

Upgrading the ARC Biotechnology Platform's roof, Fasi boards, gutters and down pipes with Cool Surface Polymer Coating at the ARC, Onderstepoort Campus

1. Project Background

The ARC has decided to test the benefits of Cool Surfaces on the roof of one of the buildings. The ARC Biotechnology Platform building's (Building 38, aka Old Hospital Building, 100 Old Soutpan Road (M35)) roof consists of corrugated iron sheets, with wooden louvres at the top (Figure 1) for air movement and Fasi boards, gutters, and downpipes on the edges. The building has a **footprint** of $\pm 910\text{m}^2$ (Figure 2) – roof angles not taken into account. The roof, louvres, fasi boards, gutters and downpipes must all be prepared and covered with a Cool Surface polymer/coating to allow passive cooling prior to PV installation.



Figure 1. Biotechnology Platform building's roof, wooden louvres, gutters, downpipes and Fasi boards showing that will require cool surface prep and painting. All measurements to be confirmed by the suppliers

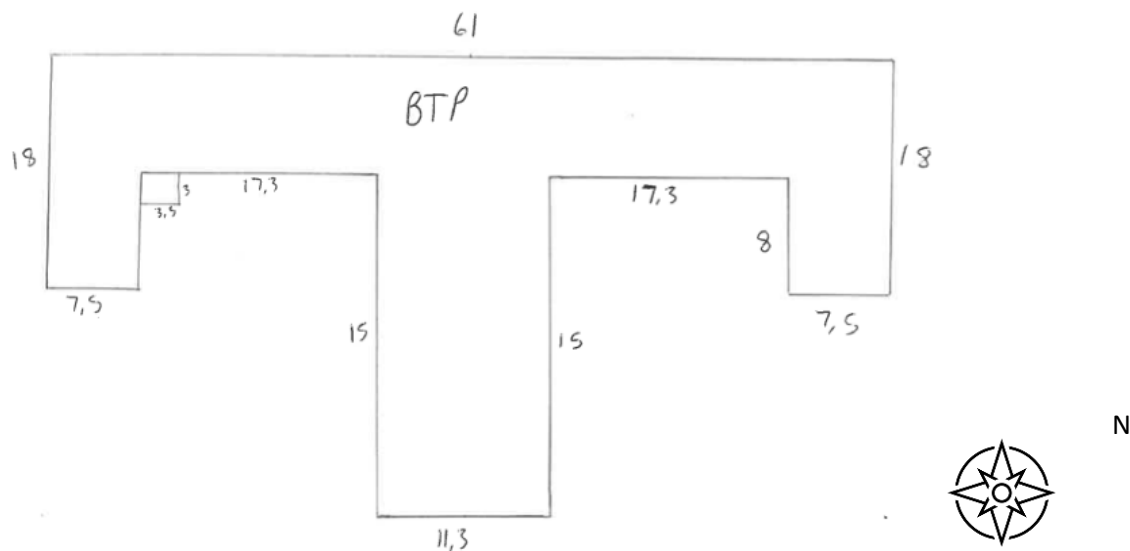


Figure 2. An estimated floorplan of the Biotechnology Platform Building (aka Building 38), ARC Onderstepoort Campus, 100 Old Soutpan Road. **Note: Roof measurements for bidders to confirm at mandatory site visit.**

2. Project Objectives

The key objectives of this project:

- Prepare the roof, wooden louvres, Fasi boards, gutters and down pipes appropriately, *repair any broken or leaking parts*, apply appropriate primer(s) and two coats (or as per recommendation) of cool surface infra-red product paint/polymer over these areas as specified below.
- The infra-red polymer/paint selected must decrease the demand/load on the energy systems and thus electricity and/or diesel generator use and associated costs.
- Increase Human Capacity Development (HCD) and knowledge base.
- Improving occupancy thermal comfort within the building.

3. Scope of work, including products supply, training and application

1. Sand all wooden louvers/air vents down to remove loose paint, dirt etc. Repair any broken parts, e.g. gutters, etc., replace all missing screws/fasteners on roof and seal with appropriate products. *All work must comply with surface preparation and water proofing using materials inline and processes that are required for the infra-red cool surface product used.* Ensure all leaks are sealed appropriately.
2. Sand down all Fasi boards, gutters, and downpipes of any loose paint and/or rust and seal with appropriate sealant and primer. Fasten any loose components with screws prior to painting.
3. Apply and prepare appropriately for approved and complaint primer(s) application, e.g. wood primer for all wooden surfaces, anti-rust primer to treat any rusted areas, etc. All work must comply with surface preparation and water proofing using materials inline and processes that are required for the infra-red cool surface product used.

4. Apply 2 coats of *an energy efficient* infra-red product, similar or equivalent to *EcoCote, TEPLO-HOL, Topps, Wilcote, Sandtex, etc.* to allow for passive cooling of the roof surfaces, including wooden louvres, roof surfaces, gutters, Fasi boards and down pipes, etc. Also apply on the overhanging ceiling boards on the outside of the building.
 - a. Manufacturer must provide written recommendations for optimal application of product.
 - b. Color of the roof to be in line with existing roof color, e.g. light pastel green, with approval by Facilities Manager, ARC Onderstepoort Campus prior to application.
Color, with its specific SRI value, to be provided in quotation for approval.
 - c. The paint dry depth thickness to be provided.
5. Make good on any work, and insure a leak-free product is delivered. *Note: The roof is not leaking now.*
6. Provide **at least a 10-year polymer and applicator warranty** on the paint and work performed.
7. Provide an **extra 20 liter of Paint/Polymer Coating for future use**
8. **All measurements are indicative and for suppliers to verify and measure** during their mandatory site visit prior to quote on this RFQ. The ARC will not be held liable for incorrect measurements.
9. Clear calculations and breakdown of Quantities: Costs of product to be priced per m² for primer (if required) and coating.
10. Facilities will provide onsite OHS standards required.

4. COMPULSORY BRIEFING

A compulsory Physical Site briefing will take place at the Biotechnology Platform Building, 100 Old Soutpan Road (M35), ARC Onderstepoort Site, Onderstepoort. **The compulsory site visit will be on the 6th March 2025@ 10:00am**

5. THE SPECIFICATIONS OF THE PROJECT

- a) Prepare all the surfaces appropriately by removing and applying new roof seals, etc. as stipulated above. Fix all broken parts, e.g. gutter, etc. and prepare for painting with for Cool surfacing of roof and associated surfaces, e.g. louvres, outside ceilings, Fasi boards, gutters, etc. Use full specifications as provided above.
- b) All associated hardware, personal protective equipment (PPE) and scaffolding must be supplied by the appointed contractor.
- c) The contractor must offer a 10-year guarantee on product performance, and at least 5 years leak free roof.

Compulsory Technical Requirements		Scoring Guidelines	
All minimum requirements met:		Yes	No
1. Supply SACSA/SABS/CRRC certified cool coating product. Or SACSA member that can be tracked to product database. Current membership to certification to be provided.			
2. Minimum SRI (Solar Radiance Index) of 0.75 three (3) years after application is required for the color (light/pastel green/olive, etc.) offered. Therefore, offers must include both the colour sample, e.g. in the green range, that will meet the specified SRI rating 3 years after applied, and confirm its SRI, for example: light olive pastel green of Cool surface X will have a SRI index of 0.8 three years after application (with certificate).			
3. CIDB 1 GB			
4. Two (2) Reference Letters (on companies' letterheads) for previous work done/similar project, i.e. for application of cool surface paint, above 100k each.			
5. Provide the methodology of cool surface technology application you will be working. Includes the final dry depth thickness, if provided, to guarantee the SRI index value provided in item 2 above.			
6. Provide a detailed quotation with the following line items: 1. Preparation of surfaces for water proofing and painting by fixing all broken parts, e.g. gutter, etc. 2. Application of new waterproofing. Please note: the roof is not leaking at present 3. Preparing of the surfaces with all the correct primers after water proofing 4. Application of 2 coats (or as needed) to achieve the correct SRI index of 0.75 or better for the color in the green spectrum offered. <i>Please ensure you have calculated the roof areas correctly, i.e. taking the pitch into account.</i> 5. A contingency of 5% - only released for unforeseen problems by approval of the Facilities and BTP management. 6. Extra 20 liter of Paint/Polymer Coating for Future Use			

7. Project Schedule

The project shall be completed within 2 months from the awarding date of the RFQ (i.e. PO number). Any deviations from this will need written motivation to the ARC Facilities Manager.