Cave Archaeology of the Lenggong Valley, Malaysia: A Heritage Management Perspective

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A thesis submitted for the degree of Doctor of Philosophy

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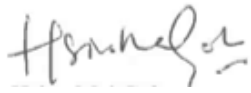
August 2014

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.



Hsiao Mei Goh

Abstract

This dissertation reviews the contemporary cultural heritage management system in Malaysia with a special focus on three archaeological cave sites – Gua Gunung Runtuh, Gua Kajang and Gua Harimau—that form part of the World Heritage Listed site, the Archaeological Heritage of the Lenggong Valley. The study first synthesizes the archaeological data of these caves and presents a regional synthesis of the cave occupation of the Lenggong Valley during the Late Pleistocene-Holocene periods in Southeast Asia. The project also investigates the contemporary heritage management planning for the Lenggong Valley and further explores the social significances of these caves from a community perspective by adopting a Burra Charter-inspired heritage assessment process, on the assumption that this significance is the key to determining management priorities. Results of this study reveal that the cave sites of the Lenggong Valley were continuously occupied by prehistoric humans from 14,000 to 1,500 years ago. Investigations into the recent use of the caves surprisingly revealed that the local community associated these caves with several important social and historical episodes, and these caves are still being used by the local community on a daily basis. However, it is ironic to discover that contemporary conservation and management of the Lenggong Valley tend only to emphasize the archaeological values of the area and disregard the other heritage values associated with the local community. Examination of the contemporary heritage management plan for the valley showed that the rate of consultation with, and inclusion of, the local community in management planning is fairly low. The social significance assessment of the caves has shed new light on the interpretation of the cultural heritage of the valley, as well as reflected the divergences between the official values ascribed by professionals, such as archaeologists, to the site and the non-official values. As the present practice solely relies on heritage professionals ascribing meaning to the sites, the discrepancies between how such professionals and other officials and local stakeholders perceive their heritage reflects the domination by professional groups of the cultural heritage assessment process in Malaysia. This study addresses a need to rethink the old heritage management approach and urges the need for a greater recognition of the social significance of the caves of the Lenggong Valley. It also argues that the successfulness of heritage conservation in the Lenggong Valley is highly dependent on local conservation efforts, and this can only be achieved if heritage officials acknowledge the importance of local values and actively incorporate local ideas into the future management planning of the valley.

Acknowledgements

This dissertation would not have been possible without the help of so many people and here I would like to thank them.

Above all, I would like to express my gratitude to Associate Prof. Dr. Heather Burke for her support, encouragement and patience over the last 4 years of my Ph.D study. I would also like to thank my co-supervisors Dr. Mick Morrison, my previous co-supervisors Dr. Lynley Wallis and Dr. Alice Gorman, and my external supervisor, Prof. Mokhtar Saidin for your continuous support and advise throughout my candidature. I really appreciate the knowledge and expertise shared in different aspects of my project.

I would also like to thank Ministry of Higher Education Malaysia for the funding of my study in Flinders University and Department of National Heritage and University Sains Malaysia (USM) granted me the research grant to complete my research in the Lenggong Valley.

As my research involves several phases of archaeological investigations and excavations in the Lenggong Valley, I would like to take this opportunity to express my appreciation to the staffs from Centre of Global Archaeological Centre, USM, the staffs from Lenggong Archaeological Museums and Lenggong District Council for your kind cooperation and assistance in my field investigations and surveys as well as laboratory analyses.

Added to this, I would also like to thank all the participants in my surveys, especially the residents of the Lenggong Valley for sharing me their personal perspectives about the contemporary heritage management of the Lenggong Valley.

At last but not least, I would like to express my deepest gratitude to my late father, who recently passed away. Thank you for your undiviable love and support throughout my study and your support and encouragement were vital to keep me motivated. I love you and you

will always be remembered. I would also like to thank my family members and friends for always being there for me, thank you very much.

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Chapter 1 – Introduction and Overview

In Southeast Asia, the archaeological investigations of caves and rockshelters are thus far considered as one of the main focuses of archaeological investigation across the region. This is because previous researches show that many caves and rockshelters comprise clues for the understanding of cultural development in the human history, especially during the late Pleistocene and Holocene periods in Southeast Asia (e.g. Anderson, 1997; Barker et al., 2007; Bellwood, 1997). This recognition of the importance of caves and rockshelters have led to an urge to conserve and preserve these archaeologically importance sites as a means to safeguard the past for future generation.

In Malaysia, the conservation and preservation programmes have been put in place to conserve the archaeological sites particularly the archaeological cave sites since 1990s (e.g. Chia, 2004; Zuraina, 1997). Archaeological site, in this context, adopted the definition from *Hoi An Protocols* as *"... a site that comprises any combination of structural remains, artefacts and ecological elements within a culturally modified soil matrix*..." (UNESCO, 2005). Despite nearly a decade of conservation, recent cave surveys conducted by Goh and Mokhtar (2011), however, revealed that many of the archaeological cave sites of the Lenggong Valley are subject to on-going deteriorations. Among the others, Chia (2004) and Goh and Mokhtar (2011) pointed to the low level of heritage awareness among the local communities as the main threat that challenges the heritage conservation of the Lenggong Valley at present day.

In seeking for the factors that influence the effectiveness of a heritage conservation programme in Southeast Asia, Byrne (2011:3) and Karlstrom (2009), through their works in Thailand and Laos concluded that the successfulness of the heritage conservation in Southeast Asia is highly influenced by the local support. They argued that the contemporary

heritage conservation practice of Southeast Asia which gives greater focus on the tangible or physical elements of the sites and artefacts has failed to address and acknowledge the intangible elements (i.e. popular cultures, religious practices, living traditions, and collective memory) associated with a heritage site. As the result, the local communities are often felt themselves detached from the heritage site. This has led to a scenario where the local community refused to involved or support the heritage conservation programmes and thus make the conservation programme based on the local effort impossible.

Given that the local effort in heritage conservation is now perceived as the key to a successful and sustainable heritage conservation (Rössler, 2012:29), a good heritage conservation programme should therefore consider the local ideas especially how the local community perceived and socially connected to the local heritage. In other words, the heritage conservation programme should sitting within a social context. As such, the investigation into the cultural values associated with a heritage sites as well as the cultural continuity from prehistoric times to the present-day existing of living cultures are among the popular themes that have to be investigated when one engages with the heritage management across the Southeast Asian countries.

Corresponding to the above discussion, this thesis, by looking at three archaeological cave sites of the Lenggong Valley, Malaysia, tends to investigate the level of inclusiveness of the contemporary heritage management of Malaysia in acknowledging the tangible but also the intangible elements associated to a heritage site, especially the socio-cultural connection between the local community and the site within a heritage precinct. Overall, this PhD project comprises three main components. First is to present a thorough synthesis about the uses of the caves of Lenggong Valley since late Pleistocene time to the recent past; second is to investigate the issues surrounded the heritage management of Malaysia as well as explore to what extent, the contemporary heritage management practices are sufficient to address these

issues; and finally, this project also takes the initiatives to incorporate the Burra Charter-inspired heritage assessment into the identification of the cultural values associated with the cave sites of the Lenggong Valley and examine whether or not, there is a divergence between the official values (i.e. the cultural values identified by the government agencies and heritage professionals) and the values held by the local community as well as explore its implication for the heritage conservation of Malaysia. Local community, in this context, refers to the community which presently lives in the Lenggong Valley. Although there are many sources pointed to Lenggong Valley as an area used to be occupied by the Indigenous people, the Indigeneous community, however, has been relocated to a new village, approximately 15-20km away from Lenggong Valley since 1970s-1980s. This thesis, therefore, only collected the voices of the existing residents of the Lenggong Valley in order to address the contemporary heritage management issues based on the local social context.

This chapter begins with a brief examination of the development of cultural heritage protection in Southeast Asian region over the past few decades and discusses how the emergence of the concept of UNESCO World Heritage influences the orientation of heritage conservation of the region since 1972. Then, the later parts of the chapter will looking at the background of this project – the Lenggong Valley, as well as discusses the objectives and significance of this PhD project in contributing to the understanding of the contemporary heritage management practice in Malaysia.

1.1 Cultural heritage protection in Southeast Asia: a brief introduction

The preservation and management of archaeological heritage is a subject of increasing interest in many parts of the world today (e.g. Cleere, 1984, 1989; Karlstrom, 2009; McManamon and Hatton, 2000). Following the adoption of the UNESCO *Convention*

Concerning the Protection of the World Cultural and Heritage (henceforth referred as the *UNESCO World Heritage Convention)* in 1972, concerns over heritage management have become more evident in the past few decades, as evidenced in the development of legislative frameworks for the protection of World Heritage. Today, it is notable that, other than internationally recognized charters, such as the Australia ICOMOS *Burra Charter* (1999) and the ICOMOS *International Charter for the Protection and management of Archaeological Heritage* (1990), most countries have their own heritage management systems that include provisions for the protection of their heritage (Cleere, 1989).

In Southeast Asia, the early movement of heritage preservation in archaeology can be traced back to the 1960s when Thailand and Laos began to include few archaeological impact assessments in their major constructions project. This led to the discoveries of several major prehistoric metallurgy sites across that region (e.g. Solheim, 1974). Later in 1970s, some private research foundations such as the Ford Foundation and Toyota Foundation began to provide financial and technical support into the heritage projects (i.e. archaeological projects and training programs) as a means to promote local Southeast Asian's effort to protect and conserve their own heritage (Shoocongdej, 2011:713).

In the end of 1980s, interests in the preservation and management of heritage have become even more evident across the Southeast Asian (SEA) region. Countries such as Philippines, Malaysia, Laos, Indonesia, Thailand and Vietnam ratified the UNESCO World Heritage Convention and became the states parties for UNESCO at the end of the 1980s. Later, in 1991, Cambodia also accepted it and the site of Angkor in Cambodia was listed on the World Heritage List in 1992. At present, the preservation and management of heritage sites have become major issues in most Southeast Asian countries, especially those under development from rapid urbanization, such as Thailand and Jakarta (Akagawa & Sirisrisak, 2008). Working towards World Heritage status for a site, therefore, is perceived as a practical way to

protect heritage sites and instill comprehensive management practices to sustain the survival of sites in Southeast Asian countries facing increasing development pressures (Black and Wall, 2001:124). According to the statistics published by the UNESCO World Heritage Centre, as of 2012, a total of 33 sites from SEA are listed on the World Heritage List (Table 1.1). Of these, 21 (approximately 63%) are cultural heritage sites, whereas the remaining12 (37%) are natural heritage sites (UNESCO WHC, 2012).

Country	Name of heritage property	Nature of property	Year of Inscription
Cambodia	▪ Angkor ▪ Temple of Preah Vihear	Cultural Cultural	1992 2008
Indonesia	▪ Borobudur Temple Compounds ▪ Prambanan Temple Compounds ▪ Sangiran Early Man Site ▪ Cultural Landscape of Bali Province: the *Subak* System as a Manifestation of the *Tri Hita Karana* ▪ Komodo National Park ▪ Ujung Kulon National Park ▪ Tropical Rainforest Heritage of Sumatra ▪ Lorentz National Park	Cultural Cultural Cultural Cultural Natural Natural Natural Natural	1991 1991 1996 2012 1991 1991 1999 2004
Lao's People Democratic Republic	▪ Town of Luang Prabang ▪ Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape	Cultural Cultural	1995 2001
Malaysia	▪ Gunung Mulu National Park ▪ Kinabalu Park ▪ Melaka and George Town, historic cities of the Straits of Malacca ▪ Archaeological Heritage of the Lenggong Valley ▪	Natural Natural Cultural Cultural	2000 2000 2008 2012
Philippines	▪ Baroque Churches of the Philippines	Cultural Cultural	1993 1995

	▪ Rice Terraces of the Philippine Cordilleras (*in danger*) ▪ Historic Town of Vigan ▪ Tubbataha Reefs Natural Park ▪ Puerto-Princesa Subterranean River National Park	Cultural Natural Natural	1999 1993 1999
Thailand	▪ Historic City of Ayutthaya ▪ Historic Town of Sukhothai and Associated Historic Towns ▪ Ban Chiang Archaeological Site ▪ Thungyai-Huai Kha Khaeng Wildlife Sanctuaries ▪ Dong Phayayen-Khao Yai Forest Complex	Cultural Cultural Cultural Natural Natural	1991 1991 1992 1991 2005
Vietnam	• Complex of Hué Monuments • Hoi An Ancient Town • My Son Sanctuary • Central Sector of the Imperial Citadel of Thang Long - Hanoi • Citadel of the Ho Dynasty • Ha Long Bay • Phong Nha-Ke Bang National Park	Cultural Cultural Cultural Cultural Cultural Natural Natural	1993 1999 1999 2010 2011 1994 2003

Table 1.1 UNESCO World Heritage Sites in Southeast Asia

1.1.1 Heritage from top-down

In Southeast Asia, heritage is often used as a source of political legitimacy (Black and Wall, 2001:123; Shoocongdej, 2011:722) and national identity building (Zuraina, 2007). This is because the past heritage prior to the arrival of colonial powers in Southeast Asia is fundamental to the national identity building, especially in the post-colonial era. As such, the government always makes sure that they have full control of the cultural heritage or resources of the country. The management of cultural heritage or resources is therefore often placed under the centralized control of the government and the decision concerning *what* to

conserve, *how* to define and present it are made at the top levels of government with the input from the professionals (i.e. archaeologists and heritage practitioners) without involving the local communities in the management planning process.

Generally, this system can be referred as the "functionalist top-down model" in which authorities codify a specific history (or heritage in this context) for the consumption of the public to achieve certain political goals (Sommer, 2009:104). In Southeast Asia, Black and Wall (2001:131) described this scenario as the "heritage from top down" given that the decisions concerning heritage were made at the top levels of government and then dropped down on the community that live within a heritage precinct. At present-day Southeast Asia, Black and Wall (2001:124) further indicate that apart from the local government, the international organizations such as UNESCO and ICOMOS have also indirectly dominated the heritage management planning of Southeast Asia. Charters and decrees recommended by UNESCO and ICOMOS into the heritage management planning of a heritage site have indirectly imposed their mandate on local community. This creates a struggle between the authorities and the local stakeholders because there is always a disparity between how local community and authorities value the heritage site.

1.1.2 Legislation, heritage charters and decrees: a regional context

The contemporary heritage management practice of Southeast Asia in certain extent, are conform to the principles and recommendations as stipulated in the charters recommended by UNESCO and ICOMOS. Taylor (2004:421), however, argues that these western-derived charters might not sit perfectly into the heritage management planning of Southeast Asia given that there is always a cultural disparity between the western and eastern world. As such, several protocols or decrees which specifically designed for the cultural heritage

protection of Southeast Asia have been established and endorsed by the members of ASEAN[1] over the last decade. Among the others, the ASEAN *Declaration of Cultural Heritage in 2000* and *Hoi An Protocols for best conservation practice in Asia* are two important documents that adopted in the heritage management across the region.

The Association of Southeast Asian Nations (ASEAN) *Declaration of Cultural Heritage in 2000*, is a decree that provides policies and frameworks for ASEAN cooperation on cultural heritage (Ahmad, 2006:58-60). This declaration was endorsed by the ASEAN members to identify, delineate, protect, conserve, promote, develop and transmit to future generations the significant cultural heritage of the region, and proposed a guideline to protect, preserve and promote the cultural heritage of ASEAN countries.

Hoi An Protocols for best conservation practice in Asia, on the other hand, was established through the UNESCO regional workshop held in Hoi An, Vietnam in 2001. In this workshop, 34 heritage experts from 16 countries across the world addressed an urgent need to establish a regional protocol as operation guidelines for the heritage conservation of Asia. Overall, this protocols sets to provide guidelines for identification and documentation of heritage of Asia, with specific focus into the conservation of the cultural authenticity of heritage sites[2]. The first part of the protocols provides definition for the concept of cultural significance and authenticity and later draw attention to the on-going threats to the authenticity of heritage in Asia. The final part of the protocols proposes conservation recommendations and principles

[1] The Association of Southeast Asian Nations (ASEAN) is a geo-political and economic organization of ten countries located in Southeast Asia. At present, there are ten state members include Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Burma (Myanmar), Cambodia, Laos and Vietnam. Generally, this organization aims to accelerate economic growth, social progress, cultural development among its members, protection of regional peace and stability.

[2] Heritage sites, according to *Hoi An Protocols for best conservation practice in Asia*, include archaeological sites, both excavated and unexcavated; monuments and other standing structures, whether ruined or intact; buildings and other structures of historic or other cultural, social, economic, political or ideological significance; architectural ensembles, historic urban areas and townscapes; underwater cultural heritage and landscapes and environments of historical, cultural and/or socioeconomic significance.

to five categories of heritage resources, namely cultural landscapes, archaeological sites, underwater cultural heritage site, historic urban sites and heritage groups, and monuments, buildings and structures. Each category is clearly defined and the conservation approaches for each type of heritage resource are stated. As this protocols is perceived as a practical tool that can effectively guide the heritage conservation of Asia, UNESCO call upon regional, national and local bodies (governmental and non-governmental) to adopt the standards or principles as stipulated in this protocols in their handling with the heritage conservation of heritage in this region (UNESCO Bangkok, 2005).

In addition, there are also some regional organizations that demonstrate their efforts in the protection and management of heritage within the region. For example, the ASEAN Committee on Culture and Information (COCI), which was established in 1978, is functioning as a platform to promote awareness and appreciation of the cultural heritage of ASEAN and to enhance mutual understanding of the cultures and value systems among the peoples of ASEAN countries. Since 1978, more than 300 cultural and information projects have been conducted throughout the region. In 1994, COCI launched a three-year Plan of Action for Culture and Information, focused on the promotion of ASEAN awareness towards the preservation and revitalization of cultural heritage (Thumboo, 1996).

1.2 Cultural heritage protection in Malaysia: a brief introduction

In Malaysia, early efforts towards cultural heritage protection began in the late 1960s, when the First Malaysia Plan (1966-1970) integrated heritage preservation into the country's development planning (Sanday, 1987). This initial stage of cultural protection in Malaysia was mainly pioneered by government agencies such as the Department of Museums and

Antiquities Malaysia. Between 1960s and 1970s, the Department of Museums and Antiquities Malaysia was the only governmental agency involved in the preservation of cultural heritage. It was not until the 1980s, when the general public started to show their interest in heritage conservation via the establishment of the Heritage of Malaysia Trust in 1983, which was run entirely by enthusiastic heritage practitioners, such as architects, curators and town planners. The public heritage movement slowly spread across the country in the mid-1980s when many other heritage-related non-governmental organizations (NGOs), such as the Penang Heritage Trust and Friends of the Heritage of Malaysia Trust, were set up by amateur heritage groups in different parts of the country.

1.2.1 Heritage from top-down

Like many other countries of Southeast Asia, the Malaysian government claims full control over the heritage resource of the country (Shoocongdej, 2011:715). This is because heritage is often manipulated by the government agencies as the tools for nation building (Zuraina, 2007:78-81). Prior to 2006, the protection of cultural heritage of the country was placed under the joint purviews of Department of Museums and Antiquities Malaysia and the Heritage Division attached to the Ministry of Culture, Arts and Heritage Malaysia. In 2006, the Department of National Heritage was established and it was appointed by the federal government as the single agency in this country which possesses full control over the heritage resources across the country. According to the Article 3 of the National Heritage Act 2005, the higher commissioner of Department of National Heritage has the mandate to provide or issuing policies, statements or directives in respect of any matter, business, strategy or conduct on the conservation and preservation of heritage (National Heritage Act 2005).

At present, the heritage research or conservation projects conducted in Malaysia are monitored and often funded by Department of National Heritage through the collaboration with several local tertiary institutions. All heritage research or conservation projects are subject to the permission from the Department of National Heritage. Often, only professionals such as heritage practitioners and archaeologists are involved in the heritage research and conservation programmes in which the local people are rarely be consulted or involved in the heritage management planning. This scenario often led to the inadequate localization of stewardship responsibility over heritage resource.

1.2.2 Legislation, heritage charters and guidelines

The first heritage related legal document of Malaysia was promulgated in 1976. *The Antiquities Act* of 1976 is a document that outlines the responsibility of Department of Museums and Antiquities in monitoring the heritage-related research and preservation of ancient and historical monument across the country. This Act, however, was repelled in December 2005 and replaced with the National Heritage Act 2005 due to the inconclusiveness of this Act which only focuses on tangible heritage as well as its geographical boundaries which only apply to Peninsular Malaysia (not endorsed in East Malaysia).

The National Heritage Act 2005 was established to provide a guideline for the conservation and preservation of national heritage, natural heritage, tangible heritage and intangible heritage, cultural heritage, and underwater cultural heritage, as well as treasure troves[3]. This piece of legal mechanism is perceived as an effective tool in the overall protection of natural,

[3] A "Treasure trove", according to the *National Heritage Act 2005* (Act 645) means any money, coin, gold, silver, plate, bullion jewellery, precious stones or any object or article of value found hidden in, or in anything affixed to, the soil or the bed of a river or lake or the sea, the owner of which is unknown or cannot be found, but does not include any tangible cultural heritage.

cultural and underwater cultural heritage of Malaysia given that it recommends a comprehensive scheme to protect the heritage of the country through the establishment of the National Heritage Council and Heritage Fund for the identification, documentation and conservation of heritage across the country (Article 9, *National Heritage Act 2005*).

Apart from the heritage legislation, the Malaysian government also encourages the adoption of internationally recognized charters or guidelines in the heritage research or conservation programmes at national and local level. Soon after the ratification of the UNESCO World Heritage Convention by the Malaysian government in 1988, the heritage conservation in Malaysia began to be influenced by the international heritage movement. International heritage charters, such as the UNESCO *Venice Charter 1964* and the *ICOMOS Charter for the Protection and Management of Archaeological Heritage 1990* have been widely adopted as the main references to guide heritage preservation in the country.

1.2.3 The heritage conservation of Malaysia: a recent trend

In the last three decades, the Malaysian government has undertaken several initiatives through the Department of National Heritage Malaysia, and the Department of Museums Malaysia, as well as local authorities and non-government bodies, including the Heritage of Malaysia Trust, to promote, protect and preserve the heritage of Malaysia (Ahmad, 2002). Between 2007 and 2009, a total of 37 heritage sites were gazetted as National Heritage Sites on the National Heritage List[4], and 182 sites were placed on the Heritage Register[5].

[4] The National Heritage List identifies heritage sites or objects of national importance gazetted through the *National Heritage Act 200*5.
[5] The Heritage Register identifies heritage sites or objects of state or local importance gazetted through the *National Heritage Act 2005*.

In 2007, the heritage site of George Town and Malacca gained UNESCO World Heritage status. This is Malaysia's first cultural World Heritage Site (WHS), and its nomination took 10 years to prepare (Williams, 2010:197). The massive coverage of the nomination by local media eventually brought in academic interests (see, for example, Idrus *et al*., 2010; Izani *et al*., 2010; Williams, 2010), and also drew public attention to the importance of heritage conservation and management in the country. Supporting this statement are the latest results from a survey conducted in the WHS of George Town, Penang. This survey aimed to investigate the awareness of conservation among the residents of George Town, and showed that 71% of the respondents believed that the conservation of the heritage of George Town was important (Lim *et.al*., 2008).

Besides heritage buildings, the conservation and management of archaeological heritage has also become a national interest over the last 15 years in Malaysia (Muhammad, 2009; Zuraina, 1996). The first foray into the conservation and management of archaeological heritage commenced in the 1990s, when archaeological impact assessments were first included in large scale development projects, such as the Petronas Utilisation Project in Peninsular Malaysia and the construction of the Bakun Dam in Sarawak (Chia, 2004). As a result, several megalithic sites were excavated and relocated to Kuala Lumpur (Zuraina, 1993). In 2006, the Unit of Conservation and Archaeology was set up by the Department of National Heritage in order to pioneer archaeological research and take responsibility for the conservation, restoration and maintenance of archaeological heritage in the country.

1.3 The background to the project: the Lenggong Valley

Thus far, archaeological conservation projects have been launched by the Department of National Heritage in four major archaeological areas in Malaysia: the Lenggong Valley in

Perak, Bujang Valley in Kedah, Niah Cave in Sarawak and East Sabah (Department of National Heritage, 2011). However, increasing site deterioration of sites and artefacts is one of the most challenging issues in the conservation of archaeological sites in these areas (Chia, 2004; Goh and Mokhtar, 2011). Given that the issues and problems surrounding heritage conservation at these sites are still undetermined, this thesis takes the initiative to review the management of archaeological heritage in Malaysia in order to explore what constrains and advances the practice of heritage conservation in the country. Of the four aforementioned archaeological areas, the Lenggong Valley has been selected as the focus of this study (Figure 1.1).

The Lenggong Valley is a sub-district of the District of Upper Perak, located in the State of Perak in northern Peninsular Malaysia. It is located about 100km from Ipoh, the capital of Perak and approximately 120km from the southern border of Thailand. Today, the Lenggong Valley can be accessed through the North-South Expressway[6] via exit No. 143 at Kuala Kangsar (Figures 1.1). Geographically, this valley is bounded by wet and humid tropical jungle and has an average elevation 100 metres above sea level. It is situated between two main mountain ranges in Peninsular Malaysia – the Titiwangsa Range to the east and the Bintang Range to the southwest and has an equatorial climate, averaging between 27 and 33 degrees Celsius. Previous geological survey in this valley identified eight limestone massifs over an area of approximately six kilometres square.

[6] The North-South Expressway is the longest expressway in Malaysia with the total length of 966 km running from the Malaysia-Thai border to Malaysia-Singapore border at the southern boundary of Peninsular Malaysia.

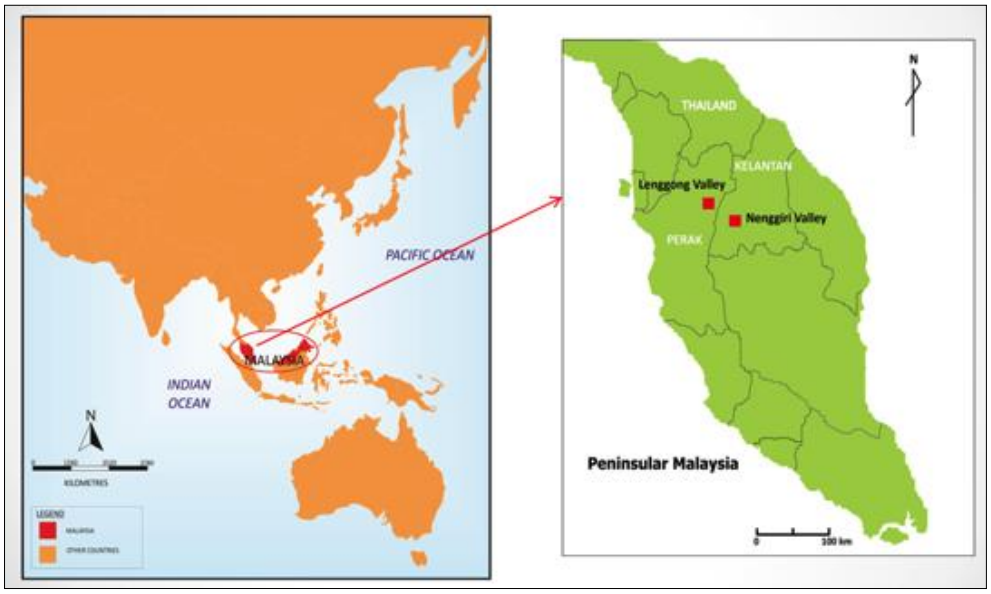

Figure 1.1: The location of the Lenggong Valley in Malaysia.

There are several versions of local folktales that tell the origin of the name of the Lenggong Valley. Of the many versions, there are currently two that are widespread among the local communities. Both versions are related to the local indigenous ethnic group. The first version names the valley after Lenggong, a Semang[7] man who found the valley during the pre-colonial era in Malaya. The second version carries a story that by historic times, the valley had been settled by the indigenous group. The name Lenggong appears to have come from the Malay word "*terlanggung"* which means "hanging*"* in English. Legend has it that a Semang man wanted to cut down a five-fathom tree. After much hard work he succeeded in cutting it down but it fell onto another smaller tree which broke the larger trunk's fall and bounced it back

At present, the Lenggong Valley covers an area of approximately 80,324 hectares with a population of around 15,000. The land use of the Lenggong Valley can be generally divided into four categories: agricultural use; built environment; industrial use and native forest

[7] The Semang is identified as the oldest indigenous group found in Peninsular Malaysia (Carey, 1976).

(Figure 1.2). According to the statistical data provided by the Lenggong District and Land Office (2012), the majority of the residents in this valley still survive on agricultural activities for which more than 30,000 hectares of land are currently used for agricultural purposes such as palm oil, rubber and fruit plantations. The urban area (built environment and industrial area) in the Lenggong Valley covers only 160 hectares of land, whereas the remaining lands consist of both native forest and wasteland.

Thus far, the records of the settlement of the Lenggong Valley during historic times are fairly limited. The majority of the early literature dedicated to this valley consists of ethnographical records that mainly demonstrate the settlement of indigenous groups across the Lenggong Valley. Between 1913 and 1925, I.H.N. Evans (1914, 1923 and 1927) made several visits to the indigenous encampments in this valley. From his studies, he recorded the settlement of Semang people (or Sakai in the local context) in close proximity to several caves in this valley. The earlier works of Evans (1914) later led him to further his work into the cave investigations in 1917 which the first important evidence of prehistoric human occupation in this valley.

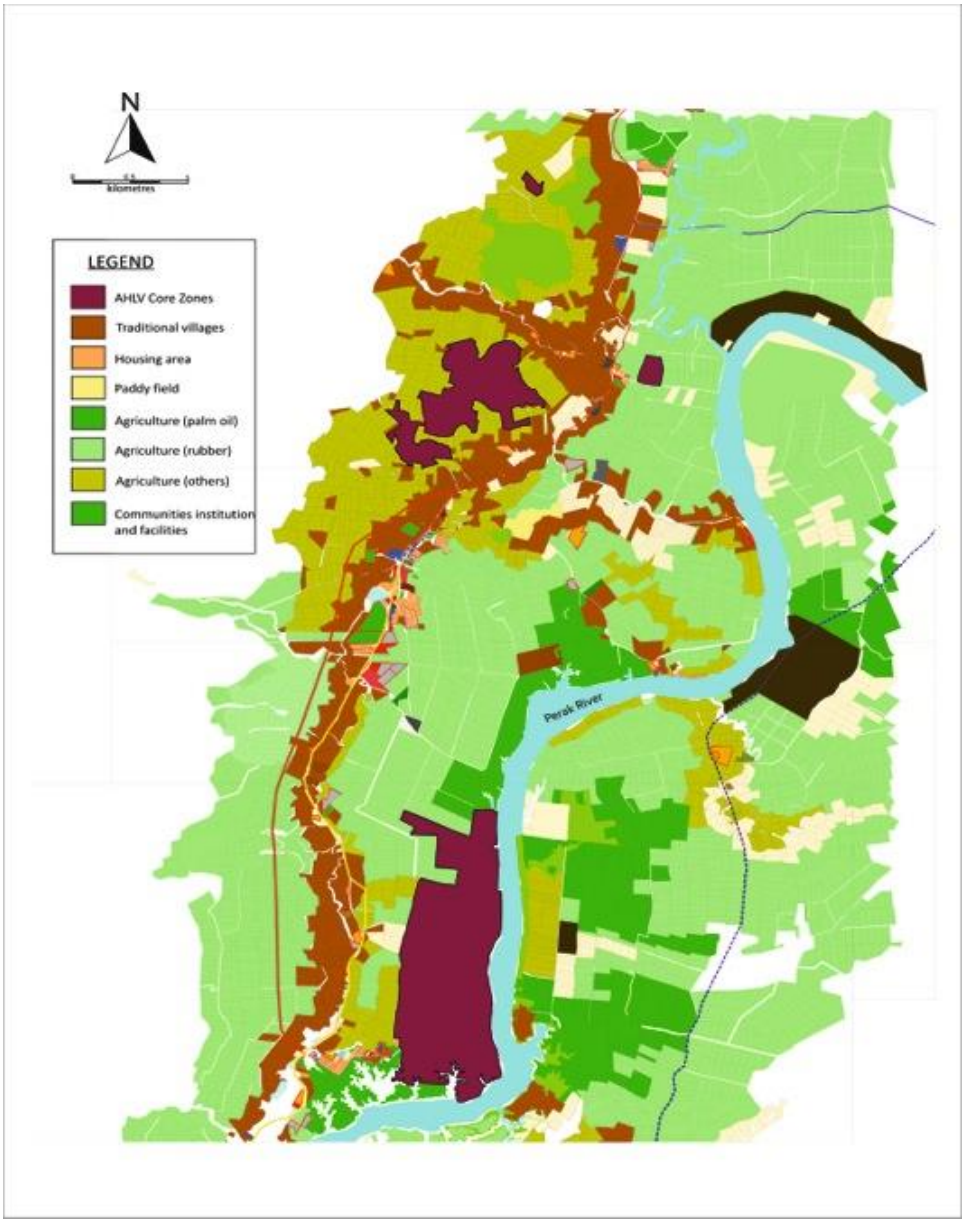

Figure 1.2: The current land use pattern of Lenggong Valley.

To date, a total of four Palaeolithic open sites and eight cave sites from this valley have been archaeologically studied in detail (e.g. Chia, 1997; Goh, 2008; Mokhtar, 1997; Zolkurnain, 1998; Zuraina, 1994, 2003), and the findings point to this valley as one of the most important archaeological sites in the world. This valley is one of the earliest prehistoric settlement areas in Southeast Asia, dating back to as early as 1.83 million years during the Palaeolithic period,

after which human occupation extended into the Neolithic and Metal Periods (Mokhtar, 2012:5).

In July 2012, the Lenggong Valley was inscribed on the UNESCO World Heritage List (WHL), making it the fifth heritage site in Malaysia to gain UNESCO recognition since 2000 (Figure 1.3). It is also the first cultural property in the country to be listed as a UNESCO WHS explicitly for its archaeological value. The three open sites and four cave sites that are collectively known as the Archaeological Heritage of Lenggong Valley (AHLV) were inscribed as a UNESCO World Heritage Site under a serial nomination. The inscription of the AHLV was based on criteria III and IV and four themes have been flagged as the main reasons for the nomination (ICOMOS, 2012):

(i) The AHLV bears one of the longest culture sequences in a single locality in the world;

(ii) The AHLV comprises undisturbed *in-situ* stone tool workshops dated in a long chronological sequence that provide a key to the understanding of the development of Palaeolithic human culture in Southeast Asia, and

(iii) The AHLV contains evidence of early hominid presence outside Africa.

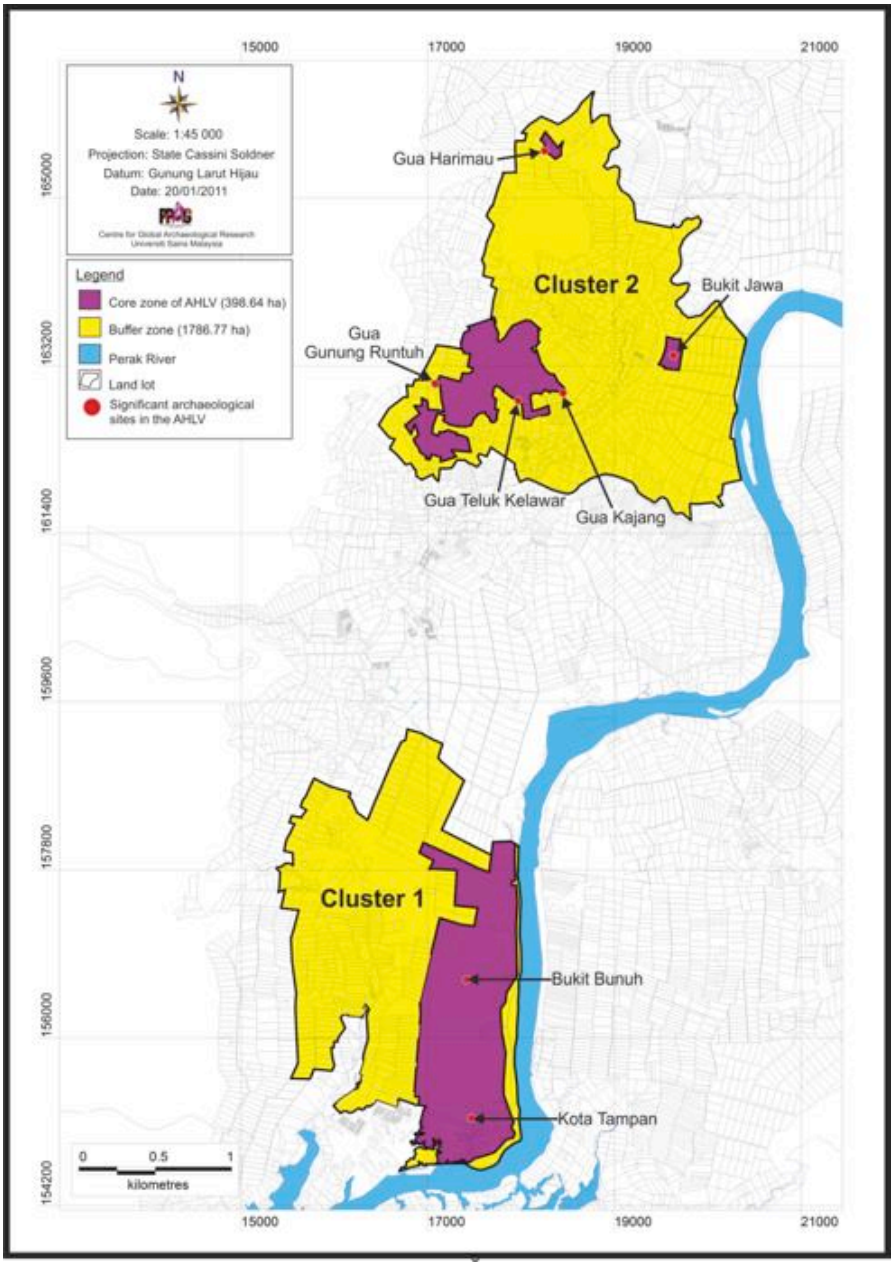

Figure 1.3: The nominated property of the UNESCO World Heritage Site of the Archaeological Heritage of the Lenggong Valley (AHLV).
(Illustration credit: the domination dossier of AHLV).

Of many open and cave sites in the Lenggong Valley, three cave sites: Gua Gunung Runtuh, Gua Kajang and Gua Harimau, were selected as the context for this study. Together these sites have occupation dated between 14,000 and 1,500 years ago and were selected because

they represent complementary and overlapping periods of human occupation throughout the Late Pleistocene-Holocene periods.

1.4 The motivation of the research: issues and challenges for the cave archaeology of the Lenggong Valley

In the Lenggong Valley, archaeologists and heritage managers are often engaged with several issues and challenges in their attempts to manage the archaeological heritage of this area (Chia, 2004; Zuraina, 1996). Despite several proposals to mitigate the pressures on sites, as well as the creation of relevant legislative mechanisms (e.g. Chia, 2004; Goh and Mokhtar, 2011), the latest field investigations carried out by the author indicated that many of the archaeological cave sites in the Lenggong Valley are still under increasing threat. The following section will examine the issues and challenges to the cave archaeology of the Lenggong Valley and explore how these problems conflict with the current management and conservation of the archaeological heritage of the Lenggong Valley.

1.4.1 Insufficient internationally-published materials

Previous archaeological research in the Lenggong Valley shows that it represents one of the longest sequences of prehistoric cultural continuity in the Southeast Asian region (Zuraina, 2003). Though most research undertaken since 1987 has been published, the majority of the published reports, articles or theses were written in Bahasa Malaysia (*Malay*). As such, there is a notable "language barrier" (a term coined by Bellwood (1997)) that restricts the access of foreign archaeologists to Malaysian prehistory. This situation happens not only in Malaysia but is widespread, especially in those Southeast Asian countries where English is the second spoken language. For example, most of the archaeological work done by local archaeologists

is published in the local academic journal *Khao Co Hoc*, published in Vietnamese. Thus far, there are about 50 publications on the archaeological research of the Lenggong Valley; however the archaeological importance of the Lenggong Valley is still not well-recognized internationally. There is also a widespread misconception that the development of Malaysian archaeology is rather sporadic (Glover, 1986), due at least in part to the lack of internationally-published materials, with only a limited number of publications about Malaysian archaeology appearing in English.

1.4.2 On-going site deterioration

In many Southeast Asian countries, archaeologists and heritage managers increasingly have to deal with the issue of site deterioration (see for example, Anderson, 1997; Simanjuntak, 2002). In Malaysia, major archaeological site destruction is often brought about through a lack of awareness of appropriate conservation practice amongst researchers, particularly when some archaeological sites are left open after excavation without appropriate conservation strategies (Goh, 2008). In the Lenggong Valley, owing to their easy access, most of the archaeological sites, especially the cave sites, have suffered from illegal digging and vandalism. Although the issue of guano digging has been highlighted since the 1990s and guano collection is strongly prohibited in the Lenggong Valley, traces of illegal digging are still noticeable due to ineffective law enforcement. The local community of the Lenggong Valley, on the other hand, often ignores petitions from local authorities to protect the archaeological sites and rarely becomes involved in the preservation of such heritage due to a lack of mutual communication between authorities and local residents. It is recognised that local community involvement in protecting heritage sites is fundamental (Smith, 2003), however such involvement is still relatively rare among local communities in Malaysia.

The agricultural expansion in this valley has also threatened the integrity of the cave sites in several ways. Extensive land clearance in the lowland, especially the areas surrounding the limestone massifs that contain the caves. has bulldozed the original landscapes close to the cave sites. The development of the agricultural sector in this valley has also increased the local demand for fertilizer, which has indirectly led to the re-activation of illegal guano mining within the cave sites. Currently, no archaeological cave in this valley has been exempt from illegal digging.

Currently, access to the archaeological cave sites is not restricted or guarded. This tends to allow uncontrolled public access to the sites. Although non-local visitors to the caves are relatively rare, visitor impact is still prevalent because cave sites such as Gua Kajang and Gua Harimau are accessed by the local residents every day. Failure to control the carrying capacity of the sites has placed the caves under risk in several ways. Issues such as vandalism, waste disposal and deterioration of the caves are among the most serious problems arising from regular public visitation. In Gua Kajang and Gua Badak, for instance, irresponsible visitors have spread graffiti on the cave walls with various types of inerasable materials. Some panels of Indigenous rock art in Gua Badak are now superimposed by modern drawings and writing and the Indigenous rock art discovered by Evans (1918) in Gua Kajang no longer survives because of vandalism pressures (Mokhtar and Taşon, 2012:461). Today, solid wastes are found scattered in the cave and no proper waste disposal has been recommended. Excessive access to the cave sites also stimulates natural decay and leads to the premature deterioration of the caves. Regular trampling of the sites will compact the soil in the caves and further reduce water permeability and increase the runoff from the caves.

1.4.3 Insufficient heritage conservation management

A shortage of skilled experts in heritage conservation has been identified as one of the key factors affecting the integrity of the cave heritage of the Lenggong Valley (Chia, 2004). Maintenance and monitoring activities are not conducted by experienced heritage officers or conservators from the Department of National Heritage. Instead, contractors are appointed who are not skilled workers in the heritage field. As such, no standard conservation practices are implemented on site and often the impacts and damage to the cave sites are not documented in detailed. Thus far, no proper site monitoring program has been initiated, and monitoring of the sites often relies on the site inspections carried out by the research team from the Universiti Sains Malaysia under their own initiative.

Additionally, although the relevant stakeholders have been provided with guidelines which conform to internationally-recognised modules and principles (e.g. the *ICOMOS Burra Charter 1999*, *Venice Charter 1964* and *ICOMOS Charter for the Protection and Management of Archaeological Heritage 1990*), it is arguable whether such principles and guidelines can sit perfectly in the management and preservation of archaeological heritage in the Lenggong Valley, seeing as there is always a discrepancy between western heritage discourse and local heritage context. This is a widespread issue in the SEA region (e.g. Karlstrom, 2005).

Ironically, many destructive activities are carried out by the local people who live near to the heritage sites. Management authorities try their best to preserve the heritage of the valley, but the locals tend to exploit the resources in the sites for their own economic benefit. This conflict of interest creates a struggle between the management authorities and the local community in the conservation of archaeological heritage. Goh and Mokhtar (2011) surmised that this situation reflects a lack of knowledge among the local people regarding the

significance of these heritage sites and the links between the sites and their community, as well as a lack of understanding about conservation as a priority. Extensive community surveys conducted for this project reveal that the local people sometimes do not realize that their activities could damage the cultural values of a particular heritage site. This is because their rights to engage with the protection of culturally associated sites are never acknowledged by management authorities and thus a sense of responsibility towards protecting the sites among the local population is still relatively low. More information on the survey is provided in Chapter 7.

1.4.4 Imbalances in the focus of archaeological research

Over the last three decades, archaeological investigations in the Lenggong Valley have demonstrated an imbalance in the focus of research. Thus far, investigations into the cave archaeology of the valley have been generally rooted in prehistoric studies (e.g. Chia, 1997; Goh, 2008; Zuraina, 1988, 1989, 1994; Zolkurnain, 1998) and the ultimate goal of these investigations has been to generate data that would allow the construction of a comprehensive regional cave chronology (Zuraina, 1995).

While the discovery of prehistoric evidence in the cave sites has been regularly reported, many records also show that the caves of the Lenggong Valley have been exploited by different groups of people during the historical period. Evans (1914, 1918, 1924), for example, discovered traces of Indigenous occupation in the caves during the early 20th century. Although the caves of the Lenggong Valley seem to be associated with a wide range of cultural events over different periods of time, contemporary archaeological investigations have failed to capture the full range of past activities. Prehistoric investigations are given greater priority in contemporary archaeological research of this area and, as a result, the

historical and Indigenous attachments to the caves are often ignored and not integrated into the interpretation of the "cave culture" of the valley. This situation brings about a potential loss to the archaeological heritage of the caves in the valley, as well as a potentially distorted community understanding of their past and the contemporary connections between the local community and the sites.

1.5 Research Questions

Can you include a sentence which reiterates the overarching research goal of your thesis here (to remind the reader about what it is)? To achieve this research goal, the following list of questions was formulated:

i. How can the archaeological findings from the cave sites in the Lenggong Valley contribute to the regional understanding of the Late-Pleistocene- Holocene occupation of Malaysia?
ii. What are the challenges and opportunities in the conservation and management of archaeological sites in the Lenggong Valley?
iii. Does the current legislative framework provide extensive protection and conservation for heritage sites in Malaysia? What are its strengths and weaknesses?
iv. What is the significance of the cave sites in the Lenggong Valley to the local communities and what are their concerns for the future delivery of heritage management in the valley?

1.6 Significance of the research

The significance of this project lies in three areas: (i) providing a thorough synthesis of the cave archaeology of the Lenggong Valley which gives insights into human lifeways during the Late-Pleistocene and Holocene periods in the valley; (ii) reviewing and exploring the constraints and opportunities of the contemporary and future heritage management of the archaeological sites of the Lenggong Valley; and (iii) making an original assessment of the full range of cultural values embodied in the Lenggong cave sites through applying the principles of Burra Charter significance assessment.

One major objective of this study is to investigate the social significance of the Lenggong Valley and examine how this significance affects the heritage conservation and management orientation of the sites in light of other values. To date, local involvement in the preservation and management of archaeological sites is still relatively low due to the emphasis placed on archaeological significance as the management priority and the disregard for other heritage values associated with local communities. According to international standards, a critical part of effective heritage management requires an understanding of the significance of sites to stakeholders, such as local communities, as a core element in the formulation of an effective conservation plan (Mason, 2008; Sullivan, 1993). One key outcome of this thesis will therefore be a thorough Burra Charter-inspired heritage assessment to identify other areas of significance (e.g. social, aesthetic and historical values) associated with the archaeological sites in the valley, on the assumption that a full assessment of significance should be the key to determining management priorities. The implementation of such assessment, while commonplace in some parts of the world, is not common in Malaysia. As of today, no conservation planning in the country has adopted this approach to investigating the cultural significance of a heritage precinct. As the Lenggong Valley is now a UNESCO World

Heritage Site, a more thorough heritage assessment will contribute to its protection, and provide a model whereby heritage significance can be assessed for other Malaysian sites.

This assessment is the first community-driven heritage project conducted in the Lenggong Valley in over nearly a century of archaeological research conducted in this area. For the very first time, it provides a way for the local community and various stakeholders to voice their perceptions of their heritage and attribute social meanings to these caves based on their long term interactions with the sites. The results generated from this assessment are important for shedding new light on the interpretation of cultural heritage in the country, as well as helping to reflect the divergences between the official values ascribed by professionals, such as archaeologists, to the sites and non-official values. As present practice relies exclusively on heritage professionals ascribing meaning to heritage sites based on the scientific evidence, the discrepancies between how the official and local stakeholders perceive their heritage will in part reflect the extent to which professional groups have dominated the cultural heritage sphere in the country. How this issue should be addressed in the future is a critical issue in promote the wider social appreciation of heritage and preserving sites for the long term.

A second major objective of this study is to review the contemporary heritage management of the Lenggong Valley and identify to what extent existing heritage management practice is sufficient to address the issues and challenges of the cave archaeology of the Lenggong Valley. This review will identify the strengths and weaknesses of contemporary heritage management through a content analysis of the AHLV management plan. Two key frameworks for successful heritage management (Feilden and Jokilehto, 1993; Lee *et al*., 2007) have been adopted as the benchmark for this review. The results from this content analysis will contribute to an understanding of the existing heritage management framework, as well as assisting in the formulation of a more holistic management practice for the caves site of the Lenggong Valley.

Given that a misconception exists about the underdeveloped nature of Malaysian archaeology due to a lack of internationally-published materials, a synthesis of the Lenggong Valley's prehistory will also be provided by this thesis. This synthesis focuses on reviewing and evaluating the prehistoric cave occupation of the Lenggong Valley, primarily based on the results of archaeological excavations of cave site deposits in the region carried out over the past 90 years. Given that the archaeological investigation of caves and rock shelters is widely considered to provide important clues for the understanding of cultural development in Southeast Asia, especially in the study of the relationships between cultural and environmental changes during the during the Late-Pleistocene and Holocene periods (Barker, Reynold and Gilbertson, 2005), a synthesis of the cave archaeology of the Lenggong Valley will contribute to a better regional understanding of the Late Pleistocene–Holocene occupation of Southeast Asia.

1.7 Thesis outline

Chapter 2 explores the contemporary heritage management discourse and its relevance to the archaeology of Malaysia and the Lenggong Valley. The discussion first draws attention to the theoretical framework of heritage management and further discusses heritage management practices as applied to archaeological sites in Malaysia. This chapter then reviews the legislation relevant to Malaysian heritage management and provides an in-depth discussion of the contemporary heritage management system in Malaysia.

Chapter 3 describes the methodologies and approaches implemented in this research, including the field survey and excavation methods, qualitative and quantitative approaches to heritage assessment, and the methods used in the benchmarking survey, content analysis, collection of social significance data, and statistical analysis of the results.

Chapter 4 presents a regional synthesis of the Late Pleistocene-Holocene occupation of the Lenggong Valley which aims to synthesize all published materials from archaeological work carried out over the last century. As additional field survey and rescue excavation was carried out for this thesis, this synthesis also integrates the latest archaeological findings with the data available from previous studies to permit, for the first time, a thorough understanding of the cave archaeology of this valley.

Chapter 5 contains background information about three cave sites—Gua Gunung Runtuh, Gua Kajang and Gua Harimau—which are the focus of this study. It presents a detailed description of each of these sites as well as examine the present state of conservation these caves.

Chapter 6 reviews the contemporary heritage management of the Lenggong Valley through a content analysis of the management plan for the UNESCO nominated property, the Archaeological Heritage of the Lenggong Valley. It discusses the strengths and weaknesses of this newly-proposed management plan through a systematic quantitative analysis and explores to what extent the plan advances the conservation and management needs of the Lenggong Valley.

Chapter 7 presents results from the social and archaeological heritage assessment of the Lenggong Valley. This chapter evaluates the significance of the three archaeological cave sites based on the results collected from questionnaire surveys and oral interviews conducted with local residents in the Lenggong Valley.

Chapter 8 examines the divergence between the official heritage values ascribed to these sites by heritage professionals and the non-official values attributed to the sites by the local community. It also explores how the official heritage paradigm has affected the past and

present interpretation of heritage in the country, and how, if left unchallenged, this will continue to have repercussions for the future.

Chapter 2 Malaysian Archaeology: A Heritage Management Perspective

At present, there is an increasing concern over the conservation and management of the archaeological heritage in Malaysia. This has resulted in a switching of research focus, from initial excavation-oriented archaeological research to the inclusion of post-excavation conservation and management of archaeological heritage into the mainstream. Archaeological heritage, in this thesis, refers to any archaeological site or objects discovered through archaeological research in any parts of Malaysia which are at least 50 years old or more[8]. Such efforts in the conservation and management of archaeological heritage are practiced through the establishment of a set of institutional practices, including heritage charters and guidelines, as well as law or regulations.

This chapter, by examining the heritage management practice in Malaysia, explores how it contributes to the overall conservation and management of the archaeological heritage of the country. The discussion first underpins some theoretical aspects of contemporary heritage management, particularly the definitions and scope of heritage and further deliberates what constitutes "heritage" in the context of Malaysia.

The second part of the chapter explores how the emergence of a values system in heritage assists policy making and its delivery in heritage conservation. The discussion focuses on the current debates surrounding the heritage values system and examines the implications of this system in conservation and management of archaeological heritage in Malaysia with special reference to the Lenggong Valley. The final part of this chapter will review the on-going heritage management system of Malaysia and addresses how it advances the overall conservation and protection of archaeological heritage of the country.

[8] As defined by the *National Heritage Act 2005*

2.1 Theoretical Underpinnings: Definition and scope of heritage

…"Today, one of the complexities of heritage conservation is the expansion of the concept and scope of heritage." (Torre 2005:4)

Over the last three decades, debates about "what heritage is" have occurred regularly within the heritage discipline. These mainly centered on three key subjects: first, the etymology of the word "heritage" (Aplin, 2002; Carman and Sørensen, 2009:12; Howard, 2003:6), and how this term should be defined within the field of heritage studies (Ahmad, 2006; Carman and Sørensen, 2009:11). The second is about the scope and extent of heritage as a discipline (Ahmad, 2006; Carman, 2002; Smith, 2006) and the third is to investigate the uses of heritage in contemporary society (Smith, 2006).

Generally, the word "heritage" carries a relatively straightforward connection with the concept of "inheritance", in which heritage always refers to something that has been, or may be, inherited. Heritage can be regarded as something that is conserved or collected either by an individual or the public, and later passed on to future generations (Howard, 2003:6; Holtoft 2005). The concept of "inheritance" in heritage became even more apparent when UNESCO defined heritage as the "legacy of the past, what we live with today, and what we pass on to future generations" (UNESCO, 1972).

Although such a definition seems all embracing, it is arguable that "heritage" now means something different within contemporary society as a result of recent debates (e.g. Ahmad, 2006; Ashworth, Graham and Tunbridge, 2007; Carman and Sørensen, 2009). Traditionally, heritage is closely tied to material property, which includes sites, monuments, buildings and artefacts of cultural importance. This is demonstrated in the development of early international heritage conservation which only focused on physical properties (Ahmad, 2006; Lennon 2006:448-452). By the end of the 20th century, the nature of heritage had become

multifaceted when international cultural organisations such as UNESCO and ICOMOS (*International Council on Monument and Sites*) refined and broadened the definition and scope of heritage to include not only tangible heritage but also intangible and natural heritage (Ahmad, 2006:298).

More recently, many practitioners started to argue that the nature of heritage changes over time (Littler and Naido, 2004). Heritage is not solely a legacy of the past; it now has many uses and multiple producers under different circumstances (Ashworth and Graham, 2005). For example, heritage can traditionally be concerned with those places, objects or landscapes that are worth preserving for the benefit of future generations (Holtorf, 2005). However, it can also be regarded as collective memory that constructs political, social or historical identity (Smith, 2004:2) or commodified as a tourism product to generate economic capital (Anderson, 2007). All these examples seem to reflect that heritage has little intrinsic value, and imply that it can be manipulated and interpreted according to present demand (Ashworth, Graham and Tunbridge, 2007). Graham and Howard (2008:1) pointed out that oftentimes a "constructionist perspective" is adopted in contemporary society in which meanings or values are placed on tangible material from the past to make them into cultural, political and economic resources for the present. The implications of this concept for archaeology have also been discussed (e.g. Darvill, 1995; Smith, 2004). Darvill (1995:41) suggests that values are often placed upon the archaeological resource to develop a certain form of tangible return based on contemporary, usually tourist consumption. Generally, there are three values placed upon archaeological resources: use value, option value and existence value. Oftentimes, contemporary society exploits archaeological resources when they have the "expertise" to attribute meanings to evidence, records or memories to provoke recognition and appreciation towards their past (Darvill, 1995:41-47). As such, Carman (2002) and Graham (2002) assert that what constitute "heritage" always depends on the meanings and values placed upon an

artifact or cultural material and the representations which are created from them. This concept is widely accepted by heritage practitioners, given that "values" define what is heritage and why a site or an object is important to a person, group or community (Jameson, 2008).

Alternatively, heritage may also be defined through laws or regulations (Cleere, 1989). The definitions of heritage in legal instruments are normally influenced by the politics and history of the country, as well as public perceptions of heritage (Ndoro, 2008:25). In the Philippines for instance, heritage is defined through the *Natural Cultural Heritage Act 2009*, which refers to heritage as all products and activities through which a people and a nation reveal their identity. Although this approach privileges heritage conservation in some ways, it also highlights the fact that the definition of heritage in every country is influenced by its own political, historical and cultural background.

Since the 1960s, one of the main concerns of international charters and guidelines has been to establish a common definition of heritage (Ahmad, 2006). Attempting to clearly define what "heritage" means to us and what constitutes heritage might be influential in bringing focus and coherence to the field, but in turn, this might also restrict the expansion of the field (Carman and Sørensen, 2009:13). Heritage is, therefore, indefinable to a certain extent. As Carman (2002:12) states, *"... there is no commonly accepted definition of what comprises ... heritage... what we think of as ... heritage largely depends upon the kind of people we are and the circumstances in which we work*."

2.1.1 Definitions and scope of heritage in Malaysia

Like other countries in Southeast Asia, the concept of "heritage" only emerged in Malaysia in the late 20th century; or more precisely, after the ratification of the UNESCO World Heritage

Convention by the Malaysian Government in 1988. Prior to that, all cultural properties in the country were divided into two categories: treasure troves and antiquities. Treasure troves refer to any money, coin, gold, silver, plate, bullion jewellery, precious stones or any object of value found hidden in Peninsular Malaysia for which the owner is unknown or cannot be found (*Treasure Trove Act 1957*). Antiquities, on the other hand, include ancient and historical monuments, historical objects and historical sites which are reasonably believed to be at least 100 years old (*Antiquities Act 1976*).

With an increasing concern over the protection and preservation of heritage, the provisions in both the *Treasure Trove Act 1957* and the *Antiquities Act 1976* failed to provide adequate protection for Malaysian heritage. The *Antiquities Act 1976*, for instance, was considered not conclusive as all provisions were focused upon a single object or a small composite of interrelated tangible elements. Further examination into the strengths and weaknesses of Treasure Trove Act 1957 and Antiquities Act 1976 will be discussed in the later part of this chapter (Section 2.3.3). In 2005 the Malaysian Government repealed the Antiquities Act 1976 and replaced it with the National Heritage Act 2005. Since then heritage has been defined through this act to include natural, cultural and underwater heritage on both a national and a local scale. Each of these is defined as follows:

a. **Natural Heritage** includes natural features of any area in Malaysia which may consist of earthly physical or biological formations; geographical or physiographical features or any natural sites of outstanding universal value from the point of view of nature, science, history conservation or natural beauty, including flora and fauna.
b. **Cultural Heritage** includes tangible or intangible forms of cultural properties, structures or artefacts of cultural significance. Cultural significance, in this context, means aesthetic, archaeological, architectural, cultural, historical, scientific, social, spiritual, linguistic or technological value that is pertinent to the historical or

contemporary way of life of Malaysia. **Tangible Cultural Heritage** includes areas, monuments, buildings, objects (antiquities and historical objects) and archaeological relics. Another form of cultural heritage is the **Intangible Cultural heritage**. It includes any forms of expression, language, folksong, oral tradition, poetry, performing arts, martial arts, that may have existed or exist in relation to the heritage of Malaysia or in relation to the heritage of a Malaysian community.

c. **Underwater Cultural Heritage** refers to all traces of human existence having a cultural, historical or archaeological character which have been partially or totally under water, periodically or continuously for at least 100 years. This includes sites, structures, buildings, artefacts, human remains, vessels, aircraft, other vehicles and prehistoric objects with their archaeological and natural context.

Undoubtedly, the establishment of this act initiated new definitions for heritage in Malaysia. It also extended the scope of heritage from the initial focus on natural and tangible cultural heritage, to intangible cultural heritage, as well as underwater heritage. The scope of tangible cultural heritage, in particular, has been expanded to include various types of cultural properties, such as areas, monuments, buildings, objects and archaeological relics, as well as the intangible elements associated with each. Unfortunately, there is no clear physical attributes for what constitutes an archaeological relic under this act and the age of the remnants (50-100 years old or more) seems to be the principal, as well as the strongest, indicator in their identification. In turn, archaeologists or heritage practitioners in Malaysia still refer to any heritage finds through archaeological research as archaeological relics or, in more general terms, archaeological heritage.

One of the improvements of the National Heritage Act 2005 compared to previous legislation is that, for the first time, the concept of cultural significance has been recommended as a means to define and identify the cultural heritage of the country. Since the 1970s this concept has emerged as a core concept in identifying cultural heritage across the globe. The underlying idea of the concept of cultural significance is that the interpretation of cultural heritage should not only emphasize the physical fabric but also other social meanings. At present, this concept is becoming the guiding idea in heritage conservation because the ultimate goal of conservation is to retain all the strands in the significance of cultural heritage (Mason, 2008a:99).

2.2 The concept of cultural significance

The emergence of the concept of "cultural significance" is perceived as a fundamental development in heritage conservation over the last 30 years. This is because the cultural significance of a place is now the key element that shapes conservation decisions (Mason, 2008:99). The term "significance" in the context of heritage conservation refers to the exceptional attributes or qualities of a place that are especially meaningful to a person, group or community (Carter and Bramley, 2002:181; Pearson and Sullivan, 1995:17). Often, both terms – "significance" and "values"— are synonymously used in heritage conservation.

In Malaysia, cultural significance is defined through the National Heritage Act 2005 as aesthetic, archaeological, architectural, cultural, historical, scientific, social, spiritual, linguistic or technological value (National Heritage Act, 2005). In the Philippines, three main criteria for value – cultural, artistic and historical —are used to identify cultural heritage (National Cultural Heritage Act, 2009). Although the proposed criteria of significance vary between countries and each charter or decree tends to conceptualize cultural significance in

different ways, one of the similarities between these documents is to make cultural significance assessment obligatory in heritage conservation planning and assert that all conservation planning has to retain the cultural significance of a heritage site or place. With the increasing focus on the concept of cultural significance in conservation planning, the values system has also emerged as a subject of intense debate. Generally, there are two themes central to these debates. The first is to explore what values should be protected and the second is to examine where the values or significance come from (e.g. Briuer and Mather, 1996; Bryne, Brayshaw and Ireland, 2001; Carter and Bramley, 2002; Darvill, 1995; Lipe, 1984; Mason, 2005, 2008; Tainter and Lucas, 1983; Sullivan, 1993; Zancheti et al., 2009).

As mentioned above, one of the main focuses of the debate is to determine *what* values should be protected, given that there are many types of value systems being introduced into the field and each framework tends to devise different values to fit their own cultural context (Mason, 2008:101). It is ironic to point out that, thus far, there is no agreed typology of values accepted across the globe (Bryne, Brayshaw and Ireland, 2001:8; Mason, 2008:102). Lipe (1984:3), for example, proposed that cultural resources mainly comprise four types of values, namely economic, aesthetic, associative or symbolic, and informational. Hall and McArthur (1996) proposed that cultural resources are mainly associated with economic, socio-cultural, scientific and political values. English Heritage (1997), on the other hand, divides significance into six criteria – cultural, educational or academic, economic, resource, recreational and aesthetic.

Such discrepancies between value systems tend to complicate the articulation of heritage values in a wider geographical context because each heritage place or asset is valued in different way in different countries. As such, Mason (2008:102) suggests that a common typology of significance or values should be adopted in heritage assessment. A common typology would help to identify the cultural values of heritage in a more cohesive fashion and

advance comparability in evaluating heritage places or assets under different circumstances, as well as facilitating better understanding of different valuing processes in heritage conservation. Ultimately, this would lead to the establishment of benchmarks in cultural heritage significance assessment.

In terms of the question *where do values come from*? Carter and Bramley (2002:178-179) have suggested that values attributed to a heritage place or object can be intrinsic or extrinsic. Intrinsic value refers to the quality that is inherent in a place or object, whereas extrinsic value refers to the quality or perception given to a place or object by people. Often, intrinsic value is seen as being assessed objectively and hence can be used as a means to gain widespread agreement. Extrinsic value, on the other hand, is attributed to a place or objects by specific social groups through their interaction with the place or object.

According to the Burra Charter, cultural significance is embodied in the place itself (ICOMOS, 1999). This concept of inherency in heritage is widely recognized from the empiricist-positivist perspective, given that significance is present in a physical site or place and can be objectively determined depending on the state of knowledge and the precision of the observation methods. Although the principle of inherent significance is said to have received widespread agreement (Carter and Bramley, 2002:178), this concept is, however, contested by many practitioners in the heritage field. Tainter and Lucas (1983:714) argue that cultural significance or value is attributed to, but not inherent, in a place or object. Mason (2008:100) supports this idea by asserting that value is produced from the interaction between the social groups and the heritage place or objects because a place or an object has no meaning by itself without value being ascribed to it by people.

In contemporary society, heritage is becoming a social phenomenon in which the interaction between social groups and heritage is incessant. Heritage places or objects can inherit certain

kinds of value from the past and, at the same time, have new values ascribed to them through continuous social actions. People are perpetually engaging with their cultural landscape and creating associations to a place or object. This suggests that heritage value is a dynamic concept in which the significance of a heritage place or object is not fixed and unchanging, since the significance or value of a place or object is simultaneously inherited and being reinvented from time to time (Briuer and Mather, 1996:11; Byrne, Brayshaw and Ireland, 2001:61; Carman, 1995:7, Pearson and Sullivan, 1995).

In responding to the value typology issues, among the many there are to choose from (see Lipe 1984; English Heritage, 1997; Frey, 1997; Burra Charter 1999), the Australia ICOMOS Burra Charter is seen as the most suitable typology for adopting in Asia-Pacific context. The Burra Charter has been influential in changing conservation practices in several Asian countries over the last decade. This has resulted in the adoption of the concept of cultural significance in conservation planning through the promulgation of heritage-related charters and decrees in several Asian countries. Generally, the concept of cultural significance is adopted to investigate *why* a place is of significance and *how* this significance helps to direct conservation priorities. In China, for example, the ICOMOS Principles for the Conservation of Heritage Sites in China adopted the concept of cultural significance from the Burra Charter by referring to cultural heritage as property that carries historical, artistic or scientific value (China ICOMOS, 2002).

The Australia ICOMOS Burra Charter defines cultural significance as encompassing aesthetic, historic, scientific, social or spiritual value for past, present or future generations (ICOMOS, 1999). In 1979, the Australian Burra Charter (Australia ICOMOS, 1979) advocated the necessity to thoroughly assess the cultural significance embodied in a place before any conservation measures take place (Australia ICOMOS, 1999). It also asserts that all conservation planning has to be value-based, and the aim of conservation is therefore to

retain the cultural significance of a place (Oz ICOMOS, 1999). This values-based approach fosters a new dimension in heritage conservation, moving from the traditional approach rooted in physical conservation (e.g. restoration, repair or reconstruction) to an approach which makes conservation decisions based on an understanding of the values inherent in a heritage place or object. The Burra Charter also stresses that cultural significance is embodied in the place itself and that a place may have a range of values for different individuals or groups.

2.2.1 The concept of cultural significance: Implications for Malaysian heritage conservation

In Malaysia, the concept of cultural significance was indirectly introduced into the heritage sector during the 1970s, through the *Antiquities Act's* association between a site or object and religious, traditional, artistic or historical interest (Antiquities Act 1976). This indirectly introduced a value system into heritage identification and preservation. However, this initial concept of value was not defined in the act and no finer conceptual framework presented. Hence, the adoption of this value system was relatively sporadic, due at least in part to the ambiguity of the framework. Additionally, the development of heritage conservation in Malaysia from the 1970s until the early 21st century was rooted in physical conservation, as part of which the majority of conservation projects focused on preservation and restoration of tangible elements of heritage sites, monuments and objects.

In was not until 2006 that the term cultural heritage significance was officially introduced into the heritage sector following the endorsement of the National Heritage Act 2005. This Act defines cultural significance as aesthetic, archaeological, architectural, cultural, historical, scientific, social, spiritual, linguistic or technological values attributed to heritage places or objects (National Heritage Act 2005). Compared to the Antiquities Act 1976, the

concept of cultural significance as stipulated in the National Heritage Act 2005 covers a wide range of values by addressing a necessity to value both tangible and intangible aspects of heritage, as well as highlighting the importance of the identification of heritage values in heritage conservation planning.

The practically and validity of this concept in heritage conservation in Malaysia, however, has yet to be determined. This is because the introduction of the concept of cultural significance into the field has thus far raised several challenges. Unlike other heritage charters or decrees, the concept of cultural significance recommended by the National Heritage Act 2005 is relatively ambiguous given that it does not provide sufficient explanation or definition for each criterion and the underlying concept of cultural significance is not clearly deliberated. Additionally, the articulation of ten values in one single cultural significance framework tends to complicate the identification and assessment of significance in this context. The underlying meaning of some values is overlapping and one of the challenges is clearly to identify the attributes of each type of value and make a clear-cut characterization for it. For example, attempting to objectively distinguish the "cultural" and "historical" values appears to be a complex task. Generally, cultural value refers to all values accepted, respected or appreciated by a community. Thus, a heritage object or place which contains historical value is also considered to have cultural value because it is culturally valued by, or affiliated to, a particular social group or community. Of course, it is common for a heritage place or object to have more than one kind of significance given that the nature of heritage is multivalent (Mason 2008a:100). In this case, historical value somehow ultimately falls under the larger umbrella of cultural value. This leads to an overlapping of values within heritage conservation and complicates the heritage assessment process.

Although the importance of cultural significance is receiving increased recognition in Malaysia, this concept is rarely or inconclusively incorporated into heritage conservation

practice. This is because it is not a mandatory component in a heritage conservation project. It is ironic to point out that some conservation works were launched without assessing or identifying associated cultural significance. Often, the conservation programmes set out only to maintain the physical features of the site or monument without examining the cultural significance attached to it. Additionally, many heritage or archaeological projects launched within the country are thematically-oriented, resulting in the project only investigating certain values of a heritage place or object (e.g. Chia, 1997; Zuraina, 1995). For example, archaeological investigation in a prehistoric cave sets out only to document the archaeological value embodied in that particular site and a heritage building conservation project is likely only to emphasize the preservation of the architectural and aesthetic values of the building. In this case, the cultural and social connection between the local community and the heritage place or object is often neglected. As Johnston (1992:28) suggests, if significance or value is transitory then these values may be lost in the future through a change of use. A thorough and up-to-date assessment and documentation of cultural significance therefore should be mandatory in every heritage conservation programme to retain the significance and identity of a heritage place.

In seeking to transform into developed nations, hundreds, if not thousands, of development projects are launched in Malaysia every year. As a result, many heritage places are threatened by development pressures. To solve this problem, it was suggested that a heritage assessment should be conducted by heritage professionals such as archaeologists prior to the commencement of any development project in a particular area to examine whether or not the place is of cultural significance to avoid the loss or damage of the country's heritage (Chia, 2004). Pragmatically, this recommendation seems flawless by assuming that the heritage assessment conducted will help to identify and retain the full range of values associated with a place. Paradoxically, this recommendation has at least in part led to an imbalance in

heritage assessment where the "professional values" (scientific, architectural, historical and archaeological) are given greater recognition but the social values of the place neglected because these social groups are usually not involved in the heritage assessment process. This tends to distance social connections between people and places and implies that some socio-culturally important places may be diminished due to an imbalance of focus in the heritage assessment process.

A recent proposal by the Malaysian government to partially tear down 20 to 30 modern buildings in Petaling Street, Kuala Lumpur for the expansion of Mass Rapid Transit (MRT) infrastructure has flagged an urgent need to revise the existing heritage assessment system in Malaysia (Citrinot 2011). Petaling Street was one of the first settlement areas for Chinese migrants into Malaya at the end of the 18th century and is better known as "Chinatown" among Malaysian Chinese. The majority of Chinese communities in Kuala Lumpur protested against the plan because some of these buildings, though considered to havie little or no historical significance by heritage authorities, are landmarks for the Chinese and socially connected to the Chinese communities in Kuala Lumpur. In this case, it is apparent that the social attachment of the Chinese communities to Chinatown had been undervalued. This suggests that the contemporary heritage assessment system in Malaysia is too narrow and failed to address the full range of interests or values present in a society.

2.2.2 The social significance of the Lenggong Valley: A neglected dimension

At present, one of the biggest challenges in the heritage conservation of Lenggong Valley is the identification and assessment of its cultural significance. This is because the contemporary archaeological investigation tend to prioritize and appreciate the scientific values of this valley (i.e. archaeological and historical values), and therefore, the questions

about how the past and present community of Lenggong Valley interact with these archaeological sites are still remained unanswered. As mentioned earlier, the archaeological importance of the Lenggong Valley is widely recognized. Several archaeological sites in this valley are now listed on the UNESCO World Heritage List (refer to Section 1.3). To date, there are more than 15 prehistoric archaeological sites discovered in this valley that have been inhabited by human as early as 1.83 million years ago (Mokhtar, 2012). Archaeological investigations have revealed that the Lenggong Valley is one of the few archaeological areas in the world that holds such a long prehistoric cultural sequence, spanning the Palaeolithic period to the Metal Age. This area is also important in illuminating the prehistoric culture of the region and provides rare insights into the understanding of human lifeways during prehistoric times. Additionally, the study of ancient human migration from Africa to Australia conducted by Oppenheimer (2004) postulates that the Lenggong Valley was part of the ancient migration route and that anatomically modern humans arrived in this area before the last eruption of the Toba volcano, which occurred around 74,000 years ago.

The extraordinary archaeological importance of the Lenggong Valley has resulted in archaeological conservation programmes, such as workshops, public talks and heritage-related development initiatives, being launched by the Department of National Heritage, Universiti Sains Malaysia and the Lenggong Archaeological Museum on a regular basis over the last few decades. As mentioned by Goh and Mokhtar (2011), the launching of such programmes is fundamental in promoting local understanding of the archaeological importance of the area and, at the same time, invoking awareness among the local community to preserve the archaeological heritage of the valley. Generally, the development of heritage conservation programmes in the Lenggong Valley can be divided into two major phases. The first phase (1987-2009) was archaeologically-orientated, often involving only professional

groups such as archaeologists or heritage conservators to preserve the physical fabric of the heritage sites. During this phase, the identification of cultural significance was carried out by professional groups, and tended to over emphasize the investigation and documentation of scientific or archaeological values. The local communities had no role in the overall conservation and identification of heritage.

The second phase of started in 2010, in tandem with the nomination of the Lenggong Valley to the UNESCO World Heritage List. Given that one global strategy emphasized by UNESCO is to encourage local involvement in the heritage sector, several community out-reach programmes were launched in the Lenggong Valley between 2010 and 2011 as a preparation towards the listing. Despite a focus on archaeological heritage conservation, the programmes initiated in this phase also set out to encourage local involvement in heritage conservation and to promote the sustainable use of the archaeological resources for the economic benefits of local communities. The local tourist-guide training programme, for example, was launched in November 2011 under the initiative of the Department of National Heritage and the local government in order to channel local commitment and as a means to create heritage awareness among the local people for the overall protection of the archaeological heritage of the Lenggong Valley.

Unfortunately, the archaeological significance of the Lenggong valley has overshadowed other types of cultural values, such as the historical or social values potentially associated with these sites. For example, the cultural association between local indigenous groups and archaeological caves in the Lenggong Valley has thus far rarely been presented or acknowledged whereas, in fact, some of these caves (e.g. Gua Kajang and Gua Harimau) were occupied by local Indigenous groups until the early 1950s-1970s. To date, little is

known about how the existing social groups of the Lenggong Valley or the previous Indigenous groups who has been relocated elsewhere perceived, or are connected to, the surrounding environment because no research gives way to them to value their own heritage. This situation reflects an imbalance in the identification of heritage in which the existing approach to cultural heritage failed to address the full stands of the cultural significance of the Lenggong Valley and flags an urgent need to re-investigate the cultural significance of the valley through a more holistic approach.

The short discussion above had reflected the weaknesses of the contemporary archaeological research in addressing the issues surrounded the cultural significance assessment. With the emergence and expansion of the discipline of heritage management, one could argue that it might enhance the future archaeological research of the country. However, in what way the incorporation of the discipline of heritage management into the field of archaeology is still yet to be explored. The section below, therefore, explores the implications of the heritage management for Malaysian archaeology as well as examine how effective is the conventional heritage management practices fit into the local context.

2.3 Heritage Management: Implications for Malaysian Archaeology

Heritage Management is a distinct field which aiming at managing and mitigating conflicts over heritage sites (Smith, 1994). It is considered as one of the core components at present day archaeology, given the increase complexity in handling with the heritage conservation, interpretation and presentation issues. Over the past few decades, a number of literatures have been dedicated to the formulation of "heritage management" frameworks (Feilden and Jokilehto, 1993; Kerr, 2000; Lee et al., 2007; Lipe, 1984). This is due in part to the rises of public concern towards their past and the development of professionalization in heritage field

(Carmen and Sörensen, 2009:14-16). Briefly, the concept of heritage management was first emerged within the Euro-America society at the end of eighteenth century. During the latter part of the twentieth century, these Euro-America heritage models were exported to other parts of the world, particularly those Asian nations under the western colonizing power (Carman and Sörensen, 2009:16).

In Malaysia, the concept of "heritage management" has been transmitted into the region through the global heritage movement since 1970s. Several international heritage organizations such as UNESCO, ICOMOS and ICCROM have introduced and encourage the adoption of the heritage management principles and practices (e.g. Venice Charter) in all United Nations countries especially those developing nations as a means to safeguard the cultural and natural heritage of the world under the rapid development pace. Malaysia, as a member of UNESCO since 1988, ratified the UNESCO convention and began to incorporate the concept of "development with heritage conservation" into the national development planning since 1970s (Jenkins, 2008:2; Keromo, 2003). Hitchcock, King and Parnwell (2010:265) indicated that the heritage management across the Southeast Asian region is highly influenced by the "outside forces", which in turn the Southeast Asian's heritage management frameworks are deeply rooted in the western-derived models. McKercher and du Cros (2002), however, argued that each heritage management framework adopted in different country is somehow in certain extent, subject to the influence from local factors included the cultural, political, socio-economical and historical context. This explains why despite the fact that the early stage of heritage conservation in Malaysia was western-centric in which the western heritage charters such as Venice Charter was highly adopted as the guidelines in country heritage planning, the development of the heritage management was also highly affected by the governmental policies.

Few decades since the introduction of heritage management into the heritage field, the term "heritage management" is still relatively new to many of the heritage practitioners who work across the heritage field in Malaysia because it's more likely known as "heritage conservation" in the local context. While the introduction of heritage management has inevitably impacted the conservation and preservation of the architecture heritage of Malaysia (e.g. Ahmad, 2002), it's implication for Malaysian archaeology is also prevalent. One obvious influence is the shift of research focus from the initial emphasize on physical sites, monuments or objects towards the examination of these archaeological resources in a wider social context. This has indirectly triggered a concern into past, present and future use of the archaeological sites or artefacts within a dynamic political and social context. Another influence of heritage management in Malaysian archaeology can be seen even more clearly in the field of law and legislations. Heritage legislation in Malaysia has been evolved from being concern with the ownership of archaeological site and object to emphasize on the conservation and presentation of the archaeological heritage. The inclusion of the public in the management of heritage through outreach programmes and involvement of local stakeholders in the heritage planning has also resulted in the shift of public perceptions about archaeological heritage and how these changes of ideas among the public opened up the divergence in attitudes between the "traditional owners" of heritage and the institutional guardians towards heritage. As such, the following sections will explore how these changes and shift of ideas within the field of archaeology have re-directed the orientation and management of archaeological heritage over the last two decades in Malaysia.

2.3.1 Malaysian archaeology: *whose heritage for whom*?

Generally, the early archaeological investigations conducted in Malaysia since early 20th century was mainly in the form of antiquarian style diggings. The so-called "new archaeology" which primarily based on the multidisciplinary approaches included the management and conservation of archaeological heritage was only imported into the field of archaeology in Malaysia by the end of 1970s through several western-trained local archaeologists (e.g. Adi, 1983, 1985; Zuraina, 1988, 1989, 1994). Whereas one may argued that the introduction of systematic and multidisciplinary practices have marked a new age of Malaysian archaeology, it is clear that the import of western-derived heritage management model has also create a domination of heritage by the state under the name of "heritage management".

Since 1970s, the state began to promote or encourage the investigation into the nation's past, particularly through archaeological and historical research, by providing various funding mechanisms to the local heritage or archaeological researchers. Under the influence of this heritage funding scheme, the term "Malaysian Archaeology" has begun to be adopted as a term that orientated the direction of archaeological research in the country. Malaysian archaeology, in this context, carries a strong nationalist sentiments which urge a need to trace back the historical roots of the country, especially those past prior to the arrival of colonial powers (prior to the arrival of Portuguese at Malacca in 1511). It was, therefore, not surprise that the archaeological investigations launched in Malaysia by the end of 20th century were thematically-orientated, with a special focus into the origins of human, the prehistoric cultural development, as well as the early civilization of the Peninsular Malaysia (e.g. Adi, 1987; Chia, 1997; Mokhtar, 1997; Zolkurnain, 1998; Zuraina, 1989, 1994).

While the state often claims that their involvement in the heritage management and archaeological research is not related to the political agenda, Jenkins's investigation into the cultural heritage and constructions of national identity of Malaysia, however, shows that the political contrivance plays vital roles in influencing the cultural heritage interpretation and presentation of the country. She further postulated that the country's past is one of the fundamental resources used by the state for national identity reconstruction, particularly in the post-colonial era (Jenskins, 2008:2). In this context, the country's past (cultural heritage such as historical and archaeological records) is perceived as a tool that can be used to evoke the patriotisms among the pluralist society of Malaysia.

This scenario, however, is not uncommon across the Southeast Asian countries. Scholars such as Byrne (2011), Hitchcock, King and Parnwell (2010) as well as Shoocongdej (2011) have previously pointed out that the "heritage resources" such as "archaeological records" are often manipulated by the state to legitimize their political power, especially in the post-colonial era (mid-end of 20th century) in Southeast Asia. In Malaysia, however, Zuraina (2007:79) argued that the domination of archaeological records by the government is a necessary process of "nations building", asserting that the search of the country's past is fundamental to construct the national identity, especially for a newly-independent nation like Malaysia.

"Heritage management" or "heritage conservation", as propagates by Malaysian government since 1970s, aims to provide full protection for the heritage sites and objects found in the country. Due to the fact that the early stage of archaeological research conducted in the country were carried out in antiquarian style digging and the data and results were not reliable, present archaeological investigations are stressing at applying multidisciplinary scientific approaches, and the interpretation of the archaeological heritage of the country are mainly retrieved from the physical evidence. As such, the indigenous or community

knowledge, mainly in the form of oral history, had never considered as "reliable" data to be integrated into the interpretation and presentation of archaeological heritage of the country. This situation reflects reluctance on the contemporary heritage management or archaeological research to engage with the intangible narration within a diverse society in Malaysia.

Apart from that, government or state authority, often through the promulgation of heritage law, always claims full custody or ownership on every discovered or undiscovered antiquity, heritage monuments, as well as heritage objects found in the country (Article 3, *Antiquities Act 1976*). In this context, cultural heritage is perceived as the absolute property of the country and this ideology is wide-spread among the society. In Lenggong Valley, for instance, the local communities who engage with the archaeological sites in their daily life were instilled with the idea which "heritage" is government-owned and they have no rights to claim their social custody towards "*their*" heritage (Suhaimi, 2011, personal communication). The disfranchisement of the community knowledge and the claiming of constitutional guardianship towards the heritage which traditionally own and look after by the local community have, consequently, detached the local community or the "traditional heritage owner" from their heritage.

2.3.2 The Protection of Heritage: policies and legislation

Like many other countries of the world, the development of heritage legislation in Malaysia was influenced by the historical and political background of the country. In Malaysia, the beginning of twentieth century had witnessed a growing interest in archaeological investigations, mainly in the forms of antiquarian style digging or treasure hunting. Antiquities trades and exports were prevalent during this period and this had led to a major lost in country's cultural heritage in which many of these archaeologically valuable objects or

materials (i.e. prehistoric human skeleton, pottery collections and etc.) were exported to or kept in the foreign countries.

In order to safeguard the antiquities and control the export of antiquities, the first heritage-related legal document – *Treasure Trove Act 1957* was promulgated in 1957, not long after Malaysia gained its independence from British Colonial. Between 1950s and mid-1970s, this *Act* was the only available legal mechanism which empowers the state authority to claim full custody over the treasure troves, historical object and monuments discovered across Peninsular Malaysia. A Director General, who usually the Director of Musuems and Antiquities Malaysia is authorized to regulate the issues related to the discovery, preservation, exports and trades of treasure trove, antiquities such as historical or ancient objects and monuments. Interestingly, this *Act* gave greater focus on the treasure trove with monetary value, with a special emphasize on the items such as money or coin, gold or silver plate, bullion jewellery and precious stones. Archaeologically, this Act provided minimal focus into the "archaeological reserve", what constitute "archaeological reserve", however, is not mentioned. Due to the insufficiency of this Act in providing protection for the treasure troves and antiquities, the *Antiquities Act* was enacted in 1976 as a supplementary legal document in safeguarding the country's heritage. The Treasure Trove Act was later revised in 1995 and few provisions have been deleted by the *Antiquities Act 1976*.

In comparison to the *Treasure Trove Act 1957*, the *Antiquities Act 1976* is perceived as a more powerful heritage decree to complement the protection and preservation of Malaysian heritage. It provided control and preservation of, as well as the research into a wider scope of heritage which include ancient and historical monuments, archaeological sites and remains, antiquities object and treasure troves. Also, this document provided clearer definition for each category of the heritage property compare to the *Treasure Trove Act 1957*, by delimiting specific characteristics of each sub-group, and further defines each sub-group by the date of

manufacture or age of the heritage property. As stipulated in the *Act*, the ancient monument and antiquities refers to those movable or immovable object or monuments which produced or modified by human agency and has to be reasonably believed to age at least 100 years old or above.

In terms of the administration and enforcement of the *Antiquities Act 1976*, similar to the *Treasure Trove Act 1957*, this *Act* also authorized the Director-General to oversee any matter in related to the cultural heritage. The responsibility of the Director-General has been slightly expanded, to cover not only the discovery, preservation, conservation and procurement of heritage object and site in the country, but also monitoring the research into the heritage, by stressing on the adoption of the scientific and systematic methods in any heritage investigation (i.e. excavation and documentation). Permission and research permit have to be obtained from the Director-General when any party intended to engage with any excavation, digging, or quarry activities within or close to a heritage precinct. It also authorized the Director-General to gazette or declares any object, monument or site with historical, archaeological or antiquity value as ancient monument, antiquity or archaeological reserve which subject to the mandatory documentation and preservative treatment under the purview of the state authority. Under the *Antiquities Act 1976*, the Director-General was assigned with full power to declared or gazette heritage property and can proclaim any antiquities, historical objects, ancient monuments and historical sites as "absolute property" of the government.

Undoubtedly, this *Act* served as an important decree in the progress of protection and preservation of archaeological heritage in Malaysia. For the first time, this *Act* outlined the procedures in handling with the new discovery of any antiquity object and ancient monuments, such as demanding a clear record for any discovery of objects or site and the adoption of scientific methods in excavation and conservation are obligatory. This *Act* claimed full custody upon any antiquities, ancient monuments, historical objects and

archaeological reserve, and thus placed all these heritage properties under the centralized power of the government in which any policy and decision related to heritage protection and conservation are only made in the top level of government. As such, it secured the on-going financial support for the protection and conservation of the heritage property from the government and allowed easier integration of the concept of heritage conservation into the national development planning.

The aforementioned heritage legislation reflects the situation from 1957 until the promulgation of the *National Heritage Act* in 2005. By looking at the heritage legislation within this period, it shows that both *Treasure Trove Act 1957* and *Antiquities Act 1976* were mainly focused on the protection and preservation of the physical attributes of heritage property. For instance, both *Acts* define the heritage object or site on the basis of their monetary value, age of manufacture or other physical attributes that reflect the antiquity or historical value of particular object, monument or site. Furthermore, it was obvious that all the provisions stipulated in both of these *Acts* are centered to the physical conservation of the heritage property.

Another issue surrounded the heritage legislation during this period of time was the question of how these legislation treated different forms of knowledge and who could actually identify or define something as treasure trove or antiquities within the legal framework. Despite the fact that both documents assigned full power to the Director-General to oversee and coordinate the discovery, research, procurement, protection and preservation of heritage properties, these documents however, do not clearly acknowledge or demand any professional or expert such as archaeologist or historian in handling with the investigation or interpretation of the "treasure trove" or "antiquities". As stipulated on both abovementioned documents, the power to declare a property as "heritage" is placed in the hand of Director-General and there is no doubt the he or she is capable to identify different types of heritage

properties with his expertise and professionalism, however, the domination of professionals and experts in the identification and interpretation of heritage will somehow, disenfranchised the indigenous oral knowledge or community knowledge (i.e. social value) associated with a heritage object or site. This is because professionals and experts tend to prioritize the intrinsic values or physical attributes and often neglect the intangible aspects or elements associated of a heritage object or site.

In 2005, both *Treasure Trove Act 1957* and *Antiquities Act 1976* were repealed following by the enactment of the *National Heritage Act 2005*. It was officially become effective as national law on the 1st of March 2006 and it was the first heritage law that endorsed in both West and East Malaysia. This *Act* is perceived as a more powerful heritage decree because despite the fact that it considered almost all provisions of Treasure Trove Act 1957 and Antiquities Act 1976, it also expanded the focus of heritage preservation to include not only tangible but also the intangible aspects of natural, cultural and underwater cultural heritage found in the country. Compare to the *Treasure Trove Act 1957* and *Antiquities Act 1976*, the *National Heritage Act 2005*, for the first time, put forward a clearer definition for the identification of each category of heritage, and these definitions are almost on par with the definitions recommended by international heritage organizations such as UNESCO and ICOMOS. Generally, the *National Heritage Act 2005* is divided into 17 parts, with 126 articles comprising provisions for administration of the act, the formation of a National Heritage Council, Heritage Fund, National Heritage Register, designation of heritage sites, declaration of heritage objects and underwater cultural heritage, the declaration and protection of national heritage, treasure troves, licensing, appeals, enforcement powers and offences.

By examining the *National Heritage Act 2005* in detailed, it shows that this *Act* gives greater focus into the conservation and management of heritage and many of the management

principles are conforms to the recommendations made by some major heritage charters such as UNESCO *Venice Charter* and ICOMOS *Charter for the Protection and Management of Archaeological Heritage*. Although many argued that the adoption of western-centric heritage Charters in Southeast Asia might not as effective as it seems to be (Taylor, 2004), it has however, provided a baseline for the heritage management planning for Malaysia. In tandem with the establishment of this *Act*, a special heritage division – the Department of National Heritage was formed under the Ministry of Culture, Arts and Heritage Malaysia. This department is headed by a High Commissioner of Heritage who at the same time chairs the National Heritage Council to oversee and coordinates the conservation, preservation, restoration, maintenance, promotion, exhibitions, excavation and accessibility of heritage in the country.

The endorsement of the *National Heritage Act 2005* has marked a milestone in the development of heritage conservation of Malaysia in several ways. Generally, there was a drawback to the old heritage legislation mainly because these heritage decrees did not anticipate some contemporary issues in heritage conservation. As such, the *National Heritage Act 2005* took the initiative to propose a more inclusive heritage conservation framework, through the incorporation of new strategies and policies to address the contemporary heritage issues such as the heritage funding schemes, administration of heritage, identification and documentation of heritage and many more. For instance, through the promulgation of the *National Heritage Act 2005*, a Heritage Fund consists of Consolidated Funds allocated by the Parliament was established to secure sufficient funding for the expenses of conservation and preservation of heritage in the country. The National Heritage Register was also introduced as a means to keep a clear record of the registration of the heritage items and sites as well as other forms of intangible heritage such as performing arts, folk songs and traditional dance. Additionally, this *Act* also clarifies a requirement for the preparation of conservation

management plan for any identified heritage site found within the country. The obligatory conservation management plan as requested by the *National Heritage Act 2005* has to incorporate proper core and buffer zones and the management planning should prioritize the promotion of conservation, preservation of the heritage significance (either cultural or natural) of the sites, as well as promoting community involvement in the management planning process. Another significant contribution of this document is the introduction of the concept of "cultural significance" in the identification of the cultural heritage in Malaysia. Though there is no doubt that the practicality and validity of the concept of "cultural significance" proposed by this document is still being questioned (refer to Section 2.21), the introduction of this concept via legislation into the field has inevitably influence the identification and investigation of cultural heritage in the country.

The study into the heritage legislation of Malaysia shows that a number of strategies have been adapted to assist in the formulation of heritage policies for the preservation and conservation of heritage. What has been observed is that since 1957, Malaysian government began to claim their full custody on the ownership and transfer of heritage properties through the promulgation of heritage legislation. This led to a scenario where the state authority turn out to be the only party who dominates the identification and conservation of heritage in which the decision-making only involved those authorities from the highest level of the government bureaucracy (more details on section 1.4). Thus far, this policy had received number of criticisms. For instance, despites many studies indicated that heritage is manipulated by the governments across Southeast Asia to achieve their political goals (i.e. Black and Wall, 2001; Byrne, 2011; Hitchcock, King and Parnwell, 2010; Jenkins, 2008), Freeman (2000:47-49), on the other hand, questioned the capability of the professional groups (government officers, archaeologists, historians or heritage professionals) in understanding the culture of people (local communities or public). He argued that in order to

understand culture, the voice of people has to be heard because the competency of government in interpreting the diverse culture or heritage within a diverse society is thus far, not convincing (Freeman, 2000:49).

Another notable characteristic of the heritage legislation of Malaysia is that the development of the heritage legislation of Malaysia over the last decade was indeed, highly influenced by the international heritage movement. The emergence of the "world heritage" concept and the globalization of cultural heritage had urged a need for all UNESCO members including Malaysia to introduce heritage policy or legislation which is on par with the recommendations made by UNESCO or ICOMOS. Often, adopting principles of heritage charter recommended by UNESCO or ICOMOS into the heritage legislation is considered as a practical move, by assuming that the effectiveness of these principles and recommendation as stipulated in these charters are promising. In the case of Malaysia, the *National Heritage Act 2005* claims itself as a more inclusive piece of legal document compared to the *Treasure Trove Act 1957* and *Antiquities Act 1976*, given that many of the provisions carries by National Heritage Act 2005 are conforms to the UNESCO's recommendations and principles. However, many heritage practitioners are still skeptical about the efficiency of these principles or charters in addressing the cross-region heritage issues (e.g. Karlstrom, 2009; Taylor, 2004), and some even argued that the incorporation of the UNESCO and ICOMOS charters into the local legislation may not have any substantial effect unless the state incorporate the local factors such as the public supports and social policy into their heritage legislative framework (Lee at al., 2007).

Thus far, the implications of the national heritage legislation on Malaysian archaeology are relatively evident. The establishment of the heritage legislation provides an effective administrative structures and ongoing funding for the archaeological research and investigation in this country since 1970s. This led to a scenario where most of the

archaeological investigations are governmental funded, and mainly conducted by the research teams or archaeologist appointed by the authority (such as Department of National Heritage). The authority claimed that this is a great approach to control the integrity of the archaeological knowledge, by switching the early research approach from the early antiquarian style digging (pre-1957) to a more systematic and multi-disciplinary archaeological investigations through the appointment of professionally-trained archaeologists. Additionally, it also switched the focus on the appreciation of archaeological heritage based on the monetary value (i.e. *Treasure Trove Act 1957*) to include the tangible and intangible aspects of cultural heritage.

As discussed above, all heritage properties especially archaeological sites and objects, according to the National Heritage Act 2005, are fully monitored by the Department of National Heritage and subject to mandatory post-excavation protection and conservation. At present, all government funded archaeological research, including the excavation and conservation of archaeological objects or sites, is conducted by well-trained archaeologists or heritage conservators appointed by the Department of National Heritage. The obligatory conservation management plan for every excavated site had expanded the scope of archaeological research to adopt standard heritage management practices as part of the post-excavation procedures. This is to ensure that the identification, documentation, conservation and preservation, as well as the interpretation or presentation of archaeological heritage conforms to standard practice and international standards. However, To date, there is no set of formal guidelines for the management of archaeological heritage in Malaysia. It is common that each archaeological research institution or authority adopts a different set of guidelines, despite the fact that they are supposed, to some extent, to conform to the recommendations of UNESCO or ICOMOS.

With the endorsement of *National Heritage Act 2005*, all excavated artefacts have to be systematically analyzed, documented and safely stored in appropriate repositories. Scientific conservation methods, where necessary, must be applied to conserve the integrity of archaeological objects (e.g. Chia and Sam, 1994). To date, a total of six archaeological sites and two archaeological objects have been listed on the National Heritage Register (Department of National Heritage, 2012). The *National Heritage Act 2005* also recommends a conservation planning policy which attempts to balance the conservation and development of the archaeological site (National Heritage Act 2005). This includes not only the conservation of the physical attributes of the site, but also the improvement of the physical living environment and communications, as well as the socio-economic well-being of local communities.

2.4 Discussion

In summary, existing conservation management guidelines adopted by Malaysian archaeologists and heritage managers are still insufficient to address heritage management challenges. Generally, international charters and guidelines such as the Management Guidelines for World Heritage Sites (Feilden and Jokilehto, 1993), Management Plans for Archaeological Sites: A World Heritage Template (Cleere, 2010), ICOMOS Charter for the Protection and Management of the Archaeological Heritage and the UNESCO Venice Charter, are among the most common adopted by local archaeologists or heritage practitioners to assist them in conservation planning in order to safeguard the archaeological heritage of the country. However, the validity of these charters in the local conservation context has always been questioned. Taylor (2004:420) has previously commented that the imposition of international standards in the management of heritage places may diminish the

local values associated with the place. Thus, it is advisable that conservation planning should prioritize local values rather than aim for global standardization. In the case of the Lenggong Valley, it is suggested that the conservation management of archaeological heritage in Malaysia should be "values-based", so that the main management goal becomes to preserve the total significance of a site. This approach advances the conservation of archaeological sites as it relies on consultation with local communities to understand all values attributed to a site and thus involves a greater part of society in the decision making (Torre, 2005:5). It promotes communities' involvement in conservation planning and would ultimately help to identify the conflicts of interests among different stakeholders so that they can be resolved early (Albert, 2012:33).

At present, community and stakeholder involvement is considered to be a key component in heritage conservation planning. Community involvement, in this context, refers to how local communities share their values and their experiences during the consultation process, as well as how their interests in the future delivery of the conservation management of the site are incorporated into the management process. Over the last decade, many community-driven conservation projects worldwide have proven successful, especially in World Heritage Sites such as the Sacred Mijikenda Kaya Forest in Kenya and the Uluru-Kata Tjuta National Park in Australia (Rössler, 2012:28-29). It is evident that the most effective heritage conservation practice is formulated based on local values and local experiences and implemented with local conservation efforts (Black and Wall, 2001; Smith, 2004; Taylor, 2004; Rössler, 2012).

In Malaysia, there is a growing recognition of the importance of local involvement in the conservation of heritage. Such movements can be seen through the launching of several community-driven heritage projects, especially those related to heritage tourism. At present, community and stakeholder involvement in heritage conservation is made mandatory through the National Heritage Act 2005. The National Heritage Act 2005 states that the Heritage

Fund should channel schemes for education and presentation of heritage, and provide practical and financial assistance to owners and occupiers of a heritage precinct as a means to promote community involvement in decision making (National Heritage Act 2005). In the Lenggong Valley for example, the heritage tour-guide training workshop launched at the end of 2011 set out to provide training to local residents to participate in tour-guiding activities as a means to promote the sustainable use of heritage. At the same time, it was also perceived as a precursor to developing the partnership between the heritage authorities and the local community.

Looking at contemporary heritage management in Malaysia, it is ironic to point out that the level of stakeholder consultation and participation in the conservation planning is still relatively low. Heritage management in Malaysia can be described as a "top-down model", whereby the power to formulate the conservation and management options is placed in the hands of federal and state authorities. Local stakeholders oftentimes do not get involved in consultation and thus the decision making in conservation planning is rooted in justification from the "experts", whether archaeologists, historians or heritage managers. Such an approach has halted local stakeholders from recognizing their own heritage and ultimately failed to provoke local awareness of, and appreciation towards, heritage. This, in turn, has led to a misconception among local communities and stakeholders that the government or heritage authorities are the main agents responsible for the conservation of heritage in the country (Intan, 2010, personal communication). This has flagged an urgent need to initiate practical approaches to promote local appreciation of heritage. While much literature covers the effectiveness of this approach in overall conservation (see for example, Byrne, 2011; Hodges and Watson, 2000), what should be explored at first are the factors and conditions that motivate the community and local stakeholder participation in heritage conservation. How to get the community to recognize and adopt their heritage and how to get the

community and stakeholders to contribute to the management of the sites in the long run are main issues that should be addressed in the early stages of heritage conservation planning.

Chapter 3 Research Methodology

How, *why* and *when* early humans utilised the cave sites in the Lenggong Valley are questions that have gained much attention from the archaeologists working across the region over the last century. However, questions about *why* the caves in the Valley are important to local communities and *how* to conserve and manage them remain unanswered. Seeking to investigate the cultural significance of the cave sites and to review the effectiveness of the contemporary heritage management of the Lenggong Valley, this PhD has used various methods. Overall, this research comprises three major components – identification and documentation of the cave sites of the Lenggong Valley, review of the contemporary heritage management of the Lenggong Valley and the assessment of the cultural significance of the Lenggong Valley. Each component has required adopting a different methodology at different stages in order to collect, explore and interpret the data, including both qualitative and quantitative approaches.

3.1 Identification and documentation – Cave archaeology of the Lenggong Valley

One of the many objectives in this research is to present a thorough synthesis of the cave sites in the Lenggong Valley; therefore, a detailed study on the cave sites was essential to present an overview of cave archaeology. Early attempts to obtain information about these cave sites focussed on documentary research and existing artefact inventories, because most of the cave sites have been previously archaeologically investigated and the findings published in books, journals, articles and reports. Additional field surveys, field mapping and rescue excavation

have been carried out in Gua Gunung Runtuh, Gua Kajang and Gua Harimau through this project and the results integrated into the synthesis presented in Chapter 4.

3.1.1 Documentary Research

Documentary research is a form of qualitative research which helps in establishing a plausible interpretation of, or explanation for, a particular subject of research (Fitzgerald 2002:281). Documents can exist in many forms, including reports, articles, official letters, plans, diaries, maps, photographs, newspapers, monographs and more. For this project, documentary sources were mainly sourced from local and foreign libraries, museum archives, *on-line* databases and government departments. This documentary research aimed to retrieve the archaeological data related to the Late Pleistocene–Holocene cave occupation of the Lenggong Valley. The information retrieved also assisted in forming a baseline for the cultural significance assessment of the cave sites.

The early archaeological records of the Lenggong Valley (before 1957) were rather scarce and mainly published in the form of field reports or collection catalogues. Several key sources can be traced from Evans (1918), Callenfels and Evans (1928), Tweedie (1953) and Williams-Hunt (1951, 1952). These reports or monographs were mainly published in the old journals, such as the *Journal of the Federated Malay State Museums* (JFMSM) and the *Journal of Malayan Branch of the Royal Asiatic Society* (JMBRAS). These early journals provide information about the early picture of prehistoric cave culture in the Lenggong Valley, as well as bringing to light the early archaeological investigations in the country.

Apart from JFMSM and JMBRAS, the study of the cave archaeology in the Lenggong Valley was also assisted by a number of locally-published journals, such as the *Jurnal Arkeologi Malaysia*, *Malaysia Museum Journal*, *Archaeological Heritage of Malaysia*, and *Jurnal Persatuan Muzium Malaysia* (PURBA), which contain records of the recent archaeological research in the Lenggong Valley. Recent records of cave archaeology in the Lenggong Valley were also retrieved from several refereed journals, such as *Quaternary Science*, *Antiquity* and *Asian Perspectives*. For instance, the cave paintings of the Lenggong Valley were recently published in 2012 in *Antiquity* (Mokhtar and Taçon, 2012).

Other than academic journals, there are other useful publications in the form of reports, theses, monographs and books dedicated to the prehistoric archaeology of Malaysia. Among others, *Archaeology in Malaysia* (Zuraina, 2003) and *The Prehistoric of Indo-Malaysian Archipelago* (Bellwood, 1997) are two key publications which provide a general overview of the archaeological sites in this region. In Zuraina (2003), much attention has been given to the development of archaeology in the Lenggong Valley since 1987. Her discussions also focus on the current issues surrounding the archaeological research of the valley, as well as demonstrating how the archaeological finds contribute to the national and regional understanding of the prehistory of Malaysia. Bellwood (1997), on the other hand, provides a cross-cultural study of the human prehistory of Indonesia and Malaysia and explores how these archaeological data provide clues to cultural and biological development in Southeast Asia.

The archives of the Department of Museums and Antiquities Malaysia, the Lenggong Archaeological Museum, and Taiping Museum, as well as the library of University Sains Malaysia, also house a vast collection of theses, books, film slides, photos, maps, plans,

reports and newspaper cuttings dedicated to the cave archaeology of the Lenggong Valley. However, attempted to retrieve some of the early records of the cave investigations of Lenggong Valley was relatively challenging. This is because many of these documents included field reports, photo and books especially those produced by the British researchers during early 20th century were went missing, resulted from several relocations of the museum archives during the Second World War (1942-1945) in Malaya. Therefore, a brief documentary also conducted in the State Library of South Australia and the Barr Smith Library of University of Adelaide, attempted to retrace those early records which is unavailable in Malaysia. Furthermore, many of the archaeological records produced by the researcher which pre-date the Malaya's independence (prior to 1957) were mainly published in the foreign journals or newspaper. This led to the expansion of the focus of archival research to include not only the local published materials but also some foreign published materials in order to collect more information about the cave of Lenggong Valley.

3.1.2 Artefact Inventories

Generally, the artefact inventory is perceived as a useful tool in heritage interpretation. This is because the artefact itself is a tool that conveys meaning and information of human life in the past, as well as providing insight into the significance and value inherent in human activity. Previously, Sullivan (1993:20) pointed out that a thorough inventory of artefacts can assist the interpretation of a heritage place or site and is also perceived as an essential component in heritage conservation.

Recognizing the importance of artefacts in constructing a connection to the past, a compilation of the inventory records of artefacts recovered from the cave sites within the valley was carried out for this project in order to present an overview of the prehistoric cave

culture of the Lenggong Valley. This inventory was compiled between Nov 2009 and Feb 2010, with the focus on the artefacts recovered from three excavated caves, Gua Gunung Runtuh (GGR), Gua Kajang (GK) and Gua Harimau. These caves were selected because each of them represents a different period of human occupation throughout the Late Pleistocene-Holocene. It is noteworthy that most of these artefacts have been analysed by previous researchers in a preliminary fashion, though the results have not been well-published or brought together in a cohesive fashion before. This inventory synthesizes all the artefact data from the archives, although further analysis is required for those artefacts that have been poorly documented.

Using inventory records, field reports, theses and other documents which recorded the detailed features of the artefacts, such as date and place of discovery, types and materials of the artefacts ,as well as cultural context, the inventory is divided into two parts: the first focusses on the artefacts uncovered from GK and GH before 1987 (these are the prehistoric cave sites investigated prior to 1987) and the second part on the inventory records of the artefacts uncovered from GGR GK and GH, recovered from 1987 up until today.

Inventorying the artefacts uncovered from the cave sites before 1987 was a challenging task. This is because the majority of the physical artefacts recovered from the caves before 1987 are missing, misplaced, under permanent loan or stored at foreign museums. Thus, the early archival records in museums or field reports are the important sources of reference for this inventory. Thus far, the records on the artefacts uncovered from the caves through the earliest investigations carried out by Evans (1918), Evans and Callenfels (1928) and Williams-Hunt (1951 & 1952) are insufficient, given that those assemblages were poorly-documented and not much information on the uncovered assemblages has been published. According to Sieveking (1953), the majority of the artefacts excavated from the Lenggong Valley during the early 20th century were sent to the Taiping Museum in Perak and the

Raffles Museum in Singapore (now known as the National Museum of Singapore) for further analysis and proper storage. In order to retrace the records of these early collections, additional archival research was conducted in the National Museum of Singapore, the Heritage Conservation Centre of Singapore, the National Museum of Kuala Lumpur, and the Taiping Museum.

Surprisingly, archival research in the National Museum of Singapore and the Heritage Conservation Centre in Singapore did not provide much information, as there are only two entries of artefacts – one is the Neolithic adze uncovered from Gua Kajang and another is the record of stone implements from the Lenggong Valley. According to the curator in the Heritage Conservation Centre, most of the early collections stored at the Raffles Museum have been repatriated or loaned to museums in Malaysia (Felix Chong, personal communication, 2010). However, the records of the repatriation of those collections could not be accessed due to several relocations of the artefacts over the last 50 years and the records having gone missing or been misplaced.

In Taiping Museum, on the other hand, none of the records of the artefacts from the Lenggong Valley can be traced. The Lenggong Archaeological Museum claimed custody of those artefact collections upon its establishment in 2003. All the artefacts from Lenggong which were stored at the Taiping Museum were relocated to the Lenggong Archaeological Museum and a few important artefacts, such as the human remains and burial goods uncovered from GGR and GH, are currently on display in the National Museum of Malaysia in Kuala Lumpur. Therefore, the entries for the early artefacts uncovered from GK and GH depend on publication records and the existing records in the Lenggong Archaeological Museum and the National Museum.

Another source which possibly provides clues to the earlier archaeological finds is the catalogue published by Glover (2002). This contains a brief record of Southeast Asian artefacts that are currently stored in UK museums. Glover presents a summary of the SEA archaeological collections found in 13 museums and archaeological departments throughout the United Kingdom. According to his summary, the Pitt Rivers Museum currently holds some archaeological materials from Perak donated by the Taiping Museum. However, the exact origin of this material is uncertain. More recently, Zuraina (2005) published a detailed record of all prehistoric human skeletons excavated from the Lenggong Valley which are currently stored in foreign countries.

The second stage of the inventory was fairly straightforward, since recent records of archaeological finds from the cave sites could be easily retrieved. Since 1987, the archaeological research and surveys conducted by the research team from the Universiti Sains Malaysia in the caves across the Lenggong Valley have produced a great number of documents in the form of reports, theses, journal articles, books and monographs. Among these, the monographs by Zuraina (1994) and Chia (1997) and unpublished MA theses by Zolkurnain (1998) and Goh (2008) present a comprehensive record of archaeological excavations and finds in Gua Gunung Runtuh, Gua Kajang, Gua Teluk Kelawar, Gua Batu Tukang, Gua Ngaum and Gua Harimau. Additionally, the Department of Museum Malaysia, the Lenggong Archaeological Museum and the Centre of Global Archaeological Research also hold a database that contains artefacts in their custody. Records of the artefacts found from previous research conducted in GGR, GK and GH over the last century are clearly stated in Chapter 5.

3.1.3 Radiocarbon Dating of Charcoal from Gua Kajang and Gua Harimau

Previously, Zuraina (2003) established a prehistoric chronological framework based on the radiocarbon dates derived from the caves in the Lenggong Valley. More than 40 radiocarbon dates suggest that the caves in this valley were occupied between 13,000 and 1,000 years ago (Zuraina, 1998). However, the accuracy of at least some of these dates has been questioned, because the majority of them were produced from shell samples (Anderson, 1997; Chia, 2005, Spriggs, 1999). Often, shells are likely to have incorporated older limestone-derived-bicarbonate into their shell structures, which in turn will influence the accuracy of the radiocarbon dates in representing a site chronology. In the Lenggong Valley, for example, Chia (1997) had previously re-dated the Neolithic deposits in Gua Harimau using charcoal and his sample indicated a discrepancy of 1,700 years between radiocarbon dates derived from the collected from the same level. Consequently, he suggested a correction factor of ± 1,700 years for those radiocarbon dates produced by the shell samples from the Lenggong Valley. Although the techniques for correcting and calibrating radiocarbon dates on shells have become more sophisticated in recent times, dating of different samples is perceived as a practical way to refine the site chronology (Rick, Vellanoweth and Erlandson, 2005). As many archaeologists have suggested a need to re-assess the cave chronology of the Lenggong Valley (e.g. Anderson, 1997; Barker, Reynolds and Gilbertson, 2005), a new program of dating (using charcoal samples from GGR, GK and GH) has been conducted through this research in order to establish a more robust site chronology.

At present, many of the cave sites in the Lenggong Valley have been disturbed by anthropogenic activities. In searching for reliable specimens, several field surveys were conducted within the cave sites located of the valley. From the surveys it was apparent that only a small area in Gua Kajang and Gua Harimau still appeared intact. In Gua Kajang, we retraced one of the previous excavated trenches (Trench C5, measured 1m x 1m, actual depth

from the datum, 153cm) in the front cave. A 10cm-wide test pit extending from the west wall of Trench C5 was opened and excavated according to the spit system (10cm=1 spit). Throughout the test-pit excavation, only one charcoal sample was collected from spit 10 at a depth between 95cm-100cm from the datum level.

Cave site	Lab Number	Material	Area/Depth/ Stratigraphic layer	Archaeological Context	Calibrated Dates (B.C.)	Conventional Dates (B.P.)
Gua Harimau	Beta 275049	Charcoal	Collected from spit 7, at a depth around 70-80cm	Found associated with human remains of GH 12	-	5,080 ± 50
Gua Kajang	Beta 275049	Organic sediments	Collected from layer 5 at a depth around 100cm	Found comingled with the fauna remains	10,730 – 10,190	10,470 ± 60

Table 3.1: The latest C^{14} dates obtained from Gua Kajang and Gua Harimau.

In Gua Harimau, recent field surveys conducted through this PhD project had discovered a human burial adjacent to the cave mouth. This fortuitous discovery later required a rescue excavation between January and February of 2010 to salvage the remains. Only two charcoal specimens were found associated with these remains Both samples were carefully collected and handled according to the standards and procedures as recommended by Kra (1986), and each sample was well-documented and labelled before it was sent to Beta Analytic in Florida. The latest radiocarbon results from Gua Kajang and Gua Harimau are shown in Table 3.1. These dates were incorporated with the previous radiocarbon dates from Gua Kajang and Gua Harimau to refine the prehistoric cave chronology of the Lenggong Valley.

3.1.4 Field Survey

Gathering the physical evidence of a heritage site is fundamental to conservation planning (Pearson and Sullivan, 1995:131). As a small component of a larger PhD project, a field survey was proposed to thoroughly document all physical information about or attributes associated with the research caves. This small project consists of a 4-week field survey and was carried out in GGR, GK and GH between Oct 2009 and March 2010. It was fully funded by the Department of National Heritage with the technical assistance of a research team from the Centre for Global Archaeological Research, University Sains Malaysia. A total of four archaeologists included three local labours were involved in this survey.

Prior to the commencement of the survey, an application to survey permit was obtained from the Department of National Heritage. Additional approval was also obtained from the Lenggong District Council to access the cave sites. Overall, this field survey was conducted in two different phases. The first phase of the survey consisted two major components: (i) field recording or inventory and (ii) site mapping, However, these initial field inventory and site mapping have led to a rescue excavation, soon after the discovery of a prehistoric human burial during the field mapping. Basically, this field survey was carried by adopting the standard practices proposed by several archaeologists such as Burke and Smith (2004) and Hester, Shafer and Feder (1997). Following by the fortuitous discovery of the human burial, a more complex and sophisticated research methods were adopted especially in handling with the human bones and teeth and the collection of dating samples. As such, several key references which are helpful in the identification of human bones and preservation of human bones such as The Human Bone Manuals by White (2005) were selected to assist the

excavation, on-site identification and preservation of the human burial found in Gua Harimau.

The field survey began with the documentation of the features and current condition of the sites. This was mainly done through mapping and surface survey. The location of the cave and its elevation were first determined using a Geographical Positioning System (GPS) device. After that, the caves were mapped using compass, stadia and theodolite. This mapping was relatively simple, since the main objective was to produce a 2-D map clearly illustrating the boundary, as well as the physical settings of the sites. Although GGR, GK and GH have been previously mapped and published (see Zuraina, 1994; Zolkurnain, 1998; Goh, 2008), new plans were required to get the most accurate and up-to-date spatial information of the sites. The plans were sketched in a ratio of 1:100 and later cross-referenced with old plans to trace the changes in the sites' setting over time (Figure 3.1).

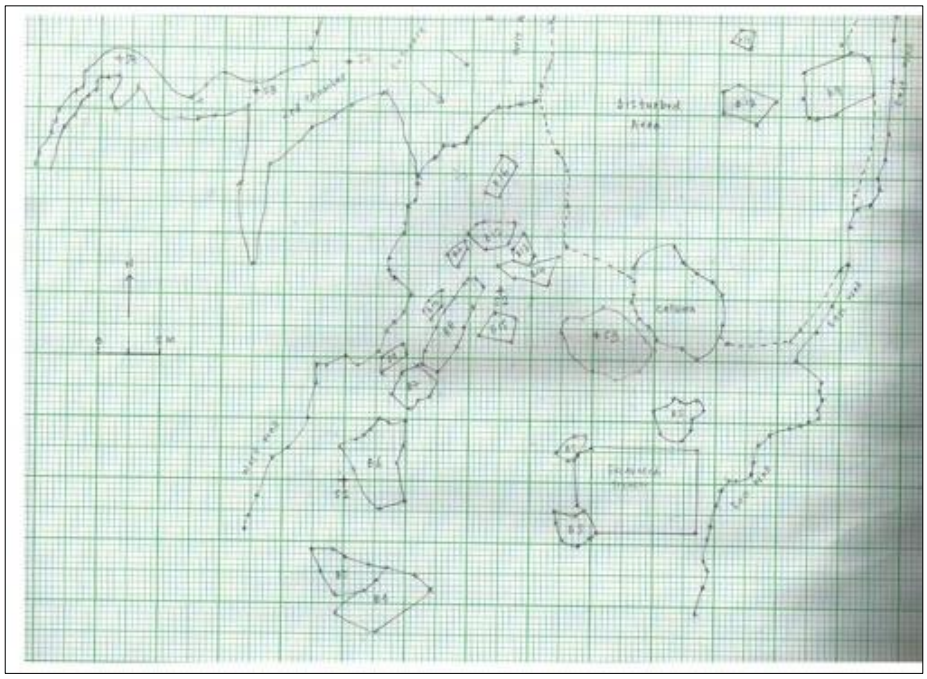

Figure 3.1: The latest sketch of the floor plan of Gua Harimau in a ratio of 1:100.

Once the sites were mapped, they were then recorded through a pedestrian survey (Figure 3.2). All features were clearly recorded using the site recording system recommended by the Museum of London (Museum of London Archaeology Service, 1994). All pits or disturbed areas in the caves were carefully measured and recorded on the plans. Given that both GK and GH are often disturbed by guano diggers, artefacts present on the cave floor were collected, recorded, photographed and carefully packed into bag with appropriate labels (i.e. types of artefacts and surface locations). Surveys were also conducted in proximity to the caves in order to yield information about the ecosystem and land use patterns, as well as to detect potential threats to the sites. All data obtained from the surveys was then integrated with the existing data from previous research and surveys to present the comprehensive and up-to-date descriptions of the sites in Chapter 5.

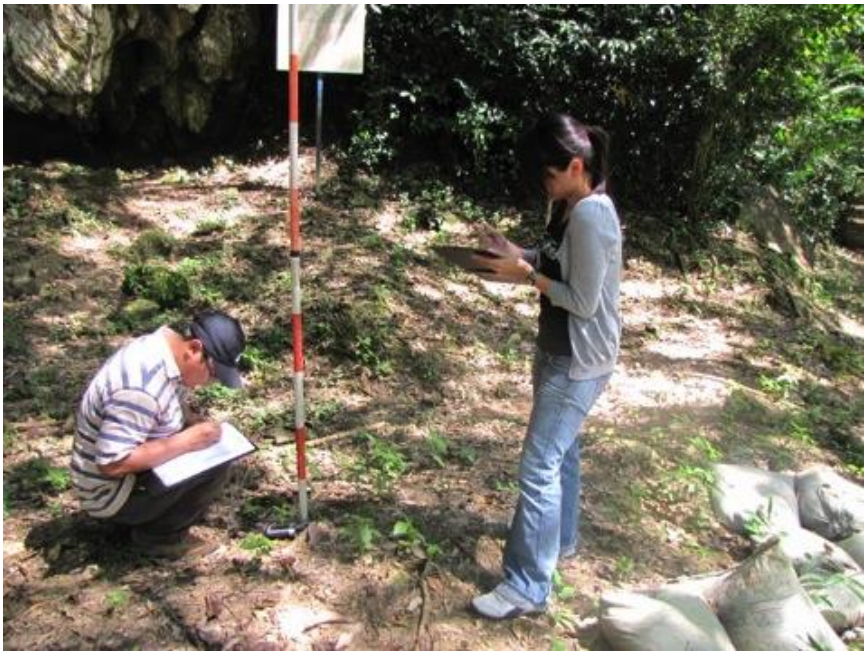

Figure 3.2: Pedestrian survey and field recording in Gua Harimau.

3.1.5 Rescue Excavation

Four weeks of field survey in the caves was extended for another week upon the chance discovery of a human burial in Gua Harimau at the end of January 2010. The burial was found in a disturbed context and the skeleton had already been partially removed. Upon its discovery, this burial was temporarily labelled as GH 12 (there were 11 individuals found in this cave previously) and immediate on-site documentation was carried out (Figure 3.3). This included documenting (i) the location, position and extent of the burial, (ii) the exposed skeletal parts of GH 12, and (iii) the potential associated artefacts found within a radius of 1m-2m of the burial. This process was further assisted by sketches and photographs. From the preliminary survey, two teeth were found in the disturbed area next to GH 12. Each tooth was photographed, labelled and packed before it was sent to the Centre for Global Archaeological Research (CGAR) for further identification.

Figure 3.3: Immediate on-site documentation of burial GH12 in Gua Harimau after its discovery.

This excavation adopted the standard excavation system as practiced in previously in the Lenggong Valley – the spit system, which refers to 10cm as one spit to allow a more detailed documentation of the horizontal and vertical distributions of artefacts in the deposits. All artefacts and human bones were carefully exposed using wooden skewers and soft-hair brushes until the skeleton of GH 12 and associated burial goods could be fully identified (Figure 3.4). The uncovered human bones and burial goods were preliminarily identified and labelled, photographed and sketched. The excavated soils were screened through 3-5mm sieves to capture the minute artefacts. All sieved soils were then packed and labelled for pollen analyses carried out in the laboratory of USM.

Figure 3.4: The excavation of GH 12 burial.

As the human bones of GH12 were found in a very fragile condition, immediate on-site bone consolidation was recommended. Methacrylate co-polymer in acetone (5-20%) was applied on the surface of the bones with a 1cm soft-hair brush to strengthen their structures (Figure 3.5). The bones were left to air-dry *in-situ* for a few hours until the bones had totally dried. Given that the bones were still too fragile to be removed from the excavation trench, the excavation team then decided to conserve the human remains of GH 12 in situ and removed the bones with the soil block before transporting it back to the CGAR laboratory in Universiti Sains Malaysia, Penang.

Figure 3.5: Methacrylate co-polymer in acetone (5-20%) was applied on the surface of the bones.

3.2 Review of the contemporary heritage management of the Lenggong Valley

The examination of the contemporary heritage management of the Lenggong Valley aimed to understand the issues and challenges faced in the conservation of the cave sites, as well as exploring to what extent existing heritage management is sufficient to address the

management issues and challenges. This review was conducted in two stages: the first involved a field survey to examine the present conservation state of each cave and to identify the factors affecting each cave site (Section 3.1.4); the second stage consisted of a content analysis of the latest heritage management plan of the Lenggong Valley submitted to the UNESCO World Heritage Centre.

3.2.1 Content Analysis of the heritage management plan of the Lenggong Valley

Content analysis is one of the most useful techniques for recognising messages in particular textual or image sources based on explicit rules of coding. Generally, content analysis is regarded as a flexible method for analysing text data (Cavanagh, 1997). According to Kaid and Wadsworth (1989), all content analyses are subjected to a seven analytical steps, including the formulation of research questions, sampling, categorization of coding themes, identification of coding process, implementation of coding process, determination of the trustworthiness of the process and the analysis of the results.

As this study seeks to evaluate the effectiveness of the existing management plan of AHLV, I choose to adopt several heritage management frameworks to develop initial coding themes to guide the evaluation process. Later, a systematic compression of the text in the management plan of AHLV into fewer thematic categories based on the identified evaluation themes was conducted. The initial coding schemes has been developed with a special reference to several similar works conducted by Landorf (2009) and Simpson (2001) in examining the effectiveness of heritage management plans and the results are relatively convincing. Basically, the content analysis of the management plan of AHLV involved two major stages:

(a) Stage 1 – Identification of the source for content analysis and evaluation themes

The first stage of the content analysis involved two processes: the identification of the analysis source and the development of the evaluation themes and coding instruments. The existing management plan of AHLV submitted to the UNESCO World Heritage Centre (WHC) was adopted as the analysis source. This management plan was obtained from the Department of National Heritage Malaysia. Once the plan was ready, the second process was to develop the evaluation themes or dimensions to be examined.

Two heritage management frameworks recommended by Lee and his colleagues (2007) and Feilden and Jokilehto (1993) were adopted as the primary benchmark models in assessing the effectiveness of AHLV's heritage management plan. The framework recommended by Lee and colleagues was formulated based on their experience of the cultural heritage management of the Pearl Delta in China. This framework was especially useful as a benchmark for heritage management in the Lenggong Valley given that, to a certain extent, both sites are culturally and geographically similar (i.e. demographically, politically and economically). This framework was also considered as more appropriate compared to some other western-based heritage management frameworks given that westernised heritage frameworks might not sit perfectly in the Asian context (e.g. Karlstrom, 2009; Taylor, 2004). The second heritage management framework selected as a benchmark model for this assessment was the management guidelines for World Heritage Sites developed by Feilden and Jokilehto (1993). As the Lenggong Valley is now a UNESCO World Heritage Site, the effectiveness of its management plan is also subject to the management requirements of UNESCO.

Lee and his colleagues (2007) recommended five management components or principles for a good heritage management framework: inventory of heritage assets; legislation; involvement of professionals in management; stakeholder consultation; and participation and regular review and monitoring of the plan. Feilden and Jokilehto (1993), on the other hand, suggested that a good management plan for a WHS was made up of at least three major components: site description; site evaluation and objectives; and site management. Examination into the existing heritage management plan of AHLV revealed that the main objective of the management team was to promote the sustainable development of AHLV, therefore, emphasis was also given to the examination of community attitudes and participation in the heritage management of AHLV. Community attitudes and stakeholder participation are perceived as key criteria in determining the successfulness of sustainability development (Landorf, 2009).

Summarising the aforementioned themes, five themes were selected as the main evaluation dimensions for the content analysis:

(i) Legislation

(ii) Site evaluation and management objectives

(iii) Action and implementation

(iv) Community values and attitudes

(v) Stakeholder and community participation.

Once the evaluation themes were identified, construction of the coding instruments or assessment items began. Coding instruments were developed according to each

theme. These instruments helped to assess the degree of integration of the identified management themes in the management plan of AHLV. A total of 31 coding instruments across five evaluation dimensions made up the framework for content analysis (Table 3.2). Some of the instruments were adopted from Simpson (2001) and Landorf (2009) and some were specifically developed for this study. A four point Likert-scale was adopted in order quantitatively to evaluate to what degree the assessment items were integrated into the management plan. The responses were quantified using a numeric scale range from 0 to 3, with each scale justified according to the criteria in Table 3.3.

Evaluation Dimension	Coding Item
Legislation	1. Does the national legislation provide clear definitions about the scope and definitions of heritage, including not only tangible but also intangible heritage and are these described in the plan? 2. Does the national legislation provide a guideline for the identification of the heritage asset, particularly the archaeological sites and artefacts and are these deliberated in the plan? 3. Does the legislation contain a provision about licensing in heritage and does the plan include issues such as: - The trade of antiquities? - Import/export of heritage items? - License to excavate heritage sites? 4. Does the national legislation describe the policy in relation to conservation and preservation of the heritage and is it outlined in the plan? 5. Does the national legislation include provision for the enforcement of the heritage act/decree/enactment and is this included in the plan?
Site Evaluation and Management Objectives	6. Are tangible heritage characteristics described? 7. Are intangible heritage characteristics described? 8. Are the land use and ownership patterns identified? 9. Are demographic characteristics identified? 10. Are the cultural significances of the site evaluated? 11. Are heritage tourism activities identified? 12. Is the degree of authenticity and integrity of the site identified? 13. Are the threats and risks towards the heritage site identified? 14. Are the management visions/goals/objectives clearly stated? 15. Do the management objectives prioritize the significance of the Outstanding Universal Values of the site?

Action and Implementation	16. Is the administrative structure of the management described? 17. Is the management plan integrated into planning policies at national, regional or local levels? 18. Is the implementation/action and monitoring plan reviewed or periodically addressed? 19. Are the staffing level and human resources requirements of the management addressed? 20. Is the financial/funding situation described? 21. Is the involvement of the NGOs in the implementation of the management described/addressed?
Community Values and Attitudes	22. Are local heritage values identified? 23. Are critical issues of residents in relation to heritage identified? 24. Are community attitudes to heritage assessed? 25. Is the attachment/connection between the local residents and the heritage site described?
Stakeholder and Community Participation	26. Are the stakeholders and their relationship identified? 27. Is the partnership between the administrator board and other stakeholders addressed in the plan? 28. Are local ideas incorporated into heritage management? 29. Is the level of support from local communities for heritage management identified? 30. Is the participation of local communities and stakeholders in the management process addressed?

Table 3.2: The AHLV management plan coding instruments.

Scale		Rationale
Award 0 if:	(i)	The item has been ignored/is absent from the management plan
Award 1 if:	(i)	The item is mentioned but not defined, described or integrated into the management plan
Award 2 if:	(i)	The item is mentioned, defined, described or incorporated into at least one component in the management plan (e.g. a section heading)
Award 3 if:	(i)	The item is well defined/well deliberated and the descriptions are unambiguous/unquestionable
	(ii)	The item has been incorporated into more than one component in the management plan

Table 3.3: The rationales for the coding responses.

(b) Stage 2: Content analysis

A total of five heritage practitioners, including two archaeologists and three heritage officers from Malaysia, were invited to join this content analysis. Prior to the commencement of this content analysis, the management plan was sent to the respondents two weeks before the focus group meeting and the objective and methodology of the study were explained via email. The analysis began with a pre-focus group meeting session, and each respondent was given a copy of the heritage management plan of AHLV. Then, a thorough discussion into each evaluation theme or dimension included it's underlying concept and component were conducted. The researcher and participations were later involved in the familiarisation of the management plan of AHLV according to the themes and evaluation items which will be assessed in this content analysis. Later, another three focus group sessions were conducted. Each focus group session took approximately two hours and all participants were requested to evaluate the content of the management plan according to the coding items that have been developed for this study (Tale 3.2 and 3.3).

At the beginning of the focus group meeting, a detailed explanation into the aims and methodology of the study was presented to the participants. The management plan was explained and each sub-section of every chapter was outlined in detailed. Then, each participant was requested to categorise the text according to the coding themes. Basically, the participants evaluate each coding item based on their understanding about the depth of discussion of the management plan of AHLV with the assistance of the coding themes. As mentioned earlier, this content analysis adopted a quantitative approach in which participants have to award the response scores (scale from 0 to 3), mainly on the basis of: (i) the occurrence of the keyword and phrases of the coding

item on the management plan; (ii) the depth of the discussion about each coded theme; and (iii) the degree of integration of particular coding items into the management plan.

All responses obtained from the analysis were processed using the IBM SPSS (Statistical Product and Service Solution) quantitative analytical tool. A mean score (minimum 0, maximum 3) was used to measure the degree of integration of the identified heritage management principles into the plan. A higher mean score reflected higher integration of a particular management principle into the plan, indicating greater efficiency of the plan in achieving management goals.

3.3 Heritage Assessment of the Cave Sites of Gua Gunung Runtuh, Gua Kajang and Gua Harimau

As mentioned in Chapter 2, the assessment of cultural significance for the cave sites of the Lenggong Valley has tended to prioritize archaeological values, while ignoring other values. The majority of heritage practitioners working across the Lenggong Valley are archaeologically trained and thus greater focus has been given to the identification and investigation of archaeological significance. This project, for the first time, adopted a Burra Charter-inspired heritage assessment to identify all of the strands of cultural significance associated with the cave sites of the Lenggong Valley. The heritage assessment particularly investigated how the local communities attributed meanings to the cave sites based on their past experiences and memories obtained through their long-term interaction with the sites. To achieve this goal, a questionnaire survey and oral interviews were conducted to gauge local

knowledge and to collect information related to Gua Gunung Runtuh, Gua Kajang and Gua Harimau.

3.3.1 Questionnaire Survey

One of the major components of this thesis was to explore local community knowledge about the archaeology of the Lenggong Valley and local perceptions of significance at local, regional and national levels. To obtain such information, community engagement was necessary and a questionnaire survey was considered to be the most effective tool for obtaining responses from local residents and relevant stakeholders within a specific timeframe (Oppenheim, 1992). The questionnaire survey was carried out in four stages – questionnaire design; ethics application; the administration of questionnaire surveys; and analysis.

(a) Identification of sampling group and questionnaire design

Prior to the commencement of the questionnaire survey, a sampling group had to be identified. Identification of a sampling group is a crucial step in driving the direction of the questionnaire design (Vaus, 2002). For this study, two groups of people were targeted: heritage professionals (archaeologists, government agents, and cultural heritage managers), and local residents of two villages where the research caves are located. Potential stakeholders who had been previously engaged with archaeological or heritage research on the caves in the Lenggong Valley were identified from amongst the relevant institutions, such as the National Heritage Department of Malaysia, the Centre for Archaeological Research Malaysia, the National Museum Department of Malaysia and

the Lenggong District Councils. In addition, potential local respondents were primarily drawn from the residents of the Gelok and Gua Badak Villages in the Lenggong Valley.

The construction of the questionnaire itself took approximately two months. The questionnaire was nine pages long, prepared in both English and Malay languages, and was aimed at assessing each respondent's knowledge about GGR, GK and GH (Appendix I and II). There were three major themes that guided the construction of the questionnaire:

(i) Local knowledge of the caves;

(ii) The importance of the caves to the local and wider communities; and

(iii) The social connection (i.e. historical, spiritual, economic) between the local communities and the caves.

The questionnaire was composed of closed and open-ended questions and the types of questions were later categorised according to Dillman's model (1978:80), which separates questions into five distinct types: *behaviour* questions; *belief* questions; *knowledge* questions; *attitude* questions; and *attribute* questions. The questionnaire started with the *attribute* questions, which were designed to obtain demographic information about the respondent, such as their age, sex, ethnic affiliation and nationality. The later sections of the questionnaire consisted of a mix of *knowledge* questions and *belief* questions. *Knowledge* questions set out to discover respondents' knowledge about the archaeology and values of the GGR, GK and GH, whereas *belief* questions comprised a list of closed questions which tended to explore what respondents believed to be true or false.

In order to obtain the best results, the construction of the questionnaire employed some basic principles suggested by Vaus (2002:96-97), such as maximizing reliability, validity and relevance. All questions were constructed using simple language and avoided ambiguous or vague wording because these would have affected the consistency and reliability of the responses. Double-barrelled, negative or leading questions were excluded from the questionnaire to avoid bias or subjectivity in the responses.

(b) Ethics application

In Australia, any research that involves human subjects is subject to ethics clearance prior to the commencement of the project. As the researcher is affiliated to Flinders University of South Australia, an ethics application needed to be submitted to the Social and Behavioural Research Ethics Committee. An ethics application was submitted in July 2010 and final approval was obtained by the end of September 2010 (Project approval no: 4905) (Appendix III).

(c) The questionnaire survey

Between October 2010 and Feb 2011, a total of 50 participants or informants were approached to complete the questionnaires. Of these 50, 15 participants were drawn from professional fields, whereas the remaining 35 participants were local residents from two villages, Gelok Village and Gua Badak Village. For those who were interested in providing further information, a short follow-up interview was conducted to collect extra information. In total there were seven participants who committed to a further semi-structured interview. The questionnaire survey was administered through two methods: email survey and face-to-face survey.

The email survey was targeted to those potential participants from professional fields, in view of the fact that they were more likely to have access to the internet and therefore an

email survey might be a time and cost efficient tool to gather their responses. All email surveys contained an invitation text which outlined the project aims, consent form and questionnaire (Appendix IV and V). It is important to highlight here that the invitation text, consent form and questionnaire were all bilingual, in English and Malay. All Malay-translated copies were translated by the researcher and the accuracy of the translation copies was validated by the Universiti Sains Malaysia.

A non-probabilistic sampling approach was used to recruit questionnaire participants. Anyone from either of the two targeted groups was welcome to join the survey and no selection process was applied. Although many statisticians argue that the individuals in non-probabilistic samples do not accurately represent the entire population (Weiss, 2012), this sampling method is fairly popular in the humanities and social sciences, given that the majority of questionnaire surveys developed within these fields are to collect voluntary responses and self-selected participants are often preferred in these surveys (Neuman, 2014). Due to the fact that the targeted participants of the questionnaire survey for this PhD study included some members of Indigenous groups (considered a high risk category in research), the non-probabilistic approach based on voluntary responses is preferred and, to a certain extent, complies with the Social and Behavioural Research Ethics code of conduct.

A total of 20 questionnaires were sent out via email to government institutions such as tertiary institutions, heritage departments and museums, and only seven copies of questionnaires were collected. Face-to-face surveys, on the other hand, were carried out in two villages in the Lenggong Valley. In this survey, the administration of the survey was a major concern, given that, (i) most of the local residents were native Malay speakers, and (ii) there are small groups of respondents who are illiterate or received only a primary education. Consequently, attempts to invite them to read or understand the

questions of the survey were a challenge for the researcher. At the same time, this also discomfited the respondents. To solve the first problem, the questionnaire was prepared in both English and Malay and respondents were welcome to answer it in either language. For those respondents who needed language assistance, two Malay interpreters were invited into the field to assist in this project.

The second issue was overcome by employing the Paper and Pencil Interview (PAPI) (Vaus 2002:123). This method refers to an approach where the interviewer reads or explains the questions to the respondents and further records the respondents' answers on paper questionnaires. Most of the PAPIs started with taking a verbal-consent, and the whole interview process was tape-recorded. All interviewers in PAPIs were native-Malay speakers and their abilities to appropriately convey the content of questionnaire and interpret or code the responses were convincing (Figure 3.6).

Figure 3.6: Mr Shaiful Shahidan from the University Sains Malaysia conducting the questionnaire survey in Kampung Gelok, Lenggong Valley (22nd October 2010)

Professional participants all spoke English. Local residents usually did not, and the services of an interpreter were required. A few research officers from the Centre for Archaeological Research affiliated to the University of Science Malaysia, were invited into the field as part of the project to act as interpreters. In this case, the questionnaires were not filled in by the participants; instead the researcher completed them using verbal information from the participants. Interpreters were made aware before work began that confidentiality was paramount and that they would not be in control of any information (i.e. all notes taken of responses, completed questionnaires and interview tapes and transcripts are held by the researcher and stored appropriately).

In Gelok Village and Gua Badak Village, an informal meet-and-greet session was held in the community hall to inform residents about the research and to ask for volunteers to participate in the survey. Following this, the researcher (and interpreters if required) visited the participant's house to conduct the questionnaire and the follow-up interview. For those questionnaires that were completed during a visit to a respondent's house or village, all completed questionnaires were sealed in an envelope to avoid information leakage. The participants who expressed an interest in participating in a follow-up interview (see section 3.3.2) were identified during the survey and usually an oral-interview was conducted straight after he or she completed the questionnaire survey.

Both quantitative and qualitative approaches were adopted to analyse the questionnaire responses. All the data obtained from the questionnaire survey were analysed using IBM Statistical Product and Service Solution (SPSS) 19.0 and QSR Nvivo 9.0. For those data derived from closed questions, such as demographic details, the frequency of responses were all processed using SPSS, whereas the open-ended questions were analysed using

QSR Nvivo 9.0. To begin the analysis using QSR Nvivo 9.0, all responses obtained from the open ended questions were first transcribed into an electronic copy and imported into the Nvivo database in the form of Word, Excel or PDF files. Later, the texts were coded based on the themes of the questions and the codes were managed using the coding system in Nvivo. The analytical results of the questionnaire survey are further presented in Chapter 7.

3.3.2 Interviews

Interviewing people is being increasingly adopted in heritage studies as a means to obtain extra information and opinions about the value of a place. It is perceived as a useful tool to trace the relationship or association between a community and a heritage place. In this research, interviews were a supplement to the questionnaire surveys and were only conducted when a questionnaire respondent showed their willingness to share more information. Prior to the commencement of the interview, an interview outline was formulated. Generally, this comprised a list of topics reflecting the objective of the interview in order to guide the interview process.

A total of six follow-up interviews were conducted during the questionnaire survey in Kampung Gelok and Kampung Gua Badak between 0ctober 2010 and February 2011. Given that the majority of the informants were native speakers of Malay, the interviews were conducted in Malay. Since the principal researcher is not a native Malay speaker, two Malay interpreters from the Universiti Sains Malaysia—Mr Shaiful Shahidan and Mrs Normah Hemat—were appointed to assist. Interviews were conducted in the informant's house as per

advice from Sommer and Quinlan (2009:52) that a familiar environment will positively affect the interview.

Interviews were semi-structured, and only a brief outline of questions was prepared in order to keep the interview as dynamic and flexible as possible. Both open-ended and closed questions were employed throughout the interview process. According to Rithie (2003:92), open-ended questions allow the informants to volunteer opinions they think relevant to the subject, whereas closed questions are necessary to elicit more factual information, especially in response to something mentioned while answering the open-ended questions. Three survey themes similar to those which guided the questionnaire surveys (refer to section 3.3.1.[a]) were adopted to construct the questions for oral interviews:

1. How many years have you known about the cave or caves in the Lenggong Valley?
2. Do cave sites within the Lenggong valley reflect noticeable/observable changes over a long time? If yes, what are the changes?
3. What do you know about the caves or any caves in this valley?
4. Are the cave sites in the Lenggong Valley important to you or your community? In what way and to what extent?
5. Are any of the caves associated with any local stories, histories or any community events?
6. From your understanding/knowledge, are the cave sites in the Lenggong Valley associated with a particular person or group that is important to you, your community or the nation?
7. Is there any particular cave site that reflects indigenous significance?
8. Are the local community still using the caves for certain purposes? If yes, for what purposes?

Each interview was tape recorded and a written transcript was produced at the end of the interview. A written consent or verbal consent was obtained from the interviewee prior to the commencement of the oral interview (Figure 3.9). The researcher first briefed the participants on the purpose of the study and the participants could decide whether or not to voluntarily participate in the interview. The participants were informed that all data collected from the interview was strictly confidential and the participants were given the option of remaining anonymous if they wished. Also, participants were advised that could withdraw from the survey or interview at any time without penalty. All recordings were later electronically processed and transcribed into text. Participants were allowed to edit the final transcript of their interview.

Figure 3.7: Mr Shaiful Shahidan reading the verbal consent text to the interviewee (22 October 2010).

The data obtained from the interviews were transcribed into text and analysed using QSR Nvivo 9.0. As the main objective of the interviews was to explore local knowledge about the caves and investigate people's past and present social interactions with the cave sites, all interview transcripts were coded based on the keywords which corresponded to the interview themes. Detailed analysis of the oral interviews is presented in Chapter 7.

3.4 Conclusion

In summary, this chapter presents a detailed account of the methodologies adopted in this research. It demonstrates how both quantitative and qualitative approaches were employed in this study to access, collect and analyse the data through many channels. Each research component adopted different methodologies to generate useful data, in order to provide an in-depth understanding of the past and present use of the cave sites, as well as investigating the constraints and opportunities surrounding conservation management of the cave sites. The analyses generated for each of the research component are further elaborated in Chapters 4, 5, 6 and 7.

Chapter 4 Cave Archaeology of the Lenggong Valley

The archaeological investigation of caves and rock shelters is widely considered to provide important clues for the understanding of cultural development during the late-Pleistocene and Holocene periods in Southeast Asia. Barker, Reynolds and Gilbertson (2005) suggested that caves and rock shelters are important as a focus of archaeological research in this region for a number of reasons, including: (i) the boundary, size and artifact density, which makes a cave site easier to tackle than an open site; (ii) caves and rock shelters have more stable microclimates; and (iii) the nature of caves and rock shelters makes them likely to collect sequences of deposits that can assist in the study of the relationships between cultural and environmental changes through time.

Since the early 20th century, archaeological investigations in caves and rock shelters in Southeast Asia have uncovered stone artefacts, human and animal remains, and pottery, as well as metal objectss. Although cave deposits were frequently disturbed, however, the embedded archaeological deposits still provided insights into the culture and lifeways of prehistoric people during the late Pleistocene –Holocene in this region (Anderson, 1997). In the past three decades, pilot studies conducted at caves and rock shelters in Southeast Asia have shed light on some issues regarding the evolution of modern humans in this region (e.g. Barker et al., 2007; Cuong, 1986; Zuraina, 1994), the development of lithic technology (e.g. Gorman, 1977; Ha Van Tan, 1994; Zuraina, 1992), and the transitions from foraging to farming during the Holocene (e.g. Bellwood,1997, 2001; Oppenheimer, 2004).

According to Anderson (1997), the caves and rock shelters in mainland and island Southeast Asia were generally used as brief campsites during the late-Pleistocene and appeared to

function as dwelling sites and later as burial sites during the Holocene (Anderson, 1997). This has been widely accepted in interpreting the uses of caves in Southeast Asia during the late Pleistocene and Holocene (e.g. Bulbeck, 2001; Lewis et al., 2008; Simanjuntak, 2001; Zuraina, 1994). Nevertheless, there are still difficulties in interpreting the function and use of caves and rock shelters (Barker, Reynolds and Gilbertson, 2005). In more recent years, the use of caves in Southeast Asia during the late-Pleistocene and Holocene has been studied more thematically (e.g. Anderson, 2005; Latinis and Stark, 2005; Veth, Spriggs and O' Connor, 2005) to resolve questions arising from previous studies relating to the stratigraphy of the cave deposits, the function of caves and rock shelters, palaeo-environment and the origins of agriculture in Southeast Asia.

In Peninsular Malaysia, a number of inland caves and shelters have been excavated in limestone massifs scattered through the northern region (Bellwood, 1997; Chia, 2005; Zuraina, 2003). These caves and shelters, particularly those found in the Nenggiri Valley in Kelantan and the Lenggong Valley in Perak, have demonstrated many imprints of human occupation beginning 15,000-14,000 years ago (Chia, 2005). In the Lenggong Valley, like many parts of Southeast Asia, caves have been a focus for research interest since the early 20th century (e.g. Evans, 1918, 1920; Callenfels and Evans, 1928). Previous archaeological investigations in this valley indicated that cave occupation started around 13,000 years ago and extended throughout the Holocene period. Thus far, eight cave sites have been archaeologically investigated and the results partially published in detail (e.g. Chia, 1997; Chia and Zolkurnain, 2005; Goh, 2008; Mokhtar, 1997; Zolkurnain, 1998; Zuraina, 1988, 1994, 1996, 1998, 2003, 2005).

In order to create a regional understanding of the cave archaeology of the Lenggong Valley, this chapter will present a thorough synthesis of cave archaeology, primarily based on results

obtained from previous archaeological research. At the same time, new data obtained by the author from the latest field surveys and excavations in the site of Gua Harimau in the valley will be integrated with the data available from previous studies to present the most complete overview to date of Late-Pleistocene-Holocene occupation in the valley. Additionally, the discussion will further underpin the challenges and prospects of cave archaeology in the valley and discuss how the cave archaeology of the Lenggong Valley contributes to the cultural development of Malaysia and Southeast Asia.

4.1 Caves and rock shelters in the Lenggong Valley: A geological background

The Lenggong Valley is located between two mountain ranges: the Titiwangsa Range and the Bintang Range in the northern region of Peninsular Malaysia (Figure 4.1). It is situated approximately 100km from Ipoh city and approximately 120km from the southern border of Thailand. It is one of three districts in Upper Perak, in the state of Perak, and is located between 101º 03´E, 5º 20´N and 100º 55´ E, 5º 00´ N.

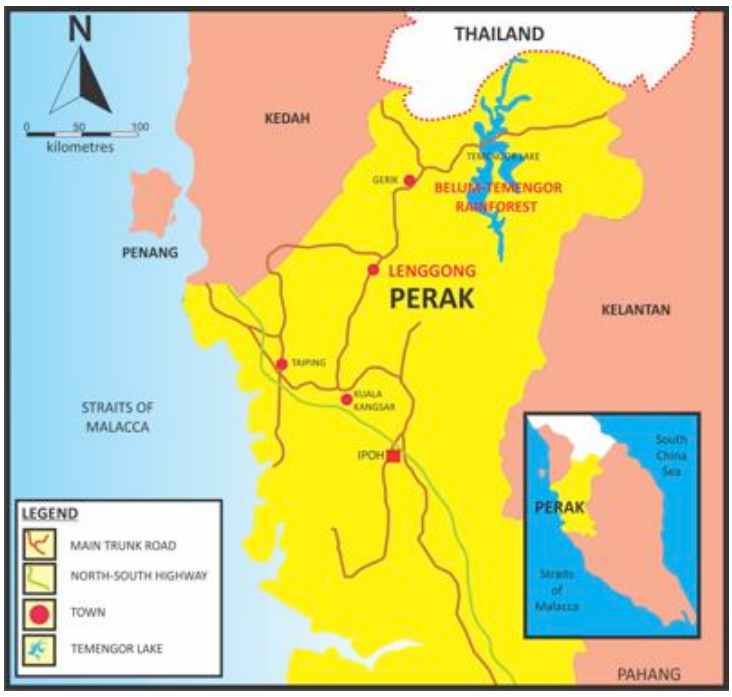

Figure 4.1: The location of Lenggong Valley in Peninsular Malaysia.

The Lenggong Valley covers an area of 9,733 hectares, with a population of around 7,000 people. Currently, the Lenggong Valley is best described as an agricultural valley, with smallholdings of oil palm and rubber plantations scattered throughout. This valley, with an average elevation of around 100 metres above sea level, follows the northwest-southeast axis of Peninsular Malaysia. The valley also comprises limestone hill complexes and gravel deposits on lakeshores or river banks in the midst of tropical savannah or forests. The Lenggong Valley is easily accessible via two main highways: the North-South highway and the East-South highway.

Both the Titiwangsa and Bintang Ranges are made up of Porphyritic biotite granitic rock (Mokhtar, 2005) and numbers of isolated limestone hills cover an area about six kilometres square, or approximately 30 percent of the land surface of the Lenggong Valley. In 1988, geological survey carried out in the valley mapped eight limestone hills (Figure 4.2) comprising Lower Palaeozoic rock under the Baling Formation. The topography of these complexes comprises steep-to-vertical walls with rounded tops and houses caves at different levels, which originate from both phreatic (formed underwater) and vadose (formed by running water) processes (Mokhtar, 2005).

The ESR (electron spin resonance) dating of stalactites from the caves in the Lenggong Valley shows that the oldest cave is considered to be Gua Gunung Runtuh, which was formed by running water (vadose cave) between 54,000 and 145,000 years ago (Mokhtar, 2005; Yoshida et al., 2002). However, the archaeological record shows that the oldest human occupation in this cave appears only 13,600 years ago (Zuraina, 1994). Further geomorphological studies suggested that, prior to 13,600 years, there was no, or little, soil preserved on the cave floor of Gua Gunung Runtuh due to the occasional sheet wash that

could have swept out the soil or due to strong wind action during drier climatic periods in the Late Quaternary (Mokhtar and Tjia, 1994; Mokhtar, 2005). Supporting this is the suggestion made by Verstappen (1975) that the heart of Sundaland (which includes Peninsular Malaysia) should have been subjected to strong winds that correlated to the dry continental climates during the Last Glacial Maximum. Uranium series dating of the stalagmites in a cave located at the foothills of Bukit Gua Badak – Gua Badak C—gave a date between 31,000 and 62,000 years ago (Ros Fatihah and Yeap, 2002). According to Mokhtar (2005), all caves at the foothills of the limestone complexes in the Lenggong Valley developed in the same period; in other words, these caves were formed between 31,000 and 62,000 years ago.

The largest cave found so far is Gua Harimau, which covers an area of about 350 metres square. Many of the smaller caves have entrances that are less than one metre wide (Mokhtar, 2005). To date, of the many caves and rock shelters spread over the Lenggong Valley, 72 have been mapped and eight of these have been archaeologically investigated.

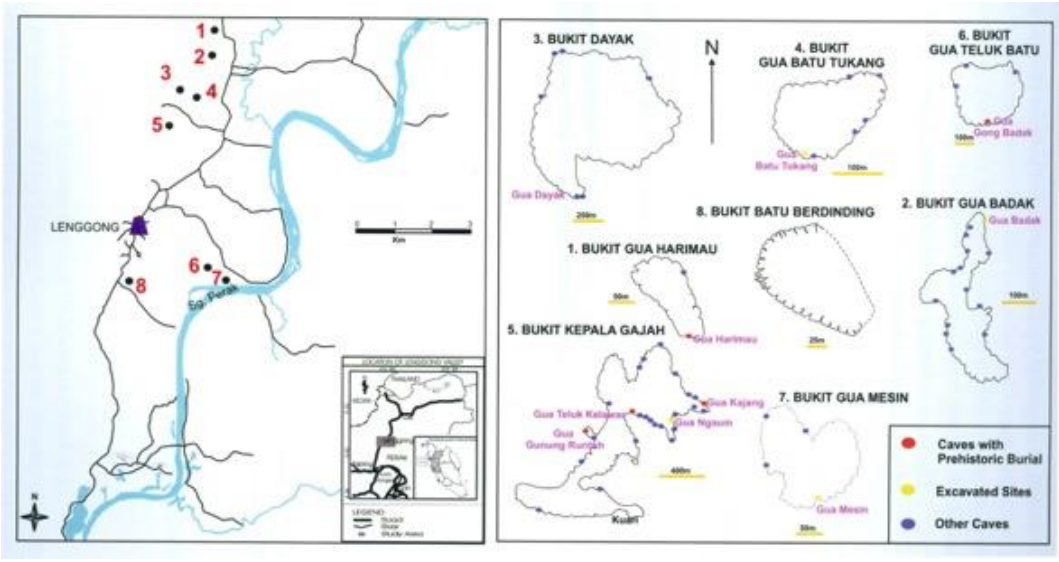

Figure 4. 2: The limestone hills in the Lenggong Valley

4.2 Cave archaeology of the Lenggong Valley: History and development

Generally, archaeological research within the cave sites of the Lenggong Valley can be divided into two phases:

i. Phase I – Early 20th Century to the 1960s
ii. Phase II – 1987 to the present

The first phase, between 1917 and 1960, was a series of archaeological investigations mainly conducted by British amateurs or officers during the British colonization period in Malaysia. During this period six cave sites were investigated, beginning with the first archaeological excavation by I.H.N. Evans in Gua Kajang in 1917. Archaeological research at Gua Kajang involved two seasons of excavations which uncovered an area about 90 metres square. The first season, which took place at the back and front cave simultaneously, exposed a total area of about 82 square metres. High densities of freshwater shells, stone artefacts, hematite, fauna and human remains, as well as earthenware pottery, were uncovered. The second season of excavations, however, uncovered only some earthenware pottery comprising both plain and decorated pieces (Evans, 1918).

After the initial discoveries in Gua Kajang, Callenfels and Evans (1928) conducted another series of investigations in Gua Badak between 1926 and 1927. These attempted to examine the spread of early lithic culture from Indo-China to Peninsular Malaya and into Sumatra. Excavation in a section of this cave was halted soon after it started due to the scarcity of cultural deposits. This excavation failed in its search for the development of early lithic traditions, where only a few pieces of cord-marked potsherds and two pieces of polished implements from the upper Neolithic were documented. The cave investigation was suspended in the following decade, due in part to a shift in archaeological interest from caves

to open sites (e.g. Collings, 1934). Between 1945 and 1950, a few attempts were made by Williams-Hunt to re-investigate the caves in the valley. As a result, he conducted reconnaissance surveys at seven caves: Gua Kajang, Gua Batu Tukang (I&III), Gua Harimau, Gua Gelok, Gua Jepai, Gua Badak (I, II &IV) and Gua Dayak. From his survey, Williams-Hunt produced a catalogue of the collections of the surface finds. Generally, these collections comprised large amounts of cord-marked potsherds, the "Sumatralith" tools (oval unifacial tools), quadrangular stone axes, flake tools and Neolithic stone chisels (Williams-Hunt, 1951). A further detailed examination was made by Williams-Hunt, again at Gua Harimau, Gua Kajang and Gua Batu Tukang, in 1952. The investigation of Gua Harimau uncovered some fragmentary juvenile human remains, stone adzes and earthenware pottery (Williams-Hunt, 1952). A charcoal sample from this excavation, the first in Peninsular Malaysia, was sent for radiocarbon dating and provided a result of 3450 ± 150 BP (e.g Chia and Zolkurnain, 2005; Zuraina, 1989). The survey at Gua Kajang, on the other hand, revealed a few Mesolithic axes and some potsherds, whereas only a small collection of potsherds was documented at Gua Batu Tukang (Williams-Hunt, 1952). The first phase of cave investigation in the Lenggong Valley ended with the exploration by Matthews of Gua Batu Berdinding in 1960. Matthews did not publish his work but the artefacts collected were recorded in a publication of the National Museum of Malaysia (Adi, 1983, 1987).

The second phase of archaeological research in the cave sites of the Lenggong Valley began in 1987, when Zuraina Majid re-investigated the cave site of Gua Harimau in order to resolve some questions arising from Williams-Hunt's previous research (Zuraina, 1988). This investigation shed new light on Malaysian prehistory. For the first time, evidence of Bronze Age occupation was discovered in the Lenggong Valley, indicating that the tradition of Bronze Age culture was not restricted to Peninsular Thailand. Additionally, the 1987-88 excavation in Gua Harimau also revealed seven human burials associated with various types

of mortuary goods, including food remains, potsherds and stone artefacts (Zuraina, 1989). In searching for the evidence of local manufacturing of bronze and attempting to establish an early time frame for the Bronze Age occupation of Peninsular Malaysia, another excavation took place in Gua Harimau in 1995. Altogether, a total of 11 human burials dated to between 4,000 and 1,700 years ago were excavated from Gua Harimau between 1988 and 1995 (Chia and Zolkurnain, 2005; Zolkurnain, 1998; Zuraina, 1988).

Recognizing the importance of caves as a key for the understanding of Malaysian prehistory, an increasing focus has been given to cave investigations in the valley. Since the 1990s eight cave sites—Gua Gunung Runtuh (Zuraina, 1994), Gua Kajang (Chia, 1997), Gua Teluk Kelawar (Zuraina, 1996), Gua Ngaum and Gua Batu Tukang (Zolkurnain, 1998), Gua Badak and Gua Dayak (Chia, 1997) and Gua Harimau (Zolkurnain, 1998, Zuraina, 1989)—have been systematically excavated and a more comprehensive cave chronology has been established based on chronometric dating derived from either charcoal or shell samples from the excavated deposits.

In short, most of the excavations during the first phase of research were in the form of antiquarian style "digging", with no absolute dating carried out (Chia, 1997; Goh, 2008; Mokhtar, 1997; Zuraina, 1996). These excavations were generally done without using what would be considered appropriate methods, and the documentation was often sparse (Zuraina, 1996). In contrast, the second phase witnessed a major shift in archaeological research from "initial digging" to research-oriented investigation. With the emergence of archaeological sub-disciplines, archaeological research in the Lenggong Valley during this phase has produced important findings that contribute to our broader understanding of the occupation sequence in the valley in particular and of the archaeology of Malaysia more generally.

4.3 Prehistoric Cave Occupation of the Lenggong Valley

4.3.1 Cultural sequences

The periodisation and classification of prehistoric cultural sequences in Malaysia has been the focus of archaeological research since the early 20th century. Generally, this is a widespread issue faced by most archaeologists in Southeast Asia, where many of the prehistoric chronological frameworks seem to be confined by western cultural classification models which traditionally divide cultural development into the archaic Paleolithic, Mesolithic, Neolithic, Bronze Age and Iron Age periods (Gorman, 1971; Hutterer, 1985). In Southeast Asia, the early construction of prehistoric cultural sequences was developed through two approaches. The first was to synthesize data from several sites in Vietnam, Indonesia, Burma, Thailand and Malaysia and develop tentative cultural sequences that were later extrapolated to the whole region; and the second was to correlate similar cultural assemblages with a distinctive culture (Shoocongdej, 2011:711).

The earliest prehistoric chronologies in Malaysia (e.g. Heine-Gelden, 1932; Tweedie, 1953) were established through comparative studies of other cultural assemblages found within the Southeast Asian region. These were created by reference to particular kinds of technology or types of tools found elsewhere and then labelled accordingly (e.g. Pajitan culture, Hoabinhian culture etc.). In contrast, today Malaysian archaeologists characterize each cultural phase through typology, artefact correlations, or cross dating. To a certain extent, the uniqueness of some specific cultural artefacts has been used to indicate the presence of a certain cultural period. Previously, Zuraina (1995) had proposed the concept of periodicity in the prehistoric cultures of Malaysia, a framework that has been recently revised by Chia (2009). According to Chia (2009), the Paleolithic culture of Malaysia (which includes the Epi-Paleolithic according to Zuraina [1995]), is characterized by the use of stone technology, lake shore

adaptation, hunting and gathering, a nomadic way of life and flexed burials. The Neolithic culture in Malaysia, on the other hand, is characterized by a settled way of life, the beginning of agriculture, an increase in human population, stratification, extended and supine burials, and the beginnings of maritime trade and exchange, as well as the introduction of new forms of cultural artefacts, such as earthenware pottery, polished stone adzes, stone bark-cloth beaters, and ornaments and tools made of stone, shell and bone. Attempting to identify the characteristics of the Metal Age in Malaysia still remain a challenge for archaeologists due to the paucity of archaeological evidence obtained from mostly undated sites and private collections. Some characteristics of Metal Age culture in Malaysia as highlighted by Chia (2009) include the introduction of bronze and iron technologies, long-distance maritime trade and exchange, extended burials with metal artefacts, cist graves, jar burials and the presence of log coffins.

In the context of the Lenggong Valley, the first phase of archaeological research established a brief chronology for cave sites in the valley on the basis of recovered artefacts. According to Callenfels and Evans (1928) and Williams-Hunt (1951, 1952), results from the comparative studies done on the stone assemblages found from the cave deposits at Gua Kajang, Gua Badak and Gua Harimau indicated human occupation within the cave sites over the "Mesolithic" and "Neolithic" periods. Some sites (e.g. Gua Kajang) were culturally defined as "Hoabinhian" by the presence of "Sumatralith" pebble tools deposited in their pre-Neolithic layers (e.g. Bellwood, 1997; Tweedie, 1953). The "Hoabinhian" was initially used to represent the flaked-pebble tool assemblages at the site of Hoabinh in Vietnam first recorded in the 1920s (Colani, 1930). However, this term was then widely adopted by some archaeologists to represent a distinctive culture that primarily depended on a hunting and food gathering economy with flaked stone artefacts made of pebbles throughout the Southeast Asian region (e.g. Dunn, 1970; Gorman, 1971; Matthew, 1964).

Due to the complex nature of the classification of prehistoric cultural sequences in Malaysia, the archaeological records of early human settlements and cultures in Peninsular Malaysia have been recently revised and classified into three cultural phases: Palaeolithic, Neolithic and Metal periods (Chia, 2005, 2009; Zuraina, 1995, 2003). The terms "Mesolithic" and "Hoabihian" have been excluded from the classification of cultural phases since the 1990s, when the key defining artefacts of these so-called phases – unifacial or bifacial pebble tools – were also found in Palaeolithic stone assemblages in the site of Kota Tampan and dated to ca 70,000 years ago (Hamid, 2008; Zuraina, 1987, 2003). Thus, Zuraina (1987, 1995, 2003) indicated that the Palaeolithic and Mesolithic cultural periods co-existed in the Lenggong Valley. Consequently, Zuraina (1995) proposed that the term "Mesolithic" was not suitable to represent a particular cultural phase in Malaysian prehistory, especially in the prehistory of the Lenggong Valley.

The appropriateness of using a construct such as the "Hoabinhian" to represent a cultural phase in Malaysia has been questioned for several reasons (Zuraina, 1995). Firstly, the geographical extent of Hoabinhian has always been questioned, as it covers a huge area from Indochina to Indonesia, all defined by one distinctive assemblage found in Hoabinh without further linking it to the local cultural context where the particular assemblage was found and there are still discrepancies in defining the Hoabinhian culture in Southeast Asia. For instance, some archaeologists defined it as a "techno-complex" (Gorman, 1970: page), as an "industry" (Heekeren, 1972) or as a "tradition" (Dunn, 1970). Considering all aforementioned issues, Zuraina (1995, 1996) suggested excluding the use of "Hoabinhian" and "Mesolithic" in representing the early Holocene culture in Malaysia. In order to fill the gap of cultural difference between Palaeolithic and Neolithic, Zuraina (1995) further adopted the use of the term "Epi-Palaeolithic" to represent the Palaeolithic tradition that survived in the early Holocene prior to the Neolithic.

In the context of the Lenggong Valley, archaeological data generated since 1987 indicates that cave sites within this region were predominantly occupied by early humans from the Epi-Palaeolithic to Metal periods (Zuraina, 2003), covering a time span from 13,000 to 1,000 years ago. The earliest cave occupation, dated to the Late Palaeolithic or Epi Paleolithic period, started around 13,000 to 10,000 years ago at four cave sites: Gua Gunung Runtuh, Gua Kajang, Gua Batu Tukang and Gua Teluk Kelawar. Archaeological excavations at these caves revealed high densities of cultural assemblages, such as stone artefacts, flexed human burials and animal remains. Thus far, a total of four human burials were uncovered, all dated to between 11,000 and 7,000 years ago (Goh, 2008; Zuraina 1994, 1998; Zuraina et al., 2005). These burials were found *in situ*, mostly in a flexed position and were associated with various types of mortuary goods. In fact, the earliest archaeological evidence for flexed burial so far found is at Gua Kajang and Gua Gunung Runtuh, dated to 10,820 ± 60 BP and 10,120 ± 110 BP respectively. The stone artefact assemblages found within these caves were predominantly pebble tools, ranging from hammer stones, unifacially and bifacially flaked pebbles, to cores and large flake tools made of quartz and quartzite.

The Neolithic in the Lenggong Valley shows the emergence of new forms of technology and tools, such as earthenware, polished adzes, stone bark-cloth beaters, and extended burials. Neolithic cultural remains have been found in the upper layer of almost all excavated cave sites in the Lenggong Valley. The earliest reliable radiocarbon date for the commencement of the Neolithic period in the Lenggong Valley is 3,620 ± 50 BP at Gua Batu Tukang and 3,170 ± 60 at Gua Harimau (Chia, 2005). These Neolithic cultural remains are often found in the upper layers of caves. At Gua Harimau, at least four extended Neolithic burials associated with plain and cord mark pottery, polished adzes, shell ornaments and stone bark-cloth beaters were found in the upper layers of the cave, at a depth of between 15 and 40cm (Chia and Zolkurnain, 2005).

Up until now, the Metal Period occupation in the Lenggong Valley has only been represented by the archaeological finds at Gua Harimau. The 1988 excavation at Gua Harimau exposed two human burials associated with bronze celts and their clay moulds. The earlier riverine shells associated with these burials were sent for radiocarbon dating and gave uncalibrated radiocarbon dates of 4,920 ± 270 BP and 1,760 ± 195 BP (Zuraina, 1988).

4.3.2 Cave Chronology

Although the archaeological evidence and radiocarbon dates derived from the cave sites of the Lenggong Valley have demarcated the timeframe of each cultural phase, discussions according to cultural phases is too restrictive and the interpretations of cultural development are not absolutely reliable when most of the inferences are founded on typological studies or comparative analysis. Alternatively, some researchers have classified cave occupation in the Lenggong Valley according to the Quaternary period, which indicated that cave occupation started from the late-Pleistocene at approximately 14,000 -13,000 years ago and extended throughout the Holocene period (Goh, 2008).

In Malaysia, the old chronological implications (as proposed by Heine-Geldern, 1945; Tweedie, 1953) have been revised and a new cultural chronological framework proposed (Chia, 2009; Zuraina, 1996, 2003). Questions concerning cave chronology, however, are still widely discussed. For instance, Anderson (1997) has questioned the cave chronology within Peninsular Malaysia, suggesting that the chronology for most cave sites needs to be re-assessed, given that the previous excavated or reported Holocene sites might contain Pleistocene deposits that are yet to be discovered. In more recent years, efforts have been made to search for evidence of late-Pleistocene occupation within the cave sites in the

Lenggong Valley. It is no surprise that traces of late-Pleistocene occupation have been documented in some cave sites, such as Gua Kajang (Goh, 2008) and Gua Gunung Runtuh (Zuraina, 1994, 2005), however the late Pleistocene layers were not as thick as in other cave sites within Southeast Asia (e.g. Anderson, 2005). Additionally, radiocarbon dating for the late-Pleistocene layers from these two sites appears to be relatively young, falling between 13,000 and 10,000 years ago.

Within the Lenggong Valley in general, most cave sites have been disturbed by guano diggers since the 1950s. As such, the selection of locations for excavation trenches is essential in archaeological research. Archaeologists who work in the Lenggong Valley often select the most intact parts of a cave for further excavation, assuming that all the archaeological deposits uncovered in these areas are in their original context. However, Anderson (1997) hypothesized that there might be some disturbed but re-compacted deposits arranged in spatial patterns that are identical to undisturbed features in the cave sites in Southeast Asia. Supporting this were the findings from Gua Kajang (Goh, 2008), where materials in different cultural layers were found partially mixed within what first appeared as an intact deposit. In this circumstance, cave chronology made on the basis of correlations between the radiocarbon dates and depth below surface, need to be re-assessed. To generate more reliable data, interpretations of cave chronology should be made in an extensive way, by considering not only the correlation between radiocarbon dates and the stratigraphy of the deposits, but also by linking chronology to typological sequences and artefact correlations within archaeological deposits.

Over the last two decades, approximately 15 archaeological excavations have been undertaken within cave sites in the valley and an absolute chronology has been established based on the chronometric dating derived from organic samples embedded in the cultural deposits. However, the majority of these radiocarbon dates are derived from shell samples

(Zuraina, 1998) and the accuracy of using these riverine shells has always been questioned because such shells tend to be contaminated by old carbon (Chia, 2005; Spriggs, 1984). To solve this issue, Chia and Zolkurnain (2005) re-dated the earthenware-bearing levels at Gua Harimau using charcoal, and the result provided a date of 3, 170 ± 60 BP compared to the previous 4,920 ± 270 BP derived from shell samples. Based on these results, Chia (2005) later suggested that shell dates should be corrected by a local correction factor of at least 1,700 years.

Since 1987, the main objective for archaeological research in the Lenggong Valley has been to fill the archaeological lacuna in time and space, with the aim of constructing a local and national prehistoric chronological sequence (Zuraina, 1998). Attempting to present a clearer picture of prehistoric cave occupation in the Lenggong Valley, it is crucial to understand the absolute dating of the cultural assemblages and how the dates correlate from one to another. The following section, therefore, will focus on the cave chronology of the Lenggong Valley, primarily based on the previous radiocarbon dates derived from the cave deposits in seven cave sites in this region (Table 4.1). As additional effort has been made to collate the radiocarbon dates from Gua Kajang and Gua Harimau, the latest radiocarbon dating results will be integrated with the data available from previous studies. To avoid any discrepancies in the chronological interpretations, this discussion will also consider the issues as flagged in the discussion above in order to put forward a comprehensive cave chronological framework for the Lenggong Valley.

Cave Site	Limestone Massifs	Radiocarbon date (uncalibrated BP)	Sample	Lab No.	Reference
Gua Gunung Runtuh	Bukit Kepala Gajah	13,600 ± 120 12,930 ± 100 10,170 ± 90 10,120 ± 110 10,100 ± 80 10,010 ± 70 9,930 ± 140 9,460 ± 90 9,290 ± 70 9,210 ± 80 8,480 ± 70 8,070 ± 80 7,920 ± 110 7,880 ± 80 2,620 ± 80	Shells Shells Shells Shells Shells Shells Shells Shells Shells Shells Shells Shells Shells Shells Charcoal	Beta-38338 Beta-49850 Beta-38294 Beta-38394 Beta-49849 Beta-49851 Beta-46813 Beta-37818 Beta-46814 Beta-49853 Beta-49854 Beta-49852 Beta-49855 Beta-50831 Beta-37817	Zuraina 1994 Zuraina 1998
Gua Kajang	Bukit Kepala Gajah	10,820 ± 60 10,470 ± 60 8,970 ± 140 7,890 ± 80 6,380 ± 60	Shells Charcoal Charcoal Shells Charcoal	Beta-227446 Beta-275049 Beta-28156 Beta-227445 Beta-28157	Goh 2008 * Zuraina 1998 Goh 2008 Zuraina 1998
Gua Teluk Kelawar	Bukit Kepala Gajah	10,245 ± 80 10,240 ± 70 9,450 ± 70 9,390 ± 80 8,640 ± 80 8,400 ± 40 7,780 ± 90 7,160 ± 60 7,020 ± 140 6,890 ± 80 6,550 ± 70 6,100 ± 100	Charcoal Shells Shells Shells Shells Shells Shells Shells Shells Shells Shells Shells	Beta-41365 Beta-87286 Beta-87287 Beta-87285 Beta-38295 Beta-193000 Beta-87285 Beta-49845 Beta-38298 Beta-49844 Beta-38296 Beta-49846	Zuraina 1998 Zolkurnian 1998 Zuraina 1998
Gua Ngaum	Bukit Kepala Gajah	6,370 ± 90 5,990 ± 80	-	Beta-66232 Beta-66233	Zuraina 1998
Gua Batu Tukang	Bukit Gua Batu Tukang	8,830 ± 80 7,850 ± 80 6,230 ± 80 3,620 ± 50	Shells Shells Shells Charcoal	Beta-87289 Beta-87290 Beta-87288 Beta-46809	Zolkurnian 1998 Zuraina 1998
Gua	Bukit Gua	14,140 ± 795	Shells	GX-13509	Zuraina 1998

Harimau	Harimau	5,080 ± 50 4,920 ± 270 3,170 ± 60 3,080 ± 60 1,760 ± 195	Charcoal Shells Charcoal Charcoal Charcoal	Beta-275680 GX-13508 Beta-81771 Beta-81772 GX-13506	* Zuraina 1998 Zolkurnian 1998 Zuraina 1998
Gua Dayak	Bukit Gua Dayak	1,610 ± 140	Charcoal	Beta-46808	Zuraina 1998

\latest radiocarbon dates obtained by the author

Table 4. 1: The radiocarbon dates of cave sites in the Lenggong Valley

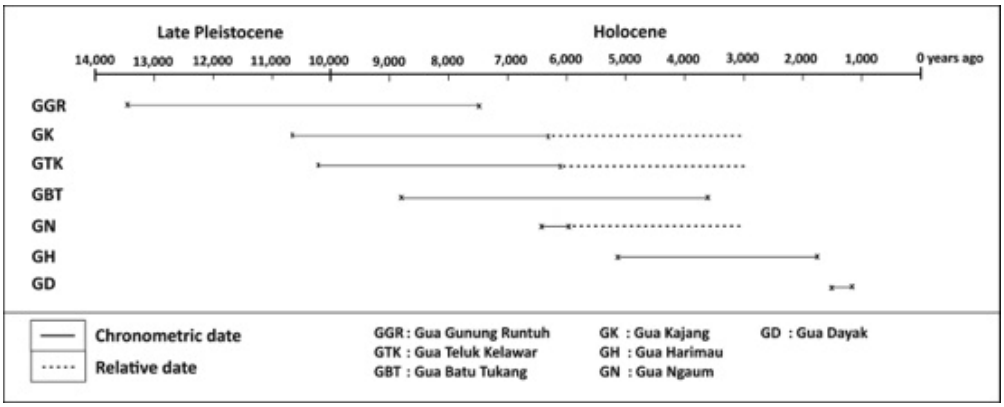

Figure 4. 3: The Prehistoric Cave Chronology of the Lenggong Valley

The cave chronology (Figure 4.3) established on the basis of radiocarbon dates shows that the earliest cave occupations began around 14,000 and 10,000 years ago at Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar, during the transition from the late Pleistocene to the Holocene. Three of these caves are located in the same limestone hill of Kepala Gajah. Although Gua Gunung Runtuh gives the earliest date of 13,600 ± 120 BP, the direct archaeological evidence of human remains found in this cave provide a slightly younger date of 10, 120 ± 110 BP. The human remains found in the lowest cultural layer in Gua Kajang were previously given a radiocarbon date of 10,820 ± 60 BP by riverine shells and this date has been re-affirmed by a charcoal sample derived from the same cultural layer, dated to 10,

470 ± 60 BP. In Gua Teluk Kelawar the earliest occupation is contemporaneous to Gua Gunung Runtuh and Gua Kajang, where the earliest cultural remains were securely dated to 10,245 ± 80 BP.

Based on the archaeological evidence, Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar were consecutively occupied by early people from the late Pleistocene until the end of the early Holocene, from 11,000 or 10,000 to around 6,000 years ago based on the chronometric dates derived from the lower and middle cultural layers of the cave deposits. Archaeologists who work within these sites (e.g. Zuraina, 1994, 1996; Goh, 2008) assumed that the human activities in these caves became sporadic after 6,000 years ago due to the drastic decrease in the numbers of artefacts found in the upper layers of these caves. The upper layers have been relatively dated to between 3,000 and 4,000 years ago, however, until now archaeologists have failed precisely to date the upper layers of the cave deposits at Gua Kajang and Gua Gunung Runtuh due to the paucity of reliable samples.

During the transition from the early to mid Holocene, archaeological evidence shows that the early occupiers of the Lenggong Valley started to reside at Gua Ngaum and Gua Batu Tukang. The former cave site is situated in the limestone hill of Kepala Gajah, whereas the latter is situated in the Gua Batu Tukang limestone complex. Both hills lie about 1.5km from each other. The archaeological record shows that Gua Ngaum has only been occupied for a relatively short period from 6,000 to 6,500 years ago, whereas Gua Batu Tukang demonstrates evidence of human occupation from the early Holocene to the late Holocene between 8,000 and 3,500 years ago.

The mid Holocene witnessed a wider geographical spread of people in the Lenggong Valley when early humans started to occupy the cave sites in other limestone hill complexes, such as the Bukit harimau and Bukit Gua Dayak (refer to Figure 4.3). While Gua Batu Tukang and probably Gua Kajang continued to be occupied, the cave site of Gua Harimau, at a distance of about 4-5 kilometres from Gua Batu Tukang and Gua Kajang, was occupied by early hunter-gatherers approximately 5,000 years ago. The latest radiocarbon dates obtained from the human burial at Gua Harimau provide a firm date of 5,080 ± 50 BP from a charcoal sample (Beta 275680). This has extended the early occupation of this cave from the presumed date of 3,000-4,000 years ago back into the mid Holocene. Thus far, archaeological evidence at Gua Harimau shows that this cave has been consecutively used by early humans as a cemetrey from 5,000 to 1,700 years ago, while the site of Gua Dayak recorded the occurrence of human activities by the end of the late Pleistocene at around 1,500 years ago.

4.4 The Terminal late Pleistocene – early Holocene Occupation

Our understanding of the terminal late Pleistocene–early Holocene occupation of the Lenggong Valley is derived from only three cave sites, namely Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar. With elevations between 124 and 74 metres above sea level, these caves are located in the limestone massif of Kepala Gajah, approximately 5 kilometres from the town of Lenggong. Three of these caves are varied in size but share a similarity in that all of them were occupied during the late Pleistocene-early Holocene period, between 13,000 to 7,000 years ago (e.g. Goh, 2008; Zolkurnain, 1998; Zuraina, 2003).

Gua Gunung Runtuh is a small, high level limestone cave with four entrances. It is made up of three chambers and is approximately 96 square metres in size. Archaeological excavations over two seasons between 1990 and 1991 have uncovered an approximately 1.5 metre–thick

archaeological deposit here, however the deposit above 50cm in this cave has been disturbed. The lowest level of the cave deposit was dated to 13, 600 ± 120 BP and the human burial found embedded at the middle of the deposit (80cm from the surface) was given a radiocarbon date of 10,120 ± 110 BP (Zuraina, 1994:16). Within walking distance from Gua Gunung Runtuh, Gua Kajang is a natural limestone tunnel situated in the foothill of the Kepala Gajah limestone hill. This cave is approximately 60 metres long and the 2007 excavation revealed three late Pleistocene-early Holocene layers dating from 10, 820 ± 60 BP to 7,890± 80 BP (Goh, 2008). Another rockshelter of Gua Teluk Kelawar provided a cultural deposit which was more than one metre-thick, and dated from 10, 245 ± 80 BP to 7,020 ± 140BP (Zolkurnain, 1998; Zuraina, 1998; Zuraina et al., 2005).

In Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar, the cultural assemblages found from the late Pleistocene-early Holocene layers were mainly composed of human remains, stone artefacts and faunal remains (Goh, 2008; Zolkurnain, 1998; Zuraina, 1994). According to the archaeological record, these cave sites have revealed at least four prehistoric human burials since 1987. Of these, Gua Gunung Runtuh and Gua Teluk Kelawar have each revealed one burial (Zuraina, 1994; Zuraina et al., 2005), with two being unearthed in Gua Kajang (Goh, 2008). Therefore, the discussion on late Pleistocene-early Holocene burials in the Lenggong Valley will only focus on the four burials mentioned above. Stone artefacts found vary from cores, hammerstones and anvils, to flakes and pebble tools, while the faunal remains are dominated by small to medium size mammals, reptiles and riverine mollusks (Goh, 2008; Zuraina, 2003).

The presence of *in-situ* human burials associated with various types of mortuary goods in Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar has undoubtedly provided insights into the lifeways and cultures of prehistoric people during the late Pleistocene–early Holocene periods in the Lenggong Valley. In Gua Gunung Runtuh, an intact burial was found

embedded at a depth between 60cm and 110cm in trench A2. This skeleton was found almost complete, with only a few missing bones, such as metatarsals, costa and several parts of the face. This skeleton was named "Perak Man". Perak Man was found buried in a flexed position with both legs folded up to the chest, while the right hand was placed at the shoulder and the left arm was flexed, with the hand placed on the stomach. A shell sample derived from the burial provided a date of 10,120 ± 110 BP, and pointed to Perak Man as a late Pleistocene burial. In terms of the cultural association, Zuraina (1994:23) suggested that this burial was an Epi-Palaeolithic burial, whereas Bellwood (1997:168) claimed it as a Hoabinhian burial. Perak Man was buried with stone artefacts, riverine shells and animals. Further analysis of the skeleton assessed Perak Man as an adult man between 40-45 years old with a stature of around 154cm. It is noteworthy that Perak Man suffered from the antemortem genetic deformity known as *Brachymesophalangia* A2. *Brachymesophalangia* A2 is a genetic anomaly that causes the abnormal shortness of the middle phalanges of the digits. The palaeoanthropological study of Perak Man carried out by Jacob and Soepriyo (1994:48) observed a shortness and abnormal shape of the second and third middle phalanges of the third digit of the left hand of Perak Man. Jacobs and Soepriyo (1994) also observed that Perak Man had shorter lower arm bones and compensatory scoliosis of the spinal column. All these suggest a genetic malformation. Based on the morphological characteristics of the dentition, Loh (1994:87-88), through his dental-anthropological study, suggested that Perak Man was of *Australomelanesioid* affinity (Loh, 1994:88).

Evidence of human burials in Gua Kajang was first reported in 1918, following two seasons of cave explorations carried out by I.H.N. Evans in 1917 (Evans, 1918). In physical morphology Evans thought that the jaws and teeth resembled the features of the Australian Aborigine, as indicated by Duckworth (1934). As these remains were not found *in situ*, they don't allow further reconstruction of the burial associations and no material that could be

used for chronometric dates was collected. In 2007, two human burials, GK 1 and GK 2, were excavated from the eastern part of the cave. The burial associations of both were partially disturbed, but the skeletons were still considered *in situ*, as indicated by the intact bone articulations. GK 1, a 50% female skeleton, was laid face down in a flexed position (prone-flexed) with both legs folded up to the chest, while both arms were folded up to the shoulder at a depth of 80cm to 100cm. Shell samples collected in association with the burial gave a radiocarbon date of 10, 820 ± 60 BP, whereas the charcoal sample from the same cultural level was dated to 10, 470 ± 60 BP. GK 1 was buried with stone artefacts, riverine shells and animals. GK 1 was assessed as an adult with a stature of around 155-163cm. Approximately one metre away and southeast of GK 1, the burial of GK 2 was uncovered at a depth of 70cm – 80cm. Unfortunately, the excavation only managed to rescue the leg bones of GK 2, some associated stone artefacts and faunal remains because it had been badly disturbed by guano collectors. GK 2 was dated to 7, 890 ± 80 BP by shells and its original position, but the sex and age at death could not be identified due to the absence of strong indicators (Goh and Mokhtar, 2009).

Another early Holocene burial was found in Gua Teluk Kelawar, a rockshelter about two kilometres from Gua Kajang. In 2004, a burial known as GTK 1 was found in a flexed position. Its bones were extremely fragile and were in part crushed beyond recognition (Zuraina et al., 2005). Two limestone blocks weighing about 20kg each were found overlying the head-neck and the pelvic area of GTK 1. It is surmised that these were stalactites that had fallen from the cave ceiling after the burial had taken place and disarticulated the GTK 1 skeleton (Zuraina et al., 2005). The associated mortuary items were stone artefacts, animal bones and riverine shells that were extremely similar to the mortuary goods of Perak Man and GK 1. The associated shell sample provided a radiocarbon date of 8,400 ± 40 BP. GTK 1 was indicated to be a female who probably died at an age of 45 to 50 years. The stature of GTK 1

was estimated at between 143 and 151cm through the measurement of the fibula; a palaeoanthropological study showed that GTK 1 was of *Australomelanesoid* stock, similar to Perak Man (Bulbeck and Zuraina, 2007).

The evidence from Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar allows a reconstruction of the method of burial during the late Pleistocene-early Holocene and sheds light on people's beliefs. Perak Man, GK 1 and GTK 1 were all given a burial according to certain rituals and were not just abandoned at death. The bodies of Perak Man, GK 1 and GTK 1 were buried in a flexed position, indicating preparation for burial before *rigor mortis* set in. Thus far, archaeologists across Southeast Asia believe that the flexed burial tradition is contemporary to the late Pleistocene and early Holocene in this region (Treeratapiwat, 2005). This is evidently demonstrated through the discoveries of flexed burials in other cave sites in Malaysia (e.g. Adi, 1985), Indonesia (e.g. Sémah et al., 2004; Simanjuntak, 2001) and Thailand (e.g. Anderson, 1990, 1997; Shoochongdej, 2006).

In terms of mortuary goods, the burial items associated with Perak Man, GK 1 and GTK 1 included stone artefacts, such as hammerstones, and oval unifacial and bifacial pebble tools, animal meats and shellfish (Zuraina, 1994; Zuraina et al., 2005). Despite the overlap of stone tool types, the assemblage in the burial of GK 1 marked some differences to those of Perak Man and GTK 1. In Gua Gunung Runtuh and Gua Teluk Kelawar, pebble tools and hammerstones were found in the burial assemblages, but apparently none of the flaked tools, anvils or cores that were found in Gua Kajang (Goh, 2008). The faunal remains identified from the burial assemblages were those of tropical small to medium size mammals, reptiles and some freshwater riverine shellfish deposited throughout the cave deposits.

The lithic artefacts found throughout the deposit in Gua Gunung Runtuh, Gua Kajang and GuaTeluk Kelawar strongly resembled the Kota Tampan Paleolithic tools (e.g. Goh, 2008;

Zolkurnain, 1998; Zuraina, 1989, 2003), which form two distinctive groups: toolmaking kits (hammerstone, anvil and core) and finished tools (pebble tools, flake tools and palaeoadzes), included unutilized waste (debitage). All stone tools were made of locally available materials such as quartz, quartzite and limestone. The presence of cores, anvils, hammerstones and debitage indicated that these tools were made in the caves and almost 90 percent of these tools show traces of use-wear. The lithic artefacts from the late Pleistocene-early Holocene cultural layers were dominated by flaked tools or oval unifacial and bifacial pebble tools (the so-called "Sumatralith" tools). This type of tool is characterized by flaking over all of one or both surfaces of a pebble (Bellwood, 1997:158) and is usually found in the late Pleistocene or early Holocene cultural layers in caves and rockshelters spread across the mainland of Southeast Asia, such as Gua Cha in northern Peninsular Malaysia (Adi, 1985), Tham Lod Cave in north Thailand (Shoocongdej, 2006), Ban Rai Rockshelter in northwestern Thailand (Treerayapiwat, 2005), and Tien Cave in Vietnam (Trinh, 2009), all of which predate the middle Holocene.

The faunal remains uncovered from Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar indicate a dietary dependence on mammals, particularly primates, wild boar and deer; reptiles such as monitor lizards and tortoises; and freshwater shells. In Gua Gunung Runtuh, a total of 18 mammal species and eight reptile species were identified from the faunal assemblages (Davison, 1994). Seven mammal species and three reptile species were found in Gua Kajang (Goh, 2008), whereas a total of 11 mammal species and four reptile species were identified from the faunal assemblages excavated in Gua Teluk Kelawar (Goh and Mokhtar, 2008). This indicates a hunter-gathering subsistence strategy that depended upon a diverse range of mammal fauna identical to that which occurs in the rainforests of Peninsular Malaysia today (Davidson, 1994). Based on the identified species, Bujeng (2009:69) postulated that the late Pleistocene–early Holocene populations in the Lenggong

Valley were fairly skillful in hunting. The discovery of a wide range of animal species from these caves suggests that hunting activities covered both lowland and highland areas. It also demonstrates that the early hunters of the Lenggong Valley could hunt from the forest floor (for medium size animals such as deer and wild boar) to the canopy (for small size animals including monkeys and tree shrews), probably using both traps and wooden spears. Many of the animal remains found in Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar were fragmentary and usually found associated with stone tools (Zolkurnain, 1998), further suggesting that butchering or food preparation might have taken place prior to the consumption of these animals.

Apart from hunting, the early populations of the Lenggong Valley also gathered food resources during the late Pleistocene and early Holocene periods. High densities of freshwater riverine shells of *Brotia costula* and *Brotia spinosa* were found in these caves. Most of the apices of the *Brotia* shells were chopped off to allow easier consumption. Other shell species include the *Unionidae* bivalves, which were occasionally found in the cultural deposits of Gua Kajang and Gua Teluk Kelawar. Bujeng (2009:70) also pointed to molluscs being gathered during the dry season in this area. This is because the water level is low in the dry season, making the gathering process easier. To date, these *Brotia* and *Unionidae* shells can still be easily collected from the rivers or streams of the Lenggong Valley. The nearest source for these types of shellfish is the Sungai Temelong (Temelong River), about 2-3km east of the limestone hill of Kepala Gajah.

The excavations at Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar suggest that these sites were not permanently occupied for long stretches of time but repetitively used as short-term habitation sites or campsites from time to time throughout the late Pleistocene-early Holocene (Goh, 2008; Zuraina, 1994, 1996). This is suggested on the basis that the density of cultural remains in these caves is less than that found in the primary–long term

habitation sites of northern Peninsular Malaysia, such as the Kota Tampan in the Lenggong Valley and Guar Kepah in Seberang Perai, Penang. Kota Tampan is a middle Pleistocene open site which contains a dense accumulation of stone artefacts scattered across an area more than 1km square (Zuraina, 1989; Hamid, 2007), whereas Guar Kepah site is a middle Holocene coastal shell midden with more than three metres of deposited shell remains (Adi, 1983:53-54). Kota Tampan and Guar Kepah were perhaps selected as long-term habitation sites owing to their location near the ancient lakeshores (Zuraina, 1989) or the coast of the western Peninsula, which provided resources such as stone raw materials (river gravels), water and food resources. Apart from this, Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar also seem to have functioned as burial sites for at least four individuals during he late Pleistocene–early Holocene. According to other archaeological studies, the selection of caves as burial sites was a relatively common practice throughout Southeast Asia in the late Pleistocene to Holocene, as demonstrated in Lang Rongrien, Southern Thailand (Anderson, 1997), Broholo Cave in Java, Indonesia (Simanjuntak, 2001), and Con Moong Cave in Vietnam (Demeter et al., 2005).

4.5 The Holocene Occupation

Chronologically, most of the caves sites in the Lenggong Valley bear evidence of occupation beginning in the Early Holocene, except Gua Harimau which was only occupied at the end of the mid Holocene and Gua Dayak at the end of Holocene, between 5,000 and 1,500 years ago. During the Holocene period, the settlement of early foragers began to spread as people moved northward from the cave sites at Kepala Gajah to other cave sites located in the Batu Tukang limestone hill, Gua Harimau limestone hill and Dayak limestone hill in the northern region of the valley (see Figure 4.3).

During the Holocene period, the early population of the Lenggong Valley continued to exploit Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar, which are located in the Bukit Kepala Gajah limestone hill. In Gua Gunung Runtuh, there is no firm record of Middle or late Holocene occupation reported thus far. Although a few pottery sherds have been uncovered from the upper layer of the cave, the soil layers above 50cm tend to be disturbed and the soil deposits are probably partially mixed (Zuraina, 1994:18). In Gua Kajang and Gua Teluk Kelawar, human activities were apparent throughout the Holocene period (Goh, 2008; Zolkurnain, 1998). The early Holocene in these sites is also well represented by the human burials of GTK 1 and GK 2, which date to 8, 400 ± 40 BP and 7, 890 ± 80 BP respectively. The associated cultural assemblages from the same level as these burials yielded stone artefacts and faunal remains, and are very similar to the assemblages found in the late Pleistocene cultural layers at the same sites (Goh, 2008). Although the upper layers of Gua Kajang and Gua Teluk Kelawar were not chronometrically dated, the typological changes in cultural assemblages through time, with the emergence of new forms of technology in the upper layers of the cave, has led Zuraina (1996) to speculate that there were cultural transitions during the mid-late Holocene period in Gua Kajang and Gua Teluk Kelawar. Chia (1997) further examined the pottery assemblage from the upper layers of Gua Kajang and relatively dated it to 3,000 to 4,000 years ago (Chia, 1997).

Approximately 1km away from Gua Kajang, there is another mid-Holocene site known as Gua Ngaum. Gua Ngaum is a small cave covering an area of 38 metres square. It was first explored during the 1990s and the excavation uncovered a 60cm-thick Holocene deposit. The cultural remains in this cave were scarce, consisting of only some stone artefacts, animal bones and shell remains. A few pottery sherds were found in the upper layer of the cave. Some attempts have been made to date the deposits of this cave, suggesting that human

activity began in Gua Ngaum during the mid Holocene period, around 6, 370 ± 90 BP (Zolkurnain, 1998: 91).

Human activity at Gua Batu Tukang began in the early Holocene, at around 8, 500 years ago. Gua Batu Tukang is a large cave situated in the limestone hill of Bukit Gua Batu Batu Tukang and covers an area of 112 metres square. It was found partially disturbed when archaeological investigations took place in 1950 and 1951 (Williams-Hunt, 1951). Two seasons of investigations at Gua Batu Tukang revealed a large collection of pottery sherds and vessels with both plain and cord-marked decorations. In fact, stone artefacts such as polished adzes and chisels were also uncovered, but the 'Sumatralith" tools were only found in the deeper pits (Williams-Hunt, 1951, 1952). Unfortunately, these artefacts were not found in stratigraphic context. In the 1990s, this cave was re-investigated and excavation uncovered cultural deposits that were approximately 1.3 metres thick. The radiocarbon dates from these contexts span between 8,830 ± 80 BP and 3,620 ± 50 BP (Zolkurnain, 1998: 131). The lower layers in this cave contained cultural remains, such as stone artefacts and faunal remains, which conformed to the assemblages found in Gua Gunung Runtuh, Gua Kajang, Gua Teluk Kelawar and Gua Ngaum that predate 5,000 BP. The cultural remains in the upper layers of Gua Batu Tukang were diverse, including plain and cord-marked pottery and well-developed types of stone artefacts, such as polished adzes, with pebble tools, hammerstones and flaked artefacts also present throughout the deposits (Zolkurnain 1998). The pottery assemblages found in Gua Batu Tukang were the earthenwares formed from the local clay that are well distributed throughout the upper layers of the caves in the Lenggong Valley. The charcoal from direct associations securely dated these earthenwares to 3,620 ± 50 BP (Chia, 2005:203).

The mid Holocene and late Holocene in Peninsular Malaysia witnessed few episodes of climatic change. A study on the Holocene shorelines along the straits of Malacca postulated

that sea level along the Straits of Malacca rose four metres above modern level at 6,800 BP and dropped to 3.5 metres around 4,000 BP and later to 2.5 metres at c. 3,000 BP (Tjia, Fujii and Kigoshi, 1983). Some other palaeo-environmental studies suggest that sea levels in Southeast Asia reached ca. 1-5 metres above modern levels by c 5,000 – 6,000 years ago (Grindrod, Moss and Kaars, 2002; Woodroffe, 2000). Sea level rise during the mid and late Holocene would have submerged the caves nearest to the coast, causing dramatic shifts in early populations to higher altitude caves or shelters further inland. The inland caves scattered through the Lenggong Valley, on average at elevations of 70 metres above sea level, would have been available for use during these periods.

The mid–late Holocene occupation of the Lenggong Valley is best represented by Gua Harimau, the largest cave found thus far in the valley. This cave is 133 metres above sea level and covers an area of approximately 350 metres square. Gua Harimau was investigated by Williams-Hunt in the early 1950s and the site was reported as intact during that time. Among the finds that Williams-Hunt uncovered were skeletal remains of a juvenile, pottery vessels and sherds with cord-marked decoration, and Neolithic polished adzes. A charcoal sample was submitted to the British Museum for analysis (Williams-Hunt, 1951, 1952), and later provided a radiocarbon date of 3, 450 ± 150 BP (Zuraina 1989). Overall, Williams-Hunt's investigations in Gua Harimau did not produce any stratigraphic data and no further results of the artefact analysis were reported. Gua Harimau was re-investigated in 1987, and, to date, at least 12 Holocene human burials have been uncovered, all with numerous mortuary goods. Other significant finds included collections of locally evolved earthenware vessels, metal objects and ornaments (Chia and Zolkurnain 2005).

The 1987-88 investigations in Gua Harimau have uncovered seven human burials containing at least eight individuals. These were extended burials recovered from the upper layers of the caves and dated to between 1,700 and 4,900 years ago. Later in 1995, four more human

burials dated between 3,000 and 3,200 years were revealed in the cave deposits. These burials, labeled Burial 1 to Burial 11, were found incomplete and in very fragile condition. A variety of mortuary items, such as earthenware vessels, stone artefacts, stone adzes, bark-cloth beaters, shell and stone ornaments, bronze celts and clay moulds, were associated with these burials (Chia and Zolkurnain 2005; Zolkurnain 1989, 1998; Zuraina 1988). Burial 1 contained the most complete skeleton, an extended burial discovered at a depth of 30cm. The body was buried in a north-south direction with the head facing the cave floor and turned eastwards. Along with it were some pottery sherds on one shoulder, a sickle-shape stone tool and a D-shaped bark-cloth beater made of pebble in between the thighs. Another significant find was the discovery of a bronze celt with its clay mould found associated with Burial 5. The skeletal remains of Burial 5 were powdery and encrusted with lime and estimations of sex and age at death were therefore not possible. Burial 5 was associated with numerous mortuary goods of Neolithic and Metal Age periods and a shell sample from the burial context gave it a radiocarbon date of 4,920 ± 270 BP. A bronze celt was probably placed near the wrist and a piece of a bivalve clay mould for casting of the bronze celt was uncovered from the left shoulder. Additional to this, a limestone bangle, food shells, animal remains, potsherds and a shell necklace placed in a bowl were also recovered from the burial area of Burial 5 (Chia and Zolkurnain 2005; Zolkurnain 1998; Zuraina 1988).

In 2010, another burial, labeled Burial 12, was uncovered at the smaller, eastern cave entrance, adjacent to the cave mouth This burial, found at a depth of 30–55 cm, was probably extended and followed a north-south orientation. The southeast of the burial area was disturbed, but the northwest area still remained intact. Interestingly, the associated mortuary items were scarce compared to the previous burials. Only an earthenware vessel of cord-marked and plain decoration and a few pieces of potsherd were uncovered. Whether these differences indicate variations in burial practices, or whether there might have been other

associated mortuary items that have been removed by anthropogenic factors still remains uncertain. The remaining skeletal parts were fragile and incomplete, with the absence of part of the cranium, both legs, the pelvis and the right hand. Preliminary observations made on the jaw and teeth of Burial 12 indicated that this skeleton belonged to an adult male and the charcoal associated with the skeletal remains provided a terminal mid-late Holocene age of 5,080 ± 50 BP.

Undoubtedly, the discovery of human burials in Gua Harimau has broadened the understanding of human burial practices during the terminal mid-late Holocene in Malaysia. It is apparent that late Holocene humans in the Lenggong Valley were practicing extended burials and that the burials were accompanied by a wealth of mortuary goods. Among the mortuary offerings were earthenware vessels, polished stone artefacts, bark-cloth beaters, metal objects, and faunal remains, as well as ornaments made of stone and shell. These burial packages are contemporaneous with the late Holocene or Neolithic burials found in Northern Peninsular Malaysia and Thailand (Adi 1985; Anderson 1990). In terms of the cultural contexts, archaeologists have indicated that the late Holocene human burials in Gua Harimau were of two cultural contexts—the Neolithic and the Metal Age (Chia and Zolkurnain 2005; Zolkurnain 1998; Zuraina 1988). Previous studies suggested that the Neolithic commenced in Gua Harimau at around 4,000 years ago, however the exact time frame for the commencement of the Metal Age in Gua Harimau is still undetermined. As the radiocarbon dates for these burials were between 4,000 and 2,000 years, and the burials were overlapping within the stratigraphic context, it is surmised that there might be an overlapping between the Neolithic and Early Metal Age episodes in Gua Harimau during the late Holocene. The palaeoanthropological study on the remains of Burials 1-11 showed that the skeletal remains of Gua Harimau shared similarities with the Neolithic human remains found in Ban Kao, Thailand (Matsumura and Zuraina 1995:4). Further analyses of the human teeth of Burials 1-

11 indicated that the prehistoric humans of Gua Harimau were of Mongoloid ancestry, which is widely found during the Neolithic in Southeast Asia (Bulbeck 2005; Chia and Zolkurnain 2005), in contrast to the Australomelanesoid individuals from Gua Gunung Runtuh and Gua Teluk Kelawar (Bulbeck and Zuraina 2007; Jacob and Soepriyo 1994). According to Matsumura and Zuraina (1995: 31), it is generally assumed that the *Austramelanesoid* population occupied many parts of Southeast Asia before the migration of *Mongoloid* people into this area from the north during the late Pleistocene.

The stone artefacts from Gua Harimau are typical Neolithic types, mainly comprising polished stone adzes and bark-cloth beaters. However, flaked artefacts and hammerstones were also occasionally found in the deposits. The stone adzes were mostly rectangular in shape, polished and with sharpened edges. The bark-cloth beaters are made from pebbles and have distinct criss-crosses or circles engraved at one end. The adzes and beaters are made of quartz and quartzite—choices of material which are locally available. The faunal assemblage from Gua Harimau was almost identical to those uncovered from late Pleistocene or early Holocene sites, leading to assumptions that there may have been no drastic climatic changes throughout the Holocene period in the Lenggong Valley. Bishop (1994), however, has postulated that there was climatic warming in Peninsular Southeast Asia during the Holocene.

The late Holocene in the Lenggong Valley witnessed the emergence of pottery making technology around 3,000–4,000 years ago. The earthenware assemblage of Gua Harimau is considered to be one of the most representative prehistoric earthenware collections found so far in this area and helps to define the earthenware culture of the Lenggong Valley. The Gua Harimau earthenware consists of footed vessels, carinated bowls, and single globular vessels, either left plain or with decorated designs (Chia 1997; Williams-Hunt 1951, 1952; Zolkurnain and Chia 2005). An investigation by Chia (1997) to trace the sources of the earthenware shows that they were locally evolved and mainly used as household vessels or burial goods

(Chia 2005). The earthenware vessels found in Gua Harimau are well-developed types and appear to be more recent than 1,500 BC (Chia 2005). Morphological studies of the earthenware from Gua Harimau, Gua Kajang, Gua Teluk Kelawar and Gua Batu Tukang indicate that the pottery was sand-tempered, hand moulded using the slow wheel, and fired under high temperatures between 600–800^0 C. Thus far, all earthenware assemblages found in the caves in the Lenggong Valley are of late Neolithic design (plain or incised or cord-marked decorated) and were all formed from local clay (Chia 1997:). In fact, the typology of the earthenware of the Lenggong Valley seems comparable to the Southern Thai earthenware from Sakai Cave, Lang Rongrien, Khao Tao, Pak Om and Ban Kao (Anderson 1988; Pookajorn et al. 1995; Srisuchat 2003). Such similarity, and the fact that Lenggong's pottery was locally made, seems to suggest that pottery making technology was brought into the Malay Peninsula by the movement of people rather than through trade or exchange with the north (Chia 2005, 2007, 2009).

4.6 Discussion and Conclusion

Undoubtedly, archaeological research and investigation in the caves and rockshelters has broadened the regional understanding of prehistory and cultural developments during the late Pleistocene and Holocene times in Southeast Asia (Anderson 1997). In the Lenggong Valley, years of study have revealed that early humans started to occupy caves and rockshelters for habitation and burial purposes during the late Pleistocene and later extending into the Holocene period, spanning approximately 13,000 to 1,000 years ago. Out of seven excavated caves, three—Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar—show the traces of early human activities which began during the terminal late Pleistocene-early Holocene at around 13,000 to 9,000 years ago; whereas the cultural artifacts and radiocarbon dates

yielded from Gua Batu Tukang, Gua Ngaum, Gua Harimau and Gua Dayak suggest that these caves were only consecutively occupied by early people starting from early to late Holocene, between 8,000 and 1,000 years ago.

Generally, the late Pleistocene and early Holocene of the Lenggong Valley can be represented by a hunter-gatherer way of life which used lithics and settled in or around the caves or rockshelters. This is a typical adaptation pattern found across mainland Southeast Asia during the late Pleistocene period (Higham 2002). The evidence of such adaptation can also be found in many caves across the region, such as Tham Hang Rockshelter in Northern Laos (Demeter et al. 2010) and Ban Rai Rockshelter in Thailand (Treerayapiwat 2005). The lithic assemblage found from the late Pleistocene-early Holocene cultural layers in Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar does not represent a distinctive industry but rather resembles the assemblage found in the Paleolithic site of Kota Tampan dated to between 70,000 and 30,000 years ago. Although the lithic assemblage from the caves shares some morphological and technological similarities with the Kota Tampan assemblage, the cultural connections between these two assemblages are not cogent, because there was an obvious cultural hiatus of approximately 17,000 years between these two occupations. Thus far, there is no evidence of occupation dated anywhere between Kota Tampan and the cave occupations found in this valley (Bellwood 1997:160).

Detailed studies on the faunal remains from Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar have provided information on the diet and subsistence activities of early human. Analysis carried out by Davidson (1994) and Bujeng (2009) on the animal bones uncovered from Gua Gunung Runtuh and Gua Teluk Kelawar indicated a dietary dependence on tropical mammals, reptiles and shellfish. This led them to surmise that early humans had extensively exploited the tropical resources of Peninsular Malaysia through hunting-gathering activities during the late Pleistocene-early Holocene.

Our current knowledge of prehistoric humans in Peninsular Malaysia is mainly derived from the human remains uncovered from the cave sites in the Lenggong Valley. Undeniably, the discovery of Perak Man has extended our knowledge on evolution of modern humans in this region, as well as provided rare insights into the burial traditions, beliefs and lifeways of the late Pleistocene and early Holocene. Detailed study of Perak Man (Zuraina, 1994), GTK 1 (Zuraina et al., 2005) and GK 1 (Go, 2008) revealed the cognitivity of early humans in their handling of the deceased for flexed burials. It also shows that the late Pleistocene and early Holocene populations of the Lenggong Valley were practicing certain burial rituals. This is noticeable in the clear burial associations of various types of goods.

Based on the thickness of the Holocene deposits (averaging more than 1 metre), archaeological research suggests that the cave sites were more intensively and continually occupied during the Holocene compared to the Late Pleistocene. Primarily, cultural assemblages uncovered from the early Holocene cultural layers in Gua Gunung Runtuh, Gua Kajang and Gua Teluk Kelawar conformed to those found in the late Pleistocene layers. The cultural remains from the late Pleistocene-early Holocene layers generally consist of flexed human burials. stone artefacts resembling Palaeolithic cultures and faunal remains of tropical animals and shellfish. In fact, examinations of the early and middle Holocene layers in Gua Kajang, Gua Teluk Kelawar and Gua Batu Tukang indicate an absence of distinctive typological differences between early and middle Holocene assemblages. This suggests there was no distinct stratigraphic separation between these periods in the cave sites of the Lenggong Valley, unlike other cave sites in Peninsular Southeast Asia (e.g. Anderson 1990; Pookajorn 1991). As a result, this suggests that there might be cultural continuity from the late Pleistocene into the Holocene in the Lenggong Valley until the emergence of new forms of technology and tools, such as earthenware, polished adzes and stone bark-cloth beaters,

and the development of extended and supine human burials, during the terminal mid-late Holocene, around 4,000 to 5,000 years ago.

The discussion above provides an overview of cave archaeology in the Lenggong Valley and explains how it developed through time. Culturally, the artefacts asemblages uncovered from the cave sites of the Lenggong Valley are contemporaneous to many of the Late Pleistocene-Holocene cave sites found across the Southeast Asia region (Table 4.2).

In sum, there are several issues that need further attention. The first relates to the construction of the cultural sequence of cave occupation and how it can be fitted into the regional context. As mentioned earlier, Zuraina (1995) had previously proposed to divide the cultural sequence in the Lenggong Valley into four cultural phases: Palaeolithic, Epi-Palaeolithic, Neolithic and Metal periods. She excluded the use of the Mesolithic in representing the early Holocene, and considers the "Epi-Palaeolithic culture" more appropriate in representing the transition period between the Palaeolithic and Neolithic in the Lenggong Valley Although the term "Epi-Palaeolithic" became more accepted and started to be adopted by archaeologists to represent the early Holocene in other countries across Southeast Asia (e.g. Shoocongdej 1996), a disparity in defining the transitional cultural phase between Palaeolithic and Neolithic still widely exists in this region. Today in Southeast Asia, some foreign archaeologists still refer to this cultural stage as "Hoabinhian" (Anderson 1997, 2005; Bellwood 1997; Higham 2002), whereas local archaeologists will label this cultural stage as a distinctive culture based on its geographical context. In Southern Java, Indonesia, for example, the cultural phase dated between the early Holocene and 2,000 years ago is referred to as the "Keplek culture" (name after Keplek Cave located in the Gunung Sewu, Southern Jawa) (Simanjuntak 2001). This disparity has created confusion about the prehistory of Southeast Asia (Shoocongdej 2011),

and more cross-cultural studies should be carried out between the Lenggong Valley and other archaeological sites across the region to propose a better-defined prehistoric cultural framework that can be put in place in a wider geographical context.

The second issue in the cave archaeology of the Lenggong Valley is cave stratigraphy. Understanding cave stratigraphy is a challenging task in investigations throughout Southeast Asia (Anderson 1997). This is because the cave deposits often exist in a disturbed setting due to anthropogenic activities such as illegal digging. In the Lenggong Valley, guano digging activities have been reported in several cave sites since the 1950s (e.g. Williams-Hunt 1952, 1952). This creates difficulties for archaeologists in differentiating between primary and secondary cultural materials in the deposits, as sometimes the deposits are partially mixed between layers As such, the traditional approach in interpreting the relationships between the radiocarbon dates and depth of material below the surface of a cave deposit should be re-assessed and the interpretation of cave stratigraphy made through the careful assessment of cave depositional process, correlations of artifacts and cross dating.

Another issue is related to the prehistory of the Lenggong Valley, where there is the distinct cultural lacuna between 30,000 and 13,000 years ago. Thus far, the evidence of the last occupation in the Lenggong Valley predating the LGM (Last Glacial Maximum) is found in the Palaeolithic open sites of Bukit Bunuh and Kota Tampan, dated to approximately 30,000 years ago (Mokhtar 2006; Zuraina 1989). After that date, no evidence of human occupation is recorded until the occurrence of the first cave occupation in the valley approximately 13,000 years ago. This cultural hiatus raises the question of prehistoric cultural continuity in this area, as well as draws attention to the early movements of humans. Anderson (1997) has postulated that there might still be cultural deposits underlying the basal layer in caves across the Malay Peninsula, arguing that archaeologists need to return to previously excavated caves and re-excavate them.

In conclusion, the cave archaeology of the Lenggong Valley can provide considerable information on lifeways and cultural development during the late Pleistocene and Holocene. By incorporating these archaeological data into a Southeast Asian context, it shows that cultural development in Malaysia during these periods is contemporaneous with that in other countries, especially with the cave sites in Thailand. Such parallels might seem to suggest a cultural contact or link between Peninsular Malaysia and Thailand during the late Pleistocene and Holocene and might shed light on the early movement of human populations in mainland Southeast Asia. Considering the issues of cave archaeology in the Lenggong Valley as mentioned above, more research and investigation should be initiated in this area to generate more concrete data in order to provide clues to a better understanding of the early development of human culture during prehistoric times in the Lenggong Valley.

Country	Site	Cultural Period/Dating	Lab No.	Cultural Materials	Reference
Thailand	Spirit Cave	Late Pleistocene – Pre Neolithic 11,690 ± 560 BP	FSU 315	Pebble tools resembling "Sumatralith", flake tools and agriculture evidence. The pottery sherds found are mainly cord-marked decorated, relatively dated to 8,500-7,000 years ago.	Gorman, 1970 Solheim, 1970
	Lembah Banyan Cave	Late Pleistocene-Neolithic	-	Pebble tools resembling "Sumatralith", flake tools, cord-marked pottery, faunal remains and polished adzes.	Gorman 1977
	Lang Rongrien	Late Pleistocene-Neolithic 37,000 – 7,500 BP	-	Pebble tools, flake tools and faunal remains found at the lower layers. Human remains, pottery sherds and polished adzes found in the upper layers.	Anderson 1997
	Lang Kamnan Cave	Late Pleistocene-Late Holocene 30,880 ± 760 15,640 ± 150 6,110 ± 60	GX 20068 OAEP 1181 Beta 70984	Pebble tools, flake tools, faunal remains and pottery sherds.	Shoocongdej 2006
	Moh Khiew Cave	Late Pleistocene-Early Holocene 30,000 – 3,300BP	-	Unifacial and bifacial pebble tools, flake tools, faunal remains and pottery sherds. A flexed human burial, relatively dated to 9,600 years ago was uncovered.	Pookajorn 1992
	Tham Lod Cave	Late Pleistocene – 300 years ago. 12,100 ± 60 BP	Beta 168224	Flake tools, hammerstones, "Sumatralith" tools, faunal remains and a flexed human burial.	Shoocongdej 2006

		10,582 ± 49 BP	Beta 168223		
Vietnam	Con Moong Cave	Late Pleistocene-Early Holocene 12,021 ± 50 BP	-	Hoabihn pebble tools, faunal remains	Pham Huy Thong 1979
	Nguom Cave	Late Pleistocene-Early Holocene 18,000-9,000 years ago	-	Unifacial pebble tools, shell remains	Ha Van Tan 1985
	Bac Bo Cave	Late Pleistocene-Early Holocene 12,000-7,000 years ago	-	Unifacial pebble tools resembling Sumatralith, faunal remains	Ha Van Tan 1976
Myanmar	Padah Lin Cave	Early Holocene – Mid Holocene	-	Flake tools, Hoabihn pebble tools, pottery sherds	Aung Thaw 1971
Malaysia	Gua Cha	Late Pleistocene-Holocene 10,000-1,000 years ago. 6,300±170BP 3,020±230BP	 ANU 2219 ANU 2217	Flake tools, unifacial and bifacial pebble tools, faunal remains, pottery sherds. More than 30 human burials were reported by Sieveking (1954) and later excavations conducted by Adi found another 3 human burials.	Adi 1985, Bulbeck 2001
	Gua Chawas	Late Pleistocene – Holocene 12,550 BP	 ANU 9937	Unifacial pebble tools, flake tools, faunal remains	Adi 1983

	Gua Sagu	Late Pleistocene – Early Holocene 14,410±180 BP	Beta 33181	Unifacial and bifacial pebble tools, flake tools and faunal remains	Zuraina 1998
	Gua Teluk Kelawar	Late Pleistocene – Holocene 10,245±80BP 9,450 ±70 BP 8,640 ± 80 BP 8,400 ± 40 BP 7,780 ± 90 BP 6,890 ± 80 BP	Beta-41365 Beta-87287 Beta-38295 Beta-19300 Beta-49848 Beta-49844	Unifacial and bifacial pebble tools, a flexed human burial dated to 8,400 ± 40 BP, and pottery sherds.	Zuraina 1998, Zuraina e*t.al*. 2005
	Gua Agop Atas	Late Pleistocene-Holocene 11,000-7,000 years ago 10,800±120BP	ANU 3088	Flake tools and faunal remains	Bellwood 1987
	Pulau Balambangan	Late Pleistocene – Early Holocene 16,800 ±210 BP 10,790±90 BP 8,930 ± 150 BP	Beta 105172 Beta 105171 Beta 109140	Bifacial pebble tools, flake tools, faunal remains and bone tools.	Jaffrie 2000
Indonesia	Tianko Panjang Cave	Late Pliestocene-Early Holocene	-	Obsidian tools, fauna remains, human remains and pottery sherds.	Bronson and Asmar 1975
	Lau Biang Valley	Late Pleistocene-Early Holocene	-	9-10 metres thick shell midden, 12 human burials, unifacial pebble tools, flake tools and faunal remains.	McKinnon 1991

	Pandan Cave	Holocene, 9,000 – 6,500 years ago	-	"Sumatralith" pebble tools and fauna remains	Forestier *et. al.* 2006
	Keplek Cave	Late Pleistocene-Holocene 24,420 ± 1000 BP 15,880 ± 540 BP 8,230 ± 220 BP 7,580 ± 210 BP	 P3G 2000 P3G 1998 P3G 1996 P3G 1996	Flakes, pebble tools, faunal remains, pottery sherds and a human burial dated to 7,020± 180 BP (P3G 1996).	Simanjuntak 2001
Philippines	Sohoton Cave	Late Pleistocene-Late Holocene 10,500± 160 BP 385 ± 105 BP	-	Flake tools, faunal remains, cord-marked and red-slipped pottery sherds.	Tuggle and Hutterer 1972
	Tabon Cave	Late Pleistocene – Early Holocene 30,000 – 8,000 years ago	-	Flake tools, faunal remains and a thick layer of shell deposits	Fox 1970
	Musang Cave	Late Pleistocene – Holocene 11,450 BP 4,000 BP	 ISGS – 496 Gak – 7043b	Flake tools, amorphous tools, faunal remains.	Thiel 1986
	Naulan Cave	Late Pleistocene – Early Holocene 12,010 ± 150 BP 9,590 ± 120 BP	 SUA – 989 SUA – 1739	Flake tools, hammerstones and faunal remains.	Coutts 1983

		7,460 ± 100 BP	SUA – 1738		
	Ille Cave	Late Pleistocene-Mid Holocene 10,000 – 5,000 years ago 10,577 BP	ANU 11871	Two human burials dated to 10,000, flake tools resembling Tabon Cave's lithic assemblage and faunal remains.	Szabó *et al*. 2004

Table 4.2 : Late Pleistocene-Holocene cave sites of Southeast Asia

Chapter 5 Background to the Study: Gua Gunung Runtuh, Gua Kajang and Gua Harimau

This chapter presents the latest results of the field surveys conducted in Gua Gunung Runtuh, Gua Kajang and Gua Harimau in the Lenggong Valley between September 2009 and March 2010. The preliminary aim of these field inspections was to identify and document all existing features of these cave sites, as well as to investigate the present state of their conservation. Generally, this field inspection consisted of several components, including site mapping, field recording, and community survey and rescue excavation. The first part of the chapter will present a detailed identification and description of Gua Gunung Runtuh, Gua Kajang and Gua Harimau. The second part will explore the present state of conservation of each site, as well as address the existing threats and pressures that affect the integrity of these sites.

5.1 The Lenggong Valley

The Lenggong Valley is a sub-district of the District of Upper Perak, located in the State of Perak in northern Peninsular Malaysia. It is located about 100km from Ipoh, the capital of Perak and approximately 120km from the southern border of Thailand. Today, the Lenggong Valley can be accessed through the North-South Expressway[9] via exit No. 143 at Kuala Kangsar. Geographically, this valley is bounded by wet and humid tropical jungle and has an average elevation of 100 metres above sea level. It is situated between two main mountain ranges in Peninsular Malaysia – the Titiwangsa Range to the east and the Bintang Range to the southwest and has an equatorial climate, averaging between 27 and 33 degrees Celsius.

[9] The North-South Expressway is the longest expressway in Malaysia, with a total length of 966 km, and runs from the Malaysia-Thai border to the Malaysia-Singapore border at the southern boundary of Peninsular Malaysia.

Previous geological survey in this valley identified eight limestone massifs over an area of approximately six kilometres square.

There are several versions of local folktales that tell the origin of the name of the Lenggong Valley. Of the many versions, there are currently two that are widespread among local communities. Both versions are related to the local Indigenous ethnic group. The first version names the valley after Lenggong, a Semang[10] man who found the valley during the pre-colonial era in Malaya. According to the second version, by historic times the valley had been settled by the Indigenous group. The name Lenggong appears to have come from the Malay word "*terlanggung"* means "hanging". Legend has it that a Semang man wanted to cut down a five-fathom tree. After much hard work he succeeded in cutting it down but it fell onto another smaller tree which broke the larger trunk's fall and bounced it back upright. This extraordinary event gave its name to the town and the valley.

At present, the Lenggong Valley covers an area of approximately 80,324 hectares with a population of around 15,000 (Figure 5.1). The land use of the Lenggong Valley can be generally divided into four categories: agricultural use; built environment; industrial use and native forest. According to the statistical data provided by the Lenggong District and Land Office (2012), the majority of the residents in this valley still survive on agricultural activities which use more than 30,000 hectares of land for purposes such as palm oil, rubber and fruit plantations. The urban area (built environment and industrial area) in the Lenggong Valley covers only 160 hectares of land, whereas the remaining lands consist of both native forest and wasteland.

[10] The Semang is identified as the oldest Indigenous group found in Peninsular Malaysia (Carey, 1976).

Thus far, the records of the settlement of the Lenggong Valley during historic times are fairly limited. The majority of the early literature dedicated to this valley consists of ethnographical records that mainly demonstrate the settlement of indigenous groups across the Lenggong Valley. Between 1913 and 1925, I.H.N. Evans (1914, 1923, 1927) made several visits to the indigenous encampments in this valley. From his studies, he recorded the settlement of Semang people (or Sakai in the local context) in close proximity to several caves in this valley. From the literature, there were many Indigenous tribes such as Semang, Sakai, Kintak, Lanoh and few more camped across the caves and limestone hills across the Lenggong Valley (Carey, 1976); however, these Indigenous tribes have been relocated to a new village – the Kampung Air Bah, which is located approximately 15-20km from the valley.

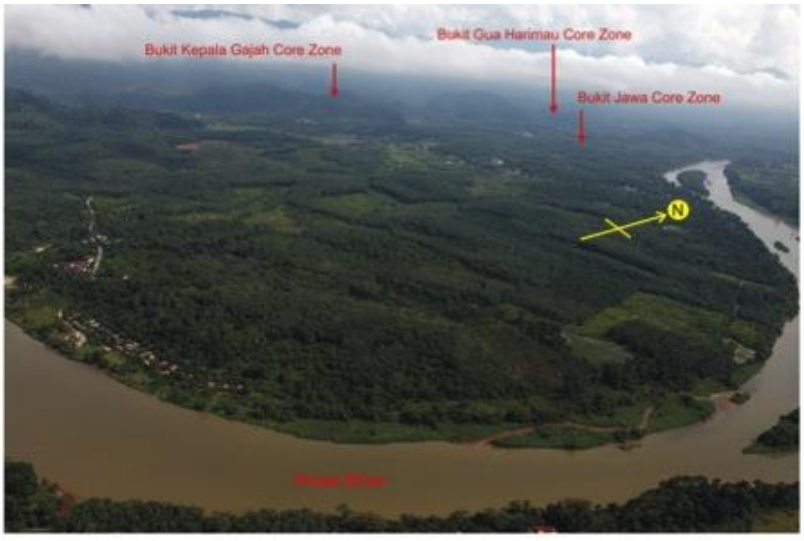

Figure 5. 1: An aerial view of the Lenggong Valley

5.2 Identification and Description of Gua Gunung Runtuh, Gua Kajang and Gua Harimau

Of many caves in the Lenggong Valley, three cave sites – Gua Gunung Runtuh, Gua Kajang and Gua Harimau - were selected as the focus for this project (Figure 5.2). These caves were selected because they have been extensively investigated by archaeologists and the data generated from previous research have provided significant information about the uses of the caves in this valley from prehistoric times until the recent past. The section below presents a detailed description of each cave site to offer an overview of their current setting, as well as to explore how these caves have been used through time.

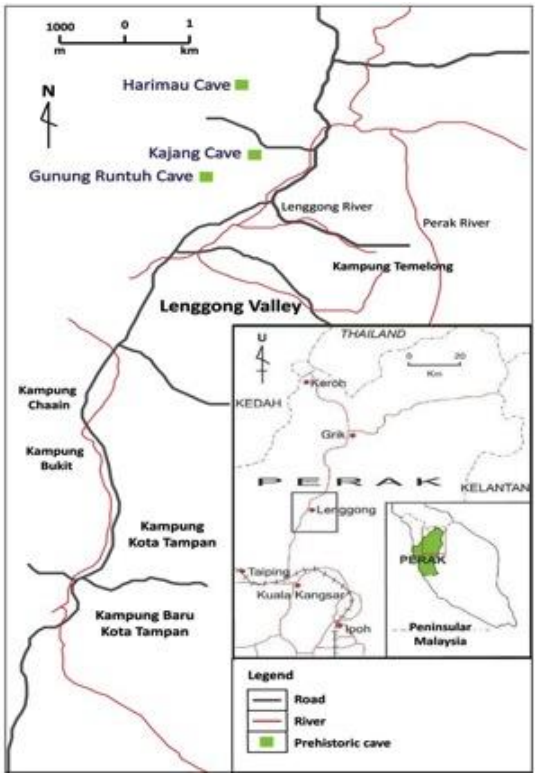

Figure 5. 2: The location of Gua Gunung Runtuh, Gua Kajang and Gua Harimau in the Lenggong Valley

5.2.1 Gua Gunung Runtuh

Gua Gunung Runtuh is situated in Kampung (village) Ulu Jepai, a small village about six kilometres from Lenggong Town. It is located at latitude 5°07' 594" N and longitude 100°58' 195"E, in the Bukit Kepala Gajah limestone massif (Figure 5.3), approximately 124 metres above sea level. This cave is surrounded by dense secondary forest, whereas the smallholdings of rubber estates and fruit orchards are found in the foothills. This cave is difficult to access given that the walking trail connected to the cave from the foothills is craggy, wet and slippery. Leeches are occasionally found along the trail, especially during the wet season and the whole journey from the foothill to the cave on foot takes about 25 minutes (Figure 5.4).

Figure 5.3: The southwestern face of Bukit Kepala Gajah limestone massif

Based on ESR (Electron Spin Resonance) dating, geologists indicate that Gua Gunung Runtuh was probably formed around 54,000 years ago (Muhammad *et al*. 2002: 19-26). This cave is north-south aligned and has three entrances, however only the south entrance is conveniently accessible, whereas the other two entrances – the west entrance and the northeast entrance - are partially blocked by fallen limestone blocks. This cave has three chambers. The main chamber is high-ceilinged and approximately 96 metres square. Two much smaller openings to the west and southeast have been blocked by rock falls (Figure 5.5 and Figure 5.6). The cave is semidry and dripping water from the ceiling can be spotted in some areas. The lighting in the cave is poor, given that the cave is lighted mainly from sunlight shining through the northern entrance.

Figure 5.4: The access path to Gua Gunung Runtuh

The cave floor is uneven and scattered with stalagmites and fallen stalactites. In 2010, four disturbed areas were noted, as indicated by large holes in the ground surrounded by piles of loose soil. Given that a colony of bats still lives in the cave, these holes are highly likely to have been dug by the guano diggers to collect the guano. This cave was excavated in 1990 and 1991 by Zuraina (1994). Currently, six excavation trenches from the 1990 excavation are still preserved *in situ* (Figure 5.7). The latest survey in the cave indicated a low potential for future research because there is no intact area left for further excavation.

Apparently, Gua Gunung Runtuh is popular among the local communities and is closely associated with several historical episodes in this area. According to the villagers, this cave was used as an asylum during the Second World War in Malaya (1942-1945) and later sporadically occupied by the communists during the Malayan Emergency[11] between 1948 and 1960. Also, the local population believes that this cave was used for hoarding gold during the Second World War, because according to one of the local residents, one of his family members found a piece of gold when he attempted to collect the guano from the cave (Ahmad, personal communication, 2010). Soon after the Malayan Emergency, the local residents of the Lenggong Valley started to collect the guano from Gua Gunung Runtuh following the establishment of a guano processing plant in this valley in the early 1960s. However, due to the location of Gua Gunung Runtuh, which is not very accessible, guano collecting activities in this cave are less frequent than those in lowland caves such as Gua Harimau and Gua Kajang.

[11] The Malayan Emergency was a guerrilla war fought between Commonwealth Armed Forces and the Malayan National Liberation Army (MNLA), the military arm of the Malayan Communist Party after the Second World War, from 1948 to 1960.

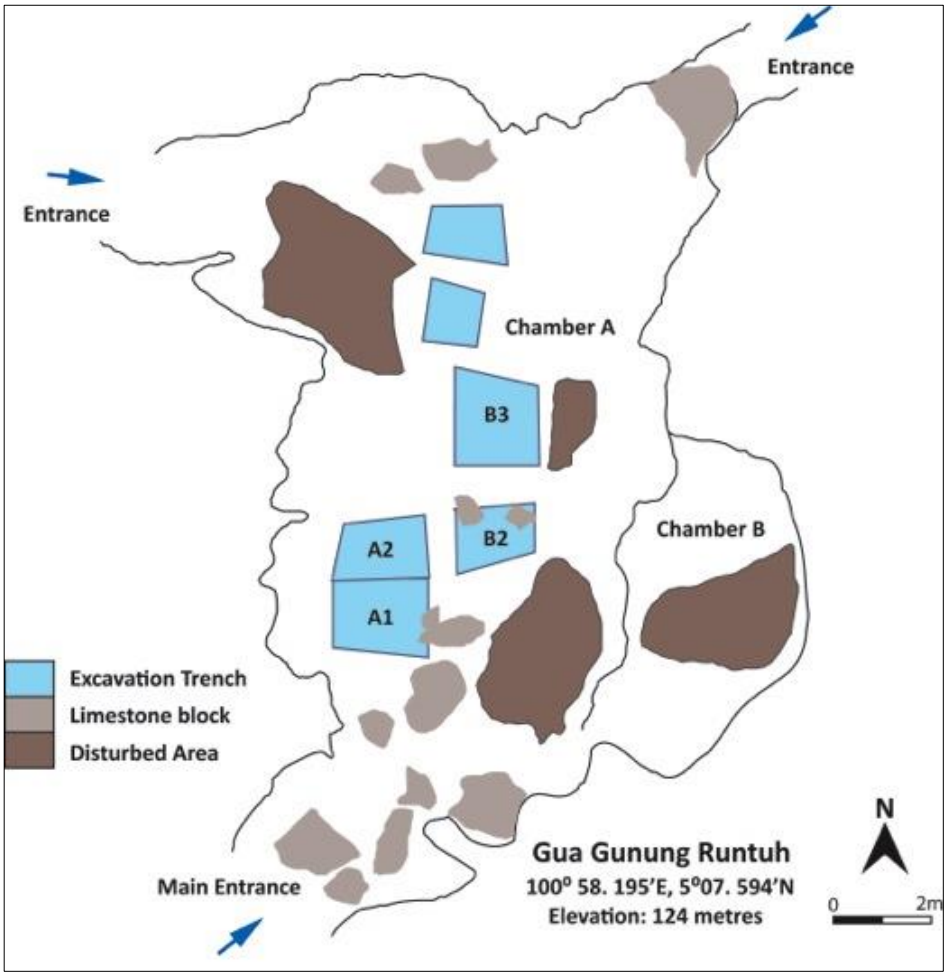

Figure 5.5: The floor plan of Gua Gunung Runtuh

Figure 5.6: The main chamber of the Gua Gunung Runtuh

5.2.1.1 Archaeological Research and Findings

This cave was first investigated over two seasons in 1990 and 1991 as a collaboration between the Universiti Sains Malaysia and the Department of Museum and Antiquity Malaysia (Figure 5.7). The 1990 and 1991 excavations revealed the oldest most complete human skeleton in Southeast Asia, dubbed the Perak Man, chronologically dated to 10, 120 ± 110 B.P. (Beta 38394).

Previous excavation in Gua Gunung Runtuh excavated 16 excavation trenches, each measuring four square metres. Perak Man was recovered from Trench A1 in the main chamber, at a depth of 80-90 cm, lying in an east-west orientation. He was laid face up, with his head slightly inclined to the right. He had his right arm folded up to the shoulder and the

left arm was flexed with the hand placed on the stomach, then both legs were folded over the chest (Zuraina 1994:30). Perak Man was later assessed as an adult with *Australomelanesoid* affinity, aged between 40 and 45 years old, with a stature around 154cm (Jacob and Soepriyo 1994:57-59) (Figure 5.8).

Figure 5.7: The 1990 excavation in Gua Gunung Runtuh

Figure 5.8: The excavation of the Perak Man in the Gua Gunung Runtuh.

Analyses of the burial showed that Perak Man was buried with stone tools and food. Perak Man was found buried with ten stone tools including one oval unifacial pebble tool, three hammerstones, two slabs and four miscellaneous tools (Zuraina *et al*. 1994: 23-47) (Figure 5.9). Ninety percent of the animal bones uncovered from the burial area were fragmentary and unidentified. Analysis of the faunal remains suggested that more than five species of animals and two species of freshwater shells were buried with Perak Man (Zuraina 1994) (Table 5.1). A total of seven organic samples consisting of both shells and charcoal were retrieved from the deposit of Gua Gunung Runtuh for radiocarbon dating. Radiocarbon dates from Gua Gunung Runtuh suggest that humans occupied this cave for habitation and burial purposes beginning about 13,000 years ago and continued to occupy it until the Holocene period. Further details on the excavated cultural materials and the radiocarbon dates from Gua Gunung Runtuh are elucidated in Table 5.2 and 5.3.

Component	C^{14} Dating	Stratigraphic layer/ Depth	Stone Artefacts, N=10	Animal Bones, 1.261kg	Shellfish, N=2,878
Flexed human burial – the Perak Man	9,460 ± 90 (Beta 37818) 10,120 ± 110 (Beta 38394) 10,010 ± 70 (Beta 49851)	Layer 4, 60-110cm	Hammerstone (N=3) Pebble Tool (N=5) Slab (N=3)	Pig Monitor lizard Rusa Monkey Tortoise Gibbon Kijang	*Brotia Costula* *Brotia Spinosa*

Table 5. 1: The associated finds of the human burial of Perak Man

5.2.1.2 Present State of Conservation

Gua Gunung Runtuh is now gazetted as a National Heritage Site (Gazette No: P.U. [B] 494) and is currently maintained and monitored by the Department of National Heritage with occasional assistance from the Universiti Sains Malaysia. Thus far, No physical facilities have been developed on the site, except for an information sign which is erected in front of the cave (Figure 5.10).

Year of Excavation	Excavation	Archaeological Finds			Cultural Interpretation	Analysis undertaken by	Storage	Key Reference
		Types of Artefacts		Frequency (pcs)				
1990 and 1991 by Zuraina Majid	Excavation took place in the main chamber. A total of 14 trenches, each measuring 4m were excavated.	Stone Artefacts	Core	8	The earliest occupation in this cave started 10,000 years ago. It was continuously used by the early humans of the Lenggong Valley until the early Holocene. This cave was also used as a cemetery during the late Palaeolithic period. A flexed human burial was found in the main chamber and this individual was later named Perak Man. Perak Man was buried with various choices of mortuary goods which demonstrated the burial culture and the rituals of early human populations. Perak Man was later assessed as a male who died at his 40s, with a stature around 154cm. He is the only known prehistoric man born with the congenital deformity *Brachymesophalagia* A2 thus far found in the world.	Zuraina *et* al. (1994)	LAM [i], NMM [ii] and CGAR [iii]	Zuraina (1994) Zuraina (2005)
			Anvil	15				
			Hammer stone	86				
			Oval Unifacial tool	52				
			Oval Bifacial tool	25				
			Palaeo adze	3				
			Chopper	4				
			Perimeter flake	3				
			Miscellaneous tool	21				
			Flake tool	6				
		Faunal Remains	*Brotia* Shells	20,722		Davidson (1994)		
			Animal Bones	*4,924				
		Human Remains		An almost complete human skeleton		Jacob and Soepriyo (1994) Loh (1994) Matsumura & Zuraina (1999)		

** the faunal remains are calculated by bone weight (grams)*

i - Lenggong Archaeological Museum ii - National Museum of Malaysia

iii – Centre for Global Archaeological Research, University Sains Malays

Table 5. 2: The excavated cultural materials from Gua Gunung Runtuh

Lab Number	Material	Area / Depth	Archaeological Context	Calibrated Dates	Conventional Dates (B.P.)	Reference
Beta 37818	Freshwater gastropod shells	Collected at a depth of 70cm in Trench A2	Shells associated with the human skeleton, stone tools and animal bones.	No details	9,460 ± 90	Zuraina (1994) Mokhtar and Tjia (1994)
Beta 38394	Freshwater gastropod shells	Collected at a depth of 80cm in Trench A2	Shells associated with the human skeleton, stone tools and animal bones.	No details	10,120 ± 110	Zuraina (1994) Mokhtar and Tjia (1994)
Beta 49851	Freshwater gastropod shells	No details	No details	No details	10,010 ± 70	Zuraina (1994)

Table 5. 3: The C^{14} dates of Gua Gunung Runtuh

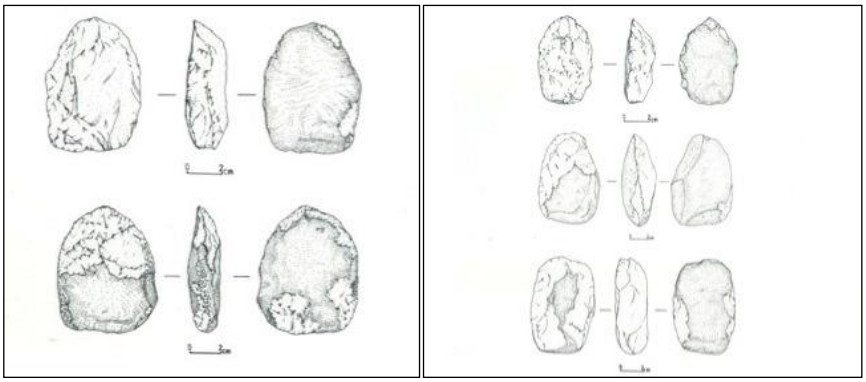

Figure 5.9: Oval unifacial pebble tools buried with Perak Man.

Figure 5.10: The information sign erected in front of the southern entrance of Gua Gunung Runtuh

Access to Gua Gunung Runtuh is not restricted or guarded. However, major rock falls in front of the cave entrance makes this site unsafe for unsupervised visits. At present, Gua Gunung Runtuh is one of the most visited sites in the valley and visitation to the site is normally supervised by staff from the Universiti Sains Malaysia or the Lenggong Archaeological Musuem for free. Local tourist guides can be hired from the neighboring villages but the charge varies between RM 15 and RM 50 (USD 4.50 – USD 15.00), depending on the numbers of visitors in a trip. Visitation to the cave by both local residents and outsiders has its impact on the cave. During the survey, several recent waste items such as plastic drinking bottles and cigarette butts, were found scattered on the cave floor. Graffiti was also found on the cave wall (Figure 5.11)

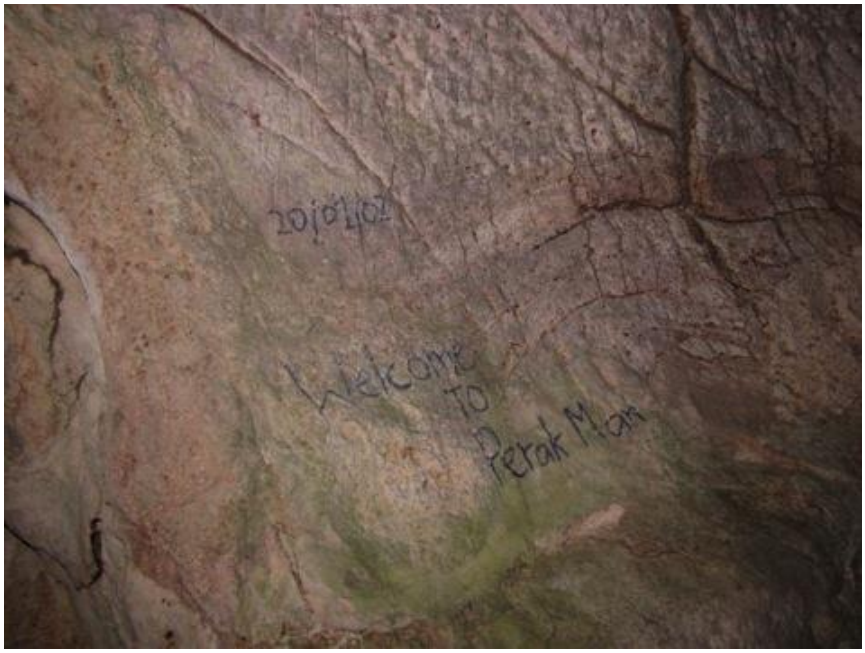

Figure 5.11: The graffiti on the cave wall of Gua Gunung Runtuh

Although Gua Gunung Runtuh is bounded by dense tropical jungle, the climate inside the cave is relatively stable, ranging between 23.5 and 24.5 degrees Celsius. The humidity of the cave is moderate, but water dripping in several parts of the cave has increased humidity over the years. Green algae covers several parts of the cave wall and ceiling. Also, plant roots are found growing out of limestone ceilings inside the cave (Figure 5.12). The growth of these microorganisms and plants are the main agents that stimulate deterioration of the cave. As the cave is located deep in the jungle and is not well lit, this makes it a suitable area for the habitation of bats. At present, bats still inhabit Gua Gunung Runtuh and produce guano, which in turn promotes illegal guano diggings in the cave (Figure 5.13)

Figure 5.12: Green algae and roots found in Gua Gunung Runtuh.

Figure 5.13: Bats still inhabit Gua Gunung Runtuh.

The cave floor of Gua Gunung Runtuh is uneven and covered with chunks of fallen stalactites and limestone blocks (Figure 5.14). Several areas in the cave show traces of quarrying, suggesting that illegal diggings are still taking place. Also, some cultural artefacts, such as shells and small stone artefacts, are visible on the cave floor. Previous excavation trenches still remain open without being backfilled (Figure 5.15) or being fenced. So far, no safety order has been generated for the site and visitors are visiting Gua Gunung Runtuh at their own risk. To date, all movable artefacts have been transferred to the Lenggong Archaeological Museum for preservation and display. Perak Man, the most significant find from this cave, is currently on display in the National Musuem of Kuala Lumpur.

Figure 5.14: The cave floor of Gua Gunung Runtuh is uneven and scattered with limestone chunks.

Figure 5.15: Excavation trenches opened in 1990 have been left open without being backfilled.

5.2.2 Gua Kajang

Gua Kajang is a natural limestone tunnel through the Bukit Kepala Gajah limestone massif, located in Kampung Gelok, approximately 4.5 kilometres from Lenggong Town (Figure 5.16). It is situated at latitude 5°07' 571' N and longitude 100°58' 883", 72 metres above sea level. Both Gua Kajang and Gua Gunung Runtuh are located in the same limestone massif and Gua Kajang is about two kilometres by trail from Gua Gunung Runtuh. This cave is surrounded by low land suitable for agriculture. During the 1960s and 70s, Gua Kajang was surrounded by paddy fields, but now the area around the cave is used for rubber and banana plantations. This cave is easily accessible by a sealed road from the surrounding small holdings. It takes about 20-25 minutes on foot from the entrance of Kampong Gelok to the cave (Figure 5.17).

Figure 5. 12: The front view of Gua Kajang facing north.

Gua Kajang is a 60 metre long limestone tunnel with two openings. The main entrance is facing north and there is another at the southern end. The mouth of the northern entrance measures about 25 metres wide, with a height of 12 metres. The cave comprises two chambers: the main chamber is divided into the front cave and the back cave by a limestone column and the second chamber is small and dark, and is found adjacent to the east of the southern entrance (Figure 5.18). At present, the original cultural landscape of Gua Kajang as described by Evans (1918) is untraceable, as the cave floor is interspersed by deep man-made holes. Three disturbed pits, each measuring about 25-30 metres square, are visible in the main chamber. These pits have been dug by local guano diggers because Gua Kajang is one of the best spots in this village to harvest guano. The cave floor is uneven, and some artefacts, such as stone tools and pottery sherds, are evident on the surface (Figure 5.19). The front cave is

dank but well lit, because it is exposed to natural sunshine and rain. The rear cave is slightly drier. According to the available archaeological records, the area of the front cave was previously excavated by Evans (1918) and Chia (1997). However, these areas are untraceable now as the trenches left behind by Evans in 1918 have been badly disturbed, whereas Chia (1997) backfilled his excavation trench after completion. The eastern part of the front cave, which appeared to be the only intact area, was chosen as the location for a third excavation in 2007 (Goh, 2008).

Figure 5. 17: The well-sealed access road to Gua Kajang.

Similar to Gua Gunung Runtuh, the local residents in the Lenggong Valley, especially those from Kampung Gelok and the villages nearby are familiar with Gua Kajang. According to the elderly in Kampung Geluk, this cave once served as the thoroughfare which connected the village to Lenggong Town (Sharif, personal communication, 2010) in the early 20th century. This claim is substantiated by I.H.N. Evans, who visited Gua Kajang in 1917 and reported a path leading from Lenggong to Kampung Geluk that passed through this tunnel (Evans,

1918:227). Apart from being known as part of the old route, this cave is also notorious among the locals as the campsite of the Indigenous or Aboriginal (known as *Orang Asli* in the local context) tribes who lived in this valley from the early 1900s until the 1980s. The earliest record of indigenous settlement in Kampung Gelok was reported in 1914, when Evans (1914) visited the encampments of the *Semang* group in this village.

Later in 1917, Evans (1918:228) reported Indigenous occupation in Gua Kajang when he found bamboo sleeping platforms and sections of blowpipes inside the cave that showed clear signs of having been recently used. Evans (1918) further confirmed Indigenous occupation through the discovery of selections of paintings on the cave wall. According to Evans (1918), these were monochrome charcoal figurative drawings consisting of elephants and four-wheeled wagon figures. However, these drawings have not survived into the modern era (Taçon and Mokhtar 2012:461). The evidence of Indigenous occupation in this cave became even more apparent when an Indigenous man recently claimed that his family had probably camped within the proximity of Gua Kajang during the 1950s and 1960s. Recent conversations with this man (En Bahari, in his 60s), who is now relocated in the Kampung Air Bah, revealed that his older brother, who passed away a few years ago, was told by their parents that he was born in Gua Kajang. However, the exact birth date of his brother is undetermined.

Like other caves in the Lenggong Valley, Gua Kajang served as an asylum for the local communities during the Second World War in Malaya. This cave was then extensively exploited by the locals for guano until the end of the 1980s when the Minerals and Geoscience Department of Malaysia banned guano mining in the valley. However, illegal digging is still widely practiced in this valley because, according to some villagers, guano mining has been their main source of income for the past three decades.

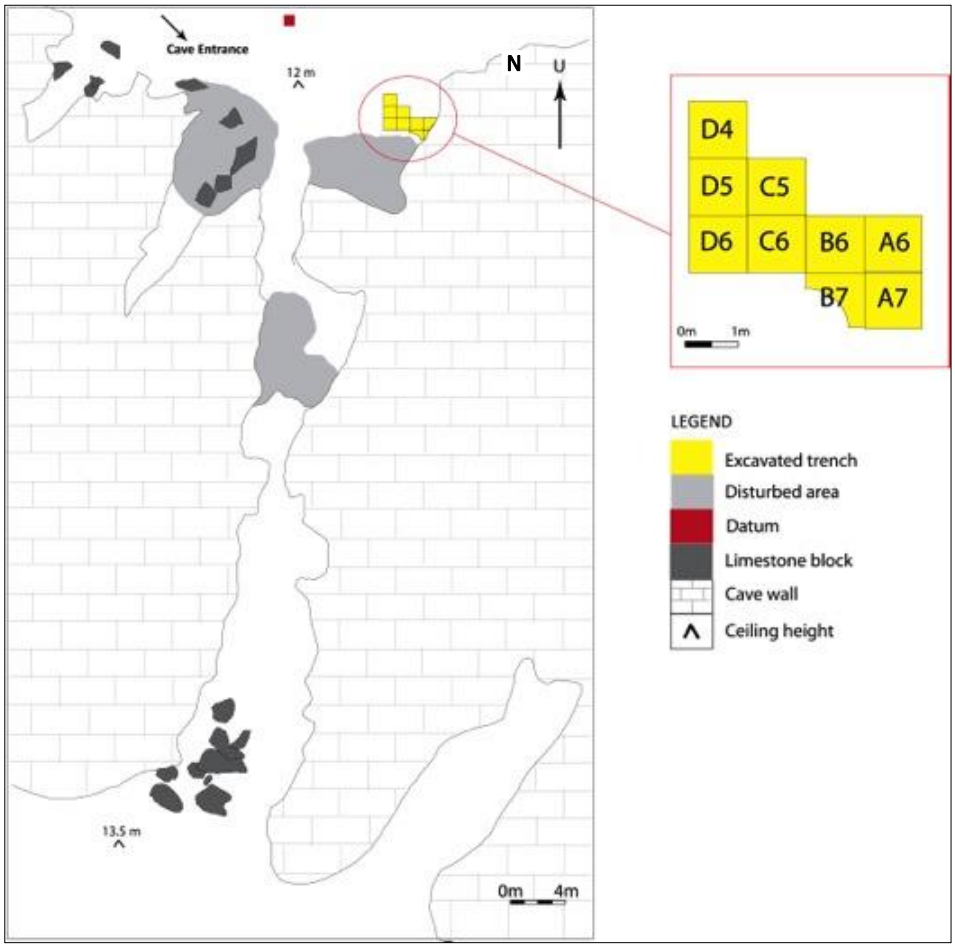

Figure 5.18: The floor plan of Gua Kajang.

Figure 5.19: Some surface finds noted during the field survey in 2010 in Gua Kajang.

5.2.2.1 Archaeological Research and Findings

Archaeologically, Gua Kajang holds the longest history of archaeological investigations in the valley, from 1917 until now. Over the last 95 years, this cave has been investigated by Evans (1918), Williams-Hunt (1951, 1952), Chia (1997) and Goh (2008). The earliest investigation carried out by Evans (1918) discovered fragments of pottery, stone tools, food remains and human skeletal remains. Based on the thickness of the cultural deposits, Evans (1918) concluded that this cave might have been used at intervals during the Neolithic. Further investigation of the human remains from Gua Kajang by Duckworth (1934) indicated an anthropological connection between the early occupants of Gua Kajang and the Australian Aborigines.

Later in the 1950s, the reconnaissance survey by Williams-Hunt (1951, 1952) produced a catalogue of surface finds which recorded the discovery of several Mesolithic axes and pottery fragments. In 1990, Chia (1997) excavated the front area of the cave in search of prehistoric pottery samples. All research prior to 2000 pointed to Gua Kajang as a Mesolithic-Neolithic site, although no chronometric evidence was ever provided.

Further research was undertaken in Gua Kajang in early 2007 soon after the chance discovery of a human burial by the local residents (Figure 5.20). Two *in situ* human burials dated to 10, 820 ± 60 B.P. (Beta 227446) and 7, 890 ± 80 B.P. (Beta 227445) were found in the deposits. Both burials were partially disturbed, with several parts of the skeletons missing. The parts that remained, however, were still *in situ* as indicated by the intact bone articulation. These burials, later labelled GK 1 and GK 2, were found associated with various types of mortuary offerings. GK 1 was found buried in a flexed position, but the burial position of GK 1 was unable to be determined. Both GK 1 and GK 2 were found incomplete but were identified as

adults. Their ages at death, stature and sex remained uncertain due to the absence of good indicators.

The stone tools uncovered from Gua Kajang are attributed to the late-Palaeolithic and Neolithic periods, and include unifacial and bifacial pebble tools, hammerstone, anvils, cores and flake tools. This stone assemblage is well distributed among the caves in the valley and shares many similarities with those stone artefacts uncovered from cave sites in Thailand (Goh 2008). The pottery of Gua Kajang is of typical Neolithic type (Chia 1997), consisting of plain, cord marked and red-slipped pieces. The 2007 excavation later led Goh (2008) to suggest that this cave had been consecutively used from 11,000 to 4,000 years ago during the late Paleolithic and Neolithic periods. Further information on the archaeological research and, including the radiocarbon dates yielded from Gua Kajang are detailed in Tables 5.4 and 5.5.

Figure 5.20: The 2007 excavation at the eastern part of the front cave.

Year of Excavation	Excavation	Archaeological Finds			Cultural Interpretations	Analysis undertaken by	Storage	Key Reference
		Types of Artefacts		Frequency (pcs)				
1917 by I.H.N. Evans	1st season of excavation uncovered an area approximately 82m	Stone artefacts	Sumatralith pebble tools, flakes, polished stone adze	No exact quantity recorded	Evans (1918) suggested that this cave was occasionally used by early people during the Mesolithic and Neolithic periods.	Evans (1918)	NMS, NMM and LAM	Evans (1918)
		Fauna remains	*Unio and Melania* Shells, animal bones (deer, muntjac, squirrel, rhinoceros, bamboo rat, wild pig)					
		Human remains	Human jaw, fragments of skull, ribs and finger bones	No exact quantity recorded	Duckworth (1934), through his analyses of the human teeth and jaw, suggested that the dental features of the Gua Kajang's remains resembled features of Australian Aborigines.	Duckworth (1934)	Laboratory of Duckworth, University Cambridge of London	Duckworth (1934) Zuraina and Pfister (2005)
	2nd season of excavation uncovered an area of 9m to search for evidence of earthenware	Stone artefacts	a. Rough stone tools b. Flakes c. Core	No exact quantity recorded		Evans (1918)	NMS, NMM and LAM	Evans (1918)
		Fauna Remains	Animal bones and shells					
		Earthenware pottery	Black-coloured ware and fragments of pottery					
1945-1951 by Williams-Hunt	Reconnaissance surveys were conducted in Gua Kajang between 1945 and 1951. No excavation was conducted. The interpretation of culture was made based on the surface finds.	Stone artefacts	Mesolithic tools – oval pebble tools.	No exact quantity recorded	Pointed to Gua Kajang as a Mesolithic-Neolithic site.	Williams-Hunt (1951, 1952)	No detail	Williams-Hunt (1951, 1952)
		Earthenware pottery	Pottery vessels and sherds including cake-stand ware and red-slipped ware					

Year of Excavation	Excavation	Archaeological Finds			Cultural Interpretations	Analysis undertaken by	Storage	Key Reference
		Types of Artefacts		Frequency (pcs)				
1990 by Chia	Only one trench measuring 1m was excavated in searching for pottery samples.	Earthenware pottery	Fragments of pottery	5	The pottery sherds of Gua Kajang were relatively dated to 3,000-4,000 years old. However, no further documentation was carried out on the stone artefacts and faunal remains found in this excavation because this research was designated to collect pottery samples.	Chia (1997)	NMM, LAM and CGAR	Chia (1997)
		Stone artefacts and fauna remains	-	No exact quantity recorded				
2007 by Goh	This excavation took place in the east corner of the front cave. Nine trenches, each measuring 1m were excavated.	Stone artefacts	Core Anvil Hammerstone Flake tool Bifacial and Unifacial Slab Miscellaneous tool Debitage	2 31 66 118 12 1 1 467	Gua Kajang was interpreted as a late Pleistocene – Holocene site. On the basis of artefact types and typology as well as the C14 dates, this cave is said to have been occupied by early humans from 11,000 years ago extending to the recent past.	Goh (2008)	CGAR	Goh (2008, 2009)
		Fauna Remains	Bone fragments of: *Mamalia* *Reptilia* *Malacostraca* *Brotia* Shells	 309 27 1 14255				
		Earthenware pottery	Pottery sherds: Plain Decorated Red-slipped	 22 14 1				
		Human remains	Two incomplete skeletons were uncovered.	-				

Table 5. 4: The archaeological investigations and finds of Gua Kajang.

Lab Number	Material	Area / Depth/ Stratigraphic layer	Archaeological Context	Calibrated Dates (B.C.)	Conventional Dates (B.P.)	Reference
Beta 28157	Freshwater gastropod shells	Collected from depth of 30cm	No details	No details	6,380 ± 60	Zuraina (1998)
Beta 28156	Freshwater gastropod shells	Collected from depth of 60cm	No details	No details	8,970 ± 140	Zuraina (1998)
Beta 227445	Freshwater gastropod shells	Collected from layer 3, at a depth of 70-80cm	These shells were associated with the human burial of GK 1	7,050 – 6,580	7,890 ± 80	Goh (2008)
Beta 227446	Freshwater gastropod shells	Collected from layer 6, at a depth of 120-140cm	These shells were associated with the human burial of GK 2	10,950 – 10,830	10, 820 ± 60	Goh (2008)
Beta 229005	Freshwater gastropod shells	Collected from layer 6, at a depth of 154cm	These shells were associated with stone artefacts and animal bones	9,810 – 9,300	10,000± 60	Goh (2008)
Beta 275049	Organic sediments	Collected from layer 5 at a depth around 100cm	Found comingled with the faunal remains	10,730 – 10,190	10,470 ± 60	*

** C^{14} date obtained through this project.*

Table 5. 5: The C14 dates of the cultural remains of Gua Kajang

5.2.2.3 Present State of Conservation

Gua Kajang is now placed under the monitoring of the Department of National Heritage (DNH). The maintenance team appointed by DNH inspects the site on a twice-weekly basis. In 2009, a program to upgrade the facilities of archaeological sites was launched in the Lenggong Valley under the 9th Malaysia Plan. In Gua Kajang particularly, a gazebo with information board was built in front of the cave and a two-kilometre boardwalk was built to connect four caves in the Bukit Kepala Gajah limestone massif – Gua Kajang, Gua Ngaum, Gua Puteri and Gua Asar - to enhance the visitor's experience (Figure 5.21).

Figure 5.21: The boardwalk connecting four cave sites in the Bukit Kepala Gajah limestone massif.

The latest survey of Gua Kajang shows that this cave is severely disturbed, where almost 90 percent of the surface area has been excavated, either for research purposes or other activities, such as illegal digging and treasure hunting (Figure 5.22). The only intact area in this cave that was previously earmarked for further investigation in 2007 was covered by tar (bitumen)

during the construction of a metal road to connect the village to the cave in 2008. No further excavation has been carried out in Gua Kajang since 2007 and some of the cultural artefacts on the surface have been covered in tar (Figure 5.23).

Figure 5.22: The disturbed area at the front of the cave.

The cave floors in both of the chambers are uneven, and covered with man-made pits and holes (Figure 5.24). Three large disturbed pits – each measuring about 25 – 30 metre square - were observed in the main chamber of the cave. Two large pits were found at both bays of the front cave and another disturbed area is visible in the corridor which serves as the main channel that allows access from one end of the tunnel to the other. At present, a crude wooden platform has been laid over the pits to provide passage between the two mouths of the tunnel (Figure 5.25). Large limestone boulders are also obvious in the northwest and southern end of the tunnel (Figure 5.26).

Figure 5.23: The area at the cave mouth now partially covered by tar.

Figure 5.24: The disturbed area in the east bay of Gua Kajang.

Figure 5.25: Crude wooden platforms laid to provide passage between the two mouths of Gua Kajang.

Figure 5.26: Limestone boulders at the southern end of Gua Kajang.

Given that Gua Kajang is easily accessible, intruders often enter this cave to dig for guano, hunt for artefacts or engage in other activities (Figure 5.27). In 2007, a local resident conducted illegal diggings in this cave and exposed a prehistoric human burial (Goh, 2008). More recently in 2009, several pottery vessels attributed to the Neolithic were found by local residents in Gua Kajang and these vessels were later being offered for sale (Figure 5.28).

Figure 5.27: Illegal diggings in Gua Kajang have severely destroyed the deposits of the cave. The circled area indicates the depth of deposit removed in a two year period.

Figure 5.28: One of the pottery vessels excavated by a local resident in Gua Kajang as offered for sale in 2010.

Following uncontrolled digging in Gua Kajang since 2007, hundreds of cultural artefacts, including stone artefacts, food remains and pottery sherds, have been scattered on the cave floors (Figure 5.29). As the original context of these artefacts cannot be traced, subsequent archaeological work has had to treat the majority of these artefacts as surface finds. All

cultural artefacts uncovered from Gua Kajang are now kept in the Lenggong Archaeological Musuem. Remnants of excavation trenches opened by Goh (2008) in 2007 are still traceable in the east bay of the cave, but illegal excavation has destroyed the original archaeological settings of the 2007 excavation. These trenches are now left open on site without proper fencing.

Figure 5.29: Cultural artefacts scattered in the cave.

Gua Kajang is used by local villagers as their daily access route to the rubber estates located to the south of the cave. Vehicles such as motorcycles, cars and trucks frequently drive into the cave to collect the latex from the surrounding estates (Figure 5.30). Apart from public visitation, it is also regularly visited by school groups for educational purposes on weekends. Due to its accessibility, Gua Kajang is highly exposed to vandalism activities. Modern wastes are found scattered all over the cave floor and almost 80 percent of the cave wall is covered

in graffiti from paints, marker pens, charcoal and other media. These graffiti included modern writing in different languages and some figurative drawings (Figure 5.31). The cave wall of Gua Kajang was also vandalized by a local film crew when this cave was selected as the filming location for a local movie. For unknown reasons, the film crew repainted several portions of the cave wall with grey emulsion paints (Figure 5.32).

Figure 5.30: Large vehicles often access the cave to collect the latex from surrounding rubber estates.

Figure 5.31: The cave wall of Gua Kajang covered with modern graffiti.

Figure 5.32: The cave wall has been partially painted with grey paint.

5.2.3 Gua Harimau

Gua Harimau is the only cave found in the Bukit Gua Harimau limestone massif (Figure 5.32). It is located at latitude 5°08' 895' N and longitude 100°58' 856" E, about 133 metres above sea level. This cave is situated in the Kampung Gua Badak - about 10km from Lenggong Town. Previously, this cave was bounded by a dense secondary tropical jungle, however, the surrounding lowland was turned into rubber estates and fruit orchards in the 1980s (Figure 5.33). Today, Gua Harimau is occasionally used as a rest station for the rubber tappers who work in the surrounding estates. Access to Gua Harimau is not difficult, as there is a narrow footpath stretching from the junction at the entrance of the village to the cave (Figure 5.34). The whole journey from the entrance of the village to the cave takes about 30 minutes on foot. Some villagers, however, alternatively access the cave by a bicycle or motorcycle.

Figure 5.33: The southern face of Bukit Gua Harimau.

Of the myriad caves in the valley, Gua Harimau is the largest cave found so far, covering an area of approximately 350 metres square (Mokhtar 2005) (Figure 5.35). Gua Harimau has two entrances – the main entrance is well-lit and facing south (Entrance A) with a horizontal opening about 18 metres wide, whereas another one metre wide opening is found to the west (Entrance B) (Figure 5.36). The cave is deep and comprises two chambers. The main chamber is spacious and semidry. The front area of the main chamber is well lit compared to the inner part of the cave, which is dimmer. There is another chamber stretching out from the western wall and connected to the west entrance of the cave. This chamber is small and low ceilinged, approximately 1.5 metres wide and 10 metres long. This small chamber is dark and some areas are wet, caused by dripping water from the ceiling. Another small opening was found in the roof of the cave, 20 metres above the floor.

Figure 5.34: Gua Harimau is now surrounded by rubber plantations.

Figure 5.35: The footpath access to Gua Harimau.

Figure 5.36: The front view of entrance A of Gua Harimau facing south.

Almost 90 percent of the cave floor in the main chamber is disturbed. The floor is uneven and covered with chunks of stalactites (Figure 5.37). The cave floor in the small chamber is craggy and also shows signs of disturbance. From the survey in 2010, two major disturbed areas were observable in the inner part of the cave. The soil in these areas has been dug out and some artefacts are visible on the cave floor. Previously, a total of 12 excavation trenches stretching over an area of about 48 metres square were excavated in the front cave (Zolkurnain 1998). At present, several excavation trenches (approximately 15-16 metres square) have been left *in situ* and the remaining trenches have been backfilled.

The term Gua Harimau is a Malay phrase meaning "Tiger Cave". The Malayan Tiger[12] (or *harimau belang* in the local context) is occasionally found in this cave, especially during the dry season. Traces of tiger in Gua Harimau have been reported since the early days of the 20th century and the latest discovery was reported in 2011 by a rubber tapper who works on the neighboring estates.

Apart for being signaled as an unsafe area, Gua Harimau is also marked as an important area for Indigenous activities. Prior to the 1980s, Gua Harimau was occasionally occupied by an Indigenous group who survived on jungle resources. A community survey conducted in the village where Gua Harimau is located in 2010 found a wooden house that incorporates an engraved wooden pillar made by the Indigenous. The owner of the house, Mr Hamid, said that he had bought the wooden pillars from an Indigenous man called "Kunyit" (turmeric) who camped around the vicinity of Gua Harimau during the 1970s. According to him, each seven-foot pillar cost him four Malaysian dollars at that time (Hamid, personal communication, 2010).

[12] The Malayan Tiger, scientifically known as *Panthera tigris jacksoni*, is a tiger subspecies that inhabits the jungle of Peninsular Malaysia.

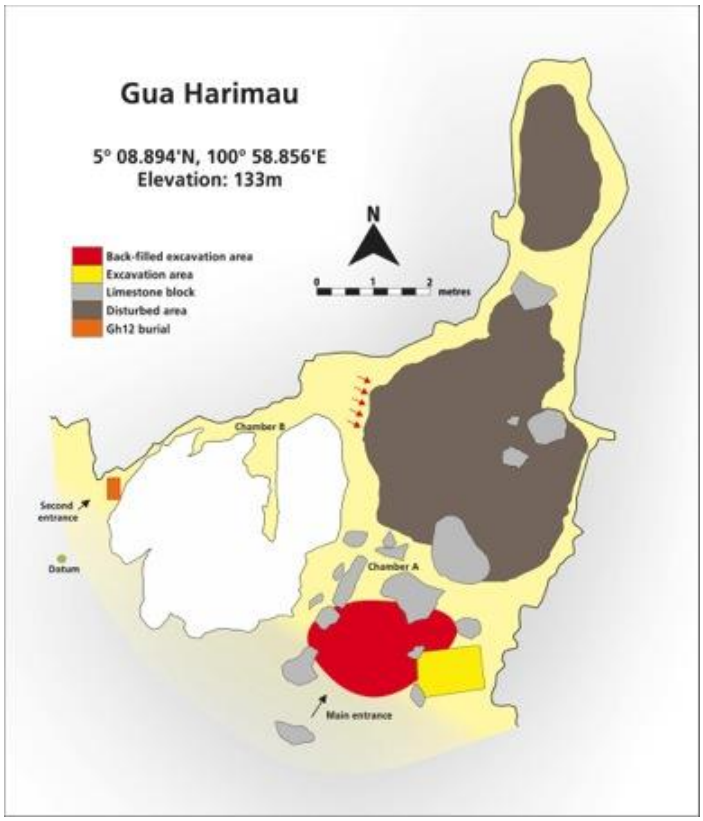

Figure 5.37: The floor plan of Gua Harimau

Figure 5.38: The inner part of Gua Harimau is dim and the cave floor is badly disturbed.

5.2.3.1 Archaeological Research and Findings

The first two investigations in Gua Harimau took place between 1945 and 1951 and were conducted by Williams-Hunt (1951, 1952), who discovered the human burial of a juvenile with some stone implements and pottery attributed to the Mesolithic and Neolithic periods. In 1987-1988, two seasons of archaeological excavations uncovered seven human burials from the Neolithic-Bronze period, with radiocarbon dates spanning from 4,900 to 1,700 years ago (Zuraina, 1989) (Figure 5.38, 5.39 5.40 and 5.41). This cave was later re-investigated by Zolkurnain (1998) in 1995 and this research yielded another four Neolithic human burials associated with an abundance of mortuary offerings, including stone tools and pottery vessels (Figure 5.42). These burials were dated to between 3,200 and 1,500 years ago.

After 15 years, another excavation was conducted in Gua Harimau in early 2010 following the chance discovery of a Neolithic human burial in the outer part of the western entrance. GH 12 was found lying in the supine position in a north-south orientation with the head pointing north. Several fragments of earthenware were found east of the skeletal remains (Figure 5.43). The skeletal remains were incomplete and found in a fragile condition, but based on the appearance of the bones and teeth, they belonged to a human adult. Most of the fragmentary bones in this burial were from the upper body, as there were no lower limbs preserved. The left portion of the mandible showed a robust mandibular body and a prominent mandibular angle, giving a masculine impression, and suggests a male (Figure 5.44). On the mandible, the second and third molars were present in their sockets, which means that he would have been older than 20 years. The enamel had a reddish brown discolouration while the roots still retained their natural colour, which may suggest a habitual consumption of betel nut. Sex estimation was made on the sexually dimorphic features of the mandible as the rest of the remains were severely fragmented.

A total of 15 pottery sherds weighing 352.3 grams were found scattered on the left side (east) of GH 12 at a depth of about 60 – 80cm in trench GH 10-A. These sherds were found in two clusters and further laboratory analyses indicated that they y all belonged to a single vessel. The reconstructed vessel is a round-bottomed globular vessel with cord marked decoration on its base (Figure 5.45). The vessel is dark brown in colour, grog tempered with a plain everted rim. It is approximately 24cm high and 16.5cm wide with a large orifice of 14cm. Further study on this vessel indicats that it is comparable to the pottery collections previously found in the Lenggong Valley where vessels of similar shape, decoration and finish have been found in other cave sites including Gua Harimau, Gua Teluk Kelawar and Gua Kajang (Figure 5.58).

Attempting to date the burial of GH 12 was a challenging task because the presence of a reliable sample within the deposits was relatively rare. There were only two charcoal samples collected for radiocarbon dating from the excavation. Sample 1 was found comingled with the soil and the skeletal parts of GH 12 at spit 7 in trench GH 10-A whereas Sample 2 was collected from the northern end of trench GH 10-A. Both samples were sent to Beta Analytic for radiocarbon dating. Sample 1 later provided an AMS (Accelerator Mass Spectrometry) radiocarbon date of 5,080 ± 50 B.P. (Beta 275680). Sample 2, however, was unable to provide an age for GH 12 because it was a contaminated specimen. The details of the radiocarbon date for Sample 1 are shown in Table 5.7.

Over six seasons of investigations in Gua Harimau, archaeologists have revealed that this cave was used as a cemetery during the Neolithic and Bronze Periods in Malaysia (Chia and Zolkurnain 2005). The latest investigation through this project shows that the earliest occupation probably began in this cave 5,000 years ago, which is slightly earlier than the presumed date of 4,000 years as postulated by Chia and Zolkurnain (2005). Thus far, it is the

only Bronze Age site found in this valley and the pottery of Gua Harimau is one of the most distinctive prehistoric pottery collections found in Malaysia.

Figure 5.39: The excavation in Gua Harimau between 1987 and 1988.

Figure 5.40: The human burial of GH 1 excavated in 1987.

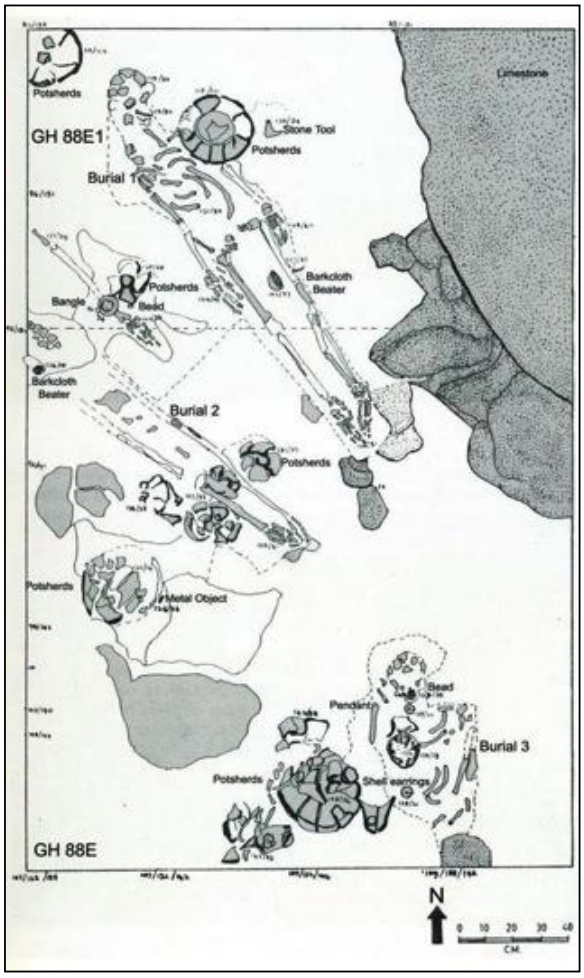

Figure 5.41: Burials of GH1, GH 2 and GH 3 and their associated artefacts found during the excavations between 1987 and 1988.

Figure 5.42: Human remains discovered in front of the entrance B of Gua Harimau in 2010.

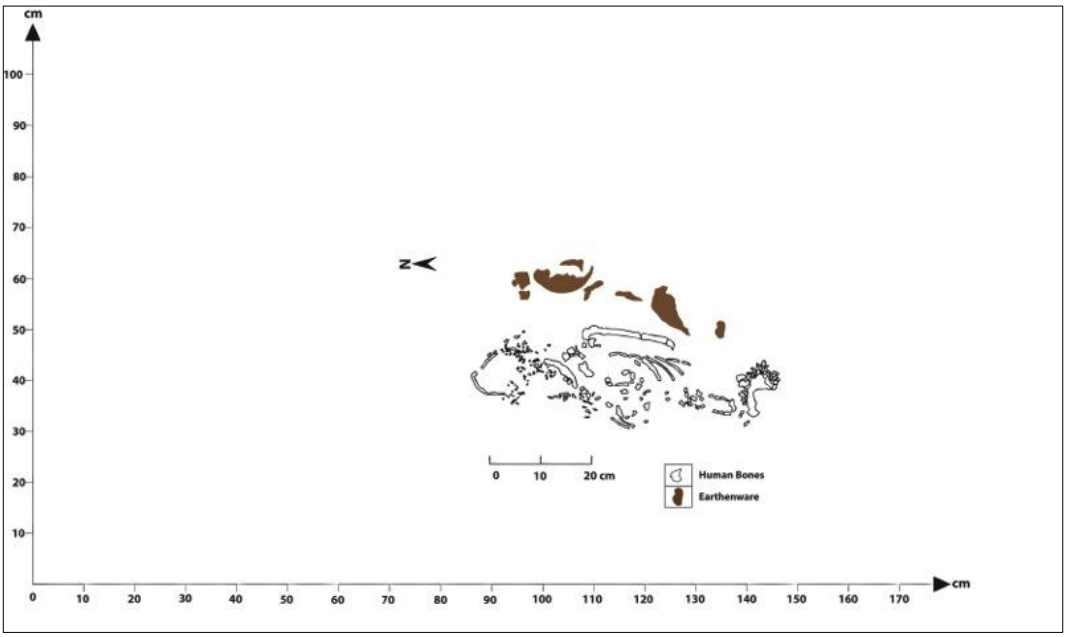

Figure 5.13: The burial area and associated finds of GH 12.

Figure 5. 14: The left portion of the mandible showed a robust mandibular body and a prominent mandibular angle, which indicates GH 12 was a male. As the mandible was too fragile to remove from the soil, it was now consolidated within the soil block for further study.

Figure 5.: The earthenware vessel reconstructed from the pottery sherds found associated with GH 12.

5.2.3.3 Present state of conservation

Today, Gua Harimau survives in a disturbed context, where 90 percent of the surface area of the cave has been quarried for guano. Extensive removal of deposits from Gua Harimau has destroyed the archaeological context of the cave, causing large quantities of cultural artefacts to be exposed in the cave floor (Figure 5.47).

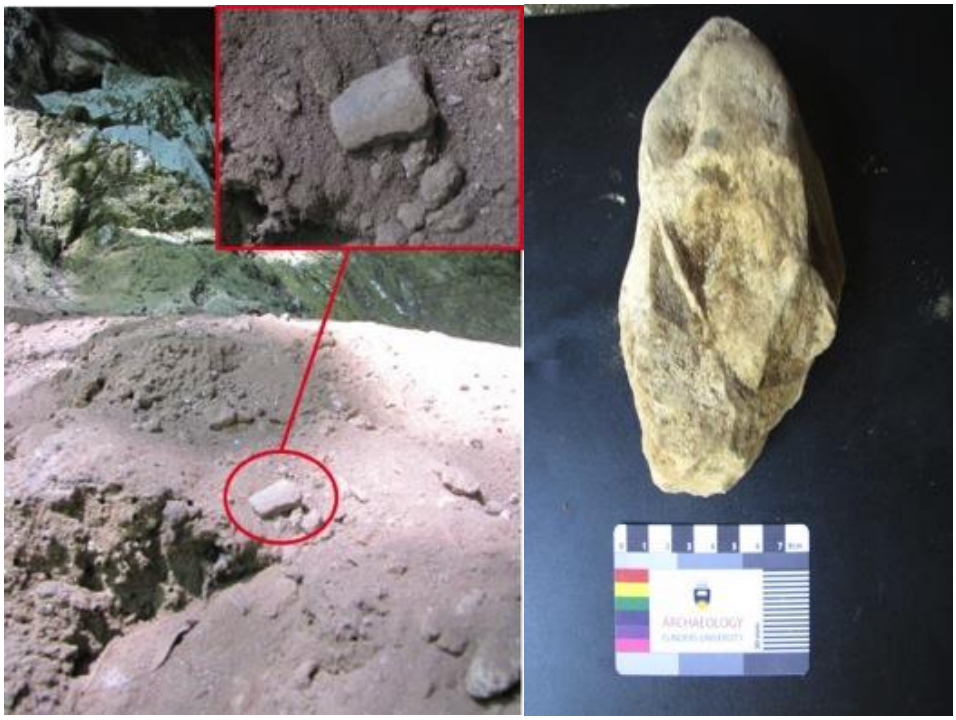

Figure 5.46: (left to right) Pottery sherd and stone tool found on the surface of the cave floor of Gua Harimau.

Guano mining activities in Gua Harimau were believed to have started during the 1960s and reached a peak in the following decades. Based on the field report of Williams-Hunt (1951, 1952), no signs of disturbance were detected in this cave between 1945 and 1951. However, in the 1980s the inner part of the main chamber of Gua Harimau was found severely disturbed (Zuraina 1988; Zolkurnain 1998). The latest survey of Gua Harimau reveals that the villagers still illegally collect the guano from Gua Harimau, although this activity has been prohibited since the late 1980s. According to the locals, a sack (10Kg) of guano can sell for up to RM 12 – RM 15 (equivalent to USD 3 – 4.50) and many of the villagers collect guano from the cave to gain extra income.

Gua Harimau is also deteriorating as a result of natural weathering. In 2010, fallen stalactites were found scattered all over the cave floor (Figure 5.48) and water dripping from the ceiling has increased humidity in certain parts of the cave. Uncontrolled access and visitation to Gua Harimau have also affected the integrity of the site. Often, irresponsible visitors spread graffiti on the cave wall with charcoal, inerasable marker pen and paint (Figure 5.49). In Gua Harimau, almost 50% of the cave wall is now superimposed with various styles of modern writing and drawing. The front area of the main chamber is currently covered with rubble from cave-ins, and two disturbed areas were spotted in the main chamber (Figures 5.50). Previous excavation trenches were partially backfilled but several trenches still remain open.

Figure 5.47: Fallen stalactites scattered on the cave floor of Gua Harimau.

Figure 5. 48: The cave wall of Gua Harimau covered with graffiti.

Figure 5. 49: The cave mouth of Gua Harimau covered with limestone boulders.

The site is currently maintained and monitored by the Department of National Heritage. Nowadays, site maintenance relies on very simple strategies, such as undergrowth trimming and trash collection. All movable artefacts uncovered from Gua Harimau, on the other hand, were sent to the Lenggong Archaeological Musuem for proper storage and display. Additionally, regular animal encroachments have been detected within the surrounding areas, particularly traces of elephants and tigers. At present, no physical facilities have been constructed for this cave except for a sign containing background information that has been erected in front of the cave (Figure 5.50).

Figure 5. 50: The information sign erected in front of Gua Harimau.

Year of Excavation	Excavation	Archaeological Finds			Cultural Interpretations	Analysis undertaken by	Storage	Key Reference
		Types of Artefacts		Frequency (pcs)				
1945 – 1951 by Williams-Hunt	Reconnaissance surveys conducted between 1945 and 1951. No excavation was conducted. The interpretation of culture was made based on surface finds.	I. Cord-marked shallow bowls, burnished ware and pottery fragments II. Neolithic adze III. Human remains of a juvenile		No details	Interpreted Gua Harimau as a Neolithic site.	Williams-Hunt (1951, 1952)	No details	Williams-Hunt (1951, 1952)
1987 by Zuraina		Stone artefacts Animal bones Shells Shell ornaments Pottery		No exact quantity recorded	This cave was a prehistoric cemetery during the Neolithic and Metal periods in the Lenggong Valley. The radiocarbon dates derived from shells and charcoals associated with the burials indicated that the cave was occupied by humans between 1,700 and 4,900 years ago.	Zuraina (1988) Zolkurnain (1989)	NMM, LAM and CGAR	Zuraina (1988) Zolkurnain (1989)
		Human remains		7 incomplete individuals (labelled as GH 1-GH 7)				
1995 by Zolkurnain	The excavation was carried out at the cave mouth. A total of six trenches, covering an area of 20m were excavated.	Stone artefacts	Anvil Hammerstone Falke tool Bark-cloth beater Polished adze Pebble tool Debitage	2 4 3 1 1 3 37	Gua Harimau is the only Neolithic-Bronze Age site in the Lenggong Valley and it was used for burial purposes during the late Holocene period, around 3,000 years ago.	Zolkurnain (1998)	NMM, LAM and CGAR	Zolkurnain (1998)
		Earthenware pottery	Plain sherds Cord-marked Red-slipped	*7,374 *5,828 * 656				

		Faunal Remains	Animal bones Freshwater shells Marine shells	*557 450 3				
		Metal objects		2				
		Human remains		4 incomplete individuals (labelled as GH 8 –GH 11)				
2010	The latest excavation was conducted in 2010 when a field survey initiated through this research discovered a human burial in a disturbed context. The excavation was launched on a small-scale basis to rescue the remaining burial assemblage which has been partially dug out.	Earthenware pottery	Round-bottom vessel	1	GH 12 was assessed as an adult male and the radiocarbon dates derived from a charcoal sample associated with the skeletal remains identified GH12 as an early Neolithic burial dated to 5,080 ± 50 BP (Beta 275680). The pottery vessel is comparable to the previous pottery collections found in this cave. The C^{14} date of 5,000 suggests that Gua Harimau was occupied by early human starting from the Mid Holocene, which is earlier than the previously presumed date of 3,000-4,000 years ago.	-	CGAR	-
		Human remains		1 incomplete individual (labelled as GH 12)				

Table 5. 6: The archaeological investigations and finds of Gua Harimau.

Lab Number	Material	Area / Depth/ Stratigraphic layer	Archaeological Context	Calibrated Dates (B.C.)	Conventional Dates (B.P.)	Reference
GX 13506	Charcoal	No details	No details	No details	1,790 ± 195	Zuraina (1998)
GX 13508	Freshwater gastropod shells	No details	No details	No details	4,920 ± 270	Zuraina (1998)
GX 13509	Freshwater gastropod shells	No details	No details	No details	14,140 ± 795	Zuraina (1998)
Beta 81771	Charcoal	Collected from trench 95A, layer 5, at a depth of 40cm	Found associated with the burial assemblage of GH 9	1,435 – 1,135	3,170 ± 60	Zolkurnain (1998)
Beta 81772	Charcoal	Collected from trench 95G, layer 5, at a depth of 45cm	Found associated with the burial assemblage of GH 10	1,440 – 1,145	3,080 ± 60	Zolkurnain (1998)
Beta 275049	Charcoal	Collected from spit 7, at a depth around 70-80cm	Found associated with GH 12	-	5,080 ± 50	*

** C^{14} date obtained through this project.*

Table 5. 7: The C^{14} dates from Gua Harimau.

5.3 Summary and Discussion

The investigations the Gua Gunung Runtuh, Gua Kajang and Gua Harimau through field surveys and recording, mapping and excavation have generated much new data for the understanding of the past and present use of these cave sites. Examination of the present state of the conservation of Gua Gunung Runtuh, Gua Kajang and Gua Harimau revealed that these cave sites are badly damaged and exposed to various threats and pressures, including development pressure, tourism pressure, anthropogenic activities such as illegal guano digging and vandalism, as well as environmental pressure.

Many of the low-lying areas surrounding the limestone massifs have been cleared for agricultural purposes. This has bulldozed the original landscape close to the cave sites. Additionally, none of the cave sites have been exempt from illegal diggings and this is causing extensive damage to the cave deposits and their original settings. Uncontrolled access by local villagers and visitors to these caves has placed the caves under risk in several ways. Issues such as vandalism, waste disposal and premature deterioration of the caves are among the most serious problems arising from regular visitation. Furthermore, these sites are poorly-maintained and the excavated trenches are not being backfilled or fenced.

As these caves are now listed as a UNESCO World Heritage Site, the newly-proposed conservation management plan could be expected to address these issues, as well as provide strategies for mitigating the impacts and threats on these cave sites. As such, this project took the initiative to assess to what extent the newly-proposed management plan for the Lenggong Valley is adequate to preserve and sustain the integrity of the cave sites of the Lenggong

Valley. The review of the contemporary heritage management plan of the Lenggong Valley will be presented in Chapter 6.

Chapter 6 Archaeological Heritage of Lenggong Valley: A Review of its Contemporary Heritage Management

As discussed in the previous chapters, Lenggong Valley is one of the few archaeological areas in the world that holds the longest stretch of prehistoric sequences, spanning from the Paleolithic period to the Metal Age. Recognizing the archaeological importance of the Lenggong Valley, this area was nominated as a UNESCO World Heritage Site (WHS) in July 2012. The early examination into the heritage management of the Lenggong Valley conducted through this PhD project (between 2009 and 2012) found out that none of any formal heritage management plan has been put in place to address the heritage management issues of the Lenggong Valley prior to its nomination to the UNESCO World Heritage Centre (refer to Section 1.5).

Soon after the arrival of the UNESCO World Heritage Status (WHS) by mid of 2012, the heritage management of the valley has been restructured by adopting a preliminary conservation management plan (CMP) (in Malaysia, the plan that outline the management of a heritage site is known as conservation management plan, Article 46, National Heritage Act 2005) that conforms to the requirements of the UNESCO World Heritage Centre (WHC). The official CMP, according to the Department of National Heritage Malaysia (DNH), can only expected to be formally endorsed by 2014. In one of the recent interview, the Higher Commissioner of Heritage Malaysia stated that the DNH is now liaise with at least twelve agencies from Federal, State and District levels to prepare a detailed Special Area Plan (SAP) and a CMP which aim to address all heritage management and development issues of the Lenggong Valley and these two plans will be submitted to UNESCO and endorsed in Lenggong Valley by 2014 (Dermawan 2012).

Given that one of the main objectives of this PhD project is to investigate the social significance of the Lenggong Valley and recommend a more holistic management practice which shows appreciation of the local values and recognizes their ideas to promote sustainable management through local conservation effort, this project took the initiative to examine the effectiveness of present heritage conservation and management of AHLV in addressing the overall conservation constraints, particularly in relation to the community values and involvement. Basically, this was done through systematic field surveys in few archaeological caves (refer to Chapter 5) and a systematic content analysis of the preliminary CMP currently adopted in the heritage management of the Lenggong Valley.

While this newly adopted preliminary CMP is expected to bring improvement to the overall heritage management of the Lenggong Valley, a follow-up field survey conducted in three cave sites (GGR, GH and GK) by the end of 2012 shows that many of the archaeological sites in the Lenggong Valley still engages with heritage management issues, particularly those related to the local heritage awareness and stakeholder participation in heritage management. As such, this project took the initiative to review the competency of the preliminary CMP of Lenggong Valley by looking at five distinct dimensions included the accuracy of this CMP in conveying the information about the heritage sites and its management objectives; the legislation in related to the heritage conservation and management; the action and implementation of the management strategy, as well as investigate how this CMP integrates the local values and ideas into the management planning through the consultation to and participation and involvement of, the local community in the management planning.

The results obtained from this content analysis show that the contemporary heritage management planning of Lenggong Valley tends to prioritize the conservation of the archaeological values of AHLV compared to other values (i.e. social, historical and aesthetic values) and that planning has been placed in the hand of the governmental agencies with limited involvement from local communities in the decision making. Further results of the content analysis will be discussed in-depth in this chapter.

6.1 The Archaeological Heritage of the Lenggong Valley: A newly nominated WHS

The preparation for the nomination of the Lenggong Valley as a UNESCO World Heritage Site began in year 2010 under the initiatives of the Department of National Heritage Malaysia, Perak State Government and University Science Malaysia. Since then, continuous surveys and research were conducted across the valley and relevant stakeholders, such as the government agencies, research institutes, non-governmental organizations (NGOs), and the several identified stakeholders were consulted in the preparation of the nomination dossier. The nomination dossier was submitted to the UNESCO World Heritage Center by January and the nominated property was enlisted on the UNESCO World Heritage Tentative List since then. In July 2012, the Lenggong Valley was awarded with the UNESCO World Heritage Status, made it as the fourth site in Malaysia to have earned this recognition.

The nominated property is named the Archaeological Heritage of the Lenggong Valley (AHLV). This nominated property is described as *"... the remnants of cultural landscape comprising river gravels, open air stone tool workshop sites , limestone massifs and caves..."* in the nomination dossier. It is a serial nomination formed by two major clusters and consists

of seven individual archaeological sites (Figure 1.3). This serial nomination consists of three open sites and four cave sites, covering a core area of 399 hectares and a buffer zone of approximately 1787 hectares. Cluster 1 consists of two Palaeolithic open sites – Bukit Bunuh and Kota Tampan. Bukit Bunuh bears the evidence of early human-mad stone tool, dated to as early as 1.83 million years ago whereas the archaeological research conducted in Kota Tampan pointed to it as an early undisturbed stone tool workshop dated to 74,000 years ago. The uncovering of the stone tool workshop in the Kota Tampan, in particular, contributes to the regional understanding of the early lithic technology and revealed that the diversity and sophistication of the tools found in this workshop indicated that the early tool-making technology of Southeast Asia was as sophisticated as anywhere in the world. At present, this site is an important reference site for Palaeolithic stone making across the globe.

The Cluster 2 comprises a Palaeolithic open site of Bukit Jawa, and four cave sites, namely Gua Gunung Runtuh, Gua Kajang, Gua Teluk Kelawar and Gua Harimau. The Bukit Jawa was accidentally uncovered in 1997 following an expressway construction in Lenggong Valley and this *in situ* stone tool workshop site has been relatively dated to approximately 200,000 years based on the comparative study conducted by Zuraina (1997). Similar to the Kota Tampan, this site is located on the ancient lake shores, and the quartz and quartzite stone tools found in this site are morphologically similar to those stone tools from Kota Tampan, with only technologically slightly underdeveloped in comparison (Zuraina 1997). The cave sites, on the other hand, bear the evidence of human occupation during the late Palaeolithic and Metal Age, spanning from 13,000 to approximately 1,500 years ago. All aforementioned caves contains prehistoric human burials, prehistoric stone tools and food remains, indicated that these caves were used for habitation and burial purposes, especially

during the Holocene period (Chia 1997; Chia and Zolkurnain 2005; Goh 2008; Zolkurnain 1998; Zuraina 1994; Zuraina et al 2005).

Despite many evidence show that the human occupation are dated back to as early as 1.83 million years in the Lenggong Valley, however, the direct skeletal evidence of the prehistoric anatomically modern human (AMH) has thus far only found in several cave sites across the valley. The archaeological investigation in the Gua Gunung Runtuh, for instance, revealed a 90% complete human skeleton, radiocarbon dated to 10, 120 BP. This skeleton, best known as the Perak Man, is the oldest most complete human skeleton found in South-east Asia and was identified with a genetic deformity known as *Brachymesophalangia* type A2. The Perak Man has also been identified as the *Australomelanesoid*, a hominid population occupying many parts of indo-archipelago and Southeast Asia at the end of Pleistocene and early Holocene. More discussion of the significance of the cave archaeology of the Lenggong Valley is presented in the Chapter 3.

As briefly discussed above, all nominated sites have been archaeologically studied and the results show that these sites have been occupied by early humans between 1.83 million and 1,000 years ago (Mokhtar 2012:5). According to the UNESCO World Heritage Committee, the AHLV is inscribed on the UNESCO World Heritage List (WHL) based on criteria (iii) and (iv) of Outstanding Universal Value (OUV). The justifications for the OUV of AHLV are stated as follows:

Criterion (iii)*: The series of cave and open air sites along the Perak River in the Lenggong Valley is an exceptional testimony to occupation of the area particularly during the*

Palaeolithic era, but also during the Neolithic and Bronze Age periods from 1.83 million years ago to 1,700 years ago.

***Criterion (iv)**: The undisturbed in situ Palaeolithic stone tool workshops located on the shores of a paleolake and Ancient River gravel beds and dated in a long chronological sequence are an outstanding ensemble of lithic technology*.

6.2 The Management of AHLV prior to its UNESCO World Heritage Status: A brief highlight

Between 1980s and 2003, the conservation and management of the archaeological heritage of the Lenggong Valley were co-monitored by the Department of Museums and Antiquities and Lenggong District Council. This stage of conservation and management was relying on a very simple practice, mainly through the control of archaeological investigations (i.e. research grants and excavation license) and periodical site maintenances carried out by the staffs from Taiping Museum, located approximately 80km away from the Lenggong Valley. In early 2004, a more comprehensive conservation and management practice was introduced into the valley following by the establishment of the Division of Heritage, a division branches from the Ministry of Culture, Arts and Heritage Malaysia (KEKKWA). This division was later restructured and upgraded to the Department of National Heritage (DNH) in 2006.

Since 2006, the DNH began to channel sufficient funding and technical assistance for the archaeological research of the Lenggong Valley. The heritage conservation management of Lenggong Valley has also been systematized in accordance to the provisions and guidelines provided by the National Heritage Act 2005 (NHA 2005) and other international charters with minor enhancements by the local government and authorities since then. Between 2004 and July 2012 (Lenggong Valley was nominated as the UNESCO World Heritage Site in 30th

June 2012), the administration of the heritage management in Lenggong Valley was then placed under the purview of DNH and Lenggong District Council. The DNH Central Zone Branch is setting up in the central of Peninsular Malaysia to provide direct support services to the heritage conservation and management of the Lenggong Valley (e.g. site maintenance, technical services, professional consultation).

In the local level, the Lenggong District Council was authorized by DNH as the main agency to coordinate the management of the local archaeological sites according to the established guidelines (i.e National Heritage Act 2005, UNESCO Venice Charter). Apart from this, the Lenggong District Council also actively involved in the local development planning and worked with different state authorities such as the Department of Town and Country Planning, the Perak Economic Planning Unit and the local land office in the formulation of an integrated management planning to achieve a balance and integrated development in Lenggong Valley. Another statutory agency that takes part in the heritage management during this stage was the Lenggong Archaeological Museum. This museum was established in 2003 and mainly responsible for the conservation, storage and exhibition of the artefacts uncovered from the archaeological sites in this area.

Prior to the arrival of UNESCO World Heritage Status, there was no formally written conservation management plan put in place. Often, the conservation management of the archaeological heritage of this valley was mainly relied on the archaeologists who carried out the archaeological investigations or the conservationists who handle the conservation of the archaeological materials excavated from the sites. It was common that most of the archaeological investigation was conducted by professionally-trained archaeologists with the

application of multi-disciplinary approaches and all uncovered cultural materials were scientifically studied, analyzed and conserved either in situ or in the laboratory.

To date, the interpretation and presentation of the heritage of Lenggong Valley are mainly drawn from the archaeological data generated by the archaeologists. As such, the interpretation of the heritage of Lenggong Valley is mainly focused on its archaeological value (or scientific value) which mainly derived from the tangible elements associated to an archaeological site or object. The intangible elements such as the social connection, living traditions and spiritual beliefs associated with the sites are often been neglected given that the interpretation of the cultural heritage of Lenggong Valley are based on the professional-objective values.

Looking at the conservation management practices in Lenggong Valley for the past two decades, there were two major trends that can be observed. First is the domination of the professionals such as archaeologists and government authorities in the management of the cultural heritage through the constitutional control or governmental bureaucracy. As discussed in Section 1.4 and Section 2.3, the heritage management system in Malaysia can be referred as a "top-down" model given that all heritage-related policies or decisions were mainly formulated or made by the professionals without the consultation to or inclusion of local community and non-governmental organizations. Furthermore, the contemporary heritage legislations and policies seems to also advance the domination of authority in heritage sphere as these legislative documents empower the authorities to claim full custody towards the cultural heritage discovered across the country.

The second obvious trend was the imbalances of the focus of conservation management which tends to prioritize the tangible or physical conservation of the cultural materials. Up until now, little acknowledgement has been given to the intangible heritage of the Lenggong Valley. Historically, the cave sites of Lenggong Valley are associated with several important historical episodes during the Second World War and early archaeological records (e.g. Evans 1917) also show these caves have been extensively occupied by the Indigenous tribes of Peninsular Malaysia in the recent past. However, the heritage conservation and management of the Lenggong Valley prior to the 2012 never integrated these important cultural associations into the interpretation of the cave culture of the Lenggong Valley and how the local community culturally connected to these caves is thus far remain unknown.

The absence of a formally written CMP prior to July 2012 has led to a scenario in which the heritage conservation and management of the Lenggong Valley was inadequate to address the management issues. Among the others, the uncontrolled anthropogenic activities, development and tourism pressures and the imbalances in the focus of archaeological research are few of the major challenges to the heritage conservation and management of the Lenggong Valley (Refer to Section 1.5). For instance, the uncontrolled anthropogenic activities such as illegal digging in the caves and the illegal logging within the proximity of the cave sites believed to have caused the deterioration of these cave sites. As all the cave sites are located within plantation areas and the secondary forest surrounding the caves has been cleared for rubber and fruit plantations, the original landscapes within proximity of the caves have also been bulldozed. Following by the inscription on the UNESCO World Heritage List, the ICOMOS also pointed out that the existing main hreats to the Lenggong Valley are change of land use, housing development, quarrying activities, increased tourism activities and graffiti at cave sites due to increased visitation (ICOMOS 2012:164). As such,

the state party has been urged by the UNESCO and ICOMOS to produce a CMP which integrates a Special Area Plan as a mean to address the aforementioned issues.

Considering the present state of conservation and management of the Lenggong Valley still subject to several problems and threats, the formulation of an effective CMP to oversee these issues is important in the near future. A thorough review of the existing CMP of the Lenggong Valley, is therefore, considered as a practical way to figure out the strengths and weaknesses of the existing CMP to allow appropriate recommendations for the future delivery of the heritage conservation management for Lenggong Valley.

6.3 The Content Analysis of the CMP of AHLV: motivation and rationale

The nomination dossier submitted to the UNESCO World Heritage Convention contains a detailed description of the nominated property as well as a proposal for its future management based on the requirements as stipulated in the UNESCO World Heritage Centre Operation Guidelines. It comprises seven distinct chapters to provide sufficient information related the archaeological sites of the Lenggong Valley which includes the identification of the nominated property, a detailed description of the archaeological records of the sites, the justification for the inscriptions included a clear statement of Outstanding Universal Value (OUV) of the each nominated property and a brief proposal for the conservation management of the nominated property (*http://whc.unesco.org/uploads/nominations/1396.pdf*). Along with this nomination dossier, a separate copy the preliminary Conservation Management Plan (CMP) has also been submitted to the UNESCO as a measure to safeguard the archaeological heritage of the Lenggong Valley. As a newly-nominated World Heritage Site, the preliminary CMP of AHLV is prepared with the assistance of the consultation from UNESCO Bangkok office and the plan was developed with a special reference to the CHMP of the heritage site

of Plain of Jars in Lao People's Democratic Republic prepared for the nomination of the UNESCO WHS. Generally, this CMP details the short and long-term management goals and sets forth the management strategies for the conservation of the outstanding universal values of AHLV.

As one of the newly nominated UNESCO World Heritage Site, the conservation management of the AHLV is now has to be comply with the conservation standards and strategies imposed by UNESCO (e.g Venice Charter 1964; Feilden and Jokilehto 1993). However, what constitute a "standard" or "good" heritage management guideline or framework is still relatively vague. Despite the fact that the preliminary CMP of AHLV is prepared by adopting proper principles and guidelines as recommended by UNESCO, the effectiveness of this CMP in addressing the management issues of AHLV is still questionable. This study therefore, takes the initiative to explore the effectiveness of this newly proposed management plan in assisting the contemporary and future management and development of the WHS of AHLV.

In searching for suitable evaluation criteria for the assessment of the effectiveness of the preliminary CMP of AHLV, several literatures dedicated to the management of World Heritage Sites were found useful. For example, Feilden and Jokilehto (1993) first published a Management Guideline for World Cultural Heritage Site to assist with the formulation of a proper cultural heritage management plan (CHMP). This management guideline provided a summary of guiding principles recommended by UNESCO and proposed three core components for a CHMP included site description, site evaluation and objectives of the plan and the overall site management. Later, McKercher and du Cros (2002) introduced a Cultural Heritage Management (CHM) framework that carries five major components, including inventory and evaluation of the heritage property, legislation, involvement of professionals or

experts in the management process, stakeholder consultation and participation and an on-going review and monitoring of the management plan. One of the strengths of the McKercher and du Cros's (2002) model compare to the framework proposed by Feilden and Jokilehto (1993) is that their CHM framework recognized the contemporary global and local factors as the underlying influences that shaped the CHM development in different region.

In 2010, Cleere (2010:4-12) proposed a World Heritage Template as a reference for the development of management plans for archaeological sites across the globe. This template provides basic parameters for the management planning for a World Heritage Site (particularly archaeological site) and many of the principles and procedures and conforms to the recommendations made by UNESCO and ICCROM. Cleere's proposal of a good World Heritage Management planning comprises nine major components. That included a basic guideline to the management planning process, identification of stakeholders, investigation and understanding of the site, conservation and monitoring of the archaeological site, presentation and interpretation of the archaeological heritage, tourism and visitor management as well as a valid and achievable action plan with regular review.

Apart from these heritage management guidelines and frameworks proposed by different heritage practitioners based on their experiences in handling with different conservation projects, there is also a general agreement that the contemporary heritage conservation should integrate the idea of "sustainable development" into the conservation management planning. The term "sustainable development" was first properly defined in the Brundtland Report as *"... development that meets the needs of the present without compromising the ability of future generations to meet their own needs..''*. Generally, the idea of sustainable development carries two key principles, emphasizing on the holistic planning and strategic decision-making and to promote environmental, economic and societal growth that can be sustained

over the long term (Landorf 2009:54). Given that one of the recent global strategies is to promote the sustainable use of heritage for the local development, the contemporary heritage management planning of AHLV is therefore, expected to have been adopted a more holistic and integrated approach towards the sustainable heritage conservation planning. In the recently published "*Strategic Action Plan for the Implementation of the UNESCO Convention, 2012-2022*", the UNESCO World Heritage Convention put forward the concern for sustainable development, which aimed to promote the idea which heritage protection and conservation should consider present and future environmental, societal and economic needs of the local community and the community-driven heritage conservation is recommended as a key to a success heritage conservation program.

The contemporary heritage management of the Lenggong Valley, apart from being challenged by the low local involvement in heritage conservation, one of the major issues since it obtained its UNESCO World Heritage status is the growth of heritage tourism activities across the valley. According to the latest source announced by the National Heritage Department Malaysia, the numbers of visitors to Lenggong Valley have been increased by 150% for the past 12 months (Kumaran 2013). Additionally, the issues of local preparedness in coping with the drastic socio-economic development with the arrival of UNESCO world heritage status is still relatively apparent given that the local community are still skeptical about the future of the valley (Ahmad Suhaimi, 2011, personal communication).

As discussed above, it is notable that majority of the frameworks proposed by different heritage practitioners or institutions suggest that good legislation framework, thorough site

identification and description and achievable implementation plan as three core components that should be adopted into a conservation heritage management planning. A primary examination of the existing CMP of AHLV shows that the management planning tends to prioritize the conservation of the archaeological values of AHLV compared to other values (i.e. social, historical and aesthetic values) and that planning has been placed in the hand of the governmental agencies with limited involvement from local communities in the decision making. In order to examine to what extent, the contemporary CHMP of AHLV is sufficient to address the management issues, a total of five major aspects have been identified as the key to a success cultural heritage management planning for AHLV, namely:

(i) Legislation

(ii) Site evaluation and management objectives

(iii) Action and implementation

(iv) Community values and attitudes

(v) Stakeholders and Community Participation

Each aspect will be evaluated through a quantitative content analysis with the assistance of the coding items specially developed for the study and the results generated from the content analysis will be presented in later sections of this chapter.

6.4 The Content Analysis of the AHLV Management Plan: Methodology

Usually, the first step in the content analysis is to identify the themes or dimensions which to be assessed via systematic coding. In the case of Lenggong Valley, five dimensions have been identified as the key components to a successful and sustainable heritage management plan, namely legislation, site evaluation and management objectives, action and

implementation, community values and attitude and stakeholder participation (refer to Chapter3, section 3.2.1(a)). Each dimension was assessed through the systematic coding process to explore to what extent, these dimensions have been well-integrated into the management planning of AHLV. A total of 30 coding items across five evaluation dimensions were adopted for this study. Generally, some of these evaluation instruments are adopted from Simpson (2001) and Landorf (2009) and some were specifically developed for this study (Table 6.1). In this content analysis, a four-point Likert scale was adopted in order to quantitatively evaluate to what degree the assessment items were integrated into the management plan. The responses are quantified using the numeric scale range from 0 to 3, and the rationales for the coding responses are elucidated in Table 6.2.

Evaluation Dimension	Coding Item
Legislation	1. Does the national legislation provide clear definitions about the scope and definitions of heritage, including not only tangible but also intangible heritage and these are described in the plan? 2. Does the national legislation provide a guideline for the identification of the heritage asset particularly the archaeological sites and artefacts and these are deliberated in the plan? 3. Does the legislation contain a provision about licensing in heritage and the plan included the issues such as: - The trade of antiquities? - Import/export of heritage item? - License to excavate the heritage site? 4. Does the national legislation describe the policy in relation to conservation and preservation of the heritage and it is outlined in the plan? 5. Does the national legislation include the provision for the enforcement of the heritage act/decree/enactment and this is included in the plan?
Site Evaluation and Management Objectives	6. Are tangible heritage characteristics described? 7. Are intangible heritage characteristics described? 8. Are the land use and ownership patterns identified? 9. Are demographic characteristics identified? 10. Are the cultural significances of the site evaluated? 11. Are heritage tourism activities identified?

	12. Is the degree of authenticity and integrity of the site identified? 13. Are the threats and risks towards the heritage site identified? 14. Are the management visions/goals/objectives clearly stated in the management plan? 15. Do the management objectives prioritize the significance of the Outstanding Universal Values of the site?
Action and Implementation	16. Is the administrative structure of the management described? 17. Is the management plan integrated into planning policies at national, regional or local levels? 18. Is the implementation/action plan reviewed or monitored periodically 19. Are the staffing level and human resources requirements of the management addressed? 20. Is the financial/funding situation described? 21. Is the involvement of the NGOs in the implementation of the management described/addressed?
Community Values and Attitudes	22. Are local heritage values identified? 23. Are critical issues of residents in relation to heritage identified? 24. Are community attitudes to heritage assessed? 25. Is the attachment/connection between the local residents and the heritage site described?
Stakeholder and Community Participation	26. Are the stakeholders and their relationship identified? 27. Is the partnership between the administrator board and other stakeholders addressed in the plan? 28. Are local ideas incorporated into the heritage management? 29. Is the level of support from local communities for heritage management identified? 30. Is the participation of local communities and stakeholder in the management process addressed?

Table 6.1: The AHLV management plan coding instruments.

Scale		Rationale
Award 0 if:	(ii)	The item has been ignored/absent from the management plan
Award 1 if:	(ii)	The item is mentioned but not defined, described or integrate into the management plan
Award 2 if:	(ii)	The item is mentioned, defined, described or incorporated into at least one component in the management plan (e.g. a section heading)
Award 3 if:	(iii)	The item is well defined/well deliberated and the descriptions are unambiguous/unquestionable
	(iv)	The item has been incorporated into more than 1 component in the management plan

Table 6.2: The rationales for the coding response.

The content analysis was conducted in two stages. At stage 1, five heritage practitioners (two archaeologists and three heritage officers) were invited to attend two sessions of focus group meeting (each took approximately 2 hours) to run the document familiarization and code the text according to the assessment themes and coding items. Each participant was given a hard copy of AHLV management plan and the coding item sheet and they were allowed to code the text based on their own knowledge while I run through the content of the plan. After the participants completed the text-coding process, we moved to the second stage where the participants started to evaluate the coded data and analyzed to what degree or extent these principles or items were integrated into the management planning of the site. The assessment of the content of the plan was conducted in another separate focus group session.

In this analysis, each of the coding items was awarded a response scaled between 0 and 3 based on the extent of the integration of coding items into the AHLV management plan. All responses obtained from the analysis were processed using the IBM SPSS (Statistical Product

and Services Solution) quantitative analytical tool. A mean score (minimum 0, maximum 3) was used to measure the degree of integration of these principles into the plan.

6.5 Content Analysis: The results

Figure 6.1 and Table 6.1 present the results of the content analysis of the AHLV preliminary CMP based on the mean reading for each assessed dimension. Overall, the result shows that the management plan of AHLV gives a greater focus on the legislation and its action and implementation. With a mean reading of 1.9, it demonstrates that this management plan generally adopted an average legislation framework and the important legislative policies are elucidated and incorporated into the plan. The action and implementation of the management strategies gained a mean of 1.93 out of 3, indicates that the integration of this dimension into the management plan is relatively evident, with only few key aspects of implementation being excluded from the plan. Site evaluation and the management objectives are provided in the plan, but with a mean score of 1.66, it suggests that these aspects are not well integrated into the planning process. Stakeholder's participation obtained a mean score of 0.6, demonstrating a failure of this plan to address the issues related to the identification and involvement of stakeholders in the planning and management process. Finally, examination of concerns about community values and attitudes shows that this plan makes no effort to identify the local values and attitudes, with a mean score of 0 for this dimension. The detailed assessment results obtained for each of the coding items will be deliberated in the following section.

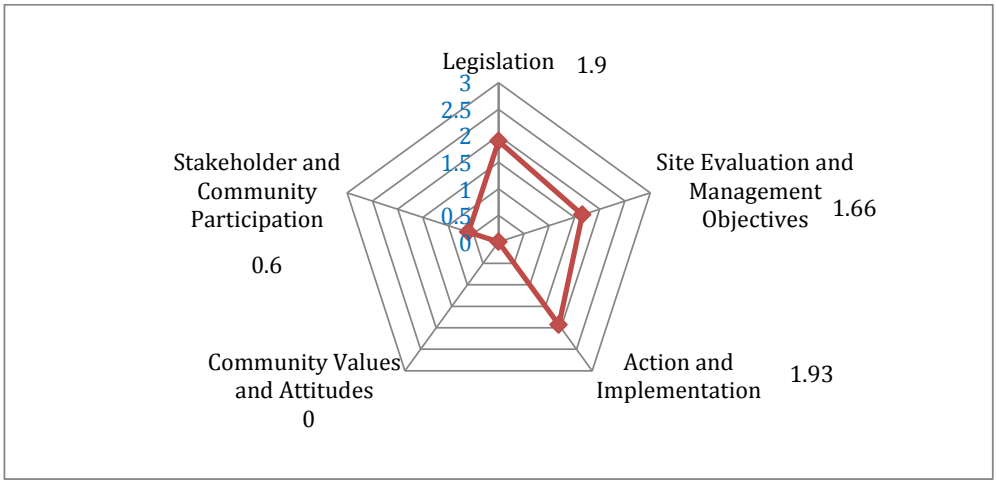

Figure 6.1: The mean reading of the responses collected for each of the evaluation dimension.

	Assessment Item	Results (mean score)
Legislation	1. Definition and scope of heritage (tangible and intangible heritage)	1.4
	2. Guideline for the identification and documentation of the heritage asset	1.8
	3. Provisions about the heritage licensing	2.8
	4. Conservation policies stipulated in the international, national and local decrees and charters	2.0
	5. The enforcement of heritage legislation	1.5

Site Evaluation and Management Objectives	6.	The tangible heritage characteristics	3.0
	7.	The intangible heritage characteristics	0
	8.	The land use and ownership patterns	0.6
	9.	The demographic characteristics / patterns	0
	10.	The cultural significances(i.e. social, historical and aesthetic) of the sites	1.8 3.0
	11.	Tourism activities	1.2
	12.	Authenticity and integrity of the site	1.2
	13.	Threats and risks towards the site	3.0
	14.	Management visions/goals/objectives	2.8
	15.	Outstanding Universal Values of the site	
Action and Implementation	16.	Administrative structure	3.0
	17.	Integrated planning	2.8
	18.	Staffing / human resource levels	1.0
	19.	Financial and funding mechanisms/situation	1.8
	20.	Involvement of NGOs	0
	21.	Monitoring and review of management	3.0
Community Values and Attitudes	22.	Local heritage values	0
	23.	Issues for local residents	0
	24.	Community goals in heritage management/conservation	0
	25.	Community attitudes towards heritage	0
	26.	Local connection/ attachment (i.e. social, historical or spiritual) to the sites	0
Stakeholder and Community	27.	Identification of stakeholders and their relationship	1.0
	28.	Stakeholder partnerships	1.0
	29.	Local ideas incorporated into management planning	1.0
	30.	Level of support of the local community in heritage management	0
	31.	Local stakeholders involved in the consultation and decision making.	0

Table 6.1: Results of the content analysis of the AHLV preliminary CMP based on the mean score.

6.5.1 Legislation

Legislation plays an important part in an effective heritage management plan given that much heritage planning is influenced by the legislative policy (Cleere, 1989). Pearson and Sullivan (1995:34) have previously pointed out that the management orientation of a heritage place is highly dependent on the legal framework established by the local government. Generally, many heritage practitioners agreed that a good legislative framework as suggested by Pearson and Sullivan (1995) and Prott (1993) should make provisions or policies for:

(a) the identification or definition of heritage;
(b) the conservation and management of heritage;
(c) integrated heritage planning and,
(d) the international standards for heritage preservation.

In this content analysis, a total of five coding items were developed based on the aforementioned themes to examine the effectiveness of legislation and policy delivery in AHLV (Figure 6.2). These coding items were developed to explore to what extent, the legislative framework established by the Malaysian government is well integrated into the management planning of AHLV.

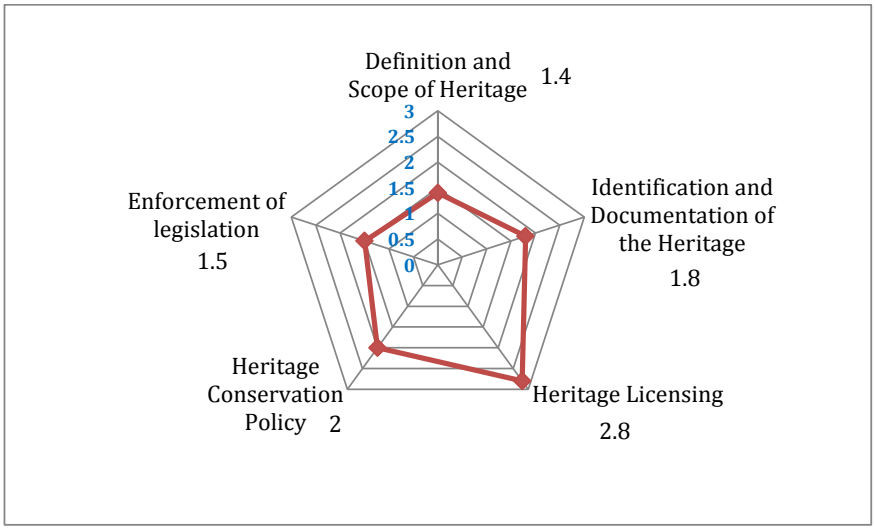

Figure 6.2: The mean reading for the each coding item adopted to assess the level of integration of heritage legislation in the AHLV's CMP

The existing management of AHLV conforms to the common principles of practice that are undertaken and enforced by the various government agencies such as the Department of National Heritage, the Department of Museums (both within the Ministry of Information, Communications and Culture), the Department of Town and Country Planning and various local authorities (both within the Ministry of Housing and Local Government) across the whole of Peninsular Malaysia. Overall, four legal instruments have been adopted into this management plan. The content analysis shows that the national legislation documents are not sufficient to assist the management and conservation of the archaeological heritage of AHLV, with an average mean score of 1.9 (Figure 6.2). Five aspects of the legislations have been examined and the result of each is discussed as follows:

(i) Definitions and scope of heritage (mean score=1.4)

From the content analysis, it shows that the national heritage legislation fails to provide clear definitions for heritage, with a mean score of only 1.4. Of four legal

documents, only the National Heritage Act (NHA) 2005 contains brief definitions of what constitutes heritage. The NHA postulates that the heritage comprises of tangible and intangible elements. Generally, the heritage in Malaysia can be subdivided into three main categories: natural heritage, cultural heritage and underwater heritage. However, the Act does not provide sufficient guidelines or criteria for what constitutes each category. According to the NHA, archaeological artefacts, remains and materials aged 50 years or over are referred to as archaeological relics. This definition is relatively vague given that there is no physical attribution recommended to classify what is an archaeological relic. The analysis shows that the definition of archaeological heritage is rarely mentioned in the management plan of AHLV and that no definition of "archaeological heritage" is given in the plan.

(ii) Guideline for the identification and documentation of the heritage (mean = 1.8)

The analysis shows that the guidelines for the identification and protection of the heritage asset are not well integrated into the management plan of AHLV, with a mean score of 1.8. This is because the existing legislation is insufficient to enable the identification of the heritage asset given that there is an absence of official charters or guidelines. Although certain parts of the plan state that internationally-accepted charters such as the UNESCO Venice Charter or ICOMOS Charter for the Protection and Management of Archaeological Heritage should be adopted as the principle documents to assist in the identification and documentation of the heritage, the relevant guidelines or principles recommended by these charters, however, are not recorded in the plan.

(iii) Heritage Licensing (mean score = 2.8)

The integration of information about heritage licensing into the management planning of AHLV is evident, reflected in a high mean score of 2.8 from the content analysis. Of all four legislative documents, only the National Heritage Act 2005 contains provisions relevant to heritage licensing. The NHA, provides sufficient support to address licensing issues such as the trade in heritage items, licenses or permissions to excavate a heritage site and the registration of heritage items and dealers. This component is very important in heritage management planning especially in Southeast Asian countries where the illicit trading of antiquities is still active across the region (e.g. Brodie 1999; Stark and Griffin 2004).

(iv) Heritage Conservation Policy (mean score=2.0)

Generally, the national legislation established a number of policies in relation to the conservation and preservation of heritage. The NHA, for instance, has proposed a set of heritage conservation policies to guide the designation of heritage sites, conservation zone planning and the inspection and monitoring of heritage sites. However, the integration of these conservation policies into the management plan is somehow evident, in the policy about the land acquisition and zoning, but few provisions for the conservation of archaeological sites and the procedures for applying for planning permission were mentioned and incorporated into the plan. These policies are not thoroughly detailed in the plan and some policies do not conform to international standard practice as recommended by UNESCO and ICOMOS.

(v) Enforcement of Heritage Legislation (mean score=1.5)

At present, the enforcement of the heritage legislation is in the hands of National Heritage Council. Overall, each heritage legal document contains provisions for such enforcement and this provision is generally comprehensive, covering the appointment of enforcement officers to the investigation of heritage offences, as well as seizure of the heritage objects. However, the integration of the enforcement of legislation into the management plan of AHLV is not evident, given that the management plan only covers a small section of the function of the National Heritage Council.

6.5.2 Site Evaluation and Management Objectives

A thorough evaluation of a heritage site and clear management objectives are considered to be the keys to an effective management plan (Pearson and Sullivan1995:82). This is because the detailed investigation of a heritage site will provide useful baseline information for the formulation of future management orientation and will ensure that management objectives are based on the cultural significance or attributes of a heritage site. According to the literatures (Feilden and Jokilehto 1998; Pearson and Sullivan1995), the identification and documentation of a heritage site has to be holistic and as detailed as possible, so that every aspect of the site can be investigated in the early stages of the management planning process. This will include the examination of the tangible and intangible elements of a heritage property, the land use and demographic patterns, the identification of its cultural significance, and existing heritage tourism activities, as well as the factors that affected the heritage property and its management goals and objectives. Overall, the AHLV provides only an average coverage of and explanation about the characteristics of the Lenggong Valley sites,

scoring only 1.66 out of 3 (Figure 6.3). Some important information such as the demographic details and intangible heritage elements have been totally left out of the management plan. The management objectives are comprehensive and were mainly established to retain the OUV of the Lenggong Valley.

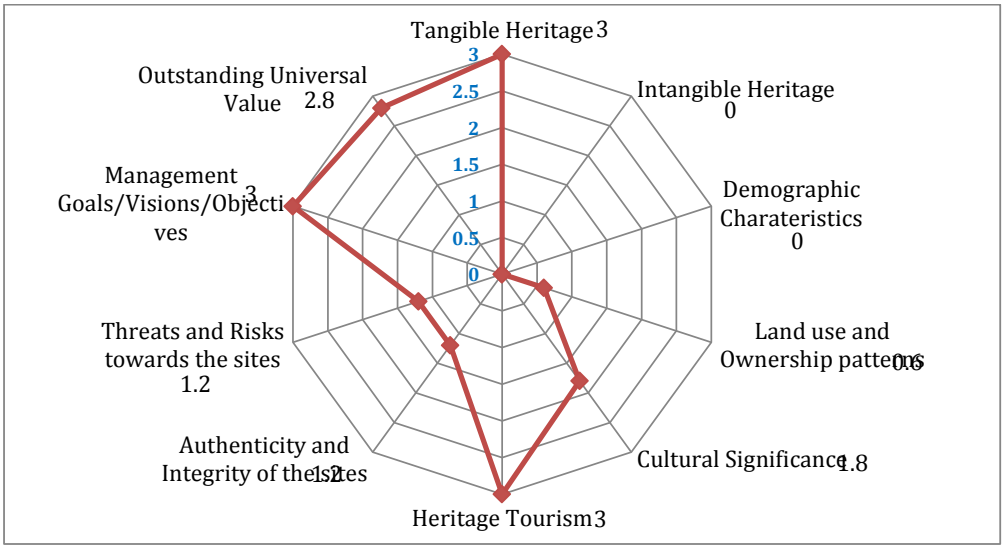

Figure 6.3: The mean reading for the each coding item adopted to assess the effectiveness of the site evaluation and management objectives of AHLV.

(i) Tangible Heritage (mean = 3.0)

From the analysis, it shows that the tangible heritage of the AHLV is well deliberated in the plan and the description of each of the archaeological sites within the nominated area is firmly supported by the scientific data. Basically, the chapter 1 of this management plan provides an in depth discussion of the tangible elements of each nominated archaeological site with a clear presentation of its geographical and geomorphological settings, physical attributes and records of archaeological findings. The boundary of each archaeological site has been well defined with sufficient zoning information (i.e. core and buffer zone) and clear inventory of the archaeological artefacts uncovered from each site is also

provided. The interpretation of the tangible aspect of the archaeological heritage of each nominated site is well presented and described in the plan. This had inevitably allow better understanding into the archaeological significance of the nominated property and the Outstanding Universal Value (OUV) of the tangible heritage of AHLV is well justified through a comparative analysis with 16 heritage property from other parts of the world .

(ii) Intangible Heritage (mean = 0)

The Lenggong Valley is an area which possesses a long human occupation history and some contemporary living traditions such as the subsistence patterns and local beliefs have been inherited from the previous generations and still in practice up until today (will be discussed in depth in Chapter 7). Heritage surveys conducted through this PhD project reveals that the Indigenous heritage still influence the contemporary lifeways of Lenggong's community up until now even the majority of the Indigenous tribes have been relocated in Kampung Air Bah, a village distance about 15km from the valley. Over the last century, many studies have been conducted to investigate the indigenous heritage of the Lenggong Valley, primarily emphasize on the ethnography and the arts of the Indigenous tribes who used to camped across the area prior to the late 1990s (i.e. Evans and Callenfels 1928; Tason and Mokhtar 2012). This PhD project further reveals that many of these archaeological sites are associated with the several historical and social episodes of the local community since the beginning of 20th century (see Chapter 7). However, it is ironic that all of these intangible elements of the local heritage have not been included at all in the management plan.

(iii) Demographic characteristic (mean = 0)

In view of the effect which the inscription of a property on the World Heritage List could have on its future, the local community is therefore considered as the most important stakeholders in the heritage management planning. As such, a detailed identification of the demographic characteristic is essential to acknowledge the cultural and ethnic diversity associated with a heritage property. As argued by Black and Wall (2001) based on their study conducted in Indonesia, the acknowledgement of the cultural diversity within a local community is a cornerstone to a good heritage conservation program given that oftentimes, the successfulness of a heritage conservation program is highly depend on how much the management team integrate the cultural background of the local community into the management planning. Added to this, Bryne (2011:3) flagged up that if a heritage management planning didn't take into account the cultural and ethnic diversity of the local society, it will be problematic to enact effective heritage conservation policies and program at local level. In the case of AHLV, it is surprising that the existing demographic characteristics of the Lenggong Valley are not included in the management plan of AHLV. The estimation of population size is not mentioned and other demographic details such as the gender, age or ethnicity of the residents of the Lenggong Valley are also absent from the plan.

(iv) Landuse and Ownership Pattern (mean = 0.6)

A clear identification and documentation of the landuse and ownership patterns for a heritage site is fundamental in every heritage management planning. This is partly due to the fact that the change of the landuse pattern and ownership is one

of the major factors that potentially threatened the integrity and authenticity of a heritage property. Examination into the existing CMP of AHLV however, shows the landuse and ownership patterns of the AHLV, are not detailed in the management plan. Overall, only a small section in the management plan (section 4.2) explaining the procedures in negotiating with the owners of the designated heritage sites about the compensation and transition plans for ownership. The major categories of the land ownership within the core and buffer zone whether it is State, Provincial, private, community, traditional, customary or non-governmental owned is not mentioned in the management plan. The significant changes in the landuse or ownership over the past few years or in the near future are also not elaborated in the plan. This demonstrates a possibility in which the contemporary management arrangement of AHLV might not sufficient to tackle the issues of changes in landuse and ownerships in a long run.

(v) Cultural Significance of the site (mean = 1.8)

The management plan of AHLV identified the archaeological values of the site and justified each component of archaeological significance with scientific data generated from archaeological research. The plan acknowledged that the archaeological importance of the Lenggong Valley is measurable at a global scale and the main objective of the management plan is to adopt appropriate strategies to retain this archaeological significance. However, other dimensions of cultural significance, such as social significance and historical significance, are not discussed in the plan. The historical and social background of the site, as well as social interactions between the locals and the sites, are not presented in the plan and thus other elements of cultural significance could not be traced from the plan.

(vi) Heritage Tourism (mean = 3.0)

Undoubtedly, the management plan of AHLV is placing greater focus on tourism activities within the core and buffer zones of AHLV. The plan details existing heritage tourism activities and provides a thorough inventory of the attractions of AHLV and past annual statistic on visitation. The plan also proposes strategies to promote a sustainable heritage tourism development in AHLV. Such strategies include infrastructure development, visitor management, and risk management, as well as collaboration with the local tourism planning authorities. It also puts forward a proposal to promote local participation and partnership in heritage tourism of AHLV. As the tourism activities within the AHLV is projected to be increased by at least 100% within a year after its inscription, a series of outreach programmes have been proposed aiming at increasing the local capacity building in local heritage tourism sector.

(vii) Authenticity and Integrity of the site (mean = 1.2)

A detailed examination of the present state of authenticity and integrity of a nominated property is a mandatory component of any World Heritage Site management plan. This is because understanding the authenticity and integrity of a site will reflect on the present state of conservation and thus provides a baseline for the designation of appropriate strategies to improve the state of conservation (Jokilehto 2006; Stovel 2007). In the case of AHLV, the management plan failed to define the concept of authenticity and integrity and explain how these concepts should be integrated into the context of AHLV. The integrity and authenticity of the nominated property is not thoroughly presented in the management plan. Basically, the plan only gives a brief examination of the present state of

conservation, and highlights the importance of the heritage management team to liaise with the relevant bureaucracies in order to conserve the authenticity and integrity of the property in accordance to the international standards as recommended by the World Heritage Convention.

(viii) Threat and Risk (mean = 1.2)

The threats and risks towards the heritage site of AHLV were identified through the Heritage Impact Assessment (HIA) conducted by the Department of National Heritage. However, the management plan of AHLV did not clearly deliberate the results obtained from the HIA. The potential threats and risks that might affect the integrity and authenticity of AHLV were briefly outlined in the plan. For instance, a list of potential threats and pressures such as development pressures and changes of land use pattern were identified and earmarked as indicators for monitoring, however, no mitigation strategy is recommended.

(ix) Management Goals, Visions and Objectives (mean = 3.0)

The management plan of AHLV provides clear and detailed management goals, visions and objectives by giving extended explanations of each component in a separate chapter. Overall, this management plan aims to propose effective management strategies to preserve the integrity and authenticity of the AHLV in order to promote sustainable development within the framework of the World Heritage Convention. A comprehensive implementation plan has also been proposed to achieve the goals, visions and objectives of the heritage management of AHLV. As this preliminary CMP will be only adopted for a short time of period until the endorsement of new CMP in 2014, the management goals of this

preliminary CMP is therefore tend to be present-oriented, with no long term management goals and strategies deliberated in the plan.

(x) Outstanding Universal Value (OUV) (mean = 2.8)

From the analysis, it shows that the preliminary CMP of AHLV provides an in depth discussion of the OUVs of the property, and each of the OUVs is justified based on the scientific data generated from years of archaeological research in this valley. Generally, the OUVs of the nominated property are central to its archaeological significance, it is therefore, the core of the whole CMP is to enhance the effort in protecting the archaeological significance of the AHLV. In order to retain the OUVs of AHLV, this CMP proposes to integrate the local planning into the conservation management as well as recommends few sustainable development measures such as the control of developments within core and buffer zones. Added to this, this CMP also tends to promote the future research into the archaeology of the valley as a means to enhance and strengthen the OUVs of the Lenggong Valley.

6.5.3 Action and Implementation

The action and implementation is considered as one of the core components of a good CMP. The action and implementation plan normally outlines the administration structures of a management team and how the team launches the conservation policies and programs in short and long-run (Pearson and Sullivan 1995:220). Normally, the implementation of a CMP makes use of a number of management practices, such as the strategies to oversee the recruitments and training of professionals and personnel, funding mechanisms for the

implementation of the conservation management, as well as the short and long-term reporting and review of the management and conservation projects. Each of these components is crucial to ensure that the conservation and management policies are competently implemented to achieve the management goals. In the case of the Lenggong Valley, I evaluated the effectiveness of its action and implementation based on six themes or components as shown in Table 6.1. These themes are chosen based on the assumption that the implementation of a CMP is rooted in a good administrative structure with sufficient staffing level and financial support. On top of this, the role of different stakeholders included NGOs in the management planning is also a key to the success of a CMP. Of course, the implementation of conservation management of the Lenggong Valley also requires a regular monitoring and review mechanism.

From the analysis, it demonstrates that the action and implementation strategies adopted by the management team of AHLV are fairly mediocre, with a mean score of 1.93 out of 3.0 (Figure 6.4). Out of six evaluated components, only three – administrative structures, integrated planning and monitor and review are well deliberated in the plan. The financial situation and the staffing level of the management team of the Lenggong Valley are mentioned and described, but not in depth whereas the involvement of the NGOs is totally absent from the action and implementation of the conservation management.

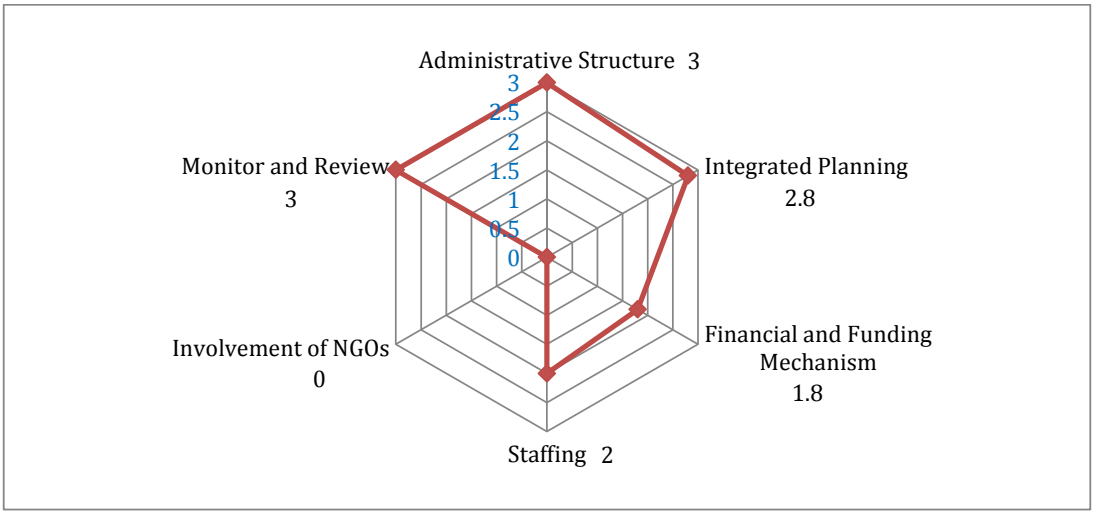

Figure 6.4: The mean reading for the each coding item adopted to assess the level competency of the action and implementation of AHLV's CMP

(i) Administrative Structures (mean = 3.0)

Inevitably, the preliminary CMP of AHLV adopted an excellent administrative structure to oversee and coordinate the heritage management of AHLV. A chapter focuses on the administration of the management of AHLV before and after the inscriptions have been presented in the CMP. It details the statutory and non-statutory bodies that are involved in the administration at Federal, State and Local levels and the function of each body is well deliberated and incorporated into the plan. Upon the inscription, an on-site World Heritage Office (WHO) was established and among the others, the responsibilities of WHO lies in two major areas: first is to oversee the implementation of this preliminary CMP in order to protect and retain the OUV of the Lenggong Valley. The second is to promote the integrated management planning through the liaison with Department of National Heritage and other government agencies. Additional to this, a Heritage Technical

and Scientific Committee (HSTC) was established to provide technical and scientific support to WHO. The formation of this special committee is an advantage to the delivery of the conservation management of the Lenggong Valley given that majority of the committee are professional from different fields and thus can provide concrete consultation and support to the WHO.

(ii) Integrated Planning (mean = 2.8)

The analysis shows that the management planning of the AHLV is highly focused on collaborative efforts from different planning units such as the Town and County Planning Department, the Economic Planning Unit and the Lenggong District Council. The management plan of AHLV also complements plans embedded in the Ninth and Tenth Malaysia Plan, Northern Corridor Economic Region (NCER) Initiatives, Perak Spatial Development Strategy, Perak State Seventh Structural Plan and District of Hulu Perak Local Plan.

The founding of a special committee board known as the Heritage Steering Committee (HSC) prior to the arrival of the UNESCO World Heritage status was in fact the first initiative shown by the management team to adopt an integrated planning policy in their management planning. This special committee comprises 14 representatives from different governmental and non-governmental agencies to monitor the statutory and non-statutory development plans in order to ensure continued protection of the property. In order words, HSC plays and important role to influence the policymaking and integrated planning of the conservation management of the Lenggong Valley.

(iii) Financial and Funding Mechanism (1.8)

The identification of the funding mechanism is an extremely important component in the heritage management planning because appropriate funding will ensure that the conservation management of a heritage site can be performed to the best of its ability. In the case of the Lenggong Valley, the content analysis found out that the financial situation and the funding mechanisms of the conservation management are not well identified in the contemporary CMP. Basically, the plan indicates that the contemporary conservation management of the Lenggong Valley is supported by two major funds, namely the Operation Fund and the Development Fund. The Operation Fund is granted by the state government and mainly aiming at supporting the management of the human resource. The Development Fund, on the other hand, is granted by both Federal and State governments for the practice of conservation programmes. How these incentives are distributed, however, are not mentioned in the plan.

One of the weaknesses of the existing funding mechanisms of AHLV is that the management team failed to identify the short and long term strategies to enhance the funding or grants programmes in the future. This might resulted in creating a compromised environment for the conservation management. Added to this, the plan also failed to clearly identify the alternative funding mechanism such as how to invest in and profit from the contemporary conservation. The existing plan only mentions that a “visitor fee” system will be implied and the money collected from the visitors will be channeled into a “Special Fund” for conservation and outreach

programme at the Lenggong Valley. Further details about this fund, however, is totally left out from the plan.

(iv) Staffing (mean = 1.0)

Oftentimes, the effectiveness of the action and implementation of a CMP are highly depended on the staffing level. As what Feilden and Jokilehto (1993:47) recommended, adequate number of properly trained personnel is one of the keys to the successfulness of a conservation management of a world heritage site. The analysis shows that the existing CMP of AHLV carries very limited staffing information. Generally, the management plan acknowledges the importance of having adequate staffs to fulfill the management requirements and proposed a plan to recruit volunteers to assist in the conservation management. However, the existing staffing level and the capacity of human resources needed to achieve the management objectives are not identified in the plan. Failure in addressing such issues will lead to a possibility of over or under utilized the human resource in the future.

Depending to the nature of a heritage property, the personnel who works in the heritage site should be equip with different expertise and professionalisms in order to support different management requirements. It is disappointed to find out that the contemporary conservation management of AHLV does not clearly identify the expertise needed to implement the conservation strategies and the roles and responsibilities of staffs are not clearly deliberated in the plan. At present, the staffs that work in the conservation management of the AHLV is mainly from the government agencies. It is understandable that many governments agencies may

want to manage the site directly for the reasons of political prestige, however, this can at least in part against the interests of interpreting the inherent cultural values of the sites. Additionally, the training opportunities for capacity building are also absent from the plan.

(v) Involvement of NGOs (mean = 0)

The importance of NGOs in the action and implementation of heritage conservation and management has been widely discussed in heritage field (e.g. Page and Hall 2003). Oftentimes, NGOs represents wide range of interests from the local level and the involvement of NGOs in a heritage conservation and management is a key to a sustainable management of the heritage through long-term partnership based on the local effort and involvement. At present, there are few local NGOs such as the Perak Heritage Society and Lestari Asia that have demonstrated their interest in engaging with the conservation and management of the AHLV (Perak Heritage News, 2011). However, the analysis into the existing CMP of AHLV shows that the management plan of AHLV has not mentioned the involvement of NGOs in any phase of the management. This indicates that up until now, the management team show no effort in identifying relevant NGOs as potential stakeholders in the management planning and the importance of NGOs in the total conservation management of AHLV is not recognized.

(vi) Monitoring and Review (mean = 3)

The management plan of AHLV presents excellent and systematic monitoring and review strategies to oversee the implementation of the plan and its implications.

The monitoring and review of the plan are to be conducted on a six-monthly or annual basis. According to the monitoring plan, there are a total of six major components to be monitored and reviewed, including the condition of the sites, conservation of artefacts, development control, research and outreach, visitor impact and overall conservation efforts. Each component comprises several assessment indicators and the authorities to conduct the monitoring and reviewing of the management have also been appointed. Overall, monitoring and review planning are sufficient responses to the management objectives.

6.5.4 Community Values and Attitude

Since 2007, UNESCO began to emphasize on the role of local communities in the implementation of the World Heriatge Convention which encourage the involvement of local communities in the identification, nomination, management and protection of World Heritage Sites (World Heritage Committee Decisions 31.COM/13A and 31.COM/13B, 2007). This is because conflicts always emerged between the management team and local communities due to the different pursed interests (Albert 2012:32). As such, the development of a management process that acknowledges local values and ideas has become increasingly important. Many community-driven heritage projects that incorporated local ideas and values into the management planning has claimed tremendous success (e.g. Smith, Morgan and der Meer 2003; Rössler 2012). Bryne (2012:11), based on his work in Southeast Asia, argued that a conservation policy which failed to address the local heritage values and issues would make heritage conservation almost impossible. Given that the AHLV is a newly nominated WHS, and thus the policy making and management planning should consider the local heritage values and what are the local attitudes (i.e. preparedness and expectation) towards the World

Heritage Status. This is because the investigation into the local values will evoke the local awareness through the creation of sense of place and the management planning should sit within a sphere in which the resident issues community values and ideas are highly acknowledged.

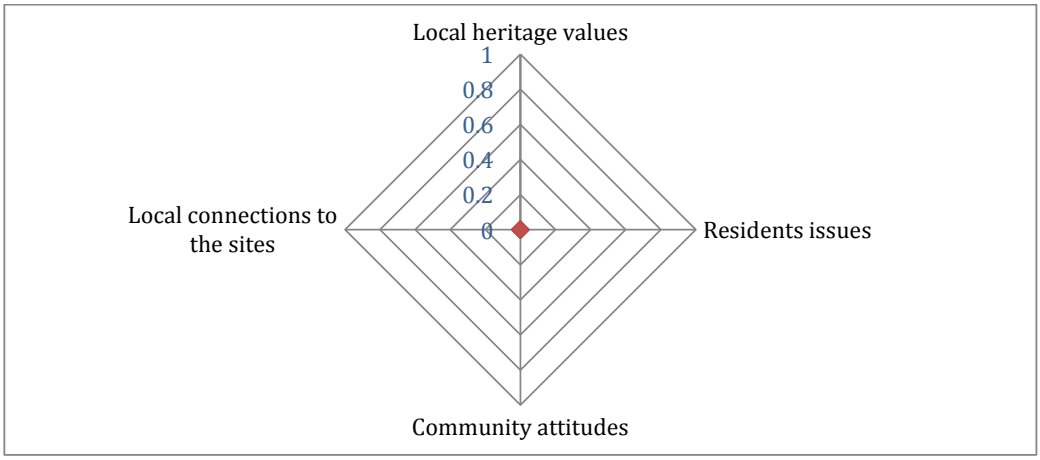

Figure 6.5: The mean reading for the each coding item adopted to assess the level of integration of local values and attitudes in the heritage management of AHLV.

(i) Local Heritage Values (mean = 0)

The management plan of AHLV does not address local heritage values in any depth. The management planning of AHLV is mainly focused on the conservation of the archaeological values without any further assessment of community or local heritage values (i.e. historical value, social value) associated with the site.

(ii) Resident Issues (mean = 0)

The issues of residents in relation to the heritage sites of AHLV are not identified in the plan. This restricts the public understanding of existing issues facing the

local residents following the inscription of the Lenggong Valley as a World Heritage Site, as well as undermining how the management team is going to cope with these issues.

(iii) Community Attitudes (mean = 0)

From the analysis, it shows that community attitudes towards the heritage sites of AHLV were not assessed and therefore not integrated into the management planning. This indicates a scenario where the community voice is totally neglected in the management planning process.

(iv) Local Connection to the Site (mean = 0)

The management plan of AHLV shows no traces of local connection to the archaeological sites located within the core and buffer zones. The local activities which engaged with the archaeological precinct were not identified and the current trend of cave exploitation among the local communities was not recorded in the plan.

6.5.5 Stakeholders and Community Participation

There is a growing acceptance that community involvement is an effective measure in successful heritage conservation management (Rössler 2012:30). However in practice, local communities are largely left out from the consultation and decision making processes associated with management planning at many world heritage sites (Millar 2009:38). The site surveys conducted through this PhD project show that the local communities of the Lenggong Valley are actively engaged with the archaeological cave sites on a daily basis. As such, they

can be considered to be one of the major stakeholders in its heritage conservation management. This dimension sets out to explore the relationship among the identified stakeholders and investigate to what extent the local communities are involved in the management planning process. Overall, the analysis shows that community participation in heritage management is not a main component adopted in the management plan. With a mean score of 0.6, this analysis demonstrates that the existing heritage management plan of AHLV is failing to address and integrate local ideas into the management planning (Figure 6.6).

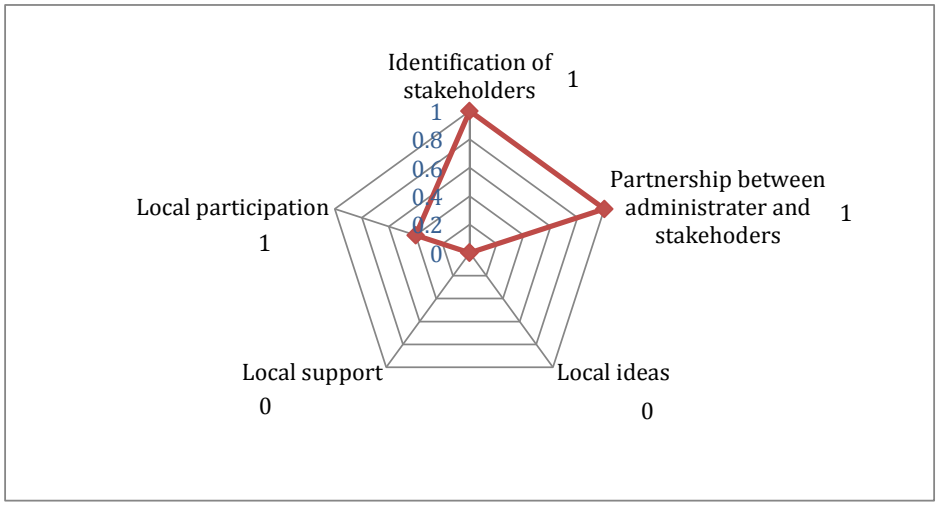

Figure 6.6: The mean reading for the each coding item adopted to assess the level of local invovement in the AHLV

(i) Identification of Stakeholders (mean=1.0)

The major stakeholders of the AHLV are identified in the plan, however these stakeholders are mainly from statutory authorities, rather than special interest groups or non-governmental agencies. The major identified governmental stakeholders of AHLV are the Department of National Heritage, the Government of the State of Perak, the Department of Town and Country Planning, the

Department of Tourism, the Land Office, the Economic Planning Unit, the Centre for Global Archaeological Research affiliated to the University Science Malaysia and the Lenggong District Council. The function and role of each of these stakeholders, however, is not detailed in the plan. It is noteworthy that the local communities have also been identified as one of the major stakeholders, but whether they have been consulted during the planning process is not clearly stated in the plan. One of the weaknesses of this CMP when it comes to the identification of stakeholder is that none of any NGOs is involved in the conservation planning (refer to Section 6.4.3. [v]). As NGOs always perceived as the amateurs in creating public awareness and as the representatives of the local community's voice, the exclusion of NGOs from the conservation management planning has led to a possibility in which the future involvement of the local communities or non-governmental agencies in the delivery of the CMP is infeasible.

(ii) Partnership (mean= 1.0)

The management plan of AHLV identifies the major stakeholders but the relationships and interactions among the stakeholders is not well-defined. There is a section in the plan which details the functions of each governmental stakeholder and how they interact to oversee and coordinate the heritage management of AHLV. There is also a short paragraph inferring that the management team is actually aware of the importance of stakeholders in the management plan. However, the partnership between the stakeholders, especially the partnership between the government agencies and the local communities is not presented.

(iii) Local Ideas (mean=0)

The management plan of AHLV shows that no effort has been taken by the management team to include local ideas in management planning. Local communities were not involved in the consultation process and the management plan has been drafted and prepared by an expert consulting group consisting of representatives from government agencies and tertiary institutions.

(iv) Local Support (mean=0)

The level of local support for the implementation of heritage management in AHLV is not identified in the management plan. Likewise, the local preparedness towards UNESCO World Heritage Status is not recorded. The management plan basically establishes a community outreach framework aiming to gain local support in the management and conservation of AHLV, but the framework is not explained in the plan.

(v) Local involvement in the consultation and decision making process (mean=0)

The heritage management plan of AHLV shows that no effort has been taken by the management team to involve the local communities in any consultation and decision making in regards to heritage conservation and management of the Lenggong Valley. The plan acknowledges local communities as one of the major stakeholders, however, the role and function of local communities in the planning and implementation of the heritage conservation and management are not defined.

6.6 Summary and Discussion

The previous sections of the chapter present the results of the content analysis of the contemporary CMP of AHLV through the examination into five different dimensions which considered as the major components that should be contemplated in a standard CMP. The analysis adopted a qualitative 4-Likert scales (0-3) to assess to what extent, each of the assessed dimension is incorporated into the conservation management planning of the Lenggong Valley. From the analysis, it shows that the existing CMP of the AHLV is fitted within a legislation framework (1.9 out of 3) in which the all heritage-related legislative policies are elaborated and incorporated into the management planning. However, the analysis shows that the heritage legislation of Malaysia is not sufficient to assist the management and conservation of the AHLV. At present, the National Heritage Act is adopted as the core legal document that provides guidelines for the identification, conservation and preservation of the heritage of the country. Due in part to the uncontrolled excavation and illicit trading of antiquities for the past decades, this piece of Act generally emphasizes more on the heritage licensing to control the heritage research and trading in the country. In contrary, little focus ahs been given on the other aspects of heritage such as the definition and scope of heritage, enforcement of heritage and the heritage conservation policy.

Many argue that a thorough identification of the heritage property and having a valid and well-defined management objectives are the cornerstone of an effective CMP (e.g. Pearson and Sullivan 1995; McKercher and du Cros 2002). In the case of the Lenggong Valley, the examination into its CMP shows that the conservation management planning gives greater focus on the identification and conservation of the tangible heritage of the valley. The intangible heritage of the valley (i.e. living traditions, indigenous cultures) area totally left out

and the management planning failed to provide details on the existing demographic characteristics and the land use pattern of the Lenggong Valley. The management objectives, on the other hand, are detailed in the plan but solely central to how to retain the OUVs of the Lenggong Valley – the archaeological value of the property. Other cultural significances associated with the Lenggong Valley (i.e. social or heritage values) are totally ignored. Added to this, the identification of the authenticity and integrity of the Lenggong Valley presented in the CMP are fairly vague as only a brief examination of the present state of the conservation was conducted. Thus far, the management team claimed that a Heritage Impact Assessment (HIA) has been conducted, but the result of the HIA has never been published elsewhere.

The implementation of the CMP of the Lenggong Valley is generally relying on a good administrative structure with the establishment of a World Heritage Office on-site which also provide a good monitoring and review mechanisms for the AHLV. Although the contemporary CMP of the Lenggong Valley stated that the integrated planning is one of the priorities of the conservation management team, it is however, ironic to find out that none of any NGOs has been involved in the consultation or planning process. This demonstrates a scenario in which the non-governmental voices are not acknowledged by the management team.

Thus far, the most disappointing results obtained from the content analysis is that the existing CMP failed to acknowledge the community values and attitudes. As discussed earlier, the acknowledgement of the local values and ideas has become increasingly important given that a conservation management that solely rely on the governmental effort without local support can hardly claim it success. In the Lenggong Valley, the local community is not consulted or

being involved in any management planning process. The collective values of the local community associated to the sites, the local attitudes such as the level of preparedness towards the World Heritage status as well as the residents issues have never been explored by the management team. As such, it turned out that the community involvement in the conservation management are extremely low. At present, most of the identified stakeholders are those governmental agencies. This has made the local partnership and local support in the conservation management of AHLV almost impossible.

In conclusion, the content analysis of the CMP of the AHLV indicates that the contemporary conservation management is inadequate to address many of the management issues especially those related to the community values and involvement. One of the biggest obstacles in the future delivery of the conservation management of the Lenggong Valley is how to promote the local heritage awareness and local involvement in heritage conservation given that the local community has been left out from the management planning and thus the community voices has never been heard. From a heritage management perspective, consultation with the local communities is not only useful, but it is a crucial process to create partnership with the local communities to manage the site in a long run. When there is a close interaction between the local values and the conservation management, it reflects back to the local communities that their heritage is recognized.

To date, our knowledge about the cultural significance of the Lenggong Valley is fairly limited given that years of research only focus on the identification of its archaeological value. The other dimension of cultural significance such as the social values and historical values has never been explored. In fact, the Lenggong Valley used to be one of the major areas which occupied by the indigenous people and the interaction between the local

community with the archaeological sites are somehow prevalent (e.g. Evans, 1917; Williams-Hunt 1952; Taçon and Mokhtar 2012). With the arrival of the World Heritage Status in the Lenggong Valley, the conservation management is solely focus on how to retain its OUVs which justified by its archaeological significance. This creates a tension between the official OUVs and the local values, where the contemporary heritage management of the Lenggong Valley tends to depreciate the local cultural values and living tradition from a community perspective (Ahman Suhaimi, 2011, personal communication). The divergence between the official values and local values illustrates the imbalance of focus of the contemporary heritage management of the Lenggong Valley and the thus possibly create a conflict of interests among different stakeholders within a heritage management sphere.

Chapter 7 The Heritage Assessment of Gua Gunung Runtuh, Gua Kajang and Gua Harimau

Previous chapters have discussed the issues pertaining to the assessment of contemporary cultural significance in Malaysia through several examples derived from the archaeological sites of the Lenggong Valley. Johnson (1992:4) argues that significance evaluations carried out by professional groups often fail to present the full range of values associated with a heritage place because these groups are more inclined to examine the professional-objective values, such as scientific value (e.g. archaeological value) or aesthetic value. In the case of the Lenggong Valley, it is evident that the social significance of the sites is not given much recognition and therefore thus far, little is known about how the local community is socially and culturally connected to these sites.

This chapter seeks to explore the social significance of the Lenggong Valley by presenting the results of a heritage assessment on the three cave sites - Gua Gunung Runtuh, Gua Kajang and Gua Harimau. This assessment was carried out between October 2010 and March 2011.in two villages via questionnaire surveys and interviews. Given that all of these cave sites have been archaeologically investigated and the archaeological importance of these sites has been identified, this heritage assessment is therefore aiming to understand the social connections of the local communities with these cave sites. The introduction of the idea of social significance into heritage assessment will help to reinforce people's social and cultural connections to these caves and ultimately, promote heritage awareness among local communities. As this project is the first project in Malaysia to investigate the social significance of a heritage precinct, the introduction of this approach will also provide a model whereby heritage significance, especially the social significance, can be assessed at other Malaysian sites in the future.

7.1 The Questionnaire Survey: rationale and methods

In this heritage assessment, the questionnaire surveys were chosen as the primary data collection mechanism. Thus far, this method is considered to be the most time and cost effective method in obtaining respondents' responses in the research field (Oppenheim, 1992). Overall, there are three general themes that guided the construction of the questionnaire that explore:

(a) The local knowledge of the caves,
(b) The importance of the caves to the local community and wider community, and
(c) The social connections, including spiritual, traditional, economic, political or historical associations, between the local communit and the caves.

The questionnaire contains a mix of closed and open questions and all questions were aimed at gauging levels of knowledge about the caves and the community perceptions of their significance. Each respondent was asked to provide basic demographic details and then to complete three separate sets of questions about the three different caves. Each set of questions comprised three sections as delineated below:

(a) Section 1 comprised a mix of 6 open and 6 closed questions investigating local understandings about each cave.
(b) Section 2 was composed of 14 closed questions assessing the importance of each particular cave to the local and wider communities.
(c) Section three consisted of 10 questions exploring how the local communities were socially connected to the caves and therefore was a follow-up section that was only answered by the respondents who were local residents of the Lenggong Valley. All

questions in this section were formulated to examine how the local residents of the Lenggong Valley interact with the caves, as well as how the cave sites were associated with particular events or beliefs within the community.

A total of 50 questionnaire surveys were collected over a period of three months from two groups of stakeholders: heritage professionals (archaeologists, government agents and heritage managers and etc.) and local residents. Of these 50 participants, 15 were drawn from professional fields and the remaining 35 were invited from the local communities of two villages, Kampung Gelok and Kampung Gua Badak. Follow-up interviews were conducted with four participants who showed an interest in providing more detailed information about the cave sites. Given that the questionnaire contained a mixed of closed and open questions, both qualitative and quantitative approaches were adopted in the analysis of the data. All responses collected from the questionnaires were processed using the SPSS (Statistical Package for Social Sciences) and QSR Nvivo 9.0, qualitative data analysis software. The results and findings of the questionnaire surveys are presented in the next section of the chapter.

7.2 Questionnaire Surveys in Gua Gunung Runtuh, Gua Kajang and Gua Harimau : results and findings

Demographic details

Overall, the questionnaire was answered by 55 respondents, however only 50 were fully completed by the respondents. Of these 50 completed questionnaires, 36 (72%) were answered by male respondents and 14 (28%) by female respondents. The majority (XX%) of the respondents were less than 50 years of age, 28% were between 26 and 35 years old (N=14), 26% between 36 and 50 years old (N=13) and 24% between 18 and 25 years old

(N=12). Only 22% of the respondents were older than 50 years of age (N=11). Of these, 10% were aged between 51 and 65 years and 12% of the 22% were older than 65 years.

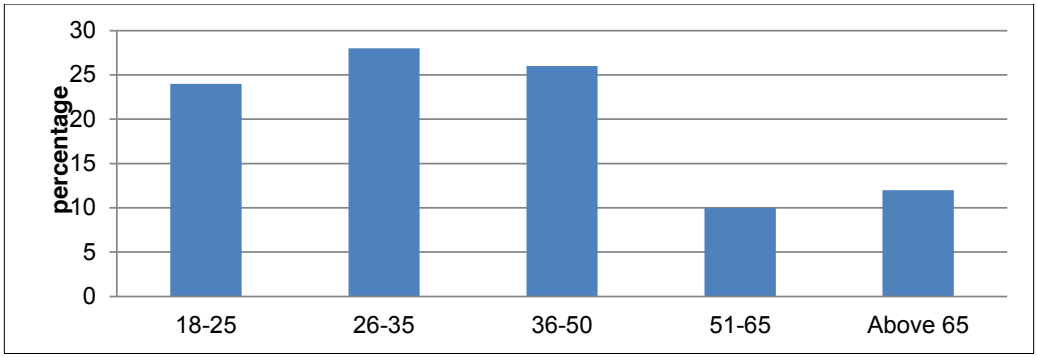

Figure 7.1: The age range of the survey respondents.

The study found that respondents worked in different sectors. A total of 13 respondents (26%) were self-employed, 11 respondents (22%) were government officers, eight respondents (16%) worked as farmers, five respondents (10%) were students, and four respondents (8%) were archaeologists who engage with the archaeological work at the sites; the remaining nine respondents (18%) were not working.

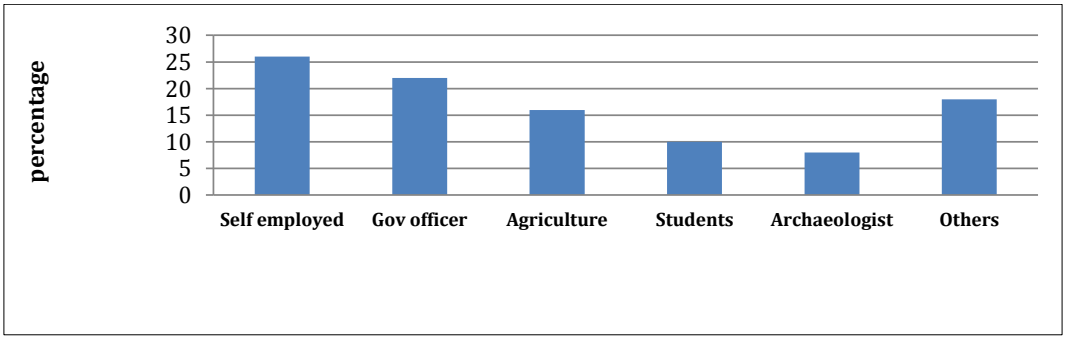

Figure 7.2: The occupations of the survey respondents.

Education levels of the respondents ranged from primary to tertiary, with 16% (N=8) having completed primary school education, 50% (N=25) having completed high school and 34% (N=17) of the respondents having pursued study into tertiary institutions.

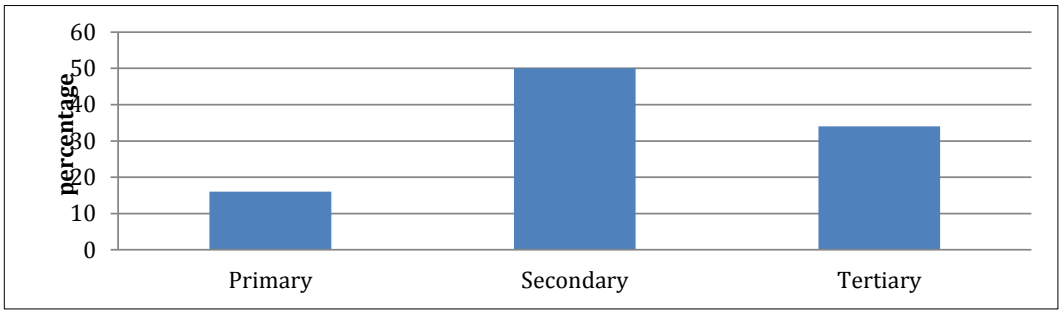

Figure 7.3: The educational level of the survey respondents.

Many of the respondents were residents of the Lenggong Valley or at least had stayed in this area for a short period of time. Of the 50 survey respondents, 16% (N=8) had lived in Lenggong Valley for less than one year, 16% (N=8) for one to five years, 10% (N=5) for six to ten years, 14% (N=7) for 16 to 20 years, 10% (N=5) for 21 to 25 years, 6% (N=3) for 26 to 30 years, 4% (N=2) for 31 to 35 years, 2% (N=1) for 36 to 40 years, 2% (N=1) for 41 to 45 years, 4% (N=2) for 46 to 50 years, 4% (N=2) for 51 to 55 years, 2% (N=1) for 56 to 60 years and 10% (N=5) for more than 60 years.

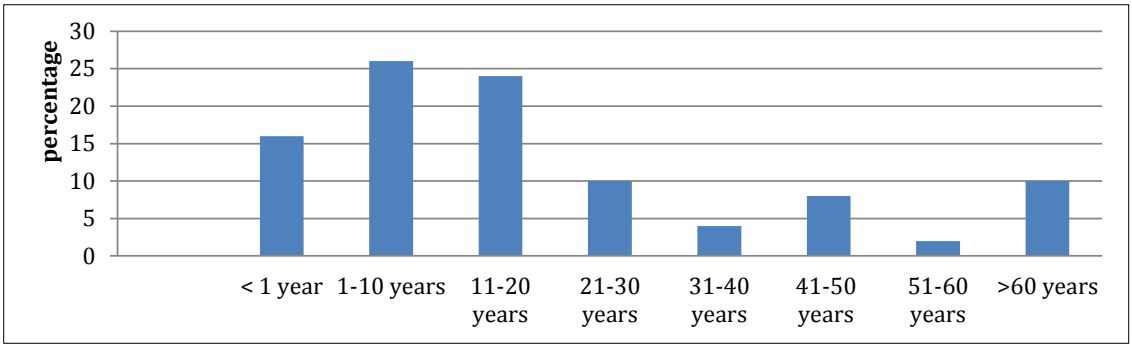

Figure 7.4: Length of residence in the Lenggong Valley by survey respondents.

7.2.1 Gua Gunung Runtuh

Section 1 – Public knowledge about GGR

Attempting to determine the level of local understanding about Gua Gunung Runtuh, the first section of the questionnaire examined public knowledge about the cave. Out of the 50 respondents who participated in the survey, 98% (N=49) of them were aware of the existence of GGR and 78% (N=39) had visited the cave at least once. Generally, more than half of the respondents (58%, N=29) knew about GGR from family or friends, whereas the rest had obtained their information from site visitation (16%, N=16), the Lenggong Archaeological Museum (8%, N=4), websites (2%, N=1), or newspapers or magazines (2%, N=1). The remaining 14% (N=7) knew about GGR through other channels.

(a) What is your first image of GGR?

Two open ended questions were developed to capture local knowledge about GGR. Respondents were asked to express their first image about GGR and what they knew

about GGR; the results are presented in Figure 7.5. There were a total of 10 images from respondents when asked to give their first image of GGR. Some of them portrayed GGR as a place containing high archaeological values (8.1%), some represented it as an ordinary or dark cave (7.52%), or as the place where Perak Man was found (5.78%), while still others highlighted its role as a place of asylum during the Second World War in Malaya (5.13%). There were also respondents who saw GGR as an important prehistoric site (4.05%), and some viewed it as a sacred place because human remains had been found there (3.9%). GGR was also viewed as a place which contains guano (1.3%) and treasures (1.16%).

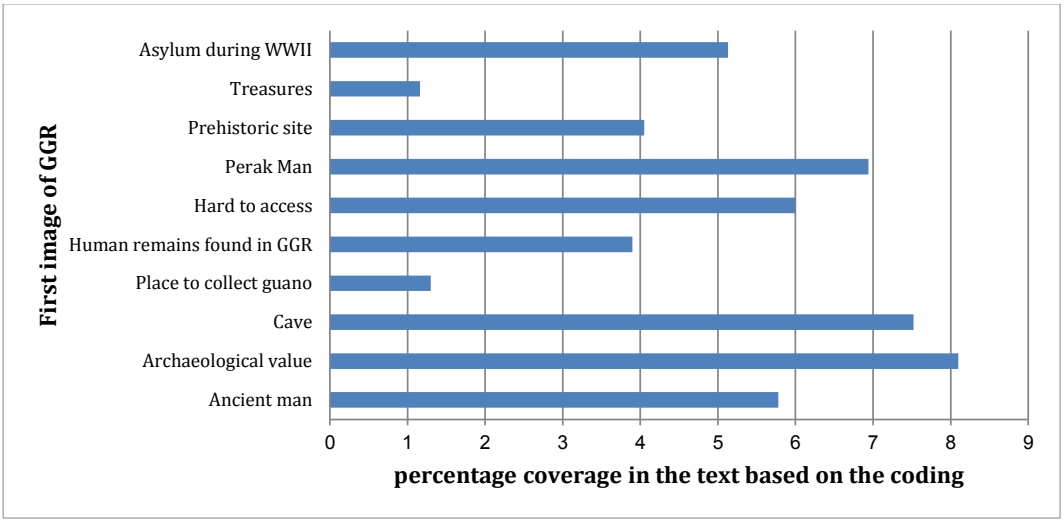

Figure 7.5: The first image of GGR portrayed by the respondents

(b) What do you know about GGR?

In exploring what respondents knew about GGR, the questionnaire surveys showed that the majority tended to relate GGR with the Perak Man (27.27%), or knew it as an archaeological heritage site (10.79%), as a prehistoric settlement area (10.6%), or as a place with prehistoric burials (5.44%). Some respondents, especially those from the local villages, described GGR as a place with supernatural power (8.6%), as a place to collect guano (1.65%) or as a tourist spot (2.77%). Only a few respondents thought that GGR was just an ordinary cave (1.75) and a few pointed to it as a place which was hard to access (1.17%) (Figure 7.6).

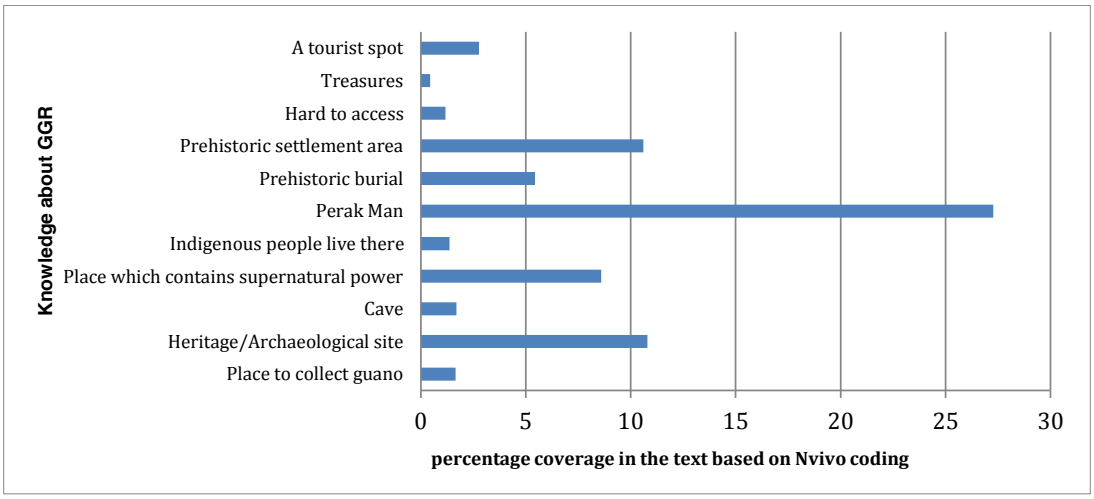

Figure 7.6: Local knowledge about GGR.

(i) Section 2 – The Importance of GGR

The importance of GGR was examined through 14 closed questions, targeted at assessing the importance of GGR to the local and wider communities (Figure 7.7).

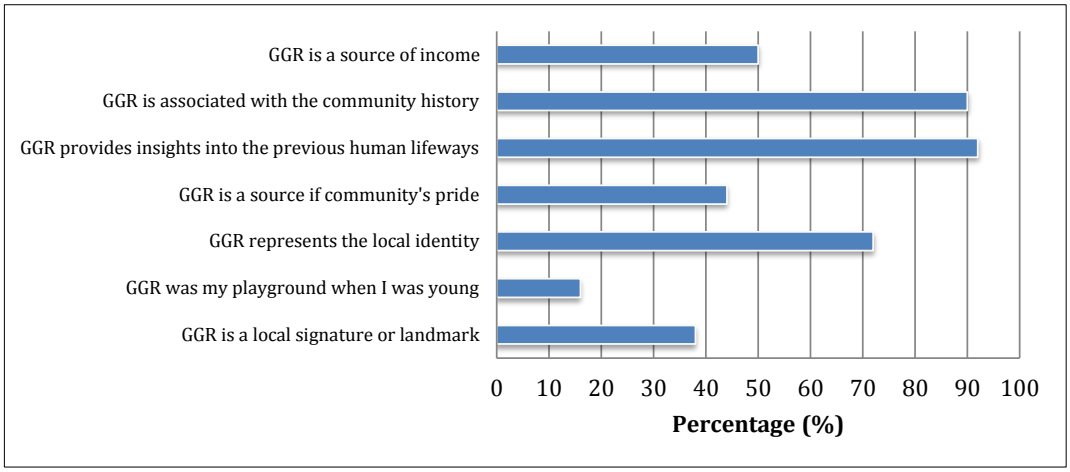

Figure 7.7: The importance of GGR to the local community of the Lenggong Valley.

The questionnaire surveys showed that local evaluations of GGR's archaeological value were relatively high, with 92% (N=46) of respondents thinking that GGR was important to provide insights into the lifeways of prehistoric humans. GGR was also important for the local community because it is associated with community historical events (90%). In terms of its representativeness and identity, 72% of respondents thought that GGR was important in representing local identity, whereas 38% of respondents viewed GGR as an important local signature or landmark. The surveys also revealed that the local residents still engage with GGR in their daily life, with 50% of respondents stating that GGR was a source of local income. A total of 44% of respondents considered GGR to be a place of community pride but only 16% of respondents appreciated GGR as their childhood playground.

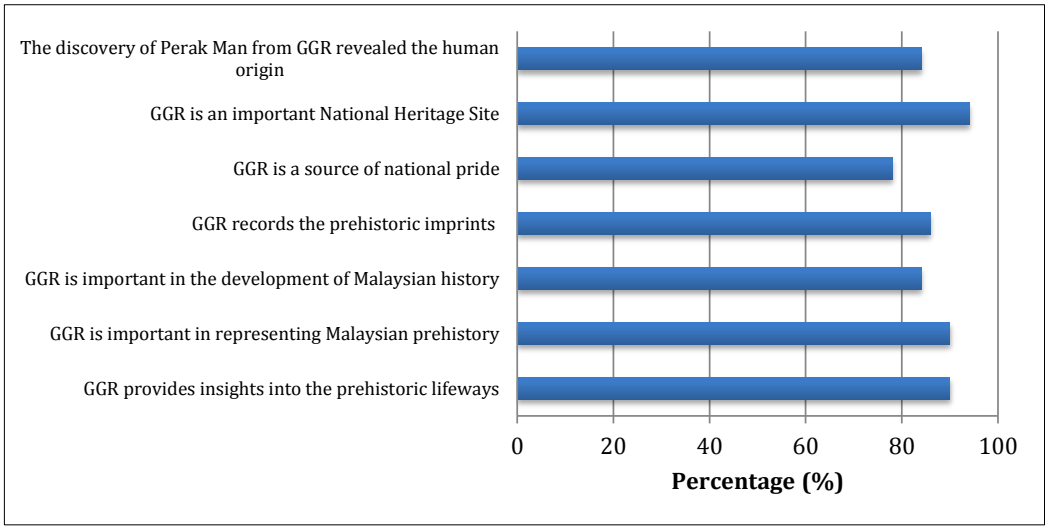

Figure 7.8: The importance of GGR to the wider community of Malaysia

In assessing the importance of GGR to the wider community of Malaysia, more than 85% of respondents considered GGR to be an important prehistoric site for three reasons: (i) it bears high national heritage value (94%); (ii) it provides insight into prehistoric lifeways (90%); and (iii) it records prehistoric imprints (90%). GGR was also perceived as an important cave on a countrywide scale because it demonstrated the development of Malaysian history (84%). Eight-four percent of respondent indicated that the discovery of Perak Man in GGR was important for providing clues into human origins in this area. Overall, 78% of the respondents considered GGR to be a source of national pride (Figure 7.8).

(c) Social Associations between the Respondents and GGR

In order to explore the social connections between the local residents and GGR, 35 questionnaires were collected in the Lenggong Valley. Overall, nine closed questions covering various themes were formulated to assess the social significance of GGR to the local community (Figure 7.9).

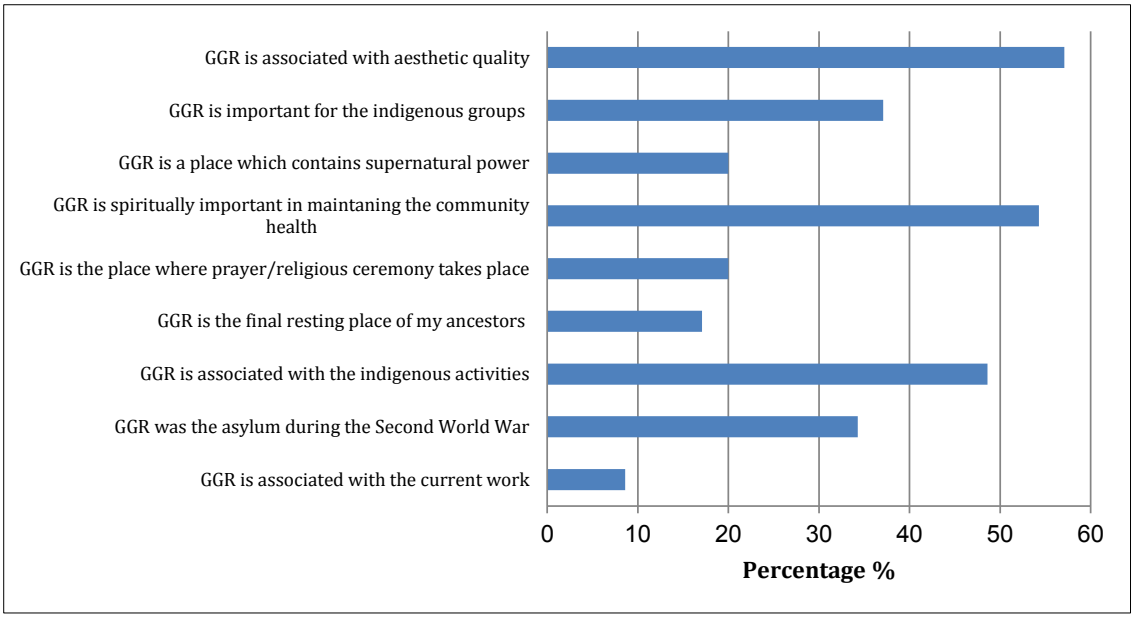

Figure 7.9: The social connection between local respondents and GGR.

The results of this section of the questionnaire largely accorded with the results of previous sections recording people's first impressions of GGR and asking respondents what they knew of GGR. This section of the questionnaires showed that more than half of the respondents (57.1%) viewed GGR as a cave with aesthetic qualities, and many stated that GGR was the main subject of local folklore and myth. From the surveys, many of the respondents expressed their appreciation of GGR as a spiritual place which was important to maintaining community health (54%), and some respondents believed that the cave contained supernatural power (20%). It is also occasionally used for prayer ceremonies (20%) and some believe that GGR is the final resting place of their ancestors (17.1%). Previous interactions between the respondents and GGR pointed to this cave as having been associated with Indigenous activities (48.6%) and 37.1% of local respondents stated that this cave was important for Indigenous people. Additionally, GGR was also socially significant to the local community because it was once served as an asylum for the local residents during the Second World War

(1942-1945) in Malaya (34.3%). Investigation into the current use of the cave shows that only 8.6% of respondents engaged with GGR due to the nature of their occupation.

7.2.2 Gua Kajang

(a) Section 1 – Public knowledge about Gua Kajang

The first section of the questionnaire explored public knowledge about Gua Kajang. Out of 50 respondents, 98% (N=48) of them knew about Gua Kajang and 80% (N=40) had visited it at least once. Fifty-six percent (N=28) of them knew GK through family and friends, 28% (N=14) of them had obtained information about GK from site visitation, 4% (N=2) from on-line resources and 16% (N=8) through other channels, such as school curricula and museums.

This section also adopted two open-ended questions to capture local knowledge about GK. Respondents were asked to provide their first image of GK and to share their knowledge about GK (Figure 7.10 and Figure 7.11).

(a) The first image of GK

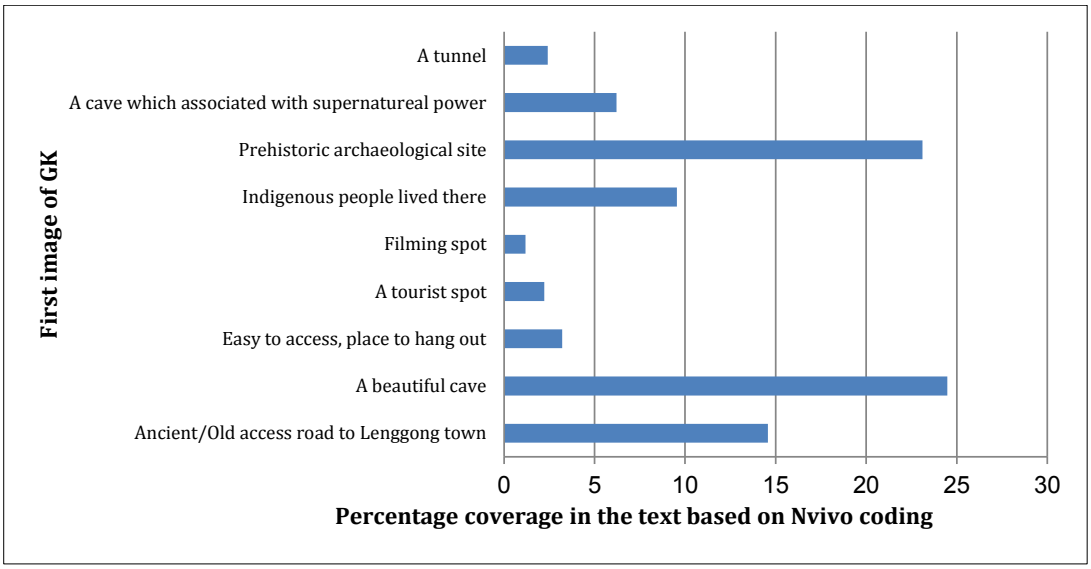

Figure 7.10: The first image of GK portrayed by the respondents.

This question tended to explore how the local residents portrayed GK. Responses revealed nine different images of GK: as a beautiful cave (24.4%); as a prehistoric archaeological site (23.1%); as an ancient or old access road to Lenggong town (14.58%); as a place which used to be occupied by Indigenous people (9.55); and as a cave that was associated with supernatural power (6.22%). Among the responses, only some respondents portrayed GK as a tunnel (2.42%), as a tourist spot (2.23%) or as a filming spot (1.18%). Some respondents, on the other hand, did not associate GK with any subject but an accessible cave (3.21%).

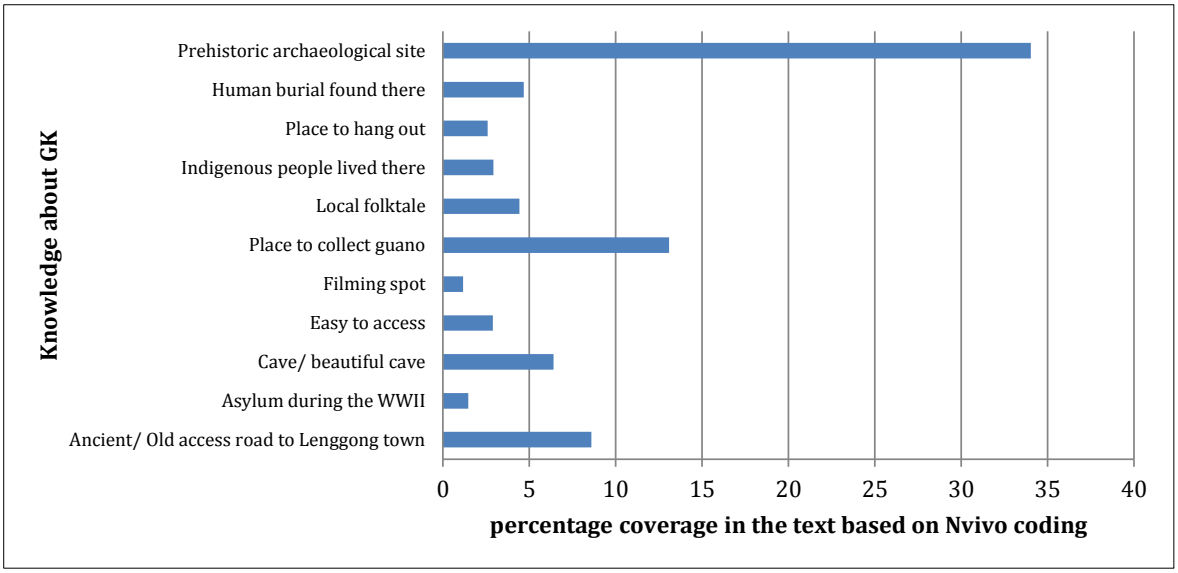

Figure 7.11: Local knowledge of GK.

In exploring what respondents knew about GK, the responses showed that the majority of interviewees knew GK as a prehistoric archaeological site (34.02%). The place was also well-known among the local residents as a place to collect guano (13.09%) and some respondents identified this tunnel-like cave as the old access road to Lenggong town (8.59%). Gua Kajang was also known as a place where human burials were found (4.68%) and some respondents knew of the site through local folktales or stories (4.42%). This cave was also said to have been associated with Indigenous activities (2.92%) and local people congregated in this place (2.92%). There were a few respondents who stated that they knew GK as a place that was easy to access (2.88%) and some stated that the cave was used as a place of asylum during the Second World War (1.46%) and was once used as the filming spot for a local movie (1.16%) (Figure 7.11).

(b) Section 2 – The importance of Gua Kajang

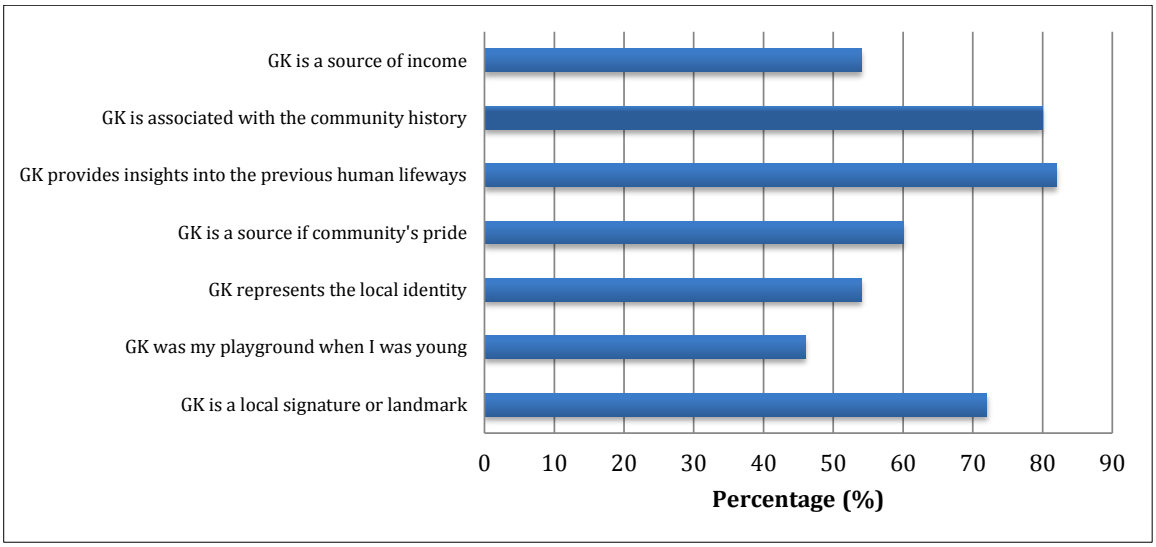

Figure 7.12: The importance of GK for the local community of the Lenggong Valley.

Figure 7.12 shows the survey results for the importance of Gua Kajang to the local community. A total of 82% of respondents indicated that Gua Kajang (GK) was a place that provided insight into previous human lifeways (i.e. prehistoric people, Indigenous groups). It was also considered as an important place associated with the community's history (80%). Gua Kajang was recognized as a local landmark by 72% of respondents and 54% stated that GK represented local identity. More than half of the respondents (60%) expressed their appreciation of GK and felt proud to have lived close to this cave (60%). The surveys also revealed that 54% of respondents agreed that GK was a source of income for the local residents, and 46% of respondents were connected to Gua Kajang through their living memory, as this cave was their playground during childhood.

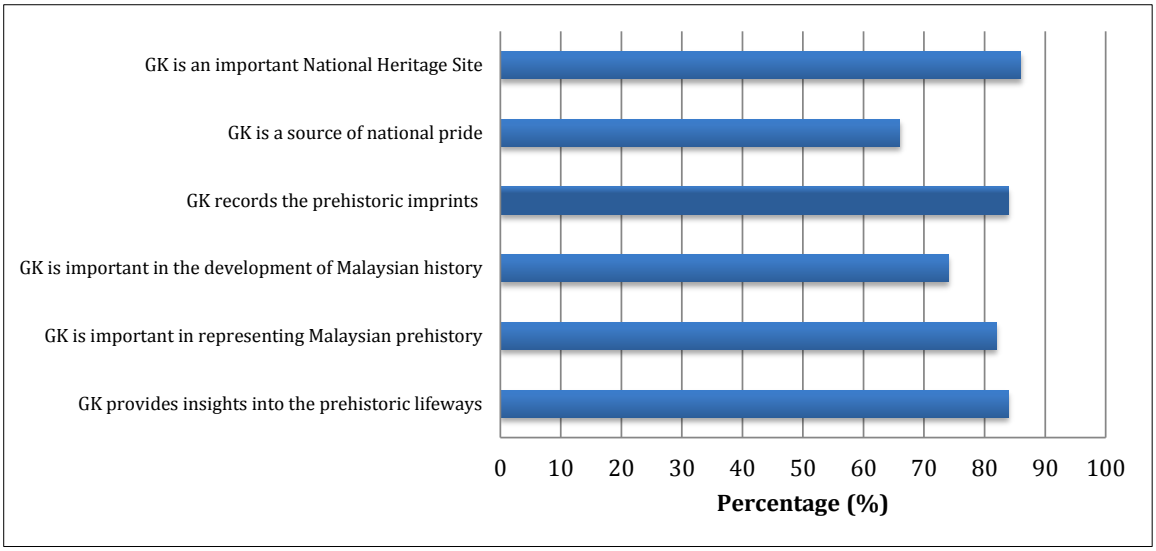

Figure 7.13: The importance of GK to the wider community of Malaysia.

Examination of the importance of GK to the wider community of Malaysia showed that more than 80% of respondents agreed that GK was an important heritage site (86%), and recognized it as an outstanding archaeological site that recorded prehistoric imprints (84%), as well as providing rare insights into the prehistoric lifeways of Malaysia (84%). This cave was also considered important in representing Malaysian prehistory (82%). A total of 74% of respondents indicated that GK contributed to the development of Malaysian history, whereas 66% of them referred to GK as a source of national pride (Figure 7.13).

(c) Social association between the respondents and GK

Overall, nine closed questions covering various themes were formulated to assess the social significance of GK to the local community (Figure 7.14).

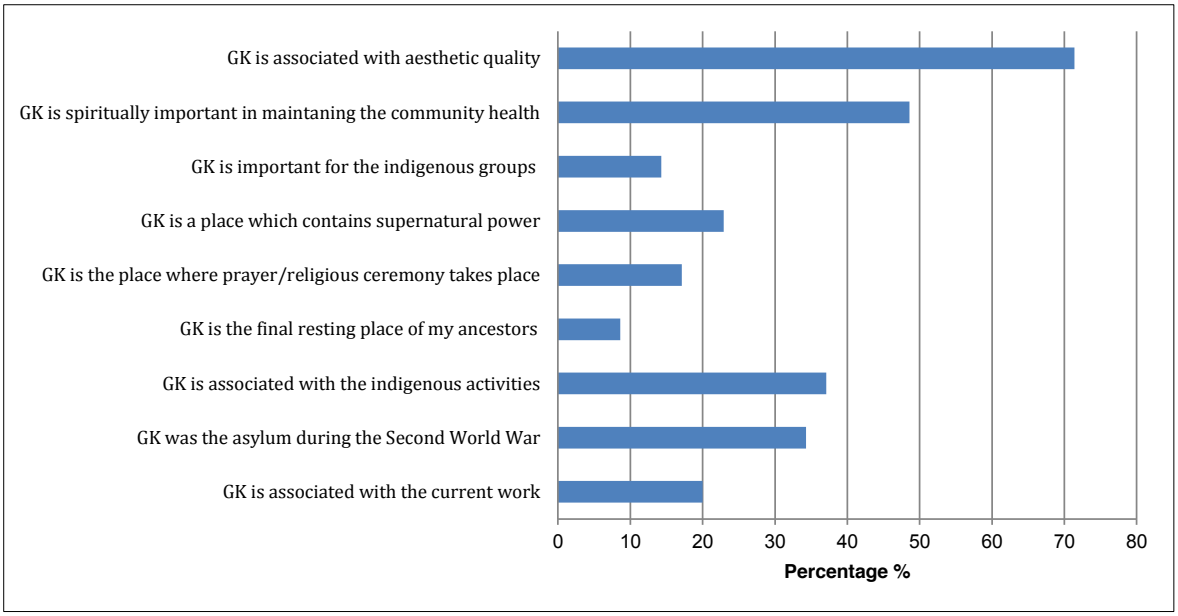

Figure 7.14: Social connections between local respondents and Gua Kajang.

Figure 7.14 shows that 71.4% of respondents viewed GK as a cave that had associated aesthetic qualities, and that it was related to many folktales and myths which were wide spread among the local community. The surveys also showed that this cave was spiritually connected to the local community because it was viewed as an important element for maintain community health (48.6%). From local residents' point of view, this cave contained supernatural power (22.9%) and the local community still occasionally used it for spiritual activities (17.11%). In contrast only 8.6% of respondents believed that GK was the final resting place of their ancestors. Previous interactions between respondents and the cave indicated that GK was associated with some Indigenous activities (37.1%), but only some assumed that GK as important to Indigenous groups (14.3%). Interestingly, some respondents appreciated GK as having provided protection for local residents during the Second World War (34.3%) and 20% of respondents were currently engaging with GK through their work.

7.2.3 Gua Harimau

(i) Section 1 – Public knowledge about Gua Harimau

The responses collected from the questionnaire surveys showed that 96% (N=48) of the 50 respondents knew about Gua Harimau and were willing to share their knowledge in this survey. Among the 50 respondents, 62% (N=31) of them had visited GH at least once. The majority of them got to know GH through their friends and family (62%, N=31), and only 14% (N=7) of them obtained information about GH from site visitation. Some respondents stated that they obtained information about GH from on-line resources (4%, N=2), as well as through media such as radio and television (2%, N=1), and newspaper and magazines (2%, N=1). A total of 16% (N=8) were exposed to information about Gua Harimau from other channels, such as local stories, museums and the school curriculum.

Knowledge about Gua Harimau was also examined through two open-ended questions, as it was for Gua Gunung Runtuh and Gua Kajang (Figures 7.15 and 7.16).

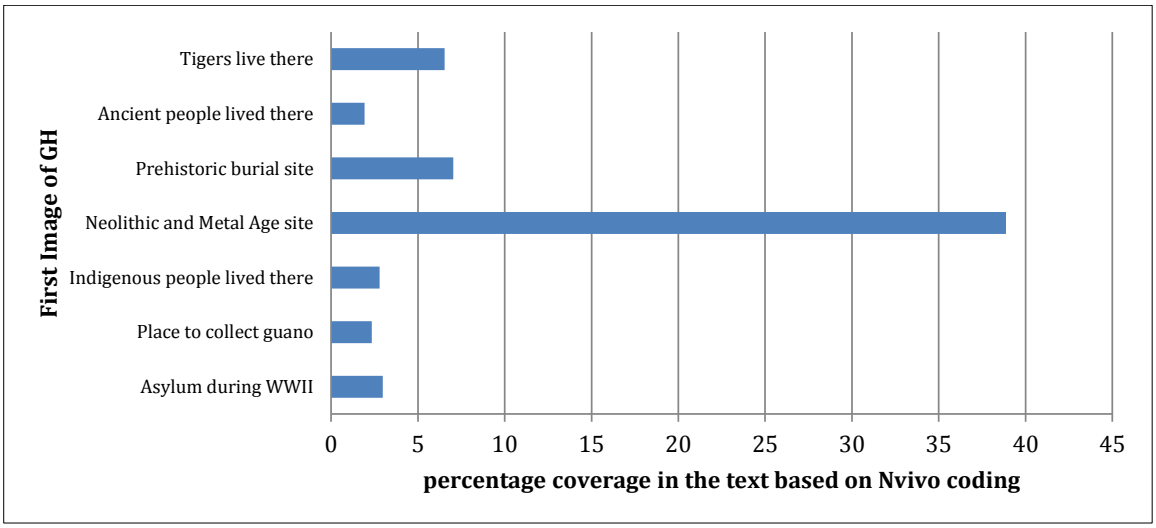

Figure 7.15: The first image of Gua Harimau as portrayed by the respondents.

Figure 7.15 shows the first image portrayed by the respondents when they were asked about Gua Harimau (GH). The majority of them associated GH with its archaeological importance by portraying it as a Neolithic or Metal period site (38.87%), as a prehistoric burial site (7.04%) or even as a place which was occupied by ancient people (1.93%). Some respondents viewed GH as a dangerous place because tigers lived in this cave (6.53%) and some recalled the fact that Indigenous people used to live there (2.79%). Some respondents recalled the site as a place of past historical community events because GH had been used as a place of asylum during the Second World War (2.98%). Others remembered it as a guano collecting spot between the 1950s and the 1980s (2.35%).

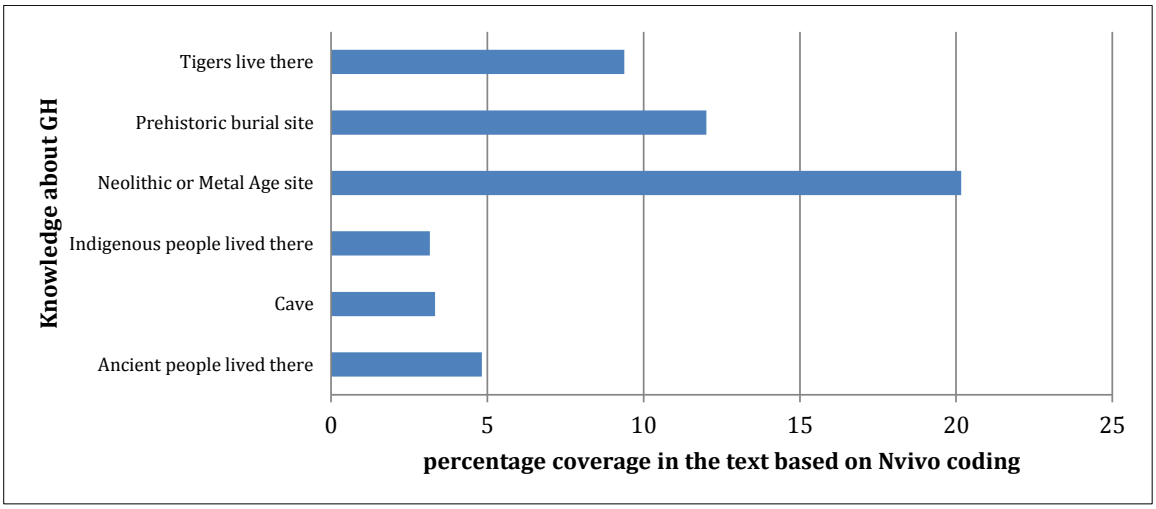

Figure 7.16: Local knowledge about Gua Harimau.

In exploring what respondents knew about GH, the coding responses showed that the majority of them were aware of the archaeological values of this cave (20.16%), of the prehistoric burials in the cave (12.01%) and of the fact that ancient people had once lived here (4.82%). Some respondents expressed their concern about the safety of the place, given

that GH is occasionally occupied by tigers (9.38%) and some pointed to this cave as having been associated with Indigenous activities in the past (3.16%) (Figure 7.16).

(a) Section 2 – The importance of Gua Harimau

The importance of GH was assessed through 13 closed questions exploring the significance of GH to the local and wider communities. The results of the questionnaires are presented in Figures 7.17 and 7.18.

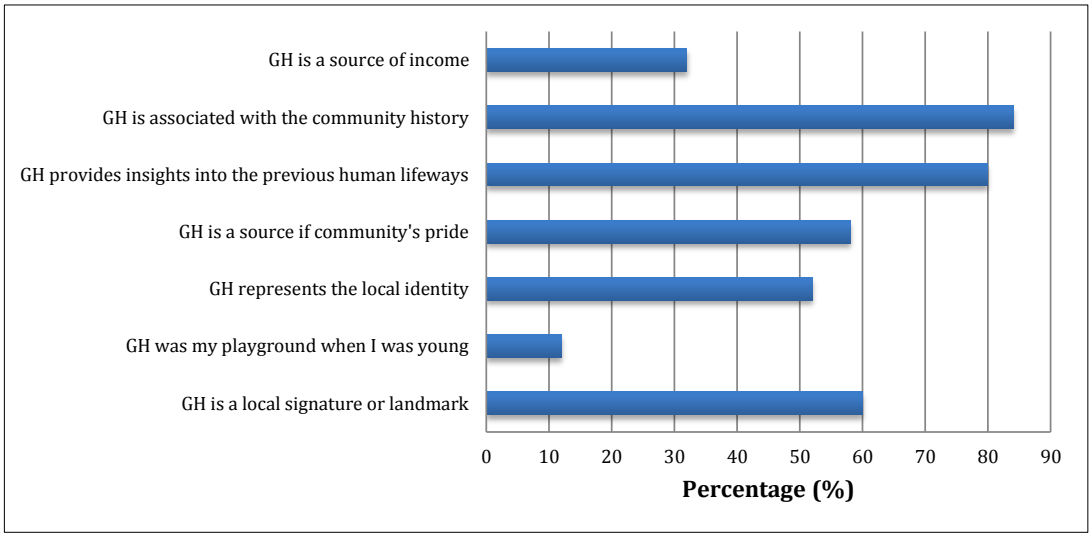

Figure 7.17: The importance of GH to the local community of the Lenggong Valley.

Figure 7.17 demonstrates that that majority of respondents thought GH was significant to the local community because it was closely associated with community history (84%) and was important to providing clues about previous human lifeways in this area. Sixty percent (60%) of respondents viewed this cave as a local signature, 58% of respondents stated that GH was a source of community pride and 52% of them agreed that GH represented in some way local identity. Only 32% of respondents were engaging with GH through economic activities (i.e. by collecting

guano, or acting as a tourist guide) and 12% of respondents appreciated GH as a childhood playground.

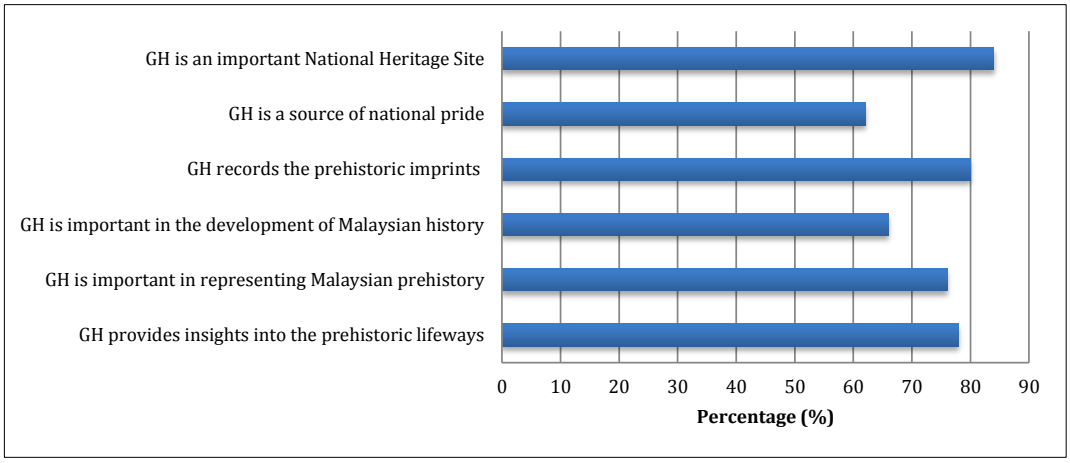

Figure 7.18: The importance of GH to the wider community of Malaysia.

The importance of GH to the wider community of Malaysia was examined through six closed questions and the results are shown in Figure 7.18. The majority of the respondents acknowledged GH as an important national heritage site (84%), as well as recognizing it as an important prehistoric cave with significant evidence of prehistoric occupation (80%) that provides insights into prehistoric lifeways of the area (78%). A total of 76% of respondents stated that GH was important for Malaysian prehistory, whereas 66% of them indicated that this cave also contributed to the development of Malaysian history. Overall, only 62% of respondents considered GH as a source of national pride.

(b) Section 3 – Social associations between respondents and Gua Harimau

Social connections between the local community and Gua Harimau were examined through nine closed questions. A total of 35 local respondents participated in this survey and the results are presented in Figure 7.19.

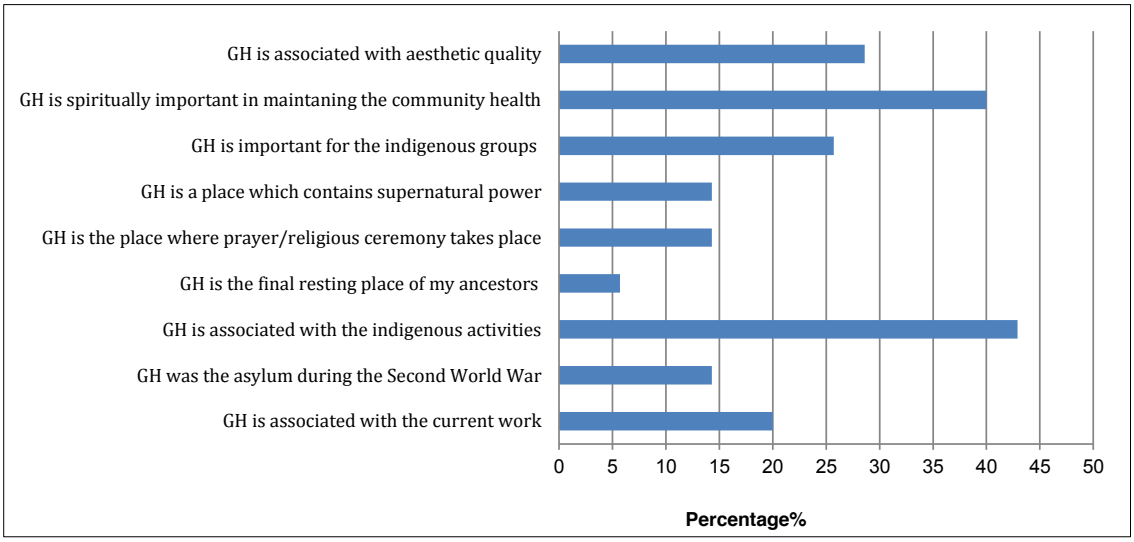

Figure 7.19: Social associations between the respondents and Gua Harimau

The surveys showed that the majority of local respondents indicated that Gua Harimau was associated with Indigenous activities (42.9%) and was important as an Indigenous site (25.7%). The cave was also viewed as a sacred place with supernatural power (14.3%) and was very important in maintaining community health (40%). A total of 14.3% of respondents indicated that this cave had been used by the local community for religious activities and only 5.7% of respondents stated that GH was the final resting place of their ancestors. Additionally, 28.6% of respondents expressed their appreciation of the aesthetic values of GH, whereas 14.3% appreciated GH for providing protection to the local community during World War Two. At present, a total of 20% of respondents from this survey were working in this cave or in close proximity to it (Figure 7.19).

7.2.4 Relationships between variables

Examination of the relationships between variables explored whether or not the responses collected from the questionnaire surveys were biased by the age, educational level or length of residence of the respondents. Three linear relationships were assessed in this assessment:

(i) Relationship between age and responses:

The effect of the age of the respondent on the responses was tested to reveal whether or not the older the respondent, the more likely he or she was to be socially connected to the cave, and vice-versa.

(ii) Relationship between length of residence in the Lenggong Valley and responses:

This analysis tested whether or not the length of residence in the Lenggong Valley influenced respondents' level of understanding of, social associations with and appreciation of the cave sites.

(iii) Relationship between educational level and responses

This aimed to explore whether or not the education level influenced levels of understanding about, social associations with and appreciation of the cave sites.

SPSS (Statistical Package for Social Sciences) was chosen as the primary analytical tool to examine the relationships between the variables and responses. Specifically, the linear relationship between the variables of age, education, length of residence and responses to some of the survey questions were tested using Pearson's correlation coefficient (Pearson's *r* value). The Pearson's *r* has a value range from -1 to +1. A positive *r* value indicates a positive correlation, while a negative *r* value shows that an increase in one variable corresponds to a decrease in another. Both -1 and +1 indicates a perfect relationship between the variables, while 0 indicates no relationship. In this assessment, the measuring guideline for *r* value recommended by Cohen (1988) for social science research was adopted.

According to Cohen's guideline, the strength of the *r* value can be sub-divided into three categories: 0.1–0.23 which indicates a weak relationship between the variables; 0.24-0.36 which indicates a moderate relationship, and an *r* value greater than 0.36 which shows a strong relationship between the variables. Overall, a total of eight questions were selected for this analysis to examine the effect of age, educational level and length of residence on the "yes" responses for these questions. The selected questions, according to numerical order, were:

1. GGR/GK /GH represents a local identity.
2. GGR/ GK/GH is a source of community pride.
3. GGR/GK/GH is associated with community history.
4. GGR/GK/GH provides insights into the lifeways of a previous community.
5. GGR/GK/GH is important in representing Malaysian prehistory.
6. GGR/GK/GH is important in representing the country's recent history.
7. GGR/GK/GH records prehistoric imprints.
8. GGR/GK/GH is an important heritage site.

The results from this analysis are presented in Tables 7.1, 7.2 and 7.3.

Variables / questions		1	2	3	4	5	6	7	8
Age	***r* value**	0.031	0.121	0.265	0.154	0.265	0.228	0.222	0.280
	***p* value**	0.833	0.403	0.063	0.285	0.063	0.111	0.121	0.049
Educational level	***r* value**	0.162	-0.097	0.205	0.138	-0.185	0.045	-0.022	-0.190
	***p* value**	0.262	0.502	0.154	0.339	0.198	0.758	0.880	0.187
Length of residence	***r* value**	-0.167	0.048	0.143	0.085	0.190	-0.029	0.075	0.369
	***p* value**	0.247	0.740	0.323	0.559	0.187	0.843	0.604	0.008

*P-value < 0.05

Table 7.1: Pearson's correlation coefficient for responses about Gua Gunung Runtuh.

Variables / questions		1	2	3	4	5	6	7	8
Age	***r* value**	0.102	0.129	0.316	0.436	0.230	0.404	0.569	-0.146
	***p* value**	0.483	0.372	0.025	0.002	0.107	0.004	0.000	0.312
Educational level	***r* value**	0.227	0.143	-0.205	-0.123	-0.276	-0.023	-0.274	-0.022
	***p* value**	0.114	0.321	0.154	0.394	0.053	0.876	0.054	0.880
Length of residence	***r* value**	-0.216	-0.236	0.190	0.257	0.404	0.245	0.433	0.007
	***p* value**	0.131	0.099	0.185	0.072	0.004	0.086	0.002	0.960

Table 7.2: Pearson's correlation coefficient for responses about Gua Kajang.

Variables / questions		1	2	3	4	5	6	7	8
Age	***r* value**	-0.108	0.224	0.109	0.092	0.141	0.168	0.222	0.029
	***p* value**	0.457	0.117	0.451	0.527	0.168	0.250	0.121	0.843
Educational level	***r* value**	0.167	-0.197	0.306	0.128	-0.216	-0.039	-0.274	-0.173
	***p* value**	0.263	0.302	0.134	0.039	0.131	0.789	0.054	0.231
Length of residence	***r* value**	-0.129	-0.013	0.296	0.433	0.414	0.164	0.024	0.343
	***p* value**	0.371	0.928	0.037	0.002	0.003	0.261	0.870	0.015

Table 7.3: The Pearson's correlation coefficient for responses about Gua Harimau.

Tables 7.1, 7.2 and 7.3 show the results of Pearson's correlation test (r-value) and demonstrate that age, educational level and length of residence were not significant factors affecting survey responses relating to Gua Gunung Runtuh (Table 7.1).

However, different correlation patterns were observed for the responses to Gua Kajang (Table 7.2). Analysis showed that there was a strong relationship between age and responses about the importance of Gua Kajang. The analysis found a significant relationship between a respondent's age and their answer to questions 4, 6 and 7. In assessing the relationship between the age of respondents and their opinion on the importance of Gua Kajang for the local community (Question 4) and wider community (Question 6 and 7), the *r* values of 0.436, 0.404 and 0.569, with a *p* value <0.05 obtained from Pearson's correlation coefficient tests, indicated that the older the respondent, the more likely he or she was to acknowledge the importance of Gua Kajang. This may show that, to a certain extent, older respondents tend to recognize their local heritage more than younger respondents. The analysis also showed that length of residence was a factor which affected survey responses. The *r* values of 0.404 and 0.433 (Questions 5 and 7), where $p<0.05$, indicated that the longer the length of residence in the Lenggong Valley, the more likely the respondent was to acknowledge the importance of Gua Kajang as a place which contributed to Malaysian prehistory.

The analysis using Pearson's correlation coefficient for the responses relating to Gua Harimau showed that length of residence obviously influenced the respondents' responses (Question 4 and Question 5). The analysis found that there was a correlation between length of residence and local perceptions of the archaeological importance of Gua Harimau. The *r* value of 0.433 obtained for Question 4 and 0.414 for Question 5 (p value<0.05) showed that the longer the length of residence by a respondent, the more likely he or she was to agree that Gua Harimau was important in providing insights into previous human lifeways, as well as being significant in representing Malaysian prehistory. Also, the analysis showed that the respondents were more likely to recognize Gua Harimau as an important heritage site if they had lived longer in the Lenggong Valley (>10 years) (Question 8, r value = 0.343, $p<0.05$).

7.3 Oral interviews

As mentioned earlier (see sections 3.32 and 7.1), a series of oral interviews were conducted with local residents in Kampung Gelok and Kampung Gua Badak, where Gua Gunung Runtuh, Gua Kajang and Gua Harimau are located. Four interviews were undertaken with Mr Shariff bin Ahmad (64 years old), Mr Hamid Suhaimi (47 years old), Mr Ahmad Tajuddin (51 years old), and the late Tuan Haji Talha bin Haji Ismail (74 years old). These interviewees were invited to participate in an oral interview because of their willingness to share their knowledge about the cave sites and were selected for this study after they had completed the questionnaire survey. The author and an interpreter attempted to guide the interviewees throughout the interview process according to our questionnaire themes and some pre-structured questions; however, most of the interviewees were not able to understand the questions and felt uncomfortable responding to a guided oral interview. In order to collect as much data as possible, the interview strategy was altered to ask the interviewees to share anything they knew about the caves. Throughout the interviews, keywords were occasionally flagged, such as "past landscapes", "supernatural power", "spiritual beliefs", "Indigenous people and activities", "economic activities" and "community events" in seeking some information which might correspond to our interview themes. Most of the interviewees have visited these caves and some even lived and worked closed to these caves. The section below presents the results from the interviews according to each cave.

7.3.1 Gua Gunung Runtuh

When the interviewees were asked about what he or she knew about GGR, none of them hesitated to share their knowledge about the cave, as well as sharing information about how these caves influenced local beliefs and culture. Mr Hamid Suhaimi stated that:

> … many people conducted research there and I know very little about their research. I have known GGR since I was young. Many villagers collected guano in this cave in the 1950s. It was once used as an asylum during the Second World War. There were plenty of clay cooking ware found in the cave many years ago and some villagers have borrowed some wares from the cave (Hamid Suhaimi, 26 October 2010).

The second interview, conducted with the late Tuan Haji Talha b. Haji Ismail, provided some insights into economic activities around GGR back in the 1950s:

> … Gua Gunung Runtuh was very popular among the villagers. We (the villagers) collected guano from every cave (including GGR) when we were young (during the 1950s) because there was a guano processing plant close to the village at that time. It was run by a Chinese man. His name was Ah Poh. This cave is dangerous. It contains supernatural power. A long time ago, a few villagers saw a fairy-snake in this cave. This giant snake stayed in GGR for quite a long time until it disappeared one day. My family and I hid there for a short period of time during the Second World War until the Japanese officially took over Malaya (Tuan Haji Talha bin Haji Ismail, 14 October 2010).

Interestingly, Mr Ahmad Tajuddin recalled that he first came to know about GGR during the 1960s when people began to dig in this cave searching for gold:

> … According to some villagers, there was a Chinese man who hoarded a huge amount of gold in GGR during the war (Second World War). He went back to China during the war and wrote his friend a letter about the treasure in GGR. This news was spread among the villagers and people started to dig in the cave for gold between the 1960s and 1970s. This is a true story because a villager found a piece of gold there (Ahmad Tajuddin, 26 October 2010).

Of all interviews, Mr Shariff bin Ahmad was the only interviewee who shared information about Indigenous activities in GGR:

> … we call GGR the Perak Man cave. We used to collect guano from this cave in the 1950s as the fertilizer for tobacco plantations. Many of the villagers believe there is a fairy-fox who lives in this cave. She turns humans into stone statues. We feel scared to go near to the cave at night (Shariff bin Ahmad, 20 October 2010).

Another casual conversation with a young villager, Ms Acu Intan who works as an eco-tourist guide, hinted about existing threats to GGR:

> … I am a local eco-tourist guide and I provide cave exploration services to the general public. GGR is not a good destination for any cave exploration because there were few minor rocks falls that happened in that area (the surrounding areas of GGR) over the past few years. We previously found a small chamber underneath GGR, the locals named it "the dark cave". There were some *paku aji* plants found at the outer wall of the cave. This plant can sell up to RM 1500 (USD 500). A lot of villagers are risking their life climbing on the outer wall of GGR to get the plant (Acu Intan, 22 October 2010).

7.3.2 Gua Kajang

Gua Kajang is one of the famous caves found in the valley and almost all of the interviewees visited this cave at least once every month. Tuan Haji Talha bin Haji Ismail stated that he had known this cave for more than 65 years and he shared some important information about the

previous landscape inside and around Gua Kajang, as well as explaining some of the previous community events associated with this cave. He stated that:

> … This cave was surrounded by paddy fields back in the 1950s. Villagers worked in the paddy field and I worked there. In the 1970s, the paddy field dried out and the villagers started to plant rubber trees there under the government scheme. During the 1950s, villagers collected guano from Gua Kajang. Many people dug in that cave. We (the villagers) dug up some human bones from this cave a very long time ago. The villagers started to pray in the cave to beg for fortune (ask for lotto numbers). Some people won the lotto prize. But I knew this cave when I was young because it was the main access road that connected the village to Lenggong town. During the war, we hid in Gua Kajang to avoid aerial bombing (Tuan Haji Talha bin Haji Ismail, 14 October 2010).

The interview with Mr Hamid Suhaimi indicated that Gua Kajang was important for the local community. He stated that:

> … I don't know what the researchers found in this cave. Gua Kajang is important because many people asked for fortune from there (the lotto numbers) (Hamid Suhaimi, 26 October 2010).

Mr Ahmad Tajuddin, on the other hand, shared his knowledge about historical events in Malaysia during the 1950s and hinted as to how Gua Kajang was associated with these events. According to him:

> … I was so young at the time (the late 1960s). My parents told me that they hid themselves in the cave during the war (Second World War, 1942-1945). When the

> communists fought with the government (1948-1969), communists sometimes stayed in this cave (Ahmad Tajuddin, 26 October 2010).

The interview conducted with Shariff bin Ahmad explained in more detail how Gua Kajang served as the main access road to Lenggong town before the 1970s:

> … There was no road access to the town except that tunnel (Gua Kajang) when I was young. The villagers used this tunnel to go to the town before the 1970s. There is a local story that tells that back in ancient times, the king of this village travelled to Siam (Thailand) on an elephant through this tunnel (Shariff Bin Ahmad, 20 October 2010).

7.3.3 Gua Harimau

The interviews showed that Gua Harimau, out of all three caves, was the cave that was most associated with Indigenous activities. The interview with Hamid Suhaimi revealed that:

> … Indigenous people lived in Gua Harimau. Villagers used to collect guano from this cave but Indigenous people were okay with that. There were some villagers who told us that they saw some Indigenous people staying and cooking in this cave. They ate bats. Then, later in the 1980s, I mean the late 1980s, we were so angry because the government stopped us from collecting guano here. That was terrible. We collected guano here. We knew the Indigenous people who stayed here. Look at that wooden pillar in my house, I bought it from an Indigenous man for four Ringgit back in the 1970s. [It's a] Seven foot pillar. There was a guano processing plant at Bukit Sapi. We sold them the guano. I always see a tiger in the cave, he (the tiger) never disturbs the villagers, he (the tiger) looks after the cave (Hamid Suhaimi, 26 October 2010).

When Mr Suhaimi was asked whether he was aware of the archaeological findings in Gua Harimau, he stated that:

> … the story they made was wrong. Those (the human remains) are not prehistoric people. They are Sakai (Indigenous people). They date to the 1950s but are not Neolithic. If they were ancient people, they should have huge stature. I believe that those (human remains) were Indigenous remains. That's why Indigenous people left the place because they will leave the place after their people died there (Hamid Suhaimi, 26 Oct 2010).

On the other hand, Mr Ahmad Tajuddin shared information about Gua Harimau by stating that this cave had been occupied by Indigenous people. He also hinted about the previous landscape and economic activities close to this cave:

> … Indigenous people lived in this cave until the 1980s. Many people have seen tigers around the cave, especially during the fruit season (March to July). This cave is now surrounded by rubber plantations. But before that, there was a goat pen next to the cave run by a guy called Mr Yaacob. He built a wooden hut close to the cave. Sometimes, during rainy days, he kept his goats in the cave (Ahmad Tajuddin, 26 October 2010).

Before we ended our interview, Mr Ahmad Tajuddin mentioned a petition he had made to the authorities and asked us to send his message to the official agencies responsible for the development of the village. He stated that:

> ... the Government tried to develop the caves for tourism purposes. But they (the government) never develop the village. If they develop and beautified the village, we might consider looking after the cave for them (Ahmad Tajuddion, 26 October 2010).

When we attempted to find out local stories related to Gua Harimau, Mr Shariff bin Ahmad told us:

> … Indigenous people lived in this cave. Before the Indigenous people came in, this cave was actually looked after by two giant cobras. One was grey and one was yellow. They (the cobras) owned the cave (Gua Harimau) (Shariff bin Ahmad, 20 October, 2010).

When we asked Mr Shariff about previous activities in Gua Harimau, he stated that:

> … Activities? Guano. This cave produced guano. But sometimes it is dangerous to collect guano in this cave. There are tigers in the cave, especially during the hot season. The tiger still exist in this cave (Shariff bin Ahmad, 20 October 2010).

7.4 The Social Significance of GGR, GK and GH

Gua Gunung Runtuh

Gua Gunung Runtuh (GGR) is important to the local community of Lenggong Valley for its social and historic associations with the development of the living tradition and local lifeways of the area. From the local perspectives, the social importance of GGR lies in three areas:

(i) GGR is spiritually important to the local community

Over the past few decades, the local people believed that Gua Gunung Runtuh is a sacred place which contains supernatural power. The local community also

believed that this cave has spirits residing at them and therefore some local beliefs and religious practices are closely related to this cave. For instance, many of the local people believed that GGR is dominated by fairy or spirit (their ancestors) that looks after the wellness (i.e. wealth and health) of the local community. Prayers ceremonies were occasionally conducted near to the cave to pay respect to the "spirit" and sometimes, the local people seek for fortune and prosperity from the spirits of the cave. Surprisingly, this social practice is firmly rooted in the local community even after the arrival of mainstream religions such as Islam and Buddhism. At present, local community still believed that there are local mediums (i.e. witch) who can communicate with the fairy or spirits (their ancestor) of Gua Gunung Runtuh.

(ii) GGR is closely associated with past social events

Tracing back the community history, Gua Gunung Runtuh is said to have been associated with several community events and social collective memory. For example, it was served as one of the major asylums for the local people during the Second World War (1942-1945) in Malaya. Local people hid themselves in this cave to avoid from aerial bombing, as well as believed that this sacred place can provide protection to the local community. At present, the local people who survived from the war and their families appreciated this cave as a sacred sanctuary. Apart from this, GGR is also considered as an important Indigenous site given that this cave has been occasionally occupied by the Indigenous people of Lenggong Valley before late 1980s. Despite the fact that the Indigenous people are no longer lived in this area, the past interaction between the local community

and Indigenous people has created social memory which records the social contact between the local people and Indigenous group.

(iii) GGR is a source of community income

At present, one of the direct records of the social interaction between the local people and the Gua Gunung Runtuh is the history of guano collection took place in this cave over the last five decades. Since 1950s, local people have been actively engaged with the landscapes of GGR by collecting guano from this cave as a source of income. Regular diggings in this cave have unintentionally unearthed various types of cultural artefacts which unconsciously exposed the local people to the previous human culture or lifeways of Lenggong Valley. During the peak of the guano collecting activities in the Lenggong Valley (1950s-1960s), GGR has undoubtedly provides economic benefits to the local community. Given that many of the local believed that this cave is dominated by spirits, they always asked for permission before they dig in the cave.

At present, Gua Gunung Runtuh is important to the local community as an expression of the community identity. The site facilitates the social interaction between the local people with the spiritual elements and Indigenous people of the cave as well as essential in representing a visible link between the local community with the past.

Gua Kajang

Of three caves selected for this study, Gua Kajang is the most highly engaged caves by the local community. It is socially linked to many past community events and significant in representing the cultural landscape changes over the last few decades in this village

(Kampung Gelok). Overall, the social significance of Gua Kajang can be traced from four aspects:

(i) Gua Kajang was part of the old access route to the Lenggong Town

Prior to the physical development of the Kampung Gelok, Gua Kajang was mainly used by the local community as the only access route to the Lenggong Town on a daily basis prior to 1970s. There is even a local story that acknowledges the importance of this cave to provide access for the ancient king of the village to travel up to Siam (Thailand) during the ancient time. The long term social contacts between the local community and the cave have created collective memories among the local people which indirectly provoke the sense of appreciation to this cave. Despite the fact that this tunnel-like cave is no longer use as the access route to Lenggong Town, Gua Kajang still important in representing a significant landmark of the previous cultural landscape of the village. At present, this cave is still termed as "the old access route" among the local people and some elderly of the village still attempted to access to Lenggong town by using Gua Kajang.

(ii) Gua Kajang is closely associated with past social events

Gua Kajang has had particular associations with the local community of Lenggong Valley since 1940s. It was used as an asylum during the Second World War (1942-1945) in Malaya. Later in 1960s, this cave was occasionally dominated by the communists who fought with the government in a gorilla war during the Malaya Emergency (1948-1969). During the Malaya Emergency time, this cave still being used as the access road in the morning and no one was allowed to access to this cave within the curfew period. Today, this cave is significantly important to the local people especially to those who have been involved in the

wars. Additionally, Gua Kajang also closely linked to the hardship of the local people during the wars as well as treated as one of the subjects of living memory among the local community of Lenggong.

(iii) Gua Kajang is important in representing the local and Indigenous beliefs

At present, Gua Kajang is highly associated with the local beliefs in which many of the local people still believed that this cave is the final resting place of their ancestors. The local stories and folktales have animated the features of the caves and ascribed spiritual meanings to these features. For example, the huge limestone column formed in the cave has been animated as the "cave keeper" which associated with supernatural power. Local community also believed that this cave is essential in maintaining the community health and some locals performed prayers in this cave to ask for fortune (i.e. lottery numbers). Despite the fact that many of the local residents are bonded to different religions such as Islam, Buddhism or Hinduism, they accepted this similar local belief associated to Gua Kajang as an alternative faith that maintain the well-being of local society. Apart from this, Gua Kajang is closely associated with Indigenous activities and the cave itself provides a rich illustration of Indigenous beliefs and culture. Evans (1917) recorded the findings of Indigenous rock arts in this cave that illustrated the daily activities of Lenggong's community. The rock arts of Gua Kajang have inevitably demonstrated the interaction between the Indigenous people and local community. Many of the local people pointed to this cave as an important spiritual site for Indigenous people who used to live here. Thus, Gua Kajang also provides insights into Indigenous culture and beliefs that no longer survived in Lenggong.

(iv) Gua Kajang is economically significant to the local community

One of the essential importance of the Gua Kajang is that it is a cave that associated with many economic activities over the past few decades. This cave was surrounded by paddy field back in 1950s and the local people who worked in the paddy field used it as rest station. The area was later transformed into the rubber estates since 1970s and Gua Kajang turned out to be the latex collection station for the neighbouring estates. Since 1950s, this cave was used as the main guano collecting spot. The changes of the use of landscapes in the surrounded area have continually changed the uses of Gua Kajang to feed the needs of the local people. This created a close social association between Gua Kajang and the local community as this cave has been engaged in their daily economic activities since 1950s.

Gua Harimau

Gua Harimau means "the cave of Tiger". It was named after the tiger with the discovery of a Malayan Tiger in this cave in early 20th century. Generally, the social significance of this cave is demonstrated through two aspects:

(i) Gua Harimau is spiritually important for the local and Indigenous people

At present, Gua Harimau is popular among the local community as a sipritual place, which associated with supernatural power. According to the local folktales and stories, this cave is dominated by the fairy tigers and the local community is not allow to access the cave or taking anything from the cave

without the permission from the “tiger”. The local community believed that these tigers are the transformation of the spirits of jungle. Therefore, this cave is forbidden among the local community and they never hunt the tigers found in the cave because these tigers are perceived as the superstitious object that maintained the local well being. Many of the local people believed that something bad would happen to the village if they killed the tigers found in Gua Harimau. Apart from this, Gua Harimau is also considered important for the Indigenous people who previously lived here. Many of the local people have witnessed some Indigenous spiritual activities in this caves but the exact records of these activities could not be traced. However, the local community believed that this place was the final resting place of some Indigenous people who used to live here.

(ii) Gua Harimau as an important Indigenous site

According to the literature records, Gua Harimau was a major Indigenous site since early 1900s (e.g. Williams-Hunt 1952). Over the past few decades, the local community has been actively engaged with the Indigenous people who reside in Gua Harimau through mainly through trading. Previously, the Indigenous people of Gua Harimau exploited the jungle resources such as animals, wood and plants and traded them with the local community in exchange for money or other forms of food. Despite the fact that the Indigenous people has been relocated and no longer occupied Gua Harimau, the local people started to ascribe social meanings to this cave based on their previous interaction with the Indigenous people. From the local perspective,

this cave is extremely important in representing the interaction between the local people and Indigenous people of the Lenggong Valley.

7.5 Summary and Conclusion

This chapter presents the statistical results collected from the questionnaire surveys and oral interviews conducted in Gua Gunung Runtuh, Gua Kajang and Gua Harimau. The questionnaire surveys and interviews were aimed at investigating the social significance of the caves by examining how the long-term interaction between the local community and the caves influenced local traditions, beliefs, lifeways and community collective memories. Overall, the questionnaire surveys showed that these caves were associated with many social events, as well as affecting local living traditions, economic activities and beliefs in many ways. The questionnaire surveys and interviews also revealed how local people ascribe meanings to these caves through local stories, as well as how they appreciate the caves through their past interactions with them. Added to this, the oral interviews revealed different insights into how these caves influenced local beliefs and how contemporary living traditions were closely associated with these caves.

Chapter 8 Rethinking the cultural significance of the caves of the Lenggong Valley: A reflection for future heritage management

The previous chapters of this thesis discussed the contemporary interpretation, presentation and management of the cultural heritage of the Lenggong Valley, which demonstrated that the focus of heritage management has, so far, only acknowledged the archaeological heritage of the valley. The heritage assessment which has been conducted through this PhD project, however, suggested that there has been long-term interaction between the local communities and many of the archaeological cave sites spread across the Lenggong Valley and that these caves, to some extent, have influenced contemporary local lifeways. This divergence of the interpretation of heritage values has inevitably created a struggle over the heritage management and conservation of Lenggong Valley.

This chapter, therefore, sets out to present an overview of the findings of this PhD project, as well as making recommendations for the future delivery of heritage management in the Lenggong Valley based on the results of this thesis. The discussions mainly aim to explore *how* contemporary heritage management practice in Malaysia creates a gap between the officials (i.e. government agencies and heritage professionals) and the local valuations of the heritage, with a special reference to the UNESCO World Heritage Site of the Lenggong Valley. It further explores *how* this disparity in heritage valuation between these two major stakeholders has affected the contemporary and future delivery of heritage management and conservation in the Lenggong Valley.

8.1 The divergence between official value and social value

As discussed earlier, the archaeological investigations of the caves conducted in the

Lenggong Valley over the past 95 years have established a concrete interpretation into the human past of Malaysia. Each archaeological research project conducted in the caves has detailed the archaeological value of these places and the importance of these caves is now nationally and internationally recognized. However, this study argues that the archaeological significance of the Lenggong Valley has over-shadowed other types of cultural value. This is because the contemporary heritage interpretation and presentation of the cave sites in the Lenggong Valley is very archaeologically-oriented and tends to ignore associations between the local community and the cave sites, despite much of the historical literature repeatedly indicating a strong social association between the local communities and the cave sites (e.g. Evans 1917, Callenfels and Evans 1928; Zuraina 1988).

The results from the latest social significance assessment conducted in three selected cave sites through this PhD project, however, has provided a new dimension into the valuation of the heritage significance of the Lenggong Valley. Thus far, the results show that social connections to these caves are still prevalent, however, the social value of the caves is somehow underrepresented, indicating that there is a divergence between how the officials (i.e. archaeologists, heritage authorities, etc.) interpret the heritage of the Lenggong Valley and how the local communities value "their own heritage". This demonstrates a scenario in which, to some extent, the heritage sphere is dominated by the officials, and suggests a need to revise the validity of the official values in representing the cave heritage of the Lenggong Valley.

8.1.1 The "official value"

In Malaysia, the interpretation of heritage is placed in the hands of professional groups. Oftentimes, their custody of heritage properties across the country is proclaimed through heritage legislation (i.e. National Heritage Act 2005; Local Government Act 1976) and the professional group is given the mandate to value and interpret the country's heritage, claiming that they are equipped with better knowledge and rationales to ascribe meaning to, or value, our unknown past. This scenario can be referred to as a top-down model, in which decisions concerning heritage interpretation are highly reliant on input from the authorities or professionals and those decisions will later be 'dropped' on the local stakeholders or community, assuming that the local stakeholders and community are acquiescent to the officials' decisions.

This domination of professional groups in the heritage sphere of Malaysia, particularly in the field of the archaeology, began in 1980s following the adoption of the idea of "new archaeology" (processual archaeology in the modern context) into the field by several western-trained local archaeologists, such as Zuraina Majid and Adi Haji Taha. The underlying philosophy of this idea argues for the use of the objective, scientific method in understanding past cultural systems (e.g. Binford 1962), and results in professional groups tending to prioritise the extrinsic value of heritage. Zuraina (1996, 2007), for instance, argued that the adoption of the scientific approach in the archaeological interpretation of the country was the only practical way to control the reliability of archaeological data. As such, over many years, the role of local communities in heritage interpretation has been neglected because, oftentimes, the validity of oral history from local communities has been contested. This approach empowers professional groups in the heritage discourse, but at the same time

detaches local communities from their heritage.

The adoption of the top-down model in producing the "official value" for the country's heritage is important in many countries across Southeast Asia. This is because this model allows officials to dominate heritage in order to fulfill their political agenda and this subject has been previously discussed in some detail elsewhere (e.g. Reynold 1991; Shoocongdej 2005; Zuraina 2007). As a new former British Colony, Malaysia is still in the process of shaping its national identity and cultural integrity; and heritage, in general, is always perceived as a tool for national identity building (Zuraina 2007; Jenkins 2008).

8.1.2 The complexity of the contemporary cultural significance framework

In Malaysia, contemporary archaeological research and cultural heritage significance assessment is still firmly rooted in an interpretation of culture that is dependent on the physical material or attributes of a heritage site. This approach over-emphasizes material culture and has led to the neglect of the social dimensions of cultural heritage significance assessment. The adoption of this approach in heritage interpretation is common across Southeast Asian countries because the field of heritage is still very materialistic and object-oriented in this region (Byrne 2011:9). One could argue that this practice, of course, would advantage the identification and recognition of the material culture of the past. Nevertheless, it also reflects a general reluctance on the part of mainstream archaeology to appreciate or acknowledge the intangible elements associated with an archaeological site.

The imbalances in the cultural significance identification of the caves of the Lenggong Valley

are also due partly to the complications of the existing cultural significance assessment framework adopted in Malaysia. According to the National Heritage Act 2005, cultural heritage significance is defined as: "…aesthetic, archaeological, architectural, cultural, historical, scientific, social, spiritual, linguistic or technological values."

These ten sub classes of value seem to cover all of the strands of heritage value that could be articulated within a heritage discourse, however, the identification of each sub-category of value is fairly difficult because no further justification or identification criteria are provided for each category of value. Moreover, the existing administration of heritage in the country has also complicated the cultural significance assessment process. At present, there is a clear-cut division between the identification of tangible heritage and intangible heritage in Malaysia. The identification of heritage is clearly placed in the hands of two main divisions: the Division of Conservation and Archaeology and the Division of Intangible Heritage. The first division is responsible for the identification of the archaeological value of a heritage site or object, whereas the second is mainly responsible for the research and documentation of intangible heritage, such as living heritage, performing arts and visual arts in Malaysia. Under the influences of this system, the identification of the social significance of the Lenggong Valley is considered as intangible heritage and has always been neglected by archaeologists because archaeological research tends to prioritize the tangible values of the site.

Such a situation suggests that there is a flaw in the existing cultural heritage significance assessment framework of Malaysia. This is because tangible and intangible values might sometimes overlap (Figure 8.1). For example, social significance is often categorized as an intangible value (i.e. oral history, collective memory, spiritual), but it can also be presented through tangible elements (i.e. aesthetic elements such as rock art or engraved stones).

Therefore, heritage practitioners (i.e. archaeologists or heritage managers) who work across heritage sites in Malaysia need to adopt a more integrated approach to exploring all heritage values associated with a heritage site, and searching for a framework for better understanding of the articulation and interaction of tangible and intangible values within a heritage sphere.

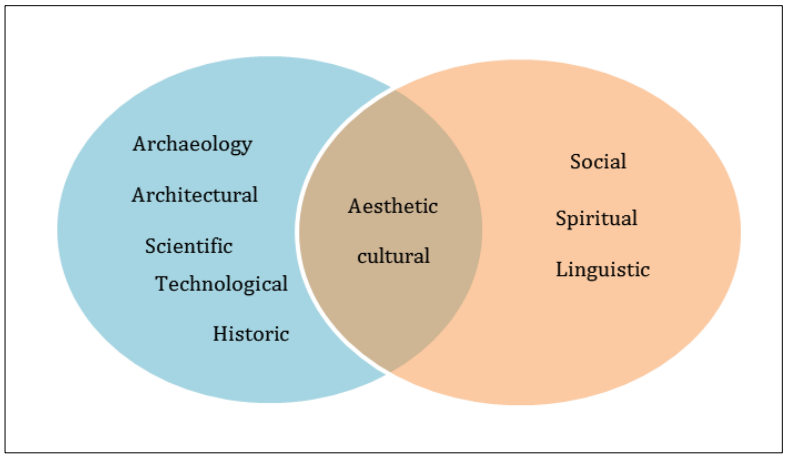

Figure 8.1: The cultural heritage values typology as stipulated in the *National Heritage Act 2005*.

Attempting to assess the social significance associated with a heritage site in Malaysia raises another issue in that what constitutes social significance remains unanswered. According to the Burra Charter (2013), social significance is defined as the qualities of a place that have become a focus of spiritual, political, national or other cultural sentiment for a majority or minority group. The New South Wales Heritage Office guidelines for assessing significance, on the other hand, argue that the definition of social significance should be extended to include not only spiritual, but also aesthetic or historical values associated with a site that are meaningful for a community (NSW Heritage Office 1996). Both models have acknowledged the role of the community in giving value to a heritage site based on their social interaction.

Compared to these models, the existing cultural heritage significance framework of Malaysia is undoubtedly not sufficient to interpret how local society perceives and appreciates heritage for two reasons: (i) there is no clear definition provided for the understanding of what constitutes social significance, nor how it should be measured and assessed?, and (ii) the existing value system doesn't provide a clear typology to explain the tangible and intangible elements and how the interaction between tangible and intangible need to be further explored.

8.1.3 Social depreciation of heritage

The Lenggong Valley is a small suburban area in the state of Perak - a state that records a GDP (Gross Domestic Product) of less than 5000 USD per capita (Department of Statistic Malaysia 2000). One can assume that the average GDP per capita of the Lenggong Valley is far below the state's GDP, given that this area is still under-developed. With a population of approximately 7,000 people, the majority of the residents of the Lenggong Valley are involved in three major agricultural sectors - oil palm, rubber and tobacco plantations. At present, the Lenggong Valley's community is still firmly rooted in a patriarchal system and, economically, the tendency to practice the one household-one income system is evident.

To date, the precise average household income of the Lenggong Valley's community remains unknown. However, several conversations with local residents indicated clearly that they are generally struggling with low incomes. Mr Rosli, for instance, is paid at RM1300 (Approx. 420USD) per month and he needs to support a big family of 11 members (per com with Rosli Abdullah, 20 October 2012). Such a scenario reflects a reality in which local heritage is always perceived as a "dispensable need" within the local community. Over the past few years, many have pointed out that the heritage awareness of the local community of the Lenggong Valley is fairly low, and there is a widespread idea that "heritage" is the

government's property and therefore local residents are not responsible for the conservation and preservation of local heritage (Goh and Mokhtar, 2009). Based on the results of this study, the domination of professional and other authority groups over heritage is a significant contributor to the local community's depreciation of their own heritage. However, what I would like to argue here is that the relatively poor economic situation appears to be another indicator that influences the level of heritage appreciation held by the local community.

The social depreciation of heritage is highly influenced by the socioeconomic situation of a community, especially in the case of the Lenggong Valley. In a recent heritage tourism workshop conducted in the Lenggong Valley in Nov 2012, the major concern of the local participants centred on the economic benefits of heritage tourism to the Lenggong Valley. At the end of the session, many local participants indicated their interest to be involved in the local heritage watch, on the condition that local economic benefits are guaranteed by the authorities (Hamid, Shaiful and Goh, 2014). Among the others who did not want to be involved, Mr Suhaimi, a food hawker, stated that it was unpractical for him to spend his time and effort on something (*heritage conservation and preservation in this context*) that do did generate anything (*monetary value*) in return. Such a scenario reflects a local perspective in which heritage is a "luxury product" that is secondary to their needs and thus local appreciation of their own heritage is not a priority in such a constrained economic situation.

One might argue that the results of the social significance assessment conducted through this study are relatively positive, since the majority of the respondents expressed their social associations with the cave sites in some way. However, this does not represent the level of heritage appreciation in the local community as a whole. Subconsciously, local people are

intangibly connected to the caves through their long-term interactions with these places. In reality, the social valuation of their heritage is not a community priority and that, in part, gives way to the domination of official values over the heritage sphere.

8.2 The divergence of heritage values: Implications for heritage management

Today, heritage management or conservation is seen as a values-based activity (Pendlebury 2012). Mason (2008), for instance, stated that every heritage object or place has a different value to different stakeholders and a thorough understanding of all of the strands of value associated with a heritage object or place is essential in good decision making. This concept is totally contradicted in the case of the Lenggong Valley, where officials and professionals tend to dominate heritage valuation and the inclusion of, and consultation with, the local community in the decision making process in relatively low. Generally, the discrepancy between how officials and locals perceived heritage has several implications for heritage conservation in the Lenggong Valley.

Present heritage conservation practices adopted in the cave sites of the Lenggong Valley have attempted to retain and preserve the archaeological value of the caves. Conservation policies and programmes address the need to promote adequate understanding about the archaeological heritage of the caves and access to, and utilization of, the caves by local people are now subjected to permission from the authorities. However, it is evident that the local people still engage with the caves through a wide range of social activities. For example, local people still believe that these caves belong to a superstitious power or their ancestors and therefore they claim the rights to exploit the caves' resources (guano).

The conflict between conservation practices and local beliefs and practices has inevitably created tension in the heritage conservation of the Lenggong Valley. From the professional's point of view, the guano collecting activities in the caves have destroyed and modified the cultural settings of the caves; however, the local community, on the other hand, believe that the guano is a "gift" from nature. With the conferral of World Heritage Status on the Lenggong Valley, authorities, such as the Department of National Heritage, have taken the extreme measure of stopping local access to the cave sites by gating the entire cave compound with a security lock. At present the local people are not allowed to enter the caves, which is a part of their living landscape, without the permission from the Department of National Heritage. This reflects a pattern of exclusion in the contemporary heritage management of the Lenggong Valley and in part leads to local resistance to heritage conservation programmes.

Thus far, local people have not been consulted on any matters of heritage interpretation or the presentation of the Lenggong's cave culture. Often, local people refuse to acknowledge archaeological interpretations as they claim that they "know the cave better than the archaeologist" (Hamid Suhaimi, personal communication, 26 October 2010). Such a confident claim was made by some local people because they have been engaged with the caves for a long time and this reflects that they perceive, value and ascribe meaning to the caves in a distinctive way. For example, Mr Hamid claimed that the archaeological interpretation of Gua Harimau was not accurate and stated that identified Neolithic human remains instead are the skeletons of Indigenous people. He added that archaeologists should consult with local people and not rely solely on science for their interpretations of the past.

Moreover, orthodox beliefs spread among the local community indicate that archaeological investigations in the caves could potentially bring harm to the community. This is because many of the caves are considered to be the final resting places of local ancestors, and excavation and research in these caves will disturb the "spirits" and thus might affect the wellness of the local community.

The disparity between how professionals and local people value the caves has led to resistance to heritage conservation programmes launched by the authorities. Heritage conservation that is deeply focused on the conservation of archaeological values has gradually detached the local people from the caves and thus made future heritage management based on local conservation efforts highly unfeasible.

8.3 Rethinking the social significance of the Lenggong Valley: A discussion

Over the years, much of the literature dedicated to the values system has addressed the importance of recognizing the social significance of a place in relation to its heritage conservation (e.g. Bryne, Ireland and Brayshaw 2001; Bryne 2011; Karlstrom 2009). As local effort in heritage conservation is now considered to be the key to the success of a conservation programme, it is important to understand why a society values a place before any conservation decisions take place.

Previous discussions in this thesis presented the cultural significance of the cave sites of the Lenggong Valley and revealed how the official values have overwhelmed local values under the influence of the "top-down" model adopted by the contemporary heritage management sphere of the country. Through this study it is evident that the local community perceives and

values the caves of Lenggong Valley in a distinctive way. Several social meanings have been ascribed to the caves. These caves have been associated with important historical, spiritual and economic events, as well as treated as a special medium that provide protection to the local community. The long-term social interactions between the local community and the caves have continually recycled the past social connections into the present and form an integral part of their present day lifeways. The changes to the landscape settings of the caves over time might be an alarm signal that has affected the integrity of the caves from a heritage management perspective; however, these changes are especially meaningful for the local community, as every change of the landscape records an interaction between the local people and the caves and these social contacts are essential to creating the sense of place among the local community.

At present, these caves are still spiritually important to the local community. The local beliefs associated with superstitious power have provided clues into the spiritual system of the past community prior to, or after, the arrival of mainstream religions, as well as demonstrating how the contemporary society of the Lenggong Valley appreciates these social beliefs by giving them an equal standing with modern rationalism.

The disparity between conservation concerns and community practices has inevitably created a tension between heritage officials and local community members. The contemporary heritage management practices of the Lenggong Valley, rooted as they are in the conservation of the physical attributes of the sites, have gradually detached the local people from their heritage, restricting their access to these caves which previously they used as playgrounds, asylums or access routes. The domination of heritage resources by heritage officials seems to

depower the local community from owning their own heritage. The conservation policies and programmes tend to disregard the social meaning of these caves, as well as decentre local roles in preserving and conserving their social heritage values. This pattern of exclusion reflects the immature state of heritage management and encourages a rethinking of old approaches to heritage management in Malaysia.

The current study suggests that the official cultural significance assessment failed to address the social significance of the cave sites of the Lenggong Valley. Over the last few decades, conservation programmes launched across the valley have not been successful, and the cave sites of the Lenggong Valley are still deteriorating. This is partly due to a lack of local participation in the daily conservation of the sites. The recognition of the social significance of the caves is therefore perceived as a practical way to reconcile the social connections between the local community and the cave sites as a means to promote collective responsibility for the heritage conservation of the cave sites of the Lenggong Valley.

The arrival of UNESCO World Heritage Status has complicated the valuation of the social significance of the Lenggong Valley. UNESCO, as an external agent, introduces a set of standards and guidelines in preserving the Outstanding Universal Value (OUV) of the archaeological heritage of the Lenggong Valley. As such, local social values tend to be subordinated to concerns about OUV. The existing "top-down" system with external forces from UNESCO has undoubtedly influenced the direction of the contemporary heritage management to become even more officially-value-oriented. Consequently, the heritage sites of the Lenggong Valley become less and less integral for local people and the local identity of the Lenggong Valley is gradually weakened. This scenario is not uncommon across Southeast Asian countries, where the arrival of UNESCO World Heritage Status has tended to create a new social space, new value and borders by imposing different sets of mandates and rules, all in the name of conservation (Black and Wall 2001; Miura 2010). That said, the

effectiveness of the heritage conservation standards recommended by UNESCO may have been widely proven in many other heritage sites, but, as argued by Karlström (2009) and Taylor (2004), those western-centric heritage principles or policies may not sit perfectly within the Southeast Asian context. Therefore, a balanced interaction between international agents, local officials and local communities is fundamental in the formulation of the delivery of integrated and sustainable heritage management across the region.

As discussed above, the neglect of social significance is due to the complexity and inadequacy of the contemporary cultural significance assessment framework adopted in Malaysia. Social significance is often considered as an intangible element and thus "object-oriented" archaeological research has excluded these elements from being recognized as part of our heritage. Like other countries in Southeast Asia, the current heritage practice adopted in Lenggong is closely associated with a political agenda that prioritizes the identification of national heritage as a representation of the national identity (e.g. Shoocongdej, 2011:722). This reflects a need to rethink the existing cultural significance framework in Malaysia.

Although dealing with multiple perceptions and voices regarding the past is one of the most complicated yet significant processes in developing a conservation management plan, I would argue that the recognition of social significance in light of other cultural significances associated with the cave sites of the Lenggong Valley is an offset for a more effective and accountable heritage management in the future. The local ideas and local attitudes towards heritage conservation should be assessed and integrated into management planning as a means to promote sustainable management with local conservation efforts. This is very important because the local knowledge should be acknowledged and the locals should be able to tell their own stories as part of the heritage interpretation of the Lenggong Valley.

Thorough understanding of the full range of heritage values should be integrated into local and national policies and the local stakeholders, government authorities, professional groups and international organizations should ensure that heritage values are defined broadly and applied objectively.

As addressed in this thesis, local involvement in overall decision making is still fairly low. This scenario forms a pattern of exclusion, and oftentimes, the cooperation between the authorities and local communities in heritage management is correspondingly low. Therefore, the future delivery of heritage management in the Lenggong Valley should stress the importance of finding a way to achieve greater public involvement in heritage decision-making and the input from the local community should integrate into the existing heritage policy framework. This can be done through the promotion of cultural sectors that stress local partnerships and networks as means to build mutual cooperative bridges or through the launching of education and outreach programmes to promote the public heritage awareness. Additionally,

In the long run, the heritage management of the Lenggong Valley can be potentially improved through capacity building. Given that UNESCO and ICOMOS are playing active roles in the conservation management of the valley, capacity-building programs should be introduced as a means to strengthen the skills, abilities and resources of the local community to assist in improving the local economy and quality of life. This strategy is aligned with ICOMOS's vision for sustainable heritage management that benefits the host community.

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