

The Importance and Significance of Heritage Conservation of the ex-tin Mining Landscape in Perak, Malaysia, the Abode of Grace

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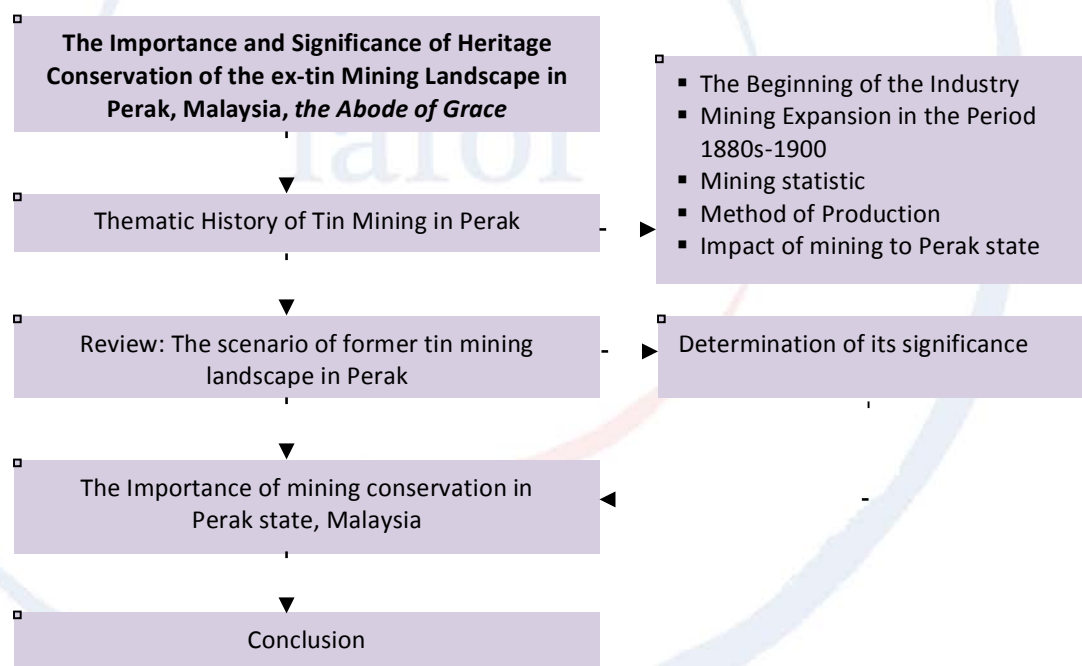
Abstract

The tin mining industry in Malaysia is one of its major exports and has been classified as its oldest industrial heritage. According to the Malaysian Department of Statistics, the mining sector continues to be significant, supplying basic raw materials to the construction and manufacturing sectors enabling Malaysia's economic growth. Until the late 1970s, Malaysia was the world's premier producer of tin, supplying some 40 per cent of the world's tin. Peninsular Malaysia contributes the highest percentage of tin mining production and the biggest mining area is situated in Perak, comprising Taiping of Larut district, Kinta Valley district (Ipoh, Gopeng, Kampar, Batu Gajah, Tronoh), Pahang and Selangor, which includes the capital of Malaysia, Kuala Lumpur. However, due to a global recession in 1929 to 1932 a severe decline occurred in this industry. This decline affected the price of tin that fell sharply due to a lack of demand from European markets and caused the closure of many tin mines. In 2011, the Malaysian Chambers of Mines indicated that in Peninsular Malaysia, there is more than 113,700 ha of ex-tin mining areas and the majority of these areas are former tin mining sites. With the current rapid development and modernization of Perak state, the insistence on the human needs has caused changes to its moribund tin mining landscapes. One of the main concerns of this paper is that most of these abandoned mine areas have been reclaimed and converted into more profitable land uses such as residential areas, commercial activities, institutional areas, agriculture and also for recreation purposes with little respect for its heritage merits. This paper reviews what is happening with the abandoned tin mining places in Perak and highlights the importance and significance for its conservation.

Keywords: Heritage Mining Conservation, Industrial Heritage, Perak ex-tin mining places, Malaysia

INTRODUCTION

Perak Darul Ridzuan is situated on the west coast of Peninsular Malaysia and was graced with lush alluvial tin deposits that spread over its districts, largely concentrated in Kinta Valley and Taiping of the Larut Matang districts. In Malaysia, although tin is not the only mineral that has been exploited, tin is one of the major minerals that has contributed to the economy of Malaya since early eighteenth century. Tin mining in Perak is of state and national eminence; leading to the growth of Perak's economy and the expansion of social and culture diversity that underpin Malaysia today. According to the Tin Industry (Research and Development) Board (1984) alluvial tin extended from "*Kedah into the Kinta Valley, and along the foothills of Perak, Selangor and Johor. This includes Kuala Lumpur, the capital of Malaysia. On the eastern lowlands of the Peninsular, alluvial tin ore is obtained from the Kelantan valley and near Mersing*". Penzer (1921) also emphasized that "*the best known portion of the Malay Peninsula lies south of a line drawn from Penang south-east to the junction of Perak, Kelantan and Pahang and north of the state of Johor*". This paper will highlight the significance of former mining heritage in Perak and its importance for conservation. The outline of the study will be guided as follows:



Source: author

THEMATIC HISTORY OF TIN MINING IN PERAK

The beginning of the Industry

The tin ore is found in fairly well-defined tin-fields that are scattered over the peninsula. In Perak, "*tin is worked in Krian and Larut, the Taiping tin field having been a large tin producer in the past. Tin ore has been worked in the Dindings, probably by slave labor.*"

The Kinta tin field, with its extension northwards into the Kuala Kangsar districts, is the richest in the country. Southwards it extends into the Batang Padang district, Chanderiang being a well-known mining locality. Another well defined tin field occurs south of Tapah, and tin worked also near Bidor, Sungkai and Tanjong Malim” (Penzer 1921). In 1746, the Dutch treaty signed by Sultan Muzafar Shah, vested in the Dutch East India Company a monopoly over the tin trade in Perak.

“During the famine caused by a bad drought in 1776, Sultan Alauddin explained to the Dutch that it was impossible to enforce the ‘kerah’ upon staving subjects (the Malays). In response, Dutch administrators, inspired by the results of imported Chinese labor in Bangka, suggested that the Chinese living in Perak should be permitted to develop tin mines in the interior. Sultan Alauddin not only agreed to the proposal but himself oversaw and encouraged the scheme. This period was significant because indentured Chinese labor was being introduced to Perak for the first time” (Khoo & Lubis 2005).

Tin mining in Perak was not extensively developed before the year 1850. As Yit Yat Hoong pointed out, *“up till the mid nineteenth century, tin production was exclusively in the hands of the indigenous people”* (Khoo & Lubis 2005) as cited from (Yip 1969). The discovery of tin in 1848 resulted in an influx of Chinese to Larut and this discovery later led to a tin rush in Larut. *“The Chinese brought with them a drastically new approach to tin mining, in terms of mining techniques, labor relations and work regime, devoting themselves full time to mining for a purely economic motive”* (Khoo & Lubis 2005). The expansion of mining in Larut finally led to the Larut War in 1860s because of feuds among the Chinese secret societies. Around the same time, tin mining in Kinta district expanded and flourished with mines opening in Gopeng, and Gopeng grew to be a major mining town before it was succeeded by Ipoh in the late nineteenth century. *“Meanwhile, in order to ensure better business climate in Larut, the Straits merchants lobbied for British intervention in the affairs of Perak”* (Khoo & Lubis 2005). Hence, the Perak chiefs were pressured to sign the Pangkor Treaty in 1874 which resulted in the placement of the first British Resident in Perak.

“..the early mining industry of Malaya was developed almost entirely with Chinese Capital and labor. Foreign enterprise in Malayan tin mining did not become important until about the beginning of the present century. Since then, the application of Western capital and technology not only secured for the Europeans an increasing share of the industry (and consequences reduced the relative importance of the Chinese) but also transformed the character of the industry as a whole from a labor-intensive to a capital intensive..”(Yip 1969).

J.W.W Birch was appointed the first British Resident in Perak in 1875. He then planned to get rid of the tax upon the miners to increase state revenue and to surprise them with the slavery issue (Khoo & Lubis 2005). In November 1875, Birch was murdered in Pasir Salak, Perak and this incident was referred to by British as the ‘Perak War’. The war ended at the end of 1876 with the capture of Maharaja Lela and Datoh Sagor. Thereafter Perak began to approach its prosperity years with mining expansion starting from 1877.

Mining Expansion in the Period 1880 - 1920

The expansion of mining in Perak commenced right after the turbulence caused by the death of the British Resident in Pasir Salak. Yip (1969) expressed this expansion as “*..the more settled politic conditions following British intervention in the Malay States in 1874 was only one reason for the rapid development of tin mining in Malaya..*”. In Kinta, the local cart roads were built in the 1880s to link the mining centre to the river ports. Swettenham, who acted as the Perak British Resident in 1884, determined to construct a major trunk road in Malaya that connected Melaka to Province Wellesley in the north of Malaya: “*..From Taiping, this road would pass over the Meru Range at the ‘Kinta Pass’*. This trunk road allowed the telegraph system and postal route to be inaugurated. Roads provided access to lands and mines..” (Khoo & Lubis 2005).

In 1888, Kinta was competing equally with Larut for tin production as demonstrated in export statistics. “*The fifteen most productive mines in Perak were still to be found in Larut, whereas the Kinta miners were more numerous but generally small, with few exceptions such as a Chinese mine at Sorakei near Lahat*” (Khoo & Lubis 2005).

The year 1889 witnessed the dominance of tin production in Kinta that exceeding Larut for the first time. The Straits Trading Company assisted in this growth and established a branch in Gopeng which dealt directly with miners in Kinta. By providing ‘cash for ore’, the Straits Trading Company created a ‘liquidity of capital’ that initiated the second Kinta Tin rush (Khoo & Lubis 2005).

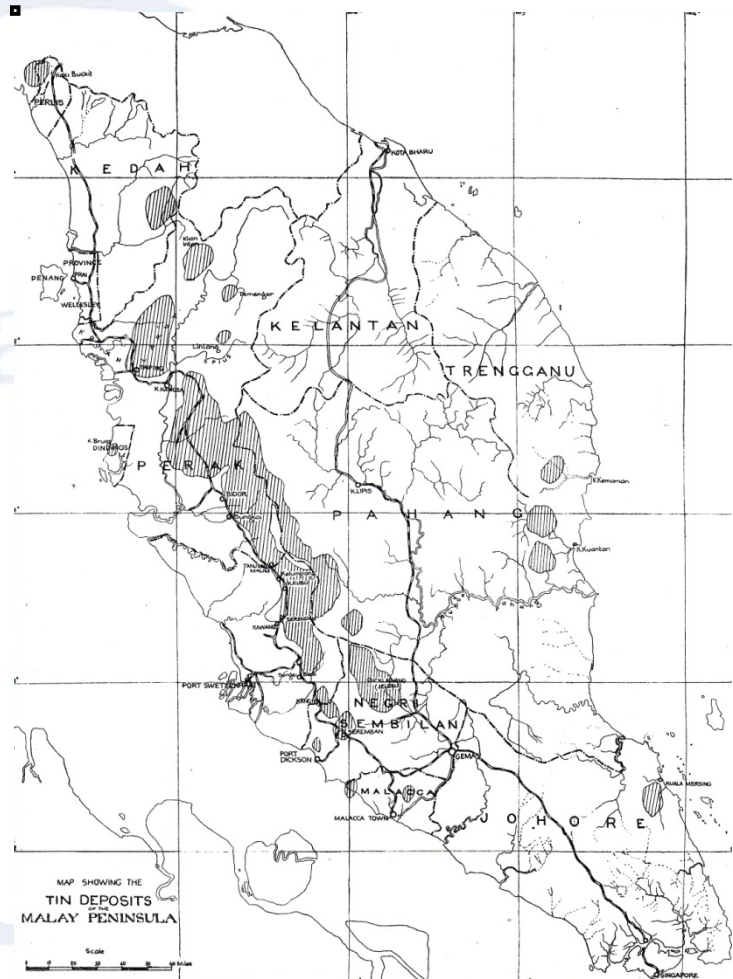


Figure 1: Tin mining deposits of the Malay Peninsula.
The map also displays the railway line through the tin deposits on the Western part of the Peninsular.
Source: (Penzer 1921)

The railway line that linked Larut to Port Weld offered cheaper transportation while in Kinta Valley, the new railway that opened in 1894, with stops at the important mining towns of Kampar, Kota Bahru, Batu Gajah and Ipoh helped the expansion of mining in the Kinta districts. Around the 1890s, Tambun, Ampang and Tanjung Rambutan also emerged as significant mining centres while “*Kampar grew to become the second largest town in Kinta, after Ipoh*” (Khoo and Lubis 2005).

Among the four Federated Malay States (Perak, Pahang, Negeri Sembilan and Selangor), Perak consistently led the statistics about yearly tin production and tin exportation in early twentieth century. Table 1 documents the expansion of the mining industry in Perak. Innovations in mining methods with the first introduction of tin dredges in 1910s also contributed to the increase in a tin production statistics in Perak.

State	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Perak	355,590	385,060	405,870	436,269	443,507	446,781	435,909	431,386	467,784	461,665
Selangor	269,490	302,570	278,360	284,592	300,413	289,867	268,624	273,900	282,540	266,007
N.Sembilan	82,320	75,230	73,520	85,461	84,849	85,133	77,766	75,155	64,221	48,072
Pahang	15,700	26,310	23,120	25,317	27,469	34,879	34,488	33,195	39,520	43,144
Totals	723,100	789,170	780,870	831,666	856,238	856,660	816,787	813,636	854,065	818,888
State	1910	1911	1912	1913	1914	1915	1916	1917	1918	
Perak	421,335	437,339	447,240	423,753	479,621	466,634	457,660	414,000	386,126	
Selangor	240,192	231,175	255,382	252,765	244,765	234,155	205,650	184,135	180,505	
N.Sembilan	34,697	29,230	29,071	36,821	35,900	20,900	15,240	12,328	10,505	
Pahang	40,674	43,954	51,779	58,791	63,723	63,980	54,464	58,734	50,679	
Totals	736,898	741,698	813,472	842,130	823,909	785,670	737,014	669,197	627,815	

Table 1: The export (figures are given in pikuls of 133 ½ lb) through customs from each on the Federated States for the Years 1900-1918
Source: (Penzer 1921)

Outline history of tin mining in Perak

Year	Events
1848	Tin was discovered in Larut district
1850s	The first tin rush to Larut
1861	Mines open in Jelentoh near Gopeng
1877	Raja Asal was permitted to develop the Papan mines
1880s	Tin rush in Sungei Raia
1882	The 'European Company' - the French Tin Mining Company develop a mine in Lahat
1885	The 'European Company' discovers the old abandoned mines known as <i>Lombong Siam</i>
1884 – 1889	The first tin rush to Kinta
1890s	Tambun, Ampang Tanjung Rambutan, Menglembu, Chemor, Kampar and Tanjong Tualang rise as mining centres Tronoh mines recognized as the largest open-cast mine of its time on the Peninsular
1890 – 1895	The second tin rush to Kinta

Table 2: The outline history of tin mining in Perak

Source: author

Methods of Production

Siamese miners were believed to be the earliest miners to explore Kinta. This corresponds with the discovery and assessment of shaft mining in the Lahat abandoned mine which was used to extract tin by the Europeans in 1875. Other than the Siamese, the Indigenous people of Malaya, the Orang Asli, and the Malays were also involved in early mining by using the 'lampan' method for tin extraction. (Khoo & Lubis 2005) drawing from (Hale, 1885:304) explain that “*..lampanning was a method in which land contain a very small quantity of ore can be washed at a profit; and was in fact, similar to hydraulicing used in California..*”.

In the middle of eighteenth century witnessed the migration of Chinese to Malaya, who brought with them the new mining techniques for economic concentration purposes. It was the Chinese who turned Malaya into a world tin producer (Khoo & Lubis 2005). The method used by the Chinese was called 'lanchut' which involved a gravel pump which became extensively used throughout Perak. In the early 1890s, Khoo & Lubis (2005) added, “*..European mining made a breakthrough in Kinta when F.Douglas Osborne imported two monitor and experimented with hydraulic sluicing*”. The first company in Malaya to initiate the hydraulic sluicing was the Gopeng Tin Mining Company which was the first British company to be able to compete successfully with the Chinese. As mining technology evolved through time, the first tin dredge was introduced in Malaya in 1913 in the Kinta Valley by the Malayan Tin Dredging Ltd.



Figure 3: Chinese Open cast mine
Source: (Lubis, Wade & Nasution 2010)



Figure 4: Hydraulic mining in Perak

Impact of Mining on Perak State

Tin mining in Perak resulted in a major change to its landscape and demonstrated the stability and growth of its economy and social development. New mining towns and settlements that were established from mining during ‘tin rush’ grew tremendously but also descended rapidly, demonstrating the fluctuating impact of mining upon the Perak landscape. Nevertheless, the improved facilities and transportation, from river and bullock cart to a ‘proper’ road system and railways that passed through these mining areas and towns supported mining activities and their expansion during the nineteenth and twentieth centuries. The glory achieved from the past mining can still be witnessed by generations today when they visit these landscapes.

THE SCENARIO OF FORMER TIN MINING LANDSCAPE IN PERAK

According to the Malaysian Department of Statistics, in Peninsular Malaysia, there is more than 113,700 ha of ex-tin mining areas and the majority of these areas are former tin mining sites. The decline of tin mining operations is linked to the collapse of the world tin market in 1985 which led to the abandonment of mine sites in Perak. The extant evidence of ex-tin mining sites can clearly be prominently seen in Kinta district especially in the Kampar, Batu Gajah, Tronoh, Pusing, Kota Bharu, Malim Nawar and Tanjong Tualang areas. Much of the ex-tin mining sites which were located adjacent to Ipoh, have been reclaimed and converted into more profitable land uses including residential areas and commercial activities to support the expansion of Ipoh. The massive economic development in Kinta Valley offers a good deal for business opportunity, leisure, and city lifestyle. People from all walks of life, especially from the other parts of Perak, flock to Kinta with the hope of changing their fortunes. To support this demand, many land developers who foresaw this trend, purchase these former tin-mining lands, and transform this cultural landscape into residential, commercial and institution

developments. This scenario can be observed in the Tambun, Ampang, Tanjong Rambutan, Lahat, Pengkalan Pegoh, Pusing, Siputeh and Menglembu areas. These former mining areas were established in the late nineteenth century and flourished in early twentieth century.

Kinta is not the only mining district that has faced its demise of ex-mining evidence, because Taping in Larut district is also witnessing the transformation. Taiping once held the position as Perak's capital city also owe's its existence to the rapid development of its tin mining in the nineteenth century. Tin mining in Larut was intensively developed before Kinta Valley under the guidance of Che Long Ja'afar and his son Ngah Ibrahim who brought Chinese miners to Larut. Other contemporary projects that have been developed on former tin mining land include the University Tunku Abdul Rahman (UTAR) in Kampar and University Technology PETRONAS in Tronoh, both was built on 526 hectare and 400 hectare of land.

Gopeng was once the main mining town in Kinta and was dominated by the European companies also faced with the extinction of its tin-mining landscape. As a response, local efforts have successfully conserved an old Chinese shop that has been converted into the Gopeng Museum, to display and store historical documents, images, tools and artifacts used in the past mining activities in the nineteenth to twentieth centuries. This scenario can also be viewed in Kampar, where the Kampar Tin Mining Museum was initiated by the ex-tin miner himself, Tan Sri Dato' Hew See Tong displayed his personal collectable items which includes images, mining documents, displaying the Malaysia mining statistics (collected and compiled from the Malaysian Chambers on Mines), mining machineries and tools and other artifacts found during his mining operations in Kampar and Puchong, Selangor. The mining methods which have been placed in 3D models assist visitors with high understanding of different mining operations and methods imposed in Malaya in the nineteenth and twentieth centuries.

The ex-tin mining landscapes that surround Kinta Valley possess their own aesthetic values because these picturesque landscapes are enhanced by the Titiwangsa hill range as their backdrop. Some of these abandoned mining areas, which are located at considerable distance from Ipoh, especially in Batu Gajah and Tanjong Tualang offer high natural aesthetic values where the jungle now succeeds. The quiet and peaceful landscapes surrounding the former mining pools also offers good places for migration bird habitats between Septembers to March each year. Some of the species includes Grey and Purple Herons which attract nature and bird lovers to visit these areas. The Perak branch of the Malaysia Nature Society has been urging the Perak state government to gazette this area as a bird sanctuary.

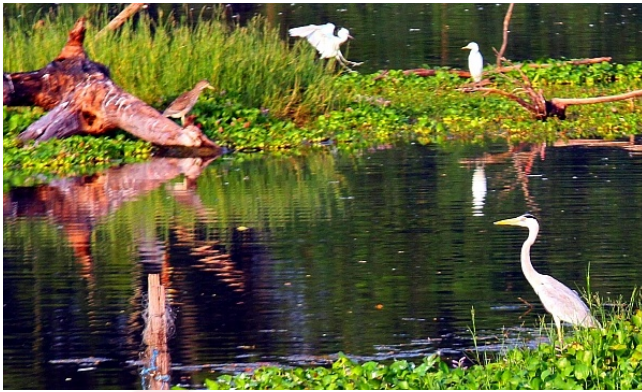


Figure 5-6: One of the abandoned mine sites in Batu Gajah, Perak which has been converted as bird sanctuary after receiving migration birds throughout September-March each year.

Source : <http://www.flickrriver.com/photos/aby1220/sets/72157626343156337/>

Nevertheless, the scenic view and landscape of ex-tin mining areas has capture attention of investor to develop the land for resorts, recreational and golf course area. Project in Kinta such as the Clearwater Sanctuary Golf Resort, Lost World of Tambun, Gunung Lang Recreational Park and Taiping Lake Garden in Larut are all exist from the former tin mining land. These projects were described as the rehabilitation program to accommodate treatment from land destruction by previous mining activities.



Figure 7: Mine rehabilitation project-Clear Water Sanctuary Golf Resort, Batu Gajah, Perak

Source:

http://www.malaysiahoteltour.com/hotel/malaysia_hotel/perak_hotel/clear_water_sanctuary/clear_water_sanctuary.html

Other than commercial and residential projects that have been built on these ‘industrial heritage lands’, there have also been projects initiated by the local people who have sought to take advantage of the breeding ducks and freshwater fish industry in the vicinity of the former tin mining lands around Batu Gajah and Tanjung Tualang.

Conversion into agriculture land can also be seen in Bidor, Perak, where the locals have been planting mangos and turnips for commercial purposes.



Figure 8: Some of the abandoned mine in Kinta has been converted into agriculture

Source: <http://telecentre.my/batugajah/index.php/ms/perikanan-dan-penternakan.html?showall=1>

Where is the public sensitivity to the appreciation of the historical value of the landscape that previously belonged to this former tin mining landscape? Do the ex-tin mining sites carry no meaning or heritage value after the tin ore has been extracted and finally abandoned? How do future generations appreciate and experience the fame brought by mining if no appreciation is afforded to these areas? The glory that was brought to Perak from this industrial heritage era by tin mining contains national and state significance values which describe and explain the history, aesthetic, social and scientific development of this landscape. While much have been destroyed, extant mining evidence still exists on the actual mining sites especially in Tanjung Tualang, which includes the last tin dredge in Perak. What concern is that, this surviving dredge which is now maintained by the Osborne and Chappel Sdn. Bhd. has been threatened by the unawareness of public who has overtaken half of the ex-tin mining pond (where the dredge stands) and convert it into a duck and fresh water fish breeding pond. A portion of its tailing sites has turn to be a vegetables and fruits farming areas. All of the statements provide an overview of the concerns the loss of industrial relics that became a symbol of glory to Perak hence describe its importance and significance for conservation.

How do mining landscapes fit into the concept and practice of conservation and heritage?

Heritage can be defined as “...*those things we want to keep, enjoy or learn from and pass on the next generation – includes many aspects of our cultural environment, among of them being mining places.*”(Pearson & McGowan 2000) as quoted from (Pearson & Sullivan 1995).

Malaysia National Heritage Bill 2005 define heritage item as “...*any National Heritage, heritage site, heritage object or underwater cultural heritage listed in the Register; "area" includes works of man or the combined works of nature and man, and areas*

including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view..."

"...The Australian Heritage Act 1975 defines 'heritage' as 'those places being components of the natural and cultural environment of Australia, that have aesthetic, historic, scientific or social significance or other special value for future generations as well as the present community'." (Sim 1997) as quoted from (Ramsay 1991).

Heritage value is *"...or SIGNIFICANCE attached to a cultural place...can be initially defined as the capacity or potential of the place to demonstrate or symbolize, or contribute to our understanding of, or appreciation of, the human story"* (Sim 1997) as quoted from (Pearson & Sllivan 1995).

Mining heritage places are *..."the sites which minerals and other minerals of value were dug from the ground – they are mines. The broader context in which mining occurred and that other places, including whole landscapes, might in themselves be of heritage significance because of mining"*(Pearson & McGowan 2000).

Mining landscapes are often viewed from the cultural landscape perspective, which records that natural and cultural components can be and are located in the same landscape setting. UNESCO through ICOMOS has acknowledged that historic mining landscape are a part of our cultural landscapes which portray the interactions between human and nature embedding the continuity of human experience.

The Burra Charter (1999), authored by Australia ICOMOS states *"Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences."*

Bandarin (2013) considers that *"...mining landscapes have to be included as part of the human experience. Clearly, we don't consider these as examples to propose for the future, but they certainly are testimonies of history..."*

As an example, Cornwall and West Devon mining landscape has been recognized by UNESCO and inscribed on the World Heritage List in 2006. The industrialized revolution which took place in eighteenth and nineteenth centuries reshaped the landscape of Cornwall and West Devon with the remaining surviving evidence a standing as a testimony of the past history. As noted in the Nomination Statement of the Cornwall and West Devon landscape for inclusion on the World Heritage List (p:23), the expansion of the Cornish mining era included technological advancements such as horizontal engine houses of the nineteenth century that spread all over the world resulting in distinctive Cornish mining landscape comprising econography and industrial evidence that can be viewed in Australia, Mexico, Spain and South Africa. Even in Malaysia, F. Douglas Osborne and Chappel consulted mining experts from Cornwall resulting in technological breakthroughs in Gopeng in 1890s and establishing the Gopeng Tin Mining Company. This company was the first to introduce the hydraulic sluicing method in Malaya and most successfully established its use in Gopeng, Perak (Khoo & Lubis 2005).

This extended expertise of the Cornish miners first came to South Australia in 1840s for copper mining and boosted up the South Australian economy in the middle of nineteenth century. Copper carbonates were discovered at Kapunda in 1842 and mining quickly spread to Burra; of greater significance in 1845 (Johns 2002). Johns describes “*..South Australia being a major copper province*” with another discovery in Kadina in 1859 and Moonta in 1861. Wallaroo rose to host a smelter in 1861 and in later years Kadina, Moonta and Wallaroo were known as the ‘copper triangle’ of the Northern Yorke Peninsula with mining continuing in this ‘copper triangle’ until the early twentieth century. John has also observed that the decline of copper and tin mines in Cornwall in the middle of nineteenth century prompted Cornish miners to travel overseas to continue this occupation. The extensive expansion discoveries of copper deposits in South Australia, offered a good opportunity for the experienced Cornish miners to flock to South Australia to escape unemployment back in their homeland. Thus “*..the mining methods, haulage and processing of ore and pumping of water from the mines were based on Cornish technology*” (Johns 2002).



Figure 9-10: Morphet's Engine House and the beautiful landscape at the Burra Monster Mine, SA

Source: author



Figure 11-12: Crowns, Botallack & Towanroath Shafts, at St Agnes

Figure 10: Moonta Mine, SA

In the Cornwall & West Devon heritage mining landscape

Source: author

Source: Management Plan 2013 – 2018 (p:2&17)

THE IMPORTANCE OF MINING CONSERVATION IN PERAK STATE

Conservation means “*all the processes of looking after a place so as to retain its cultural significance*” article 1.4, Burra Charter 1999. Malaysia National Heritage Bill 2005 defined conservation “.. Includes preservation, restoration, reconstruction, rehabilitation and adaptation or any combination..”

Heritage sites are important to be conserved because these places are scarce and non-renewable. These historic sites are capable of demonstrating the social and economic development of the past, the expansion of technology, the role and hardship of mining settlers and the evolution of mining transportation and facilities. Pearson & Gowan (2000) conclude that the evidence of a heritage mining site will compose of “*..mine working, mullock and tailing dumps, equipment and machinery sites, hut sites, roads and tramways, dams (water supply) and races.*” This evidence is still extant in some of the Perak ex-tin mining sites.

As highlighted in the Burra Charter (1999), “*Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the landscape. They are irreplaceable and precious. These places of cultural significance must be conserved for present and future generation.*”

Sim (1997) quoted from Pearson & Sullivan (1995: pg.11) “*...once destroyed (these heritage places) cannot be regenerated, reintroduced, or duplicated.*”

Legacy for the future generation

The mining landscape in Perak, especially in the Kinta and Larut districts, has experienced very serious threats due to the imperative of economic development. This past heritage industrialization resulted in major social changes and a boost to the state economy of Perak today, portrays the evolution of these mining methods and techniques that supported the spread and prosperity of settlements all over the Kinta and Larut districts which brought major changes to the Perak landscape.

How well is the translation of the state government through its Development Plan of Perak Amanjaya, which outline three main objectives; quality opportunity, quality income and quality living. In achieving the 3 outlined objectives, 7KRA (Key Result Areas) has been design for comprehensive state transformation plan (Institut Darul Ridzuan 2010). Criteria seven of the KRA emphasize on the environmental sustainability and preserve resources deep through emphasis of its importance and practice of collaboration by all parties in the preservation and conservation.

The slogan, 'Perak Amanjaya, the silver state' is normally heard and been used everywhere but do they really appreciate the fact that massive development of Perak today, the major social changes, the expansion of transportation, infrastructure and facilities are all contributed and evolved because of mining? Where is the concerns and awareness towards the conservation and preservation of ex-tin mining places in Perak, which highlight the significance of its cultural landscape? Will future generations be able to grab the understanding and difficulties experience by their forefathers? Initiative should be taken to remedy this situation. As stated, mining heritage helps to demonstrate on what has happen in the past and how to go about it in the future. As surviving mining evidence can clearly been viewed in Kinta, those identified significance sites have to undergo conservation as it offers the opportunity for the new generations to learn, appreciate and respect the pass. The last tin dredge in Perak, which is situated in Tanjong Tualang is the legacy for the future generation which prescribes the evolution of mining methods and the expansion of technology which demonstrate the technical ability of the



pass generation and how this technology could help the mining company to expand their revenue and capital.

Figure 13: Tanjung Tualang, placed the evidence of the last tin dredge in Kinta



Source: <http://tennysonlee.com/2012/05/01/the-last-tin-dredge-in-kinta-valley-tt5/>

Source: Google earth map, May 2013

Kampar and Tanjung Tualang in Kinta district, currently extant with the surviving evidence of mining dredge ponds, mullock tailing and placed the location of the last tin dredge in Perak. The placement of tin dredge ponds can clearly be seen along Kinta river and Kampar river that supports water for mining sluicing. Roads and railway that pass through Kampar, Batu Gajah and other important tin mining towns contribute to evidence and significance of the historic mining era and as means of transportation tin ore. The mining settler's villages and towns that evolve due to mining also support the theory of the mining glory once hold by Kinta in nineteenth century till middle of twentieth century.

Promoting cultural and heritage tourism in Perak

Perak, the abode of grace was known for its beautiful natural environment and rich with culture heritage. Many of the national heritage lists can be found in Perak and the latest was in 2012, where Lenggong, Perak has been recognized by the UNESCO as World Heritage Lists. The tagline 'Celebrating Ipoh's tin mining heritage' is commonly heard and becoming one of the selling point for marketing tourism in Perak. But on the actual ground, people can only view this scenario in the tin mining museums without having to fell attach to the actual site. The importance and significance of heritage conservation for the ex-tin mining sites are relevance as testimony of the past mining activities and offers opportunity for the tourist to experience the 'living museum' and to have direct contact to the mining landscapes. In return, heritage industrial conservation could help the state government to increase the states revenue through tourism activities. Conservation of the

ex-tin mining sites also link to the educational and offer a vast opportunities for future research and development.

CONCLUSION

The thematic history of tin mining in Perak reveals the tin production history, technology for extracting tin, the early transportation and infrastructure, social and economic development. The study also link to the identification of tin mining concentrated districts in the past centuries and to trace the evolution of mining towns and settlers that evolve in Kinta and Larut. The surviving evidence that spread over Kinta demonstrates the importance and significance of conservation for ex-tin mining sites in Perak. These surviving evidences are testimony of the past history. Industrial heritage, which is view from the cultural landscapes has been recognized by the UNESCO as it is capable to demonstrate the interactions between human and nature embedding the continuity of human experience. The Burra Charter (1999), authored by Australia ICOMOS states “*Places of cultural significance enrich people’s lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences.*” The Cornwall and West Devon mining landscapes is a good example of heritage mining conservation projects which acknowledges industrial heritage as part of the conservation programme. Those significant sites are scare and irreplaceable. Hence, conservation is important as it helps to secure the historical site evidences which stand as testimony for present and future generations

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