

Conservation and management of historical buildings 2008

*Programme of work for the preservation/maintenance
plan for the old District Officer's administrative
colonial building in Malindi, Kenya*



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Abstract

This paper is about the Maintenance Plan for the Old District Officer's Administrative in Kenya. The building is in the town of Malindi, which is about 155 km from Mombasa (the second largest town in Kenya). Malindi is, basically, a tourist town and a haven for Italian settlers. The town was recently upgraded from a sub-district to a full-grown district. Before the upgrade, the district's administration was undertaken at the old colonial building. With the recent upgrade, the District Commissioner's office and other administrative duties have moved to a recently-built administrative complex, thus leaving the old colonial building empty. It is this emptiness of the old colonial building that poses the greatest danger to its existence.

Introduction



Malindi is the second largest coastal town of Kenya. Malindi Municipality has today a population of about 145,000 inhabitants (in the year 1999) with the two most important townships namely Malindi (app. 81,000 inhabitants) and Watamu (app. 17,000 inhabitants). It is situated about 120 km north of Mombasa just a little south of the equator. The district has a coastline of 155 kilometres, Malindi Municipality has a land area of app. 360 sqkm.

www.malindikenya.com/geographical-location.htm

Background

The old colonial building is located along the high water mark, about 0.5 km from Lawfords Hotel – a high-class tourist hotel. To the west, there is a cemetery. Dilapidated buildings border the south. On the eastern side of the building, an open ground stretches to a fish market near the Indian Ocean seashore. The old colonial building was built around 1890 by the former British colonialists to administer their government's policies in the District of Malindi. This building has since retained its administrative functions until it was vacated about three years ago. The two-storey structure is covered with corrugated iron sheets, with the exception of the front portico, which is covered with clay roof tiles. The building houses offices on both sides of a central corridor, which then leads to a timber staircase to the first floor where more offices are located. The verandah on the first floor is covered by timber railings and supported by rounded columns, typical of British colonial buildings.

For over a decade, the National Museums of Kenya (NMK) has been trying to acquire this colonial building with a view to restoring it for future generations. However, since the building was being used by the District Administration, the NMK could not possess the building. At times, NMK had received funding to restore the building, but could not do anything as the building was occupied.

The state of the building is precarious and requires urgent intervention. Water leakages, rotting timber beams, and unstable structural walls are but a portion of the main problems afflicting the building. The corrugated iron sheets leak profusely into the floors, thus causing considerable rot to the wooden roof members (trusses and purlins). Due to leakages, most of the upper walls are partially exposed to rain and sunshine, which destabilize the plastered facades. Ceiling beams, carrying the load of the first floor, have been affected and have rotten to a dangerous degree. In a nutshell, the state of the building is that of total negligence and total decay. Presently, the NMK is undertaking restoration works to the building.

I have chosen this particular building because of the challenges that it poses and also to utilise what I have learnt in the previous restoration work on Leven House (another colonial building located in Mombasa) – especially the aspect of stakeholder participation.

Analysis

The building, a rarity in Malindi, was chosen due to its aesthetic and historical values. Its location is unique as it was constructed by the colonial government in memory of the friendly relationship between Ibn Majid, the 16th century Sultan of Malindi who gave Vasco da Gama a naval guide to India. This building is listed and protected under Heritage Act of the Republic of Kenya enacted in 2006. The architectural value of the building is unique and rare to find in the

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country. The open space in front of the building has cultural values and possesses a potential use of cultural activities.

Due to its age and the rot and decay, any conservation activities should be done with extra care so as not to destroy the historical, aesthetic and architectural values of the building.

After several stakeholders meetings held with the stakeholders on the usage of the building. The meeting agreed that due to its historical value of the building all the restoration activities should be done accordance to conservation techniques and to avoid too many alterations to the existing building.

The Stakeholders' meeting agreed that the following functions should be incorporated in the proposed plan of the building:

- The establishment of an Ethnographic Museum.
- Studies and collection of material culture prevalent along the coast ethnic groups.
- A small coffee shop at the back- yard.
- The new office along the sides could be improved to fit in with the architectural configuration of the colonial building.
- An artisans' temporary workshop could be organized in the compound where local artisans could exhibit their craft products.
- In the compound, cultural activities could be organized at least once a year.

Present Status/Size and Condition of the Building-----**Ground Floor**

Section	Dimension(m)	Picture No	Conditions
Room A	5.00 x 4.30	1 to 6	<ul style="list-style-type: none"> • Paints eroded ceiling materials and metal rusted • Wall has presence of termite • Glass panel missing • General repairs to walls
B	4.85 x 4.23	7to 13	<ul style="list-style-type: none"> • Replacements of door knobs and accessories • Cracks found in the walls • Glass panel missing
C	2.33 x 3.50	14 to 19	<ul style="list-style-type: none"> • Plaster is peeling off • There is patch of dampness and metal rust • Door and windows accessories • Glass panel broken
D	3.50 x 2.40	20 to 22	<ul style="list-style-type: none"> • Plaster is peeling off • Ceiling cracks and peeling off
E	4.85 x 4.23	23 to 26	<ul style="list-style-type: none"> • Missing glass panels • General repairs to timber frames
F	4.85 x 4.23		<ul style="list-style-type: none"> • Missing glass panels • General repairs to timber frames
G-1	2.12 x 3.70	27 to 31	<ul style="list-style-type: none"> • West exterior wall peeling off • Structural problem and missing glass panel
G-2	2.20x 3.70	32 to 33	<ul style="list-style-type: none"> • Plaster is peeling off • Floor screed is damage and missing glass panel • Timber trusses and Roofing sheets is worn out
H	3.00 x 3.60	34 to 39	<ul style="list-style-type: none"> • South exterior wall is peeling off • It has seriously structural crack • Missing glass panel
I	3.00 x 1.45	40	<ul style="list-style-type: none"> • Exterior wall is peeling off
J	3.00 x 4.25	41 to 46	<ul style="list-style-type: none"> • Interior wall peeling off • Exterior wall peeling off
K	3.00 x 3.60	47 to 54	<ul style="list-style-type: none"> • Interior plaster is peeling off • North & South exterior wall plaster is peeling off • Missing glass panels
L	3.00 x 3.60	55 to 62	<ul style="list-style-type: none"> • North exterior wall plaster is peeling off • South Exterior wall plaster is peeling off • Glass panels is missing • Window shutter is missing
Stair Hall	10.55 x 3.00	63 to 72	<ul style="list-style-type: none"> • Dampness in the ceiling • Metal beam is rusting • Doors and window accessories id missing • Glass panel is missing

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External Facade		73 to 111	<ul style="list-style-type: none"> • Over growing of tress(parasite tress) • Peeling off plaster • South exterior floor is damage • Ceiling and Main beams were rotting
Articles		112 to 120	<ul style="list-style-type: none"> • Cannons untouched

Present Status/Size and Condition of the Building-----**First Floor**

Section	Dimension(m)	Picture No	Conditions
Room A	5.20 x 4.60	1 to 14	<ul style="list-style-type: none"> • Paints eroded ceiling materials and metal rusted • Electrical fittings and wiring is falling • Doors and window accessories is missing • Cash Box at north east corner
B	5.20 x 4.60	15 to 26	<ul style="list-style-type: none"> • West and south walls plaster is flaking • Metal is oxidizing with wall causing structure damage • Ceiling boards is damage by water leakage • Floor screed is peeling off • Doors and window accessories is missing
C 1	2.80 x 3.00	27 to 34	<ul style="list-style-type: none"> • Plaster is peeling off • Wall dampness is found • Door and windows accessories • Termites attacking timber
C2	2.80 x 1.00	35 to 37	<ul style="list-style-type: none"> • Door and windows accessories • Water tank located on top of the roof
D	4.85 x 4.23	38 to 45	<ul style="list-style-type: none"> • Missing glass panels • Steel window is eroded • Dampness and termites attack timber structures
E	5.25 x 4.60		<ul style="list-style-type: none"> • Missing glass panels • General repairs to timber frames
F	5.25 x 4.60	46 to 55	<ul style="list-style-type: none"> • Roof leakages destroy ceiling members • missing glass panel
Stair hall	10.85 x 3.30	56 to 69	<ul style="list-style-type: none"> • ceiling finishes has patch of dampness • floor dampness is found • Timber staircase is worn out • Ceiling Beams need replacements
Terrace		70 to 88	<ul style="list-style-type: none"> • Roof deteriorating • Floor screed is bad • Blustered and timber railing is worn out

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Estimated Area For floors and Walls

	Floor Areas (sqm)	Walls (sqm)
Ground Floor	345 sqm	955sqm
First Floor	340 sqm	803 sqm

BEFORE INTERVATION



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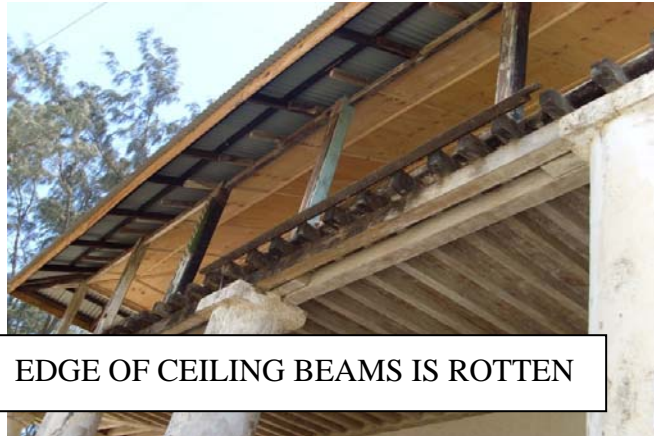


DURING INTERVATION





HACKING OF WALL SURFACE



EDGE OF CEILING BEAMS IS ROTTEN



ROOTS UNDER THE BUILDING



CEILING FINISH

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REPLACEMENTS OF MAIN BEAM



BALCONY REPLICA



DELAPIDATED DRAINAGE SYSTEM



NERU 1 :4 (W.CEMENT AND LIME)



COMPLETED PLASTER



ARCH RESTORED



BACK SIDE OF THE BUILDING

Proposal

Activities

1) Cleaning

- Regular cleaning of building components is an integral part of the maintenance and will increase the life of the building.
- Removal of dirt on hard surface prevents deterioration due to abrasion.
- Removal of debris from the exterior, cleaning the gutters and drainage spouts to prevent the damaging effects of water infiltration.

2) Site conditions

- Examination of site condition should be addressed - maintenance of the ground and landscape features i.e. the grass should be cut twice a week during peak seasons.
- Walls should be examined for cracks due to vegetation and side roots growth on the building.

3) Structural Systems

The primary structural system includes concrete, masonry, steel and wood. Regular visual inspections of surface materials could detect problem in these systems.

Concrete: this should be checked yearly to ensure that structural elements are in overall alignment and that unusual deflection, sagging or swelling do not occur.

Monolithic coral stone walling: regular inspections to prevent unnecessary deterioration i.e. loose or damaged mortar. Plaster work should be repaired immediately. It is important to make sure materials

match the properties of the existing in terms of strength, colour and textures.

Wood: wood systems should be checked at regular intervals for signs of deflection, cracking, weathering and rot. The deterioration of wood can easily be detected through visual inspection of such elements and should focus on loose, cracked, warped, discoloration, rot, decay or broken and only those pieces that are damaged should be replaced. Painting is the most generally accepted treatment for protecting wood against environmental factors.

Exterior plaster: Maintaining exterior wall finishes is essential since they are a first line of defence against unwanted moisture and environmental threats. Exterior finishes are, in most cases, the easiest to monitor and tend to wear faster.

Interior Finishes: In general, finishes should be kept free of dirt and dust as these accelerate the wear and tear. These should be removed regularly using a soft duster or damp cloth. Usage of strong chemicals should be avoided. Plaster and exposed masonry walls should be monitored for deformation and cracks.

Ceiling Finishes: There are two types of ceiling finishes;

- Suspending ceiling
- Exposed wood and I-beams

Exposed wood or metal should be protected with a layer of protective coating and should be examined for signs of cracks, surface deterioration and corrosion. The problems observed should be investigated immediately to determine the root cause and action taken to rectify the problem.

Floor surface: The floor surface should be checked for wear and tear, cracks and deterioration of joints and action taken to replace worn out areas.

Doors and Windows: Windows and doors are elements or features which are often used to determine the historicity, the age and the style of a building. It is advisable not to replace these features unless they are beyond repair. During the inspection of windows and doors, it is important to look for water damage or deterioration around the entire frame particularly in the window sill and the door threshold. Windows and doors should be scrapped and repainted regularly to prevent weathering of the original wood or metal.

Roofing structure: the roof is the least visible element in the building and its maintenance is crucial for ensuring the successful preservation of a building. All leaks should be addressed as soon as possible to prevent further damage. Roofing materials and their corresponding truss members should be regularly checked for decay and rot due to insect attack and environmental weathering.

Programme maintenance plan 2010 to 2020

<i>Activities</i>	<i>Year 1-2</i>	<i>Year 3-4</i>	<i>Year 5-6</i>	<i>Year 7-8</i>	<i>Year 9-10</i>
<i>Cleanliness</i>	<i>Monthly routine</i>	<i>Monthly routine</i>	<i>Monthly routine</i>	<i>Monthly routine</i>	<i>Monthly routine</i>
<i>Site condition</i>	<i>Thrice a month</i>	<i>Thrice a month</i>	<i>Thrice a month</i>	<i>Thrice a month</i>	<i>Thrice a month</i>
<i>Structural Systems</i>	<i>Monitoring</i>	<i>Visual inspection</i>	<i>When needed</i>	<i>Visual inspection</i>	<i>When needed</i>
<i>Reinforced concrete</i>	<i>Monitoring</i>	<i>Monitoring</i>	<i>Monitoring</i>	<i>Repair exposed reinforcements</i>	<i>Monitoring/repair</i>
<i>Coral stone wall</i>	<i>Regular cleaning</i>	<i>Monitoring</i>	<i>Repair the defective parts</i>	<i>Repair the defective parts</i>	<i>Monitoring/repair</i>
<i>Wood beams</i>	<i>Monitoring / painting</i>	<i>Monitoring / painting</i>	<i>Replace the defective parts</i>	<i>Wood treatment</i>	<i>Monitoring/repair</i>
<i>Exterior Plaster</i>	<i>Regular cleaning</i>	<i>Painting/repair work</i>	<i>Repair the defective parts</i>	<i>Painting /repair work</i>	<i>Monitoring/repair</i>
<i>Interior Finishes</i>	<i>Regular cleaning</i>	<i>Painting</i>	<i>Regular cleaning</i>	<i>Monitoring / painting</i>	<i>Repair the defective parts</i>
<i>Ceiling finishes</i>	<i>Monitoring</i>	<i>Protective coating</i>	<i>Monitoring /repair defects parts</i>	<i>Monitoring /repair defects parts</i>	<i>monitoring</i>
<i>Floor surfaces</i>	<i>Cleaning and treatment</i>	<i>Monitoring / repair defects/ replace</i>	<i>Monitoring</i>	<i>Monitoring / repair defects/ replace</i>	<i>Monitoring/repair</i>
<i>Doors and windows</i>	<i>Monitoring / painting</i>	<i>Inspecting/ replace the worn out part</i>	<i>Monitoring / painting</i>	<i>Inspecting/ replace the worn out part</i>	<i>Inspecting/ replace the worn out part</i>
<i>Accessories</i>	<i>Replace when needed</i>	<i>Replace when needed</i>	<i>Replace when needed</i>	<i>Replace when needed</i>	<i>Replace when needed</i>
<i>Roof</i>	<i>Monitoring</i>	<i>Treatment</i>	<i>Inspection/</i>	<i>Monitoring</i>	<i>Restore the</i>

<i>structure</i>		<i>with pesticide</i>	<i>replace worn out part</i>	<i>/ repair</i>	<i>complete roof</i>
<i>Electrical system</i>	<i>Evaluate/ repair</i>	<i>Evaluate/ repair</i>	<i>Evaluate/ repair</i>	<i>Evaluate/ repair</i>	<i>Evaluate/ repair</i>
<i>Plumbing system</i>	<i>Evaluate/ repair</i>	<i>Evaluate/ repair</i>	<i>Evaluate/ repair</i>	<i>Evaluate/ repair</i>	<i>Evaluate/ repair</i>

Results/Current Status of the Work

Work Already done

Roof

- ❖ Demolition of the roof structure including balcony roof.
- ❖ Fixing new pre-painted iron sheets.
- ❖ General paint to fascia board.
- ❖ General treatment to timber trusses to protect against termites.
- ❖ Installation of a fascia board to suit the original one.
- ❖ Roof re-construction.
- ❖ Roof trusses construction and including the balcony

Structure

- ❖ Stitching and sealing of cracks.
- ❖ Insertion of a main timber beam.
- ❖ Insertion of timber beams as lintels at entrance (ground floor).
- ❖ Replacements of timber beams.

Walls

- ❖ Slaking of the lime in large quantities.
- ❖ Demolition of timber partitions walls.
- ❖ Hacking the walls to remove old plaster.
- ❖ Mixing of the hydrated lime with sand for the plaster.
- ❖ New Lime plaster work ratio of lime, sand base 1:4 and finishes with final plaster and paint screed (1:4 - one part of white cement to 4 parts of lime).
- ❖ Lime based plaster samples made for the internal and external plaster.
- ❖ Re-construction of weak wall parts.
- ❖ Re-alignment of walls to western elevation.

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- ❖ Re-sealing and levelling of wall surfaces with a layer of coral stones.

Slabs

- ❖ Hacking existing slabs to receive new slab.
- ❖ 50 mm concreting to slabs – for stability and noise-reduction
- ❖ Hacking the floor screed to receive new screed.
- ❖ New floor screeds (cement and sand ratio 1:4).

Ceilings

- ❖ Inspection and replacement of ceiling beams for the entire building.
- ❖ Ceiling plasters with ratio of 1:3 (3 parts white cements to 1 part lime).
- ❖ Insertion of a 6” x 2” timber piece under the ceiling poles.

Drainage

- ❖ Cleaning of the drainage system on the western side and northern side of the building.
- ❖ Unblocking of sewage drainage (Restoration of the drainage systems).

Doors and windows

- ❖ Replacement of damaged/missing timber parts for all window and door .
- ❖ Windows cleaning, scraping and sanding.
- ❖ Repairs and replacement of rotten pieces on all window shutters and door panels.
- ❖ Making of new timber door frames identical to original ones.
- ❖ Re-setting all doors and windows.
- ❖ Creation of new openings for better cross ventilation of the building.

Balcony

- ❖ Complete restoration works of the balcony is on-going.
- ❖ Scrapping the balcony’s main timber posts.
- ❖ Re-construction of the balcony replica
- ❖ Clearing of debris.
- ❖ General cleaning works to the building.

- ❖ Scrapping the existing timber beams at the ground and first floor level.
- ❖ Underground drainage system restored (soak pit and septic tank)

The building has now recovered its full strength and all walls, slabs are sound. There are no more cracks or other signs showing instability and deformation. The addition of timber beams and stitches will guarantee the long term stability for the building, unless serious settlements or neglect in the maintenance of the building.

The building is also covered with a completely new roof that reduces the risk of deterioration of the building due to leakages. The doors and windows are also restored, and the building is secured. The building is also protected against humidity, with the surrounding properly drained, the underground drainage system restored, and the walls liberated from the previous thick waterproof cement plasters. The inside is also cleaned, the slabs are levelled, and all the ceilings restored. All electricity fittings are in place, and the power will be resumed after the work is practical completed.

Results

- ❖ Stakeholders actively involved in the project
- ❖ Building is out of danger and 70% restored
- ❖ NMK technicians and local craftsmen have gained experience
- ❖ The role of NMK is better recognized by the community
- ❖ A clear vision of the needs to enhance the presentation of the site

Discussion & Conclusions

By January 2009, the following activities will have been done:-

- Assessment of the work done during partial restoration.
- Preparation of future development for the sites and environment.
- Preparation of the project documents to raise funds for future activities.

Complete restoration work is anticipated to be completed by December 2009 and detailed maintenance to the building will begin by January 2010.

At 2010, the building will be ready for fully operational and the maintenance plan of the building put in place.

Old District Officer's building, Malindi, Kenya

Activities	Resource needed	Personnel	Time schedule	Budget in US dollars
Cleanliness	<ul style="list-style-type: none"> Caretaker Maintenance tools 	<ul style="list-style-type: none"> Unskilled labourers 	Routine daily	6,400
Site condition	<ul style="list-style-type: none"> Landscaping tools Labourers 	<ul style="list-style-type: none"> Landscaper Unskilled Skilled masons 	Once a week	5,000
Structural Systems	<ul style="list-style-type: none"> Professional Materials 	<ul style="list-style-type: none"> Skilled personnel Engineer Skilled masons 	One year	1,000
Reinforced concrete	<ul style="list-style-type: none"> Professional Materials 	<ul style="list-style-type: none"> Structural Engineer 	Once every 3 years	1,500
Coral stone wall	<ul style="list-style-type: none"> Caretaker Maintenance tools Labourers 	<ul style="list-style-type: none"> Skilled masons Historical professional 	Routine and when emergency	8,000
Wood beams	<ul style="list-style-type: none"> Materials (beams) Labourers 	<ul style="list-style-type: none"> Skilled masons Carpenter 	Once every 2 years	6,000
Exterior Plaster	<ul style="list-style-type: none"> Caretaker Materials Labourers 	<ul style="list-style-type: none"> Skilled masons Painter 	Once every 18 months	5,000
Interior Finishes	<ul style="list-style-type: none"> Caretaker Maintenance tools Labourers 	<ul style="list-style-type: none"> Skilled masons Painters Carpenter 	Routine and emergency work	15,000
Ceiling finishes	<ul style="list-style-type: none"> Caretaker Materials Labourers 	<ul style="list-style-type: none"> Skilled masons Painters Carpenter 	Once every 2 years and when needed	10,000
Floor surfaces	<ul style="list-style-type: none"> Caretaker Maintenance tools Labourers 	<ul style="list-style-type: none"> Skilled masons Carpenter 	Routine	5,000
Doors and windows	<ul style="list-style-type: none"> Materials (timber) Labourers 	<ul style="list-style-type: none"> Skilled masons Carpenter Painters 	Once a year	10,000
Accessories	<ul style="list-style-type: none"> Materials (fitting) Labourers 	<ul style="list-style-type: none"> Skilled carpenter 	Routine	5,000
Roof structure	<ul style="list-style-type: none"> Materials (timber, G.C.I) Labourers 	<ul style="list-style-type: none"> Skilled roof carpenter 	Routine and fix new after 10 years	15,000
Electrical system	<ul style="list-style-type: none"> Materials Professional 	<ul style="list-style-type: none"> Electrical engineer 	As per the need	10,000
Plumbing system	<ul style="list-style-type: none"> Materials Professional 	<ul style="list-style-type: none"> Mechanical engineer 	Once a year	5,000

Total **\$ 107,900**

Contingency 10% **\$ 10,790**

Inflation 5% **\$ 5,395**

Grand total **\$ 124,085**

While there is enough technical expertise to carry out this maintenance plan, the main problem envisaged is the funding to carry out these works. All the restoration works to-date have been funded by the National Museums of Kenya, supported by the Ministry of National Heritage. However, with the worldwide economic recession, availability of funds will be hard to come by. Even if funds are made

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available, they will be diverted to other pressing issues that are seen as priority. Many projects undertaken by the National Museums of Kenya have been done in partnership with other donors. Probably, this is what will be trend in this project too.

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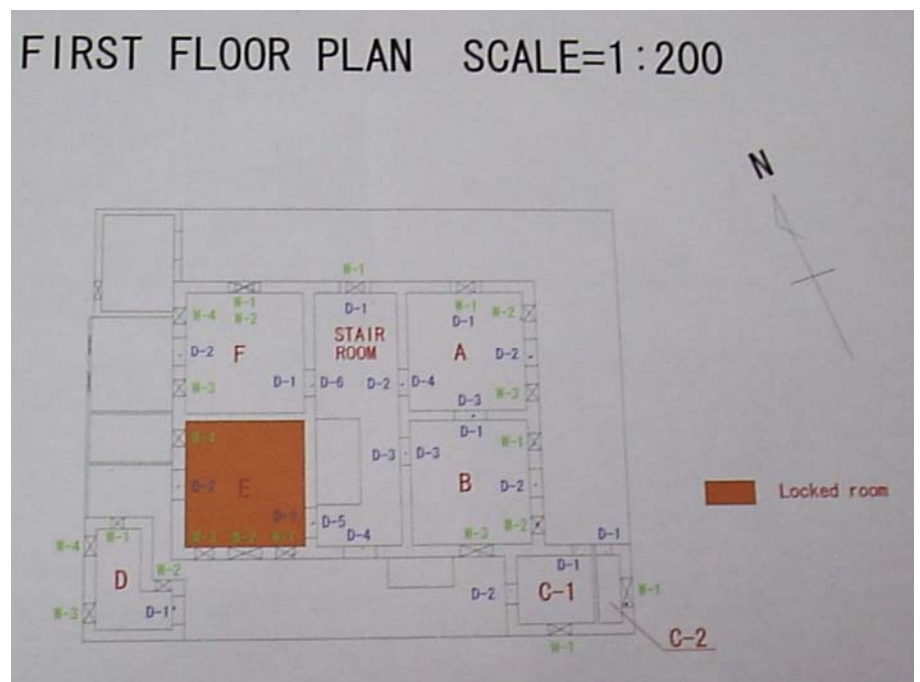
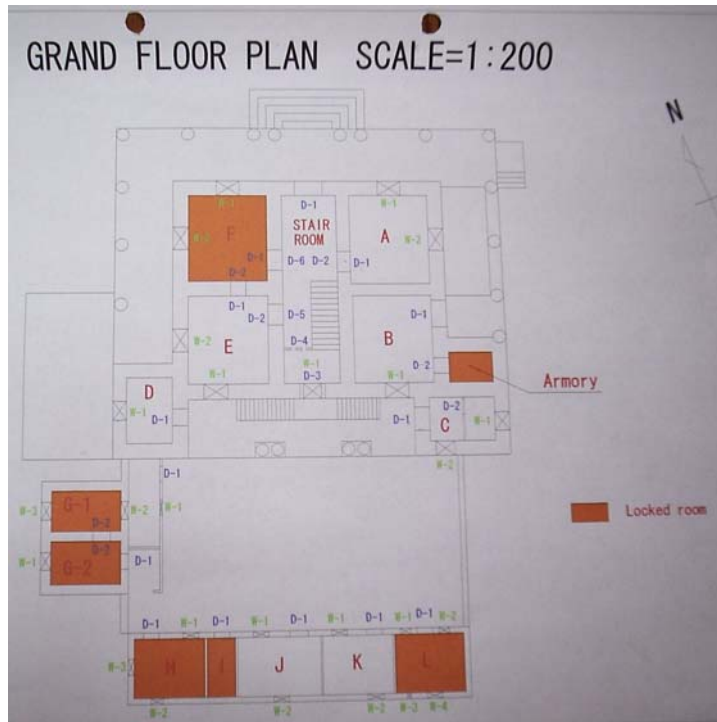
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2005 Reports of the Revitalisation of Leven House, Mombasa,
Kenya

Appendix 1 (photos)



Front blocked with trees



Front faced clearly visible

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The roof has been entirely reconstructed, with a new structure resting on walls. All the roofing sheets have also been replaced with pre painted galvanised sheets. A new wooden ceiling has been re-constructed.



Lime plaster to walls finished with screed of 1 part of white cement to 4 parts lime.



All the plaster has been removed. The weak surface of the walls strengthened, re-levelled with a layer of coral stones laid with lime mortar and finished with lime plaster with screed finish.



All the windows and doors of the building have been restored. The layers of paint have been removed and the missing elements have been fabricated; based on the existing ones.



Replacement and propping of the ceiling beams



Slaking and treatment of lime

**IMPLEMENTATION TIMETABLE FOR PARTIAL RESTORATION
FROM FEB 08 TO JAN 09**

Item	Feb 08	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan09
Masonry work												
Monolithic wall reconstruction		[Shaded]										
Purchase lime and prepare the plaster mix for the entire building		[Shaded]										
Lime preparation for the entire plaster		[Shaded]										
Replace rotten timber beams		[Shaded]										
Hacking floors and damaged slabs and insert reinforcements		[Shaded]										
New slab first floor		[Shaded]										
New slab ground floor		[Shaded]										
Hacking all damaged plaster + repair walls		[Shaded]										
Carpentry Work												
Purchase all materials for the roof		[Shaded]										
Dismantle the roofs over the building and over the balcony		[Shaded]										
Reconstruct roof with treated timber + cover with new painted galvanized sheets		[Shaded]										
Reconstruct roof over balcony + install fascia boards including under roof						[Shaded]						
Woodwork												
Dismantle balustrade and clean all Timber post and new timber balcony reconstructed							[Shaded]					
fabricate Timber balustrade as per the existing									[Shaded]			
Scrape and clean all windows and doors		[Shaded]										
Repair/refurbish each opening one by one		[Shaded]										
Restore the balcony all around							[Shaded]				[Shaded]	
Install the suspended wooden ceilings								[Shaded]				
Cleaning												
Removing all debris from the site (from slab, plaster, iron beams, etc...)								[Shaded]				

Costs and Budget for the remaining works

Item	Work Description	Cost in Kshs	Costs In Us \$
1.0	General floor screeds for the entire building	354,000/=	4,849
1.01	Hacking the existing external plaster	200,000/=	2,740
1.02	External Plaster	355,000/=	4,863
1.03	Internal plaster around 50%	330,000/=	4,521
1.04	Restoration of the balcony complete with balustered	550,000/=	7,534
1.05	General paint works to ceilings and walls	400,000/=	5,479
1.06	Linseed oil finishes to balcony	75,000/=	1,027
1.07	Windows and doors accessories and finished with Linseed oil	300,000/=	4,110
1.08	General Plumbing works for the entire building	200,000/=	2,740
1.09	Electrical fitting and accessories	210,000/=	2,877
1.10	Setting up ethnographic galleries	1,500,000/=	20,548
1.11	Ceiling finishes	100,000/=	1,370
1.12	Uprooting the tree trunk besides the building	150,000/=	2,055
1.13	General cleanliness to the building	100,000/=	1,370
1.14	General cleanliness to the surrounding	250,000/=	3,425
	GRAND TOTAL IN US DOLAR		69,507

GROUND FLOOR PHOTOS



Malindi Old DC120



Malindi old DC001



Malindi old DC002



Malindi old DC003



Malindi old DC004



Malindi old DC005



Malindi old DC006



Malindi old DC007



Malindi old DC008



Malindi old DC009



Malindi old DC010



Malindi old DC011



Malindi old DC012



Malindi old DC013



Malindi old DC014



Malindi Old DC017



Malindi Old DC019



Malindi Old DC021



Malindi Old DC022



Malindi Old DC023



Malindi Old DC024



Malindi Old DC025



Malindi Old DC026



Malindi Old DC027



Malindi Old DC028



Malindi Old DC029



Malindi Old DC030



Malindi Old DC031



Malindi Old DC035



Malindi Old DC036



Malindi Old DC037



Malindi Old DC039



Malindi Old DC040



Malindi Old DC041



Malindi Old DC042

Abdulswamadu A. Ali

Ground floor Photos



Malindi Old DC043



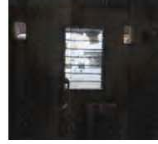
Malindi Old DC044



Malindi Old DC045



Malindi Old DC046



Malindi Old DC047



Malindi Old DC048



Malindi Old DC049



Malindi Old DC050



Malindi Old DC051



Malindi Old DC052



Malindi Old DC053



Malindi Old DC054



Malindi Old DC055



Malindi Old DC056



Malindi Old DC057



Malindi Old DC058



Malindi Old DC059



Malindi Old DC060



Malindi Old DC061



Malindi Old DC062



Malindi Old DC063



Malindi Old DC064



Malindi Old DC065



Malindi Old DC066



Malindi Old DC067



Malindi Old DC068



Malindi Old DC069



Malindi Old DC070



Malindi Old DC071



Malindi Old DC072



Malindi Old DC073



Malindi Old DC074



Malindi Old DC075



Malindi Old DC076



Malindi Old DC077

Ground floor Photos



Malindi Old DC078



Malindi Old DC079



Malindi Old DC080



Malindi Old DC081



Malindi Old DC082



Malindi Old DC083



Malindi Old DC084



Malindi Old DC085



Malindi Old DC086



Malindi Old DC087



Malindi Old DC088



Malindi Old DC089



Malindi Old DC090



Malindi Old DC091



Malindi Old DC092



Malindi Old DC093



Malindi Old DC094



Malindi Old DC095



Malindi Old DC096



Malindi Old DC097



Malindi Old DC098



Malindi Old DC099



Malindi Old DC100



Malindi Old DC101



Malindi Old DC102



Malindi Old DC103



Malindi Old DC104



Malindi Old DC105



Malindi Old DC106



Malindi Old DC107



Malindi Old DC108



Malindi Old DC109



Malindi Old DC110



Malindi Old DC111



Malindi Old DC112

Abdulswamadu A. Ali

Ground Floor Photos



Malindi Old DC116



Malindi Old DC119

First Floor Photos



Malindi Old DC01



Malindi old DC002



Malindi Old DC02



Malindi Old DC03



Malindi Old DC04



Malindi Old DC06



Malindi Old DC07



Malindi Old DC08



Malindi Old DC09



Malindi Old DC10



Malindi Old DC11



Malindi Old DC12



Malindi Old DC13



Malindi Old DC14



Malindi Old DC15



Malindi Old DC15a



Malindi Old DC16



Malindi Old DC17



Malindi Old DC18



Malindi Old DC19



Malindi Old DC20



Malindi Old DC21



Malindi Old DC22



Malindi Old DC23



Malindi Old DC24



Malindi Old DC26



Malindi Old DC27



Malindi Old DC28



Malindi Old DC29



Malindi Old DC29a



Malindi Old DC30



Malindi Old DC31



Malindi Old DC32



Malindi Old DC33



Malindi Old DC34

First Floor Photos



Malindi Old DC35



Malindi Old DC36



Malindi Old DC37



Malindi Old DC38



Malindi Old DC39



Malindi Old DC40



Malindi Old DC41



Malindi Old DC41a



Malindi Old DC42



Malindi Old DC43



Malindi Old DC44



Malindi Old DC45



Malindi Old DC46



Malindi Old DC47



Malindi Old DC48



Malindi Old DC49



Malindi Old DC50



Malindi Old DC51



Malindi Old DC52



Malindi Old DC53



Malindi Old DC54



Malindi Old DC55



Malindi Old DC56



Malindi Old DC57



Malindi Old DC58



Malindi Old DC59



Malindi Old DC60



Malindi Old DC61



Malindi Old DC62



Malindi Old DC63



Malindi Old DC64



Malindi Old DC65



Malindi Old DC66



Malindi Old DC67



Malindi Old DC68

First Floor Photos



Malindi Old DC69



Malindi Old DC70



Malindi Old DC71



Malindi Old DC72



Malindi Old DC73



Malindi Old DC75



Malindi Old DC76



Malindi Old DC77



Malindi Old DC78



Malindi Old DC79



Malindi Old DC80



Malindi Old DC81



Malindi Old DC82



Malindi Old DC83



Malindi Old DC84



Malindi Old DC85



Malindi Old DC86



Malindi Old DC87



Malindi Old DC88



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Cover