

**Conservation and Maintenance plan for
Residential buildings within the
Main Dutch Fort of Matara
Matara, Sri Lanka**

**Presented
at
SIDA' s International training Programme
Conservation and Management of Historic Buildings
Phnom Penn, 20th February 2006**

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Acknowledgements

This study would not have been possible without the help rendered by the following persons and institutions. I take this opportunity to sincerely thank all of them.

- Prof. Mats Endstrom, Prof. Kerstin Barup and Ms. Annette Wong Jere, of The University of Lund, Sweden for the guidance and encouragement.
- Prof. Nimal De Silva, Prof S. Manawadu and Archt. Chandrasekera of the University of Moratuwa, Sri Lanka for their encouragement and comments.
- Mr. Weerasuriya and Staff at the Center for Heritage Studies, University of Moratuwa for helping with my research.
- The non academic staff and students of the University of Moartuwa.
- Archt. Palli Wijeratne, Prisident ICOMMOS Sri lanka
- Archt. Anuska Wass for lending her thesis
- The librarians of the University of Moratuwa and SLIA for search rendered in finding out the sources.
- US Ambassadors Fund for cultural preservation for the funding
- The Residence of Main Fort for the invaluable time spent and help rendered.
- SIDA for giving this wonderful opportunity
- Fellow participants of the SIDA programme, my friends and family for the encouragement.

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Chapter one

Matara

Located in the southern province between the districts of Galle and Hambantota is Matara. Matara is 160 Km south of Colombo. The original town was established as a port on the mouth of the Nilwala Ganga. Today Matara has grown with a geographical area of 481.2 sq. miles or 1246.3 sq. km to become the largest town on Sri Lanka's popular south coast and is an important transportation and administrative hub. Matara is scenically attractive, surrounded by paddy fields and tea estates on the fertile river floodplain. The cost line stretching 48 km and has the most beautiful sandy and safe beaches. These assets together with its historic Dutch and British monuments have ensured that the town a popular tourist destination.



Fig. 1. Location of Matara

Matara was once called "Mhathota". The name "Mhathota" meaning "The great ferry" said to have originated after the ferry which was used to cross the wide 'Nilwala Ganga'. The Portuguese Priest Quaresse's also has reasoned out the name "Matara" as referring to Nilwala River. Portuguese had called this place as "Maturai ", and which means a great fortress. Portuguese called as Matara "Maturai" in 1672. In 1744 Hide Matheren called it as "Madarai". One thing that is clear here is that the Portuguese mis-pronounced the word. According to the old books it is clear that the Portuguese called it as "Maturai". "Thurai" which is a Tamil word means "Ferry". The present name "Matara" has been in used for the last three centuries.



Fig.2. Nilwala Ganga

History of Matara

One can trace back the history of human settlements in Matara to pre historic times. Ven. Dr. Kamburupitiye Vanarathana Thero, in his book on the 'History of Matara' describes the existence of a powerful settlement in Matara during the 'Nag' Period. However no evidence of these early settlements is available.

Portuguese, who captured Colombo in 1505, are said to have realized the strategic importance of Matara and built their fortification in 1595. However some historians such as Riberyo have described Matara being a camp for the Portuguese infantry.

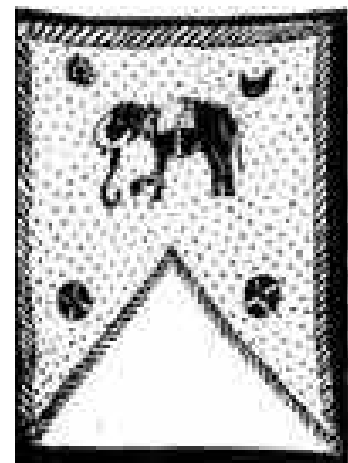


Fig.3. The state flag of Matara

W A Nelson, in his book on 'The Dutch Forts of Ceylon' describes Matara as the chief town of the south since it was the centre of local affairs and trade. Matara was renowned for its cinnamon and elephant trade. At the same time the descendents of the Arab traders the Muslims were involved in gem cutting and trading. The Dutch VOC company wanted to gain control over the lucrative cinnamon and the elephant trade of the southern region used Matara for this purpose.

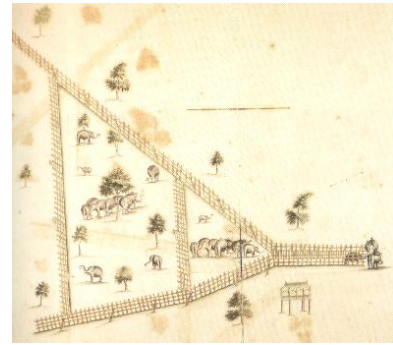


Fig.4. Drawing of Elephant Karraal- 1747

Matara remained the second most important settlement in the south for the Dutch. They strengthened their position by building the Main Dutch Fort of Matara on the left bank near the mouth of the Nilwala Ganga. Governor I.A Rumpf in his diary in July 1717 calls the Main Dutch Fort of Matara, 'the indefensible little place of Matara'. However this indefensible Main Dutch Fort has the unique distinction of being the only Dutch Fort to have been captured by the Sinhalese. Grievances over land ownership, taxes and poverty led to a general revolt in 1760. The uprising against the Dutch forced them to evacuate to sea. However within two years Dutch recaptured Matara and strengthened their defenses by building the Star Fort. Baron van Eck built the Star Fort in 1762. This was also the last major defense work built by the Dutch East India Company in Sri Lanka.



Fig.5. Drawing of the cinnamon plantation- 1747

Until the Star Fort was built, the Dutch fortifications were limited to the Main Dutch Fort. The Dutch troops were barracked inside these with the living quarters of their officials. Subsequently, the Star Fort was used as barracks with the residential accommodation for the Commanding Officer. The Main Dutch Fort was also utilizing as the commanding base for the inland Forts at Kauwana, Akuressa and Hakmana.



The British administration in Matara lasted till the Independence in 1948. They administered the Matara from 1796 to 1948. The British had the practice of the re-use any buildings of the yesteryear and replace only those that they could not use. This enabled many Dutch buildings to survive during the British occupancy.

Matara was also in the forefront of the National Independence Movement of the 20th Century. With the formation of the National Congress Movement in 1917, Matara joined in the fight for freedom with the formation of its own branch affiliated to the main association. Therefore, Matara has a unique place in the history of Sri Lanka.



Fig. 6 Main entrance and Plan-Star Fort

Social Development

Improvement in trading practices a new wealthy community of Singhalese immerged. They were either the cinnamon traders or holders of high offices under the colonial masters. They communicated the newly found status through architecture, fashion and jewellery.

They built 'Walawwas' spacious residences admit large gardens and plantation. The development of this rich community continued and the Walawwas improved even with the British occupation.



Fig. 7 . The Walawwa

Chapter two

The Main Dutch Fort of Matara

The Main Dutch Fort is located on the left bank of the Nilwala Ganga and has served as a military outpost and an administrative center since its origins.

A fortress has been designed and constructed by building of a small rampart which cuts off a tract of land between the river and the sea. The fortification is very modest when compared to other fortress in Sri Lanka such as The Galle Fort, Kalpitiya Fort or The Jaffna Fort where the ramparts wrap around the fort. Here it consists only of a simple breastwork rampart erected on a straight line. The other barriers which help protect Fort are the natural barriers the sea and the river. Therefore making the Main Dutch Fort a piece of ingenious military architecture

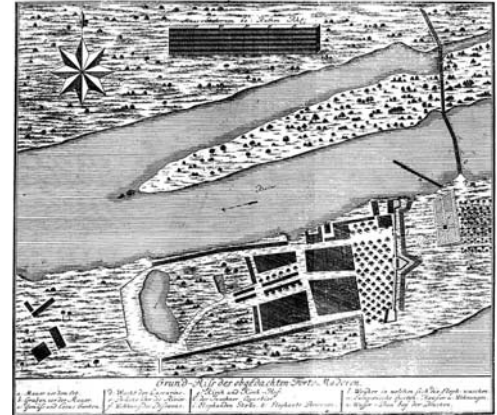


Fig. 8. Location of Main Fort

The architectural fabric of this Main Dutch Fort can be divided into the following categories.

- 1) Rampart
- 2) Open public spaces and roads
- 3) Administrative, Commercial and Religious Buildings
- 4) Residential Buildings

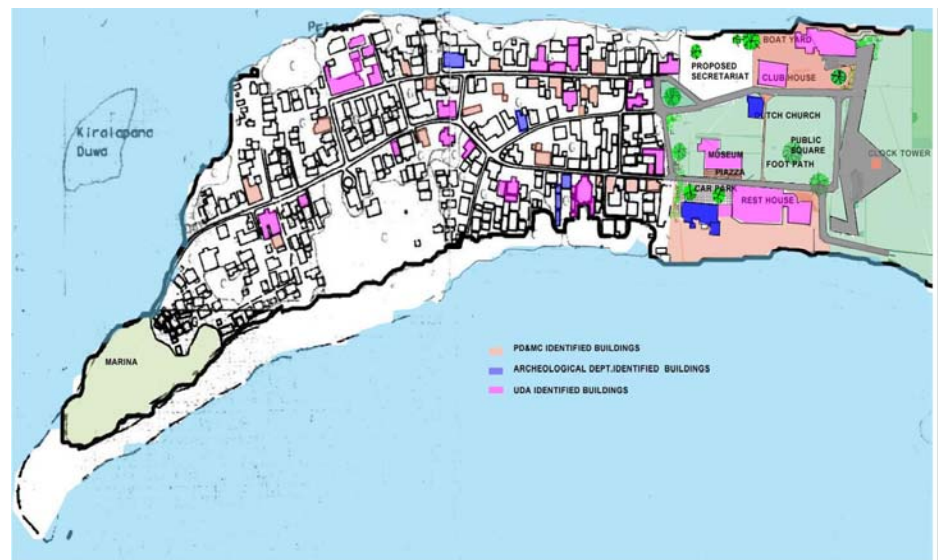


Fig. 9. The Internal layout of buildings within the Main fort.

Rampart

The rampart and its moat are the two vital visual elements that help one identify a Fortress. They stand majestically and aloof providing the impermeable defensive barrier. Whilst they form the physical and physiological barrier for the enemy it becomes a secure protective element for the residence of the Fort.

The rampart has two half bastion projections at each end with a large full bastion projection at the center. Close to this projection is the gate. The rampart faced in coral is about 240 meters long 13m thick and 5 meters high with two side lengths of 80 meters each.

The rampart with its north bastion, central projection and gun embrasures remains same to date. They are in a fair state of preservation. However the half bastion in the south adjoining the sea has been demolished and a costal road built. Also it has been mentioned that there had been a ditch in front of the rampart and a draw bridge across the ditch at the gate. These had been dismantled in the early 19th century hence they no longer exist.

A clock tower was constructed by the British on the rampart. Today this has become an important landmark.

The Gate close to the central projection shows a classical façade. The date 1789 above the gate probably indicates completion of renovation or strengthening.



Fig. 10. The Rampart



Fig. 11. The Clock Tower



Fig. 12 The south bastion demolished.



Fig. 12. The Entrance

The Map dating 20th July 1698 on Matara Fort and its environment indicates of a rear rampart. However this diagram does not indicate the existence of a moat. At present no evidence could be traced indicating the existence of a moat or the rampart.

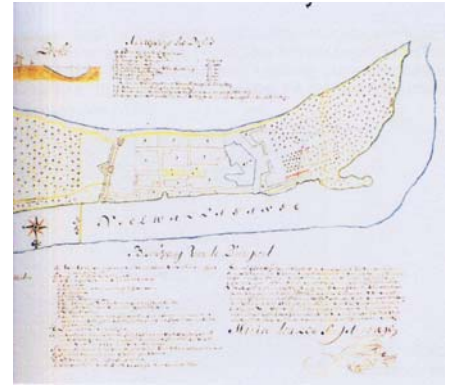


Fig. 11. A Map showing a rear Rampart

The rampart was declared a protected monument under the Antiquities Ordinance No 9 of 1940 section 33. This protects the rampart and a band of land of 400meters in width to either side of the rampart. Therefore making most of the fort unprotected and venerable.

The northern edge of the rampart is within the present army camp. They maintain the rampart from the gate archway to the Northern edge the river. Though the armed forces have maintained the section of the rampart well the new residential buildings built may have destroyed valuable archeological data. This together with the erection of the security post on top of the entrance arch indicates the lack understanding on the archeological value of this rampart and its vulnerability. These need to be taken into account.



Fig. 12. The security post

The rest of the rampart is maintained by the Department of Archeology. The rampart also has parasite plants growing on its walls. These need to be eradicated.

Due to the location direction and construction Tsunami has made little impact on the rampart.

Open spaces and Roads

Open spaces are strategically located in military architecture not only to ensure security but also act as social spaces. They may be placed in front of and behind the rampart. Some may be placed in the residential areas or as courtyards in between buildings.

The Main Dutch Fort has many open spaces .The two important spaces are the space in front of the rampart and the one behind. These not only help strengthen the defensive barrier but also help in visually strengthening the rampart and the Fort.

Historically in front of the rampart the Dutch company is said to have had an oblong vegetable garden and a guard hut of the lascars, native soldiers. Today the vegetable garden and the open area in front have been turned into a sports stadium and a bus terminal. These functions and building scales of the bus stand and stadium grandstand have disturbed the visual landscape.

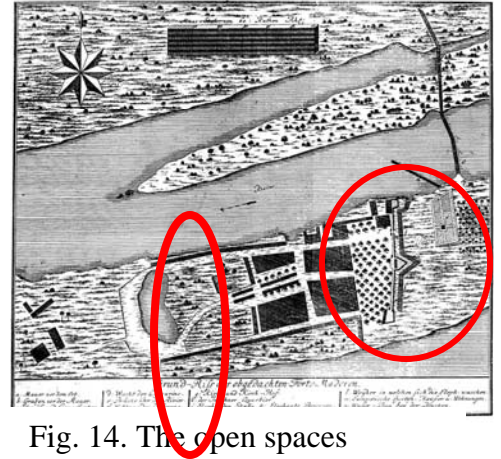


Fig. 14. The open spaces



Fig. 15. The esplanade



Fig. 16. The Bus terminal

Behind the rampart within the protective sanctuary of the rampart, sea and the river was a large open space a garden with tress and the church yard. Though most of the garden still remains it has been fenced to create a playground. Closer to the southern rampart and the rest house the garden has been turned into a bus parking area. These parking encroachments need to be curtailed and the fencing around the playground needs to be removed.



Fig.17. The Church in the past and now

The open spaces within the residential areas are few. One interesting space with is the large space in front of the first lane. But the large tress near the rest house, court complex and first lane needs to be protected.

Another feature that has been mentioned and drawn on maps is the elephant pond. According to the description in RK de Silva & WGM Beumer's illustration and views of Dutch Ceylon 80 elephants stabled in the fort could be bathed in this pond. These locations could be excavated.

The sea front and the river front have been totally neglected. They have become garbage dumps. These need to be cleaned and revitalized to enhance the natural beauty. A well kept beach and river front would not only enhance the visual landscape but also help in income generation.



Fig.18. The underutilized river frontage

Hence these open space needs to be maintained at all cost. A landscape design for the sea and river fronts, open spaces and roads needs to be implemented and maintained.

The grid iron street pattern a characteristic of Dutch street layout is not strongly visible in the Main Dutch Fort. They follow the natural topography of the land. The streets are narrow and catered to the pedestrians and an occasional horse carriages or bullock cart. However today the motorized vehicles have taken over these roads. Add to the vehicles the services such as telephone and electricity cables and post take up further space making the road feel small and non pedestrian friendly. These are also visible polluters of the environment. The parking of in administrative buildings and the residential vehicles too has become an issue.



Fig.19. The visual polluters.

Administrative, Commercial and Religious Buildings

The Fort was a key institution in the Dutch administrative system. The key administrative officials who were Dutch such as Matara Dissava lived within the fort and administered the region from the Fort. Hence the Fort became a liaison point between the Dutch officers and the locals.

Located to the right of the main gate are these administrative buildings which were occupied by the Commander, the garrison and the building which housed the Dutch Dissava's office. Today many of these buildings have modern alterations and have been transformed into administrative institutional buildings such as the kachcheri, post office and land registry. For example in the present land registry building the front verandah with the massive columns have been covered for security purposes. However with careful intervention this building could be brought back its former glory.



Fig. 20. The Dutch administrative buildings

The British who took the administrative system a step further built the district court and the Courts view hotel. The Court a two storied building is well maintained and the original characters remain as they are. The hotel building used to be the Lodging & Lawyer's Offices is not as well maintained as the court building.



Fig.21. The British Buildings – The courts

The religious buildings within the fort are the church and church yard opposite the full bastion and Methodist church along Wilfred Gunasekera Mawatha. The Dutch church is said to have been built around 1767 and is still maintained in its original Dutch character.

The Rest house and commercial cooperative shop are the oldest commercial buildings within the fort. The original Dutch characteristics are visible to some extent. Tsunami has destroyed some parts of the buildings.



Fig.22. The Dutch reformed church

Residential Buildings

Behind the Dutch church and the administrative buildings were the residential houses. Heydt writes 'Behind the Church lies three parallel streets lined with residential houses and over the left near the half bastion there may be glimpsed over the wall various low dwellings in which both Europeans and natives live.'

The Natives mentioned by Heydt are the group of graded native officials who worked under the Dutch Dissava. These native officials were the liaison officers between the colonials and the natives. They formed the new social elites. The new elites wanted to fashion their lifestyle to one similar to the European masters and to the new social requirements. They built large and spacious houses called the Walawwa houses amidst large plantations. These walawwa houses were a single storied hybrid between the traditional Kandyan yeoman courtyard houses and the colonial master's houses. The houses were outward expressions of the ideas and cultural values hence they also added distinct features that communicated the wealth and rank.

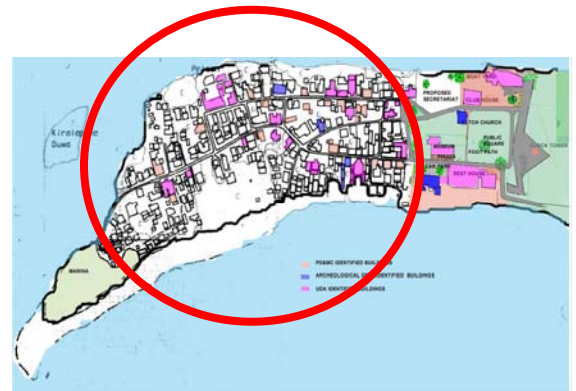


Fig.23. The residential area



Fig.24. The European elite

Chapter three

Conservation and Maintenance plan for Residential buildings within the Main Dutch Fort of Matara

Architecture is a language of a culture. Buildings through its architectural language communicate meaningful information which leads to deep and profound understanding of a culture, its traditions, values and attitudes of people at that moment of time. This understanding of the past helps one to exist at present and build upon a future. The understanding of ones culture also helps link people and places creating a sense of belonging. The sense of belonging is a vital ingredient for the existence of humankind. Hence it is vital to conserve these vital buildings, past and present for the existence of mankind.

However conservation is not merely preventing old historic buildings from decaying. Conservation must seek out not only to preserve old buildings but contribute to the future growth of the society whilst revealing social, physical and economic development of the past.

At this juncture let's discuss the need for the conservation of the Main Dutch Fort.

Why Conserve a colonial monument.? In a country which has monuments that needs to be conserved and which have been in existence since or before 5th century it has been questioned and argued the need for conservation of these Colonial monuments.

First the Fort and its environment has great architectural value as one can learn much about the Dutch and military architecture. Secondly it has historical value as it encapsulates a time in the historic evolution of Sri Lanka. It has played a crucial role in the formation of the Nation during pre and post independence. Thirdly it has great locational value due to its strategic location at the city center between the sea and river and presently it is a landmark. Hence is creating an urban identity which one can identify easily. The main fort also places an important role as a monument of dual parentage. The term dual parentage is due to its creation by the colonial and new native elites as masters and the constructors being local and foreign craftsmen. Hence it is a intermingling of ideas of the Europeans and the Natives that has created this objects hence the term dual parentage. This gives this monument a cultural value. The monument has great Economic value due to its location, historic and natural settings and being a tourist attraction.



Fig.25. The Entrance of the Dutch Reformed church

However today neglect, destruction, neo colonialization, modernization, patina has made conservation and revitalization a necessity if this link is to be passed on to further generations of Sri Lankan. The recent tsunami has caused colossal damage to the fort, its buildings and other physical elements.



Fig. 26. The modern façade to a dutch street houses



Fig. 27. Water marks indicating the water levels.

The Fort consists of predominantly of residential buildings with administrative, religious and recreational buildings. Though building owners or occupants are aware of the historical and heritage significance of this site due to economic and socio cultural reasons, human interventions and natural calamities are causing destruction to buildings, other physical elements and the environment. Hence immediate intervention is required to help reduce destruction to the buildings and its environment.

The Concept

The Main Dutch Fort of Matara is a living monument. Hence the conservation of such a living monument should permit the residence to live a contemporary lifestyle whilst preserving the atmosphere, the scale and the streetscape of the original monument. The Dutch and British buildings are to be retained and conserved whilst the modern constructions through time will be transformed into a building with Dutch or British characteristics. The environment with details such as street furniture too would be enhanced to create this environment of a Colonial Fort.

This transformation could be not carried out over night. A gradual transformation is envisaged lasting a minimum of 15 years.

In this context, the main aim of this study is to provide a directional thought through which a meaningful environment in terms of people concerned and palace could be achieved. The expected outcome of this study would be a set of propositions which would focus on a conservation and maintenance plan which would help the residential owners, occupants and stakeholders to create a meaningful environment.

The strategy for conservation will have two approaches. One would be general and would cover the Fort and its environment such as the rampart, open spaces and administrative, commercial, religious and residential Buildings. Another to be specific and would cover the specific architectural categories.

Due to limitations in time and resources this study would focus on the conservation and maintenance plan for residential buildings with in the Fort.

Methodology

A detailed study of the residential buildings within the fort was the initial step undertaken. Interviews, survey which looked into the architectural, historical and cultural values of the residences were carried out. (Refer Appendix – Annexure one)

A typology study was undertaken based on the form, shape and style of the dwellings. They can be typified as follows

- 1) **Street House**
Closely knit houses abutting each other with large spacious verandah facing the street were termed Street houses. The verandahs were raised platforms called “steop” stretched the whole length of the house and gave access to the house. These steops were deep verandahs with slender timber columns a space which filtered the activities of the street whilst not disturbing the social interactions. This spaces enabled the Dutch to not only to gain privacy and



Fig. 28. The Street house in the past

help entertain but also help build up a social relationship in a selective manner. The people whom were chosen to associate with were entertained in the living room whilst others were entertained in the verandah. From the verandah one is led to the zaal or the lobby and then into a spacious hall the living area. The hall opens out into the rear verandah and the courtyard. The bed room and service units were placed to one side of the courtyard. Most residences had a rear service entrance.



Fig. 28. The Street house today

2) Town Houses

The town houses were modified version of the walawwa houses. Whilst retaining some features of the walawwa houses such as the courtyard, verandah these houses were modified to suit the small plot size. These houses were not in spacious plantations but in smaller plots with small gardens around.

2.1) Verandah Type

Similar to the street houses some houses had deep verandah in front though which one gains access to the house. These houses with verandahs were termed Town house verandah type.

2.2) Porch Type

With the advent of carts the porch was added on to the verandah. Such houses were termed Porch Type Town House. This addition was during the later Dutch or early British period.



Fig. 29. The Verandah Type



Fig. 30. The Porch Type

- 3) British style house
Compact high hipped roofed houses with projected porch with round or square masonry columns were termed British style. The porches had gable ends. The projected porch in the later days had a flat slab roof.



Fig. 31. British style

- 4) American style roof houses
Mostly constructed in the post independence era is characterized by the single slope lean to roof which avoids the ridge line. The name American style roof houses is said to be derived from American factory construction.



Fig. 32. American style

- 5) Modern houses
Dwellings with fancy facades with curves dominating the facades and build in the recent times were termed Modern houses.



Fig. 33. The Modern house at the rear.

The survey led the research team to identify 31 dwellings which were selected as case studies. The selection was based on the following factors.

- 1) Year of origin
- 2) Style.
- 3) The Architectural value
- 4) Accessibility
- 5) The urgency for conservation

These case studies were then well documented with measured drawings and photographic surveys. The selected case studies would also be used to formulate the conservation plan and maintenance plans.

Conservation plan for Residential Building

Today a year after the Tsunami we see families are laying concrete blocks and bricks as they start afresh. Everyone seems busy rebuilding their lives and their futures. One can only marvel at their strength and fortitude. To these people we need to lend a hand.

The houses within Matara fort have fared less well than those with in Galle Fort due to been caught without the protection of an all surrounding wall and caught in between the beach and a lagoon. Hence the homes were brutally destroyed by the seawater.

Though the residential buildings within the fort have increased and vary in architectural styles and represent 50% of the total area of the Fort, 75% of these residential building have been damaged due to tsunami.

The aim of the conservation is to establish the desired environment and help in the economic growth of Matara.

The conservation plan should respect history, the aspirations of the owner's stakeholders and the environment whilst preserving the atmosphere, the scale and the streetscape of the original monument.

The conservation plan would be considered under emergency, long term and short term conservation plans but should run concurrently.

However conservation of these residential buildings has the following issues.

- 1) Legal issues -The Main fort is protected under the Antiquities Ordinance. However the residential buildings are not protected under this law. Hence making unauthorized demolition, additions and alterations possible. A new legal frame work which declares the Main fort and its environment as a protected monument needs to be implemented. This should not only protect the building fabric but empower the stakeholders to act upon when necessary.
- 2) Funding - The dwellings are being owned by individuals. Funding and Fund raising for conservation of individual dwellings could be difficult. A consortium of the owners and stake holders need to be formed and this could look at all aspects of sustainability, conservation, maintenance and management of the Fort.

Emergency plan

- Should bring back normalcy to the life of the residents/ occupants as soon as possible.
- Should help rectify the damages to property or stables structure.
- Advise the community and stakeholders through workshops on rebuilding process
- Make available historic building materials at a reasonable cost
- Train local craftsmen on specialized building technology



Fig. 34. Then. Days after the Tsunami



Fig. 35. Now

Short term plan

- A complete survey on land use to be undertaken to include the landownership within the fort.
- Identification of residential buildings for conservation/ restoration
- Draw up a consolidation/ rehabilitation plan for each residence.
- A urban design proposal with street elevations and guide lines need to be created.
- Stage1 - Advice on modifications/ conservations required for residents to live a contemporary life with a historic city.
- Formation of an association with all stakeholders to ensure the upliftment and to maintain the environment.



Fig. 36. Survey being carried out.

Long term plan

- Declaration of the Fort and its environment, including all categories as protected monument under the UDA regulations.
- The urban design proposal needs to be periodically reviewed and modifications undertaken.
- Free advice on modifications/ conservations required for residents to live a contemporary life with a historic city.
- Formation of an association with all stakeholders to ensure the maintenance of the atmosphere.
- The Implementation of conservation/ restoration to identified buildings. The interiors should also be refurbished in an authentic manner incorporating furniture of the same period whilst fulfilling inspirations of occupants.
- Provide tax relief or subsidies
- Award an annual award for the best maintained residential building and interior.
- Production of a booklet, to include Overall conservation plan for the fort, details of methodology, resource personals etc.
- Create awareness to residents on future visions and provide training in areas such as tour guiding, public relations, craft and entrepreneurship to create a sustainable community.

Maintenance plan for selected residential buildings

Conservation alone is not sufficient to achieve our objectives. These conserved buildings need to be maintained. Maintenance is the routine work which helps protect the fabric of a building, monument or even the landscape in a cost effective manner.

To be effective the maintenance needs to be carried out in a regular and in a planned cycle. The plan should extend the life of the building and retain the spirit of the place as far as possible. A good maintenance plan needs regular investments in small amounts and the maintenance work is the responsibility of all the owners and occupants of the residents. This would not only enable to minimize disruptive and extensive repairs but also will help plan future financial commitments and fundraising needs.

The maintenance plan for residential buildings consists of three parts. Namely Emergency, Short and Long term Plans. However all maintenance or rectification works should be reversible if and when needed and easily distinguishable to the experts eye and not to the laymen's eyes.

Maintenance plan

Emergency Maintenance

- 1) Clear all debris, mud and make environment suitable for immediate human occupation.
- 2) Should help rectify the damages to property or stables structure. The rectification should be reversible if and when needed.
 - Unstable walls and roofs were propped with materials such as bamboo, rubber timber or steel propos.
 - Cracks were visible on the floors and walls. These were checked and consolidated with an infill.
 - Most of the plaster was damaged. They were cleaned with water and assessed for the extent of damage. If minimal lime plaster or cement plaster was used according to the existing plaster.
 - All damaged doors and windows with temporary rectified with Materials such as damaged timber pieces or plywood and secured the dwelling.
 - Temporary materials such as water proof sheets were used to secure roof from water leakage.
 - Damaged foundations were under filed.
 - Services systems were Inspected and checked if any major damage has incurred. If incurred they were rectified before reconnect.



Fig. 37. Timber propos are used to stabiles the roof.



Fig. 38. Cracks infilled.



Fig. 39. Damaged plaster.



Fig. 40. Secured door.

Short term Maintenance

- 1) Short term is consolidation. Helping occupants to get back on the feet.
- 2) Each residence is checked and an evaluation form (Annexure two) is filled. According to the evaluations damages are rectified. Most common damages were
 - Extensive damage is noticeable on floor. Relay ground floor with cement rendering or the tiles with similar characteristics. Water proofing and termite treatment is to be carried out.
 - Wall after washing still indicates salinity as the plaster is peeling off. Hence depending on the severity re plaster with traditional Dutch plaster or consolidation of plaster with adhesives.
 - Rectify wall cracks -wire mesh and use infill.
 - Timber work such as upper floor balcony timber work is to be rechecked for cracks and damages. New additions to be installed with timber of the same period and characteristics with a simplified workmanship.
 - Roofs are of exposed rafter system with half round tiles. Major timber members are to be replaced or fiber jointed. Most owners have requested for ceilings. Hence a fiber bonded light weight ceiling has been recommended to certain areas.



Fig. 41. Damaged floor.



Fig. 42. Dutch lime plaster is peeling off due to salt.



Fig. 43. A timber balcony with loose floor boards and missing elements.



Fig. 44. Present conditions of most roofs.

Long term Maintenance

- 1) Long term maintenance is to work towards conservation and creation of the desired environment.
- 2) Creation of Street house, Town House with Dutch/British characteristics, form and shape whilst helping the occupants move with time.
 - Each house is to be scrutinized and owner's needs and wants are to be accessed. Accordingly long term modification plans are to be drawn and implemented. Issues such as parking, underground cabling are to be considered when modification plans are drawn.
 - These need to follow the urban design guidelines.
- 3) Each dwelling will follow a long term maintenance programme. Where responsibilities, task, frequency of maintenance is detailed out in accordance to the building element.



Fig. 45. Wijetunga walawwa Before the tsunami . Note the building at the side.



Fig. 46. Wijetunga walawwa after the tsunami . Note the building at the side has been destroyed.

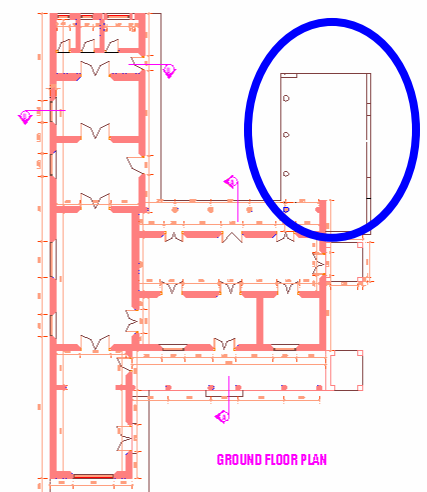


Fig. 47. The old destroyed unit to be rebuilt as a garage for cars.

Conclusion

Tsunami was unprecedented disaster in an international scale. It destroyed the physical social and economic fabric of the community. However it has also presented an opportunity to rectify many mistakes that mankind has made. One such is the adulteration and destruction of the architectural fabric of the Main Dutch Fort of Matara. Tsunami has presented Sri Lanka with an ideal opportunity to undo these mistakes and help in economic development. This conservation and maintains plan if carried out successfully would help in not only in creating the desired environment and be gain economical but also help make a disaster into appositive development.

A conservation and maintenance plan would not be successful if not for an effective management plan. Hence a management plan consisting of the management of the conservation and maintenance plans, funding, quality of work, the team and the stakeholders need to be worked out. The legal frame work needs to be implemented and amalgamated into the national system with not only the stakeholder's participation but also empowerment.

However these efforts would not be fruitful if the stakeholders and public are not motivated and focused. Hence a strong urge for conservation and awareness needs to be created. The tsunami has created this to some extent but this spirit needs to be built upon and nourished.

In conclusion all these plans need to be backed by a disaster management plan to needs to be created to help mitigate further disasters of this nature.

Appendix

Annexure One

CENTRE FOR HERITAGE AND CULTURAL STUDIES UNIVERSITY OF MORATUWA

- PROJECT:** Survey of the Cultural Properties affected by Tsunami, 26th December 2004 Matara fort and Kumaratunga Mawatha.
- CLIENT:** Sri Lanka National Committee of the ICOMOS (International Council on Monuments and Sites).
- SPONSOR:** US Ambassador's Fund for Cultural Preservation.

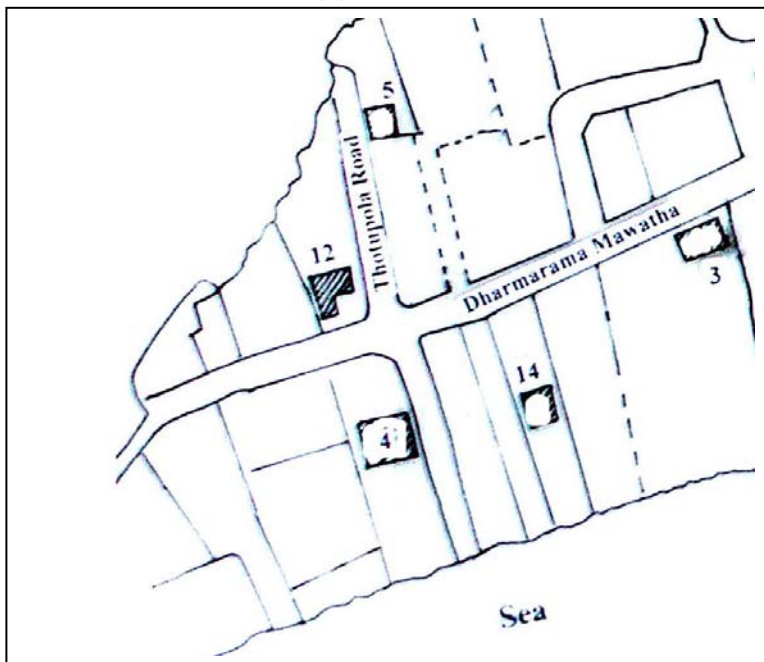
RECORDED BY: 1. D. Opatha

MEASUREMENTS TAKEN: 1. D A A Wickramasinghe
2. D A Withana

DATE (S) OF SURVEY:

DATE (S) OF CHECKING:

LOCATION OF THE BUILDING (S)



CATALOGUE / REFERENCE NUMBER

01	Name of the Building	House (Wijethunga Walawwa)	
02	Address / Location	Mr. A H Benat De Silva, No.78, Dharmarama Mawatha, Kotuwa , Matara	
03	Historical Significance	150 years old	
04	Socio – Cultural background	An upper middle income dwelling at present.	
05	Architectural Value	Dutch Town House – Verandah type	
06	Date / Period of Construction	150 years	
07	Date / Period (s) of subsequent interventions	2005	
08	Architect / Creator of the project		
09	Original Usage	House	
10	Present usage	House	
11	Original owner	Ms. Wilment P Wijethunga	
12	Present owner	Name	Mr. A H Benat De Silva
13		Address	No.78, Dharmarama Mawatha, Kotuwa , Matara
14		Telephone No.	22 27548
15		Email	
16		Approximate site Extent.	45 perches
17	Present condition of the Building. Damages in terms of percentages.	Roof	20%
18		Walls	20%
19		Doors and Windows	10%
20		Floor	25%
21		Foundations	
22		Other Building Elements	5%. Part of the house has been totally destroyed.
23	Recommended Use / Conservation Actions		
24	Identification of building under reference on the Map	12	
25	GPS Reading of the Building	05° 56.629 N, 80° 32.473 E	



Front view of the house showing the open verandah, wooden balcony with timber railing and pillar and the tiled gable roof





Interior roof structure



Detail of a window

**CENTRE FOR HERITAGE AND CULTURAL
STUDIES
UNIVERSITY OF MORATUWA**

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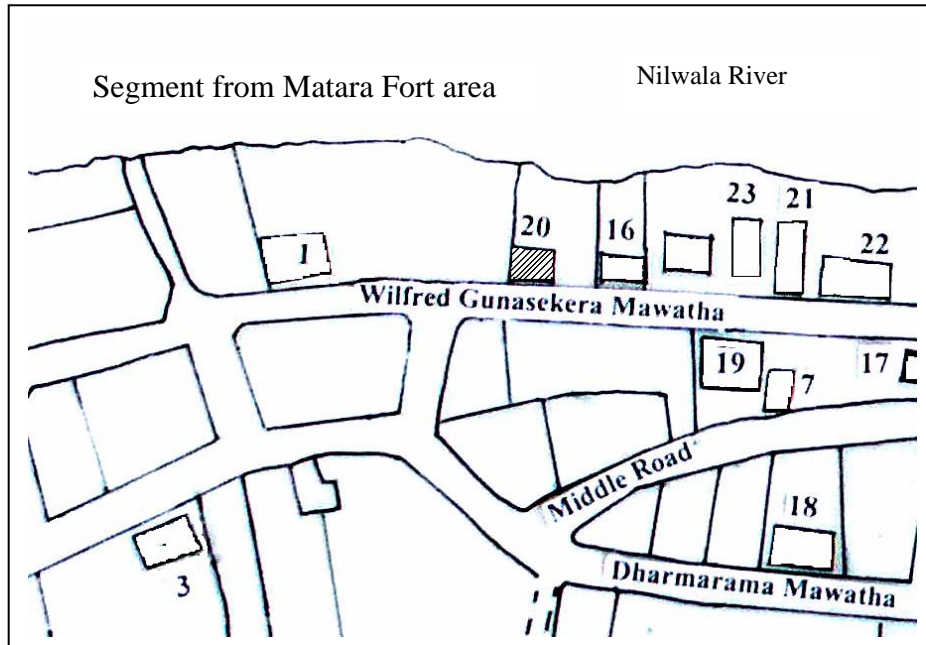
RECORDED BY: 1. Kavshal Jayathilake
2. Chethila Gunawardhana

MEASUREMENTS TAKEN: 1. Suranga Prasanna
2. Thisara Sharada

DATE (S) OF SURVEY: 08.10.2005

DATE (S) OF CHECKING:

LOCATION OF THE BUILDING (S)



CATALOGUE / REFERENCE NUMBER

01	Name of the Building	Residence of Mr. M.M.S. Priyantha	
02	Address / Location	No 48, Wilfred Gunasekera Mawatha, Fort, Matara	
03	Historical Significance	Dutch Residence	
04	Socio – Cultural background	A middle income dwelling.	
05	Architectural Value	Street house	
06	Date / Period of Construction	19 th century	
07	Date / Period (s) of subsequent interventions		
08	Architect / Creator of the project		
09	Original Usage	Residential	
10	Present usage	Residential	
11	Original owner		
12	Present owner	Name	Ms. Lasika Thushari Abedeera Weerarathna
13		Address	
14		Telephone No.	041 2230224
15		Email	
16		Approximate site Extent.	10 perches
17	Present condition of the Building. Damages in terms of percentages.	Roof	Half round clay tiles
18		Walls	Lime stones, Cracked
19		Doors and Windows	Timber
20		Floor	Originally clay tiles. Now a cement rendered floor
21		Foundations	Lime stones
22		Other Building Elements	
23	Recommended Use / Conservation Actions		
24	Identification of building under reference on the Map	20	
25	GPS Reading of the Building	05° 56.711 N, 80° 32.627 E	



Façade of the building demarcating street line



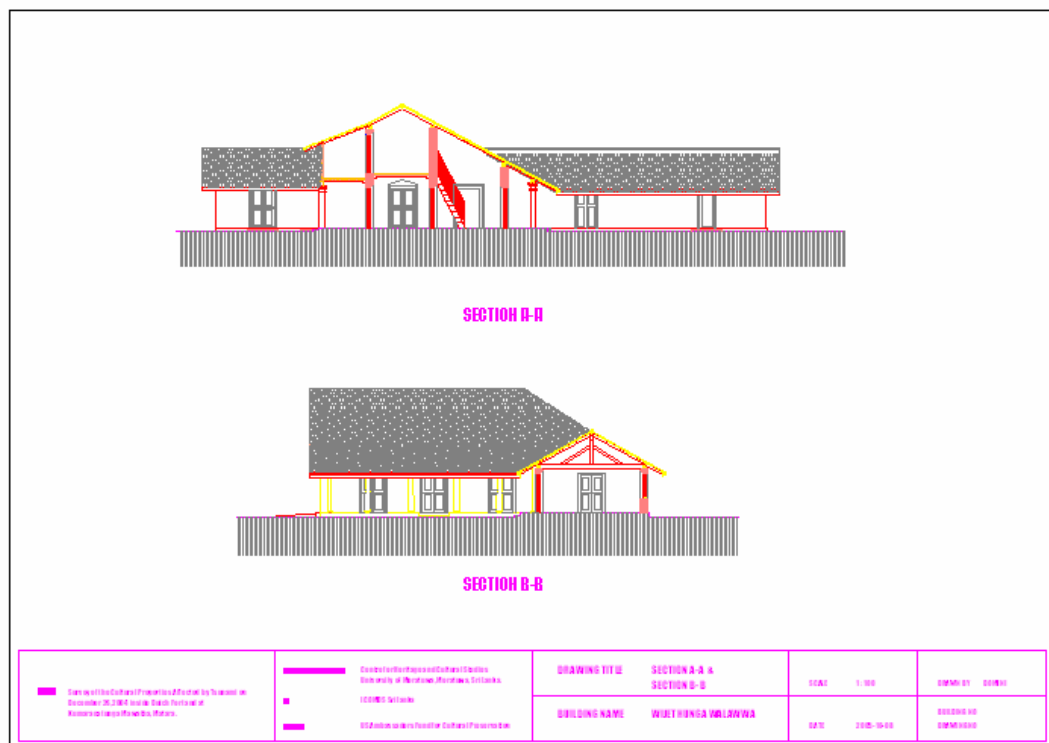
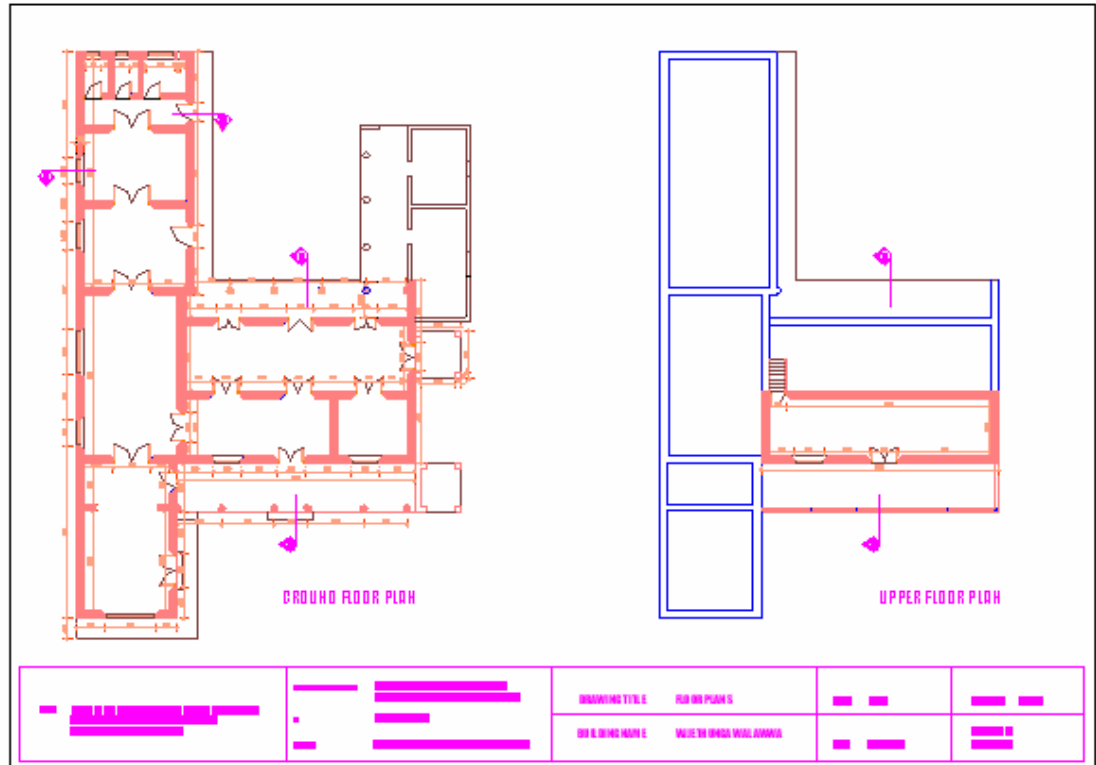
Front view of the building



Decorative valance boards, trellis work and the half-round tiled roof emphasize the colonial character

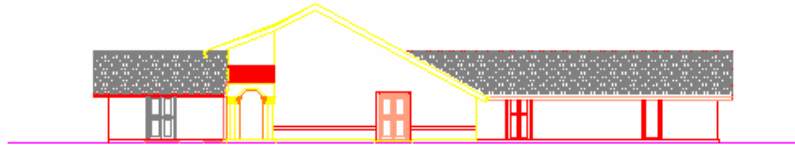
Annexure Two.

Plans, sections and elevations of Wijetunga Walawwa

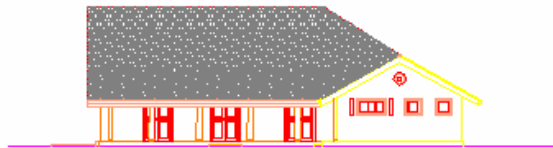




FROHT ELEVATION



SIDE ELEVATION



REAR ELEVATION

<p>Series of the Cultural Properties of the Town of December 2020/4. Institute of the Heritage Kulturális Örökségvédelmi Hivatal</p>	<p>Contractor: Directorate of Cultural Heritage Ministry of Education, Youth and Sports ©2020/4/2020</p>	DRAWING TITLE	ELEVATIONS	SCALE	1:100	DRAWN BY	02/2020
		BUILDING NAME	WÜETH-NAGY-WALAWWA	DATE	2020-10-20	02/2020/4/2020	02/2020/4/2020

Annexure Three.

Building Evaluation Form

Name	Wijetunga Walawwa	
Address	48 Dharmarama Rd, Fort	

Ref. No	Building element	Construction Material	Condition	Remarks
External elements				
1.1 Roof				
1.1.1	Roof area Generally	Half round tiles on exposed rafters	Poor – 20%	Urgent attention to roof leaking areas.
1.1.2	Tiles	Terracotta half round tiles -	35% needs to be replaced	Damaged tiles to be replaced and whole roof to be relayed.
1.1.3	Eaves – valance boards	None		
1.2 Rain water disposal				
1.2.1	Roof drainage - gutters and down pipes	None	-	Not used.
1.2.2	Perimeter drainage channel	None	-	Not used
1.2.3	Below ground drainage	None	-	
1.3 External walls				
1.3.1	External walls Generally	Lime plaster	Ground floor - poor	The plaster is peeling off due to salinity. Needs urgent attention.
1.3.2	Boundary walls	Cabook wall	Totally damaged	Temporary alternative - at The present hedge looks attractive
1.3.3	Ventilation grills, louvers	Cement lovers	Okay	Later additions
1.3.4	Balcony - rails , floor boards	Timber	25% replacement	
1.4 Internal structure				
1.4.1	Internal spaces generally			Termite treatment a must.
1.4.2	Foundations	Rubble foundation		To be checked by a struct. eng.
1.4.3	Floor	Cement rendered floors	Crack are visible – BR1, K T- re tiling	Re flooring is recommended.

1.4.4	Walls	22" tk cabook walls	Cracks are visible – BR1, BR2, K, L	To be checked by a structural eng.
1.4.5	Roof Timber	Timber Truss with 2" x4" exposed rafters with 2"x 1" reepers.	45% of timber needs to be replaced. Some trusses are sagging - K	Provide structural stability to sagging trusses.
1.4.6	Ceiling	4" x 4" Asbestos panels with timber frame work	Found in BR1, BR2 – 15% replacement	Upper floor BR3 needs a ceiling.
1.5 Doors and windows				
1.5.1	Doors	Timber framed timber paneled doors	05% of the doors have been damaged	
1.5.2	Windows	Timber framed paneled window	05% damaged	
1.5.3	Fanlight	Cement grills	Okay	
1.6 Building services				
1.6.1	Water			
1.6.2	Electricity		Exposed ducts	To be checked by a elect.Engin.
1.6.3	Communication			
1.6.4	Lightning Protection		None available	
1.6.5	Fire protection		None available	None available
1.7 Furniture and fittings				
1.7.1	Furniture			Need to replace all.
1.7.2	Sanitary fittings	Ceramic		Need to replace all.
1.7.3	Electrical fittings			Need to replace all.
1.8 Painting				
1.8.1	External walls			Needs repainting
1.8.2	Internal walls			Repaint
1.8.3	Doors and windows			Repaint

Evaluation carried out by Name :	Signature:	
	Date :	

Annexure Four

Long term maintenance programme for Wijetunga walawwa

Ref. No	Building element	Maintenance Task	Responsibility	Frequency	Annual cost
External elements					
1.1 Roof					
1.1.1	Roof area Generally	Inspect roof area form ground and accessible high points and access damage	Client/	Twice a year. After the monsoon rains.	-
1.1.2	Tiles	Inspect for cracked or damage tiles. Tiles that have slipped needs to be relayed	Roof base	Twice a year. After the monsoon rains.	-
1.1.3	Eves – valance boards	Inspect for cracks, loose joints, decay		Annually	-
1.2 Rain water disposal					
1.2.1	Roof drainage - gutters and down pipes	Inspect and clear debris		Twice a year. After the monsoon rains	-
1.2.2	Perimeter drainage channel	Inspect and clear of debris.		Twice a year. After the monsoon rains	-
1.2.3	Below ground drainage	Check manholes, gullies etc.	Specialist	Annually	-
1.3 External walls					
1.3.1	External walls Generally	Inspect from ground and accessible high points. Check for cracks, damage and water seepage		Annually	
1.3.2	Boundary walls	Remove vegetation		Annually	
1.3.3	Ventilation grills, louvers			Annually	
1.3.4	Balcony - rails , floor boards	Check for cracks, sagging, loose nails and screws		Annually	
1.4 Internal structure					
1.4.1	Internal spaces generally	Inspect on any roof leaks, water seepage		Annually	
1.4.2	Foundations	Inspect for cracks and movements		Annually	
1.4.3	Floor	Inspect for cracks and		Annually	

		movements			
1.4.4	Walls	Inspect for cracks and movements		Annually	
1.4.5	Roof Timber	Inspect for termites, sagging		Annually	
1.4.6	Ceiling	If timber inspect for insects and rodents		Annually	
1.5 Doors and windows					
1.5.1	Doors	Inspect doors, Check operations & damages in ironmongery. Check locks		Annually	
1.5.2	Windows	Inspect windows, Check damages in glazing, ironmongery		Annually	
1.6 Building services					
1.6.1	Water	Check for leakages and pressure		Annually	
1.6.2	Electricity	Inspect the systems. Check if competent with current standards		Every 5 Years	
1.6.3	Communication	Inspect the systems		Every 5 Years	
1.6.4	Lightning Protection	Inspect the systems		Every 5 Years	
1.6.5	Fire protection	Inspect the systems and reinstall/ update in accordance to systems.		Every 5 Years	
1.7 Furniture and fittings					
1.7.1	Furniture	Make temporary repairs and repaint		4 Years	
1.7.2	Sanitary fittings			Annually	
1.7.3	Electrical fittings			Annually	
1.8 Painting					
1.8.1	External walls	Repaint		7 Years	
1.8.2	Internal walls	Repaint		4 Years	
1.8.3	Doors and windows	Repaint		7 Years	

Referances

1. Ceylon, by Lord Holden, 1939.
2. Heydt's Ceylon, first published 1744, and translated with notes by R.Raven Hart, Colombo 1952.
3. A description of Ceylon by the Rev. James Cordiner, MAM. London 1807, Volume I, page 192.
4. Ceylon by sir James Emerson Tennent, K.C.S.LL'd, Second edition, London 1859, volume III, Page 113.
5. Recollections of Ceylon by the Rev. James Selkirk, London 1844.
6. Illustrations and views of Dutch Ceylon 1602 – 1796, Serandib publications, London , 1988