Chapter 9

CONCLUSION

TERMINATION
“...when you build a thing you cannot merely build that thing in isolation, but must also repair the world around it, and within it, so that the larger world at that one place becomes more coherent, and more whole; and the thing which you make takes its place in the web of nature, as you make it.”

- Christopher Alexander, 1977
FINAL MODEL
FINAL REVIEW
'GROWING' BUILDING

MASS IN PERPETUITY
I hope that this study will encourage the reader to always remain cognisant of changing times, to never accept the patterns of the world around them and always keep on questioning the norm.
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WATER TANK CALCULATIONS:

Annual rainfall = 650mm
Total runoff surface area = 17360m²

WATER USAGE:

IRRIGATION:
TOTAL IRRIGATION SURFACE AREA = 918m²
918m² x 5mm irrigation per day = 4,59m³ water
4,59m³ x twenty days per month (dry season) = 92m³ water per month
4,59m³ x fifteen days per month (wet season) = 69m³ water per month

FLUSHING OF TOILETS (Total water usage per month):
(See Note 1 for occupancy & usage calculations per building)

Auditorium: 3,072m³
Restaurant (in new building): 11,440m³
Learning spaces: 19,760m³
Historic 1896 building (Co-working office & restaurant): 25,272m³
Production House: 7,040m³
Offices in N-E building: 20,988m³

Total water usage for toilets per month on block (designated site are) = 87,572m³

TOTAL WATER USAGE PER MONTH (dry season) = 92m³ + 88m³ = 180m³ + 499,1m³ (western side) = 679,1m³
TOTAL WATER USAGE PER MONTH (wet season) = 69m³ + 88m³ = 157m³ + 482,5m³ (western side) = 639,5m³

679,1m³ x 4 months during dry season = 2716,4m³
2716,4m³ - (29mm rainfall during driest months (May, June, July & Aug) over surface area (17360m²) = 503,4m³)
Storage tank will therefore need to store 2213m³ water

TOTAL VOLUME OF WATER STORAGE TANK = 2213m³
[Dimensions of tank = 5,2m x 15,7m x 26,8m]

TO FILL UP THE TANK WILL TAKE 127,5mm rainfall over surface area of 17360m².

DURING SUMMER:
Dec (80mm x 17360m²) + Jan (80mm x 17360m²) + Feb (60mm x 17360m²)
= 3819,2m³ rain water collected
3819,2m³ - (usage of 157m³ x 3 months during wet season + 720m³ volume of tank)
= SURPLUS of 300m³ water during three peak rainfall months