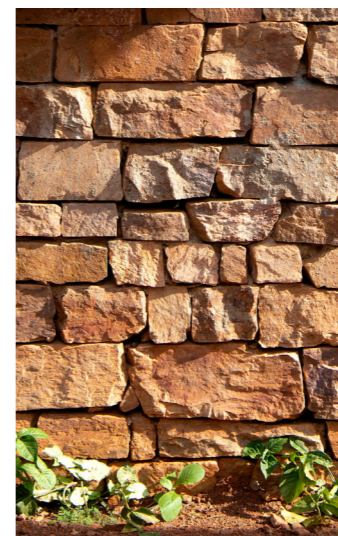



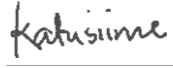



# Green Vocational College Concept - Phase 1

| Issued | 20-07-2023



# Green Vocational College Concept - Phase 1

<b>PROJECT NO.</b>	23120	
<b>CLIENT</b>	Africa Rise e.V. and Education Development Initiative	
<b>DOCUMENT TITLE</b>	Masterplan	
<b>REVISION</b>	01	
<b>FILE LOCATION</b>	Z:\23120 Green Vocational School\1 Design Development\3 Concept\Phase 1 Brochure	
<b>DATE</b>	20-07-2023	
<b>ORIGINATED BY</b>	Felix Holland Principal Architect 	Morgane Charron Graduate Architect 
<b>CHECKED BY</b>	Randi Karangizi Graduate Architect 	
<b>REVIEWED BY</b>	Moreen Katusiime Senior Architect 	
<b>APPROVED BY</b>	Felix Holland Principal Architect 	

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**Introduction**

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**Executive summary**

This brochure summarises Design Stage 2 and 3 (Concept and Developed Design) of Phase 1 of the proposed Green Vocational College project. This follows the completion of the masterplanning process (Stage 1).

**Architecture**

Architecturally, the conceptual design follows the initial thoughts laid out in the masterplan document which suggested the construction of large modular covered spaces fitted in between repurposed shipping containers.

The main aspect of the project circles around the idea of a temporary set up for this Phase until completion of the rest of the school. Some of the functions would then vacate and shift to the new building additions.

The proposal also accounts for temporary simple wash-rooms.

**Cost estimate**

At this stage, we are still confident with the cost previously communicated for Phase 1, which is in the region of \$480,000.

This includes contractor's preliminaries, client contingency and VAT, but excludes statutory and professional design and supervision fees.

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Concept - Phase 1  
Architecture



### Phase 1 Site Plan

As described in the previously submitted Masterplan, Phase 1 is mostly restricted to the construction of the 'container village', which will later be occupied by the workshops.

All spaces required for the running of the school will be temporarily arranged in this section based on the principle of modularity and flexibility.

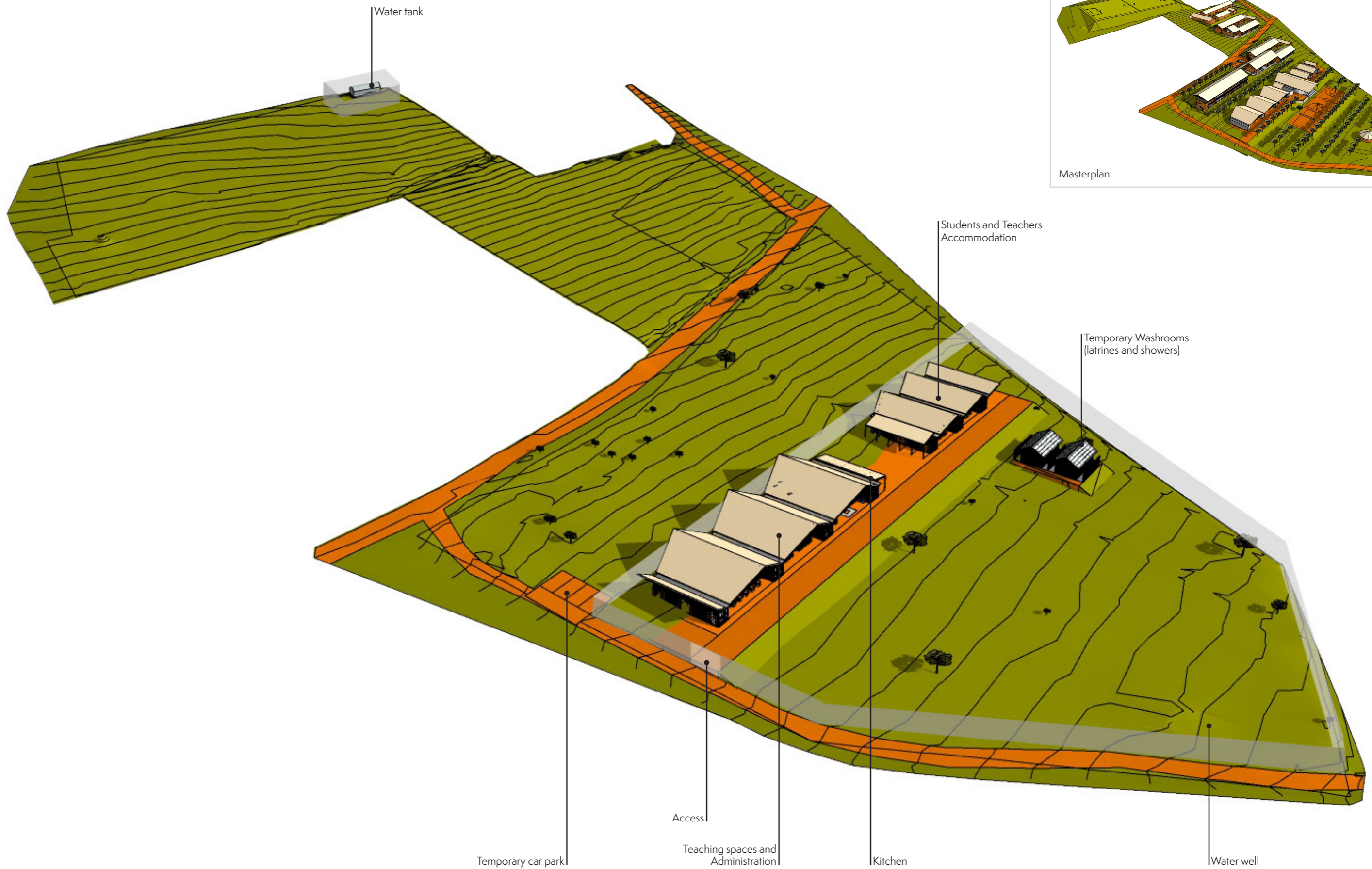
Temporary structures would also be erected, like the Washroom blocks and 2 roofs by the kitchen and teachers rooms.



Masterplan







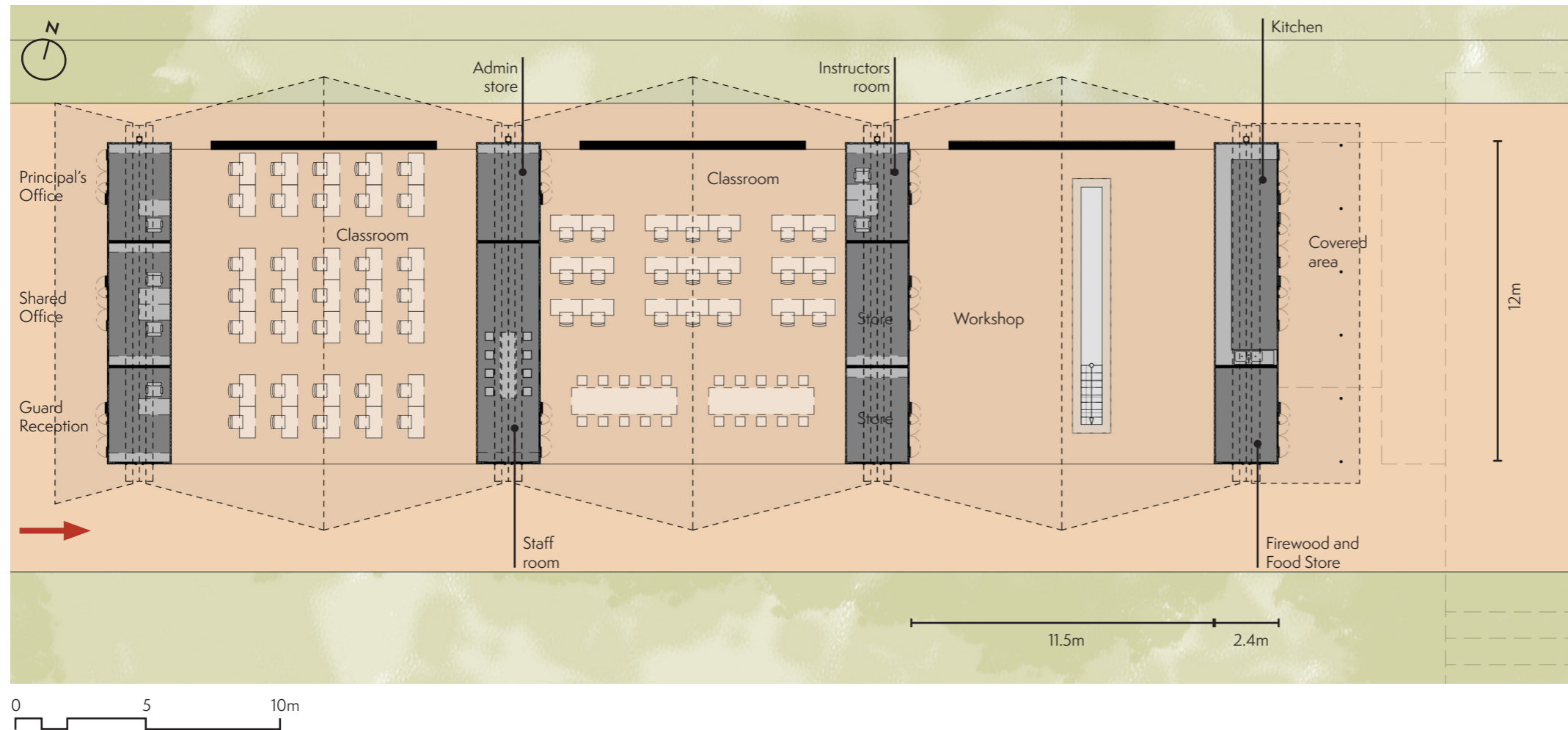
Bird-eye view





View of the Teaching spaces and Administration





### Teaching spaces and Administration

We have proposed for the Administration and other Logistics spaces to all be fitted into 3 repurposed shipping containers :

- ▶ the offices and reception/guard room in the first container as you enter the Phase 1 compound;
- ▶ a store and the staff room in the second one;
- ▶ the kitchen and attached store in the last one.

Note the kitchen for Phase 1 is only half of the complete setting. We have then designed a temporary lean-to roof to provide extra covered external space for cooking and washing.

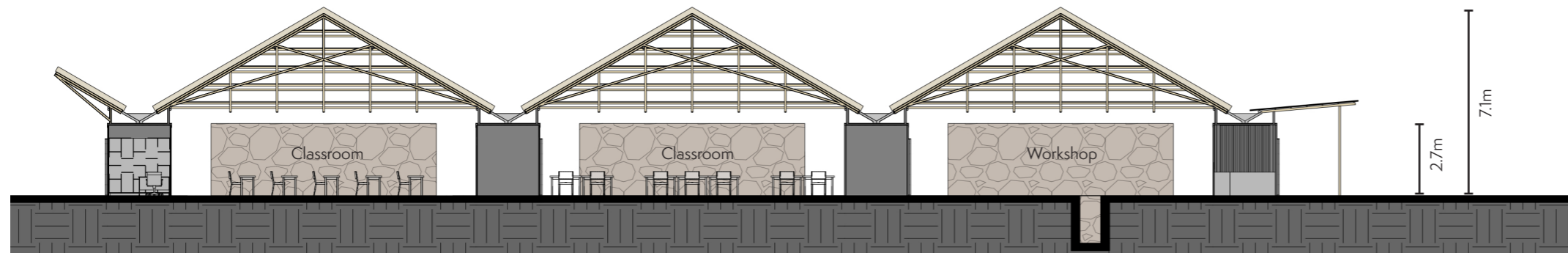
A fourth container is proposed to accommodate the instructors room and 2 stores for the workshops.

The 3 large spaces created in between the containers will be covered by a bamboo roof, and will host the temporary setting for Teaching spaces, such as classrooms and workshops. Each is thought as a modular free space of about 135 m<sup>2</sup>, allowing different layouts adapted to frontal teaching, group workshops and others.

The 'rear' (side facing up-hill) will be partially closed by a free-standing stone wall, while the 'front' will be fully opened and could expand onto the delivery driveway.

All containers are subject to the creation of openings (doors, windows and vents) to suit the rooms needs and to allow good cross ventilation. Some partition walls are also created inside using a light timber frame and plywood finish.

Note these alterations are made in a durable way so they are adequate for both Phase 1 and Phase 2 layouts.



### Sections

There are 3 large roofs, spanning circa 12m from container to container, made of bamboo scissor trusses, papyrus reeds mats ceiling, and bamboo shingles covering the galvanized sheets.

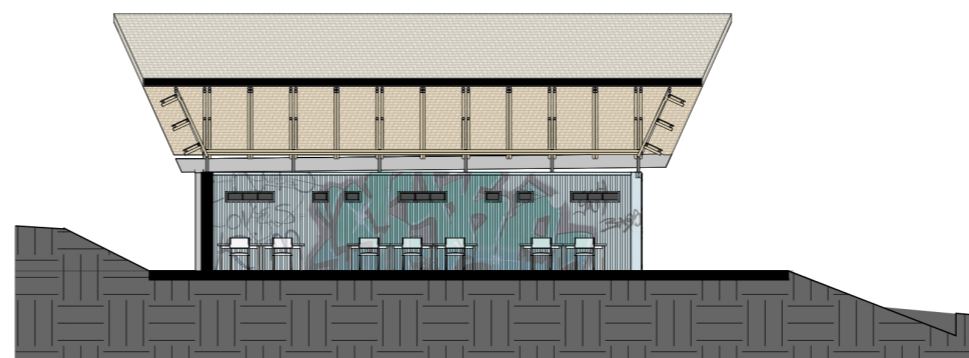
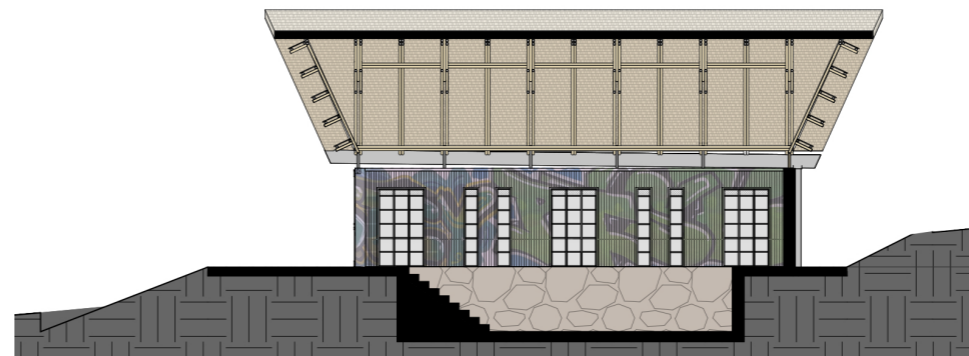
The gable ends are leaning forward to provide extra rain protection and are partially closed by wide louvres, composed of translucent corrugated sheets and sun-filtering screens (spaced out bamboo sticks) to not lose daylight.

The last containers also require protection and is fitted with an additional half roof that seems to be floating over it.

All rainwater is collected into massive galvanised steel gutters hovering over the containers and brought to sizable PVC downpipes at the rear end.

These 3 main spaces are proposed to have a stabilized murrum floor, with one of them being completed by an inspection pit built with stone retaining walls.

To avoid any steps between spaces, the containers are slightly recessed into the ground, laying on a strip of gravels and concrete pads.







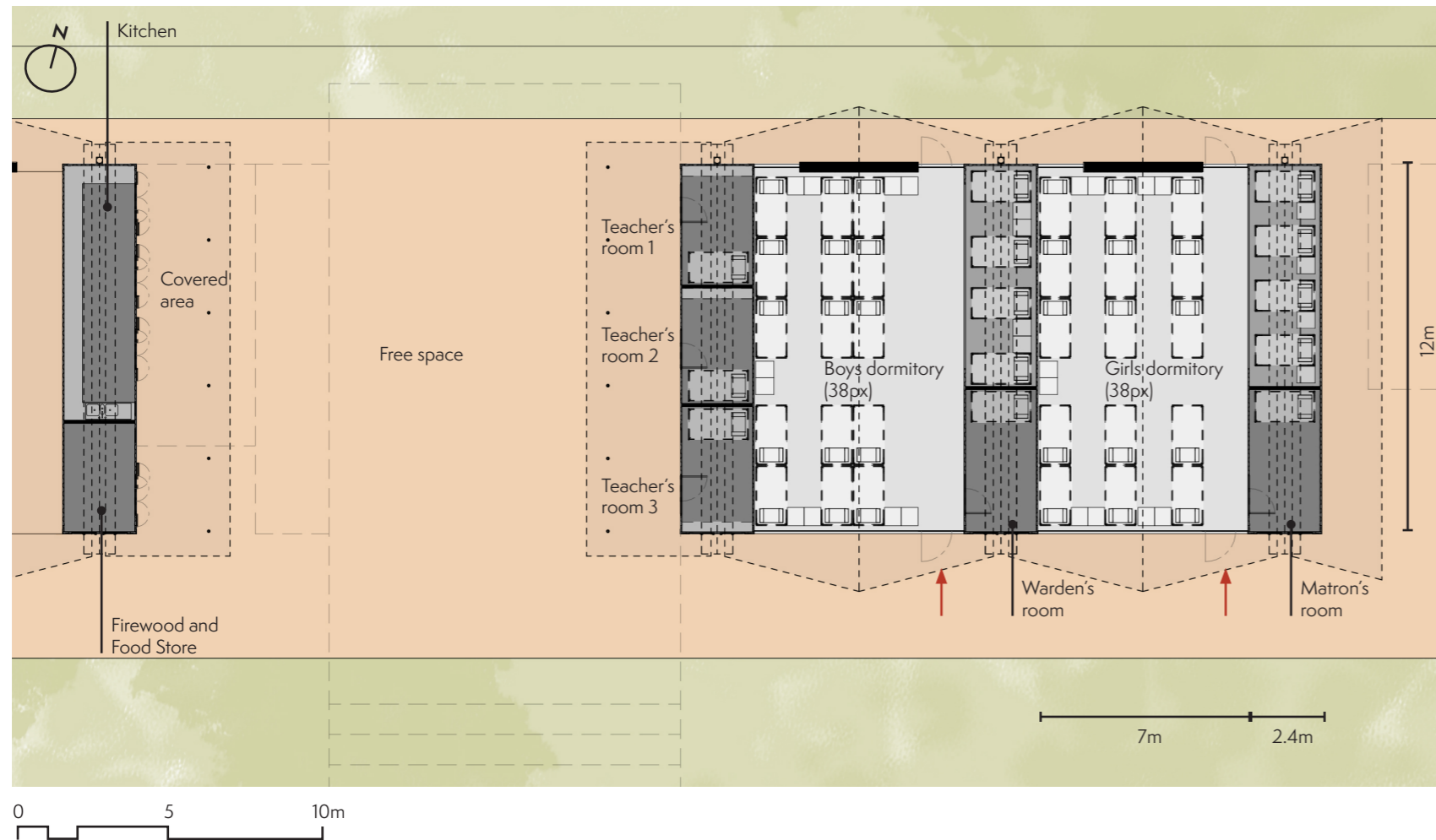
View of the Teaching spaces and Administration





View out from the Workshop





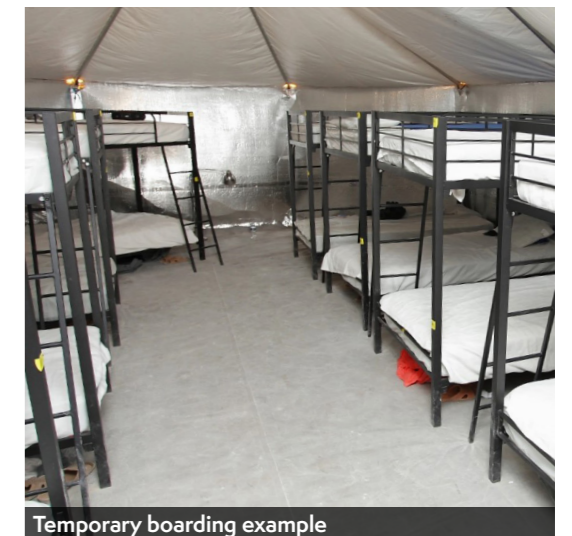
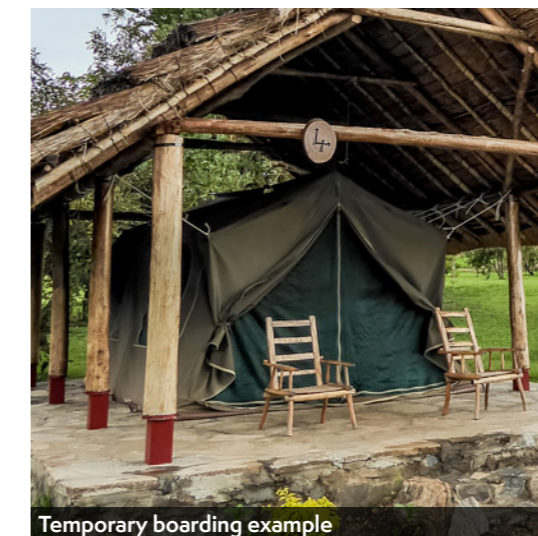
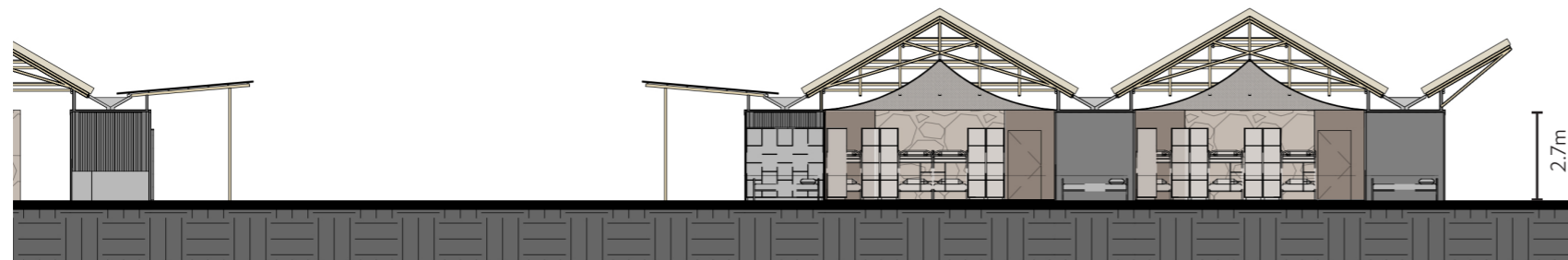
### Accommodation

The accommodation 'wing' to the East, is separated by a large uncovered free space, where the future Multipurpose Hall would be.

It is constituted of successive roofs over 3 repurposed shipping containers, with the first one hosting 3 teachers rooms, each of about 9 m<sup>2</sup>. Similarly to the kitchen across, those rooms also benefit from a temporary shade.

Both student accommodation are suitable for 38 students in bunk beds and are developed under one large roof and one container with a private room for the supervisor. Note the supervisor's access is through the dormitory.

The open space below the roof is closed off by temporary partitions made of canvas fabric fixed onto a timber frame, and a ceiling made of the same fabric is suspended below the roof structure. We shall provide 2 solid doors on either end of the space, as well as high netting for ventilation.





### Temporary Washrooms

Given the urgency of Phase 1, our design does not provide for bio-toilets nor biodigester, but rather a temporary solution at a location that won't interfere with the future developments.

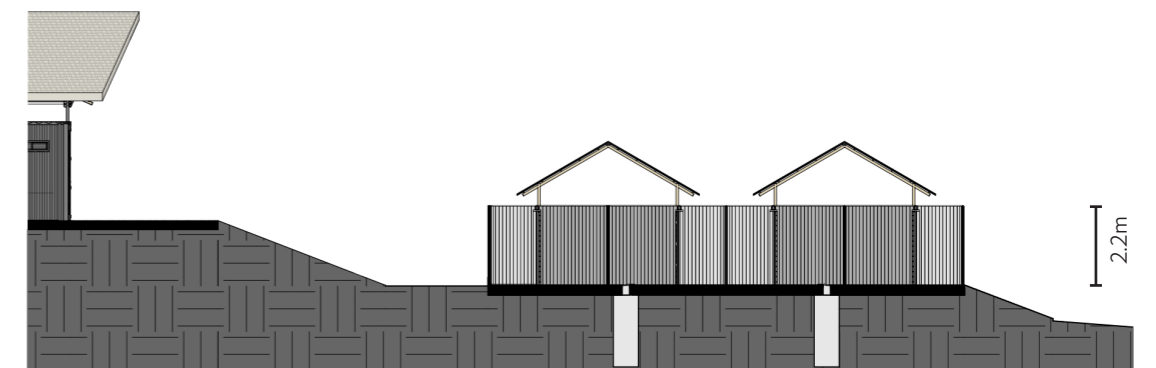
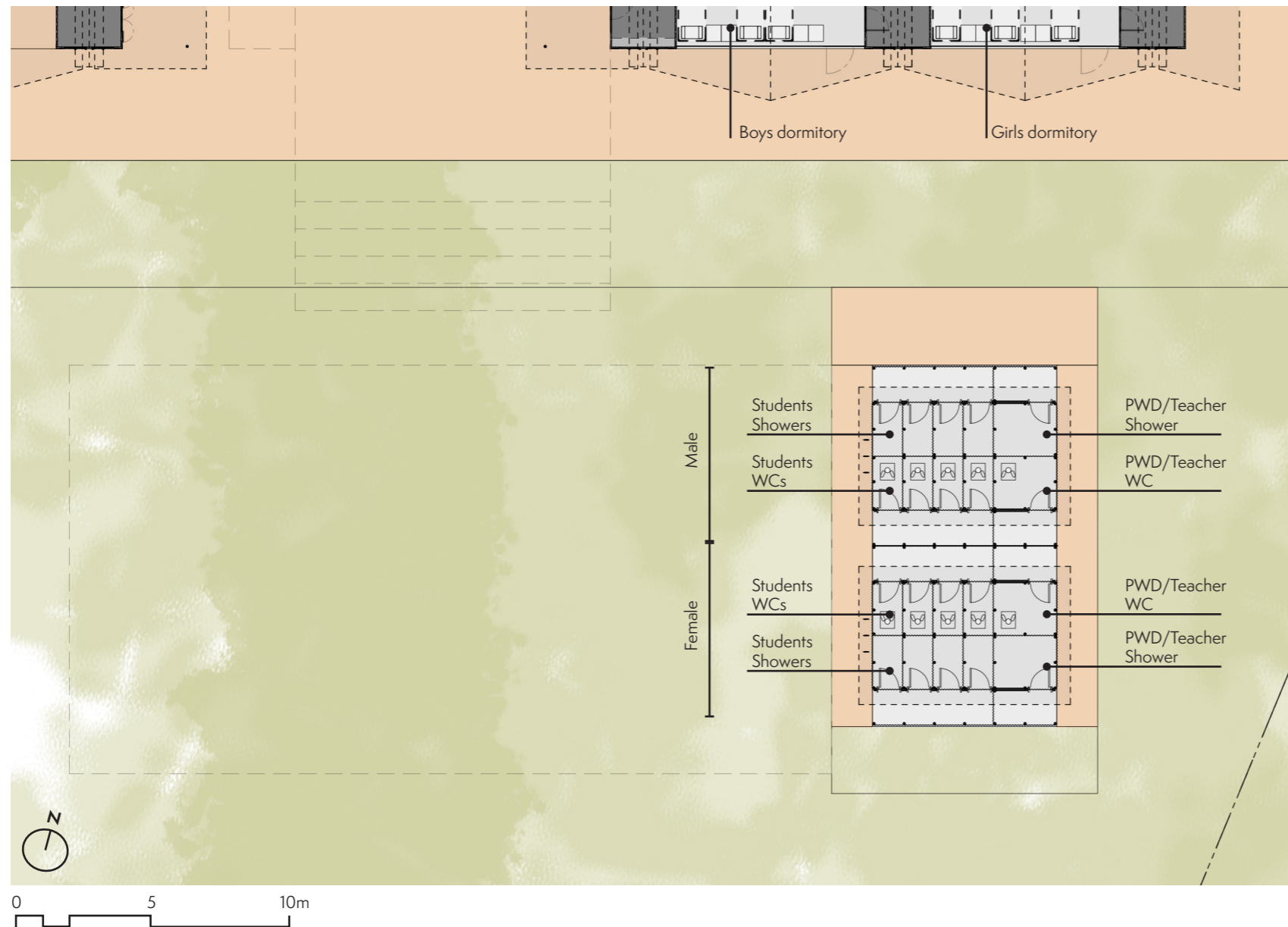
This consists in building 2 washroom blocks, male and female. Each block would have 4 latrines and 4 bucket showers cubicles, as well as a teachers and Persons with

Disabilities (PWD) wing, accessed from the back, with 1 toilet and 1 shower. Outdoor taps would be provided at the walkway.

Generally the construction is proposed as a concrete floor, with precast concrete squat pans for the latrines which would be re-used in the bio-toilets. The walls are designed as eucalyptus gum poles and cladding of vertical corrugated steel

sheets. The roof would be using the same language with eucalyptus gum poles and corrugated roof-sheets.

A ramped access would have to be provided from the wide free space of the future MPH.



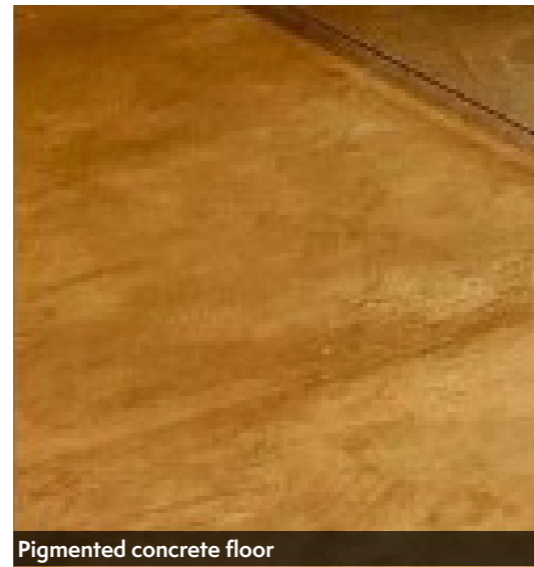


### Material palette

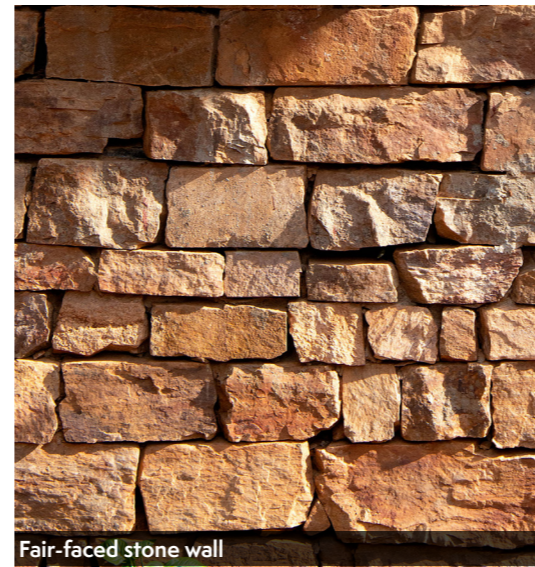
Our proposal relies on the use of natural and local materials with a long life span.

That would be translated into a earthy scheme, with pigmented concrete floor, murrum ground and stone walls; there will be a very strong presence of bamboo in the roof structure and covering, completed by papyrus reeds ceiling.

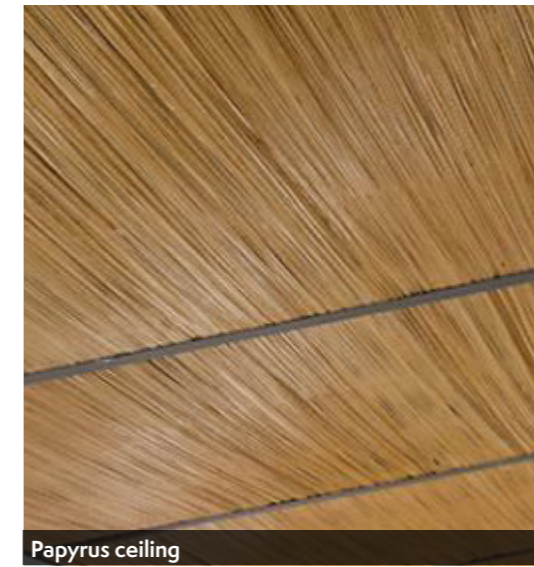
Other elements will be incorporated as well, such as glazed doors and windows in steel frames, graffiti-ed containers, canvas fabric and steel corrugated sheets for the temporary structures.



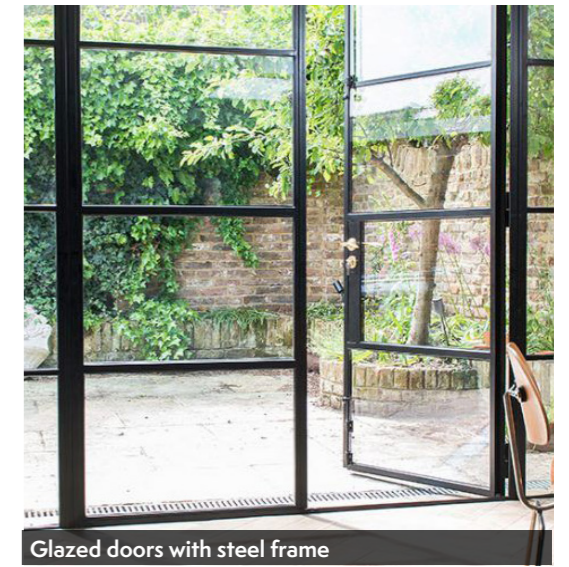
Pigmented concrete floor



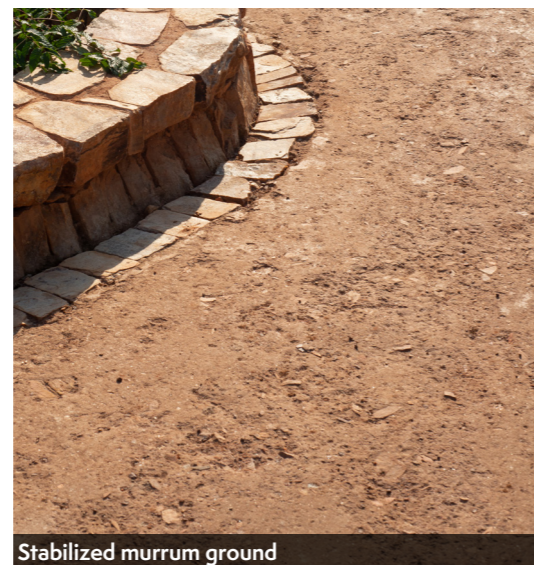
Fair-faced stone wall



Papyrus ceiling



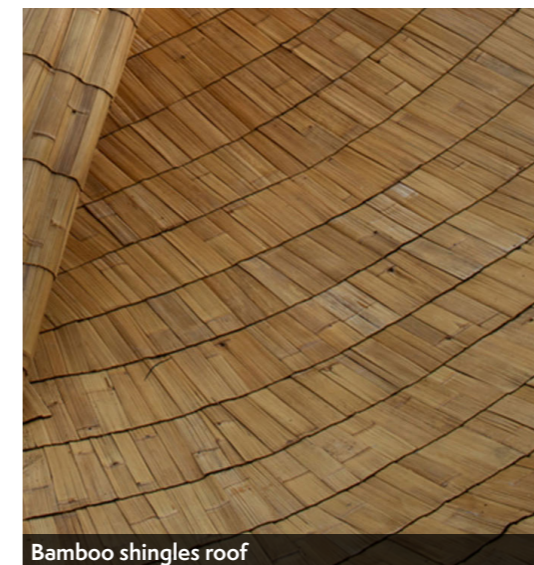
Glazed doors with steel frame



Stabilized murrum ground



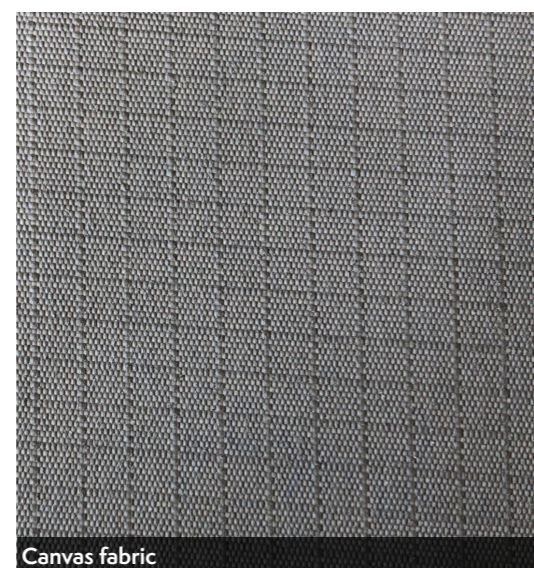
Corrugated sheets



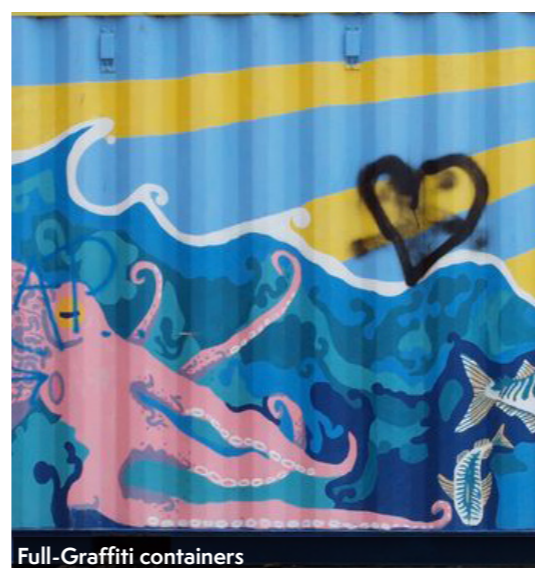
Bamboo shingles roof



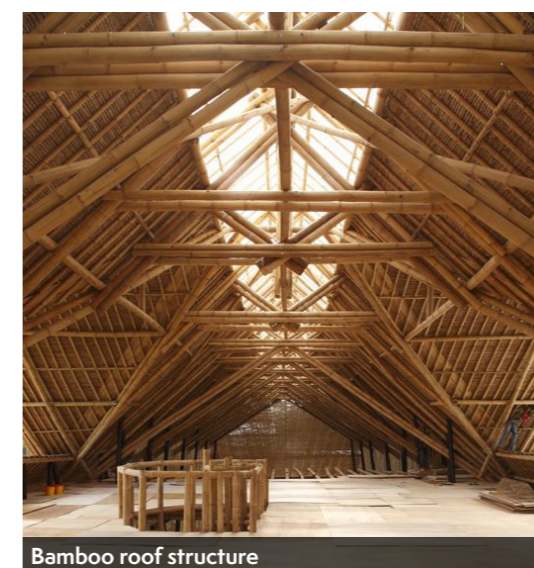
Glass louvres windows



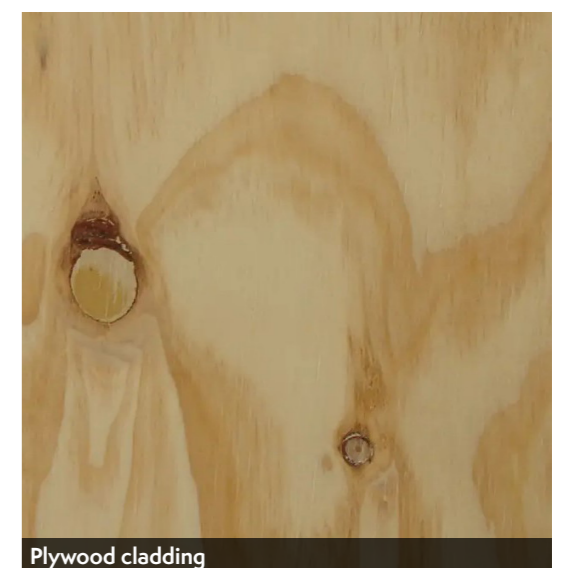
Canvas fabric



Full-Graffiti containers



Bamboo roof structure



Plywood cladding

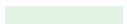




## Security

We are proposing for Phase 1 to rely on a chain link fence that would en-globe the buildings described previously, as well as the bottom of the site where the school farm would be.

The up-hill side of the 'compound' created would be closed temporarily with either chain link or hoarding. It would then be removed once the rest of the school is completed.

We also recommended to build a fence around the gravity tank at the top of the site.

-  Light security
-  Temporary hoarding
-  Green fence + Chain link



## Architecture

## Area Schedule

In total, Phase 1 represents a gross external floor area of ca. 890m<sup>2</sup> (25% of the total areas).

Room programme	From masterplan	From design - Phase 1	Room programme	From masterplan	From design - Phase 1
<b>Administration Block</b>	(gross)		<b>Student Accommodation, Boys (100px)</b>		
Reception/secretary/waiting	1 no. x 15 m2 = 15 m2		Dormitories (24px)	4 no. x 72 m2 = 288 m2	1 no. x 98 m2 = 98 m2
Principal's office	1 no. x 16 m2 = 16 m2	1 no. x 9 m2 = 9 m2	Dormitories extension (4px)	1 no. x 14 m2 = 14 m2	
Offices	2 no. x 11 m2 = 22 m2	1 no. x 11 m2 = 11 m2	Warden room	1 no. x 34 m2 = 34 m2	1 no. x 11 m2 = 11 m2
Staff room	1 no. x 23 m2 = 23 m2	1 no. x 19 m2 = 19 m2	Common area	1 no. x 60 m2 = 60 m2	
Archive store + Power room	1 no. x 9 m2 = 9 m2	1 no. x 9 m2 = 9 m2	Stairs/Circulation	1 no. x 25 m2 = 25 m2	
Library	1 no. x 23 m2 = 23 m2		<b>Sub total: Student Accommodation, Boys</b>	<b>= 421 m2</b>	<b>= 109 m2</b>
Sick Bay	1 no. x 13 m2 = 13 m2				
Covered walkway	1 no. x 59 m2 = 59 m2		<b>Student Accommodation, Girls (80px)</b>		
<b>Sub total: Administration Block</b>	<b>= 179 m2</b>	<b>= 48 m2</b>	Dormitories (24px)	2 no. x 72 m2 = 144 m2	1 no. x 98 m2 = 98 m2
			Dormitories (16px)	2 no. x 48 m2 = 96 m2	
<b>Classroom Block(s)</b>			Dormitories extension (4px)	1 no. x 14 m2 = 14 m2	
Classrooms (for 30 students)	4 no. x 56 m2 = 224 m2	2 no. x 138 m2 = 276 m2	Matron room	1 no. x 34 m2 = 34 m2	1 no. x 11 m2 = 11 m2
Art & Design studio	1 no. x 68 m2 = 68 m2		Common area	1 no. x 60 m2 = 60 m2	
Covered outdoor teaching space	1 no. x 54 m2 = 54 m2		<b>Sub total: Student Accommodation, Girls</b>	<b>= 349 m2</b>	<b>= 109 m2</b>
IT Lab (for 20 students)	1 no. x 45 m2 = 45 m2				
Covered walkway/circulation	1 no. x 59 m2 = 59 m2		<b>Teacher Accommodation (10px)</b>		
<b>Sub total: Classroom Block(s)</b>	<b>= 449 m2</b>	<b>= 276 m2</b>	Junior double units	4 no. x 60 m2 = 240 m2	3 no. x 9 m2 = 27 m2
			Senior double units	1 no. x 100 m2 = 100 m2	
<b>Workshops</b>			<b>Sub total: Teacher Accommodation</b>	<b>= 340 m2</b>	<b>= 27 m2</b>
Hairdressing	1 no. x 68 m2 = 68 m2				
Tailoring + Knitting	1 no. x 135 m2 = 135 m2		<b>Guest Bungalow (6px)</b>		
Electrics	1 no. x 110 m2 = 110 m2		Common room with kitchen	1 no. x 35 m2 = 35 m2	
Plumbing	1 no. x 110 m2 = 110 m2		Bedrooms	3 no. x 14 m2 = 42 m2	
Mechanics (cars + bikes)	1 no. x 164 m2 = 164 m2	1 no. x 166 m2 = 166 m2	Bathroom	1 no. x 6 m2 = 6 m2	
Construction (container + shade)	1 no. x 164 m2 = 164 m2		Veranda	1 no. x 20 m2 = 20 m2	
Carpentry (container + shade)	1 no. x 164 m2 = 164 m2		<b>Sub total: Guest Bungalow</b>	<b>= 103 m2</b>	<b>= 0 m2</b>
<b>Sub total: Workshops</b>	<b>= 915 m2</b>	<b>= 166 m2</b>			
			<b>Ancillary Buildings</b>		
<b>Meditation/Prayer Room</b>			Guardhouse (single unit with two rooms)	1 no. x 14 m2 = 14 m2	1 no. x 9 m2 = 9 m2
Circular meditation space	1 no. x 30 m2 = 30 m2		Tool store (near agricultural area)	1 no. x 10 m2 = 10 m2	
<b>Sub total: Meditation/Prayer Room</b>	<b>= 30 m2</b>	<b>= 0 m2</b>	Canteen/Kiosk	1 no. x 9.6 m2 = 10 m2	
			<b>Sub total: Guardhouse</b>	<b>= 34 m2</b>	<b>= 9 m2</b>
<b>Multipurpose Hall</b>					
Hall for 200px (covered external)	1 no. x 237 m2 = 237 m2		<b>Bio-Toilets</b>		
Store	1 no. x 27 m2 = 27 m2		Student & teacher toilet block (300px)	1 no. x 55 m2 = 55 m2	
<b>Sub total: Multipurpose Hall</b>	<b>= 264 m2</b>	<b>= 0 m2</b>	Admin & Visitor toilet block (10px)		
			TQs' toilet and shower block (10px)	1 no. x 46 m2 = 46 m2	
<b>School Kitchen</b>			Boys' toilet and shower block (100px)	1 no. x 73 m2 = 73 m2	1 no. x 43 m2 = 43 m2
Cooking and preparation space	1 no. x 50 m2 = 40 m2	1 no. x 20 m2 = 40 m2	Girls' toilet and shower block (80px)	1 no. x 73 m2 = 73 m2	1 no. x 43 m2 = 43 m2
Dishwashing area (covered external)	1 no. x 16 m2 = 16 m2		<b>Sub total: Bio-toilets</b>	<b>= 247 m2</b>	<b>= 86 m2</b>
Servery (covered external)	1 no. x 18 m2 = 18 m2				
Food store	1 no. x 9.2 m2 = 9 m2	1 no. x 8 m2 = 8 m2	<b>Sports grounds</b>		
Firewood store	1 no. x 9.2 m2 = 9 m2		Large sports field (football)		
<b>Sub total: School Kitchen</b>	<b>= 93 m2</b>	<b>= 48 m2</b>	Net-ball field	1 no.	
			Basketball field	1 no.	
			<b>Total net internal area</b>		<b>878 m2</b>
			Grossing factor		
			<b>Total gross external area</b>	<b>3,423 m2</b>	<b>890 m2</b>

nb : the green sections are what you intended to have operational in January 2024 (Phase 1)

Concept - Phase 1  
Cost plan

## PROPOSED CONSTRUCTION OF GREEN VOCATIONAL COLLEGE, BUWAMA

### **COST PLAN – Ver 1.0**

**Date:** 24<sup>th</sup> July 2023

**Prepared by:**

Dudley Kasibante and Partners Ltd,  
2<sup>nd</sup> Floor, Carol House, Plot 40, Bombo Road,  
P.O. Box 8963, Kampala.  
Tel: +256 414 345025.  
Email: [dkp@dudleykasibante.co.ug](mailto:dkp@dudleykasibante.co.ug).  
Web: [www.dudleykasibante.co.ug](http://www.dudleykasibante.co.ug).

#### **1.0 Introduction**

1.1 This submission presents our Cost Plan Estimate for the Proposed Green Vocational College Buwama – Phase 1 works only.

1.2 The overall project essentially comprises the following: -

- a) Classrooms
- b) Workshops
- c) Prayer Room
- d) Multi-purpose Hall;
- e) School Kitchen;
- f) Student, Teacher and Guest Accommodation;
- g) Bio-toilets;
- h) Ancillary Buildings including guardhouse, and canteen.
- i) External works including

#### **2.0 Phasing Plan**

2.1 It is anticipated that the college will be developed in phases as indicated below:-

- a) Phase 1 comprising the “Container Village” plus essential external works. This generally includes workshop space, temporary office space as well as teachers and student accommodation. **Phase 1 scope only forms the basis for this submission.**
- b) Phase 2 comprising the following:-
  - i. 2-storey teaching block and Administration Block
  - ii. Half of each of the boys and girls hostel blocks plus common room and matron’s apartment;
  - iii. Multi-purpose Hall with Kitchen;
  - iv. Student toilets/bathrooms
  - v. All external works
- c) Phase 3 comprising the following:-
  - i. Teachers quarters
  - ii. Teacher toilets/bathrooms
  - iii. Guest accommodation
  - iv. The other half of each of the hostels
  - v. Chapel

### 3.0 Provisions

3.1 Our cost plan is based on the following provisions:-

a) Currency

The estimate has been presented in Unites States Dollars. It is anticipated that the currency of the construction contract will be maintained as United States Dollars.

b) Foundations

For phase 1 buildings, concrete pad stones have been provided. Furthermore, a concrete bed has been provided for the teacher and student accommodation.

c) Walling and associated finishes.

For Phase 1 buildings, the structure is generally second-hand shipping containers.

d) Roof Construction and Coverings

Provision has been made for treated bamboo scissor truss roof structure and bamboo shingles on bamboo strips on top of gauge 32 galvanized steel sheets. Galvanized steel gutters and uPVC downpipes have also been provided.

e) Windows and Doors

Allowance has been made for mild steel glazed windows and doors.

f) Internal finishes

Internal floors generally comprise steel floated concrete floors. Internal ceiling finishes generally comprise a papyrus ceiling.

g) External works.

The preliminary budget estimate assumes very limited external works generally comprising bulk excavation and disposal, chainlink fencing, driveway and car park, limited stormwater drainage, site services like rainwater collection, refurbishment to water storage, etc.

h) Estimate Validity.

It is anticipated that the estimate will remain valid for a period of approximately six (6) months.

### 4.0 Methodology

4.1 This cost plan has been based on measurements drawn from the architectural drawings.

4.2 Pricing is based on current market prices as well as similar completed projects.

4.3 The estimate is presented in section 5.0 below.

### 5.0 Cost Plan Estimate

#### 5.1 Presentation of the Estimate.

5.1.1 Table 1 below presents our summary estimate for Phase 1.

A	Combined Phase 1 Only	
S/No.	Description	Amount (US\$)
1	Phase 1 - Building Works	280,932
2	Phase 2 - External Works	56,030
<b>3</b>	<b>Sub-total A</b>	<b>336,962</b>
4	Allow for Preliminaries @10%	33,696
	<b>Sub-total B</b>	<b>370,658</b>
5	Allow for Contingency @10%	37,066
	<b>Sub-total C</b>	<b>407,724</b>
6	Allow for VAT @18%	73,390
<b>7</b>	<b>Total Estimated Cost</b>	<b>481,114</b>

#### 5.1.2 Commentary on Phase 1 Estimate.

The budget for Phase 1 currently stands at USD481,114 which is approximately USD1,114 above the estimate communicated at the previous stage. This is well within acceptable limits and we do not propose any value engineering at this stage.

#### 5.1.3 Exclusions. The following items are **not** included in the estimate: -

- a) Equipment;
- b) Furniture and loose fittings;
- c) Professional fees;
- d) Statutory fees;

### 6.0 Risk Management.

6.1 Risk analysis and management will be continuous through the life of the Project. This will entail the definition and agreement of a risk management plan. Owners of the risks will be identified and mitigation measures highlighted. The adoption of risk management must be an integral part of the overall management of the project. All disciplines will be required to participate in the identification, assessment and the mitigation of risk.

6.2 At this developed design stage, we envisage the risks on the project as shown in the table 2 overleaf.

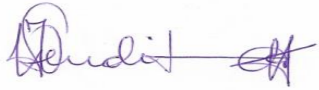
Table 2 showing the risk register.

Risk ID No.	Risk Description	Likelihood/ Probability (1-5) 1- low; 5- high;	Risk Ranking	Mitigation Measures	Action Owner	Current Status and Future Considerations
1	Requests for additional spaces and facilities	1	Low	<ul style="list-style-type: none"> <li>Adherence to client brief</li> <li>Early communication of changes required</li> </ul>	Design Team	<ul style="list-style-type: none"> <li>No action at this point.</li> </ul>
2	Inability to secure local authority planning permission resulting in programme delays.	2	Medium	<ul style="list-style-type: none"> <li>Compliance with planning laws and regulations.</li> <li>Compliance with design and engineering standards.</li> </ul>	Project Architect and Civil / Structural Engineer	<ul style="list-style-type: none"> <li>Architectural and Engineering Drawings prepared for Planning Submission</li> </ul>
3	Project cost exceeds Client's Budget	1	Low	<ul style="list-style-type: none"> <li>Value Engineering to suit Client Budget.</li> <li>Continuous monitoring of project costs at all stages.</li> <li>Omitting scope to fit within budget</li> </ul>	Design Team and Quantity Surveyor	<ul style="list-style-type: none"> <li>Currently well within budget</li> </ul>
4	Material price fluctuation impacting the budget	3	Medium	<ul style="list-style-type: none"> <li>Client to provide a risk allowance in their budget</li> </ul>	Employer	<ul style="list-style-type: none"> <li>This is a risk that we continue to monitor</li> </ul>
5	COVID-19 Restrictions / Effects Impacting on Time and Budgetary Constraints	1	Low	<ul style="list-style-type: none"> <li>Complying with government regulations as regards working and physical distancing;</li> </ul>	Consultants	<p><u>Future Impact/ Considerations</u></p> <ul style="list-style-type: none"> <li>Potential limited supply of materials or longer lead times;</li> <li>Increasing freight costs for some imported materials.</li> <li>Delays in completion of project as a result of lockdowns or delays in supply of materials</li> </ul>
6	COVID-19 outbreak at site leading to site closure	1	Low	<ul style="list-style-type: none"> <li>Complying with government regulations as regards working and physical distancing;</li> </ul>	Contractor	<ul style="list-style-type: none"> <li>No action required at this stage</li> </ul>
7	Major occurrence of health and safety incident on site	1	Low	<ul style="list-style-type: none"> <li>Workers given weekly safety briefing</li> <li>Enforcement of the use of PPE</li> </ul>	Contractor and Supervising Consultants	<ul style="list-style-type: none"> <li>No action required at this stage</li> </ul>
8	Poor communication between Contractor and Supervising Consultants leading to delays.	1	Low	<ul style="list-style-type: none"> <li>Continuous communication between Contractor and Consultants</li> </ul>	Contractor and Supervising Consultants	<ul style="list-style-type: none"> <li>No action required at this stage</li> </ul>
9	Poor performance of Contractor / consultants leading to increased costs and project delays.	1	Low	<ul style="list-style-type: none"> <li>Regular progress reports and Project Team meetings to be held to provide early warning of any poor performance</li> </ul>	Contractor and consultants	<ul style="list-style-type: none"> <li>No action required at this stage</li> </ul>
10	Variations instructed on the project during construction	1	Low	<ul style="list-style-type: none"> <li>Strict protocols to be put in place for approval of variations by Project Manager only.</li> </ul>	Project Manager	<ul style="list-style-type: none"> <li>No action required at this stage</li> </ul>
11	Delayed submission of samples leading to Contractor's failure to complete entire project on time	2	Low	<ul style="list-style-type: none"> <li>Expeditious sample approval</li> <li>Continuous liaison with contractor to address any issues at site.</li> </ul>	Contractor	<ul style="list-style-type: none"> <li>No action required at this stage</li> </ul>
12	Delayed procurement of some manufactured items leading to delayed completion of the project.	2	Low	<ul style="list-style-type: none"> <li>Contractor to provide procurement schedule for monitoring of procurement</li> <li>Early approval of samples</li> </ul>	Contractors	<ul style="list-style-type: none"> <li>No action required at this stage</li> </ul>



13	Defects in Completed buildings	1	Low	<ul style="list-style-type: none"> <li>• Continuous testing of materials and completed works;</li> <li>• Enforcement of contract specifications for the works</li> </ul>	Contractors and Supervising Consultants	<ul style="list-style-type: none"> <li>• No action required at this stage</li> </ul>
14	Failure to secure occupation permit	1	Low	<ul style="list-style-type: none"> <li>• Adherence to Approved drawings</li> <li>• Communication to Local Authority for any changes in design.</li> </ul>	Contractors and Supervising consultant.	<ul style="list-style-type: none"> <li>• No action required at this stage</li> </ul>

Prepared by:



**Sendikwanawa Wilson John,**  
*Project Quantity Surveyor,*  
 Dudley Kasibante and Partners

## Appendix A

### Detailed Workshops Cost Plan

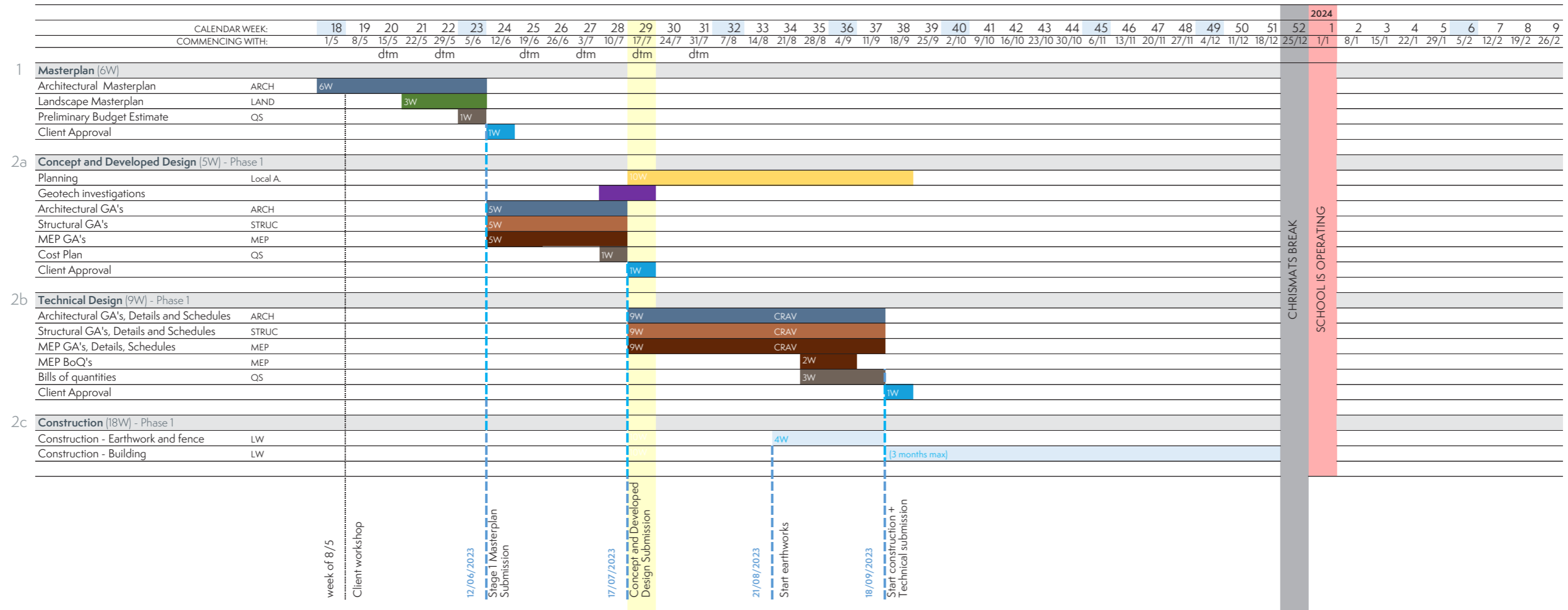
<b>Workshops - Phase 1</b>					
S/no.	Description		QTY	RATE	MOUNT (USD)
<b>1.0</b>	<b>SUBSTRUCTURE</b>				
1.1	Substructure - Stabilized murrum floor				
1.11	Grade and compact subgrade	m <sup>2</sup>	1,715	3.0	5,145.00
1.12	Anti-termite	m <sup>2</sup>	1,715	1.4	2,315.25
1.13	250m thick murrum	m <sup>2</sup>	1,334	6.0	8,004.00
1.14	100mm stabilized murrum + 100mm thick murrum	m <sup>2</sup>	381	10.0	3,810.00
1.15	Concrete topping (75mm) C25	m <sup>2</sup>	195	13.9	2,705.63
1.16	Handfloating concrete floor.	m <sup>2</sup>	195	5.0	975.00
1.17	Pigmenting to concrete floor.	m <sup>2</sup>	195	6.5	1,267.50
1.18	Formwork to sides of floor topping; n.e 100mm girth.	m	81	1.3	105.30
1.19	1000 gauge DPM	m <sup>2</sup>	195	1.3	253.50
1.20	Loose gravel (50mm)	m <sup>3</sup>	10	50.0	504.00
1.21	Stone Edging	m	150	25.0	3,750.00
1.2	<i>Pad bases to the Containers</i>				
1.21	Excavation for bases	m <sup>3</sup>	40	4.5	180.00
1.22	Remove from site	m <sup>3</sup>	-	5.5	-
1.23	Return fill and ram	m <sup>3</sup>	36	8.5	306.00
1.24	Concrete grade 20 footing (0.5*0.5*0.5m)	m <sup>3</sup>	4	150.0	600.00
1.25	Stub column- grade 20 (.4x.4x.6m)	m <sup>3</sup>	-	150.0	-
1.26	Formwork to stub bases	m <sup>2</sup>	28	12.0	336.00
1.27	Inspection pit	m <sup>2</sup>	7	200.0	1,400.00
1.28	Ancillary items	Sum	1	3,000.0	3,000.00
	<b>Sub-total</b>		-		<b>34,657.18</b>
<b>2.00</b>	<b>STRUCTURAL FRAME</b>				
2.01	Purchase of Containers	no	7	7,052.1	49,364.38
2.02	Steel column stubs (75x75x800mm) for bamboo trusses	Sum	1	2,000.0	2,000.00
2.03	Allow for ancillary works to create window and door openings	no.	7	1,000.0	7,000.00
2.04	Allow for ancillary works	Sum	1	1,500.0	1,500.00
	<b>Sub-total</b>				<b>59,864.38</b>
<b>3.00</b>	<b>EXTERNAL WALLS</b>				
3.01	Fair-faced stone wall (325mm thick)	m <sup>2</sup>	92	100.0	9,200.00
	<b>Sub-total</b>				<b>9,200.00</b>
<b>4.00</b>	<b>INTERNAL WALLS</b>				
4.01	Partition walls (timber subframe, clad with 6mm plywood)	m <sup>2</sup>	105	40.0	4,200.00
	<b>Sub-total</b>				<b>4,200.00</b>

<b>5.00 ROOF CONSTRUCTION AND COVERINGS</b>					
5.01	Roof structure	m <sup>2</sup>	973	25.0	24,312.50
5.02	Temporary roof structure over Kitchen	m <sup>2</sup>	86	18.5	1,591.00
5.03	Roof covering - bamboo	m <sup>2</sup>	973	18.0	17,505.00
5.04	Temporary roof covering over Kitchen	m <sup>2</sup>	100	18.0	1,800.00
5.05	Roof covering - gauge 30 sheet below bamboo	m <sup>2</sup>	973	7.5	7,293.75
5.06	Temporary roof covering over Kitchen	m <sup>2</sup>	100	7.5	750.00
5.07	Papyrus ceiling	m <sup>2</sup>	1,123	15.0	16,845.00
5.08	Bamboo louvres to gable ends (translucent with space)	m <sup>2</sup>	228	40.0	9,120.00
5.09	Rainwater gutters - 1.0m wide, 0.5mm galvanised sheet	m	91	15.0	1,365.00
5.10	Rainwater spouts	no	7	85.0	595.00
5.11	Downpipes - 200mm dia upvc	m	21	35.0	735.00
5.12	Bends to pipes	no.	-	12.5	-
5.13	Gauge 26 galvanized steel fascia to eaves.	m	114	12.5	1,425.00
<b>Sub-total</b>					<b>83,337.25</b>
<b>6.00 WINDOWS</b>					
6.01	450 x 2,177mm high Steel framed glazed windows	No.	16	185.5	2,968.56
6.02	450 x 300mm high Steel framed louvred windows	No.	16	42.3	677.16
6.03	1,350 x 300mm high Steel framed louvred windows	No.	20	107.7	2,154.60
<b>Sub-total</b>					<b>5,800.32</b>
<b>7.00 DOORS</b>					
7.01	1,350 x 2,177mm high glazed steel doors, D_a, D_b, D_c & D_d	No	20	556.6	11,132.10
7.02	Ironmongery per steel door	No	17	143.0	2,431.00
7.03	Eggshell oil paint	m <sup>2</sup>	118	4.0	472.00
<b>Sub-total</b>					<b>14,035.10</b>
<b>8.00 EXTERNAL FINISHES</b>					
8.01	Lime-earth plaster	m <sup>2</sup>			
8.02	Machine cut sandstone slates to base of earthbag wall	m <sup>2</sup>			
<b>Sub-total</b>					<b>-</b>
<b>9.00 INTERNAL WALL FINISHES</b>					
9.01	Backing to receive ceramic wall tiles - Inspection pit	m <sup>2</sup>	64	5.5	352.00
9.02	Ceramic wall tiles - Inspection pit	m <sup>2</sup>	64	40.0	2,560.00
9.03	Canvas Fabric Finish to walling	m <sup>2</sup>	48	42.0	2,018.26
<b>Sub-total</b>					<b>4,930.26</b>

<b>10.00 INTERNAL FLOOR FINISHES</b>					
10.01	Backing to receive ceramic floor tiles	m <sup>2</sup>	7	5.5	38.50
10.02	Ceramic floor tiles.	m <sup>2</sup>	7	40.0	280.00
<b>Sub-total</b>					<b>318.50</b>
<b>11.00 INTERNAL CEILING FINISHES</b>					
11.01	Net Ceiling to Dormitories	m <sup>2</sup>	105	13.4	1,402.40
<b>Sub-total</b>					<b>1,402.40</b>
<b>12.00 Fittings and Ancillaries</b>					
12.01	Allowance only	Sum	1	7,000	7,000.00
<b>Sub-total</b>					<b>7,000.00</b>
<b>Elemental Summary</b>					
		<b>Gross Floor Area</b>	780		<b>Rate/m2</b>
				<b>Amount (US\$)</b>	<b>Rate/m2</b>
1.00	Substructure			34,657.18	44.43
2.00	Structural Frame			59,864.38	76.75
3.00	External Walls			9,200.00	11.79
4.00	Internal Walls			4,200.00	5.38
5.00	Roof Construction and Coverings			83,337.25	106.84
6.00	Windows			5,800.32	7.44
7.00	Doors			14,035.10	17.99
8.00	External Finishes			-	-
9.00	Internal Wall Finishes			4,930.26	6.32
10.00	Internal Floor Finishes			318.50	0.41
11.00	Internal Ceiling Finishes			1,402.40	1.80
12.00	Fittings and Ancillaries			7,000.00	8.97
<b>Sub-total</b>				<b>224,745.39</b>	<b>288.14</b>
13.00	Electrical and Mechanical Installations @ 25%			56,186.35	43.22
<b>Sub-Total A</b>				<b>280,931.74</b>	<b>331.36</b>
14.00	Allow for Preliminaries (10%)			28,093.17	33.14
<b>Sub-Total B</b>				<b>309,024.91</b>	<b>364.49</b>
15.00	Allow for Contingencies (10%)			30,902.49	36.45
<b>Total Amount (Excluding VAT)</b>				<b>339,927.40</b>	<b>400.94</b>
16.00	Allow for VAT @18%			61,186.93	72.17
<b>Total Amount (Including VAT)</b>				<b>401,114.34</b>	<b>473.11</b>

Concept - Phase 1  
Program

Program



Design & Build Program

The above program shows the planned works for Phase 1.

You would notice that we are slightly behind for this stage (1 week) but we are confident this will not affect the next submission nor the construction starting dates as our team are proceeding with next stage already.

Key dates are :

- ▶ 21/08 - starting of earthworks and fencing;
- ▶ 18/09 - submission of Technical Design package and starting of construction;
- ▶ December - Handover of the premises to the client (date to be confirmed)

It is important to note that all of this program rely on fast client approvals, sufficient funding and on responsive Planning authorities.

Thank you.

**Localworks**

The Square, 10 Third Street  
P.O. Box 12352  
Kampala, Uganda

PHONE: +256-392-17 44 44  
EMAIL: [info@localworks.ug](mailto:info@localworks.ug)  
WEB: [www.localworks.ug](http://www.localworks.ug)