

PILOT SURVEY ON THE CONSERVATION OF HISTORICAL BUILDINGS IN MALAYSIA

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ABSTRACT: Historic buildings basically represents the single most visible aspect of our past history and culture. Like most other countries in the world, Malaysia has a rich legacy of historic buildings with outstanding craftsmanship and architecture quality. They form an impressive historic features and heritage of the past work of man. It is important to conserve and preserve historic buildings because they provide a sense of identity and continuity in a fast changing world for future generations. However some of these buildings are at risk from defects and are not being well cared for due to lack of technical knowledge and high cost of repair and maintenance. The purpose of this paper intends to highlight the existing conditions of historical buildings in Malaysia with the main focus on the conditions of building defects and conservation approach to these buildings. To do so, a pilot survey has been conducted on several heritage towns and cities based on the existing heritage trail in Malaysia. The broad objective of this pilot survey is to examine the level of building defects and the location of building defects that normally occur at various types of historical buildings in Malaysia. At the same time, it will also look into the conservation approaches that has been done to these historical buildings either the method are acceptable according to the basic principles and philosophy of building conservation. It is expected that this paper could contribute some benefits to the owners, consultants, contractors, conservators, various government agencies, heritage body and by all those who concerned with the care and conservation of historic buildings in Malaysia.

Keywords: Pilot Survey, Heritage Trail, Historical Buildings, Building Defects, Building Conservation.

1. INTRODUCTION

Malaysia's history is largely embedded in its architecture, social and cultural fabric, and of these the architectural fabric is probably the most enduring one. Recently, the historical building conservation and maintenance can be considered as a popular method use in Malaysia. In fact, historic building is an important element in town development which can be seen in some cities in the world. It plays an important role in defining the landmark within the urban area as well as generating income and boosting the tourism industry. Historic buildings according to Fielden (2000) is one that gives us a sense of wonder and makes us want to know more about people and culture that produced it. From the first act of its creation, through its long life to the present day, historic buildings have artistic and human messages, which will be revealed by a study of its history. A complexity of ideas and of cultures may be said to encircle historic buildings and be reflected in it. Malaysia has a rich legacy of historic buildings, they form an impressive heritage of the past works of man. As documents of the past, historic buildings are important as a source of historical materials as the paper and parchment used by historians. Therefore it is important

to conserve and preserve historic buildings because it provides a sense of identity and continuity in a fast changing world.

Since the building boom of the 1970s, many of Malaysia's historic buildings have been demolished. Recent large scale urban development continues to threaten pre-war buildings, while other historic buildings are simply deteriorating due to age, neglect and high cost of maintenance. Fee (1998) expressed that to lose these buildings, however is effectively to obliterate historical memories, and there is now increasing pressure from various segments of the community to conserve the nation's historical heritage. As we all know that conservation is the action taken to prevent decay, embracing all acts that prolong the life of cultural and natural heritage. Building conservation according to (Fielden, 2000; Insall, 1972) relates specifically to the process of repair, maintenance and restoration of historic buildings which aim to prolong a building's life and function. In Malaysia, the practice of building conservation is considered new. Laws for historic building conservation are established throughout legislation whereby a national inventory of historic buildings includes lists and schedules of old buildings for protection. Example of historic buildings in Malaysia according to Ahmad (1997) are mosque, churches, palaces, clock towers, prisons, government offices, institutional and commercials, residential, schools, railway stations, hotels, forts and monuments.

2. AIM AND OBJECTIVES OF THE RESEARCH

The overall aim of this research is to have specific knowledge associated with defects in Malaysia historical buildings like; to determine the locations, types and causes of defect so that specific action can be carried out to overcome the problems as described before. Meanwhile the overall outcome of this research is to be able to recognize and diagnose defects at each building element in historic buildings. Previously much has been published about building defects, their causes and cures, but unfortunately the information is scattered over a wide range of publications and not easily accessible. There are also a number of excellent texts, studies and research conducted on building defects but these tends to be either highly technical and/or specific to certain type of defects or building materials and did not cover on the overall elements of the buildings. Moreover, the published advice on remedial work often assumes that the cause of the failure is already known; in practice, although the symptoms will be apparent, the under laying factors may be obscure. If a wrong diagnosis is made, the treatment is unlikely to be successful and money will be wasted. Actually there is a need for a guide to study about the defects and aid

the correct diagnosis of defects because prevention is better than cure, and something have to be done to reduce the frequency of defects especially to historic buildings by choosing appropriate approaches, methods, techniques and materials. Therefore it is worth to do this research. There are four primary objectives in this research that need to be fulfilled to ensure that the overall aim of this research is achieved. The objectives are as follows:

1. To determine the conditions of building defects at Malaysia historical buildings.
2. To determine whether the historical buildings in Malaysia has been conserved accordingly to the conservation guidelines.
3. To determine the locations of defects at historic buildings.
4. To identify whether the conservation approach has been carried out practically.

3. APPROACH AND RESEARCH METHODOLOGY

The approach used in this research starts with the overview of historic buildings in Malaysia. The literature review is mainly acquired from published books, research papers, seminar papers and journals. The research is further reinforced by formulating a set of questionnaires and handed over to owners or occupants of selected historic buildings in Malaysia. The questionnaire will be tabulated, summarized and analyzed accordingly to the research objectives to obtain findings. The background information of this research is obtained by various methods and the collection of new data is necessary to get the accurate result. The data regarding defects in historic buildings is collected by two main methods as follows:

1. Observations through site survey/pilot survey where data is obtained from a visual inspection of defects at its exact location or based on building elements.
2. Questionnaires as mention before where data is collected by preparing a series of structured questions related to conservation approach at the historical buildings.

4. PILOT SURVEY ON THE HISTORICAL BUILDINGS IN MALAYSIA

Building conservation has long been of concern, although its popular application is relatively recent in origin, particularly in Malaysia. In the past few years, many historic buildings have been preserved and conserved while others have been converted to become premises for a bank, restaurant, information centre or a printing office. Malaysia is one of the fortunate countries that have many historic

buildings which are of immense architectural and historical value. An inventory study undertaken in 1992 and 1993 by the Heritage Trust of Malaysia in conjunction with the National Museum, the Housing and Local Government Ministry and Faculty of Built Environment, University Technology Malaysia (UTM), reveals that there are near 39,000 historic buildings built between 1800 and 1948 throughout the country which are worthy for preservation and conservation. Buildings built within these periods are classified as 'pre-war buildings' due to their year of build, ranging from 1800 to 1948. Listed in Table 1 is the number of 'pre-war buildings' located in 247 cities and towns nationwide:

Table 1. The Distribution of Pre-War Urban Buildings in Malaysia.

No	States	No of Historical Buildings	Percentage of Historical Buildings
1	Penang	5,057	24.30%
2	Perak	3,351	16.10%
3	Johore	2,323	11.20%
4	Malacca	2,177	10.50%
5	Kuala Lumpur	1,763	8.40%
6	Kedah	1,282	6.12%
7	Selangor	1,166	5.60%
8	Sarawak	1,010	4.90%
9	Negeri Sembilan	999	4.80%
10	Pahang	831	4.00%
11	Terengganu	420	2.00%
12	Kelantan	373	1.80%
13	Perlis	25	0.10%
14	Sabah	10	0.05%
	Total	20,787	100.0%

Source: Iddid (1995).

To make sure that the objectives of this research can be achieved, a pilot survey has been conducted towards Malaysia historical buildings. Among the objectives of this pilot survey was to get a clear understandings related to a few aspects such as the research area, scope, needs and focus before the next stage of the research can be carried out. Therefore, there are 209 historical buildings has been chosen for this pilot survey at four main heritage towns and cities in Malaysia. The selection of the historical buildings and town/cities are referred to the list of historical buildings listed in Kuala Heritage Trails, Ipoh Heritage Trails, George Town Heritage Trails and Bandar Hilir Heritage Trails as prepared and provided by the experts from Badan Warisan Malaysia, Perak State Government, Penang Heritage Trust and Malacca Museum Corporation. The list of all the historical buildings that includes in the pilot survey are as listed in Table 2 on the next page:

Table 2. List of Historical Buildings involved in the Pilot Survey.

No	Name of Historical Buildings	Location	Year Built
1	Jamek Mosque	Kuala Lumpur	1909
2	Old Survey Department	Kuala Lumpur	1910
3	Old City Hall	Kuala Lumpur	1904
4	Old High Court	Kuala Lumpur	1915
5	Sultan Abdul Samad Building	Kuala Lumpur	1897
6	Old Post Office	Kuala Lumpur	1907
7	Industrial Court	Kuala Lumpur	1905
8	Textile Museum	Kuala Lumpur	1905
9	National History Museum	Kuala Lumpur	1888
10	Kuala Lumpur Memorial Library	Kuala Lumpur	1899
11	Royal Selangor Club	Kuala Lumpur	1890
12	St. Mary Church	Kuala Lumpur	1895
13	P.A.M. Building	Kuala Lumpur	1903
14	E.K.R.A.N. House	Kuala Lumpur	1937
15	Central Market	Kuala Lumpur	1936
16	32 Jln. Hang Kasturi	Kuala Lumpur	1909
17	34 Jln. Hang Kasturi	Kuala Lumpur	1909
18	36 Jln. Hang Kasturi	Kuala Lumpur	1909
19	38 Jln. Hang Kasturi	Kuala Lumpur	1909
20	40 Jln. Hang Kasturi	Kuala Lumpur	1909
21	42 Jln. Hang Kasturi	Kuala Lumpur	1909
22	44 Jln. Hang Kasturi	Kuala Lumpur	1909
23	46 Jln. Hang Kasturi	Kuala Lumpur	1909
24	48 Jln. Hang Kasturi	Kuala Lumpur	1909
25	50 Jln. Hang Kasturi	Kuala Lumpur	1909
26	52 Jln. Hang Kasturi	Kuala Lumpur	1909
27	O.C.B.C. Building	Kuala Lumpur	1938
28	Medan Pasar	Kuala Lumpur	1937
29	2 Medan Pasar	Kuala Lumpur	1906
30	4 Medan Pasar	Kuala Lumpur	1906
31	6 Medan Pasar	Kuala Lumpur	1906
32	Gian Singh Building	Kuala Lumpur	1909
33	Bumiputra Commerce Bank	Kuala Lumpur	1930
34	16 Lebu Ampang	Kuala Lumpur	1930
35	18 Lebu Ampang	Kuala Lumpur	1930
36	24 Lebu Ampang	Kuala Lumpur	1930
37	26 Lebu Ampang	Kuala Lumpur	1930
38	28 Lebu Ampang	Kuala Lumpur	1930
39	30 Lebu Ampang	Kuala Lumpur	1930
40	32 Lebu Ampang	Kuala Lumpur	1930
41	85 Lebu Ampang	Kuala Lumpur	1930
42	34 Jln. Tun H.S. Lee	Kuala Lumpur	1880
43	36 Jln. Tun H.S. Lee	Kuala Lumpur	1880
44	38 Jln. Tun H.S. Lee	Kuala Lumpur	1880
45	40 Jln. Tun H.S. Lee	Kuala Lumpur	1880
46	Old Federal Warehouse Building	Kuala Lumpur	1905
47	M.S. Ally Company	Kuala Lumpur	1907
48	Old Bank Simpanan	Kuala Lumpur	1914
49	Sze Ya Temple	Kuala Lumpur	1864
50	Lee Rubber Building	Kuala Lumpur	1930
51	Kwong Siew Association	Kuala Lumpur	1888
52	Sri Mahamariamman Temple	Kuala Lumpur	1920
53	Old Police Station Jln. Tun H.S. Lee	Kuala Lumpur	1895
54	Victoria Institution	Kuala Lumpur	1893
55	Old Post Office Jln. Panggung	Kuala Lumpur	1886
56	Old Chinese Café	Kuala Lumpur	1930
57	Chan See Shu Yuen Association	Kuala Lumpur	1906
58	Funeral Shop	Kuala Lumpur	1900
59	Colonial Hotel	Kuala Lumpur	1930
60	Yan Keng Drama Association	Kuala Lumpur	1920
61	Selangor Merchantile Shop Association	Kuala Lumpur	1920

62	Masjid India	Kuala Lumpur	1863
63	23 Jln. Melayu	Kuala Lumpur	1870
64	25 Jln. Melayu	Kuala Lumpur	1870
65	27 Jln. Melayu	Kuala Lumpur	1870
66	29 Jln. Melayu	Kuala Lumpur	1870
67	31 Jln. Melayu	Kuala Lumpur	1870
68	33 Jln. Melayu	Kuala Lumpur	1870
69	35 Jln. Melayu	Kuala Lumpur	1870
70	1 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
71	3 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
72	5 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
73	7 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
74	9 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
75	11 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
76	13 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
77	15 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
78	17 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
79	19 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1915
80	P.H. Hendry	Kuala Lumpur	1920
81	8 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1900
82	32 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1900
83	42 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1900
84	106 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1900
85	Coliseum Cinema	Kuala Lumpur	1921
86	Rex & Tivoli Hotel	Kuala Lumpur	1930
87	150 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
88	152 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
89	154 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
90	156 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
91	158 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
92	160 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
93	162 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
94	164 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
95	Odeon Cinema	Kuala Lumpur	1936
96	Lee Wong Kee	Kuala Lumpur	1926
97	233 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
98	235 Jln. Tuanku Abdul Rahman	Kuala Lumpur	1939
99	Globe Silk Store	Kuala Lumpur	1930
100	P. Lal Store	Kuala Lumpur	1930
101	Chotirmall	Kuala Lumpur	1930
102	City Hall Building	Ipoh	1916
103	Ipoh Railway Station	Ipoh	1917
104	Chung Thye Pin Building	Ipoh	1907
105	High Court	Ipoh	1928
106	Perdagangan Selat Building	Ipoh	1907
107	S.P.H. De Silva	Ipoh	1950
108	Leong Yew Firm	Ipoh	1913
109	State Medical Office	Ipoh	1920
110	M.B.I. Parking Building	Ipoh	1962
111	Perak Hydro Building	Ipoh	1930
112	Merchantile Bank	Ipoh	1931
113	Chartered Bank	Ipoh	1924
114	Central Police Station	Ipoh	1911
115	St. John Church	Ipoh	1912
116	Dramatis Hostel	Ipoh	1920
117	Hongkong & Shanghai Bank	Ipoh	1931
118	Perak Ku Kong Chow Kung Wu Association	Ipoh	1928
119	Kian Aik Chan	Ipoh	1930
120	Pakistan Mosque	Ipoh	1930
121	Seenivasagam Office and Residential	Ipoh	1900
122	Ali Pitchay Town House	Ipoh	1940
123	Kin Kwok Daily Newspaper	Ipoh	1930
124	Jan Sahib Office	Ipoh	1930
125	Villa Jaya	Ipoh	1930

126	Mikasa Photo Shop	Ipoh	1908
127	Ipoh Royal Club	Ipoh	1898
128	Panglima Lane	Ipoh	1890
129	Kinta Commerce School	Ipoh	1950
130	Yat Loo Club & Miners Association	Ipoh	1935
131	Kinta Aerated Water	Ipoh	1930
132	Star Publication	Ipoh	1930
133	Straits Commerce Warehouse	Ipoh	1930
134	Ambika Property Office	Ipoh	1930
135	St. Michael Institution	Ipoh	1923
136	Federal Malay States Bar & Restaurant	Ipoh	1923
137	Eu Tong Seng	Ipoh	1907
138	Padang Bandar Mosque	Ipoh	1908
139	Oversea Building	Ipoh	1930
140	Guan Yin Temple	Ipoh	1878
141	Foong Seong Villa	Ipoh	1931
142	Sinhalese Bar	Ipoh	1930
143	Kampung Jawa Malay House	Ipoh	1886
144	Han Chin Pet Soo	Ipoh	1929
145	Lam Looking Bazaar	Ipoh	1933
146	Kampung Paloh Mosque	Ipoh	1912
147	Old Kinta Fire Brigade	Ipoh	1913
148	Singapore Cold Storage	Ipoh	1930
149	King George the V Rotary Club House	Ipoh	1935
150	Chua Cheng Bok Building	Ipoh	1930
151	Pa Lo Ku Miao Temple	Ipoh	1872
152	Warta Kinta Office	Ipoh	1940
153	Information Centre	Ipoh	1940
154	Times of Malaya Building	Ipoh	1930
155	Oriental Hotel	Ipoh	1930
156	Mo Ching House	Ipoh	1930
157	Dato' Sri Adika Raja House	Ipoh	1910
158	Syabil Kathigasu House	Ipoh	1930
159	Dato' Panglima Kinta House	Ipoh	1898
160	Perak Chinese Dramatis Association	Ipoh	1939
161	Yau Tet Shin Bazaar	Ipoh	1961
162	St. Michael Church	Ipoh	1924
163	Convent School	Ipoh	1927
164	Malay Women School	Ipoh	1920
165	Lam Look Ing Villa	Ipoh	1930
166	Chinese Association Building	Ipoh	1930
167	Kampung Kuchai House	Ipoh	1903
168	Japanese Military Headquarters	Ipoh	1930
169	Fort Cornwallis	George Town	1808
170	State Hall	George Town	1874
171	City Hall	George Town	1906
172	Town Hall	George Town	1883
173	High Court Building	George Town	1905
174	Convent School	George Town	1852
175	State Museum	George Town	1821
176	St. George Church	George Town	1818
177	Peranakan Penang House	George Town	1890
178	Tua Pek Kong Temple	George Town	1900
179	Goddess of Mercy Temple	George Town	1800
180	Little India Shop House	George Town	1900
181	Mahamariamman Temple	George Town	1833
182	Teochew Temple	George Town	1870
183	Kapitan Kling Mosque	George Town	1801
184	Yap Kongsu Temple	George Town	1924
185	Dr Sun Yat Sen House	George Town	1880
186	Syed Alatas Mansion	George Town	1850
187	Lebuh Acheh Malay Mosque	George Town	1808
188	Khoo Kongsu	George Town	1906
189	Cheah Kongsu	George Town	1900

190	Assumption Church	George Town	1861
191	St. Xavier Institution	George Town	1954
192	Hainanese Association	George Town	1900
193	Carpenter Association	George Town	1850
194	Goldsmith Association	George Town	1903
195	Chan Kim Boon House	George Town	1900
196	King Wan Association	George Town	1900
197	Hainan Temple	George Town	1895
198	Benggali Mosque	George Town	1803
199	Cheong Fatt Tze Mansion	George Town	1890
200	Leong Fee Mansion	George Town	1907
201	Ku Din Ku Meh Mansion	George Town	1900
202	St. Francis Xavier Church	George Town	1867
203	Baba & Nyonya Heritage	Bandar Hilir	1896
204	Cheng Hoon Teng Temple	Bandar Hilir	1646
205	Kampung Kling Mosque	Bandar Hilir	1748
206	Sri Poyyatha Vinayagar Temple	Bandar Hilir	1781
207	Christ Church	Bandar Hilir	1753
208	St. Paul Church	Bandar Hilir	1553
209	Malay Independence Memorial	Bandar Hilir	1911
	Total		209

5. THE PILOT SURVEY QUESTIONNAIRE

Basically there are ten (10) sets of questioned has been stated in the questionnaire form and the questions are as follow:

Question 1: Location of the survey?

Question 2: Year the building was built?

Question 3: Building category?

Question 4: Current uses of the building?

Question 5: Current conditions of the building?

Question 6: Does the building has been conserved properly?

Question 7: Are there any sign of defects occur at the building?

Question 8: If yes, at which element?

Question 9: Does the building needs any conservation approach?

Question 10: Does the current conservation approach suitable?

6. THE ANALYSIS RESULTS OF THE PILOT SURVEY

Based on the data that has been collected throughout the pilot survey, all the data has been analyses using SPSS and simply summarized in forms of pie charts as shown at the next page:

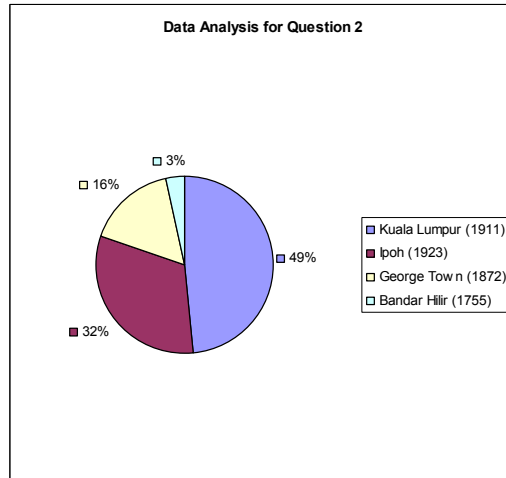
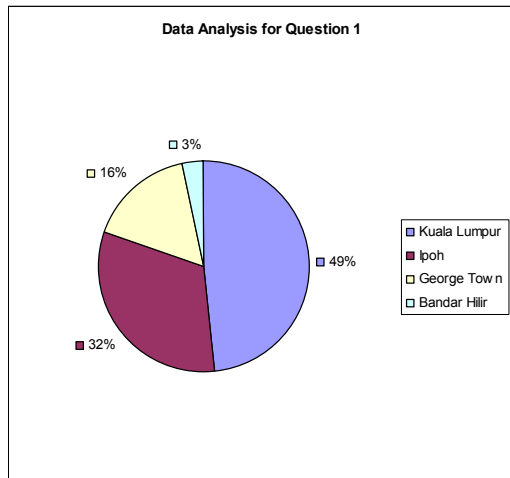


Figure 1. Data Analysis for Question 1: Location of the survey? (Top Left)
 Figure 2. Data Analysis for Question 2: Year the building was built? (Top Right)

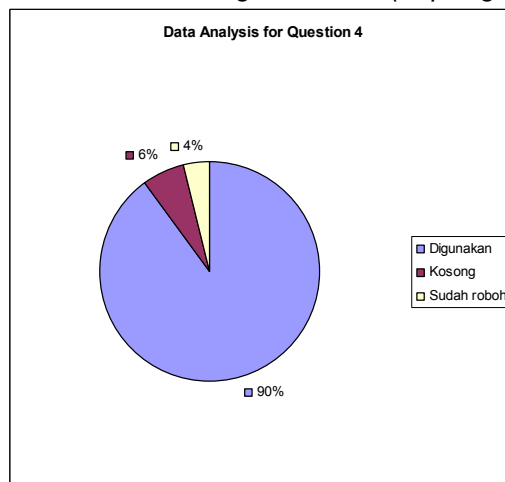
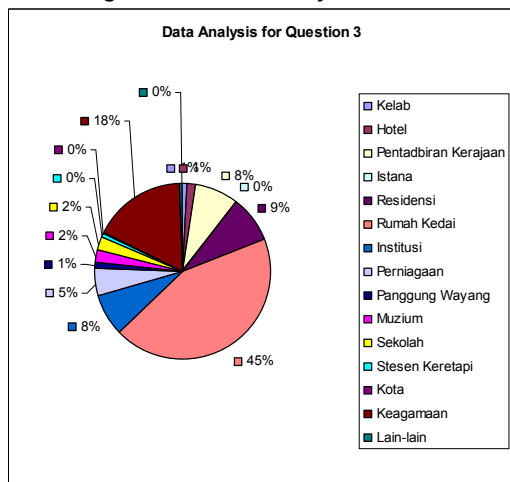


Figure 3. Data Analysis for Question 3: Building category? (Top Left)
 Figure 4. Data Analysis for Question 4: Current uses of the building? (Top Right)

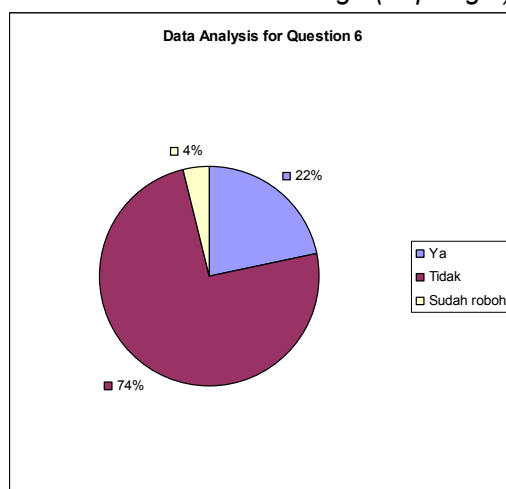
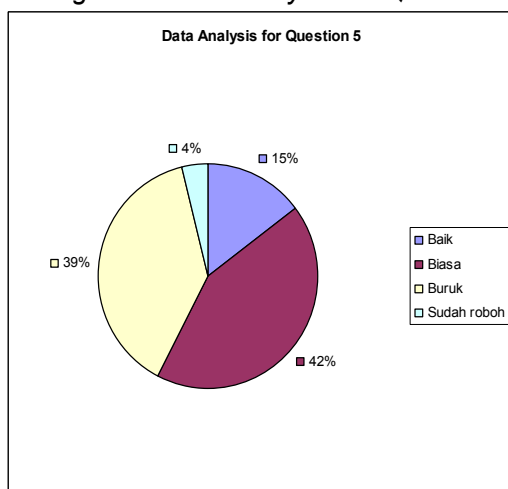


Figure 5. Data Analysis for Question 5: Current conditions of the building? (Top Left)
 Figure 6. Data Analysis for Question 6: Does the building have been conserved properly? (Top Right)

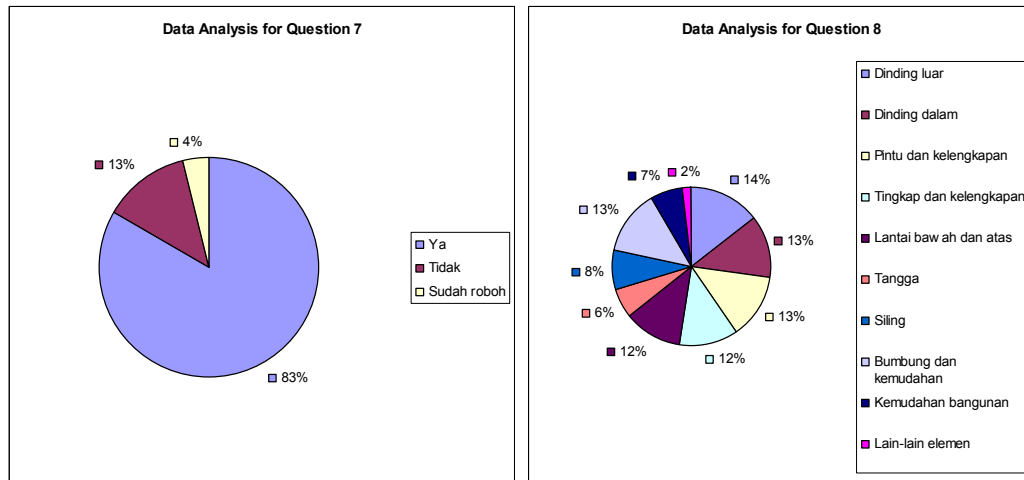


Figure 7. Data Analysis for Question 7: Are there any sign of defects occur at the building? (Top Left)

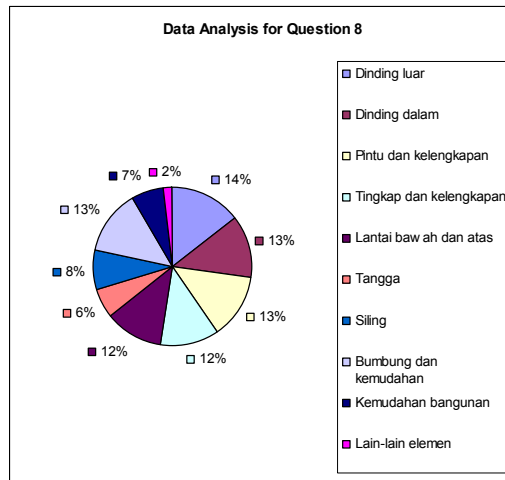


Figure 8. Data Analysis for Question 8: If yes, at which element? (Top Right)

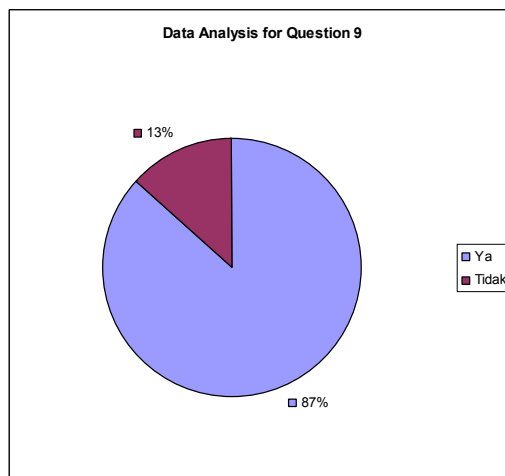


Figure 9. Data Analysis for Question 9: Does the building needs any conservation approach? (Top Left)

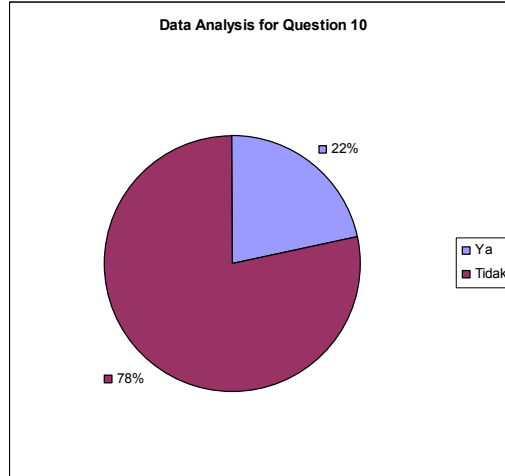


Figure 10. Data Analysis for Question 10: Does the current conservation approach suitable? (Top Right)

7. RESEARCH FINDINGS

Based on the total number of 209 historical buildings that has been surveyed in the pilot survey at four heritage towns and cities i.e Kuala Lumpur, Ipoh, George Town and Bandar Hilir, in order to identify the current conditions of the historical buildings and the level of building defects that occur at these historical buildings, it can be conculed that:

1. 49% of the historical buildings surveyed was located at Kuala Lumpur.
2. The average age of the historical buildings in Malaysia was built in 1903.
3. 45% of the historical buildings surveyed was categorised as shop houses.

4. 90% of the historical buildings surveyed was still occupied while the other 6% was abandon and 4% has been demolished.
5. 39% of the historical buildings surveyed was in poor conditions.
6. 74% of the historical buildings surveyed has not being conserved properly.
7. 83% of the historical buildings surveyed has the sign of building defects.
8. 14% of the building defects occur at external walls followed by 13% at internal walls and etc.
9. 87% of the historical buildings surveyed needs to be conserved.
10. 78% of the historical buildings surveyed showed that the buildings was not being conserved properly according to the basic principles and conservation guidelines.

8. CONCLUSION

Like many other countries in which building conservation seem a fairly new practice, Malaysia faces several problems in dealing with the issues of historic buildings. First, the present legislation on historic buildings is not sufficient and suitable to protect such buildings from being renovated, refurbished or even demolished and destroyed. Secondly, there is lack of technical knowledge in repairing and maintaining historic buildings. This is a major problem because almost all conservation jobs involve both repair and maintenance stages requiring an understanding of and analysis of building defect diagnoses. It would be hard to imagine our towns and cities without historic buildings; so much they are a part of the everyday scene that we tend to take them for granted and overlooks their importance. Each one is an example of a combination of design and construction skills that provide us with a very visible history of buildings through the past 500 years. The aim of this research is basically to identify common problems related to defects likely to occur at historic buildings. It is hoped that by doing this pilot survey and throughout the findings of this research, we could now have a clear scenario about the current condition of Malaysia historical buildings and the percentage of building defects that occur at these historic buildings and therefore a series of preventive measures can be undertaken to prevent it from happening in the future. Based from the research findings, we can conclude that most of the defects that occur at historic buildings in Malaysia were at external walls followed by internal walls and etc. Therefore, building owners should take special care and considerations at these building elements in order to prevent defects from occur in the future.

Understanding the common building defects is simply a logical way of proceeding from the evidence to the cause of a defect, after which remedies can be prescribed. The more that can be found about why defects have occurred, the more can be fed back through the repair works by the professionals responsible for the conservation works. Good repair practice is central to good conservation in Malaysia. Repair would be the only action required to enable historic buildings to survive. The present reality, however is that other sorts of intervention may be necessary to accommodate change. Alteration of one sort or another, in addition to straightforward repair, must sometimes be inflicted on buildings if they are to continue to be useful and wanted. Conservation, therefore, may entail more than repair. Destruction is invariably wasteful and may be positively damaging, while the creation and conservation of good buildings is always worthwhile where repair and maintenance may seem a modest unglamorous activity that can be continuity of past, present and future, working closely with historic buildings, can be sheer pleasure, and making them good in the Malaysian way, indeed be glorious.

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