

20 January 2014

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To: Amafa AkwaZulu-Natali  
Attention: Ros Devereux  
PO Box 2685  
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3200

**DEVIATIONS TO APPROVED PLANS FOR THE ALTERATIONS & ADDITIONS: CORNER RAILWAY STREET(PMB RAILWAY STATION), PIETERMARITZBURG, MSUNDUZI – CASE ID:1623**

Dear Ros,

Your letter dated 13 December 2013 outlining your position regarding the turret refers:

We acknowledge receipt of your letter and wish to comment in further detail outlining our position as consultants in this matter.

**Background**

The project as a whole commenced in June of 2013. Prior permission to implement the proposed additions and alterations were applied for with Amafa; and ongoing Heritage requirements were coordinated with Amafa KZN on a continuous basis by Lindsay Napier, our Amafa consultant.

With commencement of the project it soon became clear that the building as a whole was in a far more dilapidated state than originally anticipated. This has had a wide ranging impact on the completion date of the project as well as incurring further expenditure on restorative measures that needed to be addressed. Additional restoration work done so far and the cost thereof include the following:

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|--|--------------|
| • Replacement of the timber floor structure in both lounges      | R 59,408.28  |
| • Replacement of all floor boards with new timber boards         | R 80,837.86  |
| • Structural work to existing timber roof structure              | R 68,635.17  |
| • Specialist Engineers fees for the roof structure               | R 70,961.98  |
| • Re-laying of clay roof tiles on new plastic underlay           | R 277,200.00 |
| • Rebuilding of Platform covered shelter                         | R 139,294.97 |
| • New cut off drains to prevent flooding of the station building | R 176,792.00 |
| • Jet cleaning of surrounding sub soil stormwater drains         | R 42,295.00  |

As can be seen from the above the total cost of additional restorative work done amounts to R 915,452.26. This is all Amafa related restoration work that will hopefully ensure that Pietermaritzburg Station will be preserved in a good state of repair for generations to come.

Further to the above it also became apparent that the services infrastructure at Pietermaritzburg Station was in dire need of extensive upgrading and in excess of the original allowances. A new Transformer has been installed at an additional cost of R 400,000.00.

From all the above it is clear that we have gone further in our restoration work than the original scope of work had allowed for.

While we in no way want to detract from the fact that Amafa KZN views the current fibreglass turret as an inappropriate response to Amafa requirements in the given context, we must state that the proposal to do the turret in fibreglass is in our mind a valid option that would ease the load on the existing roof. This is described in more detail hereunder:

The roof structure in the area of the turret has not been reinforced with any new structural timber. An inspection of the roof void was done in July 2013 by myself and Ryan of Ryan's Joinery. Access was gained from below by means of a long ladder. This confirmed that water had been penetrating the roof for a long time with a substantial amount of wet / dry rot being present in the structural timber members surrounding the turret. This may not have been directly apparent to Derek Osborne when he conducted an independent survey in December of 2013 when access was gained to the roof from above only. Our response was therefore the most appropriate at the time, and in our opinion the most suitable without incurring far greater costs to the client.

After the July 2013 inspection work on the turret was put on hold for the next 2 months since it did not fall into the critical path of the project as a whole. By the beginning of October 2013 it had become apparent that all our contingency amounts would have to be channelled into extensive roof structure and waterproofing repairs on the station main building.

The decision to proceed with the turret in fibreglass was therefore taken out of necessity in an attempt to contain overall costs of the project and ensure the safety of all making use of this facility. In our informed opinion the replacement of the turret as per original specification would have had a knock on effect with the following effects:

- The roof surrounding the turret would have to be partially stripped of roof tiles and underlay.
- Specialists consultants would have to be employed to design structural repairs to the roof.
- The roof structure inside the ceiling void would have to receive structural timber repairs.
- Gaining access to the roof void and surrounding timber structure would require partial stripping of the ceilings below the affected area.

As with any restoration work the above points only form the general outline of requirements. Had this work proceeded in this manner there is no way of telling what other problems would have been encountered which could add considerable complexity to the restoration of the turret.

### **Current Status**

As mentioned in the financial summary above we have exhausted our contingencies and funds that were available at the beginning of the project. These expenses have largely been channelled into extensive additional restoration work in order to preserve the Station building for future generations. Our client has also made it quiet clear that no further funding will be forthcoming from his side to fund the restoration of the turret into its original form at this stage.

This leaves us in the predicament that were Amafa to insist and enforce that the turret be returned into its original form, the consultants responsible for coordinating on site operations, namely Lindsay Napier (Amafa Consultant), Thorsten Wanoth (Architect) and Ridwaan Khan (Project Manager) would be asked to finance the costs thereof. This is likely to be in the region of R120,000.00 or possibly more.

### **Fibreglass as a Construction Material**

As far as the longevity of fibreglass structures is concerned I would like to draw your attention to the fact that fibreglass has been used in the boatbuilding industries since the early 1950's.

In a severely hostile environment such as a marine application; fibreglass has proven to be a suitable material that; provided it has been properly constructed in the first place; has the ability to last many decades.

Some of the boats and yachts built in the 1950's are still sailing today.

Together with advances in fibreglass technologies made over the last decades, including the incorporation of UV resistant gel coats it is our opinion that fibreglass as a material for our turret may well be a suitable replacement in the given context and understanding the constraints the consultants faced in implementing the necessary.

The fibreglass turret is well constructed and light in weight. It has been manufactured by a reputable company that has many years experience in the creation of fibreglass components using modern manufacturing techniques using the latest advanced materials.

I have attached some general information about fibreglass to this letter outlining a few of the properties of fibreglass. Please note that this document is of particular relevance to a marine environment which poses far greater demands on fibreglass to perform in its application, but nevertheless this will give you valid information regarding fibreglass long term properties and performance.

**Way Forwards**

We assure you that we are looking for a solution to this issue which is acceptable to all parties concerned and welcome further opportunity to present you with valid technical literature outlining the suitability of our given choice of material and the methodology used and as to why we arrived at this solution.

Furthermore I would like to point out that the other sheet lead covered turrets at the station have been previously painted and that this paint finish has weathered over the years. It is therefore understandable that our new fibreglass turret will look somewhat different to the other turrets. It may be a consideration therefore to paint the other turrets so that a uniform appearance may be achieved.

We look forward to your consideration in this regard and your favourable response.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'T. Wanoth', is written on a light-colored background. The signature is fluid and cursive.

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Thorsten Wanoth (Pr. Arch)

Attached: Boat\_Longevity. pdf