9.1 Material Selection

**Glazing CoolVue**
- Heat gain reduced by 50%
- Filters 99.5% UV Radiation
- Locally Manufactured

**Roof material Rheinzink**
- 90% recyclable
- Low Co2 Emissions in production
- No Toxic coating
- Natural material
- Low embodied energy

**Polycarbonate Multiwall**
- Energy efficient
- Filters 99.9% UV Radiation
- Locally Manufactured
- Heat gain reduced

**Insulation Thermocoustex**
- Energy efficient
- Acoustic and Thermal properties
- 100% recyclable
- Low embodied energy
- Locally Manufactured
Wall Material
Facebrick

- Manufacturing process creates jobs
- Locally Manufactured
- Long life cycle

Masonry construction
Recyclable Bricks

- Manufacturing process creates jobs
- Locally Manufactured
- Locally recycled

Wall Coating 1
Aqua Coat Paint

- No VOC Emissions
- Improved Thermal properties
- Non Toxic
- Manufactured Locally
- Resistant to weather

Wall Coating 1
In Situ Concrete

- Manufacturing process creates jobs
- Locally Manufactured
- Long life cycle
- Low embodied energy

Structure
Concrete

- Manufacturing process creates jobs
- Locally Manufactured
- Long life cycle
- Low embodied energy

Sunscreen
Recycled Sunscreen

- No VOC Emissions
- Improved Thermal properties
- Non Toxic
- Manufactured Locally
- Resistant to weather
9.2 Integrated building system

The building uses an integrated system in order to comply with sustainable design protocol. It uses structural, mechanical and electrical systems that integrate to facilitate sustainable use of energy, and minimizes cost.

**Air**
- Natural cross ventilation
- HVAC (Air supply and extraction)
- Ventilation chimneys
- Passive heating and cool

**Thermal Mass**
- Thick solid walls on the west elevation
- Auditorium utilizes these walls for acoustic purposes

**Natural Lighting**
- Atrium to bring in light
- Large spanning glazing
- Sufficient shading on the north, east and west elevations
- Light through roof defused

**Water**
- Storm water harvesting

**Electricity**
- Photovoltaic cells
Integrated system

Scale 1: 250
ROOF DETAIL

Scale 1:20
STAIR DETAIL

STAIRCASE
300mm TREADS
170mm RISERS
1000mm HIGH STAINLESS STEEL BALUSTRADE

BALUSTRADE TO BE 1000mm ABOVE BALCONY FFL

APPROVED EXTERNAL TILING OF
DERBIGUM SP TORCHFUSED
WATERPROOFING SCREED LAID
FALLS TO FULBORE OUTLETS

30mm SCREED

255mm THICK REINFORCED
CONCRETE IN SITU FLOOR SLAB
ENGINEERS DETAILS AND
SPECIFICATIONS

POST TO DETAIL IF REQUIRED BY
STRUCTURAL ENGINEER

PAVING
30mm SCREED

Scale 1:50
BALUSTRADE DETAIL

Scale 1:20

STAINLESS STEEL HANDRAIL

38 X 25mm POST

16mmØ STAINLESS STEEL HORIZONTAL BALUSTER RAILS

CONCRETE INFILL, VITRO TILE FINISH TO MATCH BALCONY (SANDSTONE BROWN VSS3030)

6mm STEEL PATE

200X200mm STEEL SQUARE HOLLOW SECTION

BALUSTRADE FIXING DETAIL

Scale 1:10