CHAPTER 5

DATA ANALYSIS AND RESULTS FOR STAGE TWO

5.1   Introduction

This chapter sets out to develop the draft framework for the monitoring strategies and key indicators in assessing the heritage values of WH cities in Malaysia. It is hypothesised that a new framework could be made acceptable to the local authorities if it reflects an understanding of the local stakeholders, professionals and researchers that are primarily concerns in pursuing "managing change" in cultural properties.

It was anticipated that different participant groups would have different views about the monitoring strategy for sustaining the heritage values of Malacca and George Town. Therefore, these views were explored through group discussions and questionnaire surveys. The findings from this stage are particularly valuable in setting the proposed framework for verification by an expert. In doing so, this chapter is organized into two sections, namely focus groups discussions and questionnaire surveys.

5.2   Focus Groups Discussion

An overview of the research methods has been provided in Chapter 4. This section explains in detail the organization of the focus groups discussions at two workshops (MBMB and GTWH Inc.) that were conducted during the period of the study as shown in Table 4.1, Chapter 4.

The initial proposal by the Researcher was according to the OUV of the sites as shown in Figure 5.1, which are: 1) architecture and urban form; 2) tangible and intangible culture; and 3) shophouses and townhouses.
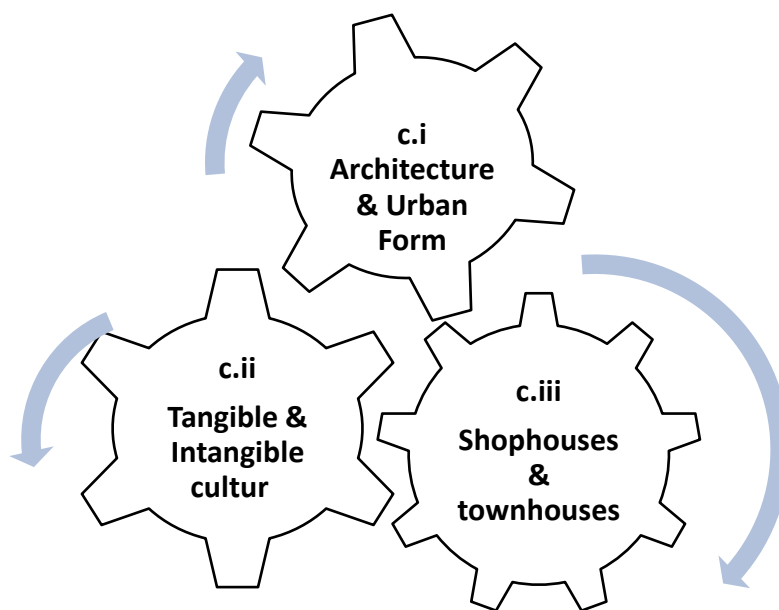

Figure 5.1: Significance criteria for WH cities
of Melaka and George Town

These are the criteria for both Malacca and George Town WH sites:

(C) ii: Malacca and George Town represent exceptional examples of multi-cultural trading town in East and Southeast Asia, …. (Decision of 32 COM 8B.25)

(C) iii: Malacca and George Town are living testimonies to the multi-cultural heritage and tradition of Asia, ….. (Decision of 32 COM 8B.25)

(C) iv: Historical City of Malacca and Historical City of George Town reflect the coming together of cultural elements …... (Decision of 32 COM 8B.25)

5.2.1 Workshop #1

The workshop was conducted with a clear objective to identify relevant strategies in monitoring the state of conservation of cultural WH cities in Malaysia, which was held at MBMB on 19th August 2009.

The focus groups session began with a welcoming address and presentation of the research background in brief. During this period, the presentation entitled "Monitoring Strategy and Indicators for Heritage Sites" for this workshop was also part of the local agenda of the local authority of MBMB. The objective and the procedure of the session was also mentioned. The session was conducted in the setting of 9 round table arrangement. Each table was labelled by a theme to be discussed. Each group was provided with a proposed themes and strategies (developed from the interview and literature review). One moderator was provided for each group to facilitate the discussion.

At the end of the session, the group presented their proposals for open discussion. There were suggestions and comments for the improvement of the proposal. The Researcher took notes for fine-tuning the answers to fit the objective of the workshop. Then, the Researcher will develop and identify the key indicators for each strategy suggested.

5.2.2 Results of Workshop #1

The data from the workshop was compiled and analysed to inform on how the proposal should be refined. Since each group's findings were based on consensus and distinctive,

thus statistical software programme was used in the analytical process. Below are the steps taken to refine the draft framework:

1. Reword or refine the strategy as suggested by the groups;

2. Omit the strategies which are not necessary;

3. Add strategies as suggested by the focus groups which are not covered in the initial proposal; and

4. Retain other strategies agreed without any amendments.

With regard to the indicators for the strategies proposed, this focus group was not involved. There was no technical discussion held in the workshop.The workshop aimed to identify the relevant indicators in monitoring strategies for both WH cities in Malaysia. The three themes considered were: 1) urban form and urban fabric and ii) heritage buildings (religious structures), and shophouses and townhouses.

From the analysis of Workshop #1, the Researcher decided to combine the outstanding of heritage buildings, shophouses townhouses under the same theme since these buildings have the same strategy that was identified in the workshop. This is illustrated in Figure 5.2.
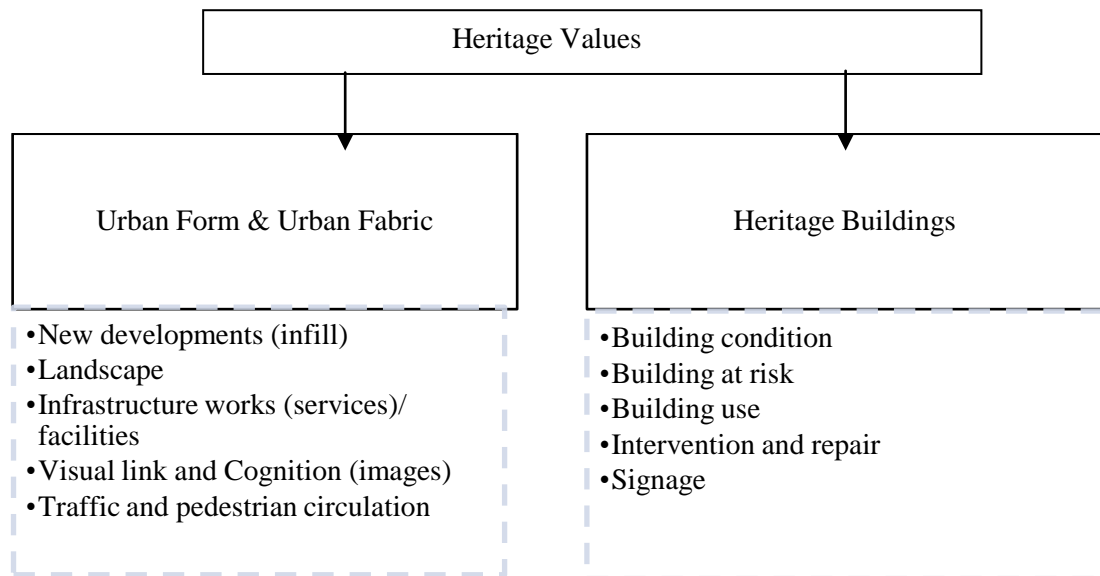
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        ┌──────────────────────┐    ┌──────────────────────┐
        │ Urban Form &         │    │ Heritage Buildings   │
        │ Urban Fabric         │    │                      │
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Urban Form & Urban Fabric
• New developments (infill)
• Landscape
• Infrastructure works (services)/ facilities
• Visual link and Cognition (images)
• Traffic and pedestrian circulation

Heritage Buildings
• Building condition
• Building at risk
• Building use
• Intervention and repair
• Signage

Figure 5.3: Framework for the development of monitoring strategies–

urban form & urban fabric and heritage buildings (Workshop #1)

Therefore, there will be ten (10) strategies for the framework. 5 strategies for urban
form and urban fabric are:

• New developments (infill);

• Landscape;

• Infrastructure works (services)/facilities;

• Visual link and cognition (images); and

• Traffic and pedestrian.

Meanwhile, five strategies for heritage buildings (heritage buildings, shophouses and
townhouses) are:

• Building condition;

• Building at risk;

• Building use;

- Intervention and repair; and

- Signage.

Since the limitation of the study is focusing on the tangible heritage aspects, the intangible heritage is removed from the research . The working framework are focusing on: 1) urban form and urban fabric; and 2) heritage building (including individual building such as religious buildings, administrative buildings, shophouses and townhouses). This is illustrated in Figure 5.3.

5.2.3 Workshop #2

The aim of the workshop #2 for focus group discussion held on 12th February 2011 in George Town was to finalize the development of questionnaires for both WH cities of Malacca and George Town. 29 participants involved were from various background; administrators (architects, engineers, planners, technical personnel), professionals, stakeholders, NGOs and academicians/researchers in the conservation field. The participants were guided to answer the survey questionnaires and comments were identified to improve the survey on the subject matter.

The focus group session began with a welcoming address and presentation of the research background in brief. The objective and the procedure of the session were also mentioned. The session was conducted in the setting of round table arrangement. The draft questionnaire was read line by line and clarification was made if necessary. There was a two-way discussion between participants and the Researchers.

The data from the workshop was compiled and analysed to inform on how the proposal should be refined. Below are the steps taken to refine for the development of questionnaire survey as a pilot study:

1. Reword or refine the strategy as suggested by the groups;

2. Omit the strategies which that are not necessary;

3. Add strategies as suggested by the focus groups which are not covered in the initial proposal; and

4. Retain other strategies agreed without any amendments.

With regard to the indicators for the strategies proposed, this focus group involved in commenting and proposing new strategies and indicators.
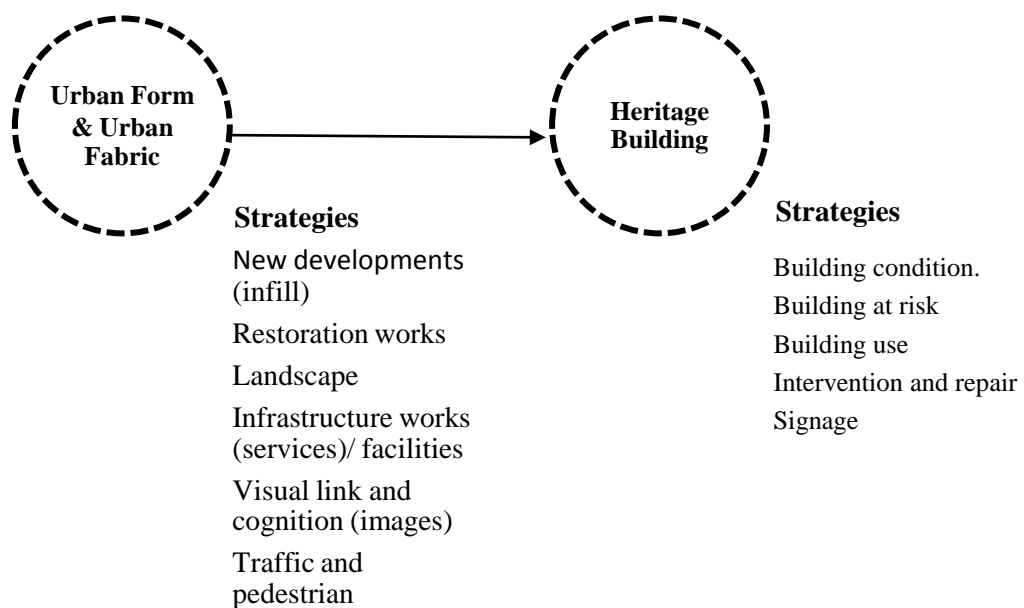

Urban Form & Urban Fabric

Heritage Building

Strategies

New developments (infill)

Restoration works

Landscape

Infrastructure works (services)/ facilities

Visual link and cognition (images)

Traffic and pedestrian

Strategies

Building condition.

Building at risk

Building use

Intervention and repair

Signage

Figure 5.3 Draft framework for monitoring strategies - urban form and urban fabric and heritage buildings (Workshop #2)

5.2.4 Results of the Workshop #1

Table 5.1: Tabulation of new indicators

Strategy	Indicators	New indicator	Total
1	5	1	6
2	3	-	3
3	6	-	6
4	3	2	5
5	4	5	9
6	3	-	3
7	2	-	2
8	2	4	6
9	6	-	6
10	2	3	5
11 (New strategy) Restoration work		7	7
Total	36	22	58

Since there were a total of ten (10) strategies and 36 indicators brought into the focus groups #2, the results are as follows:

A. Urban form and urban fabric

Initially, there were 5 strategies proposed under this theme with twenty one indicators. The results of the discussion are:

- For Strategy 1 (New developments) 1 new indicator has been suggested and 5 indicators have been retained as agreed by the group;

- There is new strategy suggested, which is "restoration works" since it has its own 7 indicators to be added to the draft framework;

- There is no omission or addition to Strategy 2 (Landscape) and 3 (Infrastructure works and facilities), and the indicators for each strategy have been agreed;

- Two new indicators are added to Strategy 4 (Visual link) to make a total of 5 indicators for this strategy; and

- Five new indicators are suggested for Strategy 5 (Traffic and pedestrian), which make

  a total of 9 indicators for this strategy.

B. Heritage buildings

There were five strategies and twenty five indicators proposed for heritage buildings. The discussion suggested:

- Strategy six (Building condition) and seven (Building at risk) have been retained

  with no changes except to refine the sentences;

- The addition of four new indicators to Strategy 8(Building use);;

- To reword some of the indicators for Strategy nine (Building intervention and

  repair); and

- The addition of 3 new indicators for Strategy ten (Signage).

New strategy was suggested to be added and seven indicators were proposed to be considered for the refinement of the survey. The summary of the results for these two workshops are presented in Table 5.2

Table 5.2: Summary of the monitoring strategies and key indicators

Item	Descriptions	Workshop #1	Workshop #2	Total
1	Monitoring strategies	10	10 +1	11
2	Key indicators	36	36+ 22	58
3	Participants	27	29	56

Eleven monitoring strategies were identified through several rounds of workshops and survey questionnaires done at both WH cities. Six (6) monitoring strategies were

identified for monitoring the authenticity and integrity for urban form and urban fabric, while five (5) monitoring strategies for heritage building were proposed for WH sites.

In seeking an appropriate monitoring system for cultural properties in both historical cities - Historical City of George Town and Historical City of Malacca in Malaysia, this research adopted a rational methodology based on exploratory research, which is problem generating rather than testing a hypothesis. As adopted by Yahaya (2004), this approach could be used because no explicit hypothesis testing is being done and the work is qualitative in nature. The exploratory method as claimed by Stebbins (2001) will give flexibility in searching for the data and open mindedness about where to find them.

5.2.5   Summary and Discussion for Focus Group

There are two (2) main values identified and agreed for monitoring strategies, which are urban form and urban fabric and heritage buildings.

A. Urban Form and Urban Fabric

There are six (6) strategies for the urban form and urban fabric value proposed as follows:

1. New developments (infill)

Urban conservation is primarily a process that seeks for economies that will facilitate the conservation and sustainability of the cities, where the revitalization of historic cities enable the economic development of the area to support the conservation of heritage buildings that will give them a viable future. Any new development should be based on a thorough understanding of the townscape of landscape in which it will be placed.

Placing new buildings into empty lots will not only introduce new densities but also alter the way of spaces of the surrounding buildings are used and the existing buildings perceived in the setting.

The texture of the town is related to the town's surface and it is measured by the relative height of the buildings in cities. The height limit of 18 meter for buildings in both cities does not mean controlling the impact on roofscape and character of the cities. However, affecting factors such as new services and facilities to accommodate the needs of the user have to be considered. Therefore, the design of the new development within the core and buffer zones should take into account the human scale factor in order to achieve a user-friendly environment, especially for the ground floor activities.

Another approach that is commonly seen in contextualizing new buildings is the use of glass, either for its transparent or reflective quality. There is often misguided perception that an elevation clad glass is transparent and therefore less obstructive in a townscape. It is appropriate in scale, height and volume to the inherent morphology of the townscape.

It is crucial to monitor the authenticity of the sites including the urban morphology, the largely retained urban fabric of shophouses with their street patterns and courtyards, as well as the open space. It is also a matter of the functions of the urban fabric and the continuous used of buildings for specific functions. The present public buildings are within close proximity to each other, which reflects a complete system that makes a living city.

The objective for this strategy is to ensure the integrity and settings of urban form and urban fabric are retained and strictly controlled, especially within the property zone. This is because the traditional urban fabrics such as infrastructure, roads and pedestrians are sensitive to the heritage setting of any new developments within the core and buffer zones that must be respected and must be sensitive to the existing settings, thus enhancing the overall heritage values.

2. Restoration works

New additions or extensions to heritage buildings due to economic are the reason why many buildings are being renovated to accommodate functional space of the present activities on sites. Some are being extended either horizontally or vertically. This extension works might affect not just the character of the building of the place, but also the entire characteristic of townscape. Alteration and improvement done to the buildings of architectural and historical significance can reduce their values. For example, façade retention is not an equivalent of conservation. The elevation of the building is an expression of the interior and its organization as elevations are only part of the building - they do not represent the whole part and integrity of the buildings. Façade contributes to streetscape character, vista and view, while the building made up the urban grains, morphology and density.

It is important to monitor any renovation works on-site to prevent negative impact on urban quality and architectural quality of the old buildings, which are parts of the value of the historical city of Malacca and George Town.

The objective of this monitoring strategy is to have limitation on the renovation work just and also new materials introduced for renovation works while controlling the extensive works that might weaken the townscape of the sites if possible.

3. Landscape

Predominant landscape is the feature that provides the character to the place. Both nature and man-made landscape influence the characteristic of the townscape. In conservation properties, trees and other natural feature may be protected through legislation. Landscape at historic towns is often linked to the setting and historical significance to the sites. There are also landscape associated with event or sacred places. All of these are parts of historical significance to the sites. Matured tree plays significant role in the morphological development of the town, as well as giving the identity to the townscape.

In both cities, matured trees provide a tropical character and shade to the cities. In Malacca, many of these matured trees are located within the vicinity of St. Paul's Hill, where a different townscape quality is observed. These heritage trees compliment the presence of many historical buildings in the area dated back to the Dutch era. While in George Town, many of the matured trees can be seen along Jalan Masjid Kapitan Kling, where the street is lined by large canopied tress, whereas in the area near Fort Cornwallis, a different landscape character is being observed as there are many trees being planted surrounding the "*padang*" that create a green pocket in the town fabric.. It is important to have sufficient monitoring and identified any threats on these heritage trees. Fund must be allocated to ensure the survival of this irreplaceable value of heritage.

The objective of monitoring the landscape of this WH sites is to ensure the softscape and hardscape works introduced are in harmony with the existing landscape and in

harmony with the character of the towns. The percentage of green trees is part of the historical environment.

4. Infrastructure works (services)/ facilities

The conservation of historic town includes upgrading existing facilities such as roads, drainage system, sewerage, power supply, light pole, telecommunication cable and other to meet the present needs of the buildings and sites. At the same time, additional or new infrastructure may be required to facilitate the current demand. Any new installation works on the heritage buildings have to be sensitive to the historical significance of building fabric and the appropriateness must be recognized. It is important to ensure new facilities are being designed and integrated harmoniously without threatening the character of the buildings, as well as the townscape. Any underground works should be minimized and the existing facilities are being maintained and serviced regularly and does not cause possible harm. It is essential to monitor new infrastructure works and facilities provided to the building from any harm that may threaten the old structures.

The objectives of this strategy are to ensure the existing facilities are being maintained and serviced regularly and does not cause possible harm. The introduction of new facilities are being designed and integrated harmoniously without threatening the values of cultural property.

5. Visual link and cognition (images)

The quality of townscape is synonymous to the quality of view. The significance of the view will depend on the message received and defined by the mind from the view projected. Townscape is influenced by structure of the town due to the spatial organization of the physical elements that influence the quality of view and experiences.

The texture of the cities influences the townscape through the visual quality of the roofscape and skyline.

Spatial quality through careful juxtaposition of buildings in relation to the   street is capable of creating unique townscape effectt as observed in both cities of Malacca and George Town.

Both Melaka and George Town provide unique setting for activities to take place through its mixture of use and architectural elements. Landmark nodes are visual link and continuity in the overall appearance of the townscape.

A dilemma faced is that the design of modern buildings cannot match the visual delight. The insensitive design added to the roofscape and character of the space of the urban form reduces the values of the historical significance as the case of Malacca with the introduction of new observation tower.

The objective of this strategy is to ensure the elements/characters along the street that entraps the eye with heritage values including landmarks, edges, paths, streets, squares, texture of the town topography, as well as waterfront/edge.

6. Traffic and pedestrian circulation

Traffic and pedestrian circulation is another constraint to Malacca and George Town that are not intended for heavy vehicle. Present streets have different sizes, width and length traversing the towns. Vehicle driving on narrow and winding street or tight corner regularly damage the historic urban fabric, vibration from heavy vehicle can

further damage underground structures and fumes released cause the subsequent material decay in Malacca and George Town.

There is no doubt that the number of private and public transports on sites are increasing tremendously. Other small changes include providing parking space for cars that have immediate impact on the townscape character of street, which reduces the green area space and contributing to more water run-off and flash flood risk in the city of George Town for example.

Providing alternative light transport such as trishaw and improve the pedestrian walkway is crucial to reduce further damage on sites. Recently, an integrated transportation hub has been introduced, and there are different types of transportation modes introduce to incorporating other activities.

It is vital to monitor the number of vehicles on sites and providing alternative transport, as well as improving the existing traffic condition and to encourage sustainable mode of transport such as private transportation and public transportation.

B. Heritage Buildings

Shophouses are one of the unique building types that characterize the townscape of the city. There are more than 2,000 shophouses and mostly still function as they were decades ago - the ground floor is used for commercial purpose while the top floor caters for residential purposes. These shophouses in both places exhibit different architectural style, which is one of the main feature of the properties and it is extremely rich when

compared with other towns. Due to economic and commercial attraction, these buildings are not being spared for restoration and adaptation that could benefit from the presence of tourists.

Other heritage buildings portray the multi-cultural living in WH sites which includes religious buildings and administrative buildings. For this heritage buildings including shophouses and townhouses, five (5) strategies are identified.

7. Building condition

Heritage buildings in Malacca and George Town aged more than hundred years. These buildings are mostly still in use, either in traditional way or being adapted to new usage. For much of their useful life, these buildings change incrementally and continuously according to the user's needs. Traditional building structures have main functions to provide strength, stiffness and stability to the buildings. Most of the building structures are post and beam construction or load bearing walls. Meanwhile, the structure remains as the most permanent elements, and changes are likely to be made to the building envelope and more regularly to the internal layout. New additional loads to the historic buildings will threaten their structural integrity. Most traditional materials work best under compression. Monitoring the buildings condition is important to determine whether they are in good state; otherwise repairing job is very crucial. However, through the observation, it can be seen that the rate of condition of the buildings are driven to the state of obsolescence through neglect and poor up-kept. Thus, it is crucial to monitor the state of the buildings.

8. Building at risk

Many design of the historical did not comply with the current fire regulation. Fire is a constant threat to the buildings as the number of fire accidents on sites increased. Fire prevention measure in heritage buildings is to be identified. Here in Malacca and George Town, shophouses and townhouses are constructed with half-timber and the other half of materials such as bricks. These building materials can easily catch fire during fire accident. It is crucial to monitor any prevention by having preparedness plan from not only fire, but also natural disaster. Even though both places are not prone to earthquake, but frequent flash flood might damage the structure of the buildings.

9. Building use

Historic buildings change incrementally and are continuously updated and adapted to user's needs.

The commercial attraction of the buildings in the town can be seen through restoration of the buildings and adapting them to the use that could benefit from the presence of tourists. For example in Malacca, the historic buildings are converted into budget hotels, antique shops and others. Most buildings have been proven to be flexible and with little adaptation, capable of accommodating new uses. However, it does not mean that all new uses are appropriate to the heritage buildings. If the buildings are too much of inappropriate use such as bird nest, if it is not controlled in the correct manner, this can easily threaten the value of the city.

It is important to monitor the buildings to retain their traditional use, and/ or have acceptable uses. The objectives are to sustain the authenticity of architectural of the

building and their integrity within historic environment without destroying sense of place.

10.Intervention and repair

Most likely, the intervention is always concerned on the external appearance and whether it will mimic the historic or stand out as contemporary design. Neither of these approaches is necessarily appropriate to each situation. Any intervention and repair works is the reflection of its time.

Any heritage interventions in both places should be controlled to ensure the continuity of the character of the urban form and its characteristic of the historical area. The intervention should be done sensitively to prevent negative impact of newer restoration or repair works to the old buildings. This is to ensure the authenticity and integrity of the heritage building is maintained and retained.

Repair and conservation works are sensitively done and in accordance to the acceptable conservation practices. Internal layout of traditional buildings, especially the shop houses and townhouses, are generally retained and any intervention should respect traditional layout and values.

Traditional materials such as tiles, decorative elements and other parts and details are being conserved, repaired and/or replaced with appropriate materials and using suitable techniques. It is crucial to ensure the overall design, proportion and details of the front facades are retained and to minimize the integration with new materials. All of these interventions are done according to conservation practice.

If the level of intervention required would cause too much damage to the historical fabric, then this is unlikely to be an appropriate intervention and repair. It is important to monitor the buildings to retain their traditional use and/ or have acceptable use.

Faradism or poor imitation of the old design also contributes to the impact on architectural quality of the old building. It is necessary to monitor any intervention either on structural or architectural of the heritage buildings, which requires a good knowledge of how it has been altered and repaired, furthermore on how well it has been maintained.

11.Signage

Malacca and George Town have some interesting façade treatments that are unique in terms of buildings contribution to the townscape. The majority of the buildings are shophouses, where each unit is treated individually and therefore, senses of variety within unity is achieved in the townscape. The richness of the townscape is also due to the decorative feature of the façade and the walkway. Many heritage buildings facades are being covered/screened by advertisement boards for the purpose of advertising. This savage act robs the heritage building and destroying the townscape qualities that disguise the unique feature of these building. It is important that any building signage are placed sensitively and not covering the details of the front facades, thus this matter needs to be monitored.

5.3   Questionnaire Survey

This section explains the implementation of the questionnaire survey conducted for the study. First, it describes the respondents who participated in the surveys, followed by the data analysis and discussion of the findings.

This small quantitative technique of research by questionnaire-based survey is considered the second level of primary data collection for the research. The period of data collection was from January 2010 until February 2011. The duration of data collection is about one year. Data was collected via a questionnaire survey distributed at identified seminars, which are attended mostly by people who cannot participate in the focus group discussion. The total respondents of the surveys were fifty eight (58). The responds from these survey are tabulated in Table 4.4 Chapter 4.

The main purpose of survey is to obtain opinions about the "proposed monitoring strategies and indicators" for both WH sites from respondents, while the objective is to ensure the proposal is relevant and adequate before seeking verification from experts.

5.3.1 Respondents of the Questionnaire Survey
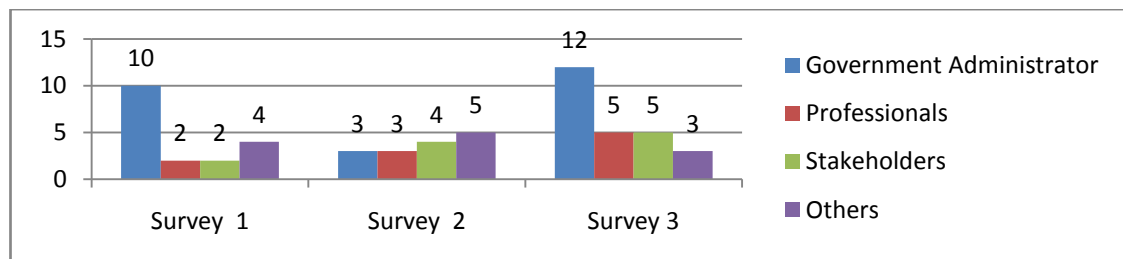
Figure 5.4: Profession of respondents

Figure 5.1 shows the tabulation of respondents' profession in both cities. Survey # 3 has the highest number of respondents with 25, followed by Survey #1 and Survey #2 with 18 and 15 respondents, respectively.
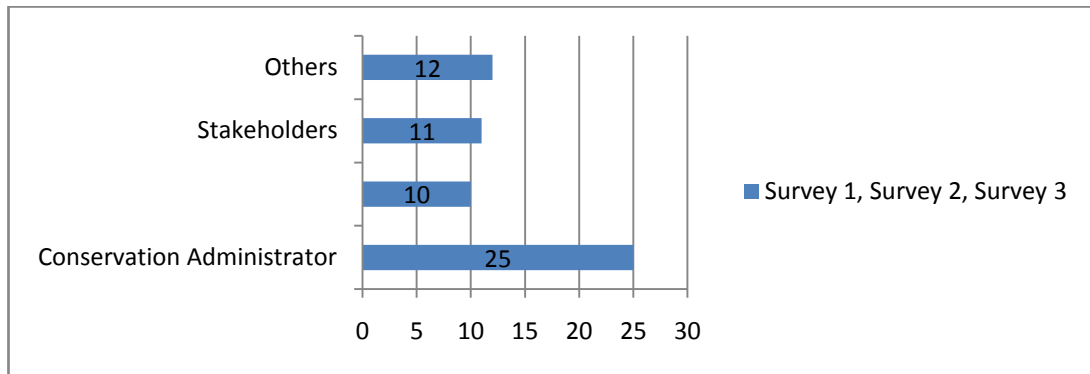
Figure 5.5: Category of respondents (Survey #1, #2 and #3)

Most of the respondents in Malacca and George Town are conservation administrators. They are mainly from the Government agencies that involved in heritage conservation. 25 personnel are from the Government agency, followed by 11 respondents as stakeholders, 10 professionals and the remaining 12 respondents are from other categories (Figure 5.5).

Table 5.3: Detail of respondents

Item	Description	Survey #1	Survey #2	Survey #3	Total	Percentage
2	Professionals: Architect, Engineer, Surveyor, Planner	2	3	5	10	16%
3	Stakeholders: Owner, Trustee	2	4	5	11	17%
4	Others: Academician, Researcher	4	5	3	12	19%
TOTAL		58				

In summary, the result shows that most of the respondents in Malacca and George Town are officials from Government bodies such as MBMB, MPPP, JKR and PERZIM. They are directly involved in the conservation of heritage at both world heritage sites, which made up of 43% of the total respondents to the survey. 18% are stakeholders, 16% are professionals and the remaining 19% are academicians and architecture students (Table 5.3).

5.3.2 Analysis of Data for Questionnaire Survey

There are ten (10) proposed strategies for urban form and urban fabric and heritage buildings as shown in Table 5.4, while Table 5.5 shows the proposed thirty (36) indicators for urban form and urban fabric and heritage buildings in WH cities: Malacca and George Town, Malaysia, which have been identified from participants who cannot attend the focus group discussion.

Table 5.4 Monitoring strategies for urban form and urban fabric and heritage buildings

		Strategies	Objectives
A: Urban Form and Urban Fabric	A1	New developments (infill)	To monitor the impact of new development including new infill projects, new infrastructure works, new structures and others within core and buffer zones
	A2	Landscape	To monitor the effect on the overall landscape and the setting of the sites
	A3	Infrastructure works (services)/ facilities	To monitor the impact of the new infrastructure works at sites
	A4	Visual link and cognition (images)	To monitor the impact on the visual setting, characteristic and setting of the sites
	A5	Traffic and pedestrian circulation	To monitor the impact of circulation at the sites from both vehicles and human being to the heritage building and townscape
B: Heritage Building	B6	Building condition	To monitor the consequences on condition of the heritage buildings
	B7	Building under disaster/damage	To monitor the impact of building damage due to disaster
	B8	Building use	To monitor the impact on building inappropriately used
	B9	Intervention and repair	To monitor the consequences of intervention and repair to heritage buildings
	B10	Signage	To monitor the effect of inappropriate signage on the building to the overall character of the heritage buildings

The results were obtained and further discussed at workshop #2 together with the focus group. This additional monitoring strategies and indicator are presented in Section 5.2.4.

Table 5.5:Summary of Proposed 10 Strategies and 36 Indictors under Urban Form and Heritage Buildings

URBAN FORM AND URBAN FABRIC					
			Percentage		
	Proposed Strategies	Proposed Indicators	Agree	Not Agree	Not Sure
1	The new developments (infill) -	1, Number of approved and completed yearly(including new and restoration / conservation / maintenance works) within core and buffer zones	100	0	0
		2. Number of proposals/projects received negative HIA reports.	85	5	10
		3 Number of on-going/completed projects that deem to threaten integrity and general settings.	95	5	0
		4. Number of new developments completed yearly that did not comply with the present guidelines.	97	2	1
		5. Number of completed projects that deem to threaten integrity and overall heritage values due to early approval before site being listed.	93	3	4
2	Landscape	6. Number of new works approved annually	95	3	2
		7 Allocation of maintenance works approved annually	95	3	2
		8. Number of completed projects that deem to threaten integrity and overall of heritage characteristic.	88	7	5
3	Infrastructure works (services)/ Facilities	9 Number of new works approved annually	100	0	0
		10 Number and allocation of maintenance works approved annually	88	7	5
		11 Number of completed projects that deem to threaten integrity and overall heritage characters.	95	0	5
		12. Records on the maintenance of the facilities	95	0	5
		13. Type of facilities being integrated into building being recorded properly	90	3	7
		14. Number of reports on inappropriate equipment placed on the buildings (a/conditioning blower, aerial TV,ASTRO etc)	94	3	3
4	Visual Link and Cognition (Images)	15. Number of new elements (eye catch –up) that being introduced in the heritage setting (physical environment)	91	5	4
		16. Number of reclaimed area along the edge/waterfront	93	2	5
		17. Number of buildings (new / extension) are of different height (Sky line and the roofscape)	95	0	5

Table 5.5 Continue

			Percentage		
	Proposed Strategies	Proposed Indicators	Agree	Not Agree	Not Sure
		URBAN FORM AND URBAN FABRIC			
5	Traffic	18. Survey of the traffic volume annually	100	0	0
		19. Annual allocation (and actual spent) to maintain the roads	100	0	0
		20. Statistic of accidents reported annually	95	3	2
		21. Report on road system	95	3	2
		21. Report on road system	95	3	2
		HERITAGE BUILDINGS			
6	Building Condition.	22.Number and percentage of buildings that are in good, fair, poor and ruined conditions.	98	0	2
		23.Number of buildings that structurally dangerous and not safe	95	3	2
		24.Number of common defects from homeowner /stakeholders	85	9	7
7	Building at Risk	25.Number of buildings involved in natural disaster (Flood, earth quake, storm, tsunami etc.)	100	0	0
		26. Number of fire incident annually	97	3	0
8	Building Use.	27. Records of building use when inscribed (2008)	100	0	0
9	Intervention & Repair	29. Record of intervention annually	97	3	0
		30. Number of projects that won local, national and international awards	93	5	2
		31. Number of projects funded by government or other agencies	95	3	2
		32. Number of projects (minor repair) carried out by homeowner themselves	91	5	4
		33. Number of completed projects that deem to threaten integrity and overall heritage values.	95	0	5

A1.   New Developments (infill)
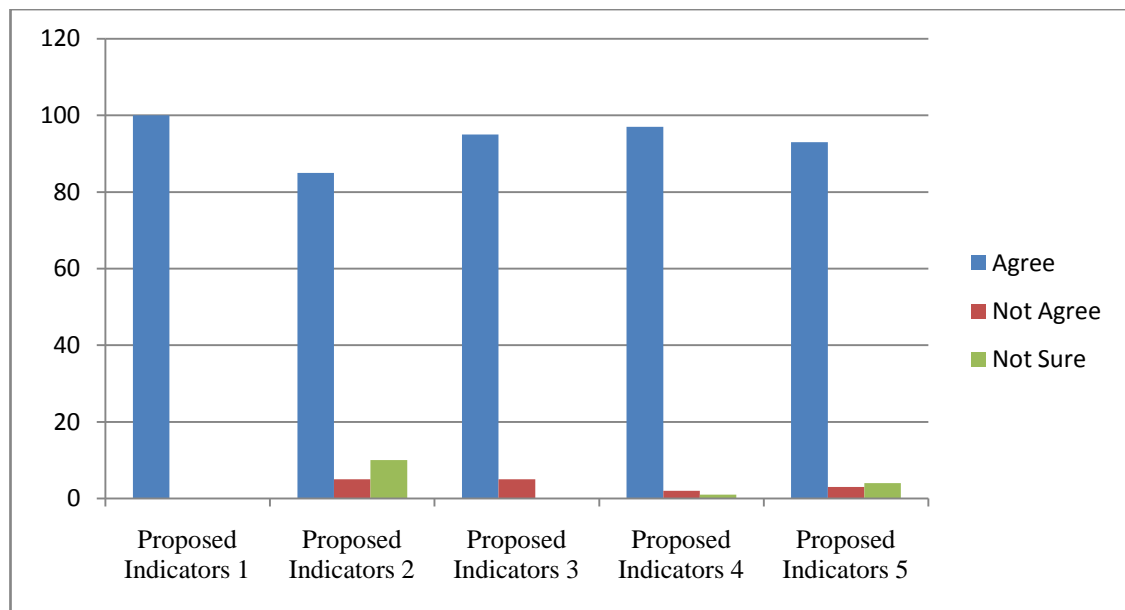
Figure 5.6: The New Developments (infill)

Indicators #1 - #5 are basically looking at the strategy to monitor the impact on new development at the conservation site. The results from the survey showed that the five indicators proposed received high percentage, which is between 93% to 100%. This means that these indicators are relevant. Although 85% agreed to the used of negative report of Historical Investigation Assessment (HIA), eventually the report has to be refined to meet the compliance of the present guidelines to the local authority (Figure 5.6).

A2.   Landscape
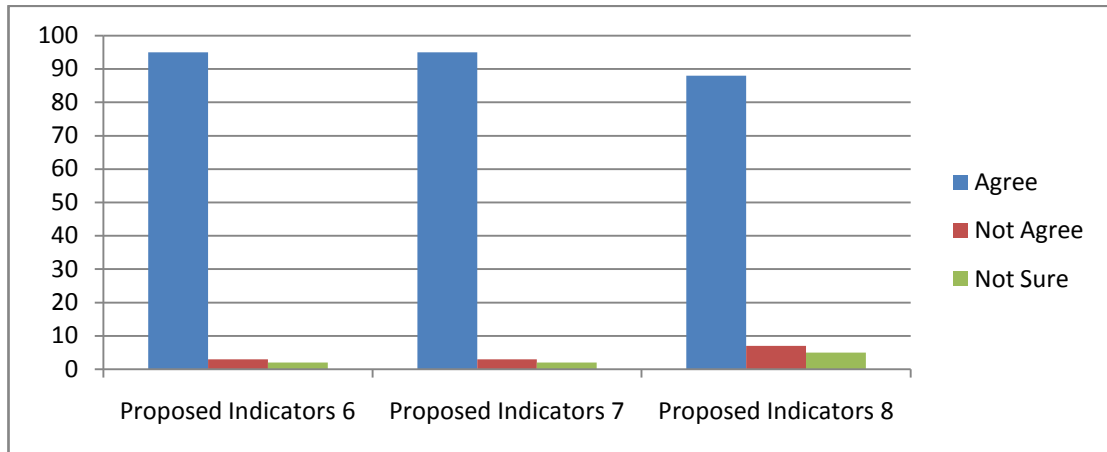
Figure 5.7: Landscape

Indicators #6 - #8 are used for monitoring of the landscape, which showed that the respondents agreed to the three indicators suggested (88%, 95%, and 97%). The surveys received low percentage, which is in between 5% to 12% for not sure and disagree with the indicators proposed. It shows that the project should balance with the allocation for maintenance and agreed on the indicators where the landscape project weaken the values on the cultural property (Figure 5.7).

A3.   Infrastructure Works (services) / Facilities
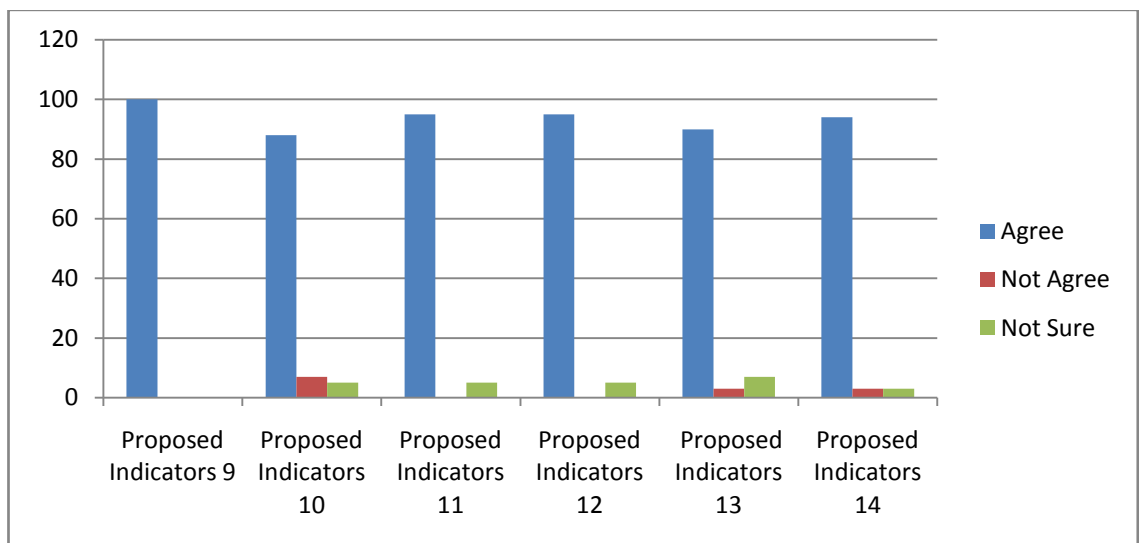
Figure 5.8: Infrastructure Works (services) / Facilities

For indicators #9 - #14, the objectives are designed to ensure:

- The existing facilities are being maintained and serviced regularly, and do not cause possible harm; and

- New facilities are being designed and integrated harmoniously without threatening the existing facilities;

The results from the survey showed that the respondents agreed to six indicators proposed, which showed that the percentage is high between 88%-90%. With this finding, it can be concluded that the proposed indicators are valid for the strategy to monitor the infrastructure works on the conservation sites (Figure 5.8).

A4.   Visual Link and Cognition
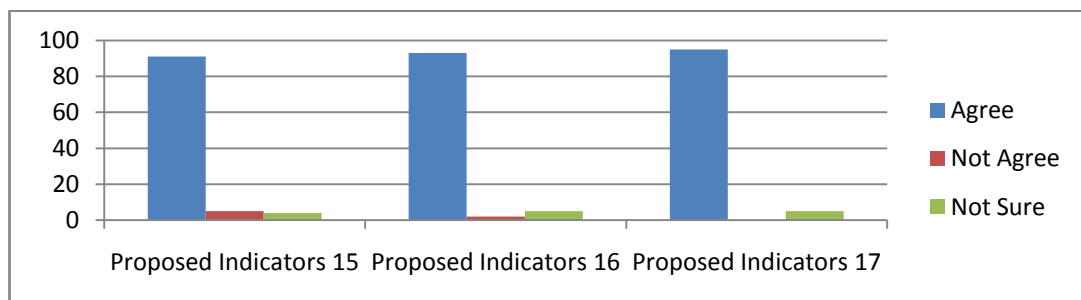
Figure 5.9: Visual Link and Cognition

Indicators #15 - #17 are related for monitoring visual link and cognition (images), with the specific objectives to ensure the elements/characters along the street entraps the eye with heritage values such as landmarks, edges, paths, streets, squares and others. It is also for monitoring the texture of the town and its topography including waterfront/edge of the conservation sites.

For the results of the number of new elements (eye-catching), most of the respondents from Malacca and George Town agreed to the proposed indicators, while 5% and 4% of the respondents are not agree and not sure about the proposed indicators, respectively.

For the results of the number of reclaimed area along the edge/waterfront, 93 % of the respondents agreed to the proposed indicators for monitoring the visual link and cognition of the sites. 5% of the respondents in Malacca and George Town are not sure to the indicators proposed, while 2% did not agree at all to the propose indicators. The results of the number of buildings (new/extension) are of different height (skyline and roofscape), where 98% of the respondents agreed to the proposed indicators and the remaining 25% are not sure to the proposed indicators (Figure 5.9).

A5. Traffic
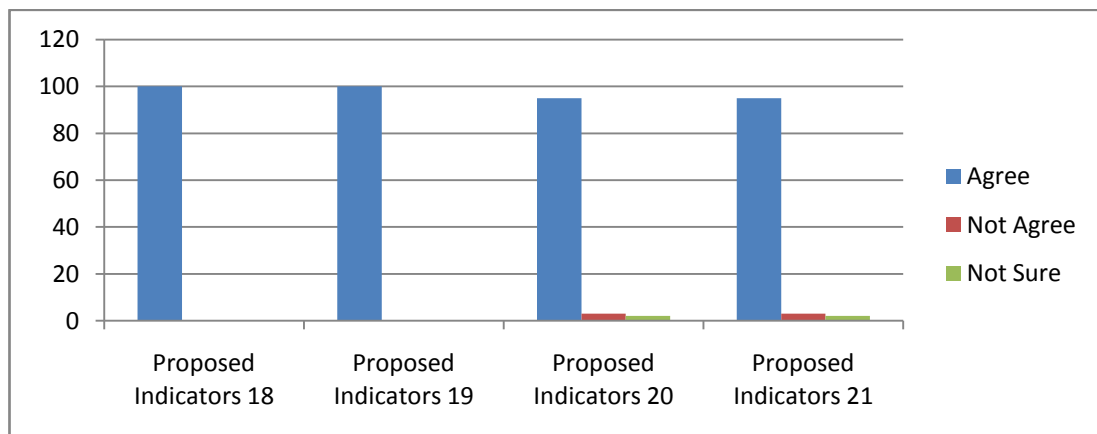
Figure 5.10: Traffic

For indicators #18 - #21, 80% of the respondents agreed to the physical environment and building height as indicators for monitoring visual link and images of the sites. 100% responded that any changes on the waterfront and roofscape may affect the

setting of the site, while 84% agreed about the survey of the traffic volume as indicators for monitoring the traffic at the sites (Figure 5.10)

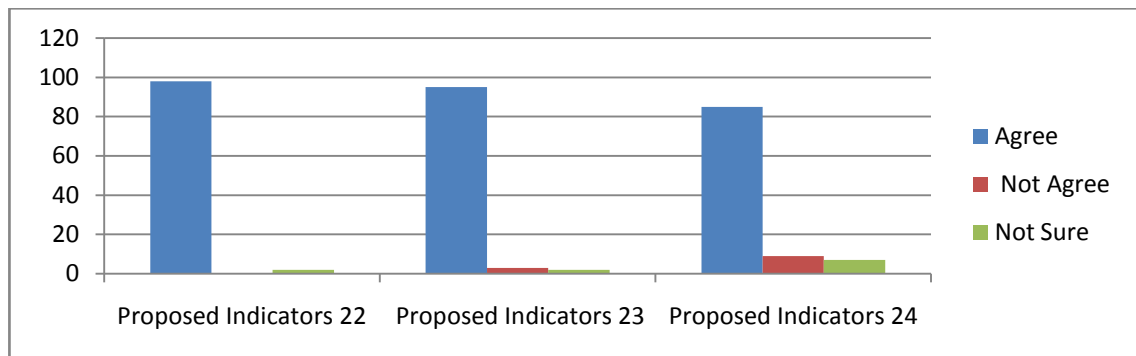B.   Heritage Buildings

B6.   Building Condition

Figure 5.11: Building Condition

Indicators # 22 - #24 are basically looking at monitoring of building condition with three indicators presented above (Figure 5.11).
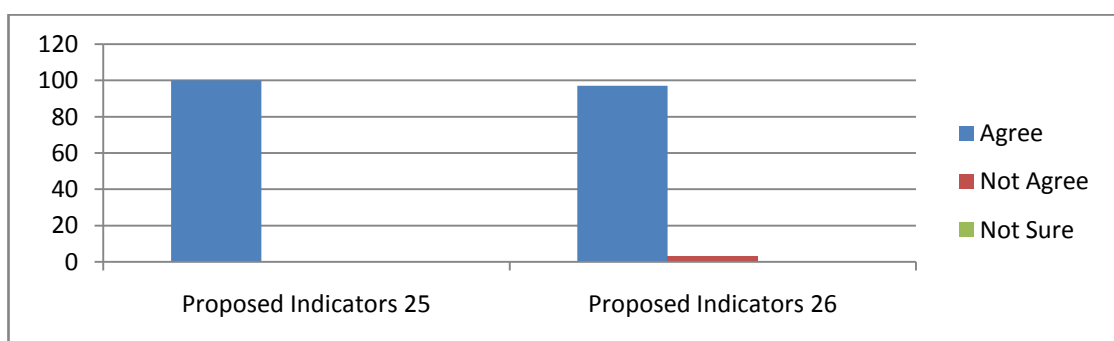
B7.   Building at Risk

Figure 5.12: Building at Risk

Indicators #25 - #26 addressed issues on buildings that are at risk. The loss of heritage property is the lost to the entire site, however WH sites in Malaysia are not exposed to natural disaster. However, the heritage properties are exposed to fire as many fires

incidence are reported lately in 2010 and 2011. There is 100% response that the indicator is necessary (Figure 5.12).
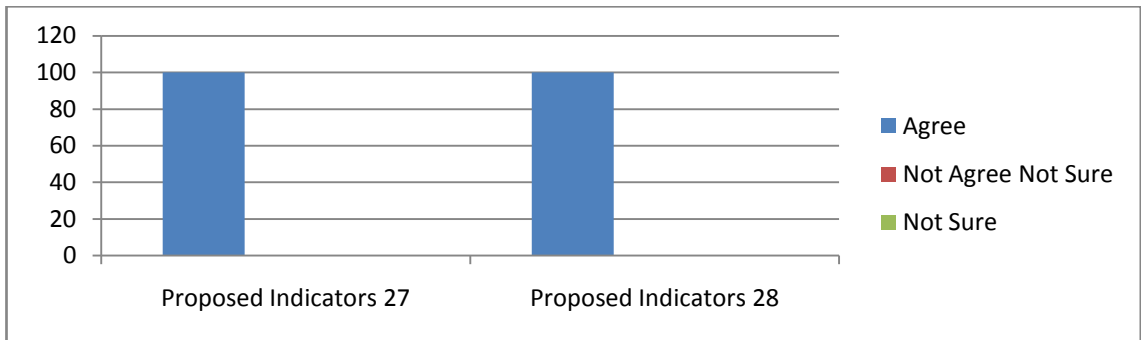
B8.   Building Use

Figure 5.13: Building Use

For Indicators #27- #28, 100% of the respondents agreed to the two proposed indicators for recording building used annually as the monitoring strategy (Figure 5.13).
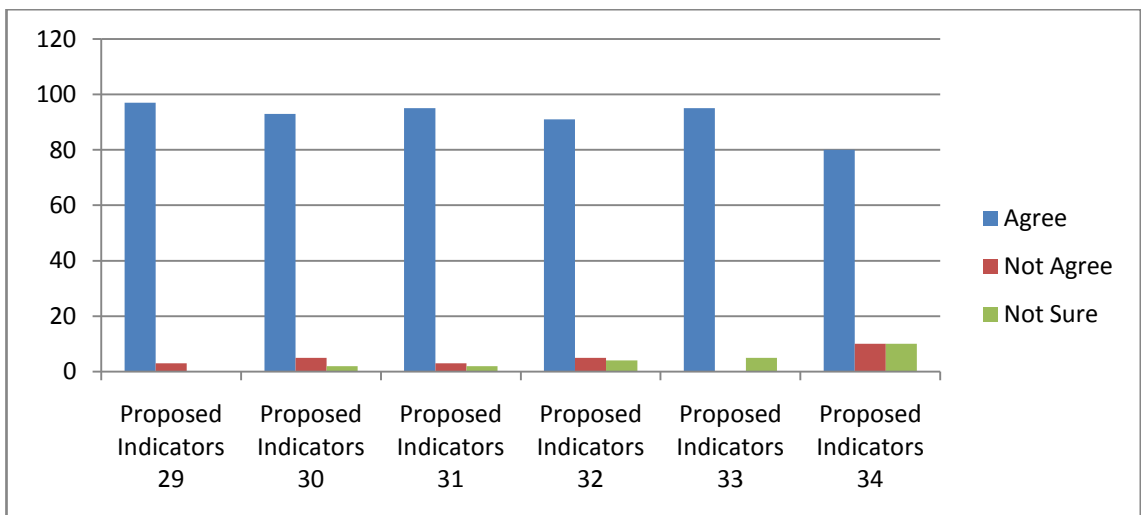
B9.   Intervention and Repair

Figure 5.14: Intervention and Repair

For Indicators #29 - #34, the highest number of indicators identified for intervention and repair to heritage building is 80%-100% responds that these indicators are necessary (Figure 5.14).
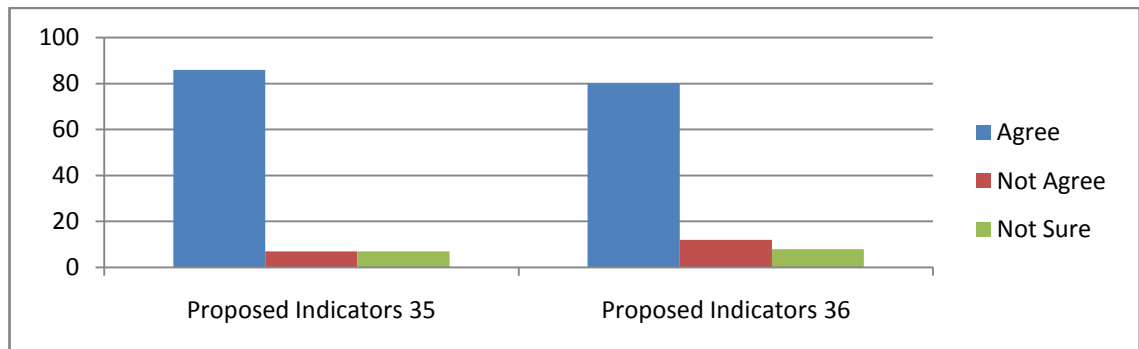
B10.   Signage

Figure 5.15: Signage

Indicators #35 - #36 are basically looking at the façade of heritage building being screened by inappropriate signage, such as advertisement boards that disguise the unique feature of these building. The surveys revealed that 85% of the respondents are agreed to the proposed indicators, 7% of the respondents are not sure and the remaining respondents did not agree to the indicator proposed for monitoring the signage on the building. The results of the survey for the number of new application for signage annually showed 80% of the respondents agreed to the proposed indicator, 12% of the respondents are not sure with the proposal and 8% of the respondents did not agree with it as shows in Figure 5.15.

5.3.3   Comments from Survey

There are comments received from the respondents. This section will only highlighted the comments that are relevant to the study, which are monitoring towards tangible built heritage.

i) Facilities

There are new facilities such as telecommunication services and other new facilities at the modern age that are added to the heritage buildings. These new facilities must be sensitive to the structure, building condition, as well as the architecture image presented in the buildings.

ii) Building use

There are issues at WH sites where the traditional trade are phasing out. Many buildings are converted for commercial used. Some building are let unused. There should be licensing control due to the gentrification of the heritage buildings.

iii) Restoration (new strategy)

There is also suggestion to separate the strategy for restoration work, which should be monitored independently and not as new development.

vi) Traffic and pedestrian circulation

Flooding of tourists with private vehicles on narrow streets may be a challenge to promote safety pedestrian way. Lack of land for car parking and bus parking may have taken up the green area or open space, which should be part of urban fabric.

v) Finance

There should be financial support from the agency to maintain the WH sites, and also additional funding to provide facilities for the visitor coming to WH sites.

vi) Building capacity

Many traditional crafts are phasing out and this will led to lack of supply of heritage related materials for repair works. There should build up the capacity of the building for those competent craftsman in the heritage work, as well as the competence of heritage consultant and contractors so that there will be no further damage to buildings heritage.

-Community involvement and effort in conservation

These comments are syntheses and added to the draft framework for experts' verification, which resulted in the addition of 1 monitoring strategies, which is renovation work. This makes the total of 11 strategies and 22 additional indicators to make up to the total 58 indicators for both WH cities. However, issues pertaining financial from other sources and building capacity are not considered as they are more on management objective.

5.3.4   Discussion for Questionnaire Survey

In summary, in this section, the data collected showed ten (10) monitoring strategies with thirty six (36) indicators that are relevant for sustaining the values of cultural property in Malacca and George Town. 7 out of 36 indicators proposed obtained 100% agreement from the respondents. An average ranging from 80% to 97% responded to the rest of the proposed indicators. The high percentage of not sure with the proposed indicators are 10% and response for not agree to the proposed indicators are 12%. These results are to be refined together with comments and new suggested monitoring strategies and indicators. The finding from this survey is discussed with the focus group at workshop #2 in George Town, Penang (as presented in Section 5.2.4).