

11 March 2010

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**Conservation and Maintenance of
Dutch Naval Commissioners House,
Trincomalee - Sri Lanka**

Conservation and Management of Historic Buildings
Advanced International Training Program 2009/10
Lund University- Sida

MAINTENANCE PROGRAM AND MAINTENANACE PLAN AND DOCUMENTAION

THE DUTCH NAVAL COMMISSIONER'S HOUSE AT TRINCOMALEE - SRI LANKA

Abstract

Dutch Naval Commissioner's House is one of the important historical evidences of Dutch colonial period of Sri Lanka. This building has been built according to the Dutch colonial architecture and comprises the specific architectural features of that period such as thick walls with spaces with large volumes, colonnaded verandahs, etc... Hence it is older than 1815 AD it is automatically considered as a monument according to the antiquities ordinance.

It had been abandoned for past 30 years, and was in a dilapidated condition and was in danger, when the conservation works were begun in 2008. About 70% of the conservation works has been finished up to now, and it has been proposed to establish a Naval and Marine Museum in this building after the restoration.

This paper is about the maintenance plan of the building as a museum after getting conserved. The paper is in two parts as maintenance program and maintenance plan respectively.

In the first part the back ground information of the building and its conservation will be discussed with a brief statement of the goals of the project. And the special maintenance requirements and the conditions of the important elements of the building after the conservation will be explained.

In the second part the work plan and time schedule (both short and long term), resources needed, budget and the proposed way of getting resources will be discussed. And also the proposal for the future management and maintenance of the building and museum with the participation of all relevant parties will be explained.

The paper will be concluded stating the importance of protecting such a heritage and having a proper maintenance and management plan to easily achieve that objective.

A.) MAINTENANCE PROGRAM

1. Project Summary

- Sri Lanka was invaded by three western powers from 16th century until 20th century namely Portuguese, Dutch and British respectively. In the Dutch Colonial Period the Dutch rulers constructed several defense Fortresses around the island, especially in the costal belt which were considered as important places both in defense and trade. Trincomalee is one of such places and developed by the British in later period. As per their practice it is common that they have built their officers quarters at quite a distance from the Fort. The Dutch Naval Commissioner's house building is a good example for the system.

- According to the archival records obtained from the National Archives of Sri Lanka this particular building has called as Naval Commissioner House. The said

building has been abandoned for more than 30 years of period and was in a dilapidated condition with large Banyans Trees within and around.

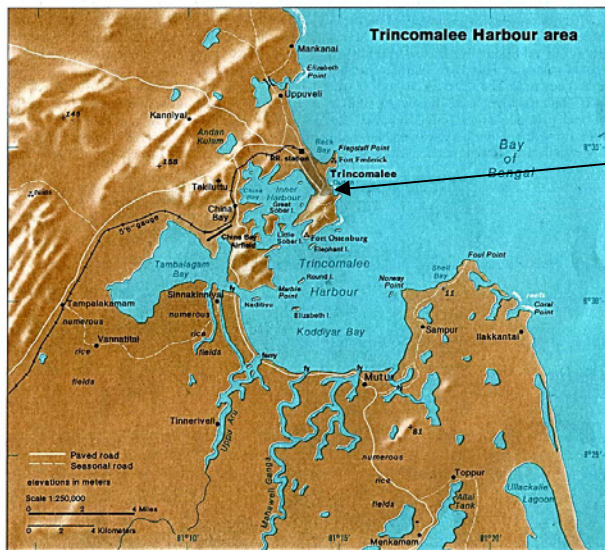
- The building is constructed by thick brick walls with a special kind of brick floor slab, for the first and roof slabs. The huge colonnaded structure was checked by structural Engineers, and stated that it is structurally not stable.
- The land belongs to the building is used by the Eastern University of Sri Lanka and they have built some other temporary structures around the building.
- As it was used as the Dutch Naval Commissioner's house it is much important to preserve the building and the idea of establishing a Naval and Marine museum leads to the conservation effort. As the dilapidated building is threat to the university students who are hanging around always, the need of preservation was greater.

2. Information about the Building



Trincomalee

Location of the building



Location of the building

2.1 Data of the building

No of Stories – two

Ground floor area- 8245 sqft

Upper floor area- 7605 sqft

Wall material – Burnt bricks with lime mortar

Ground /floor- cement rendered

First Floor- Outer Verandah-special brick slab on timber beams

Inner Area- Timber deck on timber beams

Roof- Special slab with three brick layers on timber beams

Doors and windows- Large timber

2.1.1 Data of the premises

Building Area- 685 m²

Vacant Area- 5201 m²

Total Area – 5886 m²

2.2 Legal Protection

As the building has been constructed before 1815 AD it is automatically considered as a monument according to the antiquities ordinance.

So that any changes or demolition or any other kind of intervention that could harm to the archaeological value of the building can not be done without the consent of the Director General of archaeology.

2.3 Ownership

The land belongs to the government and for last couple of decades used by the Eastern University. But after the restoration works it is to be maintained by Sri Lanka Navy.

2.4 Users

The Eastern University used the premises with some other new buildings.

Now it is proposed for a museum and there will be a provision of public access.

3 Values and threat analysis



View of the building with large banyans trees



Colonnaded elevation



Decorative columns



Special Brick Slab

Special features of the building

3.1 Cultural Values.

This building has got a value as a representation from the Dutch colonial period as a part of their administration system. The building gives clues for Dutch culture of that period in Sri Lanka. This is a good example for their culture of constructing quarters close to their defense forts

3.2 Other values

Historic This building is belonging to the Dutch colonial period. So that it is representing a period of our history with western invasions.

Architectural This building is having specific colonial architecture with large volumes of spaces, thick walls, colonnaded verandahs, etc. It is important to make a research on the columns to find out the architectural style which they belong to.

According to the discussions at the presentation these columns give an important architectural value to the building.

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Technical This building has three brick layer floor slabs on timber beams as a special feature which gives it a value in technical aspect, of the construction period.

Artistic The building design itself has given the building a grandeur look and the colonnaded structure in all four sides emphasizes that artistic look. Since it is located in a focal point of the area in front of the beach its artistic value gets more emphasized.

Identity Because of the grandeur look with the structure at this specific location this building has acquired a special identity.

Economic Due to the specific location and the selected reuse as a museum the building is highly attracted by the tourist and gets a very big economic value.

Pedagogical As a naval and marine museum it has a pedagogical value.

Symbolic The building it self is a landmark in the Trincomalee town and therefore the symbolic value is important. It also gets a value as a symbol of Dutch Colonial period.

3.3 Threats

For more than 30 years, this building had been abandoned and was in a dilapidated condition, with large Banyans Trees within and around of which roots had attacked the building structure. But due to the proper restoration techniques used in the conservation project this threat has been minimized.

4. Goals

1. Protecting an important historic building with rare architectural features and giving people a good knowledge about Dutch colonial architecture and the cultural and historic value of the building.
2. Establishing a Naval and Marine museum and educate people about the naval history of the country.
3. Increasing the tourist attraction to the Eastern part of Sri Lanka.
4. Upgrading the lifestyles of the local community, both in economic and social aspects.

5. Special maintenance Requirements

The parts of the building that should be a matter of special maintenance are **Walls-** The roots of large trees had penetrated all over the walls when the restoration works were started. There may have remaining of them still in the walls. Periodical inspections are needed to minimize the future deteriorations of walls.

Wooden Beams- wooden beams located in outer verandah are subjected to weathering and needed periodical treatments. And all the timber beams should be regularly checked in order to monitor bending, sagging and warping.

First floor and roof slab- Part of the original brick slab is remaining and was conserved. Periodical inspection of changes and cracks should be done to prevent damages.

Doors and windows-Periodical inspection and treatments are needed for the timber doors and windows which are more exposed to the weather.

The brick masonry columns- Plaster of the columns could be decayed due to exposure to weather and due to salty wind from the sea. Periodical inspection and treatment is needed.

Modern roof – galvanized iron is used for the modern roof. Corrosion should be avoided with necessary actions time to time.

6. History

6.1 History of the building

Sri Lanka was invaded by Dutch in 17th century. In this Dutch colonial period Dutch rulers constructed several defense fortresses around the island, especially in the coastal belt which were considered as important places both in defense and trade. Trincomalee is one of such places and developed by the British in later period. They built their officer's quarters at quite a distance from those forts and this building is a good example for that.

According to the archival records this building was the Dutch Naval Commissioners house. And later it had been used as administrative office of the area. But for more than 30 years, it had been abandoned and was in a dilapidated condition with large Banyans Trees within and around of which roots had attacked all the building's structure.

The building has been constructed by thick brick walls with special kind of brick floor slab for the first and roof slabs. Huge colonnaded structure of the building also had been structurally failed. Structural engineers were also not quite sure about the possibility of the restoration of the building

The land was belonged to the Eastern University of Sri Lanka and they complained frequently about the threat and danger of this ruined building to their students. Several proposals were done to remove the building and put up new buildings on this land. But the department of archaeology did not agree to these proposals and was able to get the funds to conserve the building.

The dilapidated condition of the building and lack of funds for its conservation were the main constraints for its conservation. But due to the invaluable historic importance of the building and its rare architectural features, it was decided to conserve it under any cost. Conservation cost was estimated as 75 million rupees. So that a request for funding was done from the kingdom of Netherlands who had funded several conservation projects of Dutch buildings at that time and The Netherlands Government agreed to fund the project. It was proposed to convert the building in to a Naval and Marine Museum at the end of the conservation.



Views of the building in dilapidated condition

6.2 Previous Restoration Works

No records about previous restorations could be found. But there were some evidences that some changes had done to the some parts of the building time to time such as adding new concrete staircase, closing of inner arches, changing the doors in to windows, etc..

6.2 Present Situation

Conservation works were started at the end of year 2008 and targeted to finish by the beginning of year 2010. Up to now about 70% of the conservation has been done.

Landscaping has to be done. Museum Experts are to be asked to prepare and submit a museum display proposal to establish a naval and marine museum in this building.

Lighting consultants will be asked to do a lighting proposal according to that

Main Causes of Defects in the Building

- Effect of the Trees and its roots



7 Description of Interior

Taking in to consideration that this building was highly dilapidated and restored, the following elements of the buildings are identified with explanations on how to maintain them.

Ground floor- completely re laid with cement rendering. No material authenticity.

Walls-Except very small parts most of the walls are original and only damaged and weakened areas of the plaster were re-done with cement, lime and sand plaster. So that maintain them carefully is needed and always with a professional input and help.

Columns-most of the columns on the upper verandah and some of the ground floor had been collapsed or damaged and reconstructed at the restoration. Columns which are not collapsed or damaged are remaining with their authenticity and properly documented. No harm should be done for their authenticity at the maintenance.

Slab and the beams of the outer verandah- only few timber beams are original and the others were replaced at the restoration with imported timber. Special care should be done for the original beams at the maintenance. Only small area of the original slab is remaining and special care is needed. Other areas were redone at the restoration

First floor slab and the beams of the inner area- Timber deck was missing and only few timber beams were remaining. The timber deck was completely redone. Special care should be extended to protect the timber deck and timber beams.

Slab and the beams of the roof - Most of the parts had been collapsed and destroyed. The roof slab and beams over the outer verandah was almost reconstructed at the restoration according to the evidences. The remaining areas of the roof slab in good condition were conserved. And for the other areas it has been imitated to get the same appearance from down, with flat cement fiber sheets. And also it was constructed a hidden modern roof over the inner part of the building to protect the areas including original slab and this imitation. The remaining original brick slab and timber beams should be treated very carefully at the maintenance.

Doors and windows- Most of the timber parts of the doors and windows had been missing due to theft and damages. They were replaced using partly damaged timber members found from the site and new imported timber. Original timber parts should be carefully treated at the maintenance.

Few doors had been changed recently to windows and converted again to doors at the restoration. It should not be allowed to change them again.

Staircase- The original timber staircase had been changed in to concrete staircase few decades ago and it is proposed to redone in timber as the original one according to the remaining evidences.

8 Register of Printed and not Printed Sources and of persons

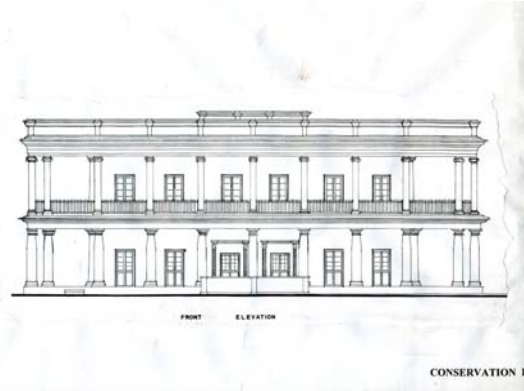
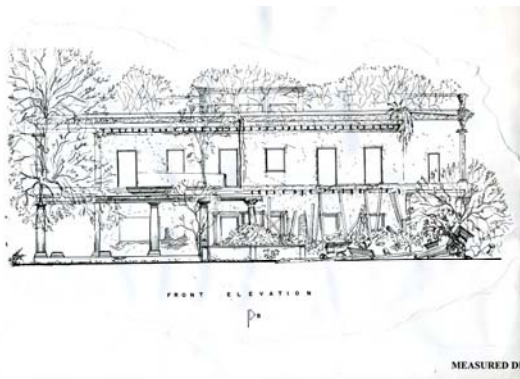
-Maps belong to the British Colonial Period (18th century)

-Measured drawings and conservation drawings done by Department of Archaeology in 1994

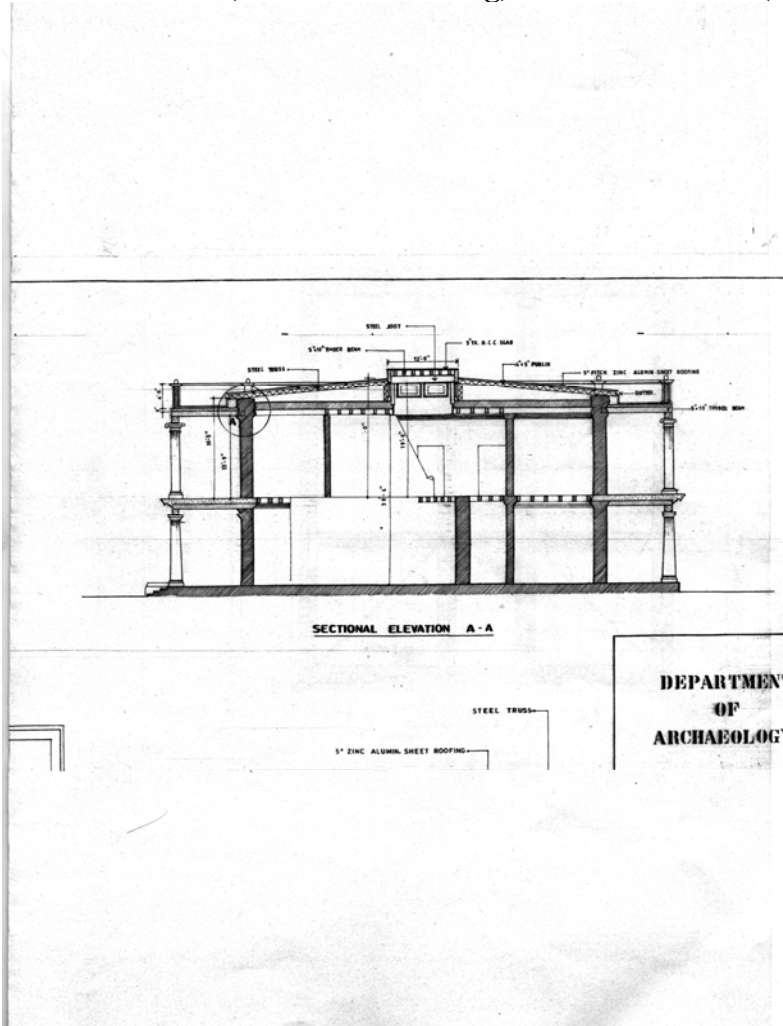
- Measured drawings and conservation drawings done by Department of Archaeology in 2008

-Reports done by Department of Archaeology in 2008

-Photographic Documentation done by Department of Archaeology in 2008

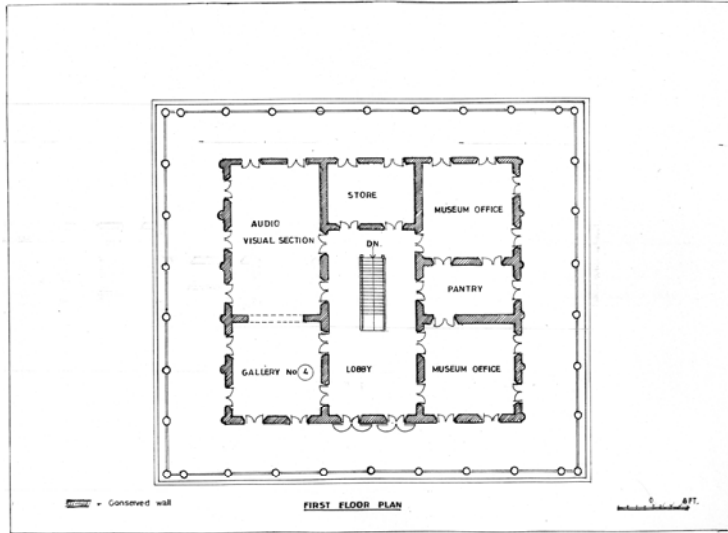


Front Elevation (Measured Drawing) Front Elevation (Conservation Drawing)

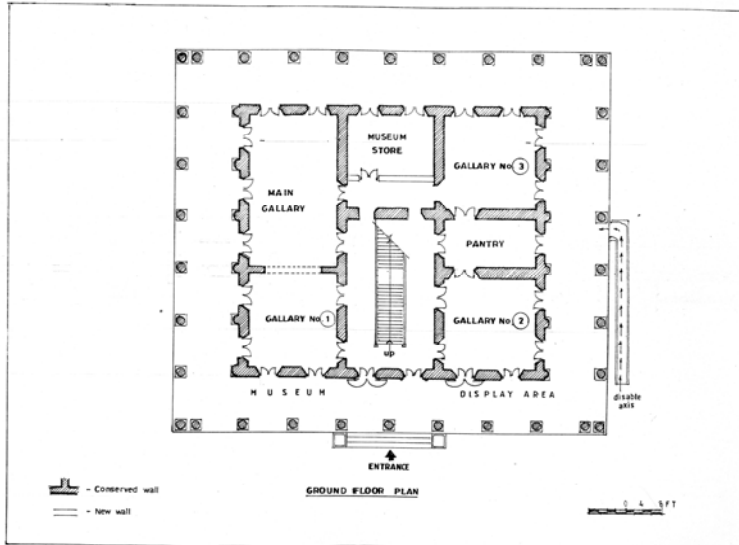


Section with the modern roof

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Ground floor plan



Upper floor plan

9 Practical Contact Details

The following persons and institutions are suggested to be responsible for each works as stated below,

Architectural conservation- Director General of Archaeology
 Director (Architectural Conservation)
 Department of Archaeology
 Sir Marcus Fernando Mawatha
 Colombo 7
 Sri Lanka

Establishment of Naval and a Marine Museum-

Director
Department of National Museums
Sir Marcus Fernando Mawatha
Colombo 7
Sri Lanka

Conducting and Maintenance of the Museum

Officer in Charge
Sri Lanka Navy

Maintenance of the Building-Director General of Archaeology

Director (Maintenance)
Department of Archaeology
Sir Marcus Fernando Mawatha
Colombo 7
Sri Lanka

B. MAINTENANCE PLAN

10 Work Plan and Time Schedule

Initial schedule for the conservation and establishment of the museum

- Conservation works were started at the end of year 2008
- Targeted to finish by the beginning of year 2010
- Preparation of the museum is to be started in March of year 2010
- Open to the public by September 2010



Building Being Conserved –Front Door



Building Being Conserved –Outer verandah



Building being conserved –First floor Timber Deck



Building being conserved – Roof slab



Building being conserved – Slab imitation



Building being conserved – Modern roof



Building being conserved



View from the beach

Work plan for the maintenance

Following work plan for the maintenance has been done considering the factors that have to be considered to protect this historic building with the remaining authenticity and considering that it had been in a high dilapidated condition when the project was begun. And protecting the building in the future with well functioning of proposed reuse also considered as a key issue.

Short term work plan

no	Description	Time
01	General inspection of the building	Every two weeks
02	Examination of the walls and columns (The remaining parts of the tree roots can create cracks and damages. To prevent those it should be inspected regularly and treated)	Every month
03	Examination of the ground floor (Due to the visit of large no. of visitors may occur decay and damages to the floor. Observation and treatments are needed)	Every two months
04	Examination of the first floor and roof slabs (Within the remaining parts of brick slabs also there are remaining of tree roots. And they could be easily cracked and damaged. To prevent those it should be inspected regularly and treated. Special care is needed for maintenance of the timber deck in first floor)	Every month

05	Examination of timber parts such as Beams, Doors and windows, Stair-case, etc (The tropical climate and the closed location to the sea can decay the timber parts easily and wanted periodical inspection and treatments)	Every three months
06	Examination of the modern roof structure (The steel parts of the modern roof structure could be corroded easily by salty atmosphere of the sea. Inspection and treatments are needed , And any water seepage , leaking, fungus spreading etc should be examined and treated)	Every four months Specially before and after the monsoon rains
07	Inspection of electric wiring and lighting system	Every three months
08	Inspection and trials on fire fighting system	Every two weeks
09	Inspection and cleaning of drainage system	Every two weeks
10	Landscaping	
	Watering, Cleaning	Every day
	Grass cutting , Trimming, Maintenance of path ways	Every week
11	Museum Display	
	General inspection of the display	Every day
	Inspection of the conditions of artifacts	Every month
	Inspection of the conditions of the display cupboards, Structures, etc	Every month

Long Term work plan

01	Whole the building should be re-examined and evaluated and should be repaired, highly concerning its every values, in terms of lengthening its life time	Every Five Years
02	The reuse of the building should be evaluated and if wanted changes should be done.	Every Five Years
03	Recording of heritage information with surveying and analysis of conditions using the latest technology	Every ten Years

11. Resources Needed

Separate management authority should be there for the management of this museum with this management plan.

The main parties of this management authority should be,

Department of Archaeology

Department of National Museums

Sri Lanka Navy

Eastern provincial Council
 Trincomalee Municipal Council
 Sri Lanka Port Authority
 Department of National Archives
 Sri Lanka Tourism Development Authority
 Community organizations
 Tourist Hotels of the area
 Taxi Operators
 School Children

- a. Proper maintenance and management team should recruited under the above management authority in two levels i.e.; consultancy level and workers level with a project manager.
 Conservation Architects, Engineers, Archaeologists, Scientists, Museologists, should be there as consultants and medium level supervisors and craftsmen such as masons, carpenters, electricians, etc should be in workers level.
- b. Stock of essential materials used for the repair and small maintenance works and identification of easy ways of getting specific materials is needed.
- c. Good training and awareness should be given to all the relevant persons involved in maintenance and conduction of this historic building and the museum.
- d. The local community should be identified as important resources to protect this heritage and should be getting involved for the function and restoration and maintenance.
- e. A good system of self funding for the maintenance of both the building and the museum is needed.

12. Budget

The conservation works were funded by the Netherlands government. For the establishment of the museum, the fund from the Sri Lankan government is expected. But for the maintenance self funding system is to be established.

It is expected to cover the following expenses through this system

Item	Approximate Cost (SLRs)
General maintenance cost of the building (small repairs, replacing of small parts and accessories, service bills, day to day maintenance)	1,800,000.00
Maintenance cost of the museum display	1,200,000.00
Maintenance cost of the Landscape	600,000.00
Cost for administration (Salaries and wages are expected from SL Government)	600,000.00
Cost for unexpected repairs	<u>1,000,000.00</u>
Total	<u>5,200,000.00</u>

Financial Resources

- a. For salaries and wages the allocations from government budget
- b. To cover other general maintenance cost, income generation is expected through
 - Entrance Tickets to the museum
 - Selling souvenirs, publications, etc
 - Renting some spaces for shops and other appropriate activities to the local community, other organizations, etc.
 - Getting direct funds from donors.

It is expected that the great potential the building has got from its location and historic value could be used to raise funds through both local and foreign tourism.

Other Resources

a. Since this museum is to be maintained by SL Navy, the human resources of them are to be used for maintenance and repair works.

b. The consultancy for the maintenance, conservation and museum arrangement, landscaping, etc are to be taken from governmental institutions such as Department of Archaeology, Department of National Museums, Urban Development Authority, Sri Lanka Navy, etc

c. Since this is to be developed as the focal point for tourism at Trincomalee, a great up-lifting of the economy of local community can be expected through this project. So that, it could be expected a great participation from local community for its maintenance.

13. Results: Forms filled in, Activities done and Lessons learned

14. Forms for Inspection and Activities

15. Documentations

Conclusions and Recommendations

The Dutch Naval Commissioners house remarks a period of western invasions of Sri Lanka. And the building which is with great historic and other values was abandoned for a long period and was in a great threat of vanishing. But through this project it could be restored and kept for future generations.

These kinds of buildings are threatened and vanishing mainly due to the high cost wanted for their restoration. If how ever restored lack of a good maintenance plan may course the risk again. There for establishing a good maintenance plan is highly wanted for their protection.

In this case the proposal of reusing the building as a museum and using its potentials for raising funds for its future maintenance according to a proper maintenance plan is the strategy for protecting this heritage for the future.