



## 2010 On Site Review Report

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by *Sultan Barakat*

# Restoration of Rubber Smokehouse

*Kedah, Malaysia*



### **Architect**

*Arkitek LLA / Laurence K.Y. Loh*

### **Client**

*DIGI Telecommunications*

### **Design**

*2006 - 2007*

### **Completed**

*2007*



# **Restoration of Rubber Smokehouse**

*Kedah, Malaysia*

## **I Introduction**

Located in the small town of Lunas, in the Kedah district near Penang, the Rubber Smokehouse stands as an example of Malaysia's industrial heritage and the rubber industry that was of vital importance to Malaysia's economy for much of the twentieth century. The restoration project involved the preservation of the historic structure and its transformation into a museum and interpretation centre displaying the history of the locality and of the rubber industry in the area.

The restoration project brought together the different communities living in the area and engaged Malaysian citizens, especially local schoolchildren who were charged with mapping and documenting a cultural history of their home. The project was sponsored through a corporate social responsibility programme of a local telecommunications company and led by the architect Laurence Loh,

The Rubber Smokehouse has been transformed from an abandoned and forgotten building into an important part of the landscape of the town and a focus for the local community. It has combined architectural restoration (the physical reconstruction of the building) with inter-cultural youth engagement and corporate social responsibility.

The merit of the project lies in its unique approach, which shows how simple architectural interventions can play a role in advancing social cohesion in multicultural societies.

## **II. Contextual Information**

### **A. *Project Background***

The project took an abandoned rubber smokehouse built in the early 1960s in the small township of Lunas in the Kedah district, just east of the border to Penang State, and converted it into an interpretation centre (museum) with a permanent exhibition showcasing the history of the rubber industry with a specific focus on the architectural and urban history of Lunas itself.

The actual restoration of the building involved a three month- long participatory project, sponsored by DiGi, a local telecommunication company, as part of its 2005 cooperate social responsibility programme 'Amazing Malaysians', and was led by architect Laurence Loh. The continued running of the museum has now become a private initiative sponsored by the Malaysian architect based on his extended family's heritage in the area.

The project brought together 80 school children (ages 10-14) to discover and document the history of their town. The children came from segregated Chinese and Malay schools and were offered a unique opportunity to work together to conduct a cultural mapping of their inter-racial neighbourhood. In partnership with the Heritage of Malaysia Trust, the project sought to teach the children true intercultural and inter-religious tolerance, how to treasure the legacies of their traditional heritage, and how to document and interpret their inheritance by gathering oral histories of the town.

Today, the restored smokehouse features the children's documentation projects, alongside a detailed description of the traditional Latex industry and its history. The exhibition allows visitors the opportunity to see and experience the making of smoked rubber sheets. This is the only museum of its kind in Malaysia, despite the country's strong and historical association with the rubber industry.

## ***B. Background to Lunas***

Lunas is a two-road township situated 45 minutes away from Penang, on the mainland. Its small inter-ethnic community has a majority Chinese population, followed by Indian and Malay. The town was first established towards the end of the nineteenth century to service the rubber plantations. It had a large number of moneylenders and changers, a couple of modest schools and a renowned Buddhist temple and retreat.

The town's name Lunas means "keel" (part of a ship) and it is assumed by many local villagers that this name referred to a time when the river Sungai Kulim, which runs immediately beside the village, was much larger and wooden barges used to travel upstream to collect trading products. In many ways, the history of this small town reflects the broader industrial history of Malaysia, of colonialism, plantations and migrant populations.

The introduction of rubber into Lunas is widely credited to three Chinese migrants who moved to Malaysia during the late 1890s. Contracted by the British to clear the land for rubber farming, Lim Lean Teng, Soon Ah Lee and Loh Boon Ghee (the grandfather of architect Laurence Loh) began their separate rubber businesses - attracting clan members from China to work as rubber tappers and selling rubber across both Malaysia and China. Soon, these three enterprising individuals turned from plantation workers to plantation owners.

In the early twentieth century, the whole area became known for its thriving rubber industry, one of the two main industries, alongside tin mining, which launched the modern economy of Malaysia and provided the impetus for the growth of many small towns. However, rubber, as a cash crop ceased to be the backbone of Malaysia's economy in the late 1970s when its global price fell following the introduction of synthetic rubber made of petroleum products. This also coincided with the introduction of smallholdings in an attempt to address entrenched poverty, which unfortunately affected the level of productivity.

The economic decline of Lunas began to be reflected on its physical appearance, and it is a story that was repeated up and down the country as interest in natural rubber started to decline.

Until recently, the history and heritage of such towns and their communities have gone unnoticed and have received no attention in terms of conservation or heritage management plans, despite the fact that they represented the cultural heritage of a majority of the people as well as the industrial heritage of Malaysia.

Recently, high-tech industry was introduced to neighboring districts and Lunas started to attract housing developments, particularly following the introduction of the Butterworth-Kulim Expressway.

### **C. *Background to the Rubber Smokehouse***

Although modern industrial and transport technology allows natural rubber today to be sold directly to factories as latex jelly, in the past it had to be rolled into rubber sheets and was smoked in order to preserve its characteristics, thus allowing it to travel further for manufacturing. This meant that the construction and maintenance of smokehouses was part and parcel of the rubber industry.

Smokehouses were traditionally single storey timber buildings with corrugated iron or asbestos pitched roofs. They would have a large door on one side of the building and no windows, and the building would have to be sealed for three to five days at a time while the rubber was being smoked. The smoke would then be let out through a series of chimneys or controlled openings in the roof. In the most sophisticated plantations the smokehouses were located close to the rubber sheet processing plants and connected to them by a steel rail along which the rubber sheets could be rolled in.

Traditionally, the smoking needed to take place soon after the tapping of the latex and that is why the majority of smokehouses were placed at the centre of plantations of between 100 and 1000 acres. The Lunas Rubber Smokehouse, however, was unique in that it was built on the edge of an urban area. It is said that Loh Liang Son (son of Loh Boon Ghee and uncle of architect Laurence Loh), who inherited the Loh Plantations, spotted a gap in the market with the creation of small land holdings, whose owners could not afford to build and run their own smokehouses, but were willing to pay for their latex to be smoked, or to sell it as jelly to a middleman who would then smoke it and sell it to the manufacturers.

Thus the Lunas smokehouse was built in the early 1960s, using local builders. It was cleverly designed to function as an industrial building, with a dock for lorries and places for people to climb up from outside the building in order to reach the different levels. It was built on a fresh site that was considered to be at the end of the town - today, however, with the introduction of the expressway, it has become the entrance of the town, which in a way makes its restoration even more interesting.

Unlike most smokehouses that were usually built of timber, the Lunas smokehouse is built of both brick and timber. It was three storeys high, designed to take an exceptionally large volume of Latex sheets, and had two smoking chambers that could work independently, thus allowing maximum utilisation. Reinforced concrete was used to create a central structure at

ground level to support the upper levels of the timber structure, which carried the weight of the rubber sheets. Originally there were no floor boards on the upper levels except a few that allowed access to the racks. The rails on which the rubber sheets were hung were made of bamboo - they are now solidified and well preserved due to the smoking. The roof of the building was made of corrugated sheets of asbestos.

The Lunas smokehouse finally closed in the late 1970s/early 1980s after which it stood abandoned and under the constant threat of demolition, like most of the historic smokehouses in the area. In fact, the whole town of Lunas became a sleepy place until recently, when the construction of the Butterworth-Kulim Expressway began to bring visitors.

#### ***D. Local Architectural Character***

The most prevalent architectural forms in this small town are the two rows of double storey shop-houses on both sides of a wide street. People work on the ground floor and live upstairs. The character of these shop-houses represents the diversity of the town and of Malaysian society, as they incorporate architectural influences from China, India, and Malaysia. Currently, there are just under a hundred old shop-houses in Lunas. Mainly situated along both sides of Jalan Raya (previously called Main Road), they are likely to have been built in the early twentieth century. A five-foot wide public passageway in the form of a covered colonnade runs along the front elevations of the shop-houses at the ground floor level.

The majority of the structures are built of fired brick with timber beams and V-shape terracotta roof tiles. Many of the buildings have timber windows with traditional ventilation features above windows and doorways. Some of the grillwork and metal collapsible doors appear to have been installed in the 1960s and 1970s and many of the traditional courtyards, air-wells and rear light-wells have been covered to provide more sheltered space in the buildings. The facades have a variety of architectural styles, from the traditional and widespread colonial style to the distinctive Art Deco-inspired buildings, characterised by strong vertical and horizontal elements (e.g. Soon Eng Hooi Shophouse, 105-106 Jalan Raya Lunas).

Overall, the collective ensemble of the shop-houses has retained its original scale and character, despite a degree of dilapidation, and is representative of the many small townships that developed between 1900 and 1940s.

The town also has a small number of distinguished structures, the most notable of which are a 'Palladian-style' bungalow called the Soon Mansion, built by Soon Ah Lee and completed in 1928; the Buddhist Hermitage Temple meditation retreat that was set up in 1990 under the patronage of the Soon family; and the "Strong Wall" House (69A Jalan Raya Lunas), built in 1951, which is an exception to the traditional shop-houses, and is the only single storey residence on the main road.

### ***E. Climatic Conditions***

Malaysia has a tropical climate and days are often warm and humid. The locals describe the weather as ‘either hot or hotter or wet and not so wet’. The wettest month on the west coast, where Lunas is located, is August, and the average temperature is around 27°C all year round.

For the smokehouse to work effectively it had to be rainproof; when water mixes with latex it dilutes it and compromises its quality and thus its price. The building had also been designed in a way that allowed the loading and off-loading of rubber to be sheltered from rain as well. The work of the smokehouse did fluctuate in accordance with the weather but this had more to do with the supply. Rubber trees cannot be tapped when it rains or during winter because their leaves fall and their productivity decreases.

The building was designed to allow the space to be sealed during the smoking process, with the smoke achieving maximum but consistent penetration at all levels. The openings were designed to maximize airflow when open, to speed up the ventilation process after the rubber had been smoked.

### ***F. Immediate Surroundings of the Site***

The smokehouse is located on the town’s main road, today a busy thoroughfare leading to several housing estates that have developed in the vicinity to service the growing high-tech industry in the nearby district of Kulim. It occupies part of an 1,800m<sup>2</sup> plot and is surrounded by a fence. The current owner of the smoke house, Mr Loh Hock Joo, has recently built a wall to replace the steel fence on the roadside.

The plot is shared with another building, also owned by Mr Loh Hock Joo, which was relocated to the smokehouse site and also restored by Laurence Loh a few months after the restoration of the smokehouse was completed. The building is known locally as the Siamese House, so called because the original tenants were Thai.

Attention was first drawn to the Siamese House on its original site by the school children who participated in the project - they had investigated the building along with a number of other significant historic buildings in and around Lunas and documented them in the exhibition area of the smokehouse. Soon after the smokehouse project had been completed, the architect heard that the house was going to be torn down to make way for a new housing development.

Laurence Loh felt that the unique and culturally significant character of this house justified its preservation. Its architecture, he felt, was unique to the area, with its peculiar eclectic column system at the connecting covered passage leading from the main house to the kitchen block at the rear: a pair of columns with a Roman capital and a Siamese base, held up the roof.

In terms of preservation best practices, the relocation of the house is reversible since it is a timber structure, which is relatively easy to dismantle and re-erect. The recycling of the building also made good economic sense since a building of its size would cost five times the amount to build from scratch.

The architect also felt that the fact that the house had been occupied by three generations of a Thai family brought attention to the history of the Thai presence in Kedah, which had been ruled by Thailand before Francis Light established a British trading post on Penang Island in 1786. Furthermore, the architect felt the preservation of the building reflected his family's continued commitment to and investment in Lunas, starting with Loh Hock Joo's informal leadership of the town.

In many ways, the relocation of the Siamese House to the smokehouse site has strengthened the concept of conservation in Lunas, and has potentially increased the sustainability and use of the site as a heritage place. In the process, it has also anchored the new entry point into the town from the modern highway.

### **G. *Present Use***

Following the restoration of the smokehouse, the two old smoking chambers are being used as a museum and interpretation centre, and are open to the public on a daily basis. The exhibition is structured in two parts. The first recounts the story of Lunas, its history and architectural heritage, with displays including the documentation work carried out by the students as well as professional posters created by the architect. The second section focuses on the history of the rubber industry and includes a showcase of an actual rubber smokehouse. Rubber sheets have been hung up on the well-preserved, original bamboo poles to allow visitors to see how the sheets were made, and to simulate an environment replicating the internal space of a smokehouse. The blackened walls, full of soot and dust accumulated over 40 years have been well preserved. This, complete with the rich pungent smell of raw rubber, creates an unforgettable and distinct experience.

The owner leases out the site. The Siamese House and the surroundings of the smokehouse are used as a restaurant and hawkers' centre. This ensures that there is a constant stream of visitors to the place and that there is a presence of people there on a daily basis. As part of the rental agreement, the restaurant lessee has to maintain the smokehouse and keep it in good repair and keep it open for visitors during work hours and sometime on request. To date the agreement has been fulfilled, but I was unable to verify the numbers of visitors as no records are kept on site.

The placing of the two buildings on the site has created a shaded area where people gather for a break and to have lunch and chat. This originally unintended use of the site was interesting to observe.

## **III. Programme**

### **A. *History of the Inception of the Project***

In September 2005, DiGi Telecommunication (a mobile phone company), launched a corporate social responsibility programme (CSR) to celebrate Malaysia's tangible and



intangible heritage. They asked the public to nominate, using text messaging, five 'Amazing Malaysians' who have made a special contribution to Malaysia's social, natural, cultural and built heritage. The programme aimed to identify unique Malaysian heritage practitioners and sponsor them to work with a number of children on a project, sharing their knowledge and skills with the young people (especially from rural areas) in the process. The aim was to bridge the country's past and present through youth engagement.

The programme ran over a three-year period and identified a total of 15 'Amazing Malaysians' with diverse interests and experience, ranging from storytelling to nature conservation, shadow-playing, and architecture.

Architect Laurence Loh was selected through the programme as the Heritage Architect of Kedah. He was asked to propose a project with the condition that it involved 80 school children working alongside him; the age of the children was left for him to determine. He said that this provided a once-in-a-lifetime opportunity for him to realise an old dream:

'Since 1990, I have been restoring other people heritage: the Blue Mansion in Penang; Cheng Hoon Teng Temple in Malacca; the Khoo Kongsi Temple and The Governor's Residence in Penang. All of this raised my interest in my own heritage. In fact, I did promise myself that one day I shall go back to my original village of Lunas and map my own history. Lunas is one of many similar forgotten townships in Malaysia that would get the chance to be noticed by those interested in heritage. When the opportunity arose I thought I would do that with local school children'.

DiGi proposed an actual building preservation as a demonstration for the children. Laurence Loh chose the smokehouse, not knowing initially that it belonged to his late uncle and was under the management of a cousin with whom he had little contact. After rounds of negotiations the smokehouse was selected for the project, on the understanding that it would be restored at no cost to the owner and in return, the owner would keep it open to the public.

The building became the ideal driver for the telling of the community's history and its connection with the rubber industry. Furthermore, this story has a resonance for every small rubber town in Malaysia and was therefore a perfect way to introduce the local youth to the history of their town and indeed the whole region; a history that is being fast forgotten in the drive for modernisation and technological improvement.

The architect sought the help of the Heritage of Malaysia Trust (Badan Warisan) that has piloted heritage programmes with children elsewhere with activities such as drawing cultural maps, interviewing residents, and recording the stories of ordinary men and women to plot the story of Malaysia's past.

In partnership with three local schools, SMK Jalan Paya-Besar, SMJK (C) Hwa Min and Sekolah Menengah Kebangsaan Kulim, the project identified 80 school children, aged between 10 and 15. All the children from the primary school were Chinese and there were many Malay and Indian children from the two secondary schools. With the help of an artist, named

“Kungyu” and a team of five facilitators the children were brought together every weekend over a period of three months. The majority of the children (60) were trained to undertake built heritage cultural mapping in order to examine the town’s culture and history of trade, and to learn about the rubber industry from the tapping through to the processing of the material. Meanwhile, the rest (20 children) were taught how to do a videography.

The work was initiated in three phases:

- Firstly, the children explored the town’s history and particularly the industrial heritage of the rubber industry which remains an important aspect of Malaysia’s modern economy. For three months, working over weekends, school children interviewed local residents about their family history, when they came to Lunas and from where, what they do for a living, and how many of their family members had left and why.
- Secondly the children analysed and triangulated the data collected through these interviews in order to build up a picture of Lunas’ past and make links between people and place. The children produced mind maps of this history and photographic timelines. In this sense the project aimed to keep history alive and engage youth in the glory of the past, allowing time to pause and reflect: “Before this, I didn’t know anything about Lunas, its buildings or its history” (Muhammada Adli Hakim, student participant, cited in New Straits Times, 2006).

Additionally, all of the children were provided with some basic training in architectural history and building renovation. As a result although the project explored the historic architecture it has also provided the children with an appreciation of existing architectural structures and their features. “I live in a warm concrete house nearby. I now understand the use of ventilation holes” (Wan Hafizuddin, student participant, quoted in StarMag, 2006). The project has provided the children with a sense of pride in their village and their ancestors’ work in the rubber industry. To learn more about the latter, the children were also taken to a rubber estate to meet experts and observe the process of rubber smoking.

- Finally, the third phase of the project involved showcasing the findings to the local population. Subsequently, the project involved the substantial restoration of the rubber smokehouse (with limited direct participation by the children due to safety concerns). The restoration of the smokehouse provided a suitable link between place and history. The results of the children’s research, which includes photos, interviews and heritage maps produced during the three months were displayed within the old rubber smokehouse and now function as a thriving interpretation and learning centre, titled the “Story of Rubber” museum.

## ***B. General Programme Objectives***

The general programme objective was to increase the people of Lunas’ awareness of their past, of the importance of intercultural tolerance, of the significance of their architecture and of the need to conserve it. The declared objectives of the programme were:

- To preserve an important example of Malaysia's industrial heritage.
- Address barriers and polarisation between different cultural groups.
- Encourage youth empowerment.

### **C. *Functional Requirements***

There was no formal functional requirement or architectural brief designed for this project. The original usage of the building as a rubber smokehouse ceased in the early 1980s and since then it had remained unused and had fallen into disrepair.

The smokehouse was proposed as the site for the preservation project, the challenge of which was to create an environment which would allow visitors to experience the authenticity of a working smokehouse, while offering a brief history of the area and its architectural heritage. As such, the brief was developed jointly between the architect and the school children who participated in the cultural heritage mapping exercise; the museum has emerged incrementally based on their findings.

## **IV. Description**

### **A. *Building Data***

The total site area is 1803.5m<sup>2</sup>, which includes the smokehouse and the surrounding plot of land. The ground floor area (footprint for the building) is 97.2m<sup>2</sup> with a total combined floor area, including ground floor and all upper floors of 340m<sup>2</sup>. The smokehouse was built as a simple industrial structure, not intended for people to live in. The architect described his first experience of setting foot in the building with its internal timber framework as having 'brought back memories of my childhood, climbing frames in a playground; a very playful experience'.

Unlike most traditional smokehouses, the Lunas smokehouse is a three-storey building with a single, three-storey high open interior interrupted by a grid of vertical and horizontal timber beams and bamboo sticks. The building was designed with two independent smoking chambers, symmetrical and back-to-back, each with its own external fireplace and a substantial duct extending deep into the room at the ground floor level to funnel the smoke into the building.

The first and second floors are accessed through a network of external staircases and balconies on the outside of the building. This would have allowed safe access to the workers carrying heavy sheets of rubber. The workers would typically have worked from the highest point downwards.

The walls are made of red/fired brick, two bricks thick (nine inches), tied up at the ground floor with cross beams of reinforced concrete sitting on the brick walls 2.5 meters above ground level. This structure not only freed space at the ground floor level, but also carried the

weight of the timber framework, which would have been very heavy when loaded with rubber sheets. Characteristic of that period, the brick walls would have rested on a strip of stepped foundations, three feet below ground. Local Chengal hardwood (Grade I) was used for the internal frame, timber rafters, trusses, doors, windows, floors, as well as the gangways. The roof is held up on a number of timber trusses with corrugated asbestos sheets sitting on top of cross-timber battens.

In any other neglected building of that age, termites would have eaten up the wood. However, the timber in the smokehouse was found intact and well preserved. Years of smoking the rubber, and by association the timber, had not only preserved the wood but also hardened it further. Even the bamboo, according to Laurence Loh, 'was found as hard as the day it was cut'. In addition, 'the smell of the smoked wood and the rubber was still there, which has added an important dimension to the experience.

## **B. *Restoration Interventions***

When considering this building one must remember that when built it was never intended to be visited. It constituted a functional entity which would have been experienced by the public only as a result of the terrible smell that the smoking rubber would have produced. It is likely that the public would have kept away from such a building.

The architect has, however, skillfully reinvented the space while maintaining the authenticity of the original function, creating an environment that allows visitors to experience the authenticity of a working smokehouse, while offering a brief history of the area and its architectural heritage. The overall structure of the smokehouse was intact and in a very good condition, which allowed the architect to keep interventions to a minimum.

With the exception of replacing one asbestos corrugated sheet, the interventions centred around cleaning the space, painting the outside of the building and introducing floor boards and pathways protected by handrails to allow people to experience the space at different levels. Across two thirds of the building even the cleaning was kept to the minimum. Although many layers of tar and dirt were removed, the architect felt that some should be kept to allow people to experience how the smokehouse must have felt when it was in use.

The main structural intervention has been the addition of timber floors at the first and second levels in order to create usable exhibition space that makes use of the building's volume. In some strategic places the open-plan high volume was preserved. The newly introduced wooden floors cover, at the first level, roughly two-thirds of one chamber and one-third of the second, as demonstrated in the attached plans. The second level has also been divided into two areas to allow the visitors to get really close to the rubber sheets, which were reintroduced by the architect.

The new timber used is all local timber, seasoned and stained and chosen for its similarity to the material used in the original structure.

The south-west facade has been painted by a local artist commissioned by DiGi, using some strong and attractive colors that stand out from a distance. The artist has also introduced the name of the museum as well as DiGi's commercial logo.

As noted above, the other major intervention has been the introduction of the Siamese House on the site of the smokehouse. This has altered the historic relationship between the smokehouse and the plot. Nevertheless, as they stand today, the two structures tell a single conservation story centered on the history of Lunas and the rubber industry.

The restoration work lasted roughly three months during which the architect used one skilled labourer, responsible for the supervision of the site, three semi-skilled wood joiners and five unskilled labourers to clear the site and remove the layers of tar from inside the building.

## V. Construction Schedule and Costs

The project was commissioned in July 2006. The design commenced in December 2006 and was completed in January 2007. The construction of the Smokehouse commenced in January 2007 and was completed in March 2007.

### A. Total Costs and Main Sources of Financing

The total cost of the project was US\$ 61,764.

	Amount (RM)	Amount (US\$)
Total Initial Budget	160,000	470,00
Cost of Land		
Actual costs		
Infrastructure		
Labour	60,000	17,647
Materials	90,000	26,470
Landscaping	10,000	2,940
Professional Fees		
Other (exhibition)	49,980	14,700
Total Actual Costs (340m <sup>2</sup> )	210,000	61,764
Actual Cost (per m <sup>2</sup> )	617	181

### B. Qualitative Analysis of Costs (per square metre, per unit, etc.)

The cost per square meter amounts to US\$ 181.00 (see above). However taking the entire site of 1,803m<sup>2</sup> the costs per square meter are RM116 or US\$34. This includes the cost of the exhibition but excludes costs associated with the school children's transport, board and lodging during three months. The architect did the work on a voluntary basis.

**C. *Maintenance Costs***

The project costs approximately RM200 or US\$58 to maintain per calendar month.

**VI. *Technical Assessment***

**A. *Functional Assessment***

The building is now used as a museum to document the history of the rubber industry in the area and to display the documentation work carried out by the school children in 2006. The exhibition is simple, but inviting and well displayed. While the architect's description of it as cultural interpretation centre is more accurate, the locals insist on referring to it as a museum. This has more to do with their pride and appreciation of the project rather than the substance and the content on exhibition. I was told that members of the local community, particularly those whose homes and families feature in the exhibition, as well as visitors from further afield, regularly visit the Rubber Smokehouse. I could not verify this information during my site visit because of the lack of record keeping. In addition, the site now doubles-up as an open restaurant/café area which seems to attract regular visitors from around the town.

**B. *Climatic and Environmental Response***

The building has few openings, which allows it to stay relatively cool from the inside. The architect also introduced simple measures, such as painting parts of the interior in white, in order to make the building more inviting and welcoming. The original building was originally designed to keep the rainfall out, and this quality persists.

**C. *Choice of Materials, Level of Technology***

The majority of the original fabric of the building remains intact. Very little new material has been introduced. The most important intervention has been the additional floors and even these were made from salvaged wood as far as possible.

**D. *Ageing and Maintenance Problems***

The smokehouse has been well looked after since its opening mid 2006. The day-to-day maintenance of the site (keeping it clean and tidy) falls to the tenant who is now running the restaurant next door and is paid for by the architect.

Given the nature of the building, ageing is likely to add to its charm and is likely to mostly affect the external paintwork, which will need to be replaced every few years.

### ***E. Durability and Long-time Viability of the Project***

On a day-to-day basis and as a result of the renovation project a busy food market has sprung up around the site. This has proved a useful venture for local businesses whilst generating revenue for the museum.

## **VII. Users**

### ***A. Description of those who use or Benefit from the Project***

The first group of users were the 80 school children who benefited from the initial experience. About 30 of them came from a primary Chinese school and spoke mostly Mandarin, and the rest from two local secondary schools and were largely Malay with some Indians and spoke predominately Malaya. For the vast majority, the ‘Amazing Malaysians’ programme marked the first opportunity they had ever had to engage with their peers from a different cultural group.

The discovery that they all shared a common heritage through the rubber industry, which once constituted the economic backbone of Malaysia, was an effective way of building bridges and promoting mutual tolerance based on a better understanding of the other. This was used as the entry point to introducing them to their physical heritage, the streets of Lunas and to community members. They started to find common ground and a mutual space to build together.

The facilitators employed a wide range of activities to bring the children together. They elected to allow the children to express themselves in their mother tongues. That raised the level of confidence amongst the children, but at the same time created a language barrier, with the facilitators constantly translating between three languages: Malay, English and Mandarin.

The second group of users is the public. During the three months people from the town (majority Chinese) engaged with the kids who came from a variety of cultural backgrounds (majority Muslim). As the participants were children the level of interaction was higher and families received them in their homes in an unbiased way. In the words of Laurence Loh, “it was amazing to see the majority Muslim children running around a majority Chinese town, asking questions and receiving answers”. The public continue to visit the smokehouse which now provides one of the few open public spaces in the town.

The third group of users is the members of the Heritage of Malaysia Trust (Badan Warisan Malaysia). According to the director of the Trust, they were able to use this project to test and refine some of their pedagogical methodologies, using creative tools to introduce children to the idea of heritage and cultural values. Lessons learnt from Lunas have been put to use elsewhere in Malaysia in subsequent programmes, such as the Brickfields’ Khazanh (treasure) programme in Kuala Lumpur where children acted as treasure hunters looking for the heritage of the Brickfields site.

With hindsight, both the architect and the Heritage of Malaysia Trust agreed that the impact of the programme would have been greater and more sustainable if it had run for a number of years with different groups of children invited to participate each year. In addition, they regret not having engaged more with school teachers and encouraged their participation in the programme. Finally, they said that more could have been done to involve the Rubber Research Institute of Malaysia in Kuala Lumpur in the preservation project.

#### **B. *Response to Project by Clients, Users, Community***

The project has been immensely successful in putting the small town of Lunas back on the map. The intervention has been received positively by local residents and in the national press, boosting the reputation of the area that had formerly made the paper only once before, in 2000, over concerns regarding by-election corruption.

Local school children benefited through their contribution to the project, particularly in developing the museum. One of the participants said: ‘The programme made such a strong impression on me that I have come to love history and heritage... before this programme, I think Lunas was a forgotten town. I hope that the authorities will now promote it as a historical site.’ (Mohammad Iqbal bin Adan, student participant, cited in Badan Warisan, 2007).

Loh is hopeful that the success of the project will attract visitors to Kedah and encourage further interest in cultural heritage and preservation.

### **VIII. Persons involved**

The following personnel were involved in the restoration and the cultural heritage awareness exercise:

- *Project Architect and Team Leader:* Laurence Loh, partner and manger of Arkitek LLA.
- *Facilitation of the schoolchildren work:* Team of facilitators from the Heritage of Malaysia Trust (Badan Warisan Malaysia), Selangor, led by Elizabeth Cardoso.
- *Artist/Graphic Designer:* Liew King Yu.
- *Client and Landowner:* Loh Hock Joo, Lunas.  
School children from SMK Jalan Paya-Besar, SMJK (C) Hwa Min and Sekolah Menengah Kebangsaan Kulim schools in Kedah.
- *Sponsor:* DiGi Communications, KL.
- *DiGi’s Public Relations and communication consultants:* Ayesha Harben & Associates Sdn Bhd, Selangor.



## IX. Bibliography and List of Interviewees

The following publications have been identified and reviewed by the technical assessor. The majority are newspaper/journal articles, demonstrating the level of publicity received by this innovative project in 2006 and 2007:

- StarMag. (2006) 'A place for history', *StarMag*, Sunday 3 December 2006.
- New Sunday Times. (2006) 'DIGI's Amazing Heritage Lessons', *New Sunday Times*, November 26, 2006.
- Utusan Malaysia. (2006) 'Laurence Loh - Pencarian harta harun di pecan Lunas', *Utusan Malaysia*, November 20, 2006.
- Chong, D. (2006) 'visions of lunas', *New Straits Times*, September 2, 2006.
- New Straits Times. (2006) 'when a river flowed,' *New Straits Times*, September 2, 2006.
- Su Mei Toh. (2006) 'Lunas and the rubber connection', *Lifestyle*, August 7, 2006.
- Zainudin, O F. (2006) 'Lunas kaya warisan lama', *Berita Herian*, August 5, 2006.
- Tan, E. (2006) 'Creating Heritage Awareness in Kedah', *StarTwo, Community*, May 27, 2006.
- Zulkefli, AS. (2007) 'Lunas legacy lives on with museum', *New Straits Times*, March 26, 2007.
- Fong, LF. (2006) 'Extraordinary pursuits', *StarTwo, People*, March 2, 2006.
- Presheelah, D., bin Hartip, M F., and Zheng, GJ. (2008) *Brichfields Kita*, 1 (1), April 26, 2008 [private circulation only].
- Badan Warisan. (2007) *A Special Place*, Badan Warisan, Malaysia
- Gill, E *et al.* (2008). *Malaysia's Amazing Heritages, a journey of discovery*, DiGi Telecommunications Sdn Bhd.

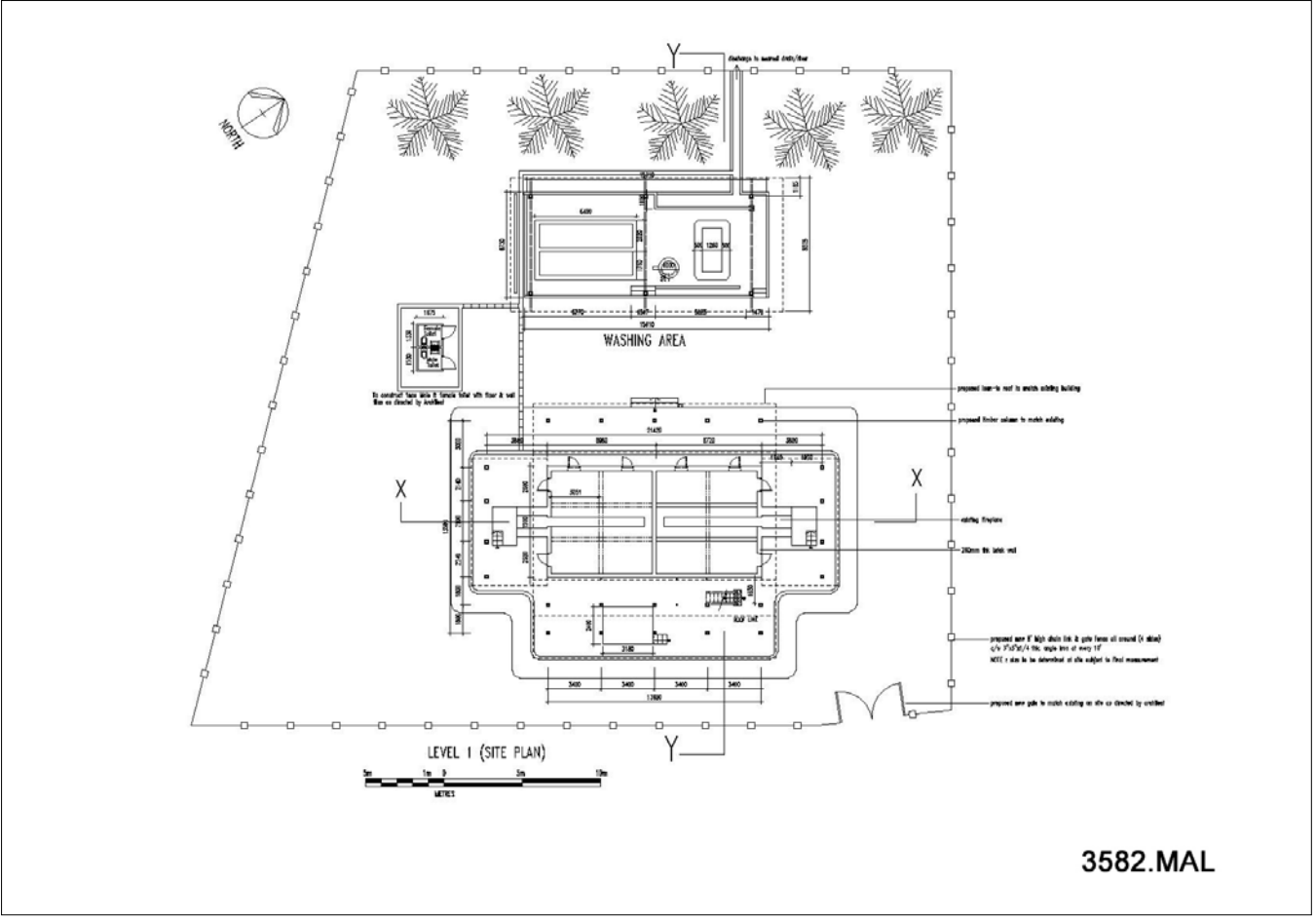
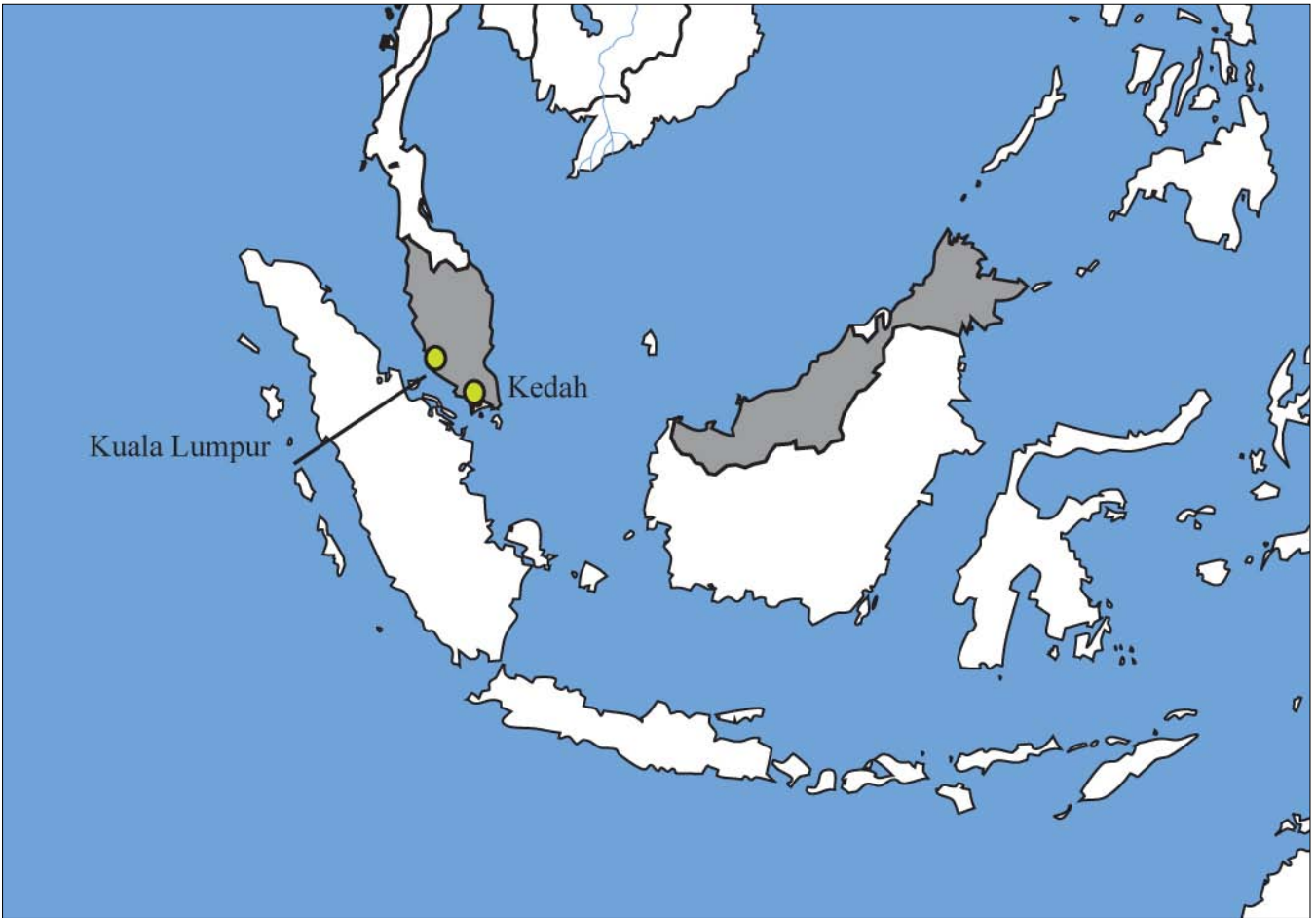
### Interviews:

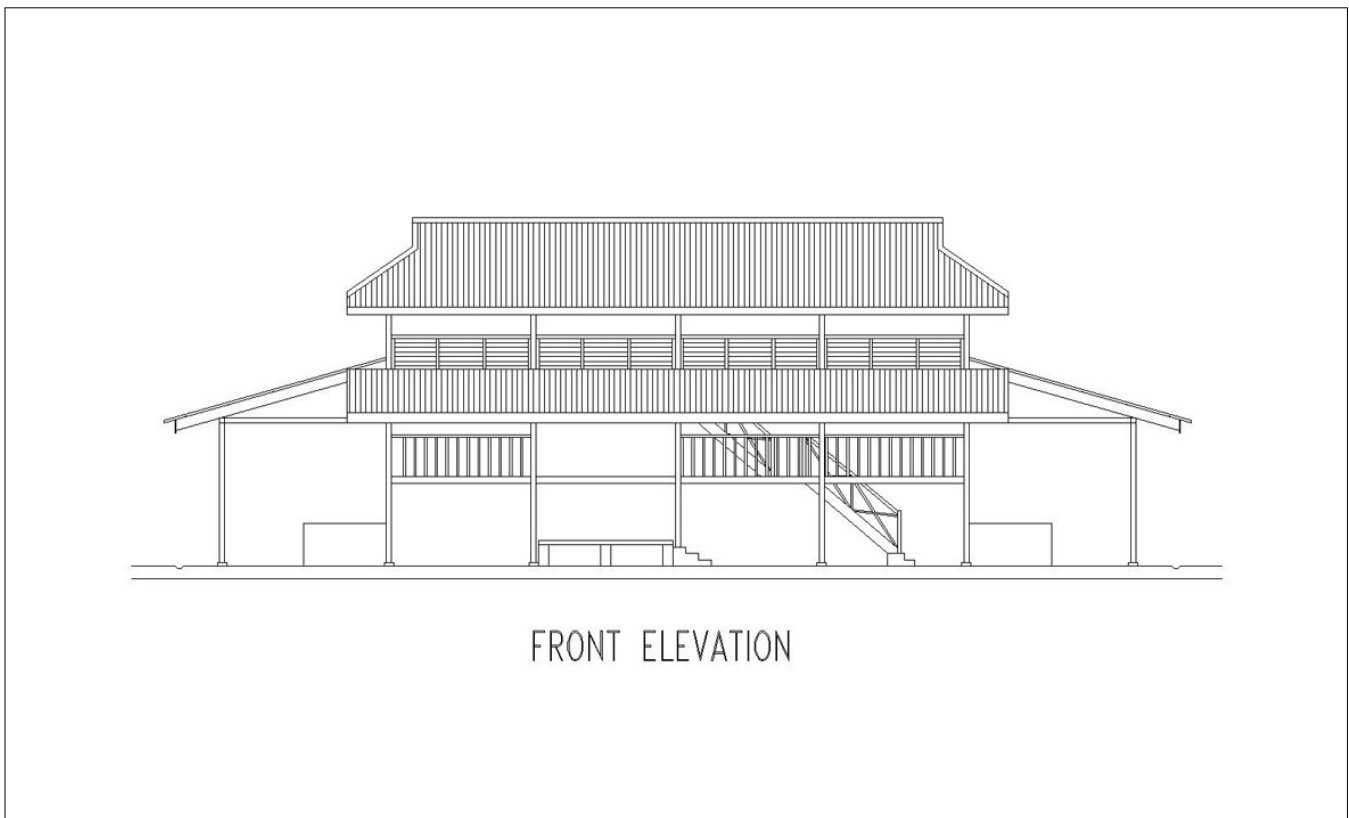
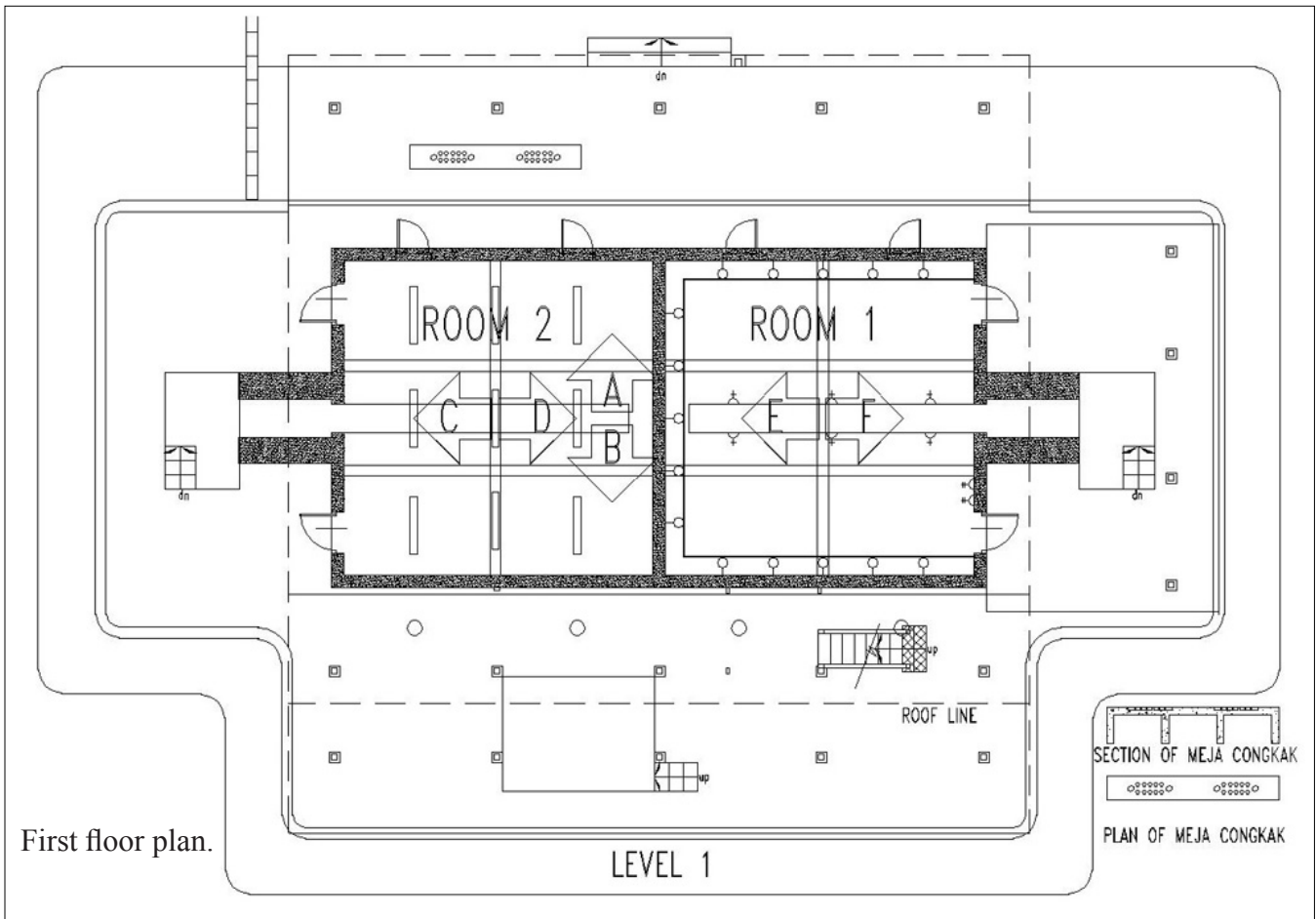
- Mr Laurence Loh, ARKITEK LLA, Nominated Project Architect, Penang.
- Mr Loh Hock Joo, Client and Landowner, Lunas.
- Ms Elizabeth Cardoso, Executive Director, Badan Warisan, Malaysia Heirtage Trust, KL.
- Mr Khoo Kar Teng, Pharmacist and herbal medicine, Lunas.
- Mrs Kung Kee Hua, Tinsmith, Lunas.
- Mr Saifuddin Ahmad, Architect, Deputy President, Malaysian Institute of Architects, KL
- Mr Jasmeet Singh Sidhu, Architect, Malaysian Institute of Architects, KL.
- Ms Lillian Tay, Architect, Malaysian Institute of Architects, KL.
- Ms Vimal Kumar, Corporate Responsibility Manager, DiGi Communications, KL.
- Mr Tan Sri Leo Moggie, Minister in the Prime Minster's Department, Board Member, DiGi Communications.
- Mr Dato' Joseph Salang, Deputy Minister of Information, Communication and Cultural.
- Mr Dato' Sonny Cheah, Businessman, KL.

**Sultan Barakat**

*April 2010*











The Rubber Smokehouse before restoration.

The Rubber Smokehouse after restoration.







Restaurant under canopy.

First floor balcony to the exhibition room.





Rotten timber floorboards and staircases, before restoration.

Wodden stairs to the first floor.







Exhibition on the architecture of the town.

Exhibition about the kid's work.







Smoking room before restoration.

Racks of smoking room for rubber sheets, hung on bamboo poles



