



## REDECORATION OF ALBERT LUTHULI HOUSE- GROUTVILLE



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## **REPORT AND RECOMMENDATIONS**

### **REDECORATION OF ALBERT LUTHULI HOUSE GROUVILLE**

#### **1. PROJECT BACKGROUND:**

##### **INTRODUCTION:**

- 1.1. Harber & Associates, being the responsible component of the professional team originally commissioned to design the overall museum complex, were requested by the museum director, Mr. Brian Xaba, to prepare this report.
- 1.2. At the outset it needs to be stressed that the Albert Luthuli House is an exceptionally significant icon due to its background of national historic significance, but also due to the nature of its construction.
- 1.3. It became evident, during the original renovation, that the walls were constructed of stabilised earth, a very humble material, albeit in the configuration of a modern home.
- 1.4. These humble origins are important to showcase in contemporary South Africa where aspirations soar above affordability. It is notable that other historic KZN icons shared similar views; John Dube's original house was also earth and M. K. Gandhi's corrugated iron. Both were also reconstructed with input from Harber & Associates.

## 2. EARTH CONSTRUCTION:

- 2.1. A centuries old English proverb recounts that one needs to “give a house of mud a good hat, a coat, and a fine pair of boots and it will last forever.” These rules still apply.

## 3. THE ‘GOOD HAT’:

- 3.1. No earth wall may be exposed to direct rainfall. This will simply eat away the top and eventually cause the wall to cave in when it loses strength from being damp and especially burdened by the considerable mass of absorbed water. This happens to humble huts all over KZN during extended wind-blown water, and is the origin of the Colonial Natal veranda house. The primary reason for the surrounding veranda was to protect the walls from water rather than gather to drink pink gin!
- 3.2. The current 'S' profile roof sheeting needs to be securely fixed; as many of the roof fixing screws have rusted through (some of these are missing completely) and the moisture resisting washers are brittle from constant sun exposure (Fig.1). It is suggested that these get replaced throughout. For extra precautionary measures, due to the age of the sheeting, an extra set of roof fixing screws are to be used. The missing / damaged screws are to be replaced where necessary.



Fig. 1: Loose fixing screws



Fig. 2: Rusted sheeting

- 3.3. All rusted roof sheets are to be replaced with double galvanised 0.53mm thick red Colourbond 'S' pattern typology to match existing, however a maximum of five sheets will only be needed (Fig.2).
- 3.4. Large scale concentrated rusting is occurring on one of the roof sheets covering the verandah (Fig.3). This is caused by inadequate waterproofing/ flashing at the discharging end of the roof valley (Fig.4).



Fig. 3: View from verandah



Fig. 4: Gap in flashing evident

- 3.5. The roof is to receive a new coat of paint as made by a reputable paint manufacturer, such as Plascon. The colour is to match the existing.
- 3.6. A 'good hat' implies an overhang; a feature that Albert Luthuli House doesn't enjoy and which clearly may not be added for historic reasons.
- 3.7. This places enormous importance on the guttering. It has to be perfectly waterproof, which the existing building isn't.



Fig. 5: No connection between gutter and rwdp

- 3.8. The historic guttering, which is 'half round galvanised' iron, used to be readily available from hardware shops. It had shortcomings however – it tended to drip at the joints and eventually rust. For historical authenticity the original type of gutter was used when the home was originally

restored. Many of the gutters and downpipes are showing signs of severe rusting, while many of these have now failed altogether (Fig.5)

- 3.9. A national search is being undertaken to find a company that may manufacture 'half round' guttering of non erosive material. (Fig.6).



Fig. 6: Proposed new guttering

- 3.10. We would now advise that all the gutters be replaced throughout and they should be ordered in white zinc-aluminium. The coating is integral and the alloy is rust resistant thereby avoiding the necessity to paint galvanised iron, which is eventually susceptible to rust, near the coast (Fig.6A).



Fig. 6A: Totally corroded gutters!

- 3.11. The main function of a down pipe is to successfully dispel water away from the building (this is even more important considering the building walls are constructed from mud bricks) The down pipes should be replaced throughout and are to be made from white zinc-aluminium material as to match the new guttering. Most are to be redirected to dispel water into the existing rainwater collection tanks. Changes in direction are to be mitred to match the existing.
- 3.12. Air-conditioning condensation pipes are unsightly and should be led directly into rainwater downpipes. The one instance at the house is a probable cause of damp damage to the wall on the front elevation. This pipe is to be redirected, as to now discharge into the nearest rainwater tanks (Fig.7). This includes garden sprinklers.



Fig. 7: All surrounding moisture sources to be removed

- 3.13. Due to the importance of the gutters and downpipes we strongly recommend that a specialist is engaged to undertake this part of the contract. We recommend: Watertight Guttering - *Mr. Keith Gillespie* on 082 825 1635 or 031 701 2922.

#### 4. THE 'COAT':

- 4.1. However prior to this the existing plaster defects need to be attended to. These have been carefully marked on the elevations with spray paint. Loose plaster was located by tapping or else marked where the sand texture of the previous repairs is too coarse (Fig.8 & 9).
- 4.2. The protective coating of paint has been specified by Plascon. The external building facade is to be repainted throughout (Appendix 9.1).
- 4.3. To assess the materials used in the original construction a core sample was taken and analysed by Contest. It provided the mix to be used as well as the need for fine sand (Appendix 9.2).



4.4. An internal water leak is clearly evident, as this has created a swelling and discolouring of a section of cornicing and stain marks along the painted wall (Fig.10).



Fig. 8: Marked hollow plaster sections



Fig. 9: Coarse plaster sand



Fig.10: Internal leak probably from air-conditioning unit over.

## 5. THE 'FINE PAIR OF BOOTS':

- 5.1. Earth walls should never come in contact with the natural ground due to rising damp. This is the main cause of rural homes deteriorating and the cause of widespread prejudice against earth construction.
- 5.2. All modern earth walls are constructed on top of a masonry base, with a damp-proof course to protect the upper wall from rising damp (Fig.11).
- 5.3. In this instance Chief Luthuli's builder was admirably informed on at least two elevations (Fig.12).



Fig.11: Substantial concrete plinth Fig. 12:Underside vent on south side

There are minor cracks in this mass concrete wall, probably due to a lack of available reinforcing, but these are of no consequence. These must be monitored in later years however (Fig.13).



Fig. 13: Minor cracks in concrete plinth

5.4. The roadside north elevation is the source of most of the current problems on site; especially since the natural ground level is too high here, the site is inherently damp and the gutters are in a poor state over. To make double sure, it is recommended that the current skirting slab be demolished and recast at a lower the level, to that of the northern section. The garden is to be trimmed downwards to suit. This includes the existing ventilation grille(Fig.14).



Fig. 14: Section to be lowered

## 6. CONCLUSION:

- 6.1. If watertight guttering made of an alloy is professionally fitted, if the walls are redecorated by a painter working strictly to specification, and if water is drained well from the base of all walls, then the house should remain in good shape for several decades more.

Rodney Harber  
Pr. Arch. 926  
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## 7. SCOPE OF WORK:

1. Asses the work recommended to be undertaken.
2. Prepare the report and submit it to the Board of Trustees, AMAFA and SAHRIS website.
3. Supervise:
  - i) The repair of the plaster.
  - ii) The painting throughout.
  - iii) The roof sheeting, guttering and downpipes.
  - iv) The site drainage along the north elevation.
  - v) Attend to incidental items.
4. Sign off and completion.

## 8. ADDENDUM:

The Museum Board of Trustees have appointed the original architectural heritage specialist as a consultant to:

1. Draw up an annotated set of architectural drawings detailing the necessary renovations interventions.
2. Provide the necessary specifications for the National Department of Public Works to undertake the restoration of building components mentioned in the report.

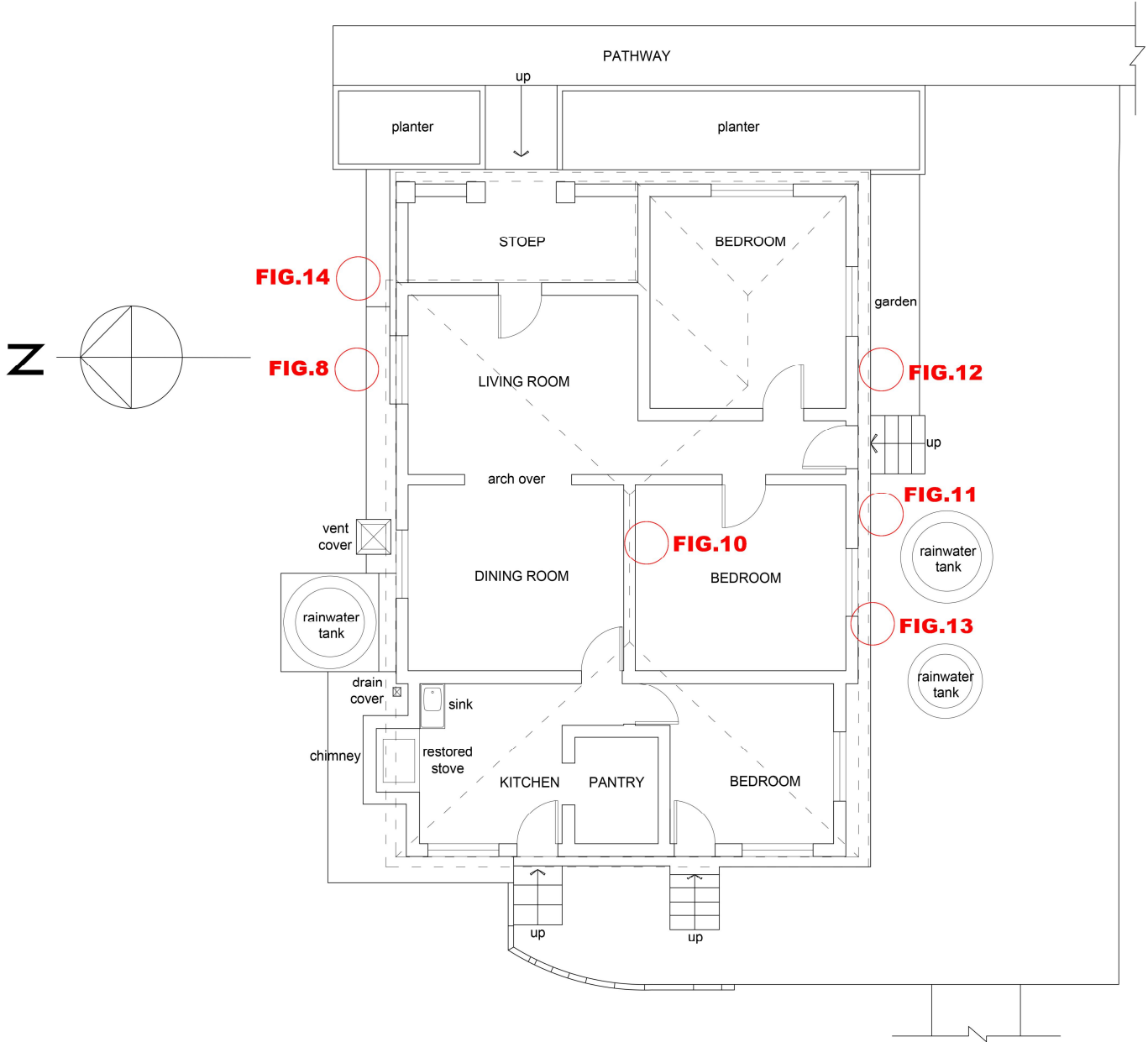
The Museum needs to budget approximately R 350 K for the possible repair/ renovation and restoration. This is merely an indicator figure and is offered purely as an estimate.

The architect will adhere to the Recommended Scale of Fees for the architectural profession. (SACAP) .

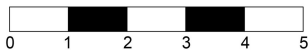
Since this work will not be put out to tender to provide a baseline for fee estimate, based on percentages, it is recommended that timesheets be kept of all categories of professionals utilized in this report and charged accordingly.

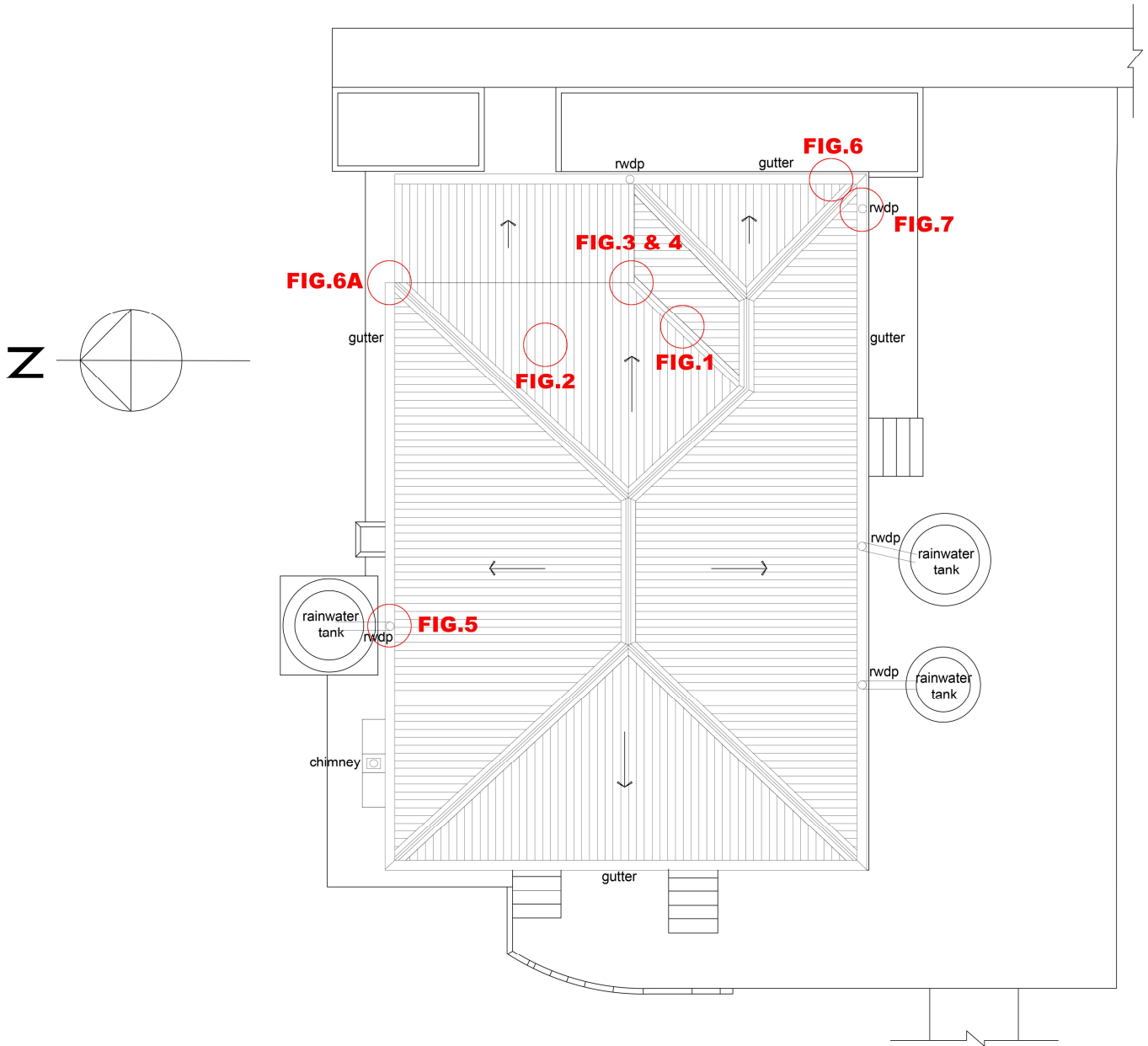
## 9. APPENDICES:

### 9.1 Plans:

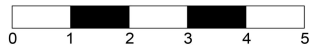


FLOOR PLAN SCALE 1 : 100





ROOF PLAN SCALE 1 : 100



## 9.2 Paint Specification:



### 9.3 Contest Report re Coring: