviews with MJDM, MJDGO and WRTLb, water, electrical and gas consumption has increased about 20% yearly in the two attractions, which lies in the sub-indicator score level 1 (increased consumption).

In China, local environmental authorities collect and take away all the waste from the MJ attraction; thus, the attraction management team may have limited knowledge of the total waste recycling rates, but they do ensure waste has been removed from the attraction. A member of staff at MJ commented on its environmental management system as follows:

“Almost 100% (can be recycled). We take all the waste to a landfill site, and do not leave any waste on the mountain.” (Interview with a member of staff at MJ, 2015)

There are various data on the percentage of urban waste recycling rates in China. Some waste can be sold for profit in China, such as paper, zip-top cans, metal and electronic appliances. At least 40% of the general waste is picked up for sale before being sent to the recycling bins, and the remaining waste goes to the recycling centres (Liu, 2013). Furthermore, a certain percentage of waste can be recycled in local recycling centres, and then the final waste will go to landfill. Thus, this figure should be more than 40%, but is in fact less than 60% (Figure 5.34, Figure 5.35).

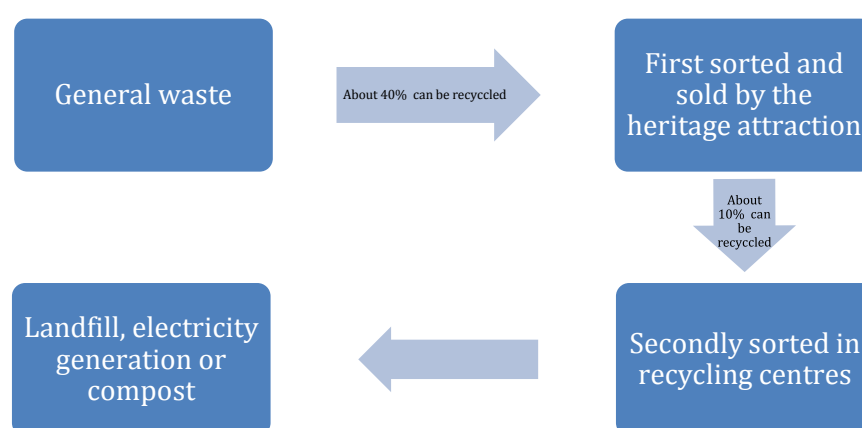


Figure 5. 34: Waste recycling at heritage attractions

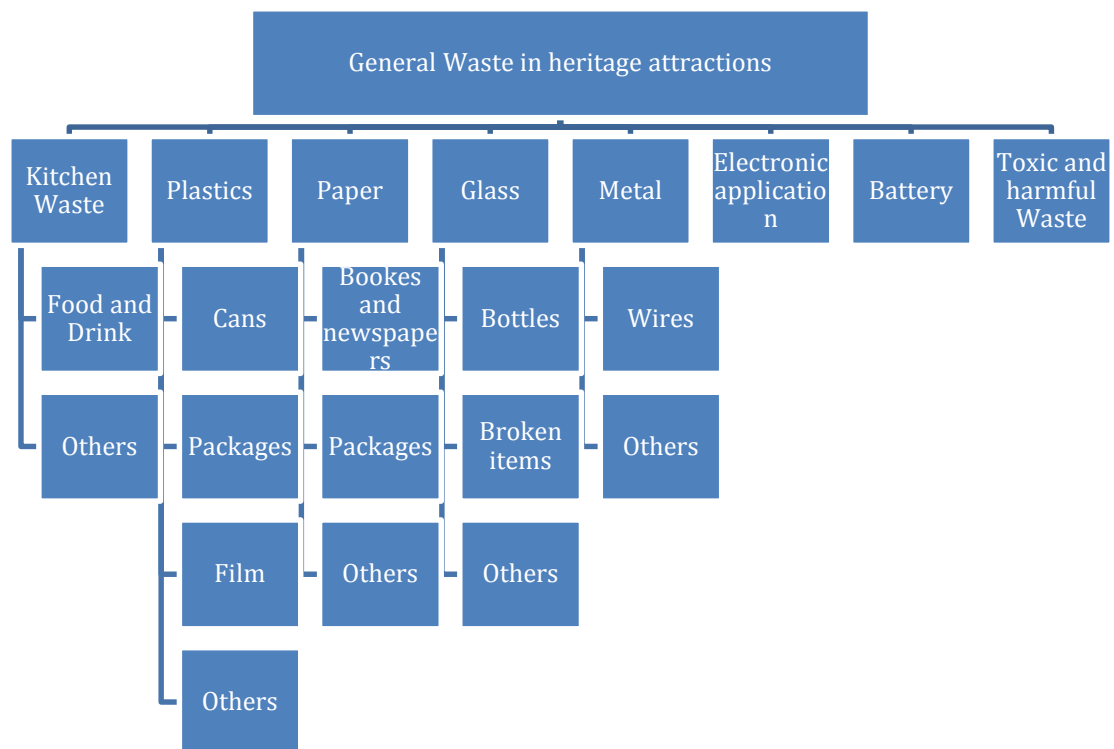


Figure 5. 35: Classification of general waste

Based on the interviews with MJDM and MJDGO, they spend about RMB 100,000 – 200,000 (about £10,370 - £20,614) on conservation per year. Their income was about RMB 150,000 (about £15,460) last year. So, as the minimum conservation cost is about RMB 100,000 (about £10,370), this means that more than 50% of the total expenditure of the attraction is annual expenditure on conservation, preservation and restoration. However, the cost of heritage conservation may also cover the cost of construction and facilities for tourism development purposes, so it would not be fair to count all the costs within the heritage conservation budget.

All the interviewees recognise the importance of heritage conservation and they believe heritage conservation is an important factor. However, from observation, many heritage ruins in the MJ do not seem to be well protected, and there are few rigorous studies and surveys on MJ heritage sites. The historic *Yunfeng Temple* and *Hanwengong Temple* in MJ have been demolished and are in ruins (Figure 5.36, Figure 5.37). Some historic buildings have been rebuilt with modern materials and structures on their original site (Figure 5.38, Figure 5.39). Interviewees could not

provide any details of conservation plans and programmes during the interview. When they were asked about conservation management, a member of staff at MJ commented as follows:

“For some heritage, we try to repair them.” (Interview with a member of staff at MJ, 2015).

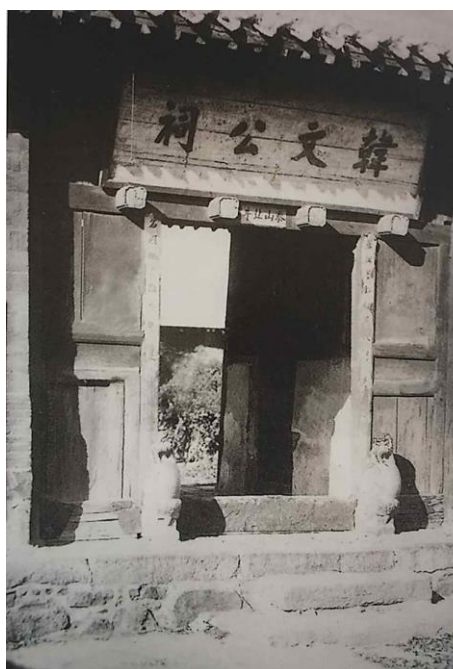


Figure 5. 36: Hanwengong Temple in 1928

Source: Government of Changli , 2011



Figure 5. 37: Yufen Temple in the 1970s

Source: Government of Changli , 2011

Overall, MJ cannot provide clearly set out conservation management structures and plans, it is not able to maintain a high quality conservation system, and the attraction implements conservation management inefficiently. Therefore, the assessor rated the conservation management of this attraction in the lower medium level, which lies in the sub-indicator score level 2.

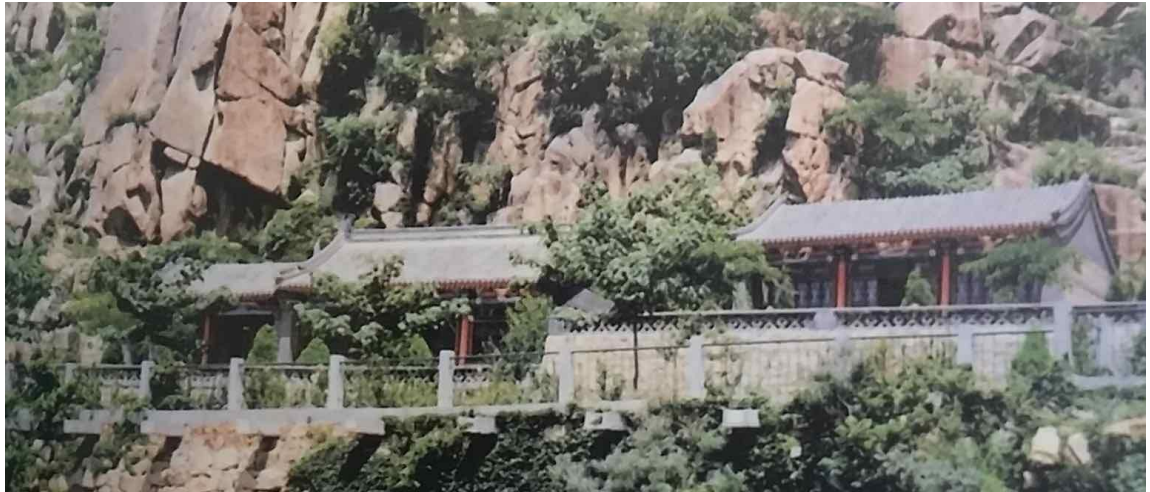


Figure 5. 38: Hangwengong Temple rebuilt in 1987
Source: Government of Changli, 2011

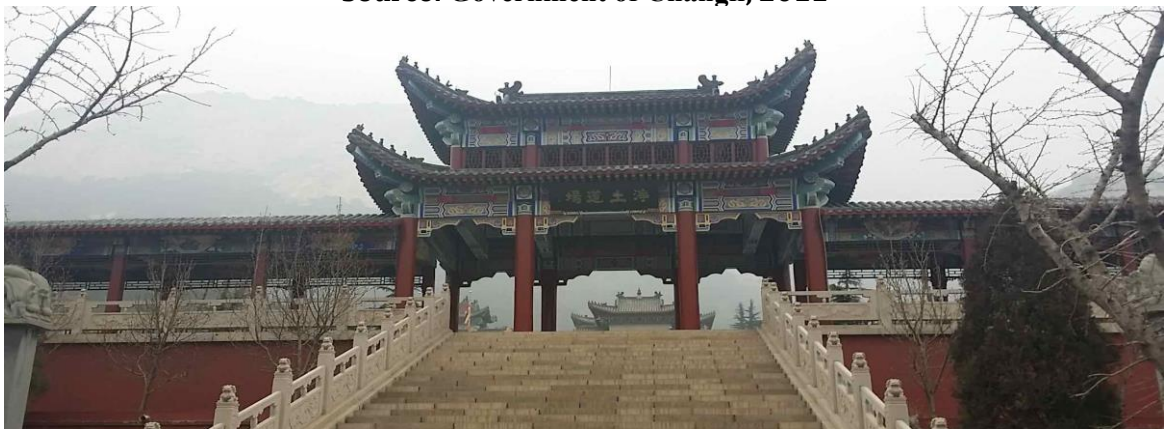


Figure 5. 39: WRT rebuilt after 2000s, 2015

5.4.2.3 Social dimension

Two indicators will be used to assess social performance: key stakeholders' involvement and stakeholders' attitudes. The overall scores for the above sub-indicators are listed in Table 5.19.

Based on the interviews with MJDM, MJDGO, WRTLb, CTBDD and CFLACC, after the WRT was rebuilt, it attracted significant numbers of visitors (about 800,000-1,000,000 each year). It benefits residents who sell more agricultural products as a result and it has helped by reconstructing more infrastructure in the local area. A member of staff at MJ commented on its social benefits as follows:

Table 5. 19: Social dimension (2013/2014)

			Indicator of Key Stakeholders Involvement		Indicator of Key Stakeholders' Attitudes	
Sub Indicators			Attraction social involvement	Annual concessions for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	The attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	The attitudes towards the attractions from the visitors
Scores	Sub-Indicator score levels	5	Shows positive/negative attitudes across all parties; Locals are sufficiently/hardly involved when development decisions are made; the attraction contributes significant/few benefits to the local area (With 5 is the best and 1 the worst)	More than 6% of visitors are concessions	The degree of attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	The degree of attitudes towards attractions from the visitors
		4		4.1%-6% of visitors are concessions		
		3		2.1%-4% of visitors are concessions		
		2		0%-2.0% of visitors are concessions		
		1		None		
	Results from analysis		The attraction is trying to benefit the local area, and it did in some ways.	More than 6% of visitors are concessions	According to the survey results, the third parties rated their average satisfaction with the attraction as 8.8/10	According to the survey results, the tourists rated their average satisfaction with the attraction as 7.7/10
	Sub-Indicator Scores		4.0	5.0	4.3	4.0
Weighting	Manager's Weighting		5.0	3.0	4.0	4.5
	Tourists' Weighting		4.2	3.8	4.2	4.7
	Third Party's Weighting		4.0	3.0	4.0	4.5
	Average Weighting		4.4	3.3	4.0	4.6
Overall Scores			17.6	16.5	3.3	18.4

“Tourism can increase the income of local residents, such as by attracting more visitors to buy locals’ flowers, fruits and artefacts.” (Interview with a staff at MJ, 2015).

A local scholar commented on the social benefits of the attraction as follows:

“It should have. Although the development of MJ is still an early stage, it has huge potential to boost the local economy, and increase the visibility of the Changli County, to protect and develop its cultural heritage. Furthermore, it may also enable the local residents to understand their living environment, and improve their facilities and infrastructure.” (Interview with a local scholar, 2015)

A member of staff at Changli Tourism Bureau commented on social benefits as follows:

“As it is a large area, the development has had huge positive effects on the surrounding area..... Changli County has also been involved in the village tourism in recent years, but they cannot replace the importance of MJ. MJ is a very historic tourism attraction, which also plays a leading role in tourism development.” (Interview with a member of staff at Changli Tourism Bureau, 2015)

MJ is a historic site but it has not been well developed so far. It provides employment but receives little income, as its financial support mainly comes from the Changli County Government. The redevelopment of MJ and WRT has been supported by the majority of the parties; local communities have received economic benefits since the redevelopment of MJ and WRT. Although some decisions made by stakeholders have been difficult for minor groups to fully accept, all participants agreed that the benefits of redevelopment outweigh its costs. Therefore, the assessor rated this attraction’s benefit to the local area in a certain way, which lies in the sub-indicator score level 4.

Visiting the WRT is free for everyone. The MJ attraction has about 25,000 visitors, and 5,000 of them are allowed to visit for free. This is because the MJ attraction belongs to the local government, so it does not charge local visitors and certain organizations. Therefore, there are more than 6% of annual concessions for residents, particular groups and visitors for educational purposes as a proportion of total visitors, which lies in the sub-indicator score level 5.

In relation to the questionnaire with third parties, participants included:

- The Deputy Director of Changli Tourism Bureau
- The Chairperson of Changli Federation of Literary and Art Circles

On average, third party respondents rated their satisfaction with the attraction as 8.5 out of 10, which lies in the sub-indicator score level 5.

The questionnaire with the 50 visitors showed that they rated their satisfaction with the attraction as 7.9 out of 10 on average, which lies in the sub-indicator score level 4.

5.4.2.4 Governance dimension

Three indicators are used to assess governance performance: planning, trouble-shooting ability and attraction management. The overall scores for the above sub-indicators are listed in Table 5.20.

Based on the interviews with MJDM, MJDGO, WRTLb, CTBDD and CFLACC, interviewees claimed that the local government and WRT are drafting plans for further development (Figure 5.40, Figure 5.41). Planning application and plan implementation follow the provisions of national regulations.

However, after the case study field trip, it became clear that the plan for developing the MJ is still in the process of development. Finalising the plans may take a long time because many meetings with the stakeholders will be needed to reach consensus on the development, and the planning application for higher levels also needs more work. The current principle of development is protective development, which so far has not allowed over-commercialised development. A local scholar commented on the development as follows:

“The development of this site is mainly protective development; this means not building too many buildings.” (Interview with a local scholar, 2015)

Furthermore, the Changli County government and the WRT have two separate plans for developing the same area; these areas for development belong to residents who may not be fully informed at this stage. The WRT even demolished the army’s

buildings without informing the army; the major dispute between them had still not been fully resolved when this research was conducted (Figure 5.42).

Table 5. 20: Governance dimension (2013/2014)

Table 3.26: Governance dimension (2013/2014)					
			Indicator of Planning	Indicator of Troubleshooting Ability	Attraction management
Sub Indicators			Planning Performance	The ability to balance the relationship between development and preservation	Attraction management
Scores	Sub-Indicator score levels	5	Regulatory compliance, planning transparency, accountability and effectiveness (With 5 is the best and 1 the worst)	If there are issues for development and preservation, the attraction can respond to the issues quickly, address the issues practically, and the results can be accepted by most stakeholders	The attraction should have a clear vision for development, practical financial forecasting, use the staff and working resource efficiently and enable the majority of staff to satisfy the requirements of the management
		4			
		3			
		2			
		1			
	Results from analysis		Problems in relation to regulatory compliance and lack of basic planning transparency and accountability, but the plans have been implemented effectively.	MJ attraction and WRT wish to address the problems but have not been sufficiently effective in doing so.	The MJ attraction does not have a clear vision for development and practical financial forecasting. They use the staff and working resource inefficiently. The site belongs to different organizations leading to unfair development.
	Sub-Indicator Scores		1.0	3.0	2.0
Weighting	Manager’s Weighting		4.7	3.3	4.3
	Tourists’ Weighting		4.5	4.5	4.4
	Third Party’s Weighting		4.0	4.5	4.0
	Average Weighting		4.4	4.1	4.3
Overall Scores			4.4	12.3	8.6

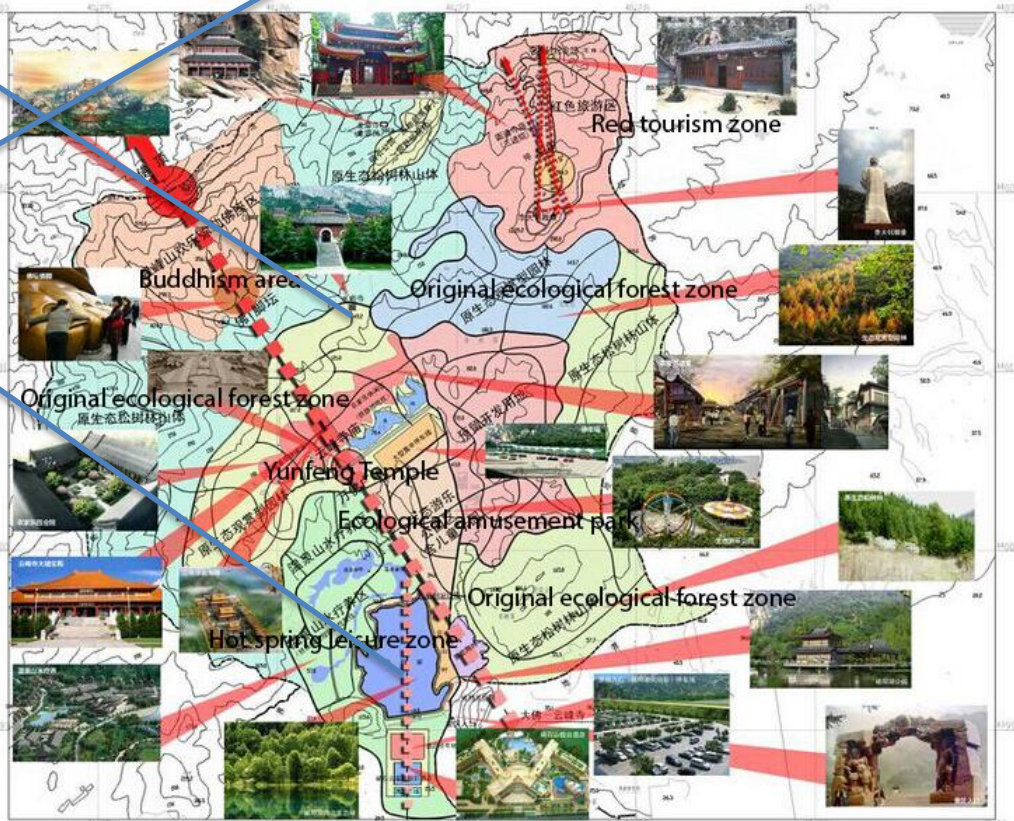


Figure 5.40: Draft plan by WRT Sources: Changli government planning bureau, 2015

Water
Rock
Temple

Lake
Jieyang

昌黎碣石山风景区观光景点建筑及景观配置规划图



Tourism Development Plan Draft for Mountain Jieshi

Figure 5.41: Draft plan by Changli government
Sources: Changli government planning bureau, 2015



Figure 5. 42: The army building's ruins in front of WRT, 2015

Moreover, the plans need more transparency and to be open to comments, not only at this attraction but also at other attractions in China. The plans for development have not involved the local villages at this stage, and this may lead to certain conflicts during the next development stage. Last but not least, the current development of WRT does not have formal land use and planning permission documentation. The Changli County Government is not able to provide land use permission but wishes the WRT to rebuild the temple. So, the Changli County Government supports the WRT in its plan to rebuild, but cannot provide the formal land use permission. The construction is illegal, but the local government and WRT are not being blamed so far. Given that MJ has problems in terms of regulatory compliance and a lack of basic planning transparency and accountability, the sub-indicator score for planning performance was rated as 1 by the assessor. The overall score for the indicator of planning is 4.4 out of 25.

Based on the interviews with MJDM, MJDGO, WRTLb, CTBDD and CFLACC, the main issues identified were as follows:

- Issues concerning potential land acquisition and demolition of settlements during development and the fact that land prices may increase after the development process.

- The rebuilt heritage buildings in WRT were criticized for not using the original historic materials and structures.
- The local government does not seem able to provide funds for tourism development yet.
- Some local farmers occupied the land in the MJ illegally and built houses there without planning permission. Conflicts may occur when this area becomes involved in the potential land acquisition and settlement demolition process.
- The development of the current WRT does not have formal land use rights and planning permission, but the local government supports the redevelopment of the WRT.
- The WRT is in dispute with certain stakeholders, such as when it destroyed the army's buildings without informing the army. This matter is still under discussion.
- There is overcrowding when the WRT has *Buddhist activities*

A local scholar commented on the issues of MJ as follows:

“The MJ development has a big bottleneck. This bottleneck is the relationship between the conservation of natural resources and caring for the local residents because many residents live around the MJ, and they are closely related to some forest industries, such as the flower industry, fruit industry, and agriculture. The development of such a large area, it may harm the current interests of the residents, and cause certain conflicts. But from a long-term development perspective, in accordance with the protection of the development, it protects the natural resources and protects the cultural heritage”(Interview with a local scholar, 2015)

A member of staff at Changli Tourism Bureau commented on the issues of MJ as follows:

“The MJ has encountered some problems during development. Some local farmers occupied the land in the MJ illegally, and built houses without planning permission. The effects were relatively small when only one or two farmers did it, but it became a serious problem when lots of farmers did the same thing.

.....The cumulative effects of the illegal buildings led to environmental problems, and the new buildings' style were all in a mess and different to the traditional building style of this area.

.....In the next stage of development, demolition may become another problem. The local residents have lived in this area for many years and when developing the MJ as an attraction, it will involve many problems, such as relocating their houses and asking them to move out of this area. It would

cost significant investment and labour. What we can do is improve and upgrade their living environment, making it more comfortable for locals during development

.....The local government has put itself under pressure by investing on its own; it is not realistic for local government to find all of the funding.”
(Interview with a member of staff at Changli Tourism Bureau, 2015)

The core issue for MJ and WRT is how to deal with redevelopment, mainly concerning how to raise funds and gain planning permission. The funds for developing MJ would benefit by involving stakeholders and providing more capital for compensation. The WRT has shown their willingness to provide certain funds. Local government supported this site by not interfering with the construction and *Buddhist activities* of the WRT. All stakeholders show willingness to apply for planning permission, although few interviewees mentioned the fact that the rebuilt buildings in the WRT do not use traditional materials and structures. The problem is that this newly built heritage does not conserve the history and ruins of the original temple buildings. Interviewees did not comment on this issue maybe because they have limited knowledge of heritage conservation. The local government has not set this temple up as an important heritage protection site, which leads to there being little legal protection for the original temple buildings. Overall, MJ and WRT wish to address the problems, but this has not been sufficiently effective to date. Therefore, the assessor rated the indicator of troubleshooting in the sub-indicator score level 3. The overall score for the indicator of trouble-shooting ability is 12.3 out of 25.

Based on the interviews with MJDM, MJDGO, WRTLb, CTBDD and CFLACC, the MJ attraction does not have a clear vision for development or practical financial forecasting. Although local government has always wished to develop MJ, and has proposed some draft plans, it has still not reached any consensus so far. Therefore, two different plans for the same area have been proposed by both MJ and WRT. A member of staff at Changli Tourism Bureau commented on their current draft plan as follows:

“Our next step is in accordance with the development direction of the Changli County, to set up a management group for the MJ attraction development. The group consists of several units: a planning unit, the management unit and other units. It has also involved many different local authorities, including the government of Changli town, the tourism bureau, the Jieshi Attraction Administration Office, the Land Use Authority, the

planning authority, the Urban Management Authority. The new plans integrated the historic culture and natural resources of MJ, and the Buddhist culture. It will also aim to help the residents in Apricot Orchard Village to sell their flowers. That is what we plan to do and we hope it will be fully developed in the next two or three years” (Interview with a staff at Changli Tourism Bureau, 2015)

This site uses the staff and working resources inefficiently. Different parts of the site belong to different organizations leading to unfair development. A staff member at MJ commented on site management in the following terms:

*“We are an independent bureau out of the Changli County Tourism Bureau.....
Water Rock Temple is an independent organization, but we have territorial management rights to the temple.....
Han Yu Ancestral Hall belongs to Changli County cultural bureau.....
The Apricot Orchard Villagers Committee belongs to the government of Chengguan (Changli) Town.....” (Interview with a staff at MJ, 2015)*

The attraction has problems in relation to the efficiency of human resources, as it always lacks sufficient workforce to serve visitors. The temple has been better managed and receives more visitors than the MJ attraction and other attractions in this area. Although there have been some problems, MJDM, MJDGO and WRTL B stated during the interview that they believe their management has worked quite well. A member of staff at Changli Tourism Bureau commented on management of the site as follows:

“We do believe we did well with this site..... We know we were not the preferred choice (attraction), but we are trying to be” (Interview with a staff member at Changli Tourism Bureau, 2015).

Furthermore, there is an understanding gap between the attraction management team and third parties. The attraction management team claimed there are no problems with the locals but other residents argue with that. For example, a staff member at MJ claimed there had been no problems involving local stakeholders when applying for planning permission, but some residents complained that the attraction did not involve them in any decisions at all when applying for planning permission. Some visitors commented on the attraction management as follows:

“Someone has destroyed the natural environment for their personal purposes.....

*MJ belongs to the people of Changli, it should be freely open to the people in Changli.....
This is a historic site, but it is not well developed because of the inaction of the administration.....”(Interview with visitors, 2014)*

Therefore, the sub-indicator score level for attraction management was rated as 2 by the researcher. The overall score for the indicator of attraction management is 8.6 out of 25.

5.4.3 Summary

5.4.3.1 Dimensions

To summarise the average indicator scores across the four dimensions, the social dimension received the highest average indicator score (18.1) compared to the other dimensions. This is followed by the economic dimension (14.1), the environmental dimension (11.9) and the governance dimension (8.4). Although the social dimension received high scores, this does not mean that this case study contributes more social benefits than other case studies in this research. However, the MJ case study has contributed to the social dimension more obviously since the WRT has been developed in the last ten years; significant numbers of visitors now come to this site for worship and travel. Other dimensions follow, such as the economic and environmental dimension. The governance dimension does not score well because the development is still at an early stage and the WRT has been involved in some construction, but there is a lack of land use permission and conflicts with other stakeholders.

5.4.3.2 Overall scores of all sub-indicators

Across the overall scores of all indicators, the attitudes towards the attractions from the third parties (20.0) received the highest overall score and planning performance (4.4) received the lowest overall score. Third parties and the local community support the redevelopment of MJ and WRT, not only because this site is like a calling card for locals, but also because the redevelopment has attracted more visitors and events to the local area. The locals enjoy the economic benefits of tourism development. In terms of planning performance, however, rebuilding a site without land use permission is a serious problem.

5.4.3.3 Weighting

In terms of the weighting, attraction conservation management (4.6) and attitudes towards the attractions from the visitors (4.6) received the highest attention; water, electrical and gas consumption trends (3.0) received the lowest attention. The weighting is associated with participants' perceptions of importance. Conservation is very important for built heritage attraction management, just as visitors' attitudes are a key factor in tourism management. Utilities consumption trends may have received a low weighting.

5.4.3.4 Scoring

In terms of scoring, net profit/income growth rate, tourist numbers of an attraction divided by attraction employee numbers, annual concession tickets and the attitudes towards the attractions from third parties received the highest score (all 5), and consumption trends again received the lowest score (1). The scoring is associated with the sustainability performance of the site. The attraction is well managed, but it is a locally based attraction and would do well to contribute to its locality first.

5.4.3.5 Lessons and limitations

The indicator of financial health uses income rather than net profit to assess performance due to the fact there is a relative lack of data on real net profit. Furthermore, this case study uses data from two organizations (MJ and WRT), and some scores use one site to represent the whole case study when the data from the other site is not accessible. It may not be very fair to use this data to reflect the true development of this site. Moreover, the interviewees could not provide all of the data very accurately, so the case study had to use some approximate data for assessment, and not all of the data requested is available to the public. During the research, the researcher only interviewed those at a senior management level, without speaking to the operational staff who take charge of environmental management more directly, so some opinions may be subjective.

MJ and WRT were selected as a joint case study to test the applied assessment methodologies in China. The most important lesson from the MJ site was that a heritage site with a natural landscape can be defined as a built heritage attraction,

and that sites like this face the issue of how to balance development and conservation. Mountain-based heritage sites are a unique type of cultural heritage site in China. This research defines built heritage attractions as inherited sites which can be promoted as heritage tourism products. MJ encompasses unique heritage features; it helps to promote the rich culture of the local traditions, ethnic backgrounds and the natural landscape of the area. Although the development of MJ and WRT was carried out by different organisations and in various management styles and the authenticity of the WRT buildings has faced strong criticism, it cannot be denied that the heritage tourism of the above site has positively contributed to a wide range of stakeholders from the perspective of economic benefits and the promotion of the local culture. Development and conservation are not two opposite poles. Actions taken in relation to heritage tourism development should be conducted appropriately, even if the development sometimes faces some debatable issues. The development of heritage tourism may not be excellent in all respects and it may not satisfy all stakeholders all the time.

5.4.4 Case statement

To summarise, MJ and WRT have been relatively newly developed as built heritage attractions in the last few years and the strategic marketing is still in the early stages. However, very obvious changes to the surrounding environment have come about because of these attractions. Clearly, tourism has brought benefits to the locals. Visitors come to local restaurants and shops, purchase local farm products and wild fruits. The nearest village to this site is the Apricot Orchard Village; this village has limited farmland, but has many fruit trees. The villagers increase their income by serving visitors; therefore, in this case, there is no argument about tourism bringing benefits to the local economy. However, this research must point out the issues which come along with tourism development, as the trade-off is not always easy to assess. In the environmental dimension, the natural environment has suffered deterioration because of the large number of people visiting. Locals also complain about the dirty streets, the overflowing rubbish bins and the large reduction in grassy areas. Overcrowding and crime rate increases have led a few people to blame tourism development and the new infrastructure such as the roads and public facilities.

Some attractions are owned by *government/public bodies and run by government*. China tends to have proportionately more of these, with large numbers of built heritage attractions belonging to government; the management of large attractions is also influenced by the government directly or indirectly. In China, all local governments have tourism development bureaus; most attractions are supervised by a tourism development bureau. This research does not appreciate the governance and conservation of this site. Although this is a small site with limited funds and resources compared to other famous heritage attractions in China, this site is still able to ensure compliance with planning regulations. MJ has developed very slowly since it started. Under the supervision of the local government, the management of MJ attraction has had a tendency to be bureaucratic. Although the MJ management office is managed directly as a government body, many departments supervise this site which leads to bureaucracy. For example, the MJ management Office, Local Government, the Local Tourism Bureau, the Local Village, the Local *Buddhist Association* and others. So, it would be difficult for the MJ management office to develop this site and implement its policies. The bureaucracy makes it difficult for MJ to compete with other similar sites in terms of marketing implementation. The participants stress that they need more funds to develop this site and local government is also working hard to raise funds for the development. However, this site needs more appropriate governance, which could be a vital factor in influencing the sustainable development of built heritage attractions, to earning more support from stakeholders and raising more funds.

The WRT, on the one hand, has rebuilt the temple buildings and tried to build them in keeping with their original historic appearance. This site was blamed for ruining the heritage without consulting locals, as all the rebuilt buildings were constructed with new materials and structures. On the other hand, the original temple buildings might have fallen into ruin if they had not been repaired and rebuilt. It was a small temple with only five monks, whose local contribution was limited. The rebuilt WRT attracts a significant number of visitors who boost the local village economy and who should receive respect for their contribution. Heritage protection and tourism development are two different dimensions, so the indicators and appraisal system would find it rather difficult to fully appraise their cost and benefits. In this

emerging market, the sustainability appraisal approach was applied to a small rural project, namely MJ and WRT; the next stage of the research aims to test the approach at a complex site in an emerging market.

5.5 Sustainability Appraisal for Second Built Heritage Attraction in China----- Case study of Shanhai Pass, the Great Wall of China

5.5.1 Introduction

Shanhai Pass, Great Wall of China (SPGWC) was selected as the second Chinese case study to test the applied assessment methodologies in the context of China. As the second case in an emerging market, SPGWC has more visitors, staff, land and heritage remains than MJ. SPGWC has been operating as an attraction for longer than MJ. SPGWC is a very typical built heritage site in China; it is owned and run directly by local government. This site can represent a significant number of built heritage attractions in China, and even in emerging markets more generally.

This section will analyse the data of the case study in terms of background information and indicators across four dimensions. SPGWC was built by General Xu Da (1332 to 1385 AD) about 1381 AD in the Ming Dynasty (1368 to 1644 AD). The current District/town of Shanhai Pass was developed around SPGWC; this town was an enclosed area encircled by walls linked with the Great Wall. The District of Shanhai Pass is a town situated in the northeast of Qinhuangdao City, Hebei Province. Qinhuangdao is a beautiful coastal resort in North China, which has a great reputation for the stunning summer holiday resort of Beidaihe. Shanhai Pass means *Mountain and Sea Pass* in Chinese. SPGWC adjoins the Bohai Sea to the southeast and the Yan Mountain to the northwest (Figure 5.43, Figure 5.44). SPGWC was the main north entrance to the town and the capital of Beijing, and it was an important military base in Chinese history. The pass was a frontline defence against the enemies of Ming. In the Ming Dynasty, the area to the north of the Shanhai Pass was Chinese territory. Following the complex physical features of this area, the northern area was once part of the defensive system of the Great Wall.

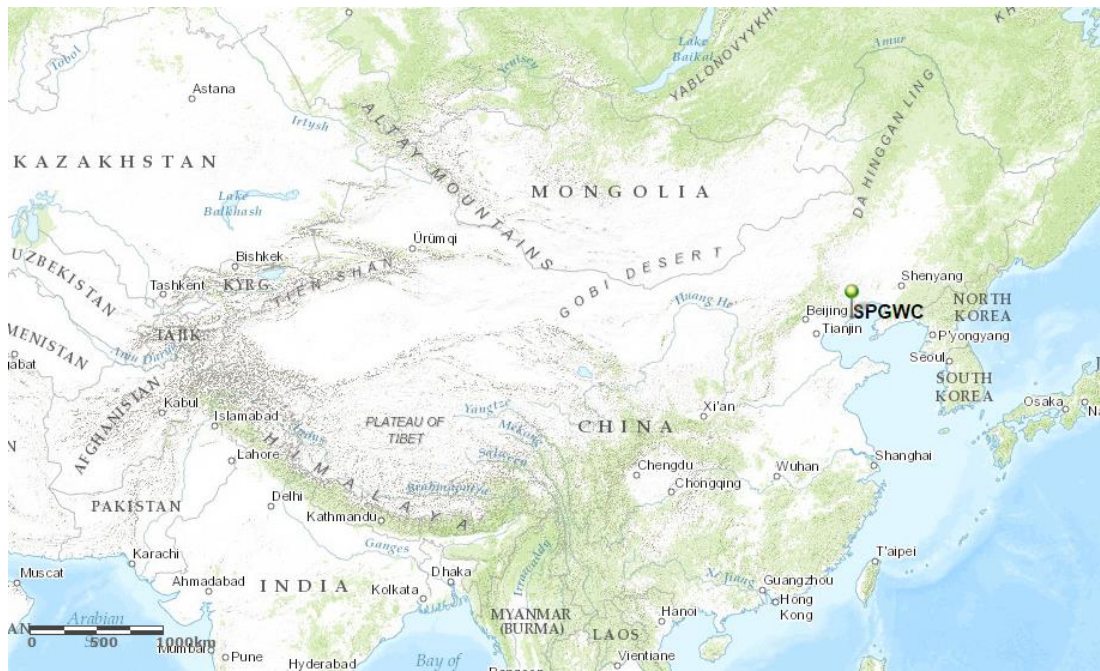


Figure 5. 43: SPGWC in North Eastern China
Sources: Esri, 2016c

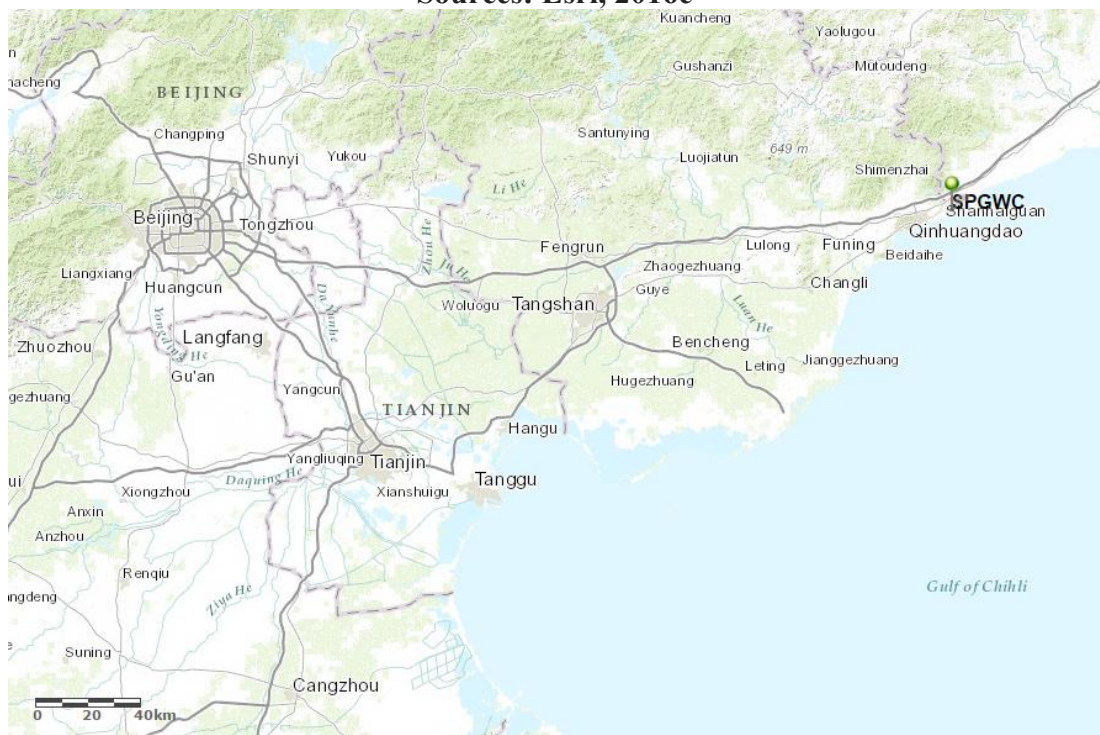


Figure 5. 44: SPGWC in North Eastern Hebei Province
Sources: Esri, 2016d

The First Pass under Heaven (Figure 5.47 is the east tower of the SPGWC; it is named the Zhendong Tower. The tower is 13.7 metres (44.95 feet) high with two floors. On the tower is a big board on which there are five huge Chinese characters *Tian Xia Di Yi Guan* (the First Pass under Heaven) inscribed by a calligrapher during the Ming Dynasty. Climbing the Zhendong Tower, there is a view of the sea on one

side of the tower, while, on the other, lies the lofty Great Wall. Furthermore, the Jingbian Tower, Linlu Tower, Muying Tower and Weiyuantang Hall stand on the same axis as the Zhendong Tower. These five buildings provide a strong protective screen of buildings against the complex geographic conditions (Figure 5.48).



Figure 5. 45: SPGWC in the District of Shanhai Pass
Sources: Google Map, 2015fb



Figure 5. 46: Sketch Map of SPGWC
Sources: China Highlight, 2015a

The First Pass under Heaven (Figure 5.47 is the east tower of the SPGWC; it is named the Zhendong Tower. The tower is 13.7 metres (44.95 feet) high with two floors. On the tower is a big board on which there are five huge Chinese characters *Tian Xia Di Yi Guan* (the First Pass under Heaven) inscribed by a calligrapher during the Ming Dynasty. Climbing the Zhendong Tower, there is a view of the sea on one side of the tower, while on the other lies the lofty Great Wall. Furthermore, the Jingbian Tower, Linlu Tower, Muying Tower and Weiyuantang Hall stand on the same axis as the Zhendong Tower. These five buildings provide a strong protective screen of buildings against the complex geographic conditions (Figure 5.48).



Figure 5. 47: The First Pass under Heaven, 2015

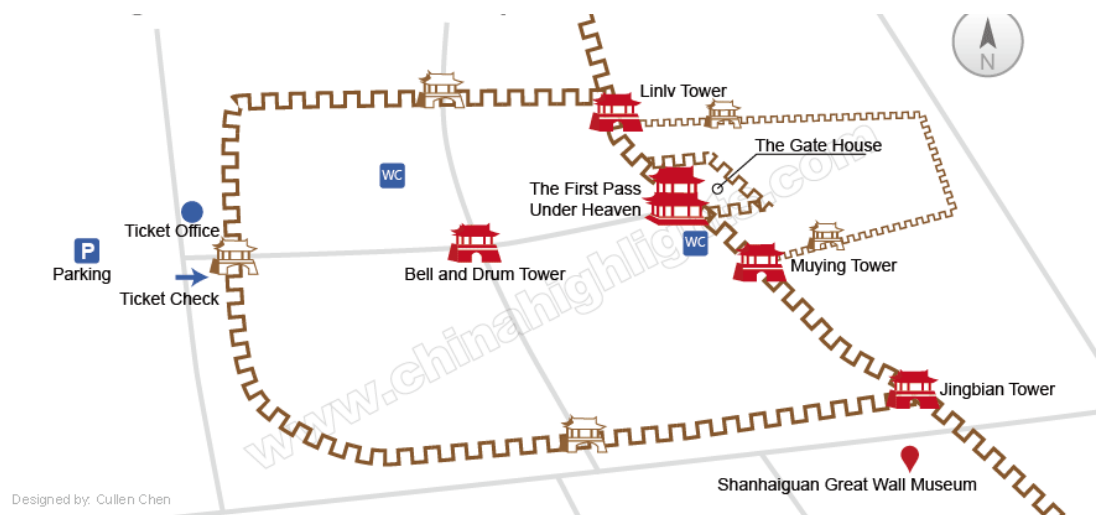


Figure 5. 48: Sketch Tourist Map of the First Pass under Heaven

Sources: China Highlight, 2015b

Old Dragon's Head (Figure 5.49) is the most eastern starting point of the Great Wall, and it extends into the Bohai Sea. Old Dragon's Head is almost like being on a peninsula as one can feel the overwhelming power of the sea (Figure 5.50).



Figure 5. 49: Old Dragon's Head
Source: Shanhai Pass Tourism Bureau, 2015



Figure 5. 50: Sketch Tourist Map of the First Pass under Heaven
Sources: China Highlight, 2015c

The researcher interviewed four people from the attraction's management and third parties, including the Deputy Director of Shanhai Pass District Tourism Bureau, the Deputy Head of Shanhai Pass District Government, the Deputy Director of the Tourism Bureau in Qinhuangdao City and a local scholar of the Great Wall. The

researcher also conducted a site survey undertaken around the attractions' exit gate to obtain 50 completed visitors' questionnaires.

5.5.2 Indicators assessment

This section analyses the data of case study in terms of the background information and indicators across four dimensions.

5.5.2.1 Economic dimension

Three indicators were used to assess economic performance: employment, financial health and visitor numbers. Each indicator has different sub-indicators; the data collected from the survey site will be converted into relevant weightings and scores during the analysis process. The overall score for the sub-indicators in the economic dimension are listed in Table 5.21.

Based on the interview with SHGVTB, the attraction provides permanent employment for the full year for about 200 people, and employs approximately 30 seasonal employees during the summer time at First Pass under Heaven and Old Dragon's Head. There are over ten long-term casual employees at each site. Therefore, the overall number of employees at the attraction is about 280. Thus, the percentage of built heritage tourist industry positions which provide permanent employment for the full year is about 71%, which lies in the sub-indicator score level 4 (61-80%). According to the interview, 80% of employees are local people living within twenty miles of the attraction. Thus, the percentage of staff who come from the local town/city is 80%, which lies in the sub-indicator score level 4 (61-80%).

Table 5. 21: Economic dimension (2013/2014)

			Indicators of employment		Table Indicator of Financial Health		Indicators of Visitors	
Sub Indicators			Percentage of built heritage tourist industry positions which provide permanent employment for the full year	Percentage of staff who come from the local town/city	Total income of an attraction divided by attraction employee numbers	Total income growth rate	The actual visitor numbers compared to the designed tourism carrying capacity of the attraction	Tourist numbers of an attraction divided by attraction employee numbers
Scores	Sub-Indicator score levels	5	81-100%	81-100%	More than £75,000	More than 10%	In the capacity	More than 8,000
		4	61-80%	61-80%	£50,001-£75,000	6.7%-10%	0-10% of over capacity	6,001-8,000
		3	41-60%	41-60%	£25,001-50,000	3.4%-6.6%	11-30% of over capacity	4,001-6,000
		2	21-40%	21-40%	£1-£25,000	0-3.3%	31-50% of over capacity	2,001-4,000
		1	Less than or equivalent to 20%	Less than or equivalent to 20%	Less than or equivalent to £0	Less than or equivalent to 0%	Over More than 50% of over capacity	Less than or equivalent to 2,000
	Results from analysis		71%	80%	£32,674	More than 10%	In the capacity	9,142
	Sub-Indicator Scores		4.0	4.0	3.0	5.0	5.0	5.0
Weighting	Manager’s Weighting		4.8	4.0	4.6	4.4	4.4	4.4
	Tourists’ Weighting		4.3	4.3	4.2	4.0	4.1	4.1
	Third Party’s Weighting		3.7	4.0	4.0	4.0	4.3	4.0
	Average Weighting		4.3	4.2	4.3	4.1	4.3	4.2
Overall Scores			17.2	16.8	12.9	20.5	21.5	21.0

For the financial health indicator, data on the pure net profit was not available from the interviewees. However, they provided the ticket income figure for the attraction over the last three years. The total ticket income was RMB 86,000,000 (about £8,878,000) in 2013/2014; and the total ticket income was RMB 73,000,000 (about £7,537,000) in 2012/2013. The number of employees at the attraction is 280. Thus, the total ticket income of the attraction divided by the attraction's employee numbers in 2014 is $\text{RMB } 86,000,000 / 280 = \text{RMB } 307,142$, which is approximately equal to £32,674, which lies in the sub-indicator score level 3. Using the figures provided, the income growth rate in the last year is $(86,000,000 - 73,000,000) / 73,000,000 = 17.81\%$, which lies in the sub-indicator score level 5 (more than 10%).

For the visitor numbers indicator, although the site has not yet set a number for its tourism carrying capacity, visitor flow is well controlled most of the time. So the attraction is operating within the tourism carrying capacity (Figure 5.51). Furthermore, it is a large attraction with more than one site. When there is overcrowding in an attraction, the staff will guide visitors to other sites to avoid overcrowding at certain times and locations. The result lies in the sub-indicator score level 5 (within capacity). A member of staff at Shanghai Pass District Tourism Bureau commented on the tourism carrying capacity management as follows:

"Sometimes, it is very crowded, but we have a pre-arranged plan. Therefore, we could deal with it if the attraction was very overcrowded, and it is very rare to have an over capacity situation" (A staff member at Shanghai Pass District Tourism Bureau, 2015).

Since the tourist numbers were 2,560,000 in 2014 and the employee number was 280, the result of the tourist numbers of the attraction divided by the attraction's employee numbers is $2,560,000 / 280 = 9,142$. The result lies in the sub-indicator score level 5 (more than 8000).



Figure 5. 51: Visitors at the attractions, 2015

5.5.2.2 Environmental dimension

Two indicators will be used to assess environmental performance: environmental management, and historic buildings' conservation and preservation. The overall score for the sub-indicators in the economic dimension are listed in Table 5.22.

Based on interviews with SHGVTB, the waste water disposal and rubbish clearance of this site are integrated in an urban waste management system. The local government takes charge of removing waste and recycling. A member of staff at Shanhai Pass District Tourism Bureau commented on the environmental management as follows:

“The attraction is integrated into the urban management system. waste water disposal and rubbish clearance, which are all taken care of by the government.....We need to clean and tidy the rubbish, and an environmental sanitation company takes the rubbish away.....We did have some events on promoting sustainability. For example, last year, we held an event to promote environmental protection on annual World Environment Day (5 June 2014)” (A member of staff at Shanhai Pass District Tourism Bureau, 2015)

Table 5. 22: Environmental dimension (2013/2014)

Indicator of Environmental Management					Indicators of Historic Buildings Conservation and Preservation		
Sub Indicators			Environmental management system	Water, electrical and gas consumption trends per annum	Waste recycling rate per annum	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	Attraction conservation system
Scores	Sub-Indicator score levels	5	The quality, effectiveness and standard of environmental management in the attraction	Reduced by more than 20%	More than 60%	More than 25% of total expenditure	Provides heritage conservation, technologies, methods and management structures (conservation management); the standards of the technologies, methods and management structures are high (conservation quality); the attraction implements efficiently (conservation implementation) (With the 5 is best and 1 is the
		4		Reduced by 11%-20%	41%-60%	21-25% of total expenditure	
		3		Reduced by 0%-10%	21%-40%	16-20% of total expenditure	
		2		No change	1%-20%	11-15% of total expenditure	
		1		Increased consumption	Less than or equivalent to 0%	Less than or equivalent to 10% of total expenditure	
	Results from analysis		The assessor rated the environmental management system of this attraction at a medium level	No change	41%-60%	No data	The assessor rated the conservation management system of this attraction at a medium-high level
	Sub-Indicator Scores		3.0	2.0	4.0	No data	4.0
	Weighting	Manager’s Weighting		4.6	3.0	3.8	4.0
Tourists’ Weighting		4.5	3.7	4.4	4.3	4.3	
Third Party’s Weighting		4.7	3.0	4.3	4.7	4.3	
Average Weighting		4.6	3.2	4.2	4.3	4.2	
Overall Scores			13.8	6.4	16.8	No data	16.8

Firstly, the attraction realizes the importance of an environmental management system and deals with the environmental management in conjunction with the local government. Secondly, SPGWC is trying to do well in relation to cleaning and waste management. The researcher found that the attraction is tidy and clean in most places and that waste has been separated into recyclable and non-recyclable bins. Thirdly, this attraction also holds events on promoting sustainable development and environmental protection. However, there is still some room for improvement. For example, there are concerns about the consumption of utilities and there is a need to apply more energy-saving technologies. Thus, the assessor rated the environmental management system of this attraction at the medium level, which lies in the sub-indicator score level 3. Utilities consumption has not changed too much in the last few years, which lies in the sub-indicator score level 2 (No change).

Similar to the MJ, local environmental authorities collect and take away all the waste from the SPGWC. When considering the condition of China in terms of environmental recycling systems, about 40% to 60% of general waste is recycled.

Based on the interviews with SHGVTB, SHGDD, QHDVTB and GWLAP, there are no data available on the percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure. The investment in the attraction's conservation management mainly comes from the local Administration of Cultural Heritage; however, information on conservation expenditure was not available during the survey. In China, for such a major heritage attraction, the investment in heritage and other expenditure is managed by different authorities (e.g. cultural protection, planning, tourism, or local government). Thus, it is difficult to work out this indicator.

SPGWC was ruined by Eight-Nation Alliance which invaded Qing China in 1900. In 1984, the Chairman of Deng Xiaoping proposed the *Love My China, Repair the Great Wall* donation event. Old Dragon's Head was rebuilt. The construction work lasted from the beginning of 1985 until 1989. With the aim of conserving the heritage town and sites, the district government of Shanhai Pass started a heritage regeneration development project after 2004. The project may take about 16 years

and £1.26 billion has been invested for all the historic sites in Shanhai Pass (Zhang *et al.*, 2009). The conservation is led by local government, but operated by the free market. In other words, the policy is to invite external investment. In 2004, 2005, 2006 and 2007, many regeneration projects have been conducted. For example, the ‘11533’ project includes the regeneration of East Luo town, Zhonggu tower, memorial archway, road west, road north, road south, town gate tower and horse sorrel way. The “1011” project includes the reconstruction of ten heritage sites and a programme of 11 invitations for external investment. The “999” project includes conservation and reconstruction of nine heritage sites, nine continued construction projects and a programme of nine invitations for external investment. The “12345” project includes the establishment of a central business district around Zhonggu tower and conservation of two historic great wall sites in East Luo town and Xi Guan town. It also involves investments of £20 million in the reconstruction of about 6,000 m of the historic Great Wall in three layers of the central town, Environment Renovation Planning in four streets, and the development of five business zones.

SPGWC development projects have finished the construction and restoration of 12 heritage projects, including the rebuilt Zhonggu tower, five memorial archways, the Wangyang tower, the Yinger Tower, Dongluo town, the ancient Ministry of War office, Dabei Temple, Guandi Temple, and Sanqing Temple, strengthening the North Gate and South Gate and repairing the horsesorrel way in the Great Wall.

Reconstruction of the Great Wall Museum has been extended by adding a new exhibition room. The heritage conservation projects of SPGWC have received very high awards and have a good reputation with central and province level government officers. A staff member at Shanhai Pass District Government commented on the heritage conservation as follows:

“Both the First Pass under Heaven and Old Dragon's Head are very good in terms of the protection of cultural heritage, these are our eyes, our priority. In all our development work, both in relation to environmental protection and the infrastructure of the whole area, the protection of cultural heritage is always put in first place where we can't break the red line and the bottom line of heritage protection.” (A member of staff at Shanhai Pass District Government, 2015)

A staff member at Qinhuangdao Tourism Bureau commented on the heritage conservation thus:

“The Great Wall between the First Pass under Heaven and Old Dragon's Head were protectively repaired; these repairs were carried out without destroying the heritage.....managing the attractions should not only put the economic benefits in first place, but it should also value the ancient heritage, especially considering the importance of the Great Wall tourism in the world. We are protecting the heritage first, with a model of protective operations”
(A member of staff at Qinhuangdao Tourism Bureau, 2015)

However, there are some concerns that some buildings were rebuilt using modern materials (Figure 5.52).



Figure 5. 52: A rebuilt historic town with modern materials, 2015

Overall, all stakeholders recognise the importance of heritage conservation and consider heritage conservation management to be important. The built heritage is well protected under conservation management; high-quality conservation technologies are employed and conservation management is implemented efficiently. Therefore, the assessor rated the conservation management of this attraction at a relatively high level, which lies in the sub-indicator score level 4.

5.5.2.3 Social dimension

Two indicators were used to assess social performance: Key Stakeholders' Involvement and Stakeholders' Attitudes. The overall score for the sub-indicators of the social dimension are listed in Table 5.23.

Based on the interviews with SHGVTB, SHGDD, QHDVTB and GWLAP, the attraction benefits the local area. The attraction is an important site for the Shanhai Pass District; 280 employees work there directly and there are many people and businesses involved in the tourism industry. The attraction received 2,560,000 visitors and RMB 86,000,000 (about £8,878,000) in ticket income in 2014. The Shanhai Pass District does not have many other industries.

The SPGWC also holds events and activities locally, such as the Dragon Head Festival, which has a dragon dance, local food and snacks, and attracts many visitors (Figure 5.53- Figure 5.58 and Table 5.24). Residents can visit the site with concession tickets. Thus, the attraction is a major income source for the local government, and it plays a very significant role in the daily life of the Shanhai Pass District. A staff member at Shanhai Pass District Tourism Bureau commented on the social benefits as follows:

“The answer is yes, because Qinhuangdao is a tourism city, SPGWC.... definitely has a positive influence on the economy and is the core part of the tourism industry”(A member of staff at Shanhai Pass District Tourism Bureau, 2015).

A member of staff at Shanhai Pass District Government commented on the social benefits as follows:

“SPGWC plays a very important role in local development The District of Shanhai Pass is not large, only 192 square kilometres SPGWC has been recognized as a UNESCO world cultural heritage since 1987, and it has received many awards since then, such as the Great Wall Cultural Town, Chinese Calligraphy Cultural Town.

.....The First Pass under Heaven and Old Dragon's Head have played significant roles in social and economic development and history; it is the core of our culture, as well as tourism development.....

.....The First Pass under Heaven and Old Dragon's Head played a significant role in leading other projects to be improved, and they have contributed a lot to employment and social development” (A member of staff at Shanhai Pass District Government, 2015).

Table 5. 23: Social dimension (2013/2014)

			Indicator of Key Stakeholders Involvement		Indicator of Key Stakeholders' Attitudes	
Sub Indicators			Attraction social involvement	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	The attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	The attitudes towards attractions from the visitors
Scores	Sub-Indicator score levels	5	Shows positive/negative attitudes across all parties; Locals are sufficiently/hardly involved when development decisions are made; the attraction contributes significant/few benefits to the local area (With 5 being the best and 1 the worst)	More than 6% of visitors are concessions	The degree of attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	The degree of attitudes towards attractions from the visitors
		4		4.1%-6% of visitors are concessions		
		3		2.1%-4% of visitors are concessions		
		2		0%-2.0% of visitors are concessions		
		1		None		
	Results from analysis		The attraction certainly benefits the local area.	More than 6% of visitors hold concessions	According to the survey results, the third parties rated their satisfaction with the attraction as 7.7/10 on average	According to the survey results, the tourists rated their satisfaction with the attraction as 7.7/10 on
	Sub-Indicator Scores		5.0	5.0	3.9	3.9
Weighting	Manager's Weighting		3.8	3.4	4.8	4.8
	Tourists' Weighting		4.0	3.7	4.3	4.6
	Third Party's Weighting		3.3	4.0	4.3	4.7
	Average Weighting		3.7	3.7	4.5	4.7
Overall Scores			18.5	18.5	17.6	18.3



Figure 5.53: Dragon head rise festival in SPGWC: Lion dances, 2015



Figure 5.54: Dragon head rise festival in SPGWC: Sedan chair, 2015



Figure 5.55: Dragon head rise festival in SPGWC: Yangko, 2015



Figure 5.56: Dragon head rise festival in SPGWC: Dragon dance, 2015



Figure 5.57: Dragon head rise festival in SPGWC: Ancestor worship, 2015



Figure 5.58: Dragon head rise festival in SPGWC: Local snack, 2015

A member of staff at Qinghuangdao Tourism Bureau commented on the social benefits as follows:

“The attractions contribute to the local area a lot. Firstly, they improve the local visibility; secondly, they absorb thousands of people who live in the surrounding area in employment, the positions they are employed in include the daily work of the attraction, such as attraction management, maintenance, guides, Security guards, cleaning, health, Gardening, landscaping etc. In terms of social development, a large part of the fiscal revenue of the District Government of Shanhai Pass is derived from the attractions’ ticket income. The District Government can use the income to invest in the construction of infrastructure. Furthermore, the operation of the attractions also attracts a lot of tourists (to) come here, which has led the local people to view the outside world with an open mind, and formulate a more tolerant attitude” (A staff member at Qinghuangdao Tourism Bureau, 2015)

A local scholar said the following about the social benefits:

“I think the positive effects are greater than the negative effects. It can protect the Great Wall. Although the government did some revision reconstruction and transformed some of the original structures into new buildings, at least the protected wall was not fully ruined. We looked at the areas of the Great Wall which were not developed into an attraction; many of these parts of the Great Wall have not been repaired or protected at all. So as time goes by, many parts of the Great Wall exposed to the weather in many places have been destroyed very seriously. I think that there have been very few negative effects; at least it can drive the development of the local economy and culture” (A local scholar, 2015).

Table 5. 24: Dragon head rise festival events and activities

Dragon head rise festival events and activities

Key official Events:

- Launch ceremony
- The Great Wall sand charity auction
- Sea sacrifice ritual

Performances and shows:

- Dragon Dance
- Tai Chi Fan and other traditional yangko dance performances
- Officers and soldiers patrol city show
- Qing emperor parade show
- Traditional folk art performances
- Traditional martial arts performance
- Dragon kite exhibition

Snack and refreshments:

- Chunbing (Spring pancake), boiled dumplings, wonton, fried cake and noodles

Tourists Participation:

- Learning traditional martial arts or Taijiquan, paper-cut, window, and sand drawing.
 - Participating in singing, dancing, guessing games
 - Young men and women were recruited by the lily network who held a blind date activity.
 - Watching the street shows, blown sugar, dough, on-site production of straw, bamboo crafts and other traditional folk art.
-

Overall, SPGWC attracts positive attitudes across all parties; a significant number of locals felt sufficiently involved when development decisions were made and the attraction contributes significant benefits to the local area on both social and

economic dimensions. Therefore, the assessor rated this attraction's benefit to the local area in the sub-indicator score level 5.

Although the interviewee could not provide the exact visitor numbers for annual concessions, SPGWC have a policy of giving free/discount tickets during the traditional local festival, such as the Dragon Head Rise Festival, during which the number of visitors per day is more than 100,000 and there are many similar events for residents each year. Furthermore, all residents, students, and large tourism groups can have concessions, and so the above percentage accounts for more than 20% of visitors according to tourism development estimates. Therefore, there are more than 6% of annual concessions for residents, particular groups and visitors for educational purposes as a proportion of total visitors.

In the indicators of attitudes towards attractions from third parties and visitors, the researchers asked all participants and 50 visitors to rate their satisfaction with the attraction, with 10 being the most satisfied and 1 being the least satisfied. The third parties rated their average satisfaction with the attraction as 7.7 out of 10, in the sub-indicator score level 4. The 50 tourists' average satisfaction with the attraction was also 7.7 out of 10, in the sub-indicator score level 4.

5.5.2.4 Governance dimension

Three indicators were used to assess governance performance: planning, troubleshooting ability and attraction management. The overall scores for the sub-indicators in the governance dimension are listed in Table 5.25.

Table 5. 25: Governance dimension (2013/2014)

			Indicator of Planning	Indicator of Troubleshooting Ability	Attraction management
Sub Indicators			Planning Performance	The ability to balance the relationship between development and preservation	Attraction management
Scores	Sub-Indicator score levels	5	Regulatory compliance, planning transparency, accountability and effectiveness (With 5 being the best and 1 the worst)	The issues for development and preservation, the attraction can respond to these issues quickly, address the issues practically, and the results can be accepted by most stakeholders	The attraction should have a clear vision for development, practical financial forecasting, uses staff and working resources efficiently, and the majority of staff are satisfied with the attraction management
		4			
		3			
		2			
		1			
	Results from analysis		Although compliant with regulations, the attraction has not implemented the plans very deeply. Furthermore, the plans need more transparency and to be open to comments.	Overall, the survey site responds to issues relatively quickly, tries to address the issues in a practical way and the results can be accepted by most of the stakeholders.	SPGWC has a clear vision for development, practical financial forecasting, uses staff and working resources relatively efficiently most of the time, and the majority of staff are satisfied with the attraction management
	Sub-Indicator Scores		4.0	4.0	4.0
Weighting	Manager’s Weighting		4.4	4.6	4.6
	Tourists’ Weighting		4.4	4.5	4.5
	Third Party’s Weighting		4.0	4.3	4.3
	Average Weighting		4.3	4.5	4.5
Overall Scores			13.5	17.2	18.0

Based on the interviews with SHGVTB, SHGDD, QHDVTB and GWLAP, the interviewees claimed that the process of planning application and implementation obeyed all planning provisions and regulations. The local government worked with the Planning and Design Institute, University of Tongji and the Hebei Institute of Ancient Architecture, to develop the following plans: Heritage town conservation plan of Shanhai Pass (2003), Historic and cultural town conservation plan of Shanhai Pass (2004) and the Tourism development plan of Shanhai Pass (2003)(Figure 5.59). The development of SPGWC as a tourist attraction has been processed for many years; it is in the first group and highest level of attractions in China, and it is part of a World Heritage Site (Figure 5.60). The attraction aims to ensure planning transparency and accountability by involving stakeholders, the development plans used full consultation processes, and the attraction implements planning practice relatively efficiently.



Figure 5. 59: Master plan SPGWC heritage regeneration development
Source: Song and Wang, 2009



Figure 5. 60: Certifications and awards of SPGWC, 2015

A staff member at Shanhai Pass District Tourism Bureau commented on regulatory compliance and planning as follows:

“Our plans were definitely implemented in accordance with the relevant provisions of the national authorities. All applications involving heritage should consult stakeholders, such as the Land Use Authority, the Environmental Protection Authority, the Landscape Garden Authority, the Civil Air Defence Office, etc. After the implementation, an audit is also needed to review the effectiveness. This is not a simple problem of communication, but also a problem of strict examination and approval” (A staff member at Shanhai Pass District Tourism Bureau, 2015).

A staff member at Shanhai Pass District Government commented on regulatory compliance and planning as follows:

“Both The First Pass under Heaven and Old Dragon's Head are the first batch of national 5A level attractions, as we just mentioned above, they are also our cultural heritage protection units. Not just in the EIA should be assessed, the protection of cultural heritage, plans and construction, all need strict procedures according to the provisions of the state examination. There is no doubt that we shall always abide by the law and not do anything illegal and strictly follow the plans..... Projects, based on their size and nature, need to get approval at different levels, district level, municipal approval level, the provincial level and state level accordingly” (A staff member at Shanhai Pass District Government, 2015).

A member of staff at Qinhuangdao Tourism Bureau commented on regulatory compliance and planning as follows:

“The applications for development planning of attractions are very strict. The Tourism Plan, Protection of Cultural Heritage Plan and Ancient Town Plan, Restoration and Protection Plan, all are in accordance with the relevant provisions of government. The district government, or provincial government cannot decide whether or not to approve these plans; they need to report to a national level authority, such as the State Bureau of Cultural Relics. The implementation is very strict too. Many people are very concerned about this attraction because it is the starting point of the Great Wall of the Ming Dynasty. People from all walks of life at home and abroad are very concerned about this matter. So the development plan and its procedures are very strict” (A staff member at Qinhuangdao Tourism Bureau, 2015)

The principal plan for development is *Heritage conservation, heritage restoration and construction of new buildings*. The plan aims to rebuild the heritage forms of the town in the Ming and Qing dynasty (AD 1368 to 1912), to improve the life quality and well-being of residents, and develop the tourism industry. The implementation of the plans set the Zhong tower as the centre of the historic town, and divides this area into five tourism zones according to traditional directions, namely: the East Luo Ming Dynasty Military Experience Zone; North East Tourism And Entertainment Zone; South East Folk Cultural Zone; North West Historic and Cultural Zone; and East West Commercial Courtyard House Zone.

Although all regulatory provisions have been complied with, the attraction has not implemented the plan very efficiently. For example, the plans require all the heritage conservation works to be maintained to an extremely high standard, but some buildings were rebuilt with modern structures and materials. Many business units were designed to be included in the heritage plans, leading to over commercialisation of this town. Furthermore, the plans need more transparency and to be open to comments, not only at this attraction, but also other attractions. Therefore, the sub-indicator score of planning performance was rated as 3 by the assessor.

There are also many problems for this built heritage attraction. A member of staff at Shanhai Pass District Tourism Bureau commented on the difficulties in the following terms:

“Because we are a tourism attraction, local residents’ lives are based on our attraction. For example, we try to employ local residents for our

attraction and related businesses. In essence, tourism provides happiness and development to local residents. Our country has a plan for cultural heritage, we have a plan to restore and develop” (A staff member at Shanhai Pass District Tourism Bureau, 2015).

A staff member at Shanhai Pass District Government commented on the difficulties as follows:

“..... the development of any project would encounter problems, such as the protection and development.....

..... Someone will think sometimes protection is more important, and someone may think the development will be more important sometimes. How to find the balance between development and protection? If you only protect the heritage, not the development, I personally think this is not perfect. If it were only about protection, it would not be able to keep the cultural heritage, and the development may play the best role for providing support. But if we do not consider protection-only development, then we may become condemned by history.

.....So we must strictly abide by the regulations of national heritage protection, ensure all the development goes well, and find the best way to balance protection and development.....The development of human culture and history is not to destroy heritage, reasonable development can enhance the traditional culture. For example, the Shanhai Pass has six hundred years of history, has many good historical stories, cultural heritage, historical legends, historical talents and historical buildings. However, if you don't show them to the public and visitors, including international friends, who will know about this? We want to keep our culture, so we must ensure it can first be shown to the public and then it can be called an orderly succession. But it needs to be developed based on the circumstances of understanding the heritage and protecting the heritage well; this is quite important in fact. We must develop the case, the legitimacy and order, not blindly favour the economic benefits or forget the responsibilities that we have at that time”(A staff member at Shanhai Pass District Government, 2015).

A staff member at Qinhuangdao Tourism Bureau commented on the difficulties as follows:

“The attraction has had different problems at different stages. When construction began in the mid-80s, the most significant problem was lack of funds. It is precisely because of this situation, the country launched the "I love China, repair the Great Wall" donations, this played a big role. The current problem is that the infrastructure needs to be further improved. The attraction is working on improving facilities and services to adapt to this; I believe that there will be a qualitative upgrading in the near future. Although the attraction is a 5A level attraction, the roads, toilets, the environment, there are still some unsatisfactory places, which need upgrading for tourists”(A staff member at Qinhuangdao Tourism Bureau, 2015).

A local scholar also spoke about the difficulties:

“There are some problems.....Outside the attraction, there used to be many traditional residents’ houses. Many of them were demolished and destroyed when the attraction was repaired. The new buildings are only similar to the traditional buildings in appearance, but they have been built using cement and steel, rather than traditional methods. Therefore, the culture and buildings have been lost. Personally, I think, in the development of tourism and the economy, we should repair old buildings in the same way that the ancient buildings were built and all the development must be based on local culture.....I think they are over focused on money, not really on making the protection of the ancient city better”(A local scholar, 2015).

Overall, these difficulties can be summarised as below. Before the heritage conservation development regeneration project, the conditions and key issues of the historic SPGWC were identified as follows (Zhang, *et al.*, 2005; Liu and Guo, 2011):

- Residences lack facilities and infrastructure. The historic Shanghai Pass residential area was built during the Ming and Qing dynasty (AD 1368-1912), the existing facilities and infrastructures are not suitable to meet the demands of modern people. For example, only 3.4% of the houses have heating, only 8.6% of the houses are situated near roads in good condition and only 12% of houses have sewage pipelines.
- There are many potential fire hazards. Most Ming and Qing buildings are made of wood, and the existing road are very narrow which makes access for fire trucks difficult.
- Many indigenous people have moved out. Given that the historic Shanghai Pass residential area lacks facilities and infrastructure and is not suitable for living, many indigenous people have moved out. Only a few senior citizens and new immigrants still live in this area for financial reasons.

During and after the heritage conservation development regeneration project, the main issues included:

- Difficulty in persuading existing residents to move out of the Shanghai Pass historic residential area. Some residents refused to move out because they are used to living there, and they were not satisfied with the compensation offered.
- Heritage authenticity. SPGWC was a military base, but the regenerated area turned into a commercial town. A significant number of tourist shops

appeared in the new town; there was overcrowding, a lack of proper management and disorderly conduct. The conserved and preserved heritage does not use the original materials and structures, and the attraction has tried to do well in terms of conservation but has sometimes failed due to lack of funds and willingness. The difference between the new buildings and the heritage buildings has lead the Shanhai Pass residential area to lose its authenticity. Most new buildings are pseudo-classic architecture, only similar to the ancient building in appearance.

- Communication with the locals. The local government implemented the moving policy strongly, by arranging a large number of officers to persuade their relatives and friends to live in this area in order to force residents to move out and accept the fixed compensation. The development did not involve the local community, did not take their opinions into account and did not address all the residential problems after they moved out. The business development for the heritage did not invite them back or encourage them to participate in the business development, it simply took their land and houses.
- Some of the residents were not satisfied with the land acquisition and settlement demolition compensation. The attraction aimed to address this by increasing the compensation to certain residents, so it has now received more support from most residents.
- Overcrowding. The attraction steers visitors to other less popular attractions during periods of overcrowding. Since SPGWC has many open spaces, overcrowding is not a very significant issue compared with other popular built heritage sites.
- Seasonal and low salary employment. SPGWC aims to reduce the influence of seasonal tourism by reducing the ticket prices which may lead to employing more people in full time and permanent positions. This action has been implemented for many years and has had some success.

SPGWC realised the problems above and responded to most of these issues relatively quickly, trying to address the issues in a practical way by designing a set of policies. The results of the demolition have been accepted by most of the

stakeholders. Therefore, the sub-indicator score levels of troubleshooting were rated as 4 by the assessor.

In terms of the attraction management, SPGWC has been in development as an attraction for many years. SPGWC has a clear vision for the site redevelopment and practical plans for the next stage of the development. A staff member at Shanhai Pass District Tourism Bureau commented on the next stage of the plan as follows:

“We have an upgrading plan for Old Dragon's Head.....This project has two parts - one is funded by our attraction, the other is funded by an external developer. The developer bought property rights from the Chinese Army outside our attraction. This area outside of the attraction will be an attraction as a whole with our attraction in the future. The government will fund the area, and support facilities will be based on marketing operations” (A member of staff at Shanhai Pass District Tourism Bureau, 2015).

A member of staff at Shanhai Pass District Government commented on the next stage of the plans as follows:

“What we are doing now is upgrading the infrastructure of the Old Dragon's Head, the next step will be in accordance with national requirements, to ensure such transformation can benefit other attractions too” (A member of staff at Shanhai Pass District Government, 2015).

Some visitors commented on the attraction management as follows:

*“It has well preserved heritage walls.....
It is too cold to visit this place in winter
There are too many trees close to the Great Wall; it may lead to destroying the Walls.....
It could be better..... ”* (Interviews with visitors, 2015)

Although there are some good points, there are still some problems with the attraction management. A very recent event is that the SPGWC had its AAAAAA qualification removed in October 2015 (Crjenglish, 2015). The National Tourism Administration accused SPGWC of poor sanitation, fraudulent pricing and declining service. The National Tourism Administration has never cancelled a 5A rating before, but it could be reinstated in the future if measures are taken to rectify the conditions (enhancing safety facilities, improving sanitation and regulating tour guides).

The survey site receives sufficient funds from tourism incomes, and external support from government that has facilitated practical financial forecasting for many years. In terms of human resources, this site uses staff and working resources relatively efficiently most of the time. The majority of staff are satisfied with the attraction management, but a few staff in low positions are not very satisfied with their salary or with the management. The sub-indicator score levels of attraction management were rated as 4 by the assessor.

5.5.3 Summary

5.5.3.1 Dimensions

To summarise the average indicator scores across the four dimensions, the social dimension (18.4) received the highest average indicator score compared to all the other dimensions. Then follows the economic dimension (18.3), the governance dimension (16.2) and the environmental dimension (13.4). The SPGWC case obviously contributes to the social dimension given the development of the tourism industry in the last twenty years; the economic and governance dimensions follow. The environmental dimension does not perform well, possibly because the attraction has paid more attention to the social and management aspects. SPGWC is a comprehensive and large built heritage attraction, which can represent one of the top class attractions in China, but it does need to meet the demands of all four dimensions. Governance is key for the attraction in terms of relevance to its sustainability. The economic dimension is an obvious factor for the attraction management team, which represents their management ability under the Chinese political system.

5.5.3.2 Overall scores of all sub-indicators

The actual visitor numbers compared to the designed tourism carrying capacity of the attraction (21.5) received the highest overall score and water, electrical and gas consumption trends (6.4) received the lowest overall score. As a major attraction, it has witnessed issues of overcrowding and has taken action to ensure this happens as little as possible. SPGWC also has a large open space that can host many visitors outside the historic buildings. Like other attractions, the management team may have limited knowledge of the links between consumption trends and sustainability;

furthermore, the consumption trends have increased because of cost inflation and the increase in tourist numbers.

5.5.3.3 Weighting

Attitudes towards the attraction from visitors (4.7) received the highest attention; water, electrical and gas consumption trends (3.2) received the lowest attention. The weighting is linked to the importance of the factors in the mind of participants. For a large tourist destination, visitor attitudes are a key factor in attracting more visitors. Consumption trends may have received a low weighting because participants may not understand its full importance.

5.5.3.4 Scoring

Net profit/income growth rate, tourism carrying capacity, the tourist numbers of an attraction divided by the attraction's employee numbers and local stakeholders' involvement (all 5) received the highest score, and consumption trends (2) again received the lowest score. Scoring is associated with the sustainability performance of the site. The attraction is a local attraction and should do well in terms of contributing to the local area and attraction management. Similar to other cases, the participants may not fully understand the importance of consumption trends.

5.5.3.5 Lessons and limitations

Similar to the previous Chinese case study, one of the limitations of this case study is that it uses income rather than net profit to assess financial health performance. The interviewees were not able to provide all the data very accurately, so the assessor had to use some approximate data in the assessment. Furthermore, to analyse such a large site may require the involvement of more stakeholders rather than just the most senior leaders of the site. However, for this research, it was difficult to convince the attraction managers to approve the researcher contacting more operational staff. It would also have been inappropriate to contact other stakeholders of the survey site without the approval of the attraction managers.

SPGWC is one of the best developed built heritage attractions in China. The most important lesson from the SPGWC case study is that a strong government-managed heritage site can sometimes be a major influence on local communities. The

conservation of SPGWC was strongly supported by local government, although the development process has faced many issues with the local communities over the last 20 years. A strong local government may not always mean democracy for all stakeholders, but it may be able to promote heritage tourism by efficiently reducing certain opposition. Although not all the decisions made by local government are correct, the conservation of local built heritage has contributed to a wide range of local communities.

5.5.4 Case statement

SPGWC and its conservation plan and actions benefits both its locality and its heritage, although there were some problems and issues during the process. There has been a key argument during the heritage regeneration project; some people have criticized the fact that some heritage sites have been destroyed and rebuilt during the regeneration. Before the redevelopment in 2004, there were many heritage ruins in SPGWC. The residents living in this area experienced a lack of modern facilities and infrastructure. Meanwhile, the residents were also a key factor in ruining the heritage site; some of them knocked down historic walls to build their houses and sold heritage fabric as antiques. The heritage regeneration ruined some heritage buildings and sites but they provided most residents with a better living environment after they were relocated. The project has also provided more job opportunities for locals in the construction and tourism industries. Nevertheless, when considering the trade-offs of the heritage regeneration project, it destroyed some folk heritage buildings, but also conserved and preserved most of the significant heritage of the Shanhai Pass. The benefits may therefore outweigh the cost of the heritage regeneration project.

Similar to MJ, this type of attraction is owned by *government/public bodies and run by government*. The management of Shanhai Pass is still in government-led mode, which means this attraction is still under the direct leadership of local government. Bureaucracy may become the main problem in the further development of this site. If the attraction leadership becomes a problem someday, the leader who operates the attraction may fully use a government style of leadership and may put the demands of supervision ahead of attraction development. This would be a problem, so a suggestion to local government is to put the management of the attraction into third

party hands. For example, they could establish an organization similar to the National Trust or establish an independent tourism company to deal with attractions in order to fit the attraction into the free-market model.

5.6 Summary

The application of the sustainability appraisal approach to these four cases has identified significant variations in the stakeholders' assessment of indicator types between the UK and China and between different management styles and forms of ownership. Mountain Jieshi and Shanhai Pass are the two cases from an emerging market.

An evolutionary approach from case to case was used in the case studies. CH was the pilot study, which tested the approach with a small rural project under the management of the NT and then Oxford Castle Heritage Site was selected to represent larger, complex sites involving a range of stakeholders. Both the above sites were tested and yielded satisfactory results in the context of a developed country. Then, the sustainability appraisal methodology was applied to an emerging market to test its feasibility in another context. This started with MJ, which is a small site in China and then moved to a larger, more comprehensive built heritage attraction, namely SPGWC. The application of the approach to MJ and SPGWC in an emerging market proved that this approach can achieve the research aim, but with some limitations. This research suggested more cases should be tested in the next stage of the research.

The application of this sustainability appraisal approach provides a means of advancing a more holistic sustainability assessment approach for built heritage attractions. Owing to differences in management, ownership and background, the four cases face different limitations and so different lessons in relation to heritage management have been learned from each case. In order to identify the potential value, acceptability, implementation and international transferability of the developed approach for an emerging market, more feasibility research and a comparative study will be explored in the next chapter.

Chapter Six: Assessment of Data

6.1 Introduction

This chapter uses two major strategies to analyse the data generated from this research. The feasibility research was employed to analyse the implementation of the methodology and indicators, and the comparative study was used to identify the similarities and variations between case studies.

6.2 Analysing the feasibility of the assessment methodology and indicators

6.2.1 Introduction

Based on the interview results and existing documentation, this chapter aims to further analyse the data from the four case studies to compare the application and feasibility of the same assessment methodology applied in four cross-national cases (Figure 6.1). This is a limited set of case studies, and the findings are only indicative of differences between indicators according to different types. The feasibility is examined based on evidence in terms of the indicators' function, key influencing factors and case study scores across four dimensions. Four sustainability dimensions, plus stakeholder perspectives on the sub-indicators, were compared and analysed. The key influencing factors for the sustainability of built heritage were identified. The six- step methodology for the overall sustainability appraisal of built heritage attractions has been analysed.

Although scores were assigned to all the indicators, it is still difficult to assess the attractions' performance by using these scores, especially considering the context of the various attraction types and backgrounds. Therefore, the assigned scores for the indicators will be used for reference only, and they will not be used to fully decide the sustainability performance of built heritage attractions.

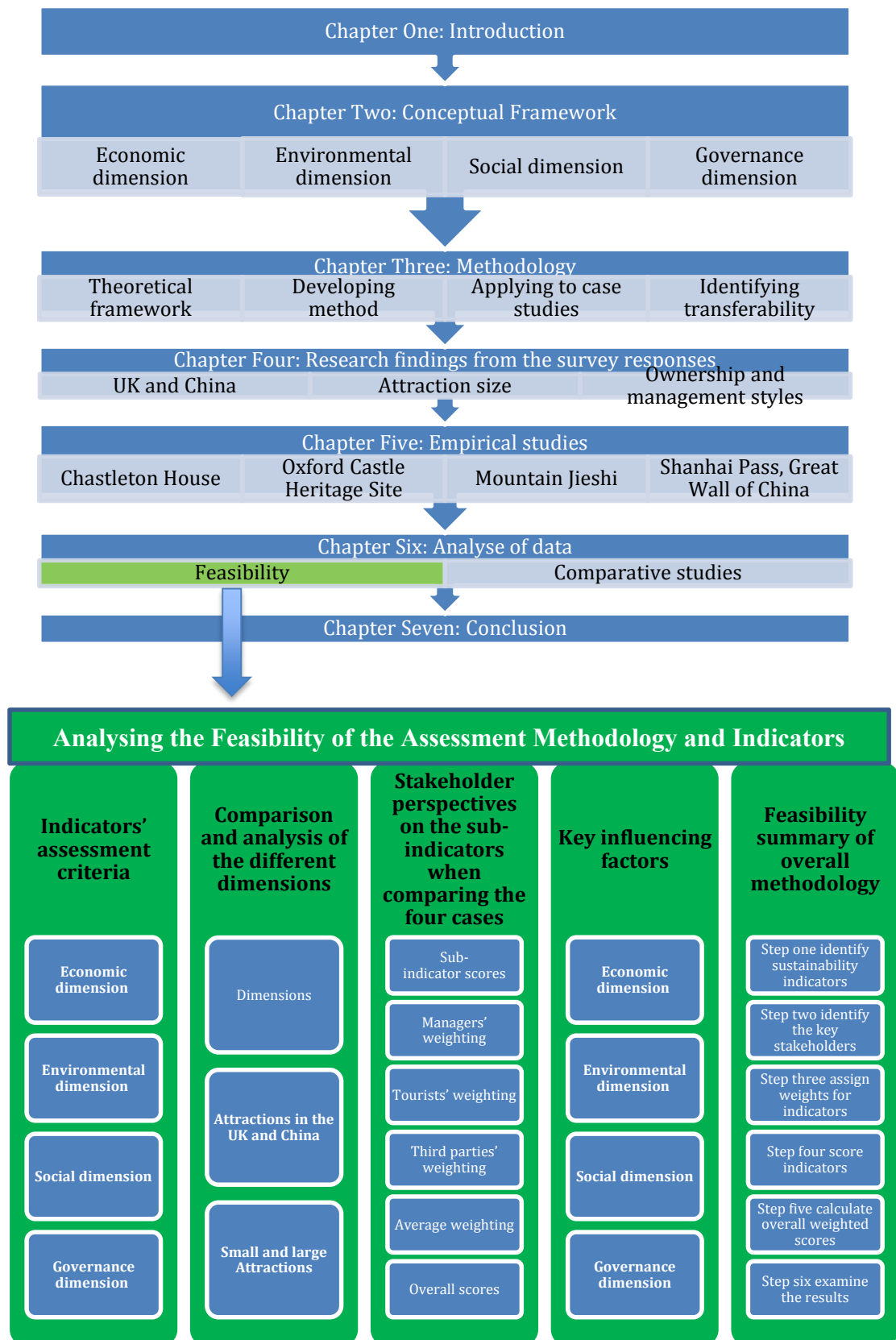


Figure 6. 1: Diagram showing the linkage of the feasibility analysing in the conceptual framework

6.2.2 Indicators' assessment criteria

This section aims to compare the application and feasibility of different indicators/sub-indicators applied by analysing the data collated in four cases. For the purpose of data analysis, the overall feasibility analysis scores have been divided into five levels according to the results, namely: very low, low, medium, high and very high. Each indicator has been set out in a table to explain feasibility in terms of sub-indicators, function, key influencing factors, case study scores and feasibility (Table 6.1).

Table 6. 1: Levels of sub-indicators

Levels of sub-indicators					
Scores	0.0-4.9	5.0-9.9	10.0-14.9	15.0-19.9	20.0-25.0
Levels	Very Low	Low	Medium	High	Very High

Four dimensions have been used to assess sustainability in this research, namely the economic, environmental, social and governance dimensions (Table 6.2). The scores have few significant differences across all indicators and attractions. Green is used to mark the highest score within the case studies and yellow is used to mark the lowest score.

Table 6. 2: Average dimension scores of case studies

	Economic dimension	Environmental dimension	Social dimension	Governance dimension
CH	13.2	15.6	12.2	14.7
OCUA	13.1	14.5	19.5	19.4
MJ	14.1	11.9	17.4	8.4
SPGWC	16.9	14.5	18.2	16.2
Average	14.3	13.1	16.8	14.7
UK Attractions	13.1	14.3	16.1	17.0
China Attractions	16.2	11.4	18.1	12.3
Small Attractions	13.7	14.7	14.4	11.6
Large Attractions	15.7	14.0	18.8	17.8

Notes:

The highest scores for the attraction across four dimensions

The lowest scores for the attraction across four dimensions

The highest scores for the dimension across the four attractions

The lowest scores for the dimension across the four attractions

6.2.2.1 Economic dimension

Indicators of employment

Table 6. 3: Indicators of employment

Sub-indicators	Percentage of built heritage tourist industry positions which provide permanent employment for the full year				Percentage of professionals who come from the local city/town			
Function	Measure how an attraction would contribute towards stable employment				Measure how an attraction would contribute to local employment.			
Key Influence Factors	Seasonality, management, local employment, type of employment, visitors							
	Results	Sub-Indicator Scores	Average Weighting	Overall Scores	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	44%	3.0	3.7	11.1	100%	5.0	3.9	19.5
OCUA	82.1%	5.0	3.7	18.5	80%	4.0	3.2	12.8
MJ	100%	5.0	4.0	20.0	100%	5.0	4.2	21.0
SPGWC	71%	4.0	4.3	17.2	80%	4.0	4.2	16.8
Average				16.7/25				17.5/25
Level				High				High
Feasibility	Overall, this indicator is appropriate and practical to measure the sustainability of built heritage attractions. However, it cannot be used to reflect the total economic equality of employment. Therefore, it is suggested that a supplementary sub-indicator be added in future research: the sub-indicator of the Gini index ² of all the attractions’ employees and stakeholders.							

Although research exists which indicates that heritage tourism is able to increase the employment rate by providing employment to maintain the heritage attraction (Orbasli, 2000; Hall, 2008; Mason, 2009), Zhang and Zeng (2004) argue that most of the benefits are relatively short term. For example, with employment, one should consider the types of positions; certain tourism-associated positions are low paid and temporary. Certain positions created in the tourism industry may also attract people from outside rather than locals, and then there is a debate on how much that heritage tourism would contribute to the local economy. The percentage of local employment could also be considered a measurable index. Furthermore, most types of tourism are

² The gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality (World Bank, 2016:1).

influenced by seasonal factors, although Cuccia and Rizzo (2011) argued that heritage tourism might be less affected by seasonality. Thus, peak and off-peak times occur throughout the year; tourism services and facilities may be strained at peak times, while some resources may be wasted in off-peak periods. The WTO (2005) suggested that indicators for tourism destination areas should include tourism seasonality, employment, community and destination economic benefits. Therefore, the designed indicators should consider the type of positions available, local benefits and seasonality.

In this research, permanent positions would provide stable financial support to the employees, and may make a greater economic contribution than part-time and temporary positions. The overall scores for the permanent employment rate sub indicators relate to seasonality, management, local employment and type of employment in this study. The small/rural attractions tend to employ proportionately more local staff than large/urban attractions (Table 6.3).

CH received a relatively low score on this indicator, which may be because this site is the smallest attraction among the four cases and, unlike the other sites, CH is not open every day of the year. Since the attraction is closed in winter and reopens in March, it does not need too many permanent employees to be there all year round. There is little difference between the rest of the attractions on this sub-indicator. Attractions with longer opening periods tend to employ more permanent staff.

All of the staff in MJ are permanent; the attraction does not employ seasonal staff although they also face the problem of seasonal tourism. Staff are needed to monitor and protect the mountain during the winter time, to ensure that the risk of forest fires is reduced. Similar to MJ, SPGWC also maintains a high percentage of permanent staff under the supervision of local government. This research found that the government-managed attractions in China tend to have stable staff numbers and lower turnover rates than those in the private sector. This may be because members of staff believe working for the government is traditionally more stable than the private sector, especially in small towns and cities. Furthermore, even in an economic crisis, government-owned attractions do not dismiss staff frequently;

government attractions can apply for economic grants from local government to overcome financial difficulties, rather than dismiss their staff.

Overall, the indicators of employment are appropriate and practical to measure the sustainability of built heritage attractions. However, some positions for local employees are low paid and unstable. So, whilst these sub-indicators can measure the benefits to the local employment and stable positions, they cannot be used as the sole indicators reflecting the total economic equality of employment. Therefore, it is suggested that a supplementary sub-indicator be added to future research: the sub-indicator of the Gini index of all attractions' employees and stakeholders.

Indicators of financial health

The funding for heritage conservation has been seen as the fundamental aspect of heritage development. The funding gained provides support for conservation (Mathieson and Wall, 2006). Financial health is an appropriate indicator for measuring financial development, in terms of the various sources used to ensure sufficient support and stable growth. The WTO (2005) suggested a financial indicator for destination areas in terms of the competitiveness of tourism businesses. Murphy (1994:37) suggests the scope of sustainable tourism should involve the "management of all resources in such a way that economic, social and aesthetic needs are met." The appropriate management of built heritage attractions would maximise benefits and minimise impact through competent management (Orbasli, 2000). It is efficient management to gather all the heritage resources together and re-use the building or other resources to make a built heritage attraction; thus, the attraction management plays a significant role in the sustainability of built heritage attraction development. In this research, the income of each of the built attractions is a key indication of sustainable development; a growth in the net profit of an attraction can provide support in terms of funding excellent facilities and professional staff. The overall scores for the human resource efficiency sub-indicator relate to attraction management in this study. The motivation to earn funds may strongly influence the net profit/income growth rate; it is also driven by the mode of operation and the management (Table 6.4).

Table 6. 4: Indicators of Financial Health

Sub-indicators	Profit/income of an attraction divided by the attraction's employee numbers				Profit/income growth rate			
Function	Measure the human resource efficiency of an attraction by calculating how much profit/income can be earned by each employee.				Measure the financial growth ability of attractions			
Key Influence Factors	Attraction management, income and profits, funding allocation system, motivation							
	Results	Sub-Indicator Scores	Average Weighting	Overall Scores	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	£56,794	4.0	4.2	16.8	0.8%	2.0	4.0	8.0
OCUA	£82	2.0	4.2	8.4	-18.9%	1.0	4.0	4.0
MJ	£679	2.0	3.9	7.8	More than 10%	5.0	3.3	16.5
SPGWC	£32,674	3.0	4.3	12.9	More than 10%	5.0	4.1	20.5
Average				11.5/25				12.3/25.0
Level				Medium				Medium
Feasibility	Overall practical and appropriate, but this sub-indicator needs an identical financial index for comparison; needs more accurate data on net profit, and should consider the economic conditions when comparing attractions in different countries.				The indicator of profit/income growth rate is appropriate and practical to use during all case studies. No alternative and supplementary indicators are suggested so far.			

The overall scores for the human resources efficiency sub-indicator do not link closely to the attraction's location and size. CH received the highest score and MJ received the lowest on this indicator because the management of CH has a tendency to be more efficient. Furthermore, CH belongs to the NT; the NT has integrated its resources nationwide, and it can provide many kinds of support to its sites. Meanwhile, the OCUA seems to be the least efficient; this may be because it has many competitors or it may lack efficient management. Although MJ and SPGWC use income rather than net profits as an indicator of financial health, their human resource management tends to be bureaucratic. Moreover, labour costs in China are not as high as in the UK, which leads to some Chinese attractions not paying very close attention to human costs. This research uses sterling as the measurable index rather than the Chinese RMB, and Chinese prices are lower than in the UK.

CH is a kind of reserved attraction, which has not been subject to full development by the NT, and the NT provides enough funding for this attraction's daily operations. In contrast, SPGWC is one of the main sources of income for the local government.

Therefore, the desire to earn more funds is stronger than for CH. Meanwhile, MJ is also funded by the local government, but a lack of capital resources has led to it needing to be more self-sufficient. Therefore, it has less desire to earn funds than SPGWC, but a stronger motivation than CH. The motivation to earn funds may strongly influence the net profit/income growth rate; it is also driven by the mode of management and ownership.

Although with some merit, this indicator still cannot fully reflect the situation in China and the UK in this study. Many financial figures are needed to express healthy development. Income can represent how much payment is received for goods or services, or from other sources, but a built heritage attraction can fall into a financial crisis even if it has a high income. Thus, net profit may be the best financial figure to use, which is the actual profit after working expenses not included in the calculation of gross profit have been paid. However, in practice, it is very hard to persuade attraction management teams to provide their financial figures in the first place; and different members of the team provide different financial figures. Future analysis and comparisons should use the same financial figures if possible.

The sub-indicator of profit/income of an attraction divided by the attraction's employee numbers is practical and appropriate overall. Given that it is inappropriate to use pounds sterling as the measurable index in both countries, the profit/income of an attraction divided by the attraction's employee numbers cannot access accurate net profit/income data in both countries. Furthermore, the data used for this indicator used net profit in the UK and total income in China due to the data that were provided on request. In future studies, this sub-indicator needs an identical financial index for comparison; and should consider the economic conditions when comparing attractions in different countries. Therefore, it is suggested that a supplementary sub-indicator be added to future research: the sub-indicator of profit of an attraction divided by the attraction's employee numbers, then divided again by the national average salary this year (use the local currency), so the assessment criteria would be set accordingly. The indicator of profit/income growth rate is appropriate and practical to use during all case studies and no alternative and supplementary indicators are suggested so far.

Indicators of visitors

Research on visitor numbers has become significant as they can bring a built heritage attraction alive and, from the perspective of marketing, visitors can be divided based on their demographic, geographic and psychographic characteristics (Swarbrooke, 2012; Bassey and Vivian, 2009; Timothy, 2011). The pursuit of knowledge and personal benefits drive visitors to built heritage attractions (Chen *et al.*, 1998). However, a larger number of visitors not only brings higher incomes to the attractions, but this also brings overcrowding and associated problems. For example, “erosion and damage of heritage surfaces, litter, traffic fumes, high cost of processes of preservation and conservation of the heritage attraction, loss of quality of products and services, and indifferent or even an antagonistic attitude of the locals towards tourism and tourists.” (Jansen-Verbeke, 1995: 26). Therefore, the concept of ‘tourism carrying capacity’ was proposed to address visitor management issues (WTO, 1981), and this capacity can be divided into three forms: environmental (or physical) carrying capacity; ecological carrying capacity and perceptual carrying capacity (Young, 1973; Hunter, 1995; Busby *et al.*, 1996).

In this research, conducted within conserved heritage buildings, attractions must set limits on tourist numbers in relation to their tourism carrying capacity. Attractions with large open spaces tend to have more carrying capacity than small sites, and appropriate management is also very helpful when directing traffic at peak times. The large attractions tend to have a stronger facility for visitor number management (Table 6.5).

Both OCUA and SPGWC have more open spaces than MJ and CH, so they received higher scores on the tourism carrying capacity sub-indicators. SPGWC receives very large numbers of visitors; there has been some difficulty when dealing with large numbers of visitors before, but appropriate management by visitor guides ensures a smooth flow of tourists through the historic aspects of the attractions. In contrast, MJ receives the least number of visitors but faces a tourist capacity problem, perhaps because it does not have sufficient parking spaces and infrastructure, and also due to the lack of management experience on how to control visitors. Experience and good management can deal with a tourism carrying capacity problem.

Table 6. 5: Indicators of Visitors

Sub-indicator s	The actual visitor numbers compared to the tourism carrying capacity of the attraction				Tourist numbers of an attraction divided by the attraction’s employee numbers			
Function	Measure the performance in terms of the tourism carrying capacity of the attraction				Measure the attractions’ visitor number management by estimating how many visitors can be managed by each employee, within the attraction management aspect.			
Key Influence Factors	Attraction site area, tourism carrying capacity, tourist numbers and attraction’s employee numbers							
	Results	Sub-Indicator Scores	Average Weighting	Overall Scores	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	Exceed 24.8%	3.0	3.9	11.7	4,159	3.0	4.0	12.0
OCUA	In the capacity	5.0	4.4	22.0	2,875	3.0	4.3	12.9
MJ	Exceed 0-10%	4.0	3.9	15.6	1,041	1.0	3.8	3.8
SPGWC	In the capacity	5.0	4.3	21.5	9,142	5.0	4.2	21.0
Average				17.7/25				12.4/25
Level				High				Medium
Feasibility	The indicator of visitors is appropriate and practical to use during all case studies; no alternative and supplementary indicators are suggested so far							

SPGWC received a high score on the sub-indicator of attraction visitor number management, firstly because this site receives a large number of visitors, and secondly, this site has an established process of dealing with a large number of visitors based on many years of experience. The MJ received the lowest scores on the sub-indicator of attraction visitor number management; MJ does not receive many visitors each year and has a limited number of employees for site management. MJ belongs to the local government and does not market itself very well and it is managed within a government style. Thus, like other attractions managed directly by government, it is, to some extent, bureaucratic. The WRT involves religious aspects, so some indicators may not be appropriate for use in this area. Taking into account the visitor numbers to WRT and the open space of OCQ would indicate that free entry would attract more visitors and use fewer human resources for attraction management.

Thus, the indicator of visitor numbers is appropriate and practical to use during all case studies and no alternative and supplementary indicators are suggested so far.

6.2.2.2 Environmental dimension

Indicators of environmental management

The negative impacts of heritage tourism may result in pollution, litter and footpath erosion, leading to damage and disturbance to wildlife habitats (Seabloom *et al*, 1989; Andereck, 1993; Gartner, 1996; Glasson *et al*, 1995; Solley, 1997; Mason 2009.) Mason (2009) argued that the revenue generated from tourism could maintain the attractions and create an interest in and willingness to protect the environment. At the level of built heritage attractions' environmental management, research into the environmental impacts of tourism has been based on the use of resources (Energy Information Administration, U.S. Department of Energy (EIA/DOE), 1998) and pollution and waste outputs (Seabloom *et al*, 1989). The main scope includes the overall environmental management system, sustainability policy, utilities consumption, waste management and recycling rates.

Environmental management systems are usually used for ensuring a built heritage attraction strategically maintains the environmental quality of the attraction, which can reflect a willingness to contribute to environmental protection. The environmental and sustainability policy regulates an attraction's environmental behaviours at management level. The English Tourism Council's (2005) Sustainable Tourism Indicators include the number of businesses signed up to environmental management schemes. The WTO (2005) suggests taking Sustainability and Environmental Management Policies and Practices of Tourism Businesses as sustainable indicators of a destination. China integrated assessing environmental management standards, enhancing the management level in environment into AAAAA standard attractions (Deng, 2007). Green Globe 21 takes the development of a sustainability policy as one of its indicators (Green Globe, 2015). The effectiveness of environment management is also very important because Orbasli (2000) suggested certain tourism operators and attractions are trying to look green and environmentally friendly tourism is promoted to meet customer demand.

Reducing utilities consumption and waste would not only benefit the attractions by lowering their running costs, it would also contribute to the environment. The indicators of reducing and considering utilities consumption, wastewater purification capacity and tourism urban waste generation were integrated into the Spanish System of Environmental Tourism Indicators (2005) for electric power consumption due to tourism; Green Globe 21 Indicators include energy consumption, total energy consumed/equivalent persons, solid waste reduction and total solid waste to land fill/ equivalent persons (Green Globe, 2015); The WTO (2005) includes energy management, sewage treatment, solid waste management and air pollution.

In this research, the environmental management system for a built heritage attraction should enable effective environmental protection. Attractions in both countries received low recognition of utilities consumption and high scores on recycling rates after a year's development (Table 6.6).

The sub-indicator of utilities consumption received the lowest scores of all sub-indicators; three of the four attractions weighted this indicator as 1.0/5.0, and SPGWC weighted this indicator as 2.0/5.0. It is difficult to ensure that heritage properties are energy efficient, although some sites use more green energy generators, for example, a number of attractions owned by the National Trust. This may be because not all attraction management teams have realized the importance of energy efficiency, and link this element to environmental management. More importantly, it costs more to invest in new facilities for energy efficiency and attractions are concerned with the return ratio of investment in energy efficient facilities. Little attention has been paid to this area among attractions and few potential links to sustainability have been considered by participants. However, the assessor believes that improvements in reducing water and energy consumption of these attractions would benefit sustainability.

The overall score for the waste recycling rate across all the attractions is at a high level. The attractions pay relatively close attention to waste recycling, as waste recycling is much cheaper than other actions to implement. OCUA and SPGWC have the highest scores.

Table 6. 6: Indicators of environmental management

Sub-indicators	Environmental management system				Water, electrical and gas consumption trends				Waste recycling rate			
Function	Measure the performance of the environmental management system in terms of quality, effectiveness and the standard of environmental management in the attraction				Measure the performance of utilities consumption efficiency by assessing increase and decrease rates				Measure the waste recycling rate			
Key Influence Factors	Attraction management, environmental scopes, recognition, practical, cost											
	Results	Sub-Indicator Scores	Average Weighting	Overall Scores	Results	Sub-Indicator Scores	Average Weighting	Overall Scores	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	3	3.0	3.97	11.7	Increased consumption	1.0	4.4	4.4	41%-60%	4.0	4.6	18.4
OCUA	4	4.0	3.5	14.0	Increased consumption	1.0	3.7	3.7	More than 60%	5.0	4.2	21.0
MJ	2	2.0	4.5	9.0	Increased consumption	1.0	3.0	3.0	41%-60%	4.0	4.0	16.0
SPGWC	3	3.0	4.6	13.8	No change	2.0	3.2	6.4	41%-60%	4.0	4.2	16.8
Average				12.1/25				4.4/25				18.1/25
Level				Medium				Very Low				High
Feasibility	Overall appropriate and practical, but a more detailed criterion needs to be developed. The improved sub-indicator criterion should review the standard of attractions' environmental management plan and documents, the practicality of environmental management structures, and the quality of internal and external programmes' implementation efficiency.				Overall, this indicator is appropriate and practical to measure the sustainability of built heritage attractions. However, more accurate data will be required in future research.							

Both the sub-indicators of water, electrical and gas consumption trends, and waste recycling rates are appropriate and practical to be used for measuring the sustainability of built heritage attractions and data collection during all case studies. However, more accurate data will be required in future research.

Overall, the indicator of environmental management is appropriate and practical to be used for measuring the sustainability of built heritage attractions and data collection during all case studies, but a more detailed criterion needs to be developed. The improved sub-indicator criterion should review the standard of the attractions' environmental management plan and documents, the practicality of environmental management structures, and the quality of internal and external programmes' implementation efficiency.

Indicators of historic buildings conservation and preservation

Millar (1989) suggested that heritage attractions are irreplaceable resources for tourism, thus conservation is a significant component of their management. However, the value of rural heritage conservation is growing, for the authenticity of rural heritage is reducing caused by speedy urbanization (Timothy, 2011). Thus, conservation should ensure heritage authenticity in terms of avoiding 'fake' culture (Orbasli, 2000). The system for built heritage conservation includes legislation, designation, funding and other attraction management approaches. Orbasli (2000) highlights that securing a future for historical building conservation is highly dependent on funds. Tourism may contribute to income for built heritage conservation. The heritage conservation systems in the UK and China have certain similarities and differences. Overall, both countries have legislation and authorities to conserve built heritage; the approach to financial allocation and conservation management are different, the details of this were introduced in chapter four and shall be further analysed in the next section.

In this research, the heritage funds allocation system provides essential financial support for the conservation, preservation and restoration of built heritage attractions. Built heritage attractions' conservation funds come mainly from government and tourist income (Table 6.7).

Table 6. 7: Indicators of historic buildings conservation and preservation

Sub-indicators	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of the attraction				Attraction conservation management			
Function	Measure the investment in the conservation, preservation and restoration of attractions				Measure the performance of tourism conservation management in terms of heritage conservation, technologies, methods and management structures; the standards of the technologies, conservation quality and implementation			
Key Influence Factors	Heritage funds allocation system, conservation management system							
	Results	Sub-Indicator Scores	Average Weighting	Overall Scores	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	About 30% of total expenditure	5.0	4.3	21.5	CPI score for is 81.3%	5.0	4.4	22.0
OCUA	82.1%	No data	4.6	No data	Medium-high level	4.0	4.8	19.2
MJ	More than 25% of total expenditure	5.0	4.5	22.5	Medium-low level	2.0	4.6	9.2
SPGWC	71%	No data	4.3	No data	Medium-high level	4.0	4.2	16.8
Average				22.0/25				16.8/25
Level				Very High				High
Feasibility	It would be difficult to apply this to data collection, and it may not fully reflect the situation of attractions’ heritage fund allocation system. A supplementary indicator is suggested to measure whether each site has sufficient funding on heritage conservation. Future research may also need to collect more accurate data.				Overall appropriate and practical, but future research may need to develop a more detailed criterion on the standard of attractions’ conservation management plan and documents, the practicality of conservation management methods, and conservation implementation efficiency.			

Both CH and MJ have a high percentage of investment in conservation, which shows the importance of heritage conservation, preservation and restoration is recognized by attractions in both countries. All attractions place a strong emphasis on conservation management, but their actions in terms of conservation management are varied. For example, CH received the highest scores on conservation management. The NT has established a relatively high standard conservation management system among attractions; the CPI measures the assets for conservation and sets a target for improvement within the NT. The scope includes the house interior, the spirit of place, collections, bats, ancillary buildings, house structures,

gardens, setting and archaeology. OCUA has also involved different stakeholders in conservation management and operation. The Oxford Castle Conservation Plan (1999) designed the guidance and requirements for historic restoration and conservation, materials, the assessment of significance, the retention of architectural features and gazetteer. Although the draft development plans include a small section on conserving built heritage buildings, MJ could not provide any detailed conservation plans and actions. In 2004, the district government of Shanhai Pass started a heritage regeneration development project to conserve all important heritage buildings in the District of Shanhai Pass; the project aims to take about 16 years and £1.26 billion has been invested in it (Zhang *et al.*, 2009). The heritage conservation plan mainly concerns development and has limited information for the public.

CH and MJ provided data for the sub-indicator of conservation investment percentage. The other attractions did not provide this data due to their complex financial management systems. It would be difficult to calculate heritage conservation percentage in some cases. Given that this research is only based on more limited evidence, it may not fully reflect the attractions' heritage fund allocation system. A supplementary indicator of sufficient funding is suggested to measure whether this site has sufficient funding for heritage conservation. Future research may also need to collect more accurate data.

Overall, the conservation management system sub-indicator is appropriate and practical to be used for measuring the sustainability of built heritage attractions based on data collection conducted during all case studies. Future research may need to develop a more detailed criterion on the standard of attractions' conservation management plan and documents, the practicality of conservation management methods and conservation implementation efficiency.

6.2.2.3 Social dimension

Indicator of key stakeholders' involvement

The socio-cultural impacts of heritage have been identified since the 1960s. Tunbridge and Ashworth (1996) claimed that built heritage could be used as a cultural resource. Timothy and Boyd (2003) argued that heritage is kept for its social

value, which is selected by human beings based on its current values and meanings. Indre *et al.* (2011) debated that built heritage is not only real estate buildings, but also has unique cultural value. It is preserved and inherited from prior generations for its unique cultural value (McDonald *et al.*, 2009). English Heritage (2008) categorized the communal value of heritage as the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory. Furthermore, Lowenthal (1996) stated that heritage as knowledge interpretation of history or heritage in particular confers social benefits as well as costs.

In this research, concession tickets would benefit certain visitors by reducing visiting costs, but other participants do not link this indicator very close to sustainability. The annual concession percentage is a marketing policy. The attraction's abilities and willingness to contribute to locals would be influenced by local stakeholders' involvement (Table 6.8).

Although not all attractions believe that annual concessions for residents would benefit the local area and society very much, this indicator can be taken as part of demonstrating a social contribution. The OCQ and WRT are free to enter; they tend to offer facilities to locals more in this area.

The ability to influence and benefit locals is a significant function of built heritage attractions. OCUA and SPGWC received the highest scores for local stakeholders' involvement. CH provides limited local jobs, but it boosts the local tourism economy by attracting more visitors to the local area and it has improved the value of local houses. It has established a close relationship with the local church that receives income by providing refreshments for visitors and they plan to host more events for educational purposes and students in the future. The regeneration of OCUA and OCQ involves TOG; English Heritage was also concerned about the changes to the redevelopment of the site. Oxfordshire County Council involved different parties, especially the OPT, residents and concerned parties. It is estimated that the project attracted about 600 jobs, 11 businesses and an education centre to deliver learning opportunities. MJ benefits residents by selling more agricultural products and by constructing more infrastructure in the local area. However, the MJ is a historic site but it has not been well developed so far, it provides limited employment but

receives little income. SPGWC is an important site for the District of Shanhai Pass, as 280 employees work there directly, and there are many people and businesses involved in the tourism industry. The SPGWC also holds events and activities locally which attract many visitors.

Table 6. 8: Indicator of key stakeholders' involvement

Table 6.6: Indicator of Key Stakeholders' Involvement								
Sub-indicators	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors				Local Stakeholders' Involvement			
Function	Measure the performance of the attraction's annual concessions and their social contribution				Measure involvement with local stakeholders in terms of attitudes across all parties; locals involved when development decisions made; and the attraction contributes to the local area			
Key Influence Factors	Social impacts, marketing policy							
	Results	Sub-Indicator Scores	Average Weighting	Overall Scores	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	1%	2.0	3.5	7.0	Trying to benefit to the local area, but limited	3.0	3.7	11.1
OCUA	More than 6%	5.0	4.1	20.5	Benefit to the local area	5.0	4.1	20.5
MJ	More than 6%	4.0	4.4	17.6	Benefit to the local area	5.0	3.3	16.5
SPGWC	More than 6%	5.0	3.7	18.5	Benefit to the local area significantly	5.0	3.7	18.5
Average				15.9/25				16.7/25
Level				High				High
Feasibility	It is suggested that this be deleted				Overall appropriate and practical, but future research may need more information and the range of local stakeholders' involvement should be noted, and the efficiency of stakeholders' involvement should be taken into consideration.			

The effectiveness of the sub-indicator of the percentage of annual concessions may need rethinking since a higher percentage of concession rates may not always represent a higher social contribution; it may also be part of the marketing policy. It is suggested that this sub-indicator be deleted from future research.

The indicator of local stakeholders' involvement is appropriate and practical to be used for measuring the sustainability of built heritage attractions and data collection in all case studies. No alternative and supplementary sub-indicators are suggested so far, but future research may need more information on the range of local stakeholders' involvement and the efficiency of stakeholders' involvement should be taken into consideration.

Indicator of key stakeholders' attitudes

ICOMOS (1987) emphasises that residents come first in the conservation of historic towns and urban areas. It cannot be sustained without community participation. Sirisrisak (2009) argued stakeholders' participation in cultural heritage management helps to resolve development conflicts. Stakeholders' attitudes could be a factor in measuring the social contribution of built heritage. Built heritage plays a significant role in enhancing the image of the area and local neighbourhoods and contributing to the quality of life for residents and communities. The Community Oriented Approach on tourism has raised concerns about fostering community control and understanding community attitudes towards tourism (Getz, 1987; Hall, 2008).

In this research, there were few differences in the sub-indicators of third parties' attitudes and visitors' attitudes scores across the four attractions. This may be because all participants have similar feelings on the sustainability of built heritage attractions. The factors of reputation, influence and attraction management affect the opinions of third parties, and the quality and infrastructure of services may sharpen the visitors' feelings (Table 6.9).

Table 6. 9: Indicators of stakeholders' attitudes

Sub-indicators	Attitudes towards the attractions among third parties (local community, volunteers, and planning authorities)				Attitudes towards the attractions among visitors			
Function	To measure attitudes towards the attractions among third parties				To measure attitudes towards the attractions among visitors			
Key Influence Factors	Stakeholders and the community							
	Results	Sub-Indicator Scores	Average Weighting	Overall Scores	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	8.8/10	4.4	3.7	16.3	7.7/10	3.9	3.7	14.4
OCUA	7.0/10	3.5	4.6	16.1	8.7/10	4.4	4.7	20.7
MJ	8.5/10	4.3	4.0	17.2	7.9/10	4.0	4.6	18.4
SPGWC	7.7/10	3.9	4.5	17.6	7.7/10	3.9	4.7	18.3
Average				16.8/25				18.0/25
Level				High				High
Feasibility	Overall appropriate and practical, but it is suggested that future research should collect a larger sample from each case study							

The third parties in this study include the attractions' planners, government officers and local academics from around the attraction area. Third parties recognised that the development of the MJ benefits the local community and the whole area because attractions with more visitors and business units lead to economic growth and provide more employment. The existing research indicates that tourism would benefit the local area, but newly developed attractions may make more significant changes to the local area than existing attractions. Thus, this influences attitudes towards attractions from the third parties and maintains these at a high level. At each case study attraction, 50 questionnaires were completed with tourists who had previously visited the attraction. It is necessary to explain that the data collected for this indicator were collected using a questionnaire, and the researcher completed the questionnaire on behalf of some visitors when they refused to fill it in in person. It was felt that this would not harm the accuracy of the responses and this is explained more in the section on limitations.

Overall, the indicator of stakeholders' attitudes is appropriate and practical to be used for measuring the sustainability of built heritage attractions and data collection conducted during all case studies. However, it is suggested that future research should collect a larger sample from each case study (e.g. 100 copies of questionnaires for each site), and require participants to provide more open comments on the sustainability of the surveyed attractions.

6.2.2.4 Governance dimension

Indicator of planning

Planning in this research considered various types of plans, local land use and planning permission, the tourism development plan, and the sustainable tourism plan. The two countries have different planning systems and different legislation which have been incorporated into a conceptual framework. Orbasli (2000:123) presented outline “objectives for tourism planning in historical towns that is to ensure long-term benefits and sustainability of tourism activities, while encouraging continuity in the urban environment.” Tourism planning approaches fall into four waves of development: Boosterism, the economic industry-oriented approach, the physical (or spatial) approach and the community-oriented approach (Hall, 2008). To achieve sustainable tourism, The English Tourism Council (2002) provided a set of indicators under three objectives: to protect and enhance the built and natural environment; to support local communities and their culture; and to benefit the economies of tourism destinations.

In this research, approvals related to planning tend to be the role of planning authorities in most cases, but the attraction may also be a major participant in this matter. Attractions may actively apply to and implement the planning policy. The baseline for planning is that it does not break any regulations and laws; only MJ has broken local planning regulations by reconstructing the WRT without legal planning permission. Other external factors may also influence the planning development, such as the local planning system, local government and communities (Table 6.10).

Almost all attractions’ plans have been constrained by the local development framework and several local planning policies strongly influence the development of plans. Thus, it would be difficult to assess planning effectiveness and efficiency, and transparency and accountability by a simple score. All plans will have a certain influence on local development and the impact may be both positive and negative based on the different views gathered in this research. However, an excellent plan must involve different stakeholders on various aspects, to balance the benefits for the majority of participants. OCUA received the highest scores on planning indicators because of the strong positive feedback from the majority of stakeholders; their plans

significantly changed and improved the heritage site, and provided major benefits to locals. Thus, local people can feel the difference and appreciate the changes. The SPGWC and MJ received relatively low scores in this area as they made less contribution to planning and have less transparency in planning. The SPGWC and MJ had less involvement with the local community when designing plans. This is particularly true for MJ, as it did not receive any formal land use or planning permission before rebuilding the temple.

Table 6. 10: Indicator of planning

Function	Measure planning performance in terms of regulatory compliance, planning transparency, accountability and effectiveness			
Key Influence Factors	Local planning system, external influence factors such as local government and communities.			
Sub-indicators	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	Regulatory compliant, aims to consider stakeholders' opinions to ensure planning transparency, accountability and effectiveness, but may not do enough in terms of communication.	4.0	4.4	17.6
OCUA	Regulatory compliant, provided excellent planning documents; the standard of the planning practice is transparent and accountable; implements planning practices somewhat efficiently	5.0	4.6	23.0
MJ	Problems in terms of regulatory compliance, lack of basic planning transparency and accountability, the plans are implemented effectively.	1.0	4.4	4.4
SPGWC	Although all plans comply with regulations, the attraction has not implemented plans effectively. Furthermore, the plans need more transparency and to be open to comments	3.0	4.5	13.5
Average				14.6/25
Level				Medium
Feasibility	Overall appropriate and practical, but future research should examine the detail on regulatory compliance and planning application records, and collect the views of stakeholders who have participated in planning applications before.			

Overall, the indicator of planning is appropriate and practical to be used for measuring the sustainability of built heritage attractions and data collection conducted during all case studies; no alternative and supplementary indicators are suggested so far. However, this research suggests the need to develop a more detailed criterion in the future. For example, to examine the detail on regulatory

compliance and planning application records and to collect the views of stakeholders who have previously participated in planning applications.

Indicator of trouble-shooting ability

There are many types of issues for built heritage attraction managers to handle; the key is how to deal with development and conservation as well as promoting effective participation from stakeholders. The negative environmental impact of tourism development can be minimized as it addresses, for example, physical and social carrying capacity (Mathieson and Wall, 2006), environmental thresholds (Hill and Rosier, 1989), and limits to or acceptable/desirable rates of change (McCool, 1994; Wight, 1998). Overall, Priskin (2001) suggested that tourism planning should be based on regional natural resources and capacity. Environmental impact and social impact assessments and statements are required under planning legislation when building large infrastructure projects and tourism resorts (Warnken and Buckley, 2000). Yung and Chan (2010) identify the various and conflicting interests of stakeholders which lead to issues of public participation, including the lack of effective public participation mechanisms, lack of knowledge of heritage conservation or an integrated heritage conservation approach to decision-making; propaganda and mobilisation of interest groups; and power disparity.

In this research, all the attractions are facing different issues; issues are raised and are on-going. The ability to deal with issues is important for the development of built heritage attractions. The key issue for most built heritage attractions is how to balance the relationship between development and heritage conservation. Involving a wide range of stakeholders and locals would facilitate the development of built heritage attractions. The external environment and the abilities of the management of the attraction influence issues and how to address the issues of built heritage attractions. The large attractions tend to have a stronger ability to troubleshoot (Figure 6.11).

Table 6. 11: Indicator of trouble-shooting ability

Function	To measure the management's ability in terms of attraction response, address issues and achieve results.			
Key Influence Factors	Deal with development and conservation, as well as effective stakeholder participation			
	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	Local residents claim the Sunday opening time will affect the peace of the local area, and they were not consulted before this decision was made. The attraction aims to settle the argument by informing and consulting communities.	3.0	4.4	13.2
OCUA	The attraction responds to issues relatively quickly, addresses issues and practices, and the results are accepted by most of the stakeholders. This process would perhaps work better if stakeholders were involved at an earlier stage.	4.0	4.1	16.4
MJ	There were many problems involved in the MJ development, including difficulty in potential land acquisition and demolition of settlements; not settling the development funds and plan; some farmers occupied the lands illegally. The management did not have formal land use rights and planning permission documentation before rebuilding the WRT; they have been in dispute with stakeholders and there has been overcrowding during activities. MJ and WRT wish to address the problems but have not yet done so effectively.	3.0	4.1	12.3
SPGWC	Overall, the survey site responds to issues relatively quickly, tries to address the issues practically, and the results are accepted by most of the stakeholders.	4.0	4.3	17.2
Average				14.8/25
Level				Medium
Feasibility	Overall appropriate and practical, but future research suggests developing a more detailed criterion. For example, to explore the details of the difficulties experienced by built heritage attractions, and examine the efficiency and practicality of the response from different stakeholder perspectives.			

There are always issues raised when environmental changes are made, especially related to the new development of built heritage attractions. The major issue for most built heritage developments is the relationship between development and preservation. On the one hand, people need to use the built heritage to develop the economy and social contribution; on the other hand, the development may suffer crises of change or damage the heritage structures. Therefore, an ability to deal with this balance should be significant in formulating the next stage of the heritage development plans for all attractions. Since the attractions may have different issues and different levels of ability to address them, the issues will be influenced by many factors. The leadership of the attraction management of the built heritage attraction

may need to identify the issues and decide how to respond, as well as ensuring the effectiveness of the results. The SPGWC received the highest score, followed by the OCUA. Such powerful voices may also come from the long established traditions and social contribution made by the attractions.

Overall the indicator is appropriate and practical, but future research suggests developing a more detailed criterion; for example, to explore the details of the difficulties experienced by built heritage attractions, and examine the efficiency and practicality of the responses from different stakeholder perspectives.

Indicators of attraction management

Millar (1989) argued that heritage management is an essential ingredient for successful heritage tourism. Garrod and Fyall (1989) investigated the major constraints and imperatives related to the management of built heritage attractions: the fundamental mission; the factors impacting decisions regarding entry fees; and the role of heritage managers in tourism management and heritage conservation programmes.

In this research, attraction management is a key factor in the sustainability of built heritage attractions. The management designs the vision, carries out the financial forecasting, manages the human resources and tries to ensure staff and visitors' satisfaction. Great management not only smooths the internal operation of the attraction, it also has a profound impact on the surrounding environment. Attraction management is also associated with ownership; charity-owned and government-owned attractions may establish a comprehensive management structure but these attractions also face the challenge of bureaucracy. A charity-owned site which involves stakeholders would be a good option for heritage management. The large attractions have a tendency to establish a more comprehensive management system and recruit more professionals to work there. Attractions in the UK tend to have a more comprehensive management system than those in China (Table 6.12).

Table 6. 12: Indicator of attraction management

Function	Measure the performance of the management of the attraction in terms of development vision, financial forecasting, human resources and staff satisfaction			
Key Influence Factors	Attraction management and ownership			
	Results	Sub-Indicator Scores	Average Weighting	Overall Scores
CH	This attraction has a clear vision for development; it has practical financial forecasting, it uses the staff and working resources relatively efficiently most of the time, and the majority of the staff is satisfied with the attraction management. However, there are some problems with bureaucracy.	3.0	4.4	13.2
OCUA	The attraction has a clear vision for development, it has practical financial forecasting, and the majority of the staff are satisfied with the attraction management, but it is difficult to identify these staff and the efficiency of working resources externally.	4.0	4.7	18.8
MJ	MJ does not have a clear vision for development and practical financial forecasting. They use the staff and working resources inefficiently. Different parts of the site belongs to different organizations leading to unbalanced development.	2.0	4.3	8.6
SPGWC	SPGWC has a clear vision for development, practical financial forecasting, uses staff and working resources relatively efficiently most of the time, and the majority of the staff are satisfied with the attraction management	4.0	4.5	18.0
Average				14.7/25
Level				Medium
Feasibility	Overall, it is appropriate and practical, but it is suggested that future research should develop a more detailed criterion. For example, to explore the details of built heritage attraction management systems, the efficiency of policy implementation and staff satisfaction from different stakeholders' perspectives.			

Attraction management has a strong influence on the outcome of all types of attractions. Given the varying situation of the different attractions, it would be difficult to assess attraction management using a simple score. SPGWC received a high score for attraction management, maybe because it has many management systems and believes in the significance of management. However, there are also problems in relation to the management, such as over bureaucracy. MJ received a relatively low score; this may be because it has fewer employees with a relatively incomplete management system due to the lack of employees. So the findings do not fully suggest that this attraction is poorly managed. Considering the fact that attractions in the UK have more experience, a longer history of developing heritage tourism, and a relatively fair business environment, they tend to have a more comprehensive management system than those in China.

Overall, this indicator is appropriate and practical, but it is suggested that future research should develop a more detailed criterion. For example, to explore the details of built heritage attraction management systems, the efficiency of policy implementation and staff satisfaction from different stakeholders' perspectives.

6.2.3 Comparison and analysis of the different dimensions

Four dimensions have been used to assess the sustainability of this research. On the basis of the limited set of indicators used in this research, many interviewees have a tendency to link sustainability quite closely to environmental dimensions. However, the social dimension is the most significant factor to most heritage attractions. Three out of four attractions received their highest scores on the social dimension; only CH received the highest scores on the environment dimension. It may be that the results show that the attractions need to deal with locals to develop their operations. Their actions have to benefit locals; the larger attractions have a stronger influence on the local area. The attitudes of third parties and visitors are influenced by management, service quality and infrastructure. The attractions can improve these even with limited resources.

The environmental dimension received the average lowest scores across the four dimensions; this may be because the sub-indicators of utilities consumption received the lowest scores of all sub-indicators. The importance of utilities consumption has not been recognized by a large proportion of the public so far. Furthermore, there may also be difficulties implementing a comprehensive environmental and utilities efficiency system if there is a lack of professionals and funds.

OCUA does better on the social and government dimensions than other attractions perhaps because it involves a wider range of stakeholders, while MJ received the lowest scores on the environmental and governance dimensions because of their limited management ability. SPGWC received the highest scores on the economic dimension since it attracts significant numbers of visitors and is stronger financially. CH has done an excellent job in relation to environmental management under the

supervision of the NT so it has received the highest scores on the environmental dimension.

Table 6. 13: Summary for Indicators Appraisal in Four Case Studies

Dim ensi on	Indic ators	Sub- Indicators	Chastleton House						Oxford Castle						Jieshi						Shanghai Pass					
			Sub-Indic ator Score s	Weighting				Ove all Scor es	Sub-Indic ator Score s	Weighting				Ove all Scor es	Sub-Indic ator Score s	Weighting				Ove all Scor es	Sub-Indic ator Score s	Weighting				Ove all Scor es
				Mana ger's Weigh ting	Touris ts' Weigh ting	Third Party' s Weigh ting	Avera ge Weigh ting			Mana ger's Weigh ting	Touris ts' Weigh ting	Third Party' s Weigh ting	Avera ge Weigh ting			Mana ger's Weigh ting	Touris ts' Weigh ting	Third Party' s Weigh ting	Avera ge Weigh ting			Mana ger's Weigh ting	Touris ts' Weigh ting	Third Party' s Weigh ting	Avera ge Weigh ting	
Eco nom ic Dim ensi on	Indic ators of empl oyme nt	Percentage of built heritage tourist industry positions which provide permanent employment for the full year	3.0	4.0	4.1	3.0	3.7	11.1	5.0	4.0	3.6	3.5	3.7	18.5	5.0	4.0	4.1	4.0	4.0	20.0	4.0	4.8	4.3	3.7	4.3	17.2
		Percentage of staff who come from the local city	5.0	4.0	4.2	3.5	3.9	19.5	4.0	2.5	3.5	3.5	3.2	12.8	5.0	4.5	4.1	4.0	4.2	21.0	4.0	4.0	4.3	4	4.2	16.8
	Indic ator of Finan cial Healt h	Total net profit/income of an attraction divided by attraction employee numbers	4.0	5.0	4.1	3.5	4.2	16.8	No data	4.5	4.2	4.0	4.2	No data	2.0	2.5	4.2	5.0	3.9	7.8	3.0	4.6	4.2	4	4.3	12.9
		Net profit/income growth rate	2.0	4.0	3.9	4.0	4.0	8	No data	5.0	4.1	3.0	4.0	No data	5.0	3.0	3.9	3.0	3.3	16.5	5.0	4.4	4.0	4	4.1	20.5
	Indic ators of Visito rs	The actual visitor numbers compare to the designed tourism carrying capacity of the attraction	3.0	4.3	4.1	3.5	3.9	11.7	5.0	4.5	4.1	4.5	4.4	22.0	4.0	3.0	4.0	4.5	3.9	15.6	5.0	4.4	4.1	4.3	4.3	21.5
		Tourist numbers of an attraction divided by attraction employee numbers	3.0	4.0	3.9	4.3	4.0	12	3.0	4.5	4.4	4.0	4.3	12.9	1.0	3.5	4.0	4.0	3.8	3.8	5.0	4.4	4.1	4	4.2	21
Env iron men tal Dim ensi on	Indic ator of Envir onme ntal Mana gemen t	Environmental management system	3.0	4.0	3.6	4.2	3.9	11.7	4.0	3.0	3.6	4.0	3.5	14.0	2.0	5.0	4.5	4.0	4.5	9.0	3.0	4.6	4.5	4.7	4.6	13.8
		Water, electrical and gas consumption trends	1.0	5.0	3.9	4.3	4.4	4.4	1.0	3.5	3.6	4.0	3.7	3.7	1.0	2.0	3.7	3.5	3.0	3.0	2.0	3.0	3.7	3	3.2	6.4
		Waste recycle rate	4.0	5.0	4.0	4.7	4.6	18.4	5.0	4.0	4.0	4.5	4.2	21.0	4.0	3.0	4.7	4.5	4.0	16.0	4.0	3.8	4.4	4.3	4.2	16.8
	Indic ators of Histo ric Build	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the	5.0	4.0	3.8	5.0	4.3	21.5	No data	5.0	4.2	4.5	4.6	No data	5.0	4.7	4.4	4.5	4.5	22.5	No data	4.0	4.3	4.7	4.3	No data

Table Continued

	ings Cons ervati on and Prese rvatio n	total expenditure of attraction																									
		Attraction conservation management	5.0	5.0	4.0	4.3	4.4	22	4.0	5.0	4.5	5.0	4.8	19.2	2.0	5.0	4.4	4.5	4.6	9.2	4.0	4.0	4.3	4.3	4.2	16.8	
Soci al Dim ensi on	Indic ator of Key Stake holde rs Invol veme nt	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	3.0	3.3	3.8	4.0	3.7	11.1	5.0	4.5	3.8	4.5	4.1	20.5	5.0	3.0	3.8	3.0	3.3	16.5	5.0	3.4	3.7	4	3.7	18.5	
		Local Stakeholders Involvement	2.0	3.0	3.8	3.8	3.5	7	5.0	4.0	3.7	4.5	4.1	20.5	4.0	5.0	4.2	4.0	4.4	17.6	5.0	3.8	4.0	3.3	3.7	18.5	
	Indic ator of Key Stake holde rs' Attitu des	The attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	4.0	3.3	3.8	4.0	3.7	14.8	No data	4.5	4.2	5.0	4.6	No data	5.0	4.0	4.2	4.0	3.3	20.0	4.0	4.8	4.3	4.3	4.5	18	
		The attitudes towards attractions from the visitors	4.0	3.3	3.8	4.0	3.7	14.8	4.0	5.0	4.1	5.0	4.7	18.8	4.0	4.5	4.7	4.5	4.6	18.4	4.0	4.8	4.6	4.7	4.7	18.8	
Gov erna nce Dim ensi on	Indic ator of Plann ing	Planning performance	4.0	5.0	3.9	4.3	4.4	17.6	5.0	4.5	4.2	5.0	4.6	23.0	1.0	4.7	4.5	4.0	4.4	4.4	3.0	4.3	4.4	5	4.5	13.5	
	Indic ator of Troub le- Shoot ing Abilit y	The ability to balance the relationship between development and preservation	3.0	5.0	3.9	4.3	4.4	13.2	4.0	4.0	3.9	4.5	4.1	16.4	3.0	3.3	4.5	4.5	4.1	12.3	4.0	4.4	4.4	4	4.3	17.2	
	Attrac tion mana geme nt	Attraction management	3.0	5.0	3.9	4.3	4.4	13.2	4.0	4.5	4.7	5.0	4.7	18.8	2.0	4.3	4.4	4.0	4.3	8.6	4.0	4.6	4.5	4.3	4.5	18	

6.2.4 Stakeholder perspectives on the sub-indicators when comparing the four cases

This part of the research compares the four case studies in terms of average indicators, weighting and scores (Table 6.13). The factors involved in the assessment include the sub-indicator scores, managers' weighting, tourists' weighting, third party's weighting, average weighting and overall scores (Table 6.14).

Table 6. 14: Average sub-indicators in four cases

Sub-indicators			Value
Sub-indicator scores	Highest	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	5.0
	Lowest	Water, electrical and gas consumption trends	1.3
Managers' Weighting	Highest	Attraction conservation management	4.8
	Lowest	Water, electrical and gas consumption trends	3.4
Tourists' Weighting	Highest	Attraction management	4.4
	Lowest	Water, electrical and gas consumption trends	3.7
Third Parties' Weighting	Highest	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of the attraction	4.7
	Lowest	Net profit/income growth	3.5
Average Weighting	Highest	Planning performance; Attraction conservation management	4.5
	Lowest	Water, electrical and gas consumption trends	3.6
Overall scores	Highest	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of the attraction	21.5
	Lowest	Water, electrical and gas consumption trends	4.4

In terms of sub-indicator scores, although only two attractions provided data for percentage expenditure on conservation, this indicator is very important to built heritage attractions. Funding for heritage protection will influence the quality and development of built heritage; having sufficient funds will usually benefit heritage conservation. Few individuals pay sufficient attention to consumption trends. Low scores for indicators may indicate there is still room for improvement. Furthermore, the sub indicators of local employment percentage rate, waste recycling rates and annual concession rates also received high scores maybe because these indices are easy for attractions to achieve.

In terms of managers' weightings, from a management perspective, conservation is a significant factor in built heritage attractions and it benefits the long term sustainable development of attractions. Similar to the above, consumption trends were given less weighting perhaps because of inefficiency concerns among management teams.

In terms of tourists' weightings, they express their satisfaction via their judgment of the attraction's management. They weigh up attraction management as the most important factor as this indicator may be the easiest to understand for certain visitors. Similar to the above, consumption trends received the lowest weighting.

In terms of third parties' weighting, they weighted the percentage of annual expenditure on conservation as the most significant, which may indicate their concerns and interest in conservation funds. Third parties show less concern about the net profit growth rate perhaps because they receive less direct benefit from the attractions' financial profits.

In terms of the average weightings, conservation and planning recorded the most significant weighting, on average, from all stakeholders. Similar to the above, consumption trends received the lowest weighting.

In terms of overall scores, the indicator of the percentage of annual expenditure on conservation received the highest score (22.0). The waste recycling rate received the second highest score (19.1); It should be pointed out that, although the percentage of annual expenditure received the highest score, only two attractions provided data for this indicator. The waste recycling rate has attracted a certain amount of attention from all attractions and stakeholders. This rate is measurable and uses a traditional index for measuring environmental management over many years and it is easy for attractions to achieve.

Water, electrical and gas consumption trends received the lowest score (4.4). Utilities consumption trends have attracted the least concern from the majority of stakeholders, maybe because few participants understand the meaning or recognize the function of reducing energy consumption. Water, electrical and gas consumption trends are commonly the least significant options for stakeholders.

Table 6. 15: Key influencing factors for sustainability

	Indicators	Internal Factors
Economic dimension	Indicators of employment	Seasonality, management, local employment, type of employment
	Indicator of Financial Health	Attraction management, income and profits, funding allocation system, motivation
	Indicators of Visitors	Attraction site area, tourism carrying capacity, tourist numbers and attraction's employee numbers
Environmental dimension	Indicators of environmental management	Attraction management, environmental scopes, recognition, practical, cost
	Indicators of historic buildings conservation and preservation	Heritage funds allocation system, conservation management system
Social dimension	Indicators of key stakeholders' involvement	Social impacts, marketing policy
	Indicators of stakeholders' attitudes	stakeholders and community
Governance dimension	Indicators of planning	Local planning system, external influence factors such as local governments and communities.
	Indicator of Trouble-Shooting Ability	Deal with development and conservation, as well as effective stakeholder participation
	Indicators of attraction management	Attraction management and ownership

6.2.5 Key influencing factors

This research identified factors which may influence the performance of sub-indicators, and which lead to improved sustainability performance (Table 6.15). More internal factors than external factors have been identified which may suggest the improvement of sustainability would be much more effective if built heritage attractions were to improve their internal management, especially given that it would be difficult, in practice, for built heritage attractions to change the external environment. However, adapting the external environment combined with having the best attraction management would maximise the advantages of an attraction. Among all the factors, the attraction management has been referred to most frequently, followed by attraction site area and attraction motivation. Effective management

enables the built heritage attraction to improve sustainability in detail, in terms of establishing more detailed and practical guidance and management systems, and also ensuring the efficiency of its implementation. Although attractions with a large site area may not always have better sustainability across all dimensions, the larger attractions show more ability and potential to influence the surrounding environment and communities. Attraction motivation illustrates the attraction's willingness to make positive changes, although they may face some difficulty. These factors are very important for the development of sustainability for built heritage attractions.

6.2.6 Feasibility summary of overall methodology

The overall methodology for the sustainability appraisal of built heritage attractions comprises six steps (Figure 6.2). Overall it is appropriate and practical, but future research may need more information, the range of local stakeholders' involvement should be noted and the efficiency of stakeholders' involvement should be taken into consideration. When considering the cost and benefit analysis, the main cost of conducting this research has been time and professional analysis. If this assessment approach were to survey more built heritage attractions, the results would lead to more appropriate management and conservation. The details of the original contribution of this research will be noted in Chapter 7. Some limitations in each step still need to be discussed.

However, this research is based on a limited set of studies; attractions' performance may not be easy to assess using a scoring system, especially considering the context of the various attractions' types and backgrounds. Therefore, the assigned scores for the indicators will be used for reference only, as they may not be able to fully show the sustainability performance of built heritage attractions.

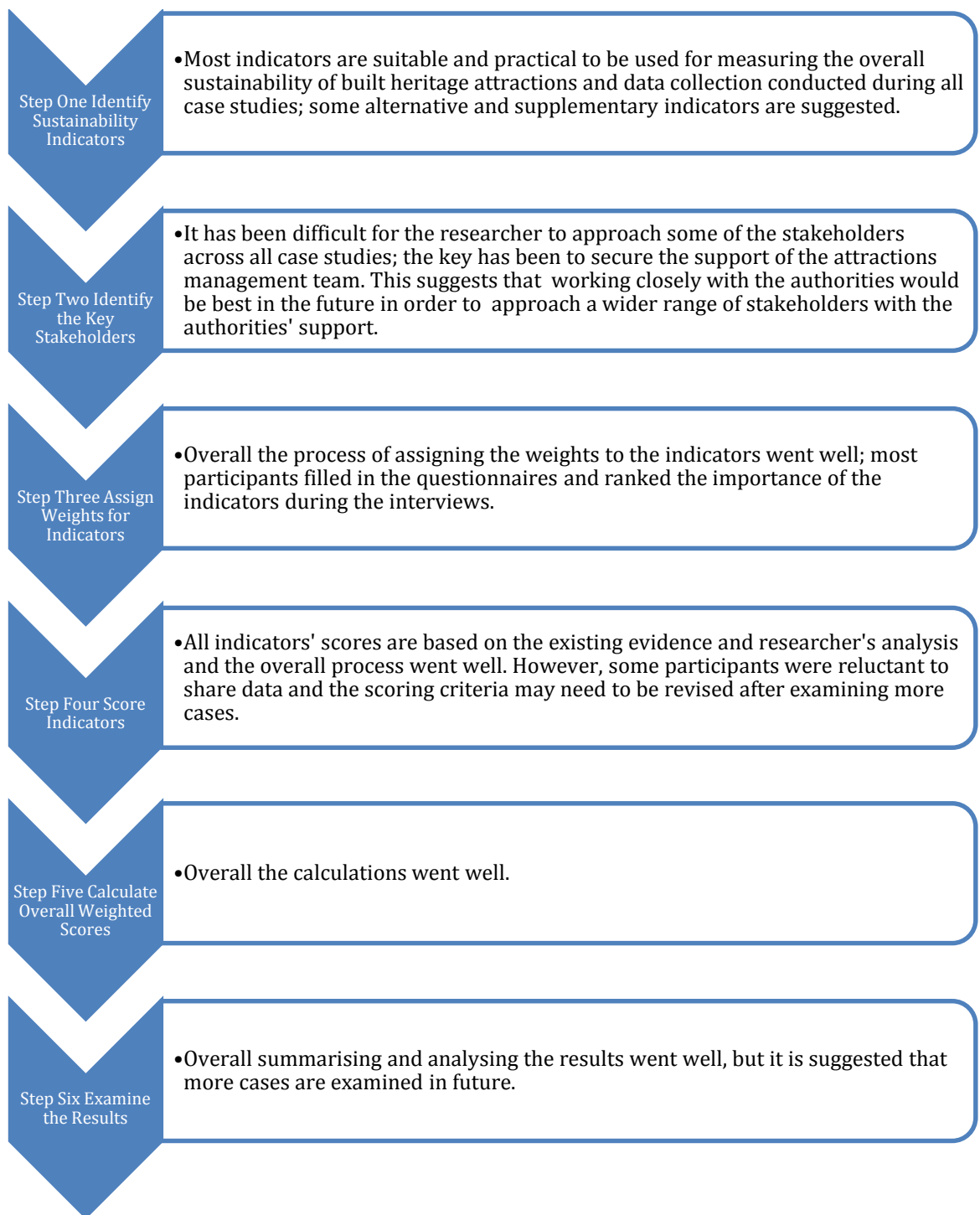


Figure 6. 2: Feasibility summary of overall methodology

6.2.6.1 Step one identify sustainability indicators

This research suggests the indicators which should be used to assess the sustainability performance of built heritage attractions. Overall, most indicators are appropriate and practical to be used for measuring the sustainability of built heritage attractions and data collection conducted during all case studies; some alternative and supplementary indicators have been suggested (Table 6.16). This set of

indicators and sub-indicators have been narrowed down based on the existing literature and a previous study conducted by the author for his Masters of Philosophy. The author's previous study narrowed down a set of 14 indicators to send to 93 environmental professionals in order to weight the significance of the indicators from a management perspective (Appendix1). There are still certain limitations when reflecting qualitative data and other aspects so that the indicators would need to be used with descriptive and assessment tools. Four dimensions have been used to assess sustainability in this research; there are some significant differences and some similarities between the scores across all average indicators and attractions.

6.2.6.2 Step two identify the key stakeholders

As mentioned in the methodology chapter, it was quite difficult during this research to approach some of the stakeholders involved in the case studies. Some contacts expressed their unwillingness to participate and some individuals did not respond to the interview request. Although some interviews have been conducted, it was not easy to collect all of the data during the fieldwork. Some participants were reluctant to share the information required for this research. The experience from this stage is that it is vital to collaborate with stakeholders appropriately during the data collection process. This research suggests that working closely with authorities will be necessary in future research, in order to approach a wider range of stakeholders and gain their support.

Table 6. 16: Feasibility of sub-indicators

Dimension	Sub-indicators	Key Influence Factors	Level of average scores	Feasibility of sub-indicators
Economic dimension	Percentage of built heritage tourist industry positions which provide permanent employment for the full year	Seasonality, opening times and management	High	Overall, this indicator is appropriate and practical to measure the sustainability of built heritage attractions. However, it cannot be used to reflect the total economic equality of employment. Therefore, it is suggested that a supplementary sub-indicator be added in future research: the sub-indicator of the Gini index of all the attractions' employees and stakeholders.
	Percentage of professionals who come from the local city	Seasonality, opening times and management	High	
	Profit/income of an attraction divided by the attraction's employee numbers	Attraction management	Medium	Overall practical and appropriate, but this sub-indicator needs an identical financial index for comparison; needs more accurate data on net profit, and should consider the economic conditions when comparing attractions in different countries.
	Profit/income growth rate	Attraction management and motivation	Medium	The indicator of profit/income growth rate is appropriate and practical to use during all case studies. No alternative and supplementary indicators are suggested so far.
	The actual visitor numbers compared to the tourism carrying capacity of the attraction	Attraction site area, infrastructure, especially the open spaces	High	The indicator of visitors is appropriate and practical to use during all case studies; no alternative and supplementary indicators are suggested so far
	Tourist numbers of an attraction divided by the attraction's employee numbers	Tourist numbers and attraction's employee numbers	Medium	
Environmental Dimension	Environmental management system	Attraction management, environmental scopes	Medium	Overall appropriate and practical, but a more detailed criterion needs to be developed. The improved sub-indicator criterion should review the standard of attractions' environmental management plan and documents, the practicality of environmental management structures, and the quality of internal and external programmes' implementation efficiency.
	Water, electrical and gas consumption trends	Recognition	Very Low	Overall, this indicator is appropriate and practical to measure the sustainability of built heritage attractions. However, more accurate data will be required in future research.
	Waste recycling rate	Cheaper to implement	High	
	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of the attraction	Heritage funds allocation system	Very High	It would be difficult to apply this to data collection, and it may not fully reflect the situation of attractions' heritage fund allocation system. A supplementary indicator is suggested to measure whether each site has sufficient funding on heritage conservation. Future research may also need to collect more accurate data.
	Attraction conservation management	Conservation management system, attraction sizes	High	Overall appropriate and practical, but future research may need to develop a more detailed criterion on the standard of attractions' conservation management plan and documents, the practicality of conservation management methods, and conservation implementation efficiency.
Social Dimensions	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	Marketing policy	High	It is suggested that this be deleted
	Local Stakeholders' Involvement	Attraction abilities and willingness	High	
	The attitudes towards attractions from third parties (local community, volunteers, and planning authorities)	Reputation, influences and management	High	Overall appropriate and practical, but it is suggested that future research should collect a larger sample from each case study
	The attitudes towards attractions from visitors	Services quality and infrastructure	High	
Governance Dimensions	Indicators of planning	Local planning system, external influence factors such as local governments and communities.	Medium	Overall appropriate and practical, but future research should examine the detail on regulatory compliance and planning application records, and collect the views of stakeholders who have participated in planning applications before.
	Indicator of Trouble-Shooting Ability	External environments and attractions management ability	Medium	Overall appropriate and practical, but future research suggests developing a more detailed criterion. For example, to explore the details of the difficulties experienced by built heritage attractions, and examine the efficiency and practicality of the response from different stakeholder perspectives.
	Indicators of Attraction management	Attraction management, ownership	Medium	Overall, it is appropriate and practical, but it is suggested that future research should develop a more detailed criterion. For example, to explore the details of built heritage attraction management systems, the efficiency of policy implementation and staff satisfaction from different stakeholders' perspectives.

6.2.6.3 Step three assign weights for indicators

This research assigns weights to the indicators based on suggestions from the stakeholders. Each indicator has associated weightings based on management, third party and the author's perspectives. Overall, assigning the weights to the indicators went well; most participants filled in the questionnaires and rated their importance during the interviews.

6.2.6.4 Step four score indicators

All indicator scores are based on the existing evidence and the researcher's analysis, most indicators were scored and the overall process went well. However, there were two problems: firstly, as indicated in the previous section, it was difficult to approach stakeholders and some participants were reluctant to share data which led to difficulties in scoring the indicators. For example, participants in two cases would not share information on their investment in heritage conservation, therefore, this research cannot score these indicators. Secondly, the criteria for the scoring was based on the author's hypotheses based on the existing literature, so the scoring criteria may need to be revised after examining more cases.

6.2.6.5 Step five calculate overall weighted scores

Overall, the weighted score equals the individual weight multiplied by the individual score. Since most indicators were scored, then the overall calculation process went well.

6.2.6.6 Step six examine the results

This research summarises and analyses the results of the case studies, and uses the data for comparative analysis between large and small attractions, attractions in the same country and in different countries. The overall process went well but some limitations should be noted. Although most indicators have been scored, a few indicators do not have scores, so this would influence the comparative results.

6.3 Comparative Studies of Built Heritage Attractions

6.3.1 Introduction

This section uses comparative research to identify significant differences between built heritage attractions in the UK and China and between large and small size attractions. The comparative research uses a case study approach which is limited to four cases. Therefore, the research is mainly looking for outstanding findings (Figure 6.3).

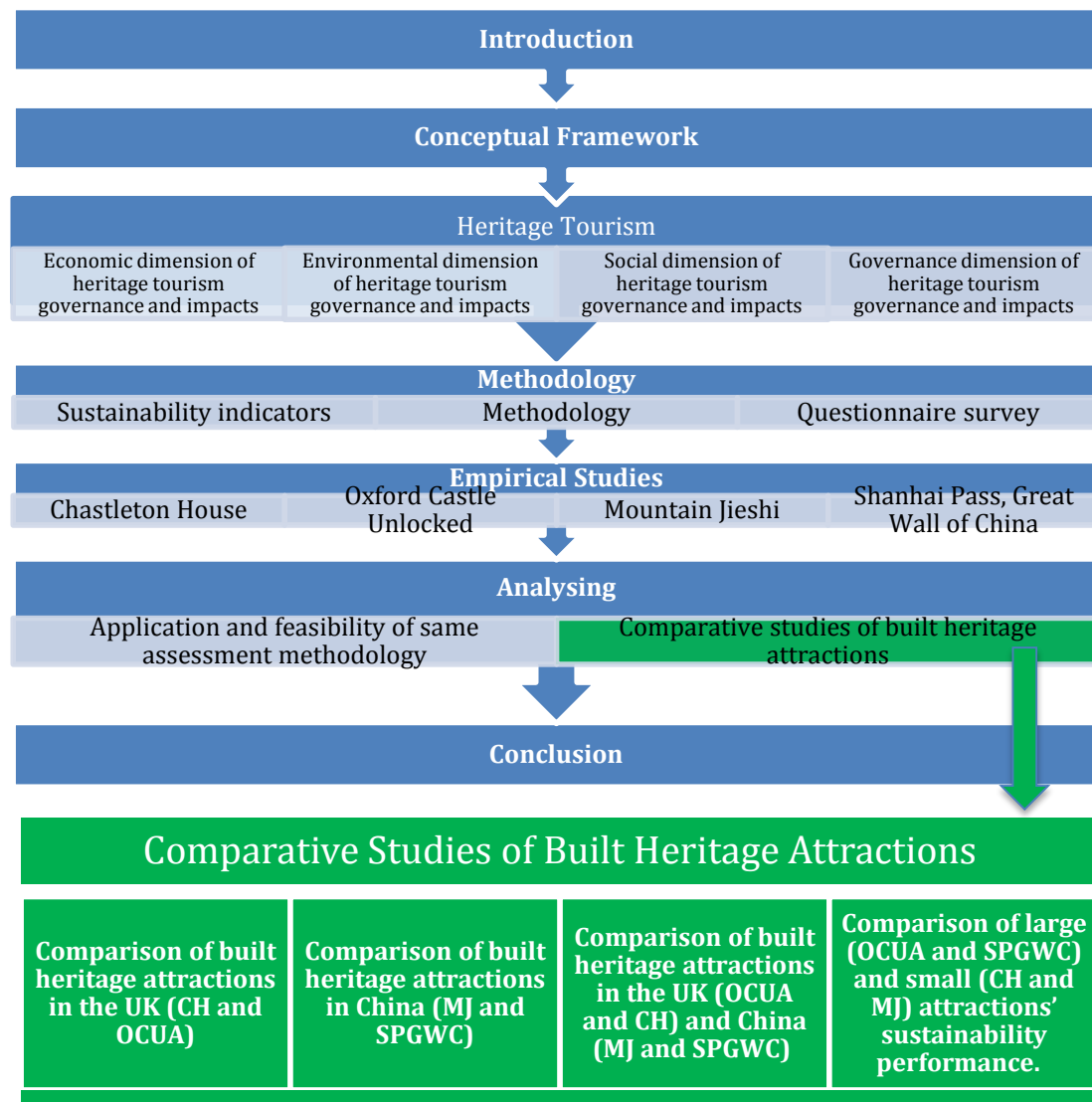


Figure 6. 3: Diagram showing the linkage of comparative studies of built heritage attractions in conceptual framework

6.3.2 Comparison of built heritage attractions in the UK (CH and OCUA)

The typology of built heritage in England includes Scheduled Monuments, Listed Buildings, Local Designations, Registered Battlefields, Registered Parks and Gardens (English Heritage, 2011). In terms of conservation approach, English Heritage (2008)

listed periodic renewal, repair, intervention to increase knowledge of the past, restoration, new work and alteration, integrating conservation with other public interests and enabling development as the methods of heritage conservation. Britain adopted the *Ancient Monuments Act* for conservation in 1882, and has integrated conservation into its planning process according to the *Civic Amenities Act* since 1967. Funding schemes for individuals and organizations have been provided by both public and private organizations.

6.3.2.1 Background

Although both of the following cases are located in the UK, similarities and differences existed and may influence the appraisal results. CH is a small rural attraction managed by fewer than ten employees with about 30,000 annual visitors. The Oxford Castle heritage site includes OCQ and OCUA; it is an urban site involving about 600 employees with about 2.8 million annual visitors. CH is solely managed by the NT as a paid attraction. The redevelopment of the OCUA case involves many stakeholders, including Oxfordshire County Council, Oxford City Council, English Heritage, OPT, Continuum and TOG.

6.3.2.2 Comparison of sub-indicators between CH and OCUA

This section identifies the significant differences between the two built heritage attractions in the UK in terms of the sub-indicators across the four dimensions (Table 6.17).

Economic dimension

In terms of employment, OCUA has a higher permanent employment score than CH but has a lower local staff percentage. As a large urban site with many business units, the OCUA can provide more positions than CH, but some tourism related positions are seasonal with a high turnover because of the nature of the hospitality industry. As a local rural small attraction, CH may be able to benefit the local area by employing more locals.

In terms of financial health, CH achieved a better score on total net profit/income of an attraction divided by the attraction's employee numbers and net profit/income growth rate. The OCUA received a very low profit score according to public records.

Table 6. 17: Comparison of sub-indicators between CH and OCUA

Dimension	Sub-Indicators	CH	OCUA
Economic	Percentage of built heritage tourist industry positions which provide permanent employment for the full year	11.1	18.5
	Percentage of staff who come from the local town/city	19.5	12.8
	Total net profit/income of an attraction divided by attraction employee numbers	16.8	8.4
	Net profit/income growth rate	8.0	4.0
	The actual visitor numbers compare to the designed tourism carrying capacity of the attraction	11.7	22.0
	Tourist numbers of an attraction divided by attraction employee numbers	12.0	12.9
Environmental	Environmental management system	11.7	14.0
	Water, electrical and gas consumption trends	4.4	3.7
	Waste recycle rate	18.4	21.0
	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	21.5	Null
	Attraction conservation management	22.0	19.2
Social	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	11.1	20.5
	Local stakeholders involvement	7.0	20.5
	The attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	16.3	16.1
	The attitudes towards attractions from the visitors	14.4	20.7
Governance	Planning performance	17.6	23.0
	The ability to balance the relationship between development and preservation	13.2	16.4
	Attraction management	13.2	18.8

In terms of visitors, the OCUA has more open space than CH, thus it has more ability to accommodate visitors within its tourism carrying capacity. Furthermore, CH has kept its original structure over the last 400 years and the NT does not wish to promote the attraction by changing its structure too much. The attractions' tourism carrying capacity management may also influence the results. It is interesting that, although there are many differences between the two cases, the score of tourist numbers of an attraction divided by the attraction's employee numbers is similar. This indicator aims to assess performance in relation to the employee working efficiency; it may indicate that both attractions have a similar employee efficiency performance.

Environmental dimension

The two cases perform similarly on environmental management. They have established an environmental management system within the sites, have very low scores on utilities consumption trends and high scores on waste recycling rates. As

analysed in previous sections, both attractions pay less attention to utilities consumption trends and so consumption has increased in the last few years. Built heritage attractions need to invest in heritage maintenance in order to host more visitors and hold more events. Each year, inflation leads to increased maintenance costs. Waste recycling has developed over many years; the management and technologies related to recycling are mature and are easy to implement. Thus, it is no wonder the waste recycling rates for both cases are high.

In relation to historic buildings' conservation and preservation, there are no annual data on conservation expenditure for OCUA, but heritage conservation project funds raised a total of about £44.5m according to OPT. It is still difficult to figure out the percentage due to the fact that the investment comes from different organizations and has been provided during different periods. Both attractions received high scores on attraction conservation management. It reflects the fact that both sites take heritage conservation seriously and try to do well on heritage conservation and preservation.

Social dimension

OCUA received higher scores overall than CH. In relation to key stakeholders' involvement, OCUA attracts more free ticket visitors than CH. OCUA issued more annual concession tickets and OCQ is free to the public. The redevelopment of OCUA also involves more local stakeholders, including OPT, Oxfordshire County Council, Oxford City Council, TOG, English Heritage and local communities. The development of CH also includes different stakeholders, but it did not fully consider the locals' opinions when extending the opening times.

Both cases have high scores on attitudes from third parties and visitors. OCUA's score in relation to third parties' attitudes is higher than CH, which may show that OCUA provides a better tourism service.

Governance dimension

OCUA tends to have higher scores than CH on the governance dimension. In relation to planning performance, the OCUA case study involves more stakeholders than the case of CH. OCUA has faced more difficulty and complexity and more development problems than CH, reducing and fixing the opposing opinions with a stakeholder's

solution. In terms of attraction management, CH is managed by the NT within a mature and developed system, while management of the OCUA involves different organizations for both the commercial units and the tourist attraction. Thus, it would be difficult to compare the attraction management merely based on scores.

6.3.3 Comparison of built heritage attractions in China (MJ and SPGWC)

The range of immovable heritage in China includes Heritage Ruins, Historic Tombs, Historic Buildings, Grotto Ruins, Temples, Stone Inscriptions, Wall Paintings and Heritage Sites (Chinese State Administration of Cultural Heritage, 2011). Methods and approaches to conserve immovable heritage include lists, schedules, inventories and records of the information and data according to legislation (Pickard, 2001). Central government, provinces, autonomous regions, municipalities, cities and counties have set up the necessary areas of protection, management signs and notices, and established records and inventories for historical and cultural sites. The *Law of the People's Republic of China on Protection of Cultural Relics* was adopted in 1992 and revised in 2002. In China, funding for built heritage conservation is mainly provided by the public.

6.3.3.1 Background

This section compares the case studies' indicators, weighting and scores between the attractions in China in terms of their most significantly different scores across the four dimensions. The attractions in China include MJ and SPGWC. The MJ belongs to Changli County Government, and the WRT is a self-managed site under the Monk Cun Hai. SPGWC belongs to local government and is directly managed by the Shanhai Pass Tourism Bureau. Both attractions belong to the local government and have contributed to the social dimension after tourism development. SPGWC has a stronger influence because of its larger size. People have criticised the authenticity of heritage remains and the land demolition process of both sites. The development of MJ is still at an early stage when compared to SPGWC. SPGWC received higher overall scores than the MJ case on all four dimensions.

6.3.3.2 Comparison of sub- indicators across the four dimensions

This section identifies the significant differences between two built heritage attractions in China in terms of the sub-indicators across the four dimensions (Table 6.18).

Table 6. 18: Comparison of sub-indicators between MJ and SPGWC

Dimension	Sub-Indicators	MJ	SPGWC
Economic	Percentage of built heritage tourist industry positions which provide permanent employment for the full year	20.0	17.2
	Percentage of staff who come from the local city	21.0	16.8
	Total net profit/income of an attraction divided by attraction employee numbers	7.8	12.9
	Net profit/income growth rate	16.5	20.5
	The actual visitor numbers compare to the designed tourism carrying capacity of the attraction	15.6	21.5
	Tourist numbers of an attraction divided by attraction employee numbers	3.8	12.6
Environmental	Environmental management system	9.0	13.8
	Water, electrical and gas consumption trends	3.0	6.4
	Waste recycle rate	16.0	21.0
	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	22.5	Null
	Attraction conservation management	9.2	16.8
Social	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	16.5	18.5
	Local stakeholders involvement	17.6	18.5
	The attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	17.2	17.6
	The attitudes towards attractions from the visitors	18.4	18.3
Governance	Planning performance	4.4	13.5
	The ability to balance the relationship between development and preservation	12.3	17.2
	Attraction management	8.6	18.0

Economic dimension

SPGWC received a few lower scores on permanent employment and the local staff percentage than MJ; smaller attractions have a tendency to rely on the local community more and attract proportionately more local staff. MJ is under the direct management of local government, it does not yet employ casual staff even during the peak tourist periods and the attraction borrows staff from the local tourism bureau rather than recruiting part-time staff.

Environmental dimension

SPGWC shows a stronger performance on almost all sub-indicators of the environmental dimension than MJ; water, electrical and gas consumption trends are a weakness for both attractions. SPGWC has established a relatively comprehensive management system after many years of operation. The conservation management of SPGWC received higher scores perhaps because large and famous built heritage attractions may have more ability to secure conservation funds from the public and they conduct more professional heritage conservation.

Social dimension

The two attractions received similarly high scores on the sub-indicators of the social dimension, and SPGWC received a slightly higher score than MJ overall. The scores show a minor difference on the sub-indicator of attitudes towards attractions from third parties and visitors. The sub-indicator of local stakeholders' involvement is similar, maybe because both attractions are under the management of local government, with similar social management styles and methods of local involvement.

Governance dimension

SPGWC received almost twice the overall sub-indicator scores of MJ on the governance dimension because SPGWC has established a relatively comprehensive management system after many years' operation, and it has a greater ability to attract visitors and income. MJ received a very low score on planning performance due to the reason that it broke local planning regulations.

6.3.4 Comparison of built heritage attractions in the UK (OCUA and CH) and China (MJ and SPGWC)

Attractions in the UK received the highest scores on the governance dimension and the lowest scores on the economic dimension. These attractions operate under a relatively comprehensive and advanced governance system and have less need to grow financially or in terms of visitor numbers. Attractions in China received the highest scores on the social dimension and the lowest scores on the environmental dimension. The attractions in China belong to local government; as a result, they are

likely to contribute more to local areas under the Chinese political system. Meanwhile, the result shows they have limited understanding and recognition of environmental management practice so far. This section identifies the significant differences between built heritage attractions in the UK and China in terms of sub-indicators across the four dimensions (Table 6.19). The overall score for each sub-indicator of a country is equal to the overall average scores of the two attractions in the same country. The attractions in the UK are the OCUA and CH, while the attractions in China are MJ and SPGWC. Taking the sub-indicator of the percentage of built heritage tourist industry positions which provide permanent employment for the full year as an example; OCUA received 18.5; CH received 11.1; MJ received 20; SPGWC received 17.2. Therefore, attractions in the UK achieved a score of $14.8 = (18.5+11.1)/2$, while attractions in China achieved a score of $18.6 = (20+17.2)/2$.

Table 6. 19: Comparison of sub-indicators between attractions in the UK and China

Dimension	Sub- Indicators	UK Attractions	China Attractions
Economic	Percentage of built heritage tourist industry positions which provide permanent employment for the full year	14.8	18.6
	Percentage of staff who come from the local city	16.2	18.9
	Total net profit/income of an attraction divided by attraction employee numbers	12.6	10.4
	Net profit/income growth rate	6.0	18.5
	The actual visitor numbers compare to the designed tourism carrying capacity of the attraction	16.9	18.6
	Tourist numbers of an attraction divided by attraction employee numbers	12.5	12.4
Environmental	Environmental management system	12.9	11.4
	Water, electrical and gas consumption trends	4.1	4.7
	Waste recycle rate	19.7	16.4
	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	Null	Null
	Attraction conservation management	20.6	13.0
Social	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	15.8	17.5
	Local stakeholders involvement	13.8	18.1
	The attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	17.4	18.4
	The attitudes towards attractions from the visitors	17.6	18.4
Governance	Planning performance	20.3	9.0
	The ability to balance the relationship between development and preservation	14.8	14.8
	Attraction management	16.0	13.3

6.3.4.1 Comparison of the Dimensions

Economic dimension

Attractions in China received higher scores on permanent employment and the local staff percentage than did attractions in the UK. The attractions in China are under the management of local government, which is more closely associated with providing stable employment compared to the attractions in the UK. This may be illustrated by two factors. Firstly, the surveyed attractions in China belong to the local government, so some of these positions are very stable because they are civil servants. Many people wish to apply for these positions and settle down into a steady position. Secondly, the Chinese attractions are happy to recruit more local employees to reduce the turnover rate.

Although all attractions have similar scores on the sub-indicators of net profit/income of an attraction divided by the attraction's employee numbers, attractions in China have a stronger tendency and desire to make a profit. During the interviews, the attractions in China were more eager to increase their growth and financial payment ability. In interviews with the management teams of the attractions in China, all agreed that funding is the most important factor, as there would be no development without funds. However, in interviews with the management teams of the attractions in the UK, fewer concerns were expressed about funding; they believe it is important, but is not the most significant issue. This may also be because of their funding bodies. CH belongs to the NT, so they receive funds from the NT funding pool. The OCUA site has been developed by the TOG, and they receive funds from many sources, for example, National lottery funds, English Heritage, the commercial units and so on. Nevertheless, the attractions in China also receive funds from the government, but most of the time, these are less than expected. Thus, they could increase their income by using tourist resources for their development. There were few differences on the sub-indicator scores of tourism carrying capacity and tourist number efficiency between the two countries.

Environmental dimension

Attractions in both countries have similar sub-indicator scores on their environmental management system (Medium); water, electrical and gas consumption trends (Very Low) and waste recycling rate (High). However, attractions in the UK tend to have a stronger performance on environmental protection and a larger environmental scope than attractions in China. Attractions in the UK received the higher scores in this area; this may be because they have established a high standard of environmental management system following the participation of different stakeholders. Although not all attractions have established a specific environmental management system, all of them include environmental management in their management. The scope of environmental management systems in the UK attractions is wider than in attractions in China. The environmental management system in the UK may concern management, recycling, the physical environment, attraction cleanliness and energy efficiency, while, in China, attractions tend to focus on attraction cleanliness and recycling, and recycling is normally managed by local government. For example, CH established the Environment Management System Action Plan 2014 and the NT Environmental Standard for Parks and Gardens Guidance 2012 to identify a range of environmental management problems and implement appropriate actions. OCUA and OCQ encompass sustainable commercial use as well as a full interpretation of the site's history and heritage. A series of actions were taken to ensure sustainability techniques were employed throughout the construction and the site aims to reduce private car use by encouraging the use of public transportation. When referring to environmental management, MJ and SPGWC focus on trying to do well on attraction cleaning and waste management. Attractions in both countries are using both recyclable and non-recyclable bins, but these bins in China are not always well used due to the management ability. Furthermore, China has a different waste recycling management system and classification system than in the UK. In China, local environmental authorities collect and take away all the waste from the attractions; there are various records kept on Chinese urban waste recycling rates, at least 40% of general waste has been recycled before waste is sent to landfill (Liu, 2013).

The funds come from different conservation systems in the UK and China. Built heritage attractions in the UK tend to work with a range of funding bodies and to attract more investment in heritage conservation than in China; the larger attractions

tend to have more ability to secure heritage funds than small attractions. The investment in conservation, preservation and restoration may be managed and funded by different organizations in both countries. For example, conservation funds in the UK may come from English Heritage, Heritage Lottery, private investors, local government, heritage conservation NGOs and donations from the public. However, most heritage conservation funds come from government and private commercial developers in China, some funds may come from tourism income and investment, but this is very limited when compared to the total heritage investment.

Social dimension

Attractions in both countries have similar sub-indicator scores on the annual concession percentage (High); attitudes towards the attractions from third parties (High) and visitors (High). However, attractions in China tend to have a higher score on sub-indicators of local stakeholders' involvement. The scores cannot always represent the status of development, and attractions in the UK have a more transparent policy than attractions in China and involve the local community more when decisions are made. Attractions in China have higher scores on overall stakeholder involvement because they are government-owned, attractions in the UK involve a wider range of stakeholders when dealing with a plan than attractions in China. Nevertheless, the attractions in China link very closely to the local community. The attractions in China employ a large number of people and attract a million visitors to, for example, SPGWC. The attraction is one of the major economic poles for local cities and has a certain influence on the local community. The attraction belongs to the government which may link it more closely to the local political community, and it works with other government departments to hold more social functions, for example, the temple fairs and festivals.

Governance dimension

Attractions in both countries have similar sub-indicator scores on troubleshooting ability (Medium). Attractions in the UK tend to have a much higher score on planning performance and a slightly higher score on attraction management. Attractions in the UK are at least trying to involve locals and ensure transparency by publishing planning decisions, thereby placing them in the public domain and making them open to discussion to some extent. Attractions in China have a tendency to inform local

communities of the planning decisions they have made with limited stakeholder involvement. It would be no surprise that attractions in the UK have established a relatively comprehensive management system and that they have more experience on built heritage development and management based on previous research. Attractions in both countries are influenced by external factors in planning performance in terms of local planning regulations and contexts. Since MJ and SPGWC are under the government system, their planning development and permissions are controlled and supported by local government.

6.3.4.2 Comparison of stakeholder perspectives on the sub-indicators between the UK and China

The conservation of built heritage is deemed a vehicle for urban regeneration and sustaining local identity (Ashley, *et al.*, 2014). The range of stakeholders is different in the UK and China; in other words, the existing research indicates that stakeholders in the UK tend to have a greater ability to influence decision making. However, this research proved that appropriate stakeholder participation provides benefits to attractions in both countries. This section compares the significance of the stakeholders' perspectives on the sub-indicators across the UK and China (Table 6.20). Table 6.20 has been derived from the absolute value of the sub-indicator scores between the UK and China. For example, if the score in the UK is higher than in China from a stakeholder's perspective, the difference in the score's value is the UK score minus the score in China.

Table 6. 20: Significant scores differences from the stakeholder perspective between the attractions in the UK and China

Sub-indicators		Scores difference
Sub-indicator scores	Net profit/income growth rate	3.5
Managers' Weighting	Water, electrical and gas consumption trends	1.8
Tourists' Weighting	Environmental management systems	0.9
Third Parties' Weighting	Water, electrical and gas consumption trends	0.9
Average Weighting	Water, electrical and gas consumption trends	1.0
Overall scores	Net profit/income growth rate	12.5

In terms of sub-indicator scores, attractions in China have a strong view on net profit/income growth rate. This may be because attractions in China are still at the growing and developing stage, which demands more income to fulfil the needs for development and infrastructure. In interviews with the management teams of the attractions in China, all agreed that funding is the most important factor, as there would be no development without funds. For example, with the support of local

government, the WRT dared to break planning regulations when rebuilding the temple and facilities.

In relation to the managers' weighting, attractions in the UK have a much stronger view of water, electrical and gas consumption trends. When interviewing the attraction managers, the UK managers had more understanding of the importance of energy efficiency for the attractions; they have started to save energy by taking various actions. Meanwhile, the Chinese managers have fewer concerns in this area, and they rank attracting visitor numbers more highly.

In terms of tourists' weighting, there was little difference between visitors' weighting between the two countries. This may be because some questions in the questionnaire for visitors were difficult for the majority of visitors to understand, leading them to select weightings by 'gut feeling' rather than knowledge. Furthermore, visitors tend to give a higher weighting when they have less knowledge on a topic. Attractions in China have a much stronger view on environmental management systems; this may indicate that the environment is currently more of a concern to the Chinese public.

In terms of third parties' weighting, similar to the managers' weighting, the third parties involved in the attractions in the UK have a much stronger view of water, electrical and gas consumption trends.

In relation to the average weighting, given the average weighting based on managers', tourists' and third parties' views, attractions in the UK have a much stronger view of water, electrical and gas consumption trends. This may be because energy efficiency is more emphasized in the UK.

In relation to the overall scores, the indicator of net profit/income growth rate has the most significant difference, for reasons explained before. Attractions in the UK also have stronger scores on planning performance, which indicates that planning management does well in this area. The main concerns for attractions in China are that some of them do not obey planning regulations during development.

6.3.5 Comparison of large (OCUA and SPGWC) and small (CH and MJ) attractions' sustainability performance

Although few pieces of research have directly pointed out the various differences between large and small built heritage attractions, some research on World Heritage Sites used as visitor attractions has received more attention (Phillips, 2014). World Heritage Sites tend to attract more visitors and income than sites which have not been nominated as such (Yang, *et al.*, 2010).

6.3.5.1 Comparison of the dimensions

This research compares the case studies' indicators, weighting and scores between large and small attractions in terms of their most significant differences across the four dimensions. The overall score for each sub-indicator is equal to the average overall scores of two attractions of similar size. Large attractions include the OCUA and SPGWC; small attractions include CH and MJ (Table 6.21). Taking the sub-indicator of the percentage of built heritage tourist industry positions which provide permanent employment for the full year as an example, OCUA received 18.5; CH received 11.1; MJ received 20; and SPGWC received 17.2. Therefore, the large attractions received an average of $6.6 = (18.5+17.2)/2$; Small attractions received an average of $17.9 = (20+11.1)/2$. Small attractions received the highest scores on the environmental dimension and the lowest scores on the governance dimension. Small attractions, especially CH under the management of the NT, may have a smart environmental policy to cover the environment, although its implementation was not always as comprehensive as that of large attractions. The governance dimension received a low score mainly because the MJ broke local planning regulations. Large attractions received the highest scores on the social dimension and the lowest scores on the environmental dimension. The large attractions are more closely involved with their surrounding communities and they have established more influence over them; thus, some locals rely heavily on large built heritage attractions for income. The fact that large attractions received low scores on the environmental dimension does not mean that they do not do well on this; it may suggest that the environmental management of large attractions is a part of attractions management among many other aspects, and may not be as important as social development and economic growth.

Table 6. 21: Comparison of sub-indicators between large and small attractions

Dimension	Sub- Indicators	Large Attraction	Small Attraction
Economic	Percentage of built heritage tourist industry positions which provide permanent employment for the full year	15.6	17.9
	Percentage of staff who come from the local city	20.3	14.8
	Total net profit/income of an attraction divided by attraction employee numbers	12.3	10.7
	Net profit/income growth rate	12.3	12.3
	The actual visitor numbers compare to the designed tourism carrying capacity of the attraction	13.7	21.8
Environmental	Tourist numbers of an attraction divided by attraction employee numbers	7.9	17.0
	Environmental management system	10.4	13.9
	Water, electrical and gas consumption trends	3.7	5.1
	Waste recycle rate	17.2	18.9
	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	22.0	Null
Social	Attraction conservation management	20.0	18.0
	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	13.1	19.5
	Local Stakeholders Involvement	11.5	19.5
	The attitudes towards attractions from the third parties (local community, volunteers, and planning authorities)	16.8	16.9
	The attitudes towards attractions from the visitors	16.4	19.5
Governance	Planning performance	10.8	18.3
	The ability to balance the relationship between development and preservation	13.4	16.8
	Attraction management	10.6	18.4

Economic dimension

There are few differences on the sub-indicator scores of permanent employment percentage, net profit/income of an attraction divided by the attraction's employee numbers and net profit/income growth rate between the two types of attractions. The large attractions tend to have lower scores on local staff percentage than small attractions and have higher scores on designed tourism carrying capacity and tourist numbers of an attraction divided by the attraction's employee numbers. The large attractions have a greater ability to attract more professional employees which enables them to attract more people from further afield, not just locals. Large sites also tend to need more specialist positions and such positions tend to need to extend the range of the recruiting area and scope as local human resources may not fit such requirements. This finding also indicates that the management team must understand and be able to

forecast changes in the built heritage attraction's development, and be well-prepared for dealing with them. Small attractions tend to employ a higher percentage of local staff due to their being linked more closely to the local community. Large attractions tend to perform better on tourism carrying capacity which benefits the tourist numbers of an attraction divided by the attraction's employee numbers because they have more experience and they have more open space, relatively comprehensive management experience and a higher tourism carrying capacity.

Environmental dimension

Both types of attractions have similar sub-indicator scores for their environmental management system (Medium), water, electrical and gas consumption trends (Very low and low) waste recycling rate (High), and conservation management (High). There are no data on the conservation percentage for large attractions. However, based on the interviews, large attractions received slightly higher scores on their environmental management system, perhaps because they have established a more comprehensive management system. Large attractions tend to have a more mature waste management system than small attractions. Large attractions have a more rigorous conservation management system than small attractions because large attractions are well-funded.

Social dimension

Large attractions tend to receive a higher score on all sub-indicators, but more significantly on concession percentage and local stakeholder involvement, less significantly on attitudes towards attractions from third parties and visitors. Large attractions tend to receive a higher score for local stakeholder involvement due to the fact that they may have more resources and ability to influence the local community. The operation of large attractions involves more stakeholders and large attractions tend to have more impact on the local area than do small attractions. A larger attraction with more visitors employs more employees and plays a significant role in the local area. The higher scores on concession percentage may be because they have more mature marketing experience.

Governance dimension

Large attractions received higher scores on all sub-indicators. Large attractions tend to have better planning performance than small attractions. This would suggest that large attractions tend to have a stronger ability to troubleshoot than smaller attractions because large attractions have more ability to influence the surrounding social environment and they have the most powerful voices on local affairs. This would indicate that large attractions have more resources which tend to establish a more comprehensive management system in terms of planning and attraction management.

6.3.5.2 Stakeholder perspectives on the sub-indicators

This section compares the significance of stakeholders' perspectives on the sub-indicators between large and small attractions (Table 6.22). The difference in scores for each indicator is equal to the highest scores of each indicator minus the lowest scores, and the indicator with the greatest difference has the highest absolute value across all indicators.

Table 6. 22: Significant score difference on the sub-indicators from the stakeholder perspectives between large and small attractions

	Sub-indicators	Scores difference
Sub-indicator scores	Tourist numbers of an attraction divided by attraction employee numbers	2.0
	Local stakeholders involvement	
Managers' Weighting	Net profit/income growth	1.2
Tourists' Weighting	Attraction management	0.4
Third Parties' Weighting	Annual concessions for local residents, particular groups and visitors for educational purposes as a proportion of total visitors; Planning performance	0.8
Average Weighting	Attitudes towards attractions from third parties	0.7
Overall scores	Tourist numbers of an attraction divided by attraction employee numbers	9.1

This research compares the case studies' indicators, weighting and scores between large and small attractions in terms of their most significant differences. Large attractions include the OCUA and SPGWC; small attractions include CH and MJ. The factors involved in the assessment include the sub-indicator scores, managers' weighting, tourists' weighting, third parties' weighting, average weighting and overall scores.

In terms of sub-indicator scores, the large attractions received higher scores for local stakeholders' involvement, which may be because large attractions have a stronger influence on the local community than small attractions. Most small attractions are still at an early stage so the decisions they make need to consider the opinions of stakeholders. The tourist numbers of an attraction divided by the attraction's employee numbers also identifies the difference, which may be because the management of MJ tends to be bureaucratic, which then pulls the overall score down.

In relation to the managers' weighting, the large attractions received more weight on net profit/income growth rate than the small attractions; this may be because large attractions require more financial development than small attractions. In terms of tourists' weighting, the attraction management received few disputes maybe because visitors are likely to be directly influenced by the quality of attraction management. In terms of the third parties' weighting, the large attractions received more weight than the small attractions on annual concessions; this may be because they use this to contribute to the community. With regards to planning performance, the large attractions tend to have more social resources to satisfy their stakeholders than do small attractions. In relation to the average weighting, the large attractions received more weight than the small attractions on attitudes towards attractions from third parties because large attractions demand more support from third parties and they have a stronger influence on the local community than small attractions have.

On the overall scores, large attractions received higher scores in relation to the tourist numbers of an attraction divided by the attraction's employee numbers. Furthermore, the large attractions received higher scores than the small attractions on actual visitor numbers compared to the designed tourism carrying capacity of the attraction; this may be because the size of large attractions enables them to manage more visitors by having more open spaces. The small attractions received higher scores than the large attractions on the percentage of staff who come from the local city. Although the large attractions provide more jobs and opportunities for the local area, the small attractions do well in benefiting their local community due to the fact that they tend to need more support from local communities. Working with locals and recruiting more residents is an economic way to link to local communities.

6.4. Summary

This chapter analyses the application and feasibility of different assessment methodology indicators/sub-indicators and case study scores applied in the four cases. Four dimensions involving stakeholder perspectives on the sub-indicators were compared and analysed, and key influencing factors for the sustainability of built heritage attractions were identified. This research suggests using this methodology for reference only because it cannot represent the complicated situation between indicators. When comparing average sub-indicators in the four cases, this study found some interesting findings across the four dimensions.

The research results of the feasibility and comparative studies have proved that the dimensions of sustainability set out in the theoretical framework are the most important elements of built heritage attractions' sustainable development proposed in the literature review. In relation to the feasibility study, Cuccia and Rizzo (2011) note that heritage tourism might be less affected by seasonality than other types of tourism; however, this research found that heritage tourism can be influenced by seasonality, not only by lower visitor numbers, but also by unstable employment during off-peak periods. Although Pedersen (2002) argued that the use of carrying capacity could increase understanding of the number of visitors and tourism impacts, this research found that carrying capacity can be beneficial in controlling some visitor impacts, but it cannot address all tourism-related issues, for example, lack of heritage funding and social tensions with locals during heritage regeneration projects.

In relation to the comparative study, Orbasli (2000) notes that heritage tourism can be an alternative solution for promoting the local economy; this research confirmed that attractions in China have a tendency to pay more attention to economic benefits than attractions in the UK, by attracting more visitors and only controlling carrying capacity in a limited way. Furthermore, attractions in the UK have more funding sources for heritage conservation than those in China. In contrast to the existing research on community involvement reported by Yung and Chan (2010), this research indicates ineffective public participation in heritage conservation in China. Attractions in the UK have a wider range of stakeholders involved in heritage regeneration projects, but this can lead to time-consuming and ineffective

communication. Thurley (2013) demonstrated the development history of heritage conservation in the UK; this research verifies the relatively mature heritage market in the UK. A limited number of research studies have focused on heritage conservation management systems in China and other emerging, as opposed to mature, cultural heritage markets. More research is suggested to apply this to emerging markets.

In summary, the existing literature links to the findings of this research to show that the methodology and associated indicators are appropriate and practical to be used for measuring the sustainability of built heritage attractions and the data collection conducted during all case studies. However some alternative and supplementary indicators are suggested and some more accurate data needs to be collected in future studies.

This research identifies the many differences and similarities between built heritage attractions in the same country, between built heritage attractions in the UK and China, and between large and small attractions. When comparing two attractions in the UK, OCUA tends to have a higher score than CH, because the OCUA tends to have more resources in relation to management and problem shooting ability. When comparing two attractions in China, SPGWC tends to have a higher score than MJ, because the SPGWC tends to have more resources and management experience. When comparing attractions in the UK and China, attractions in China tend to have a higher score than in the UK on the economic and social dimensions. Attractions in the UK tend to have a higher score than in China on the environmental and governance dimensions. The results may reflect the development of built heritage attractions in China still being at an early stage which needs more financial and social support, and the results may reflect the government context which also requires the attractions to provide economic and social development. Attractions in the UK tend to have a relatively comprehensive built heritage management system and experience after many years' development. When comparing large and small attractions, there are few differences in sub-indicator scores across all four dimensions and small attractions tend to have a slightly higher score than large attractions overall. The results may reflect the fact that the sustainability of built heritage attractions may not be restricted by the size of the attraction; the smaller attractions may also contribute to better sustainability performance with proper management. However, on some detailed sub-

indicators, the large attractions have a tendency to establish a relatively comprehensive built heritage management system; they have more resources and a greater ability to influence their local communities.

Chapter Seven: Conclusions and Recommendations

7.1 Introduction

The aim of this conclusion section is to examine the overall research process to identify the original contribution of this research, and to pave the way for further research (Figure 7.1). This research comprises a conceptual framework, a questionnaire survey and empirical studies of sustainability appraisal for built heritage attractions in the UK and China. There are four sections in this chapter. Firstly, it summarises the main findings by detailing how the research aim and the research objectives were achieved, and by illustrating how each stage of the research has produced relevant findings. Secondly, it evaluates the research overall. It begins by reviewing the feasibility of the research stages, followed by a review of the methods of data collection and analysis, and it then discusses the validity, limitations and transferability of the research. Thirdly, the chapter discusses the contribution to knowledge derived from the research in terms of its potential value for built heritage attractions' management teams, authorities, developers and academics. Fourthly, it recommends future directions for research.

7.2 Summary of key findings

The aim of this research is to develop a mechanism to appraise sustainability systems for built heritage attractions in a mature market, with the possibility of applying it to an emerging heritage market. Therefore, in order to achieve the core research aim, this section investigates the four objectives of this work.

- *To develop a theoretical framework to understand the concepts of built heritage attractions and sustainability appraisal methodologies through: a review of the existing literature and identifying and explaining strengths and weaknesses of the appraisal methodology.*

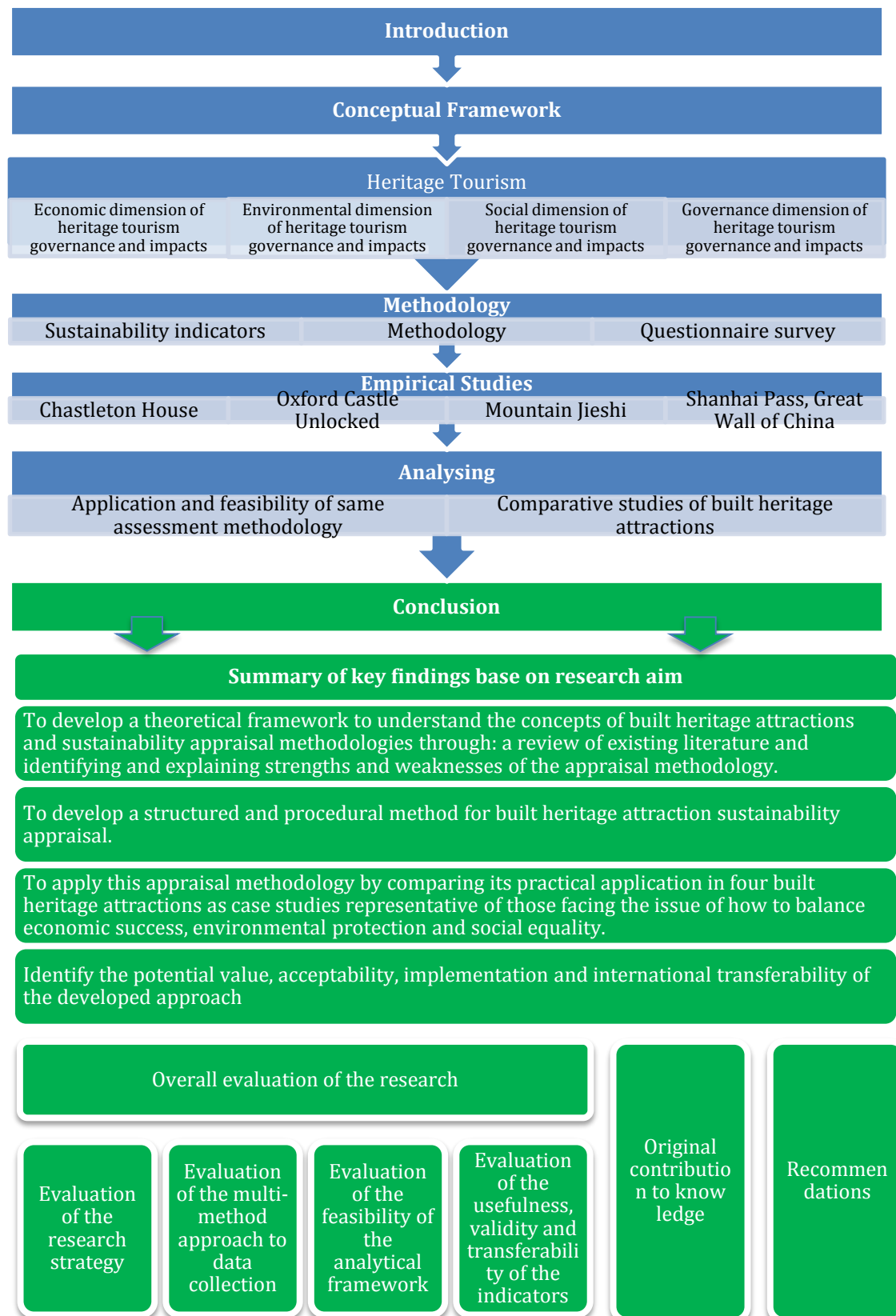


Figure 7. 1: Diagram showing the linkage of conclusion in conceptual framework

Starting with an exploration of the concept of heritage tourism, built heritage attractions were introduced in terms of their characteristics and classifications.

Heritage tourism brings both benefits and adverse effects; the impacts and governance of heritage tourism were identified across four dimensions: economic, environmental, social and governance (Figure 7.2).

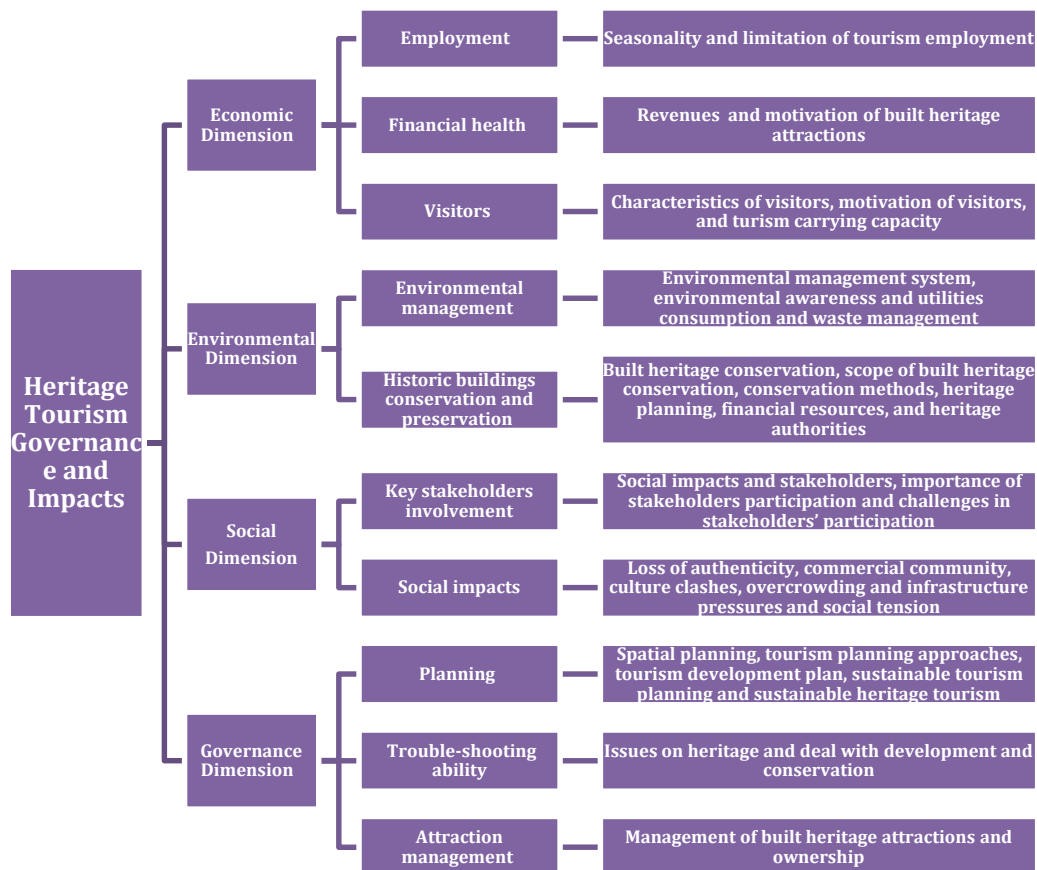


Figure 7. 2: Conceptual framework for sustainability appraisal of built heritage attractions

- *To develop a structured and procedural method for built heritage attraction sustainability appraisal.*

A two-step research process was used to achieve this objective: a questionnaire based approach and a literature review. A questionnaire survey was conducted based on the conceptual framework. The researcher employed a questionnaire-based survey designed to provide information concerning sustainability assessment for a substantial sample of built heritage attractions in both the UK and China. Across both China and the UK, 93 attractions were invited to participate and 36 responded before the deadline. The research sought to identify the dimensions of sustainability through a consideration of relevant sustainability indicators. The findings indicate several important variations in terms of the importance of key sustainability indicators:

between indicator types in the UK and China, between the size of the tourist attraction, and between different management styles and types of ownership. The questionnaire results have been re-examined compared to the existing literature. Then a six-step structured and procedural method for built heritage attraction sustainability appraisal has been proposed (Figure 7.3).

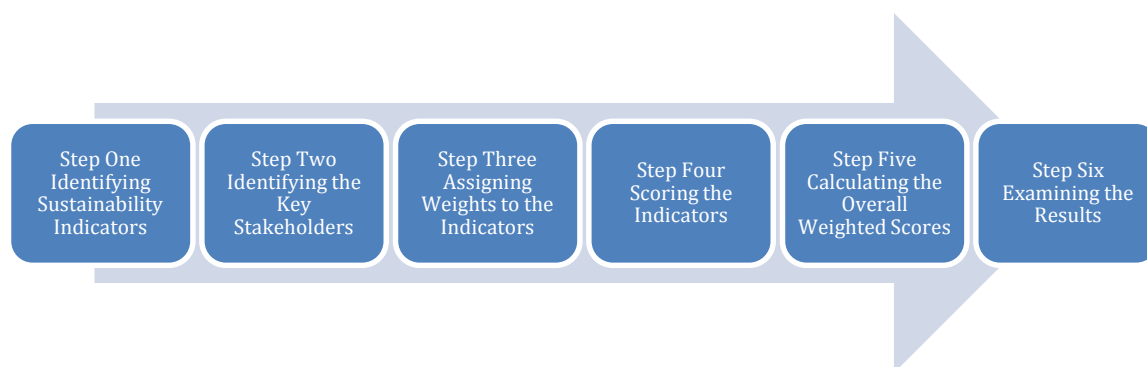


Figure 7. 3: Sustainability appraisal process for case studies

- *To apply this appraisal methodology by comparing its practical application in four built heritage attractions as case studies representative of those facing the issue of how to balance economic success, environmental protection and social equality.*

Four case studies have been used in the analysis for this research. The key findings for each case study are as follows.

CH is a NT operated site. The management system is fit for purpose and covers a range of aspects. The attraction pays close attention to environmentally associated management and less attention to its social contribution. The environmental dimension received attention and the attraction appears to be making more progress on waste recycling than on efficient energy and water consumption. Consumption trends are a weakness of this site; this may be caused by many factors, such as inflation, cost increases or more visitors. Some participants may not link the importance of consumption trends to sustainability very closely, but it does influence the sustainability performance of this site. Performance on the overall heritage conservation indicators was good and this may be because it is common sense for this attraction to be concerned about heritage conservation. Meanwhile, on the social aspect, this site tries to involve the local community in its operation by employing more local people, but the effect is still limited in terms of efficiency. Conflict between the attraction and local residents on extending the attraction's opening times

has led to a great deal of local concern; the attraction has taken remedial measures, but the social involvement indicators are still quite low.

Oxford Castle Heritage Site encompasses Oxford Castle Unlocked Attraction as the primary site and Oxford Castle Quarter for supplementary data. This site pays great attention to its social contribution; the complexity of the redevelopment forced the key developer (Oxfordshire County Council) to involve different stakeholders; their attitudes have influenced the progress and success of the redevelopment. However, the redevelopment required significant investment, which Oxfordshire County Council did not have, so the private sector became involved, and more concerns were raised. A relatively transparent, accountable and efficient method was employed in practice, and the redevelopment was open to the public and stakeholders. The results were that it worked. The attraction pays a great deal of attention to conservation management perhaps because the redevelopment sparked public concern and because this was a requirement of the stakeholders. The fact that it employs few local employees may be a result of the hospitality industry having a high staff turnover rate. The waste recycling rate has become a matter of public concern recently and Oxford city does well on recycling and sustainable development. The OCS is a free-to-visit site and the OCUA holds many events for students, so the annual concession rate received high scores. Local stakeholder involvement and planning performance also received high scores because stakeholders were highly involved in the redevelopment.

The Mountain Jieshi case study mainly comprises Mountain Jieshi as the primary site and the Water Rock Temple for supplementary data. The Jieshi Mountain attraction belongs to Changli County Government, and The Water Rock Temple is a self-managed site under the Monk Cun Hai. The social dimension of this case received the highest average indicator scores compared to all other dimensions. The Jieshi case has contributed more obviously to the social dimension since the development of the Water Rock Temple in the last ten years. The development of Mountain Jieshi is still at an early stage; more improvements may help to make for a better built heritage attraction. Some historic buildings were demolished in order to rebuild the Water Rock Temple and so some people criticised the demolition process and the authenticity of the remaining heritage.

Shanghai Pass, the Great Wall of China was part of the defensive system of the Historic Great Wall. Shanghai Pass belongs to local government and is directly managed by Shanghai Pass Tourism Bureau. The Shanghai Pass case study has obviously contributed to the social dimension of the area given its development for tourism over the last twenty years. As a major attraction, it has witnessed issues of overcrowding and has taken action to ensure this does not happen as far as possible.

- *Identify the potential value, acceptability, implementation and international transferability of the developed approach*

The application of sustainability appraisal for built heritage attractions provides a means of advancing a more holistic sustainability evaluation approach for the governance of built heritage attractions for an emerging heritage market. The findings on achieving the research aim, the four dimensions of sustainability and on the comparative aspects are summarized.

The findings in relation to achieving the research aim are summarized as follows:

- Overall, the aim of this research is to develop a mechanism by which to appraise sustainability systems for built heritage attractions in a mature market, with the possibility of applying it to an emerging heritage market. The research aim has been achieved and the application of the approach to the case study attractions proves that it is feasible.
- Emerging markets have different backgrounds compared to both developed and less developed countries. The sustainability appraisal of built heritage attractions must consider emerging markets' unique development environments, social communities, political and institutional systems. Emerging markets have witnessed rapid economic growth, but they have also encountered many issues which have not happened in developed and less developed countries. Emerging markets prioritise economic development. The realm of heritage tourism has received less attention, as has built heritage management and conservation. Although developed countries have tended to establish a relatively comprehensive sustainability appraisal system for heritage tourism, these systems may not always be suitable to apply to

emerging markets considering their stage of development. Therefore, this research concludes that emerging markets need to appraise the sustainability of their built heritage attractions and that they should learn from the experience of developed countries and also consider the situation of less developed countries.

- There is a mutual learning opportunity which can emerge after applying a sustainability appraisal approach to both emerging markets and developed countries. Although developed countries tend to have more experience and better-established systems, some of the indicators of sustainability performance scored better in emerging markets than in developed countries. For example, in terms of local community participation before heritage tourism projects were implemented, the Chinese approach is that the local government deploys a very large number of civil servants to visit each affected family to persuade the family to collaborate with the government. Local government uses a relatively realistic approach to address locals' suggestions and will increase the economic compensation if necessary. More coercive measures may be implemented if small groups of locals make unreasonable demands. Although this approach has been criticised as undemocratic in some cases, it is less time consuming in terms of the overall project. The use of coercive approaches may benefit developed countries too. The developed countries have established relevant, comprehensive laws and regulations in relation to built heritage, conservation and heritage tourism; such experience may help emerging markets to construct their own legislative framework. Both developed countries and emerging markets may apply this sustainability approach to the annual review, to monitor improvement and evaluate management efficiency. The results also indicate that both types of country are facing similar issues in this particular area, for example, how to efficiently involve local communities when built heritage regeneration projects are proposed.
- The various observers hold different opinions on heritage tourism; many of their views are coloured by their own interests. Therefore, this research understands that improving heritage management cannot be completed within

a limited time and that heritage regeneration cannot satisfy all stakeholders, but widening the range of stakeholders to reflect all those who might benefit from heritage tourism might be helpful for both developed and emerging market countries.

- This approach would be very helpful for emerging markets; due to its being a holistic assessment across four dimensions rather than a solo heritage conservation plan, it would satisfy the demands of a large group of scholars rather than a limited number of specialists.

The findings on the dimensions of sustainability are summarized as follows:

- The sustainability management of built heritage attractions should focus on economic, environmental, social and governance dimensions.
- Participants in both countries confirmed the importance of sustainability for built heritage attractions; attractions in the UK demonstrated more understanding of sustainability than attractions in China.
- Understanding of sustainability appraisal from participants mainly narrowed down to one or two perspectives, normally focusing on environmental issues and waste management. Few participants linked sustainability to social, economic and governance areas. Current systems which are promoting sustainability tend to over-emphasise environmental aspects and ignore the holistic nature of sustainable development.
- Economic dimension: The permanent employment rate relates to attraction seasonality, opening times and the management and number of visitors. A stable and long-term built heritage attraction would be able to provide more permanent employment and benefits to local employment. Human resources efficiency relates to attraction management. The motivation to earn funds and the mode of management/ownership may strongly influence the net profit/income growth rate. Attractions at an early stage of operation have a greater motivation to earn more economic benefits; attractions under the management of the local government cannot normally generate high profits maybe as the result of their bureaucracy and management. Both of these findings especially apply in China.

- Environmental dimension: Attractions in both countries performed less well on energy and water utilities consumption than on waste recycling. Although there are many funding bodies for heritage conservation attractions, the majority of funds come from government and visitor spending.
- Social dimension: The ability and willingness of the attractions' management to work with others influences the quality of local stakeholders' involvement. Attractions with clear and transparent policies and a strong willingness to collaborate involve a wide range of stakeholders. Social influences and attractions' management affect the opinions of third parties, and the quality and infrastructure of services may impact visitors' feelings.
- Governance dimension: The ability to address the issues of built heritage attractions may also come from long established traditions and the social contribution made by attractions. Different stakeholders have different views on the indicators across the four dimensions. The attraction's management is a key factor in the attraction's sustainability.
- Water, electrical and gas consumption trends received the lowest score. Utilities consumption trends have attracted the least concern from the majority of stakeholders, maybe because few participants understand the meaning or recognize the function of reducing energy consumption. Water, electrical and gas consumption trends are commonly the least significant issues for stakeholders.
- Furthermore, people criticized the authenticity of the remaining heritage and the land demolition process of all sites.
- Attractions in both countries have similar sub-indicator scores on the annual concession percentage (High); the attitudes towards the attractions from third parties (High) and visitors (High). However, attractions in China tend to have a higher score on the sub-indicators of local stakeholders' involvement. The scores cannot always represent the status of development; attractions in the UK have a more transparent policy than attractions in China and involve the local community more when decisions are made. However, attractions in China are very closely linked to the local community. The attractions in China employ a large number of people and attract a million visitors to, for example, SPGWC. This attraction is one of the major economic poles for local cities

and it has a certain influence on the local community. The attractions belong to the government which may link them more closely to the local political community, and they work with other government departments to hold more social functions, for example, temple fairs and festivals.

The findings on the comparative aspects are summarized as follows:

- Overall, attractions in China have better performance on economic and social dimensions than attractions in the UK; attractions in the UK have a tendency to perform better on the environmental and governance dimensions than attractions in China.
- The research examined the role of ownership and management style as significant factors. The research has classified four types of built heritage attractions in terms of management style and ownership and has identified their particular characteristics and issues
 - *Owned by government/public bodies and run by government/government associated companies:* Substantial numbers of attractions of this type exist in both countries, but China tends to have proportionately more, with large numbers of built heritage attractions belonging to government or public bodies. Most of these attractions are managed by government directly or indirectly. In China, all local government have tourism development bureaus. Most attractions are supervised by a tourism development bureau or a destination management committee within local government which will take over certain of the local authority's rights.
 - *Owned by government/public bodies and run by private companies:* These attractions can be found in both countries, although mainly in China. The size of these attractions is smaller and their influence is limited when compared to government owned and operated attractions. They also tend to place less emphasis on local residents' satisfaction with the operation of the attraction.
 - *Charity owned and operated attractions:* A large number of these attractions are located in the UK and there is nothing similar in China. The charities acquire the attractions from private owners; some

attractions were donated to charity when the owner faced a financial crisis caused by high death duties, or when they lacked sufficient income to maintain the attraction. The charities offer holistic management of the entire attraction; taking charge of marketing, conservation, human resources and other management matters. These attractions tend to have stronger views on many of the sustainability indicators and they welcome the involvement of key stakeholders. These attractions receive less external financial support compared to *government/public owned and run attractions*; they take responsibility for their own financial control and they have to be financially efficient. From the survey responses, these attractions appear to have more mature environmental documentation and management systems; this may be due to the fact that they are more publically accountable and so charity management is normally transparent and efficient.

- (iv) *Privately owned and operated attractions*: These attractions have strong views on efficient water and energy systems. Similar to the *charity attractions*, these attractions receive less external support, so they have sole responsibility for their own profit and loss, which means they have to be financially efficient. From the survey responses, privately owned attractions receive less government funding for conservation and some of them tend to be less sensitive and less interested in developing advanced sustainable solutions.
- An appropriate stakeholders' involvement approach helps developers to save time and cost on overall heritage regeneration development.
- Good sustainability practice within built heritage attractions is not restricted by the size of the attraction, so small attractions with good management may have good sustainability performance.
- However, the larger attractions do tend to establish a relatively comprehensive built heritage management system, they receive more conservation funds and they have more resources and ability to influence local communities.

7.3 Overall evaluation of the research

The final appraisal methodology does not aim to provide a conclusive sustainability performance result, but it can provide suggestions to decision makers to identify the sustainability performance of built heritage attractions. The overall structure of this research is illustrated below (Figure 7.4). A combination of a conceptual framework, quantitative and qualitative approach was used to establish a methodological framework capable of supporting the research process. This research design allowed feedback for verification purposes and to check assumptions, whilst contributing to the findings. The purpose of this section is to evaluate relevant aspects of the overall methodology to identify its achievements and limitations.

Initially, this researcher conducted a questionnaire study among professionals from built heritage attractions and four case studies with stakeholders in both China and the UK. He then arrived at an approach which aimed to establish a four-dimensional multiple-criteria decision analysis framework, although the appraisal methodology and selected indicators faced some limitations.

7.3.1 Evaluation of the research strategy

The research strategy established for conducting this investigation had the following characteristics: a conceptual framework, a quantitative questionnaire approach and qualitative case study analysis.

First, this work has been successful in exploring the nature of the appraisal of sustainability within built heritage attractions. This approach has contributed to establishing links and connections to understand the complexity of the four dimensions of sustainability: economic, environmental, social and governance. The conceptual framework provides theoretical support by reviewing the existing literature. Many sustainability appraisal approaches were reviewed and compared and the MCDA approach was eventually amended to fit the nature of built heritage attractions. Then, the initial sustainability appraisal indicators and sub-indicators for the questionnaire survey were identified and were continually revised during the pilot case study and the main case studies.

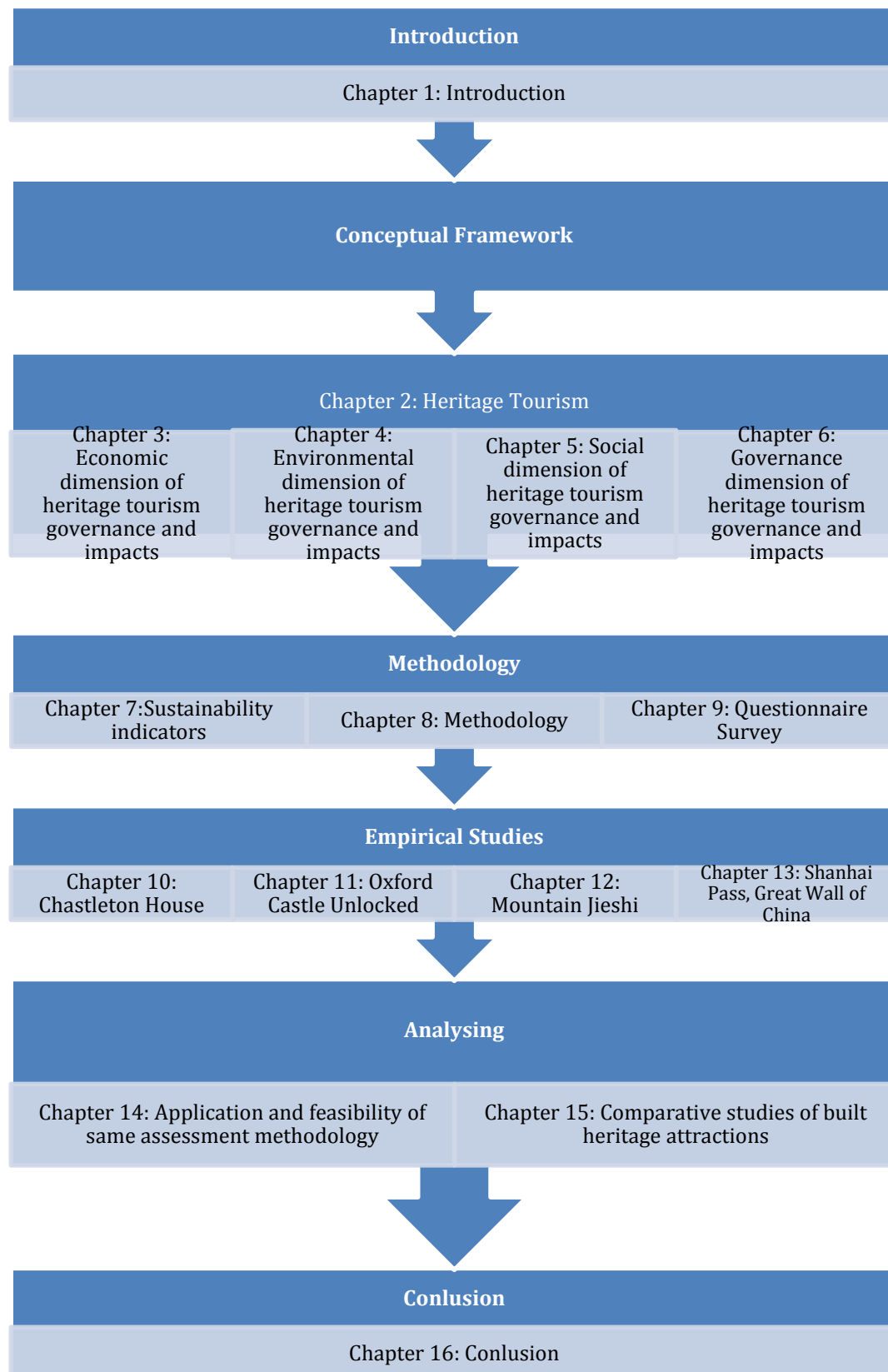


Figure 7. 4: Overall structure of this research

Secondly, the quantitative questionnaire research was considered an appropriate method to test a set of built heritage sustainability indicators. It was suitable because it offered a supportive structure for the appraisal framework and the application of sustainability indicators for built heritage attractions. Furthermore, it provides a means of advancing a more holistic sustainability assessment approach for the management of this important type of attraction. It seeks to identify the dimensions of sustainability for such attractions through a consideration of relevant sustainability indicators. However, the questionnaire survey tested a set of indicators based on the attraction management's perspective without the involvement of other stakeholders; therefore, the range of opinions and the weighting of the indicators might vary if other stakeholders are involved.

Thirdly, the qualitative case study approach was felt to be suitable due to the need for in-depth analysis in order to identify a variety of causal links in the multiple-criteria decision analysis (MCDA) involving stakeholders, such as the attractions' management team, third parties and tourists. This investigation gave the research the capability of ensuring a holistic and significant understanding of interactions and relationships. Furthermore, the case study approach provided a vivid context in which to explore the feasibility of the sustainability appraisal methodology and compare various attractions between different countries and of different sizes. However, some indicators may overlap in the governance dimension. Furthermore, to meet the realistic contexts of different countries, the same indicators may use different units of measurement in the UK and China.

7.3.2 Evaluation of the multi-method approach to data collection

Derived from the conceptual framework and the multi-dimensional appraisal approach and because of the variety of data that had to be collected, a multi-method approach was designed for the data collection (Figure 7.5).

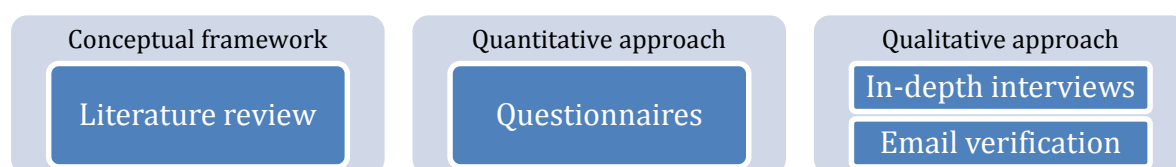


Figure 7. 5: Multi-method approach data collection

The overall methods were specific to gathering certain types of data, and complementary to each other. The use of this approach offered the possibility of triangulating information gathered by different methods and a verification process was implemented in the overall methodology.

The multi-method approach contributed to developing an understanding of the sustainability of built heritage attractions, and how to appraise their sustainability. The range of methods used different types of data, specific to each section of the conceptual framework. The literature review established the conceptual framework, and then contributed to the appraisal methodology along with the questionnaires. Applying the appraisal methodology and email verification process with key stakeholders identified the implementation issues.

Although each method offered specific and relevant data, six issues were identified in the process of data collection. First, there was a practical problem with data accessibility when conducting the survey. Some important data needed to be collected but this was not possible because the interviewees could not provide the information. From the built heritage attraction management questionnaire survey conducted prior to the main case studies, the research findings could only assess the 36 responding attractions and cannot extrapolate the views of the attractions that did not respond. It may also be surmised that the attractions that responded have better sustainability management practices than the non-responding attractions. For the main case studies, in all cases, it was very difficult to convince more than one stakeholder (managers, third parties or visitors) to participate in the survey. Some attraction stakeholders agreed to participate in the survey, but other important stakeholders did not wish to participate, resulting in the researcher having to abandon that particular case.

Secondly, respondents from all four case studies raised concerns about the potential adverse impact of participating in this research. Therefore, it was not easy to collect all the data suggested in the sub-indicators, and some data related to financial results seemed to be very sensitive for interviewees. In China, the interviewees provided 'fuzzier' data than in the UK, such as using estimated total visitor numbers and heritage protection costs. Furthermore, almost all the data provided by the interviewees was internal to the organization, so it would be extremely difficult to

verify the data externally. Therefore, data verification of the information which interviewees provided was difficult. For example, CH agreed to participate during June 2014 on the condition that the researcher did not disturb the local community. Therefore, although the researcher interviewed some volunteers associated with NT from local areas, the researcher was not able to approach a large number of residents and organizations to ask their opinions on the sustainability of CH. Furthermore, CH is located near the small town of Moreton-in-Marsh and there were few local visitors to CH on the site survey day. Therefore, for the remaining three case studies, the researcher made sure to interview third party respondents from the local area and a large number of local visitors were asked to fill in the questionnaire.

Thirdly, when conducting the questionnaire survey, some visitors did not wish to fill in the questionnaire, so the researcher completed the questionnaire for them. The apparent reasons for this were as follows: first, only about 50% of all visitors approached wished to take part in the questionnaire in the UK, and only about 25% of all visitors approached wished to take part in the questionnaire in China. Some visitors refused to fill it in when they saw it, explaining that it was too difficult to understand. Although the CH pilot study was conducted in early summer, the other three site surveys were conducted in winter so it was very cold to stand outdoors and complete the questionnaire. Furthermore, some visitors were senior citizens who could not see very well without their glasses so they were unable to write their own answers down. Therefore, the researcher explained the questionnaire to visitors face to face to help to reduce their concerns, to explore more qualitative data by observation and to increase response rates at the same time by keeping the visitors happy. The site survey was conducted in both countries and for all four case studies; there seems to be little variation across all the indicators in the weightings from visitors. The researcher suggests the following reasons for this: the majority of visitors were not familiar with the concept of sustainability; therefore, the questions/indicators may have been very difficult for them to understand and so they may have tended to weight the indicators based on their gut feeling rather than professional knowledge. Moreover, not all the visitors were happy to participate in the questionnaire survey; even when they appeared willing to participate, they did not have much time to talk. Therefore, some of them tended to decide on their answers without thinking about them for very long. Furthermore, people are more likely to

give positive answers when taking part in a face-to-face discussion because they think this is what is expected.

Fourthly, analysing the cases should have involved more stakeholders rather than just the most senior leaders of the site. During the research, it proved to be very difficult to convince the attraction managers to allow the researcher to contact more operational staff. It would also have been inappropriate to contact stakeholders of the survey site without the approval of the attraction managers. Therefore, this research only interviewed those at a senior management level, without speaking to the operational staff who take charge of environmental management more directly, so some opinions may be subjective.

Fifth, in the case of OCQ, although this research estimated the visitor numbers of this case study and considered the error rate, this result may have been distorted by the fact that the research was conducted during the Christmas period (20th-22nd December 2014).

Sixth, it was hard to apply the sub-indicator of ‘the percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of the attraction’, given that conservation funds may come from a variety of different organizations leading to difficulty in collecting the data in practice.

7.3.3 Evaluation of the feasibility of the analytical framework

The analysis framework was supported by sustainability theories and principles in conjunction with concepts of environmental planning, stakeholder input and MCDA, among other disciplines. This analysis framework was used for systematising and analysing the data and enabled the researcher to identify interactions for a holistic comprehension of the complex sustainability appraisal multidisciplinary approach and several of its components.

The analytical framework rested upon three major analysis methodologies: indicator results analysis, comparative studies and feasibility analysis. The combination of several methodologies for the analysis ensured that the core of the research was

processed and suitable to apply overall. Without this complicated analytical apparatus, the understanding of the interactions would not have been possible. The analytical framework was sufficiently robust to identify the variety of issues within the sustainability of built heritage attractions and sufficiently flexible to accommodate the four case studies. Furthermore, although apparently with certain limitations, the analysis process performed as expected and identified additional factors and components which influence sustainability.

However, a number of limitations should be noted. First, by observation in both countries, the researcher found that a significant percentage of visitors have little knowledge or understanding of the concept of sustainability and of the questions/indicators when answering the questionnaire. Thus, the researcher suspects that weighting the results of the visitor survey may not be informative, particularly when compared with the views of the environmental/heritage professionals.

Secondly, the comparative research of the main case studies is limited by the number of case studies and the fact that only four cases were involved in the research. Therefore, the research is mainly looking for overall trends and any outstanding findings.

Thirdly, some interviewees only offered general or 'fuzzy' information. Some of the information was not very appropriate to the cases being analysed and some information seemed to be idealised rather than factual which made the analysis process more difficult. For example, for the indicator of 'the percentage of annual expenditure', heritage funds may come from various organizations, including external bodies and some investment may also cover heritage conservation purposes, but not be recorded as a heritage conservation cost. Therefore, it was not easy to calculate the percentage rate. Other examples are the indicators of 'heritage conservation management' and the 'environmental management system'; the scoring criteria for these indicators related to the quality, effectiveness and standard of environmental management in the attraction. However, the researcher did not find it easy to verify the facts of the environmental management system based on the interviews and documentation only, and the criteria also become ambiguous during the assessment process.

Fourth, for the case studies involving two organizations, one of the two organizations' weightings and scores may be missing from the data collection; for example, in the cases of MJ and WRT and the OCQ and OCUA. Therefore, in that instance, many scores are the means of the results from both sites and some scores use one site to represent the entire case study when data from the other site was not accessible. Therefore, it may not be very fair to use this data to reflect the true development of this site, as the above method may distort the findings when comparing very different elements of the case study.

Fifth, there was also a weighting gap between the different stakeholders. Different stakeholders had different levels of influence on the actions of the attraction management which may have led them to hold different views of the issues. Furthermore, the personal values and the backgrounds of the stakeholders may also contribute to variations in the results. For example, in relation to the indicators of 'planning', 'troubleshooting ability' and 'attraction management' in the governance dimension, the average weightings from the managers were higher than those from the third parties, which may indicate that managers were more satisfied with their own actions and management than were the others who participated.

Sixth, the qualitative and quantitative data were both used in the scoring calculations. Therefore, variations in the scoring system are based on both facts and opinions. Although the overall scores of each sub-indicator are 25, some figures were based on the facts/hard evidence provided by respondents, and other figures were based on the opinions of the researcher based on the data collected.

Seventh, there were weighting changes in the indicators after the pilot study of CH, which aimed to reduce the number of unrealistic indicators, but which led to the indicators not having exactly the same weighting for the three later case studies.

Eighth, the indicator of 'water, electrical and gas consumption costs' (bills) increased in almost all cases so the researcher may need to take into consideration whether the attractions have received more visitors and hosted more events over time, as well as the impact of inflation.

Ninth, most sub-indicators were applied well in the data collection and assessment process as far as this research is concerned. The researcher may need to reconsider the applicability of some of the sub-indicators. For example, the sub-indicators of ‘total net profit/income of an attraction divided by the attraction’s employee numbers’ and ‘net profit/income growth rate’ should be further clarified to adopt a universal unit of measurement if possible, such as using the total net profit in all cases. Owing to the fact that the case studies have established various environmental and conservation management systems, it has been difficult to use a universal assessment standard to appraise these sub-indicators. In addition, all the sub-indicators in the governance dimension were difficult to score fairly. Each case has unique characteristics and they operate in different regulatory contexts and they provided qualitative data on various aspects. Therefore, scoring the sub-indicators in the governance dimension tended to lead to unfair comparisons.

7.3.4 Evaluation of the usefulness, validity and transferability of this research

The set of indicators used in the research has been revised three times since it was first developed (Figure 7.6). The first time was at the stage of designing the questionnaire for built heritage management professionals, the second time was at the stage of assessing the pilot study of CH and the final time was at the stage of assessing the three main case studies. The indicator system can provide results for users, but it cannot provide a descriptive conclusion for decision-making. Although most indicators used in this research have been suggested for use in sustainability assessment, the application of some of the indicators should be revised for better results. Overall, the sustainability appraisal methodology and set of indicators may be able to provide advice to the decision maker on built heritage attraction sustainability performance, but it still has certain limitations when reflecting qualitative data and other aspects, so the indicators would be best used with other descriptive and assessment tools.



Figure 7. 6: Development of indicators in this research

The validation process included email verification with 15 participants who are heritage professionals in industry and academia; some of them were involved in this project during 2012-2015. Five participants responded and highlighted the merits and weaknesses of the research approach and research findings (Table 7.1). The participants indicated that this approach is relatively comprehensive, practical and appropriate to apply to other attractions. However, concerns were raised in the areas of risk aversion, applying the methodology to more case studies, stakeholders and continuing improvements.

The transferability of this research should be fully noted, although this methodology faces potential difficulties. Other applications would be to use the set of indicators (Or a new set of indicators developed in a new context), and use the stakeholder approach to conduct similar surveys in the future. The sustainability performance results of built heritage attractions would be able to provide information to the public and concerned parties.

7.4 Original contribution to knowledge

This section identifies the theoretical, methodological and empirical contributions of the research to the body of knowledge. This work has produced three major contributions to new knowledge: First, it has opened up new directions for both theoretical and empirical studies in the field of sustainability appraisal, which could substantially enhance the initial foundations established in this work. The dimensions of sustainability in this research have adopted the traditional three pillars, namely the economic, social and environmental, but it has also considered governance as an independent dimension. The set of indicators has been designed based on the above dimensions. A stakeholder involvement approach was introduced to reduce the assessment bias during the assessment. The indicator scoring system was formulated based on both the weighting and scoring; the final score is the weighting multiplier scores. The indicators' weighting comes from an average of three types of stakeholder, namely: the attractions' management teams, third parties and visitors.

Table 7. 1: Validation summary

	Questions	Participants	Responses
1	How applicable do you consider this sustainability appraisal approach to be to other built heritage attractions?	Participant 1 Custodian of a local preservation Trust in the UK	It possibly covers most of the heritage management scenarios and highlights the importance of looking to the future to ensure the longevity of an attraction, particularly in the charity sector.
		Participant 2 Academic and independent heritage consultant in China	This sustainability appraisal approach is comprehensive and appropriate to apply to all attractions. Given that all the attractions are facing development issues, establishing structured and practical appraisal indicators would be vital to the development of attractions. This approach should be applied to more attractions.
		Participant 3 Local tourism and heritage officer in China	This approach would have a huge possibility to apply to attractions in China and the UK. China should focus on the application of this approach, in order to ensure the long-term protection of built heritage.
		Participant 4 Academic and planner of a national preservation Trust in the UK	The approach as proposed offers a very useful way of bridging two discrete agendas in heritage, namely those of assessment of the impact of major development (EIA – SEA and SA processes) with the wider benefits from heritage (often called place-making / heritage led regeneration and constructive conservation). To apply to other built heritage attractions is entirely reasonable, for example the Governance dimension covers heritage protection.
2	What do you see as the strengths and weaknesses of this approach to the assessment of the sustainability appraisal of built heritage attractions?	Participant 1 Custodian of a local preservation Trust in the UK	Maybe something could be done on risk aversion
		Participant 2 Academic and independent heritage consultant in China	Strengths: comprehensive, practical to implement, covers a wide range of indicators and is pretty convincing. Weaknesses: need to be continually improved.
		Participant 3 Local tourism and heritage officer in China	Strengths: Obvious, such as the appropriateness and comprehensiveness of the indicators. Weaknesses: This approach should be promoted in order to let more people accept it and apply it to more heritage sites.
		Participant 4 Academic and planner of a national preservation Trust in the UK	Strengths as covers a wide area of policy objectives, themselves sometimes conservation led and at other times dealing with environmental and social issues. So, a key attribute is the umbrella over a host of policy areas. The only potential weakness is that sustainability appraisal is often used in decision-making (to help inform between a choice of alternatives) and that a large number of policy areas are covered, so that it could assist many areas but not all.
		Participant 5 Academic and independent heritage consultant in the UK	I think your research is a good starting point to evaluate sustainability of built heritage attractions. In your short summary we don't see the different evaluation methods you have used to pinpoint sustainable practices. I am on the committee of an organisation that accredits heritage quality (the quality of the attraction, the visitor experience and sustainability of the attraction). You can see more information on HERITY at http://www.herity.lt/about-herity/ . The detailed assessment sheets are copyrighted and can't be shared, but I would like to draw you attention to several aspects of the appraisal: 1. the visitor experience, the quality of service, accessibility etc. all feeds into visitor engagement, desire for repeat visits and future sustainability of the place. 2. conservation: you don't seem to be placing much emphasis on this, but ultimately it is the heritage (historic/architectural) value of the place that visitors are coming to see. How well is this preserved, what measures are in places to protect it and most importantly is there the staff capacity to do so (e.g. monitor, follow maintenance procedures and undertake minor repairs in a proper way). 3. institutional sustainability: this links to your governance point. Does the institution have the capacity to sustain the attraction, know how, sufficient staff, expertise and most importantly capacity to respond to change (see Helen Phillips' thesis where she discusses adaptive capacity of organisations running heritage attractions) You might also find this short learning resource we prepared on St Paul's Cathedral of interest as it also discusses how 'values' are upheld whilst providing a positive visitor experience: http://www.icomos-uk.org/icomos-resources/ (it takes a few minutes to download)
3	Do you think the set of indicators are suitable to assess sustainability of built heritage attractions?	Participant 1 Custodian of a local preservation Trust in the UK	Yes but key stakeholders also figure in the economic dimension, particularly if they are fundraisers or donors.
		Participant 2 Academic and independent heritage consultant in China	The four dimensions are appropriate and comprehensive.
		Participant 3 Local tourism and heritage officer in China	Appropriate
		Participant 4 Academic and planner of a national preservation Trust in the UK	Yes and fits very well and comprehensively so with the guidance produced by Historic England on ‘Strategic Environmental Assessment, Sustainability Appraisal and the Historic Environment’. It allows for a balancing of alternative choices and decisions and also allows for the testing of many issues / topics against the respective built heritage attraction.
4	Could you please provide any other comments or suggestions on this research not covered in the questions above?	Participant 2 Academic and independent heritage consultant in China	The final aim of attractions’ sustainability should be achieved in terms of requesting the attractions to continue to improve and enhance.
		Participant 3 Local tourism and heritage officer in China	This approach should be applied to more case studies, for testing and improving, to formulate a more comprehensive approach.
		Participant 4 Academic and planner of a national preservation Trust in the UK	Only to reinforce the point, as established here, that the historic environment is a part of the positive management of change – which sustainability appraisal is itself seeking to deliver. This is manifest in many Historic England policies (constructive conservation + SEA / SA Guidance and their conservation principles).
		Participant 5 Academic and independent heritage consultant in the UK	You seem to appreciate the importance of taking a holistic approach to assessing sustainability and also recognise that not all organisations/places will perform well in all aspects. I guess the next challenge is to identify causal relationships and areas/ capacity that is critical to future sustainability.

Secondly, the research has developed a holistic approach to the sustainability appraisal of built heritage attractions for an emerging heritage market. This research compares the sustainability performance of built heritage attractions in different contexts. Based on the sustainability performance results of the four case studies, this research compares the sustainability performance between two attractions in the same country, between attractions in the UK and China and between large and small attractions.

Thirdly, the findings have identified several important variations and similarities in the cross-national context and recommendations have been made for the development of a sustainability appraisal methodology for the governance of built heritage attractions.

Overall, this research lays down the development of a new approach to appraising sustainability performance for built heritage attractions for an emerging heritage market, although the appraisal methodology and selected indicators face some limitations. The appraisal methodology is able to provide guidance to the decision maker to identify the sustainability performance of built heritage attractions. A special set of indicators has been selected to assess the sustainability performance of built heritage attractions and the results show the applicability of most indicators works well. This research may benefit stakeholders in the following ways:

- The appraisal methodology provides guidance to decision makers for identifying the sustainability performance of built heritage attractions.
- This research may benefit international heritage conservation organizations in the development of a holistic approach to heritage tourism and strategies, helping them to guide and monitor heritage conservation funding allocation;
- It may help heritage attraction managers to assess sustainability performance; it may help authorities to design a set of heritage indicators; it may help developers to promote their heritage management reputation in public and it may help to involve stakeholders more appropriately.
- For authorities, they may be able to design a set of indicators based on their specific context and backgrounds, to use to appraise the sustainability of the built heritage attractions they supervise, to identify the core suggestions for improvement and to set national targets to reduce energy costs. Furthermore,

the findings of this research also suggest involving more communities before heritage planning decisions are made, in order to yield a better result. The relevant heritage conservation legislative system may be improved based on data from more research.

- For academics, the set of indicators, the results and suggested model in the next section needs quantitative research to provide a larger number of examples and qualitative research for in-depth analysis.
- For developers, using the sustainability performance management and appraisal system for developing built heritage attractions, may not only promote their reputation in public, but it can also reduce costs and time if stakeholders are appropriately involved.

7.5 Recommendations

This research has opened up new directions for both theoretical and empirical studies in the field of sustainability appraisal, which could substantially enhance the initial foundations established in this work. Key areas are suggested.

Future research may be able to improve the ability and efficiency of measuring sustainability appraisal by increasing data collection capabilities, applying the methodology to more examples and developing detailed indicators. To further improve the data collection, a significant limitation of this research is that the researcher was not able to collect all the data necessary for the analysis. Improving the quality, comprehensiveness and accuracy of the data from case studies may reduce this limitation to a lower level and applying this research to more built heritage attractions would further test its applicability. Although four cases were selected and used to apply this research, more case studies are needed to test the suitability and applicability of the assessment approach. Applying the research to a wider range of built heritage attractions may be able to improve its applicability. This research was conducted by the author in an academic area and attractions participated voluntarily. It is reasonable for some attractions not to wish to share sensitive information. However, if this approach were adopted by authorities or powerful organizations to use as a compulsory exercise for funding allocation or annual audits, the attractions

would provide the relevant data and would take it very seriously. As a result, the issues of data accessibility may change significantly.

It may be advisable to conduct a further revision of the existing indicators and develop new sets of indicators to apply to different types of built heritage attractions. Revising the applicability of the indicators and developing new indicators may enhance the appraisal scores of the built heritage attractions. Given the different contexts and backgrounds of each built heritage attraction worldwide, it would be appropriate to develop new sets of indicators for each case in different countries, especially considering the various factors and legislation systems operating in different countries and areas. The newly developed indicators must consider a variety of cases, such as by attraction size, types of attraction and other factors.

It may be possible to transfer the MCDA-based sustainability appraisal framework to more organizations in different fields of tourism. The sustainability appraisal approach may not only be limited to built heritage attractions; it may also be applicable to the sustainability performance/effectiveness of other organizations by using different sets of indicators. For example, it may be possible to develop sets of indicators for tourism destinations, projects, plans, programmes and other activities.

One may be able to develop a sustainability margin capacity theory based on this research. It would be interesting to reveal some of the problems involved in trying to achieve all of the indicators at the same time. For example, some indicators require more visitors in order to achieve a higher score, but more visitors may exceed an attraction's capacity limits and may increase its environmental costs. Therefore, there may be a margin which illustrates the maximum benefits of sustainability (Figure 7.7).

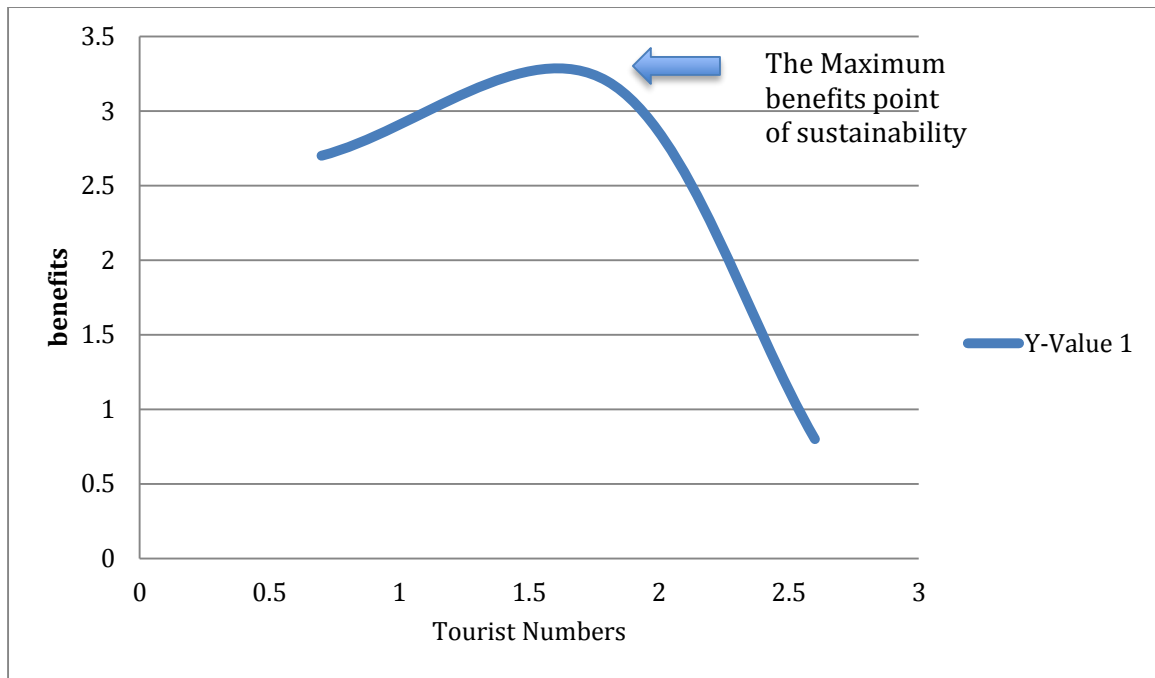


Figure 7. 7: Sustainability margin capacity theory hypothesis

This research states that the sustainability of built heritage is not limited to one single aspect, but that it should also cover economic, environmental, social and governance dimensions. Although larger attractions may have more resources and a greater ability to improve sustainability, key to promoting sustainability for built heritage attractions are the internal factors, the attractions' management and their willingness to adopt sustainable development.

Management style is also a strong influence on the implementation of sustainability; the management of private attractions, National Trust attractions, and government-owned attractions are likely to produce different results. Co-operation between the public and private sectors would benefit all if the governance works well, to ensure that transparency and effectiveness are important factors in their success.

There is a set of implications for action with regard to emerging world sites. First, more work needs to be conducted in the realm of sustainability appraisal of built heritage attractions in emerging countries. This appraisal approach was tested in China which may not be sufficient to reflect the sustainability status of other emerging contexts. However, the implications of applying this appraisal methodology in China may provide the insight and experience needed for other emerging countries.

For example, the experience of involving communities appropriately and considering the variations between indicators and attraction management during the appraisal. Therefore, studying more cases in other emerging countries would be useful to improve the sustainability appraisal approach and sustainability performance of built heritage attractions. Secondly, emerging countries should care about their heritage assets and consider sustainable development in practice. Heritage can not only be developed as tourist attractions to boost the local economy, but they also have a place in affirming identity and invaluable cultural assets. As this research indicates, the conflicts between development and conservation of heritage sites can be found in both developed and emerging markets, although emerging markets seem to have more pressure in terms of economic development. The challenge for emerging markets is how to balance the development and conservation of heritage to achieve maximum economic benefits. A list of actions should be considered outside of this research for emerging markets. For example, in terms of the economic dimension, how to control the visitor numbers while still maintaining high tourism income. In the environmental dimension, emerging markets should consider how to improve heritage conservation as well as environmental management efficiency in the development of heritage tourism. In the social dimension, they should consider how to involve local communities and stakeholders appropriately, with the aim that the development of heritage tourism would not only benefit the developers, but also the locals, including those individuals who may not be directly involved in heritage tourism. In the governance dimension, they should consider how to combine heritage planning and attraction management and how to reduce development-related issues in order to satisfy an extensive range of stakeholders.

Furthermore, countries in emerging markets are facing a variety of issues; some recognise the importance of built heritage tourism and are developing their management approaches, others much less so. For example, Funari (2000) identifies that there is a need for archaeologists to be trained and to co-operate with other professionals in dealing with heritage issues in Brazil. Kumar (2009) proposed challenges of identification and presentation in Indian heritage tourism. The town of Luang Prabang in Laos has a wonderful mix of Lao, Thai and French architecture set in a beautiful natural landscape, but there may not be enough residents to sustain its traditional activities after its inscription on the World Heritage List in 1995 (Imon,

2013). Luong (2015) reported that Vietnam's rush to develop tourism risks damaging its heritage. Casinos, new resorts and cable cars threaten the country's unspoiled heritage as the tourism sector struggles to balance development with conservation and urbanization. The experience and lessons vary between countries, and they may learn from each other. The application of a sustainability appraisal methodology would be an excellent opportunity to identify and measure their heritage tourism development issues holistically, then propose customized suggestions to address these issues.

There are more research needs to be worked on in the next stage. Some research topics for the next stage are proposed in Appendix 8, and a few papers concerning the sustainability of built heritage have been considered and accepted by various international conferences.

7.6 Concluding statement

This work has been achieved with limitations. Not only did the expected and actual duration of the doctoral programme differ, but the author also had to interact with key participants for support in order to increase his understanding of sustainability appraisal approaches. Finally, the overall conclusion has been reached: the sustainability of built heritage attractions within the scope of economic, social, environmental and governance dimensions. A stakeholder involvement approach not only provided a holistic perspective to appraise sustainability performance, but it also benefited the stakeholders themselves. Although there are various similarities between built heritage attractions in different countries and between different sizes of attraction and by different types of ownership and management, appropriate governance is the key factor to achieving sustainability.

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Appendix 1: Built Heritage Attractions Sustainability

Major Built Heritage Attractions Sustainability Survey

Dear Sir/Madam,

My name is Wei Ren, a doctoral student from the Department of Planning, at Oxford Brookes University. My research focuses on the development of sustainability appraisal for built heritage attractions, in both the UK and China. This questionnaire is specifically designed to provide information concerning sustainability appraisal for a sample of major built heritage attractions. It aims to identify the dimensions of sustainability for such attractions through a consideration of relevant sustainability indicators.

Your attraction is one of the major important attractions in the England. Therefore, your participation in this research is important and very much appreciated. With that in mind, I would like to invite you to submit your feedback and suggestions via a short online survey, which is completely anonymous and should take no more than 10 minutes to complete. All responses to the questions will be kept confidential, used purely for the research and will not be relayed to any third party.

Thank you very much in advance for completing the questionnaire.

Best Wishes,
Wei Ren
Doctoral Student
Department of Planning
Oxford Brookes University

Survey

Section A: About Your Attraction

- 1.1 *The name of your attraction* _____ -
- 1.2 *How many tourists visited your attraction in 2012 (or the number of tourists in 2011 if 2012 data is not yet available)?* _____ -
- 1.3 *How many people are employed by your attraction? How many of them are seasonal employees? How many of them are from the 'local area'? (The definition of local area in this research is an area within 10 miles radius of the attraction)*
Total employees _____ *of which seasonal employees* _____ *and local employees* _____
- 1.4 *Which department/ position takes charge of environmental management issues?* _____
- 1.5 *Your Email* _____ *Telephone number* _____

Section B: Your Views on Some Key Sustainable Indicators

Section B aims to evaluate sustainability for built heritage attraction by employing a set of indicators. They can be categorized in four: economic, environmental social and governance dimensions. Your views on the **importance** of sustainability indicators **are extremely valuable to this research**. An initial very short list of key indicators is provided.

Economic Dimension					
Indicators	Extremely important	Important	Moderately Important	Of little importance	Unimportant
Providing local employment	☐	☐	☐	☐	☐
Growth in annual gross income of attraction	☐	☐	☐	☐	☐
External funding support for the built heritage attraction (e.g. from governments/others)	☐	☐	☐	☐	☐

Environmental Dimension					
Indicators	Extremely important	Important	Moderately Important	Of little importance	Unimportant
Efficient water and energy systems (e.g. minimising use of water and energy)	☐	☐	☐	☐	☐
Waste and pollution management (e.g. minimising waste, recycling waste, preventing pollution)	☐	☐	☐	☐	☐
Possessing Environmental Management System (e.g. ISO14001, other)	☐	☐	☐	☐	☐
Historic buildings conservation and preservation	☐	☐	☐	☐	☐

Social Dimension					
Indicators	Extremely important	Important	Moderately Important	Of little importance	Unimportant
Support from attraction to local communities (e.g. with local benefits, free entry, education)	☐	☐	☐	☐	☐
Local residents' satisfaction with the operation of the attraction	☐	☐	☐	☐	☐
Traffic congestion on peak tourism periods	☐	☐	☐	☐	☐

Governance Dimension					
Indicators	Extremely important	Important	Moderately Important	Of little importance	Unimportant
Legal basis for heritage protection	☐	☐	☐	☐	☐
Involvement of key stakeholders , including local residents and organizations	☐	☐	☐	☐	☐
Producing sustainability documents (e.g. Environmental Statement, Corporate Social Responsibility report)	☐	☐	☐	☐	☐
Urban planning (e.g. planning permission, policy, appraisals)	☐	☐	☐	☐	☐

Please specify any other indicators which you think are important but are not listed above

Section C: Your Views of Planning and Management for Sustainable Heritage Attractions

Section C aims to identify the professionals' views of planning and management for built heritage attractions. Please tick all relevant boxes in follow questions.

3.1 Does your attraction have environmental management systems?

No ☐ Yes ☐ *if YES, please tick all relevant boxes*

☐ ISO quality management system 14001

☐ Sustainable Tourism Certification from VisitEngland

☐ Other environmental/ sustainability management system (please specify) _____

3.2 Which planning laws/regulations if any have directly applied to your attraction in the last five years?

☐ National Planning Policy Framework

☐ Local planning regulations

☐ The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations

☐ Planning (Listed Buildings and Conservation Areas) Act

☐ Others (please Specify) _____

3.3 What environmental/sustainability documents if any have you produced in the last five years?

☐ Environment Statements

☐ Environment/Sustainability Reports

☐ Annual Report, including environmental/sustainability section

☐ Corporate Social Responsibility reports

☐ Others (please Specify) _____

3.4 If you applied for planning permission in the last five years, which organisations were involved?

☐ Local planning authority

☐ Statutory consultees (e.g. National Trust/ English Heritage)

☐ Environment Agency

☐ Professional Consultants

☐ Developers

☐ Local Residents

☐ Others (please Specify) _____

3.5 Could you please comment on the importance or otherwise of Sustainability Appraisal for built heritage attractions?

3.6 Would you be willing to be contacted about future stages of this research?

Yes ☐ No ☐

Your participation in this research is important and very much appreciated.

Wei Ren
Doctoral Student
Department of Planning
Oxford Brookes University

Built Heritage Attractions Sustainability Survey Chinese

中国主要历史文化旅游景区可持续发展问卷调查

尊敬的先生 / 女士，

您好！

我是任伟，我是英国牛津布鲁克斯大学牛津可持续发展研究院环境影响评价处的博士研究生，研究方向是中国和欧盟文化遗产的可持续发展评估。这份问卷调查主要目的是调查可持续发展评估的使用范围和评估标准。贵景区是中国屈指可数的重要景区，您的参与对这项研究至关重要。

这份问卷调查大概会占用您十分钟的时间，您所有的回答都会保密，仅用于学术研究，决不会透露给任何第三方组织和个人。这份研究的截至日期是，请您务必于此日期之前完成。

非常感谢您的参与！

任伟

博士研究生

牛津可持续发展研究院

英国牛津布鲁克斯大学

第一部分 景区综述

- 1.1 请问贵景区的名称？
- 1.2 请问贵景区 2012 年游客总人数是多少？
- 1.3 请问贵景区目前雇用的员工总人数是多少？
- 1.4 请问贵景区员工中有多少人是季节性临时工？
- 1.5 请问贵景区中有多少员工来自本市（地级市）？
- 1.6 请问贵景区中哪个部门（职位）负责环境管理？
- 1.7 请问贵景区中哪个部门（职位）负责文化遗产保护？
- 1.8 请问您的电子邮件？
- 1.9 请问您的联系电话？

第二部分 可持续发展评估评估标准

可持续发展是既满足当代人的需求，又不对后代人满足其需求的能力构成危害的发展，它包括经济，社会，环境和管理四个方面。第二部分主要用于检验可持续发展在以上四方面的评估标准。请您根据以下评估标准的重要性打分。

经济类可持续发展评估标准

请您从景区管理者角度，根据以下准则对景区可持续发展的重要性打分，1代表最重要，5代表最不重要。

2.1 景区为当地提供就业机会

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.2 景区收入持续稳定增长

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.3 外部资金支持景区发展（例如，政府补贴，专项资金，或者捐助等）

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

环境类可持续发展评估标准

请您从景区管理者角度，根据以下评估标准对景区可持续发展的重要性打分，1代表最重要，5代表最不重要。

2.4 节约使用资源（例如，合理使用能源，节约使用水源等不可再生资源）

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.5 污染和垃圾管理（例如，减少污染和垃圾，垃圾分类处理等）

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.6 环境管理系统（例如，环境管理制度，质量管理体系，ISO140001等）

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.7 历史文物古迹的保护

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

社会类可持续发展评估标准

请您从景区管理者角度，根据以下评估标准对景区可持续发展的重要性打分，1代表最重要，5代表最不重要。

2.8 景区支持当地发展（例如，对当地居民减免票价，投资当地基础设施建设等）

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.9 当地居民对贵景区的满意程度

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.10 在旅游旺季时交通状况

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

管理类可持续发展评估标准

请您从景区管理者角度，根据以下评估标准对景区可持续发展的重要性打分，1代表最重要，5代表最不重要。

2.11 在景区发展中与利益相关者的互动（例如，当地居民与社区，相关管理机构，第三方组织等）

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.12 景区环境规划或者管理相关文件（例如，环境影响评价报告，环境管理报告，社会责任报告等）

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.13 城市规划（例如，规划审批，规划评估等）

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

2.14 法律规定（例如，文物遗产保护相关法规，环境保护相关法规等）

	1	2	3	4	5	
最重要	☐	☐	☐	☐	☐	最不重要

第三部分 历史文化遗产的管理和规划

第三部分主要目的是收集旅游景区历史文化遗产的管理和规划的相关信息。以下选择题均为多项选择题。

3.1 请问贵景区是否有环境管理系统？

环境质量管理认证（ISO 14001）

达到国家 4A 或者 5A 级景区标准

生态管理审计项目（Eco-Management and Audit Scheme）

Other:

3.2 请问贵景区的发展都受到那些法律法规的制约？

中华人民共和国环境保护法

中华人民共和国环境影响评价法

中华人民共和国文物保护法

世界文化遗产保护管理办法

中华人民共和国城乡规划法

Other:

3.3 请问贵景区在过去五年中发表了哪些环境类的文件？

环境影响评价报告

环境状况报告

企业社会责任报告

年度工作总结，其中包括环境保护章节

Other:

3.4 请问贵景区在最近申请规划审批时都咨询或者联系了哪些部门或者组织？

地方规划局（省级 / 地市级 / 县级）

中国住房和城乡建设部

地方环境保护局（省级 / 地市级 / 县级）

中国环境保护部

地方文物局（省级 / 地市级 / 县级）

开发商（例如，房地产公司，投资银行等）

当地居民（例如，开听证会等）

第三方机构

咨询机构（例如，规划院，研究院，大学等）

Other:

3.5 请问您是否可以评价一下历史文化旅游景区的可持续发展战略？

3.6 本研究员将来可否再联系您？

可以

不可以

非常感谢您参与这项研究，您的意见对历史文化旅游景区未来的发展方向非常重要。

Appendix 2: Major Built Heritage Attractions Sustainability Appraisal Interview Questions and Questionnaire for Chastleton House (Pilot Study)

Built Heritage Attractions Sustainability Appraisal Survey

Dear ...

This survey is specifically designed to provide information concerning sustainability appraisal for a sample of major built heritage attractions. It aims to identify the dimensions of sustainability for such attractions through a consideration of relevant sustainability indicators and appraisal steps. All the stakeholders for the attractions are invited to participate in this research, including attraction managers, planners and tourists.

Your participation in this research is important and very much appreciated. With that in mind, I would like to invite you to submit your feedback and suggestions via a short face-to-face interview, which is completely anonymous and should take no more than 40 minutes to complete. In the interview, two steps are involved, the first is to answer all the questions which follow, and the second is to weight the importance of various indicators. All responses to the questions will be kept confidential, used purely for the research.

Thank you very much in advance for completing the survey.

**Best Wishes,
Wei Ren
Doctoral Student
Department of Planning
Oxford Brookes University**

Interview questions for attractions' management team

Section A Interview questions

1. How many employees work at your attraction?
2. How many employees are seasonal employees?
3. How many employees are from the 'local area'? (The definition of the local area in this research is the an area of approx. 20 miles around the attraction)
4. Could you please provide your revenue in last five years? (If applicable)
5. How many visitors did your attraction have in last five years?
6. Which grade is the Energy Efficiency Rating for your attraction? (If applicable)
7. Which grade is the Environmental (CO2) Impact Rating for your attraction? (If applicable)
8. What have been the water, electrical and gas consumption costs (bills) over the last five years?
9. What percentage of waste can be recycled in your attraction?
10. What other sustainability/ environmental programmes has your attraction introduced in the last few years?
11. What is the annual expenditure on conservation, preservation and restoration as a percentage of the total expenditure of the attraction?
12. What is the technology and methods used for conservation and preservation?
13. Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?
14. Has your attraction involved local stakeholders when applying for planning permits? How did that go?
15. What are the benefits for the local residents from the attraction?
16. How many annual concessions tickets are issued to local residents, particular groups and visitors for educational purposes?
17. Do you have any buildings belonging to English Heritage Listed Building, Scheduled Monuments, Local Designation, Registered Battlefields, Registered Park and Gardens.
18. How to appraisal the sustainability for built heritage attractions in your mind?

Interview questions for planner

Section A Interview questions

- 1. Could you please explain the individual attraction planning management system of National Trust?**
- 2. Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
- 3. Have you been involved in this attraction in relation to planning permits in the last five years? If yes, could you please describe your involvement?**
- 4. Have you been involved with this attraction in other events, activities, and programmes?**
- 5. If the attraction has applied for planning permission in the last five years, which organisations were involved? Were you involved in the decision making process?**
- 6. Which planning laws/regulations, if any, have been directly applied to the attraction in the last five years?**
- 7. Has the attraction applied environmental planning (such as EIA) in the last five years? What do you think about that?**
- 8. Are there any buildings belonging to English Heritage Listed Building, Scheduled Monuments, Local Designation, Registered Battlefields, Registered Park and Gardens.**
- 9. What is the development plan for the attraction?**
- 10. How planning management may benefit to the sustainability for built heritage attraction ?**
- 11. How to appraisal the sustainability for built heritage attractions in your mind?**

Interview questions for volunteers

Section A Interview questions

- 1. When did you first start working as a volunteer for this attraction?**
- 2. Why you want to be the volunteer for this attraction?**
- 3. What is your position?**
- 4. Where you are living? How often do you come the attraction from the home per month?**
- 5. Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
- 6. Could you please give more comments and suggestions in relation to sustainability for this attraction?**
- 7. Have you been involved in this attraction in relation to planning permits in the last five years? If yes, could you please describe your involvement?**
- 8. Have you been involved with this attraction in other events, activities, and programmes?**
- 9. Has the attraction applied environmental planning (such as EIA) in the last five years? What do you think about that if you know?**
- 10. How to appraisal the sustainability for built heritage attractions in your mind?**
- 11. Please rate the following in order of satisfaction to your attraction, with 10 being the Most Satisfy and 1 being the least unsatisfied. Could you please explain why?**

Interview questions for visitors

Section A Basic Questions

1. **Where are you come from?**
2. **Could you please give more comments and suggestions in relation to sustainability for this attraction?**
3. **Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
4. **Have you been involved with this attraction in other events, activities, and programmes?**
5. **How to appraisal the sustainability for built heritage attractions from your min**
6. **Please rate the following in order of satisfaction to your attraction, with 10 being the most satisfy and 1 being the least unsatisfied.**

1 2 3 4 5 6 7 8 9 10

Could you please explain why?

Views on some key sustainability indicators for all participants

Section B: Views on Some Key Sustainability Indicators

Section B aims to evaluate sustainability for built heritage attractions by employing a set of indicators. They can be categorized into four dimensions: economic, environmental, social and governance. Your views on the importance of these factors are extremely valuable to this research. An initial very short list of key indicators is provided. Please tick the importance weightings (extremely important etc) which best reflect your views about the indicators.

Economic Dimension						
Indicator	Sub Indicator	Extremely important	Important	Moderately Important	Of little importance	Unimportant
Indicator s of employ ment	Total number of built heritage positions created directly by the attraction	☐	☐	☐	☐	☐
	Percentage of built heritage positions which provide permanent employment for the full year	☐	☐	☐	☐	☐
	Percentage of professionals who come from the local area (the 'local area' in this research is an area within 20 miles radius of the attraction)	☐	☐	☐	☐	☐
Indicator of Financial Health	Visitor numbers	☐	☐	☐	☐	☐
	Total net (revenue-costs)	☐	☐	☐	☐	☐
	Visitor numbers and net growth	☐	☐	☐	☐	☐
Environmental Dimension						
Indicator of Green/Su stainabili ty initiati ves	Energy Efficiency Rating	☐	☐	☐	☐	☐
	Environmental (CO2) Impact Rating	☐	☐	☐	☐	☐
	Water, electrical and gas consumption trends	☐	☐	☐	☐	☐
	Waste and water recycle rate	☐	☐	☐	☐	☐
Historic Buildings Conserva tion And Preservat ion	Expenditure on conservation, preservation and restoration	☐	☐	☐	☐	☐
	Technology and method of conservation and preservation	☐	☐	☐	☐	☐
Social Dimension						
Indicator	The attitudes towards attractions from the	☐	☐	☐	☐	☐

of Key Stakeholders Involvement	local community, tourism authority, and planning authority					
	Local people decision involvement	☐	☐	☐	☐	☐
	Concessions for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	☐	☐	☐	☐	☐
	Number of local workers	☐	☐	☐	☐	☐
Governance Dimension						
Indicator of Planning	Planning documentations	☐	☐	☐	☐	☐
	Planning process	☐	☐	☐	☐	☐
	Transparency and accountability	☐	☐	☐	☐	☐
	Effectiveness and efficiency	☐	☐	☐	☐	☐

Appendix 3: Major Built Heritage Attractions Sustainability

Appraisal Interview Questions and Questionnaire for

Oxford Castle Heritage Site

Interview questions for OCQ and OCUA management team

Section A Interview questions

1. How many employees work at Oxford Castle Heritage Site? (Including the staff in the Oxford Castle, Education Centre and all commercial units)?
2. How many employees are seasonal employees
3. How many employees are from the 'local area'? (The definition of the local area in this research is an area of approx. 20 miles around the attraction)
4. Could you please provide revenue of Oxford Castle Quarter in last three years? (If applicable)
5. Could you please estimate the total revenue of all commercial units in Oxford Castle Quarter in last three years? (If applicable)
6. How many visitors did Oxford Castle Quarter have in last three years roughly? What is the carrying capacity of Oxford Castle Heritage Site?
7. Which grade is the Energy Efficiency Rating for buildings of Oxford Castle Heritage Site? (If applicable)
8. Which grade is the Environmental (CO2) Impact Rating buildings of Oxford Castle Heritage Site? (If applicable)
9. Could you please introduce the environmental management system of Oxford Castle Heritage Site?
10. What has been the water, electrical and gas consumption costs (bills) trends the last few years? (3-5 years if applicable) What is the percentage of increase or decrease?
11. What percentage of waste can be recycled in Oxford Castle Heritage Site?
12. What other sustainability/ environmental programmes have Oxford Castle Heritage Site introduced in the last few years?
13. What is the annual expenditure on conservation, preservation and restoration as a percentage of the total expenditure of Oxford Castle Heritage Site?
14. What is the technology and methods used for conservation and preservation?
15. Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?
16. Has your attraction involved local stakeholders when applying for planning permits? How did that go?
17. How to appraisal the sustainability for built heritage attractions in your mind?
18. How to maintain relationship between development and preservation in your attraction?
19. Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?
20. Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 0 being the least unsatisfied.

1 2 3 4 5 6 7 8 9 10

Could you please explain why?

Interview questions for OPT management team

Section A Interview questions

1. **How many employees work at Oxford Castle Heritage Site? (Including the staff in the Oxford Castle, Education Centre and all commercial units)?**
2. **How many employees are seasonal employees?**
3. **How many employees are from the 'local area'? (The definition of the local area in this research is an area of approx. 20 miles around the attraction)**
4. **Could you please provide your revenue in last three years? (If applicable)**
5. **How many visitors did your attraction have in last three years? What is the carrying capacity of Oxford Castle Heritage Site?**
6. Which grade is the Energy Efficiency Rating for your attraction? (If applicable)
7. Which grade is the Environmental (CO2) Impact Rating for your attraction? (If applicable)
8. **Could you please introduce the environmental management system of Oxford Castle Heritage Site?**
9. What have been the water, electrical and gas consumption costs (bills) trends the last few years? (3-5 years if applicable) What is the percentage of increase or decrease?
10. What percentage of waste can be recycled in Oxford Castle Heritage Site?
11. What other sustainability/ environmental programmes have Oxford Castle Heritage Site introduced in the last few years?
12. What is the annual expenditure on conservation, preservation and restoration as a percentage of the total expenditure of Oxford Castle Heritage Site?
13. What is the technology and methods used for conservation and preservation?
14. **Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
15. **Has your attraction involved local stakeholders when applying for planning permits? How did that go?**
16. **How to appraisal the sustainability for built heritage attractions in your mind?**
17. **How to maintain relationship between development and preservation in your attraction? Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?**
18. **Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 0 being the least unsatisfied.**

1
2
3
4
5
6
7
8
9
10

Could you please explain why?

Interview questions for visitors

Section A Basic Questions

7. **Where are you come from?**
8. **Could you please give more comments and suggestions in relation to sustainability for this attraction?**
9. **Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
10. **Have you been involved with this attraction in other events, activities, and programmes?**
11. **How to appraisal the sustainability for built heritage attractions from your min**
12. **Please rate the following in order of satisfaction to your attraction, with 10 being the most satisfy and 1 being the least unsatisfied.**

1 2 3 4 5 6 7 8 9 10

Could you please explain why?

Views on some key sustainability indicators for all participants

Economic Dimension						
Indicator	Sub Indicator	Extremel y importan t	Importan t	Moderat ely Importa nt	Of little importan ce	Unimporta nt
Indicators of employment	Full-time and permanent employment	☐	☐	☐	☐	☐
	Local employment	☐	☐	☐	☐	☐
Indicator of Financial Health	Total net profit	☐	☐	☐	☐	☐
	Net profit growth rate	☐	☐	☐	☐	☐
Indicators of Visitors	Carrying capacity of the attraction	☐	☐	☐	☐	☐
	Tourist visit numbers	☐	☐	☐	☐	☐
Environmental Dimension						
Indicator of Environmen tal Managemen t	Environmental management system (Average results of Energy Efficiency Rating and Environmental (CO2) Impact Rating if possible)	☐	☐	☐	☐	☐
	Water, electrical and gas consumption trends	☐	☐	☐	☐	☐
	Waste recycle rate	☐	☐	☐	☐	☐
Indicators of Historic Buildings Conservatio n and Preservatio n	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction	☐	☐	☐	☐	☐

	Attraction conservation management	☐	☐	☐	☐	☐
Social Dimension						
Indicator of Key Stakeholders Involvement	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors	☐	☐	☐	☐	☐
	Social Involvement					
Indicator of Key Stakeholders' Attitudes	The attitudes towards attractions from the third parties (local community, volunteers, and other authorities)	☐	☒	☐	☐	☐
	The attitudes towards attractions from the visitors	☐	☐	☐	☐	☐
Governance Dimension						
Indicator of Planning	Planning effectiveness and efficiency, and transparency and accountability	☐	☐	☐	☐	☐
Trouble-Shooting Ability	The ability to balance the relationship between development and preservation	☐	☐	☐	☐	☐
Attraction management	Attraction management	☐	☐	☐	☐	☐

Appendix 4: Major Built Heritage Attractions Sustainability

Appraisal Interview Questions and Questionnaire for

Mountain Jieshi

Interview questions for management team of Mountain Jieshi Scenic Area

第一部分：采访问题

Section A: Interview Questions

1. 可否介绍一下贵景区的发展历史？ Could you please introduce the background of your site development?
2. 请问贵景区有多少员工？ How many employees work at Jieshi Mountain Scenic Area?
3. 这些员工中有多少是季节性员工？ How many employees are seasonal employees?
4. 这些员工中有多少任在距离景区20公里以内的地方定居？ How many employees are from the 'local area'? The definition of the local area in this research is an area of approx. 20 miles around the attraction
5. 贵景区最近三年的总收入分别是多少？ Could you please provide your revenue in last three years?
6. 贵景区最近三年的游客人数分别是多少？ 贵景区每年可以最多接待多少游客而不影响游客旅游质量和景区正常运营？ How many visitors did your attraction have in last three years? What is the carrying capacity of your site?
7. 贵景区是否有环境管理系统？ Could you please introduce the environmental management system of your site?
8. 贵景区最近三年水电气费是否增加或者减少？ 年增（减）比例是多少？ What have been the water, electrical and gas consumption costs (bills) trends the last few years? (If applicable) What is the percentage of increase or decrease?
9. 贵景区垃圾回收率是多少？ What percentage of waste can be recycled in your site?
10. 贵景区是承办过一些关于环境管理或者可持续发展的活动？ What other sustainability/ environmental programmes have your site introduced in the last few years?
11. 贵景区去年在文化遗产保护上的投入是多少？ What is the annual expenditure on conservation, preservation and restoration as a percentage of the total expenditure of your site?
12. 贵景区一般使用什么科技和方法保护文化遗产？ What is the technology and methods used for conservation and preservation?
13. 您是否觉得贵景区对当地发展有积极作用？ 如果有，表现在哪里？ Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?
14. 当贵景区申请规划许可时，是否考虑过其他单位的意见，并且进行了有效沟通？ Has your attraction involved local stakeholders when applying for planning permits? How did that go?
15. 您认为如何进行可持续发展评价？ How to appraisal the sustainability for built heritage attractions in your mind?
16. 如何平衡景区的发展和文化遗产保护的关系？ 贵景区以前是否遇到过什么问题？ 是否与当地居民有过争议？ How to maintain relationship between development and preservation in your attraction? Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?

17. 可否为景区的管理打分？ 10 为最高分，1为最低分？ Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 9 being the least unsatisfied.

1 2 3 4 5 6 7 8 9 10

Interview questions for management team of WRT

第一部分：采访问题

Section A: Interview Questions

1. 可否介绍一下贵寺庙的发展历史和背景？ **Could you please introduce the background of your site development?**
2. 请问贵寺庙有多少僧侣和员工？ **How many employees work at your site?**
3. 这些工人中有多少是季节性员工？ **How many employees are seasonal employees?**
4. 这些工人中有多少任在距离景区20公里以内的地方定居？ **How many employees are from the 'local area? The definition of the local area in this research is an area of approx. 20 miles around the attraction**
5. 贵寺庙最近三年的总收入分别是多少？ **Could you please provide your revenue in last three years?**
6. 贵寺庙最近三年的游客人数分别是多少？贵寺庙每年可以最多接待多少游客而不影响游客旅游质量和景区正常运营？ **How many visitors did your attraction have in last three years? What is the carrying capacity of your site?**
7. 贵寺庙是否有环境管理系统？ **Could you please introduce the environmental management system of your site?**
8. 贵寺庙最近三年水电气费是否增加或者减少？年增（减）比例是多少？ **What have been the water, electrical and gas consumption costs (bills) trends the last few years? (If applicable) What is the percentage of increase or decrease?**
9. 贵寺庙垃圾回收率是多少？ **What percentage of waste can be recycled in your site?**
10. 贵寺庙是承办过一些关于环境管理或者可持续发展的活动？ **What other sustainability/ environmental programmes have your site introduced in the last few years?**
11. 贵寺庙去年在文化遗产保护上的投入是多少？ **What is the annual expenditure on conservation, preservation and restoration as a percentage of the total expenditure of your site?**
12. 贵寺庙一般使用什么科技和方法保护文化遗产？ **What is the technology and methods used for conservation and preservation?**
13. 您是否觉得贵寺庙对当地发展有积极作用？如果有，表现在哪里？ **Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
14. 当贵寺庙重建申请规划许可时，是否考虑过其他单位的意见，并且进行了有效沟通？ **Has your attraction involved local stakeholders when applying for planning permits? How did that go?**
15. 您认为如何进行可持续发展评价？ **How to appraisal the sustainability for built heritage attractions in your mind?**
16. 如何平衡寺庙的发展和文化遗产保护的关系？贵寺庙以前是否遇到过什么问题？是否与当地居民有过争议？ **How to maintain relationship between development and preservation in your attraction? Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?**
17. 可否为寺庙的管理打分？10为最高分，1为最低分？ **Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 0 being the least unsatisfied.**

1 2 3 4 5 6 7 8 9 10

Interview questions for management team of Tourism Bureau of Changli County

第一部分：采访问题

Section A: Interview Questions

1. 可否介绍一下碣石山景区或水岩寺的发展背景？ **Could you please introduce background of the site development?**
2. 可否介绍一下旅游局在碣石山景区或水岩寺发展中的作用？ **Could you please introduce role of tourism bureau in the site development?**
3. 可否介绍一下碣石山景区或水岩寺规划申请和审批情况？ **Could you please introduce procedure for planning application of examination and approval of the site?**
4. 可否介绍一下碣石山景区或水岩寺环境保护情况？ **Could you please introduce environmental protection procedure of the site?**
5. 您是否曾经参加过碣石山景区或水岩寺举办的一些相关活动？ **Have you been involved with this site in other events, activities, and programmes?**
6. 您是否觉得碣石山景区或水岩寺对当地发展有积极作用？如果有，表现在哪里？ **Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
7. 您认为如何进行可持续发展评价？ **How to appraisal the sustainability for built heritage attractions in your mind?**
8. 如何平衡碣石山景区或水岩寺的发展和文化遗产保护的关系？碣石山景区或水岩寺以前是否遇到过问题？是否与当地居民有过争议？ **How to maintain relationship between development and preservation in your attraction? Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?**
9. 可否为碣石山景区或水岩寺的管理打分？ 10 为最高分，1为最低分？ **Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 9 being the least unsatisfied.**

1 2 3 4 5 6 7 8 9 10

Interview questions for local scholar

第一部分：采访问题

Section A: Interview Questions

1. 可否介绍一下碣石山景区或水岩寺的发展背景？ **Could you please introduce background of the site development?**
2. 可否介绍一下文联在碣石山景区或水岩寺发展中的作用？ **Could you please introduce role of Literary Federation in the site development?**
3. 可否介绍一下碣石山景区或水岩寺规划申请和审批情况？ **Could you please introduce procedure for planning application of examination and approval of the site?**
4. 可否介绍一下碣石山景区或水岩寺环境保护情况？ **Could you please introduce environmental protection procedure of the site?**
5. 您是否曾经参加过碣石山景区或水岩寺举办的一些相关活动？ **Have you been involved with this site in other events, activities, and programmes?**
6. 您是否觉得碣石山景区或水岩寺对当地发展有积极作用？如果有，表现在哪里？ **Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
7. 您认为如何进行可持续发展评价？ **How to appraisal the sustainability for built heritage attractions in your mind?**
8. 如何平衡碣石山景区或水岩寺的发展和文化遗产保护的关系？碣石山景区或水岩寺以前是否遇到过问题？是否与当地居民有过争议？ **How to maintain relationship between development and preservation in your attraction? Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?**
9. 可否为碣石山景区或水岩寺的管理打分？ 10 为最高分，1为最低分？ **Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 0 being the least unsatisfied.**

1 2 3 4 5 6 7 8 9 10

Interview questions for visitors

第一部分：采访问题

Section A: Interview Questions

1. 您在哪个城市定居？这是一个故意的错误哦 Where are you come from? _____
2. 您是否曾经参加过山海关景区举办的相关活动？ Have you been involved with this site in other events, activities, and programmes?

3. 您是否觉得山海关景区对当地发展有积极作用？如果有，表现在哪里？ Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?

4. 您认为如何进行可持续发展评价？ How to appraisal the sustainability for built heritage attractions in your mind?

5. 山海关景区以前是否遇到过什么问题？是否与当地居民有过争议？ Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?

6. 可否为山海关景区的管理打分？ 10 为最高分，1为最低分？ Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfied and 1 being the least unsatisfied.
1 2 3 4 5 6 7 8 9 10

Views on some key sustainability indicators for all participants

Economic Dimension 经济方面						
Indicator 影响因子	Sub Indicator 影响因子分解	Extremely important 极为重要	Important 重要	Moderately Important 一般重要	Of little importance 不太重要	Unimportant 不重要
Employment 就业	Full-time and permanent employment 全职正式工作	☐	☐	☐	☐	☐
	Local employment 当地工作	☐	☐	☐	☐	☐
Financial Health 财务健康	Total net profit 总盈利	☐	☐	☐	☐	☐
	Net profit growth rate 盈利增长率	☐	☐	☐	☐	☐
Visitors 游客	Carrying capacity of the attraction 旅游承载力	☐	☐	☐	☐	☐
	Tourist visit numbers 游客访问人数	☐	☐	☐	☐	☐
Environmental Dimension 环境方面						
Environmental Management 环境管理	Environmental management system 环境管理系统	☐	☐	☐	☐	☐
	Water, electrical and gas consumption trends 水电气消费趋势	☐	☐	☐	☐	☐
	Waste recycle rate 垃圾回收率	☐	☐	☐	☐	☐
Historic Buildings Conservation and Preservation 文化遗产保护	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction 文化遗产保护的总投资的比重	☐	☐	☐	☐	☐
	Attraction conservation management 文化遗产管理	☐	☐	☐	☐	☐
Social Dimension 社会方面						
Key Stakeholders Involvement	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors 为当地居民, 特殊群体	☐	☐	☐	☐	☐

nt 与其他单位相协调	准备的折扣门票占总门票的比例					
	Social Involvement 社会协调	☐	☐	☐	☐	☐
Key Stakeholders' Attitudes 其他单位的满意率	The attitudes towards attractions from the third parties (local community, volunteers, and other authorities) 当地居民, 政府部门, 志愿者和其他单位对景区的满意率	☐	☐	☐	☐	☐
	The attitudes towards attractions from the visitors 游客满意率	☐	☐	☐	☐	☐
Governance Dimension 管理方面						
Planning 规划	Planning effectiveness and efficiency, and transparency and accountability 规划的有效性, 透明度和责任感	☐	☐	☐	☐	☐
Trouble-Shooting Ability 解决问题的能力	The ability to balance the relationship between development and preservation 解决保护与发展问题的能力	☐	☐	☐	☐	☐
Attraction management 景区管理	Attraction management 景区管理	☐	☐	☐	☐	☐

Appendix 5: Major Built Heritage Attractions

Sustainability Appraisal Interview Questions and Questionnaire for Shanhai Pass, Great Wall of China

Interview questions for Shanhai Pass Tourism Bureau

第一部分：采访问题

Section A: Interview Questions

1. 可否介绍一下贵景区的发展历史？ **Could you please introduce the background of your site development?**
2. 请问贵景区有多少员工？ **How many employees work at Jieshi Mountain Scenic Area?**
3. 这些员工中有多少是季节性员工？ **How many employees are seasonal employees?**
4. 这些员工中有多少任在距离景区20公里以内的地方定居？ **How many employees are from the ‘local area’? The definition of the local area in this research is an area of approx. 20 miles around the attraction**
5. 贵景区最近三年的总收入分别是多少？ **Could you please provide your revenue in last three years?**
6. 贵景区最近三年的游客人数分别是多少？贵景区每年可以最多接待多少游客而不影响游客旅游质量和景区正常运营？ **How many visitors did your attraction have in last three years? What is the carrying capacity of your site?**
7. 贵景区是否有环境管理系统？ **Could you please introduce the environmental management system of your site?**
8. 贵景区最近三年水电气费是否增加或者减少？年增（减）比例是多少？ **What have been the water, electrical and gas consumption costs (bills) trends the last few years? (If applicable) What is the percentage of increase or decrease?**
9. 贵景区垃圾回收率是多少？ **What percentage of waste can be recycled in your site?**
10. 贵景区是承办过一些关于环境管理或者可持续发展的活动？ **What other sustainability/ environmental programmes have your site introduced in the last few years?**
11. 贵景区去年在文化遗产保护上的投入是多少？ **What is the annual expenditure on conservation, preservation and restoration as a percentage of the total expenditure of your site?**
12. 贵景区一般使用什么科技和方法保护文化遗产？ **What is the technology and methods used for conservation and preservation?**
13. 您是否觉得贵景区对当地发展有积极作用？如果有，表现在哪里？ **Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
14. 当贵景区申请规划许可时，是否考虑过其他单位的意见，并且进行了有效沟通？ **Has your attraction involved local stakeholders when applying for planning permits? How did that go?**
15. 您认为如何进行可持续发展评价？ **How to appraisal the sustainability for built heritage attractions in your mind?**
16. 如何平衡景区的发展和文化遗产保护的关系？贵景区以前是否遇到过什么问题？是否与当地居民有过争议？ **How to maintain relationship between**

development and preservation in your attraction? Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?

17. 可否为景区的管理打分? 10 为最高分, 1为最低分? Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 9 being the least unsatisfied.

1 2 3 4 5 6 7 8 9 10

Interview questions for Shanhai Pass Government

第一部分：采访问题

Section A: Interview Questions

1. 可否介绍一下山海关景区的发展背景？ Could you please introduce background of the site development?
 2. 可否介绍一下旅游局在山海关景区发展中的作用？ Could you please introduce role of tourism bureau in the site development?
 3. 可否介绍一下山海关景区规划申请和审批情况？ Could you please introduce procedure for planning application of examination and approval of the site?
 4. 可否介绍一下山海关景区环境保护情况？ Could you please introduce environmental protection procedure of the site?
 5. 您是否曾经参加过山海关景区举办的一些相关活动？ Have you been involved with this site in other events, activities, and programmes?
 6. 您是否觉得山海关景区对当地发展有积极作用？ 如果有，表现在哪里？ Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?
 7. 您认为如何进行可持续发展评价？ How to appraisal the sustainability for built heritage attractions in your mind?
 8. 如何平衡山海关景区的发展和文化遗产保护的关系？ 山海关景区以前是否遇到过问题？ 是否与当地居民有过争议？ How to maintain relationship between development and preservation in your attraction? Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?
 9. 可否为山海关景区的管理打分？ 10 为最高分，1为最低分？ Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 1 being the least unsatisfied.
- | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|

Interview Questions for Qinhuangdao Tourism Bureau

第一部分：采访问题

Section A: Interview Questions

1. 可否介绍一下山海关景区的发展背景？ **Could you please introduce background of the site development?**
2. 可否介绍一下旅游局在山海关景区发展中的作用？ **Could you please introduce role of tourism bureau in the site development?**
3. 可否介绍一下山海关景区规划申请和审批情况？ **Could you please introduce procedure for planning application of examination and approval of the site?**
4. 可否介绍一下山海关景区环境保护情况？ **Could you please introduce environmental protection procedure of the site?**
5. 您是否曾经参加过山海关景区举办的一些相关活动？ **Have you been involved with this site in other events, activities, and programmes?**
6. 您是否觉得山海关景区对当地发展有积极作用？如果有，表现在哪里？ **Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?**
7. 您认为如何进行可持续发展评价？ **How to appraisal the sustainability for built heritage attractions in your mind?**
8. 如何平衡山海关景区的发展和文化遗产保护的关系？山海关景区以前是否遇到过问题？是否与当地居民有过争议？ **How to maintain relationship between development and preservation in your attraction? Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?**
9. 可否为山海关景区的管理打分？ 10 为最高分，1为最低分？ **Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 9 being the least unsatisfied.**
1 2 3 4 5 6 7 8 9 10

Interview Questions for Local scholar

第一部分：采访问题

Section A: Interview Questions

1. 您是否曾经参加过山海关长城举办的一些相关活动？ Have you been involved with this site in other events, activities, and programmes?
2. 您是否觉得山海关长城对当地发展有积极作用？如果有，表现在哪里？ Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?
3. 您认为如何进行可持续发展评价？ How to appraisal the sustainability for built heritage attractions in your mind?
4. 如何平衡山海关长城的发展和文化遗产保护的关系？山海关长城以前是否遇到过问题？是否与当地居民有过争议？ How to maintain relationship between development and preservation in your attraction? Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?
5. 可否为山海关长城的管理打分？ 10 为最高分，1为最低分？ Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfy and 9 being the least unsatisfied.

1 2 3 4 5 6 7 8 9 10

Interview questions for visitors

第一部分：采访问题

Section A: Interview Questions

1. 您在哪个城市定居？ Where are you come from
2. 您是否曾经参加过山海关景区举办的相关活动？ Have you been involved with this site in other events, activities, and programmes?
3. 您是否觉得山海关景区对当地发展有积极作用？如果有，表现在哪里？ Do you think this attraction contributes to the local area? If yes or no, could you please list some examples?
4. 您认为如何进行可持续发展评价？ How to appraisal the sustainability for built heritage attractions in your mind?
5. 山海关景区以前是否遇到过什么问题？是否与当地居民有过争议？ Has the attraction face any issues/problems may hold back daily operating before? Has the attraction face any dispute with local residents before?
6. 可否为山海关景区的管理打分？ 10 为最高分，1为最低分？ Could you please rate the following in order of satisfaction to your attraction management, with 10 being the Most Satisfied and 1 being the least unsatisfied.

1 2 3 4 5 6 7 8 9 10

Views on some key sustainability indicators for all participants

Economic Dimension 经济方面						
Indicator 影响因子	Sub Indicator 影响因子分解	Extremely important 极为重要	Important 重要	Moderately Important 一般重要	Of little importance 不太重要	Unimportant 不重要
Employment 就业	Full-time and permanent employment 全职正式工作	☐	☐	☐	☐	☐
	Local employment 当地工作	☐	☐	☐	☐	☐
Financial Health 财务健康	Total net profit 总盈利	☐	☐	☐	☐	☐
	Net profit growth rate 盈利增长率	☐	☐	☐	☐	☐
Visitors 游客	Carrying capacity of the attraction 旅游承载力	☐	☐	☐	☐	☐
	Tourist visit numbers 游客访问人数	☐	☐	☐	☐	☐
Environmental Dimension 环境方面						
Environmental Management 环境管理	Environmental management system 环境管理系统	☐	☐	☐	☐	☐
	Water, electrical and gas consumption trends 水电气消费趋势	☐	☐	☐	☐	☐
	Waste recycle rate 垃圾回收率	☐	☐	☐	☐	☐
Historic Buildings Conservation and Preservation 文化遗产保护	Percentage of annual expenditure on conservation, preservation and restoration as a proportion of the total expenditure of attraction 文化遗产保护的总投资的比重	☐	☐	☐	☐	☐
	Attraction conservation management 文化遗产管理	☐	☐	☐	☐	☐
Social Dimension 社会方面						
Key Stakeholders Involvement	Annual concession for local residents, particular groups and visitors for educational purposes as a proportion of total visitors 为当地居民, 特殊群体	☐	☐	☐	☐	☐

nt 与其他单位相协调	准备的折扣门票占总门票的比例					
	Social Involvement 社会协调	☐	☐	☐	☐	☐
Key Stakeholders' Attitudes 其他单位的满意率	The attitudes towards attractions from the third parties (local community, volunteers, and other authorities) 当地居民, 政府部门, 志愿者和其他单位对景区的满意率	☐	☐	☐	☐	☐
	The attitudes towards attractions from the visitors 游客满意率	☐	☐	☐	☐	☐
Governance Dimension 管理方面						
Planning 规划	Planning effectiveness and efficiency, and transparency and accountability 规划的有效性, 透明度和责任感	☐	☐	☐	☐	☐
Trouble-Shooting Ability 解决问题的能力	The ability to balance the relationship between development and preservation 解决保护与发展问题的能力	☐	☐	☐	☐	☐
Attraction management 景区管理	Attraction management 景区管理	☐	☐	☐	☐	☐

Appendix 6: Major Built Heritage Attractions Sustainability Survey (Responses)

2.	2.	2.15	3.1 Does your	3.2 Which planning	3.3 What	3.4 If you applied	3.5 Could you please comment on the	3.6 Would
3	3			Local planning		Local planning	It is important but I don't want a lot of	Yes
3	2	Role in	None of the above	Local planning	None of the above	Local planning	As a designated Heritage Estate we	Yes
2	1		ISO quality	Local planning	Environment	Local planning	It is paramount and a major priority for	Yes
2	2		None of the above	Local planning	Environment/Sustai	Local planning	I am not clear what Sustainability	Yes
2	3							No
1	1	Historic	We are assessed	National Planning	Environment/Sustai	Local planning	Climate change is a threat to our built	Yes
1	1	Please	We are assessed	National Planning	Environment/Sustai	Local planning	Climate change is a threat to our built	Yes
3	2			Local planning		Statutory consultees		Yes
1	2			CFCE	Environment/Sustai	CFCE		Yes
3	2		ISO quality	China System	Environment	China System	It should has island, lakes, attractions	Yes
3	3		ISO quality	China System	Environment/Sustai	Local planning	The key factor to sustainable	Yes
1	1		China National	China System	Annual Report,			Yes
2	3		China National	China System	Environment	Local planning	It is very important factor to sustainable	Yes
2	2		China National	China System	Environment	Local planning	For the sustainable development for a	Yes
1	1		ISO quality	China System	Environment	Local planning		Yes
2	2			China System	Corporate Social	Statutory consultees		Yes
2	1			China System	Environment	Local planning		Yes
2	2		ISO quality	China System	Environment	Local planning	Management according to laws and	Yes
3	1		ISO quality	China System	Annual Report,	Local planning		
3	3		China National	China System	Environment	Local planning		Yes
1	1		China National	China System	Annual Report,	Local planning		Yes
1	1			China System	Annual Report,	Local planning		Yes
3	1		China National	China System	Annual Report,	Local planning		Yes
2	2				Annual Report,	Local planning		Yes
2	1				Annual Report,	Local planning		Yes
1	2		China National		Environment/Sustai	Local planning	To be the China National 5A Level	Yes
2	2		ISO quality	China System	Environment	Local planning	leisure and vacationing	Yes
1	1		China National	China System	Environment/Sustai	Environment		
2	2			China System	Environment/Sustai	Statutory consultees		Yes
3	1		China National	China System	Annual Report,	Local planning		Yes
2	1		Sustainable	Local planning	Environment	Local planning	forever for everyone, responsibility for	Yes
4	2			National Planning		Local planning		Yes
	2	environm	Sustainable	Local planning		Local planning	the sustainability appraisal is very	Yes
	1	Keep the					sustainability appraisal is very important	Yes
2	1		ISO quality	National Planning	Environment	Local planning		Yes
1	1		in house	Planning (Listed	Environment/Sustai	Local planning	HRP is committee to develop a	Yes

2.	2.	2.15	3.1 Does your	3.2 Which planning	3.3 What	3.4 If you applied	3.5 Could you please comment on the	3.6 Would
3	3			Local planning		Local planning	It is important but I don't want a lot of	Yes
3	2	Role in	None of the above	Local planning	None of the above	Local planning	As a designated Heritage Estate we	Yes
2	1		ISO quality	Local planning	Environment	Local planning	It is paramount and a major priority for	Yes
2	2		None of the above	Local planning	Environment/Sustai	Local planning	I am not clear what Sustainability	Yes
2	3							No
1	1	Historic	We are assessed	National Planning	Environment/Sustai	Local planning	Climate change is a threat to our built	Yes
1	1	Please	We are assessed	National Planning	Environment/Sustai	Local planning	Climate change is a threat to our built	Yes
3	2			Local planning		Statutory consultees		Yes
1	2			CFCE	Environment/Sustai	CFCE		Yes
3	2		ISO quality	China System	Environment	China System	It should has island, lakes, attractions	Yes
3	3		ISO quality	China System	Environment/Sustai	Local planning	The key factor to sustainable	Yes
1	1		China National	China System	Annual Report,			Yes
2	3		China National	China System	Environment	Local planning	It is very important factor to sustainable	Yes
2	2		China National	China System	Environment	Local planning	For the sustainable development for a	Yes
1	1		ISO quality	China System	Environment	Local planning		Yes
2	2			China System	Corporate Social	Statutory consultees		Yes
2	1			China System	Environment	Local planning		Yes
2	2		ISO quality	China System	Environment	Local planning	Management according to laws and	Yes
3	1		ISO quality	China System	Annual Report,	Local planning		
3	3		China National	China System	Environment	Local planning		Yes
1	1		China National	China System	Annual Report,	Local planning		Yes
1	1			China System	Annual Report,	Local planning		Yes
3	1		China National	China System	Annual Report,	Local planning		Yes
2	2				Annual Report,	Local planning		Yes
2	1				Annual Report,	Local planning		Yes
1	2		China National		Environment/Sustai	Local planning	To be the China National 5A Level	Yes
2	2		ISO quality	China System	Environment	Local planning	leisure and vacationing	Yes
1	1		China National	China System	Environment/Sustai	Environment		
2	2			China System	Environment/Sustai	Statutory consultees		Yes
3	1		China National	China System	Annual Report,	Local planning		Yes
2	1		Sustainable	Local planning	Environment	Local planning	forever for everyone, responsibility for	Yes
4	2			National Planning		Local planning		Yes
	2	environm	Sustainable	Local planning		Local planning	the sustainability appraisal is very	Yes
	1	Keep the					sustainability appraisal is very important	Yes
2	1		ISO quality	National Planning	Environment	Local planning		Yes
1	1		in house	Planning (Listed	Environment/Sustai	Local planning	HRP is committee to develop a	Yes

Appendix 7: Oxford Castle Street Statistical Survey

Although the case study does not use figures for OCQ annual visitor numbers in the indicators assessment, this research estimates the number by looking at the wider picture of the economic influence of the Oxford Castle heritage site redevelopment. The Oxford Castle heritage site may receive about 2.8 million visitors for shopping and entertainment per year.

The researcher conducted an Oxford Castle Site Pedestrian Traffic Statistical survey on 20th December 2014. The researcher counted the visitor numbers entering the site from four observation points around OCQ: Gate 1 New Street (Includes Two Gates); Gate 2 Castle Street; Gate 3 Paradise Street; Gate 4 Tidmarsh Lane. The observation was carried out for 10 minutes at each gate between 06:00 to 21:00. The researcher sub-totaled the visitor numbers at the four gates and multiplied them by six to calculate the visitor numbers per hour, and then worked out the visitor numbers per day. The estimated visitor number was about 2,800 on 20th December 2014. The data confirmed by the Oxford Castle Uncloaked Attraction was that its visitor numbers were 80 on 20th December 2014, and the annual visitor numbers were 80,000 in 2014. This estimate approach also needs to consider the limitation of the timing near Christmas, when OCQ may receive more people visiting while Oxford Castle may receive fewer visitors. Therefore, we can estimate the annual visitor numbers for the Oxford Castle site at about 2.8 million, after comparing the data provided by the Oxford Castle Unlocked Attraction (Table Appendix 7.1 Oxford Castle Site Pedestrian Traffic Statistic, Figure Appendix 7.1).

However, the error rate should be considered when estimating the visitor numbers per day. Therefore, the researcher conducted a second validation count on 22 December 2014. However, this result may be distorted upwards because of Christmas. At Gate 1, the researcher counted visitor numbers every 10 minutes between 11:31-12:30. Then the researcher calculated the average visitor numbers per 10 minutes at 33.5, and used the average number to obtain the average accuracy rate as 94.5%; this has a margin of error of plus or minus 5.5% for the full sample (Table Appendix 7.2).



Figure Appendix 7. 1: Oxford Castle Statistical Survey conducted at New Street Gate in the morning, 2014

Table Appendix 7. 1: Oxford castle site pedestrian traffic statistic

Time	Gate 1	Gate 2	Gate 3	Gate 4	Subtotal	Estimate
0600-0610	0				0	0
0615-0625		0				
0630-0640			0			
0645-0655				0		
0700-0710	1				1	6
0715-0725		0				
0730-0740			0			
0745-0755				0		
0800-0810	2				11	66
0815-0825		5				
0830-0840			4			
0845-0855				0		
0900-0910	4				17	102
0915-0925		7				
0930-0940			5			
0945-0955				1		
1000-1010	12				19	114
1015-1025		4				
1030-1040			3			
1045-1055				0		
1100-1110	17				47	282
1115-1125		22				
1130-1140			3			

Table Continued

1145-1155				5		
1200-1210	24				54	324
1215-1225		18				
1230-1240			10			
1245-1255				2		
1300-1310	46				72	432
1315-1325		14				
1330-1340			7			
1345-1355				5		
1400-1410	29				56	336
1415-1425		20				
1430-1440			5			
1445-1455				2		
1500-1510	24				46	276
1515-1525		15				
1530-1540			5			
1545-1555				2		
1600-1610	27				47	282
1615-1625		11				
1630-1640			9			
1645-1655				0		
1700-1710	17				38	228
1715-1725		19				
1730-1740			0			
1745-1755				2		
1800-1810	11				28	168
1815-1825		14				
1830-1840			2			
1845-1855				0		
1900-1910	28				29	174
1915-1925		1				
1930-1940			0			
1945-1955				0		
2000-2010	2				3	18
2015-2025		1				
2030-2040			0			
2045-2055				0		
	244	151	53	19	468	2808
Note	Gate 1	New Street (Include Two Gates)				
	Gate 2	Castle Street				
	Gate 3	Paradise Street				
	Gate 4	Tidmarsh Ln				

Table Appendix 7. 2: Oxford castle pedestrian traffic statistic validation

Time	Gate 1 New Road
1131-1140	30
1141-1150	33
1151-1200	32
1201-1210	35
1211-1220	34
1121-1230	37
Total	201
Average	33.5

Accuracy validation	
1131-1140	$100\% - (33.5 - 30) / 33.5 = 89.55\%$
1141-1150	$100\% - (33.5 - 33) / 33.5 = 98.21\%$
1151-1200	$100\% - (33.5 - 32) / 33.5 = 95.52\%$
1201-1210	$100\% - (35 - 33.5) / 33.5 = 95.52\%$
1211-1220	$100\% - (34 - 33.5) / 33.5 = 98.51\%$
1121-1230	$100\% - (37 - 33.5) / 33.5 = 89.55\%$
	$(89.55\% + 98.21\% + 95.52\% + 95.52\% + 98.51\% + 89.55\%) / 6 = 94.4$
Average Accuracy	8%

Appendix 8: Potential research papers to be published

Year	Title
2016	How to define the sustainability of built heritage attractions
2017	Economic sustainability of built heritage attractions Environmental sustainability of built heritage attractions Social sustainability of built heritage attractions Governance sustainability of built heritage attractions
2018	How management and ownership influence the sustainability of built heritage attractions
2019	Exploring existing sustainability appraisal approaches to built heritage attractions Exploring existing sustainability indicators for built heritage attractions
2020	Sustainability of built heritage attractions between developing and developed countries Sustainability performance between large and small built heritage attractions
2020-2025	Economic sustainability of government/public bodies owned built heritage attractions Economic sustainability of private owned built heritage attractions Economic sustainability of charity owned built heritage attractions Environmental sustainability of government/public bodies owned built heritage attractions Environmental sustainability of private owned built heritage attractions Environmental sustainability of charity owned built heritage attractions Social sustainability of government/public bodies owned built heritage attractions Social sustainability of private owned built heritage attractions Social sustainability of charity owned built heritage attractions Governance sustainability of government/public bodies owned built heritage attractions Governance sustainability of private owned built heritage attractions Governance sustainability of charity owned built heritage attractions

Appendix 9: List of Publications

Papers

- Forthcoming, Ren, W. and Wang, M. 2016. The Trends of Public Participation in The Chinese Environmental Impact Assessment System, under peer review by *Journal of Environmental Planning and Management*.
- Forthcoming, Ren, W. Glasson, J. and Goodey, B., 2016. Indicators for Assessing the Sustainability of Built Heritage Attractions An Anglo Chinese Study in Attractions Management, under revision requested by *International Journal of Heritage Studies*.
- Forthcoming, Wang, H., Li, T. Deng, B., Ren, W. and Xu, H. 2016. Strategic Environmental Assessment Performance Factors and Their Interaction: An Empirical Study in China, under revision requested by *Environmental Impact Assessment Review*.
- Forthcoming, Xi, J. and Ren, W. 2016. The Education Systems in Relation to Urban Planning in the United Kingdom, under revision requested by *Urban and Rural Construction*. (Chinese)
- Forthcoming, Ren, W. Song, J and Xi, J. 2016. Sustainable urban planning policies for small towns in China. Under revision requested by *Urban and Rural Construction*. (Chinese)
- Ren, W. and Xi, J. The Challenges and Opportunities of Environmental Impact Assessment Appraise Approaches' Effectiveness in the UK, *Environmental Impact Assessment*, 38(2), pp. 53-56. (Chinese)
- Ren, W. 2009. Primary Investigation of the Hospitality Industry in Coastal Areas, *Management Observation*, 9, pp. 87-89. (Chinese)

Conferences

- Forthcoming, Ren, W. July, 2016. The Role of Built Heritage Regeneration in Urbanisation Case of Oxford Castle Regeneration Project. In *10th International Association for China Planning Conference*. Beijing: International Association for China Planning.
- Forthcoming, Ren, W. and Song, J. May 2016, Environmental Assessment Institutions for Countries in Silk Road. In *International Association for Impact*

Assessment Conference. Aichi-Nagoya: International Association for Impact Assessment.

Ren, W. and Wang, December 2015. The Effectiveness of Strategic Environmental Assessment in the Chinese Tourism Industry. In *3rd World Research Summit for Tourism and Hospitality*. Florida: UCF Rosen College of Hospitality Management.

Ren, W. July 2015. Effectiveness of Environmental Impact Assessment in the UK, In *4th Chinese Strategic Environmental Assessment Conference*. Chengdu: University of Nankai. (Chinese)

Ren, W. June 2013. An Introduction to Environmental Impact Assessment in the UK, In *3rd Chinese Strategic Environmental Assessment Conference*. Kunming: University of Nankai. (Chinese)

Ren, W. August 2011. Sustainability Evaluation Methodology of Tourist Attractions: Case Study of Fishing Island Tourist Attraction in China. In *6th Green Economic Conference*. Oxford: Green Economic Institute.

Book

Forthcoming, Ren, W. Xu. H. 2016. *Book translation of Introduction to Environmental Impact Assessment*, 4th edi. Original version edited by Glasson, J., Therivel, R. and Chadwick, A., 2013. Routledge. Chemical Industry Press: Beijing. (Chinese)