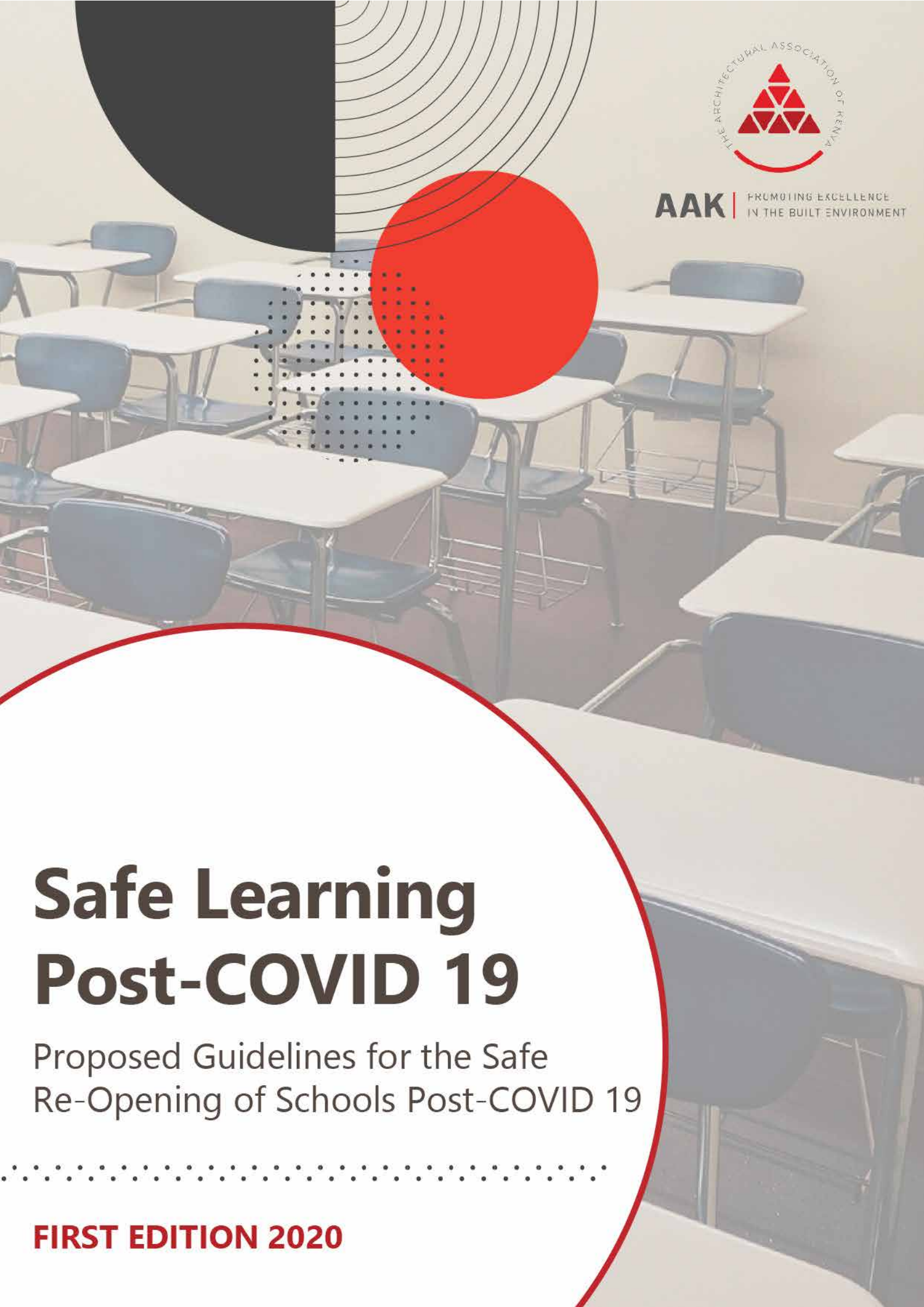

Safe Learning Post-COVID 19

Proposed Guidelines for the Safe Re-Opening of Schools Post-COVID 19

FIRST EDITION 2020

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Foreword

As the government steps up plans to fully reopen education institutions amid the Covid-19 pandemic, there is an utmost need to be cautious and careful not to break the smoked fish while trying to bend it. Stringent guidelines were necessary so that the Corona virus containment efforts are not jeopardised. But experiences from the past few days of the partial reopening point to the precariousness of the decision if the rising number of corona virus infections and related deaths are anything to go by.

From the perspective of two of the most important measures cited by global and local health authorities to prevent the spread of Covid-19 — frequent and proper hand washing and social distancing — the state of school infrastructure exposes the frailty of the education sector.

...the state of school infrastructure exposes the frailty of the education sector.

Notably, Covid-19-related hygiene and social distancing norms in schools are unearthing a range of systemic problems with school infrastructure across the world. Inadequate physical conditions — such as water shortage, poor sanitation and overcrowded classrooms, a major problem for the education sector — seem difficult to overcome in the short term for an immediate response.

Although it would be wrong to imply a causal link between school reopening and Covid-19 cases, the experiences in the past few weeks show that there is need for inclusion of stakeholders from different fields to help ensure the safety of students in school during this pandemic. The AAK Handbook on Safe School Reopening Post-COVID is projected to be a useful tool for education stakeholders in both public and private realms.

James Odongo
Ag. Research & Advocacy Manager,
Chair, AAK Safe Learning Taskforce

President's Message

Established in 1967, AAK is Kenya's leading Built and Natural Environment's professional association, incorporating Architects, Quantity Surveyors, Town Planners, Engineers, Landscape Architects, Environmental Design Consultants and Construction Project Managers. As an umbrella association, we bring together professionals in National and County Governments, the Private Sector and Academia. We also act as a link between professionals and stakeholders in the construction industry including policy makers, manufacturers, real estate developers, financial institutions, among others.

With slightly over 75,000 infections recorded in Kenya as at 21st November, 2020, and over 57 Million cases worldwide, and the uncertainty of the future of the COVID-19 pandemic still lingering, its far-reaching consequences continue to spread and catastrophically impact the interdependent global socio-economic sector. Given the scale and urgency of the pandemic, the way forward is to address it through collaborative efforts across all sectors: government, private sector and the civil society.

> **...1.53 billion learners out of school globally and 184 country-wide school closures**

Built environment professionals and consultants participated in the response with a gesture of social responsibility as a means of responding to the crisis. This has been particularly through various task forces, the AAK Rapid Response team, the AAK Floods Response team and the AAK Safe Learning Taskforce.

Education has been hit particularly hard by the COVID-19 pandemic with 1.53 billion learners out of school globally and 184 country-wide school closures, impacting 87.6% of the world's total enrolled learners. Drop-out rates across the globe are likely to rise as a result of this massive disruption to education access. While other critical needs such as health, water and sanitation are being responded to, educational needs cannot be forgotten and these have an equally detrimental impact if left unaddressed. The 'pile-on effect' of the coronavirus is that, during the global COVID-19 pandemic, interruptions to education have long term implications — especially for the most vulnerable

It is more than 8 months since schools closed in more than 190 countries, affecting 1.57 billion children and youth - 90% of the world's student population. But when it comes to reopening schools, the tempo has been far less certain. When and how to reopen schools are two of the toughest and most sensitive decisions on political agendas today. Is it safe to reopen schools or is there a risk of reigniting infections? What are the consequences for children's mental health and to the social development of young children?

...both public and private sectors would need about 245,000 new classrooms for primary schools

According to the Kenya Economic Survey 2020 report, Kenya has 10 million learners in primary schools and over 3 million in secondary schools. The average population per school is about 311 for both primary and secondary. This works out to a class size of 39 and 78 for primary and secondary schools respectively.

Currently, we have about 258,752 and 41,852 classrooms in primary and secondary schools respectively. To safely reopen primary and secondary schools with a class size of 20 learners per class, both the public and private sectors would need to build and commission about 245,000 new classrooms for primary schools and an estimated 122,000 new classrooms for secondary schools.

Based on a back-of-the-envelope calculation, we would need about Kshs.400 billion to build and equip additional learning spaces to accommodate 20 learners per classroom in primary and secondary schools. This is an enormous task for the nation.

As the Kenyan Government and the Ministry of Education, grapple with how to return to school safely, the Architectural Association of Kenya Safe Learning Taskforce, sought to provide guidelines for infrastructure and movement in our Educational facilities with one focus, keeping our Children safe and preventing viral transmission.

This taskforce comprises a collaborative, dynamic, inclusive and forward-thinking group of AAK Members who have come together to be solution providers. The work of this taskforce is insightful and innovative, and the Association applauds their expertise, and more so, their foot forward approach in volunteering their time and energy. Special thanks to the AAK Research and Advocacy Manager, James Odongo for coordinating this team and publication.

Mugure Njendu
President,
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1. Review of Existing Legislation & Policies

Guide to Revising the various Legislative Framework

To protect the well-being of children and ensure they have access to continued learning, UNESCO in March 2020 launched the COVID-19 Global Education Coalition, a multi-sector partnership between the UN family, civil society organizations, media and IT partners to design and deploy innovative solutions. Together they help countries tackle content and connectivity gaps, and facilitate inclusive learning opportunities for children and youth during this period of sudden, calamitous and educational disruption.

Specifically, the Global Education Coalition aims to:

- Help countries in mobilising resources and implementing innovative and context-appropriate solutions to provide education remotely, leveraging hi-tech, low-tech and no-tech approaches;
- Seek equitable solutions and universal access
- Ensure coordinated responses and avoid overlapping efforts
- Facilitate the return of students to school when they reopen to avoid an upsurge in dropout rates

With the above guidelines in mind and the Ministry of Education's Guidelines on Health and Safety Protocols for Reopening of Basic Education Institutions amid Covid-19 Pandemic, the framework needs to be largely based on the resources available in every region (county) and ease of implementation.

Every region's needs must be assessed to ensure that the resources will be distributed on a need to need basis for maximum utilization. Resources must be used as soon as they are dispensed to the institutions especially where storage is not sufficient. Any lag in distribution will most likely result in inadequate impact and inequitable distribution of resources. However, provisional storage facilities can be designed for the schools with proper security to prevent theft especially in remote areas.

The schools should be re-classified as both a learning Center and a work place to conform with both MOE legislations, The Occupational Safety and Health (OSH) Act 2007 and Work Injury Benefits Act (WIBA) 2007.

Source: Unsplash.com

Legislative Review

Item	LEGISLATIVE FRAMEWORK	REFERENCE REGULATIONS/ GUIDELINES
A	ESTABLISHMENT OF SCHOOL INFRASTRUCTURE TECHNICAL COMMITTEES County Education Boards incorporating representation of Architectural Association of Kenya (AAK), Institution of Engineers of Kenya (IEK), National Construction Authority (NCA), County Public Health Office, Public Works Office, School BOM to oversee the implementation and enforcement of the proposed guidelines as well as long-term improvement of school infrastructure throughout the Country.	**The Basic Education Act, 2013 - No.14 of 2013, Part III should be modified to include the relevant stakeholders**
B	CONSTITUTE SCHOOL/ EDUCATION INFRASTRUCTURE TECHNICAL COMMITTEES. These are recommended to provide guidance on infrastructural designs, approvals and implementation of education institutions that are managed by the National Government and County Governments. The legislation needs to apply cross board for ease of implementation at all levels.	
C	ENTRY • Controlled entry to Education facility. • Ease of safe screening and record-keeping at the entry points. • Buffer zone to Education facility. • Provide hand-washing and sanitization facilities at the point of entrance (gate and class) • Use of face shields / screens	**MOE Guideline 2.3(xi) - (xiii), (xv), (xviii); 3.1.11** **Occupational safety and health advisory on Coronavirus (Covid-19) - #1(i), (ii)**

Item	LEGISLATIVE FRAMEWORK	REFERENCE REGULATIONS/ GUIDELINES
D	• Classroom to be sized at 30sf/per student. During a pandemic teaching to be in shifts with 60sf/ per student. *The International Building Code prescribes 20sf/per student minimum. • Adjacent classrooms can have an openable partition that would create a larger space for controlled group work, food service and keeping the students who interact together in one space. Locally available materials can be used for acoustic purposes. • Separate lower elementary classes (Nursery to Std 3) from Upper elementary (Std 4 to 8). • Identify temporary classroom locations on the site plan, space-planned in a way to provide safety and efficiency. • Provide space / equipment to support virtual learning • Ensure classrooms are appropriately cleaned regularly • Schools should carry out an exercise to determine how many students they can admit with the guidelines. Students should not be turned back on day one due to lack of space. • Furniture modification should also be considered. It is not feasible to do away with all the existing furniture to acquire new covid-19 friendly furniture. Most schools already lack adequate equipment. Modification will go a long way to help with shortage from the proposed arrangement. • Children may have to be given permanent sitting arrangements especially where learning is proposed in indoor facilities. Even if it means having a chart to guide them at the door. • In some indoor settings, some openings (especially windows) may have to be modified, i.e. increased in size or demolition of windows to create more doors. This will help with circulation in and out of the classrooms, better ventilation. • For the boarding guidelines to be followed, the schools may need to consider hiring matrons for each hall of residence to permanently reside with the students for supervision. This may necessitate additional provisions to accommodate them.	**MOE Guideline 2.3(iv), (xxii), 3.1.1 (i)-(v), 3.1.2 (i-ii)** **2** **Kenya Basic Education Covid-19 Emergency Response Plan, May 2020 - Section 7.1)**

Item	LEGISLATIVE FRAMEWORK	REFERENCE REGULATIONS/ GUIDELINES
E	AIR QUALITY • Dust control. Provide hard and soft landscaping. Some of the open fields that would be proposed for use as classrooms do not have grass as it may be seasonal or does not grow in the school compound. • Schools may contact DOSHS-Approved Air Quality Monitors to verify the status of the air quality	**Occupational safety and health advisory on Coronavirus (Covid-19) - #1(viii)**
F	VENTILATION • Provide passive air exchange. Ensure adequate ventilation levels through well-sized operable/ openable windows and roof ventilators. • Use of high-efficiency particulate air (HEPA) filters in active/ mechanical ventilation systems programmed to 100% outside air. • Cross ventilation to be applied to keep the rooms aerated well.	**MOE Guideline 3.1.1(vi), 3.1.2(viii), 3.1.7(x)**
G	(BIO) WASTE DISPOSAL • Provide incinerator to WHO/MOH standards or pit (that is disinfected daily) for disposal of used Covid and clinical waste • Provide protocol on disposal. • Lined waste collection dust bins placed at various designated areas must be pedal ones. • Additional washrooms and waste disposal facilities will have to be made considering the fact that majority of the government schools do not have adequate facilities. The numbers of pupils have increased, but the facilities used remain the same.	**MOE Guideline 2.3(iv), (xviii), 3.1.2(x), 3.1.3(vii), 3.2.8 2** **Occupational safety and health advisory on Coronavirus (Covid-19) - Healthcare Waste Management steps (1) - (vi)**
H	FOOD SERVICE: NUTRITION (DRY STORAGE) • Provide fruits to build immune system. In the 70's, NCC provided lunch to City Council schools. In the 80's milk was provided to all Primary Schools. Possible interventions: strengthen school/community supply chain; include fruits in school gardening/landscape plans • Classrooms with operable walls can be used for snack breaks. • Provisions for storage of utensils by learners (to limit sharing) and disinfection of food store	**Kenya Basic Education Covid-19 Emergency Response Plan, May 2020 - Section 7.8)** **MOE Guideline 2.3(xxxiv); 3.1.7(viii,ix), 3.2.4-7**

Item	LEGISLATIVE FRAMEWORK	REFERENCE REGULATIONS/ GUIDELINES
J	POTABLE WATER (HYGIENE AND SANITATION) • Spigots (Taps) at each classroom. • Grey water recycled for irrigation and use in washrooms. • Hand washing facilities provided at strategic points within the school, i.e. gate, classroom, dining, dormitory, library, laboratory entry points, transport hubs, playgrounds • Due to lack of adequate water resources in many areas, use of sanitizers may be a better and more reliable option.	**MOE Guidelines 2.3(x), (xxxii), 3.1.2(xi-xii), 3.1.3(vi), 3.1.5(iii), 3.1.6(iii), 3.1.7(ii, vii), 3.1.8(viii), 3.1.9(vib), 3.2.1, 3.2.3** **Kenya Basic Education Covid-19 Emergency Response Plan, May 2020 - Section 7.6)**
K	HEALTH NURSE CLINIC SPACE • Detached from the Main facility. • Nurse Office. • Triage and Isolation spaces. • Transportation (matatu) access to hospital within 10Km. Van can be shared between several schools within close proximity. • Linking the schools with trained Community Health Extension Workers (CHEWS) and Community Health Volunteers (CHV)s • First-aid training may be mandatory for teachers in areas where a school cannot be allocated a nurse. This is to help with review of symptoms and communication with a nearby clinic.	**MOE Guidelines 3.1.10** **Utilizing the Community Health Strategy to Respond to Covid-19**
L	DIGITAL CLASSROOM/ LABORATORIES/ LIBRARIES • Operated like gyms – devices disinfected. • Storage for devices. • Laboratory PPE proposed for use by the students and teachers should be easy to clean and may need to be re-used. As a result, sanitisation of these items to be considered probably in the labs after the classes. Their movement can easily spread the virus if anyone is infected and would be better contained in the laboratories. • Library sessions to be scheduled for students to achieve the proposed guidelines for use.	**MOE Guidelines 3.1.12(I-vii)**

Item	LEGISLATIVE FRAMEWORK	REFERENCE REGULATIONS/ GUIDELINES
M	SCHOOL TRANSPORTATION • Provide minivan (with dedicated parking space). Minivans can be shared between several educational facilities. • Guidelines given are not practical as most government schools do not offer public transport and those that do don't have enough to allow for physical distancing. Children will have to be educated on the protocols for using public transport and the general public requested to monitor their movement. Where possible, parents will have to drop off children or risk missing out. This will be a collective community responsibility. • Government should partner with private transport providers to achieve the transport proposals.	**MOE Guidelines 3.1.8**
N	• STAFFROOM • Appropriate screening at the entrance • Physical / social distancing • Hand hygiene. • Regular sensitisation and debriefing for the staff • Ensure all windows are openable for adequate ventilation and flow of fresh air. • All furniture surfaces, door knobs and office equipment must be disinfected daily. • Appropriate cleaning and disinfection of ablution facilities • Pedal waste collection dust bins placed provided for. • All staff must wear masks.	
P	INSTITUTIONAL GROUNDS • Should be out of bounds to the general public. • Parents dropping off and collecting children must have a designated drop off/ collection area with tag numbers for collection. • Guards should be deployed to ensure this happens. • Some public institutions should offer some of their grounds to accommodate additional classrooms where the schools have maxed out their spaces.	

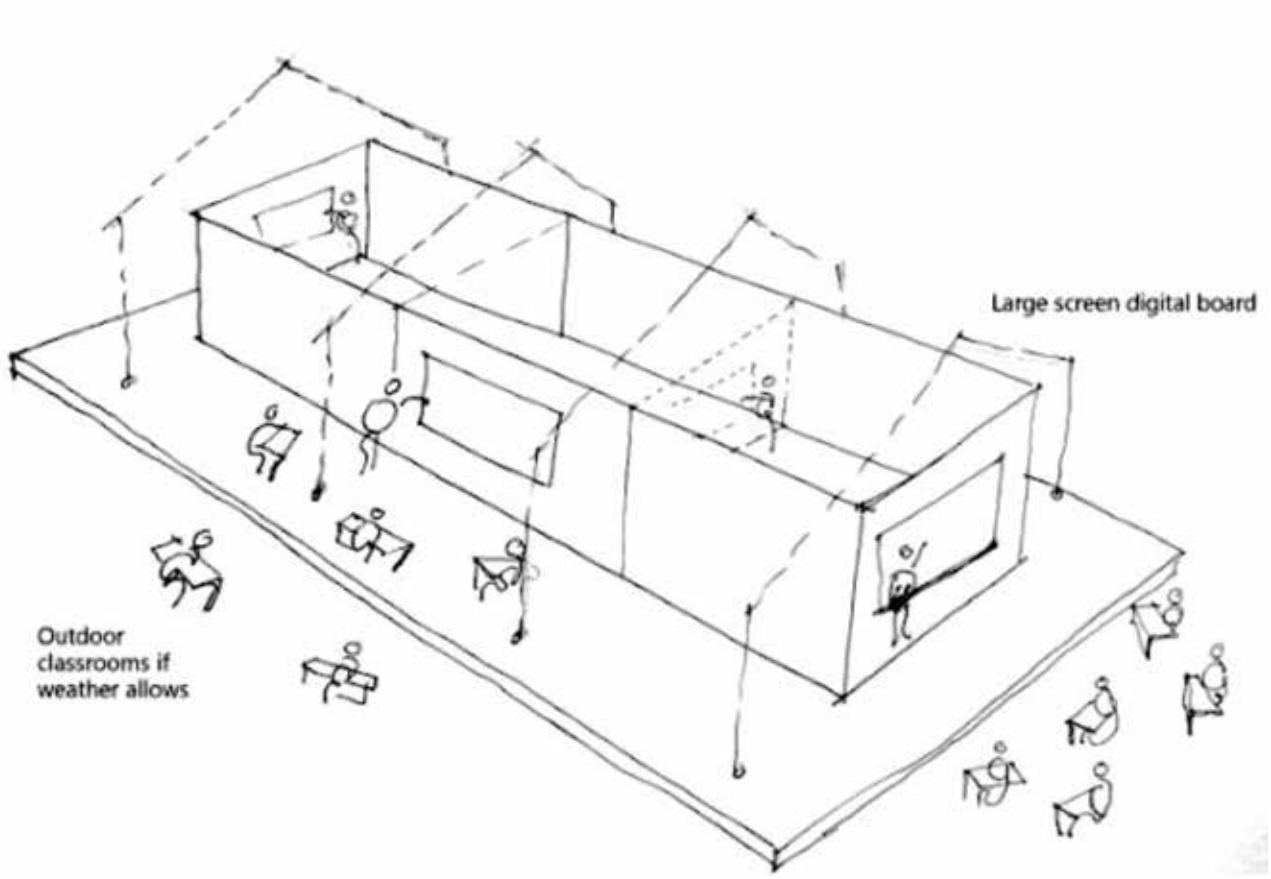
Item	LEGISLATIVE FRAMEWORK	REFERENCE REGULATIONS/ GUIDELINES
Q	SAFETY & SECURITY • Once children are in school, movement in and out should be restricted and monitored. • Record taking must be implemented for at a make shift gate house for the schools.	**Kenya Basic Education Covid-19 Emergency Response Plan, May 2020 - Section 9)**
R	FORM OVERSIGHT PARTNERSHIPS • The Government should consider partnering with the local communities on supervision of the children especially on their commute to school.	**Kenya Basic Education Covid-19 Emergency Response Plan, May 2020 - Section 8)**
S	SPECIAL NEEDS EDUCATION • Special needs' schools are currently in deplorable conditions and have been neglected by the Government. • It is the responsibility of the Cabinet Secretary to establish and maintain public special schools. • Children with special needs fall into three categories:- (a) intellectually, mentally, physically, visually, emotionally challenged or hearing impaired learners; (b) pupils with multiple disabilities; and (c) specially gifted and talented pupils. • Parents to special needs children rely on the support the special schools give their children. • A number of these children require physical contact as part of their care routine. Will their care givers require isolation to reduce the risk of infection to the students? This includes housing them at the facilities.	**The Basic Education Act, 2013 - No.14 of 2013, Part IV**
T	COVID-19 AWARENESS SIGNAGE • Walls for displaying messages and Covid safe signage to remind the students, teaching and non-teaching staff of the safetey measures.	
U	SUPPORT STAFF SPACES (NON EDUCATIONAL SPACES) • For example storage spaces: used utensils; hand-washing/sanitizing detergents. Access to these spaces must be limited.	

Long term:

The Government of Kenya should be repsonsible in providing elementary and secondary school capital projects

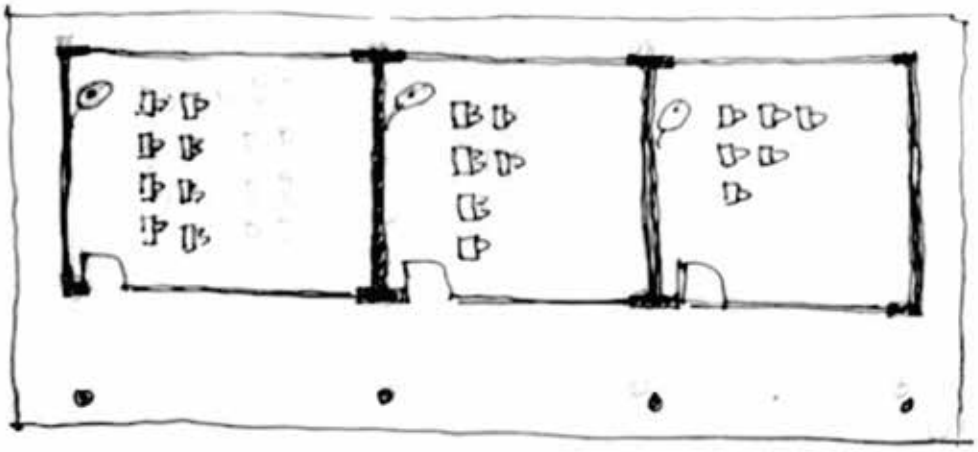
2. Resource Availability and Retrofitting of Existing Infrastructure

Architectural Outlines

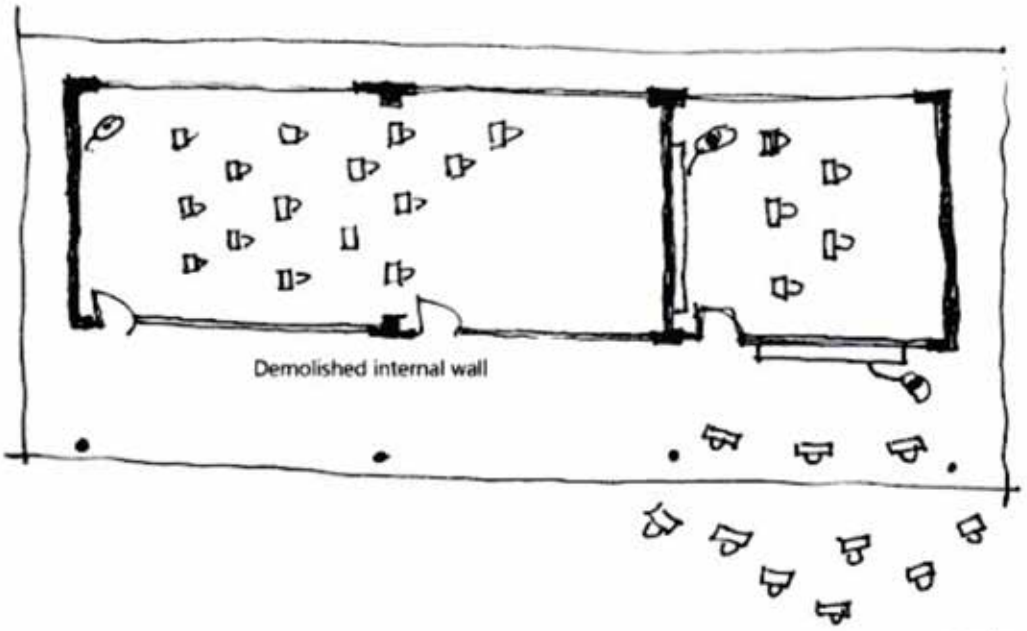


New Normal & New Technology

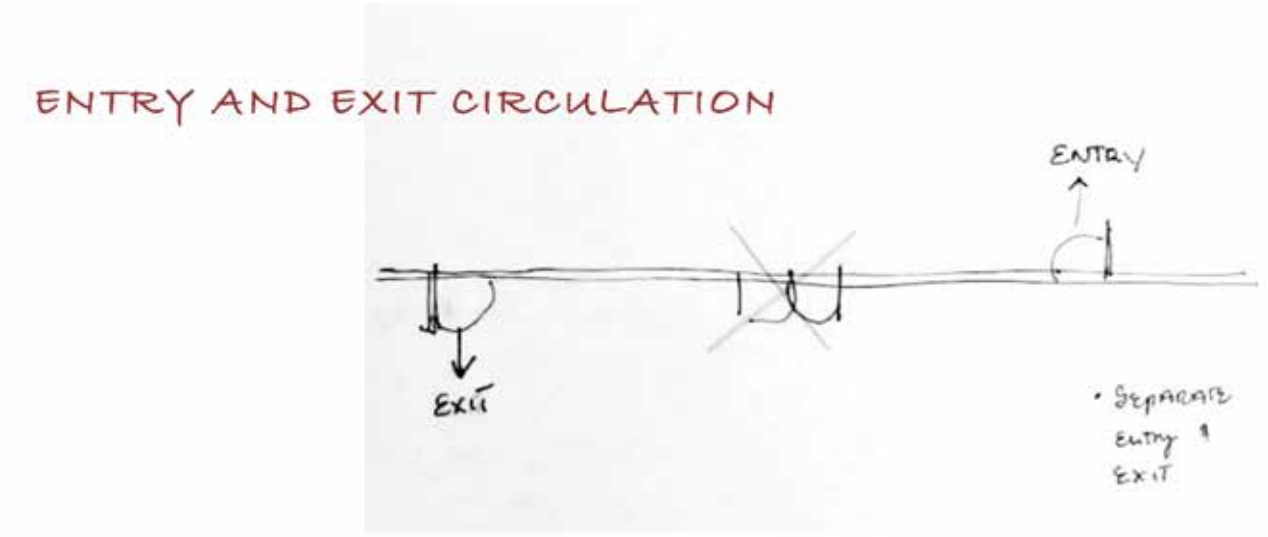
Typical Classroom block



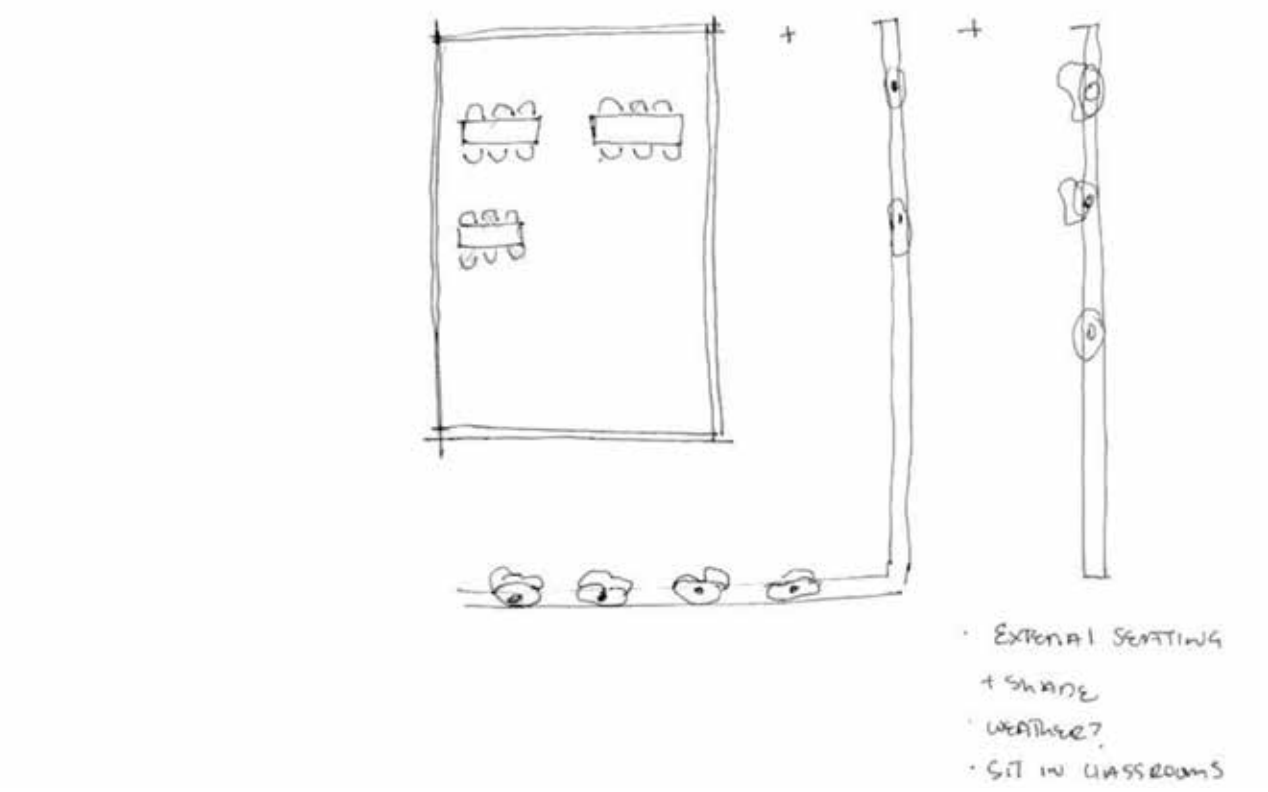
Retro-fitted to acommodate COVID
social distancing rules



Alterations to Existing

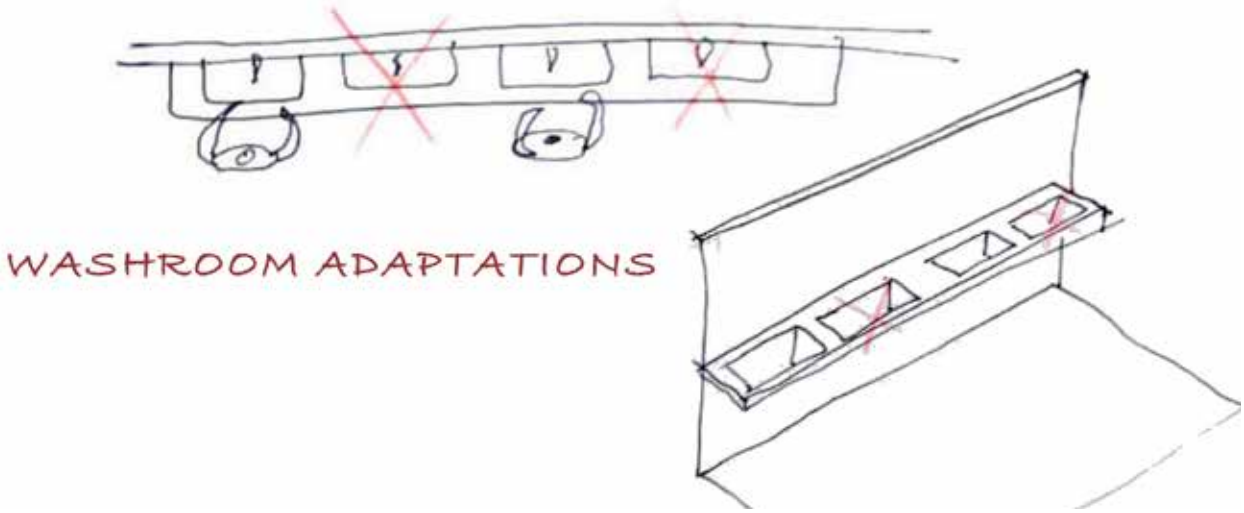


Entry and Exit Circulation

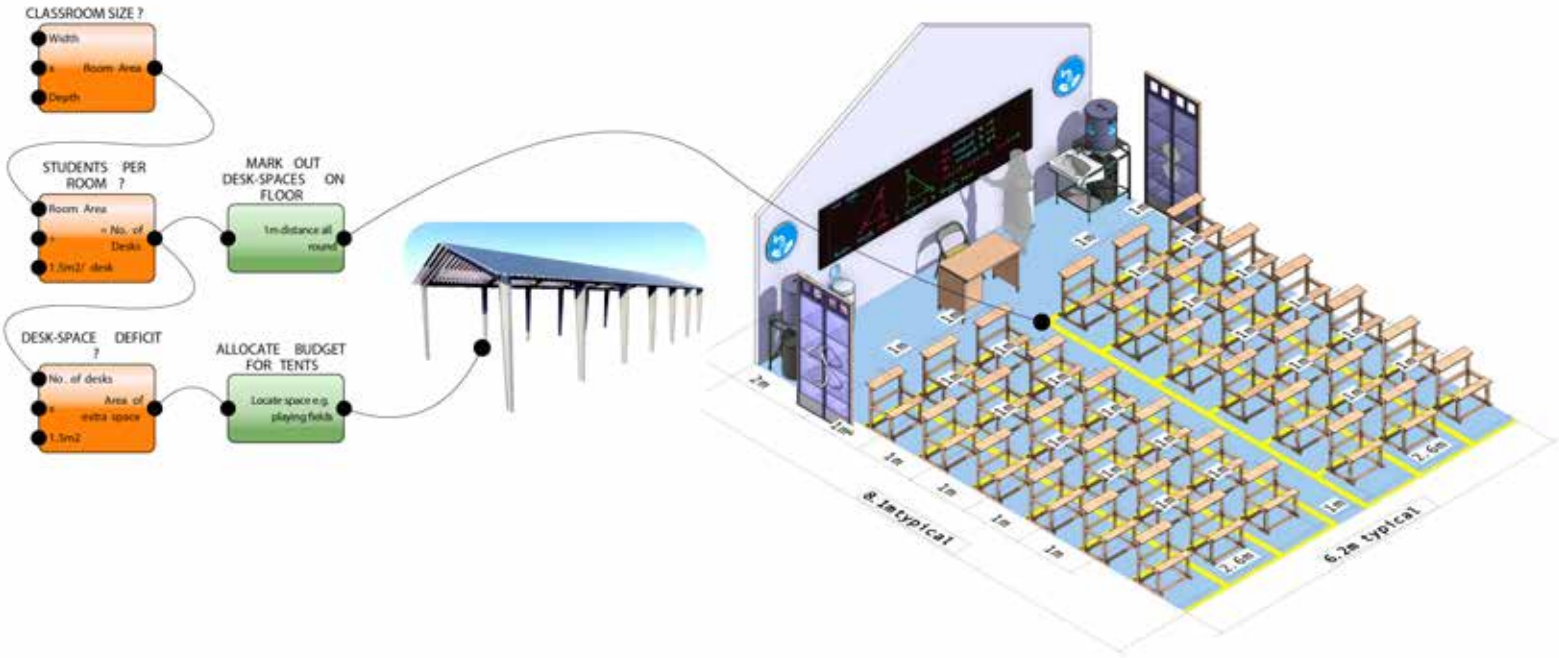


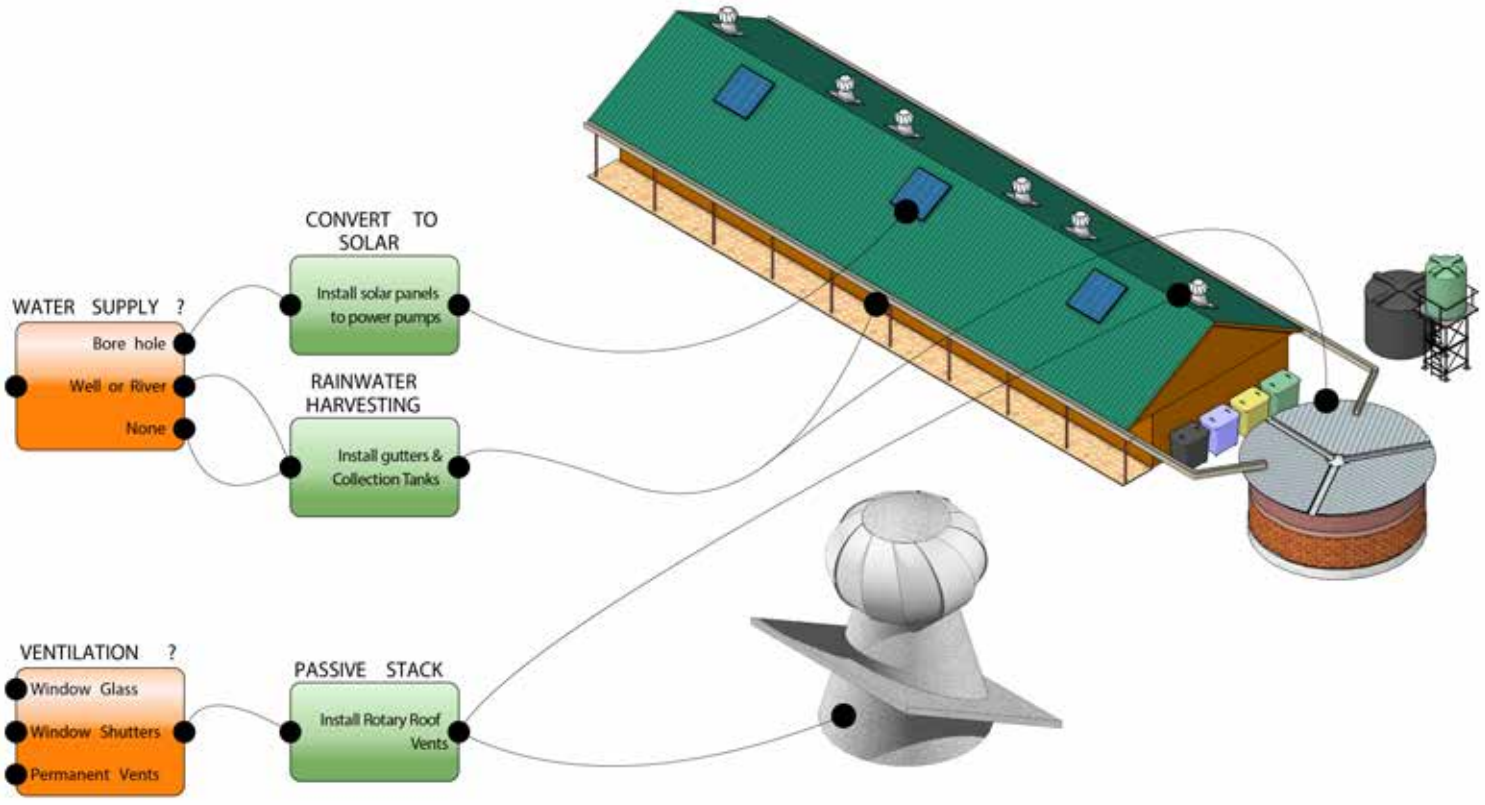
Dining Interventions

Boarder Control



Dear Headteacher: How to Covid-Safe
Compliance Flowchart





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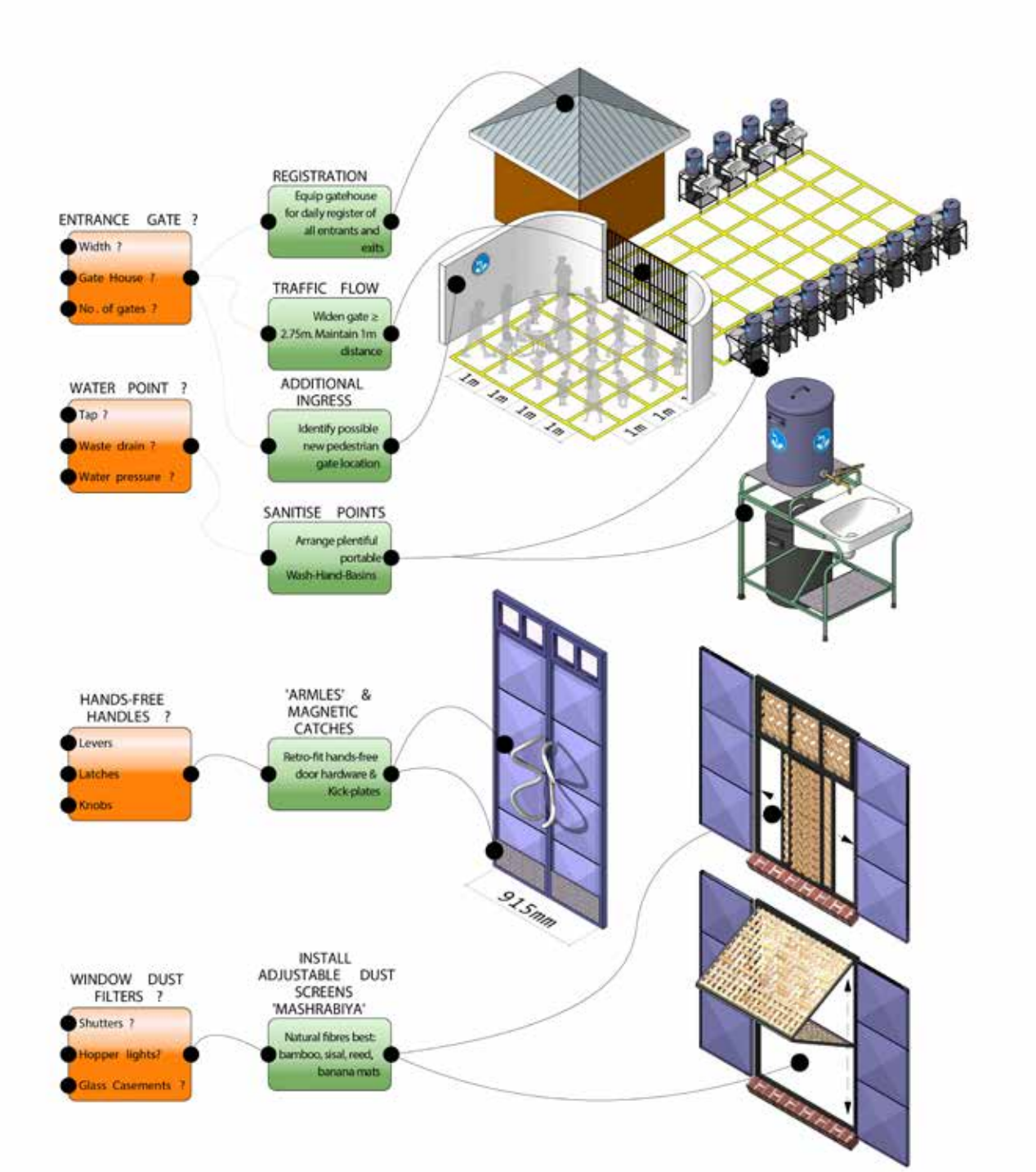

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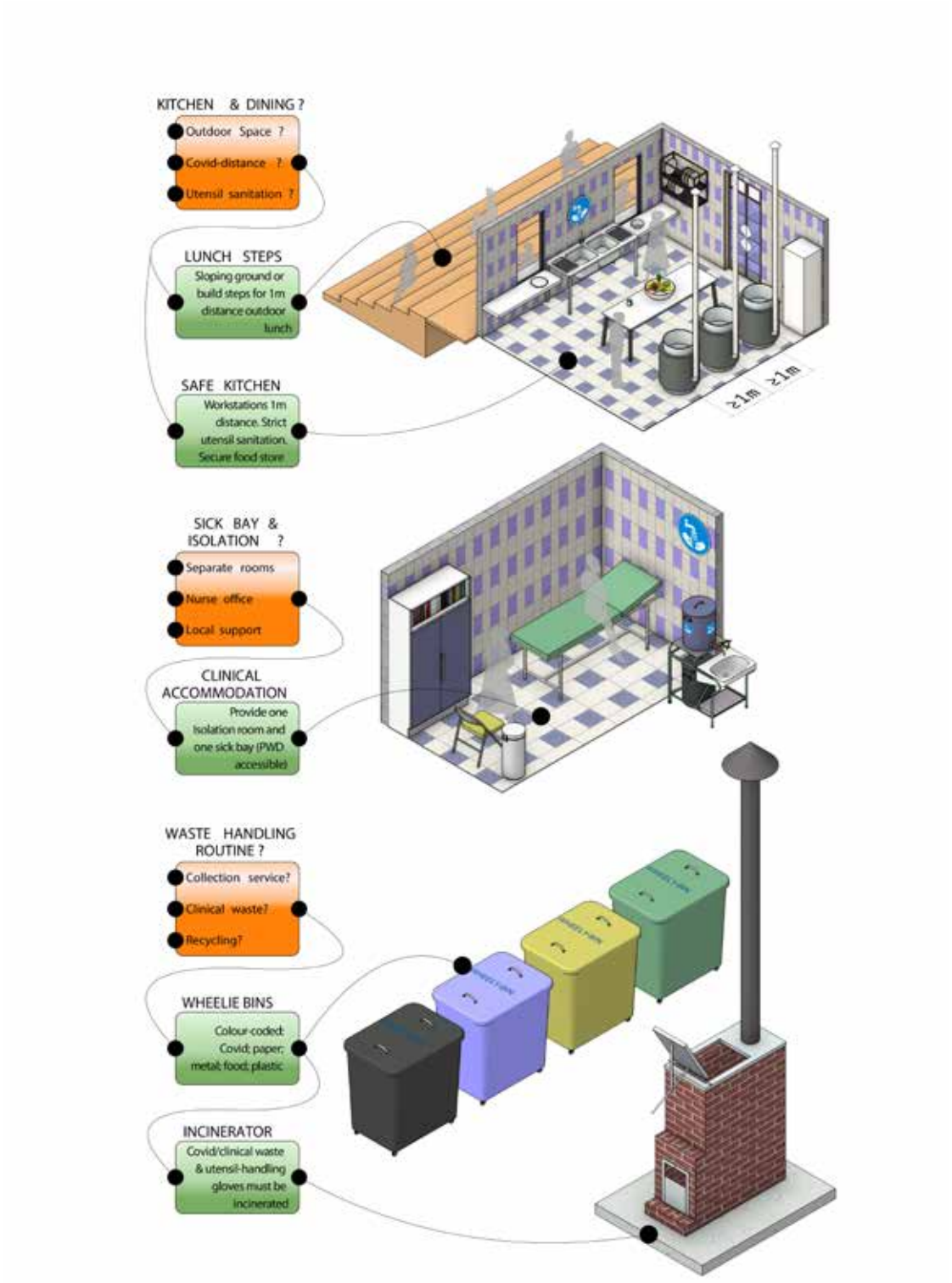


3. Sustainability and Long term Interventions to Future-Proof Learning Environments

Spatial Design Requirements for Emergency Evacuation Procedures in Schools

Introduction:
On the night of 02nd September 2017, at 0200hrs, Moi Girls' High School, Nairobi, Kenya, students were woken up and made to evacuate their dormitories, which were on fire! At least eight students passed away in that event and ten others were taken to various hospitals.

In view of the above and the current COVID-19 pandemic that is ravaging the world, AAK is lending its professional input on how to design schools and institutions to allow for safe and efficient evacuation of our students. In order to do this, we advise that the following prerequisite activities must be undertaken:

- Hazard identification
- Risk analysis
- Risk assessment matrix

Hazard Identification/Causes of emergency evacuation
Hazard identification is the process of understanding and listing all the possible perils that may necessitate an emergency evacuation to occur.

- Fires
- Natural disasters : Floods, Landslides, Thunderstorms & Lightning
- Building Structural deficiencies
- Terrorism

Risk Assessment Matrix
We could come up with a matrix showing the probability vs the impact each of the risks would have on the school and its population, but we see that each of the above risks has a high probability of occurring and would have high negative consequences if they occurred. Therefore, those responsible for public safety must implement mitigation measures for each. Moreover, these measures must be effectively tested against each identified risk, in advance. Then conclusively cover all the above risks.

Image Source: newsday.co.ke

Hazards	Risks			
	Human – Illness, disease, injury, death,	Financial – business failure	Reputational	Operational – Disruption to supplies and operations, loss of access
Fires	✓	✓	✓	✓
Natural disasters : Floods, Landslides, Thunderstorms & Lightning	✓	✓	✓	✓
Building Structural deficiencies – collapsing roofs, walls and/or buildings	✓	✓	✓	✓
Terrorism	✓	✓	✓	✓

Spatial Design Requirements

Prevention Measures

1. Design

1.1 Fire exits
1.2. Large openings for good ventilation
1.3. Finishes and fittings with high retardation ratings
1.4. Separation of flammable materials from sources of ignition
1.5. Wide but short circulation spaces
1.6. Provision of materials with low thermal conductivity between spaces to prevent fire spread

2. Communication

2.1. Emergency alarm system
2.2. 'No Smoking' Policy within school premises
2.3. Signage
2.3.1. Showing spatial/accommodation layout on each floor locating fire exits, firefighting equipement, main electrical switches and fire assembly points
2.3.2. Directional signage showing emergency escape routes

3. Protection Measures

3.1. Emergency exits
3.2. Emergency escape stairs
3.3. Emergency escape lighting
3.4. Fire alarm system
3.5. Fire detection system
3.6. Fire suppression system
    3.6.1. sprinklers
    3.6.2. fire hose reels or fire hydrants
3.7. Smoke control
3.8. Fire drills

Conclusion:

We therefore recommend that the above stated measures: in building design and in operational policy must be adopted and implemented to ensure the safety of the school occupants.

Ref:

Russell J., (2019) Emergency Preparedness in School: How to Prevent, Prepare, Respond and Recover in the Face of Emergencies and Disasters, Accessed 16th Sept 2020, https://www.accreditedschoolsonline.org/resources/emergency-preparedness-in-school/

Aljazeera Media Network, (02Sep2017) At least eight students killed in Nairobi school fire, Accessed 24th Sept 2020, https://www.aljazeera.com/news/2017/09/02/at-least-eightstudents- killed-in-nairobi-school-fire/

Odula T., (2019) 'Fire and Safety Management Document for Tandike University Library', D21FR: Fire, Explosions and Process Safety. Heriot Watt University. Unpublished.

CSCT3-3
Renewable Energy

Objective:

To come up with Sustainability and Long Term Interventions to Future-Proof Learning Environments (AGAINST COVID 19)

HOW IS COVID 19 SPREAD?

"To the best of our understanding, the virus is primarily spread through contact and respiratory droplets. Under some circumstances airborne transmission may occur (such as when aerosol generating procedures are conducted in health care settings or potentially, in indoor crowded poorly ventilated settings elsewhere). More studies are urgently needed to investigate such instances and assess their actual significance for transmission of COVID-19." – WHO

INTERVENTIONS

Maintaining adequate distance between students, wearing masks and washing/ sanitising hands regularly are the major interventions that need to be implemented. Electrically powered equipment and devices can also be helpful in preventing the spread of COVID-19 and enabling learning. Some examples of these are:-

1. **Electrically operated, hands-free doors, taps, etc**.

Benefit: Eliminates the need to touch surfaces, reducing spread through contact.

2. **Artificial Lighting**

Benefit: Required for adequate illumination for learning as well as cleaning and disinfecting rooms. The simulated classroom had lux levels lower than IES and EN recommended levels. Installing bigger windows and translucent roof sheets are one way of improving this, but use of high efficacy light fittings is the best way to ensure adequate lighting is achieved

3. **Mechanical Roof Ventilators**

Benefit: Can help to circulate air, thus improving air quality and reducing likelihood of airborne transmission.

4. **Water Pumps**

Benefit: Can help to circulate water to desired stations to enable regular hand washing. It is also important to use low-flow faucets to help conserve water.

5. Audio-Visual Equipment e.g. projectors, microphones, screens that aid teaching
Benefit: Can allow large classrooms to remain practical in terms of audibility and visibility of the teacher and content.

6. Computers, printers, network devices etc.
Benefit: These can be used for a wide range of things such as record keeping of attendance to help track possible cases of Covid 19, quick and effective information dissemination to school administration, and general administration of the school.

7. Installation of Air purifiers, UV disinfectants.
Benefit: These can help kill germs circulation in the air in closed spaces, reducing likelihood of airborne transmission.

To power the above equipment, stable, reliable electrical power supply is required in the schools. As a minimum, all schools must have electricity supply, either through the National Grid or Embedded Generation. Kenya is among the countries leading the way in Renewable Energy Generation and a recent drive to power all Schools is very important.

For remotely located schools, embedded generation is to be considered. Diesel Generators can be a stable and reliable source of power for off-grid schools, but the cost of running is prohibitive and this isn't a sustainable way of powering schools.

Wind turbines are another alternative. They uses the kinetic energy of wind to create mechanical power. This mechanical power is used to generate electricity.

In theory, this would be great because wind is an unlimited, free, renewable resource. However Schools in urban, densely populated area might lack space to set up farms and obstructions from adjacent buildings tend to make the wind turbulent and erratic. Also, Wind turbines can produce noise and are unsightly. Their maintenance is also specialised and costly.

To obtain solar power, the electromagnetic energy of sunlight is used to generate electrical power using the photovoltaic effect. This would be ideal because Solar PV is an unlimited, free, renewable resource.

Moreover, this method of generation is also silent and unobtrusive. Day schools are most active when the sun is available, reducing the need for storage as power requirements are much lower at night.

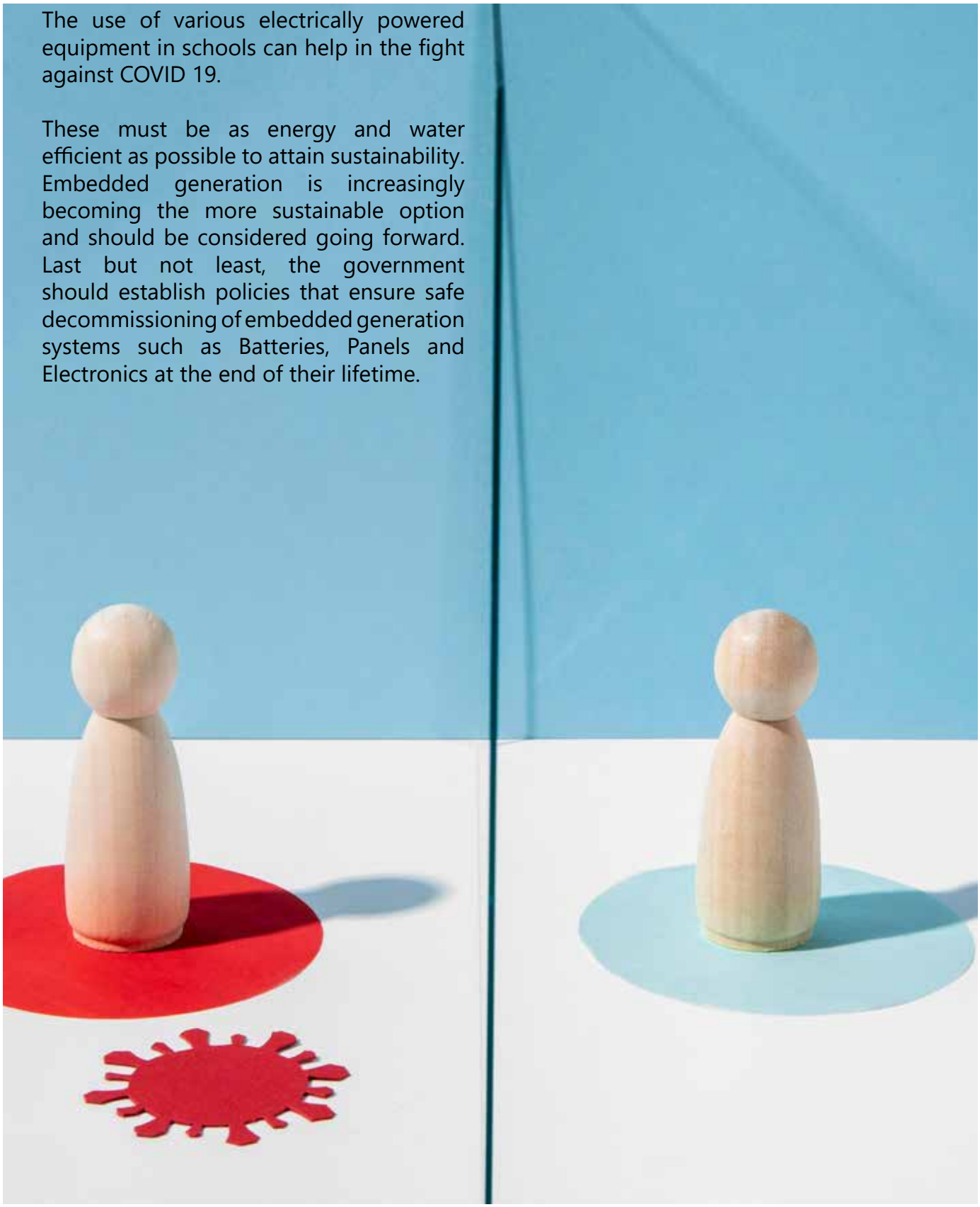
Stand-alone systems can be installed for off grid schools and Hybrid systems designed for schools that already have utility power connected. Installing Hybrid systems is beneficial because this can help reduce the schools' Utility Bills, helping payback the capital costs incurred as well as reducing energy losses between the power plant and the consumers. This will ultimately make the schools more sustainable.

Last but not least, the trend is that the cost of solar and wind technology is decreasing while their efficiency is improving. In the long term it will be absolutely feasible and sustainable to set up these solutions, and connect virtually all schools in a sustainable manner, enabling them to fight the spread of COVID-19 and other infectious diseases.

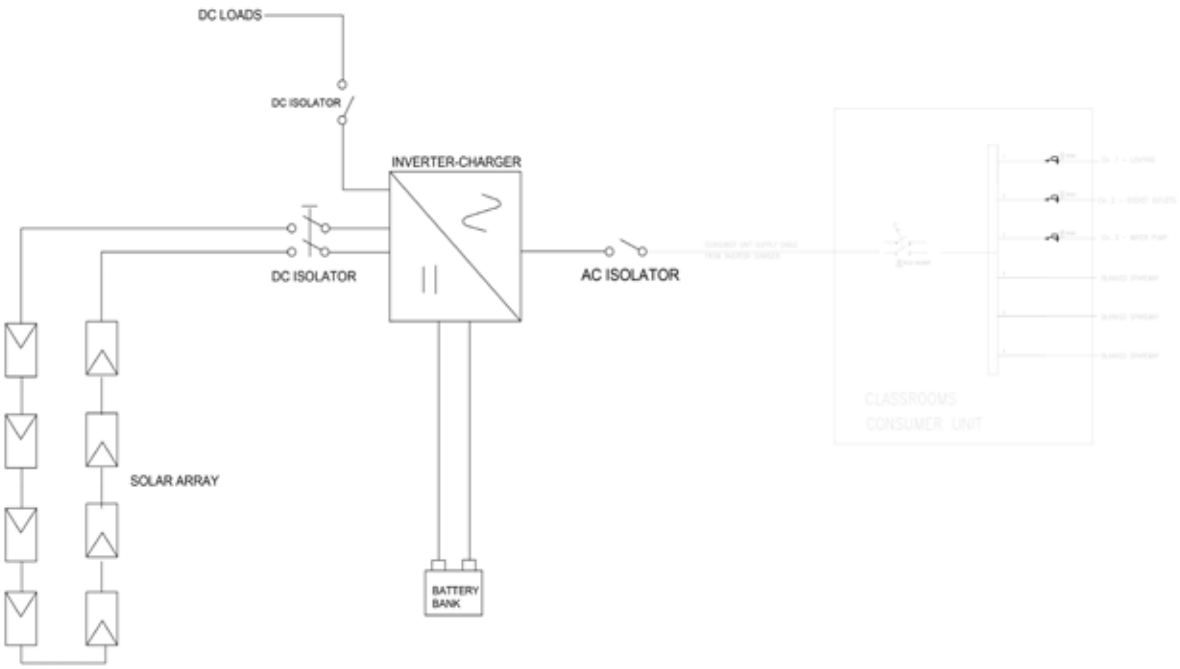
CONCLUSION

The use of various electrically powered equipment in schools can help in the fight against COVID 19.

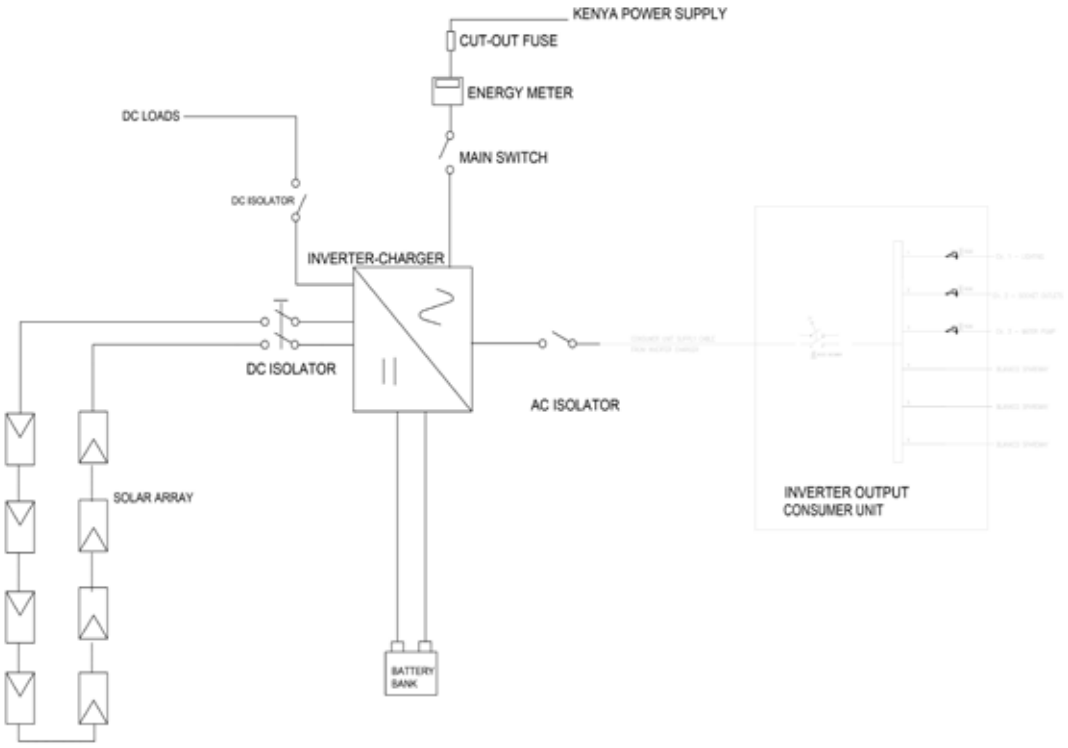
These must be as energy and water efficient as possible to attain sustainability. Embedded generation is increasingly becoming the more sustainable option and should be considered going forward. Last but not least, the government should establish policies that ensure safe decommissioning of embedded generation systems such as Batteries, Panels and Electronics at the end of their lifetime.



Typical arrangements for a Stand-alone and Hybrid PV Power Solutions that can be implemented in the schools



Stand Alone System



Hybrid Solar System

Simulations of Natural and Artificial Lighting for Different Classroom Models

Fig.1: On the left is a front-left view of a Classroom lit from Sunlight alone and on the right lighting is from both sunlight and 3 rows of LED luminaires.

Fig.2: On the left is a front-right view of a Classroom lit from Sunlight alone and on the right lighting is from both sunlight and 3 rows of LED luminaires.

Fig.3: On the left and right are views of a Classroom at night lit using 3 rows of LED luminaires.

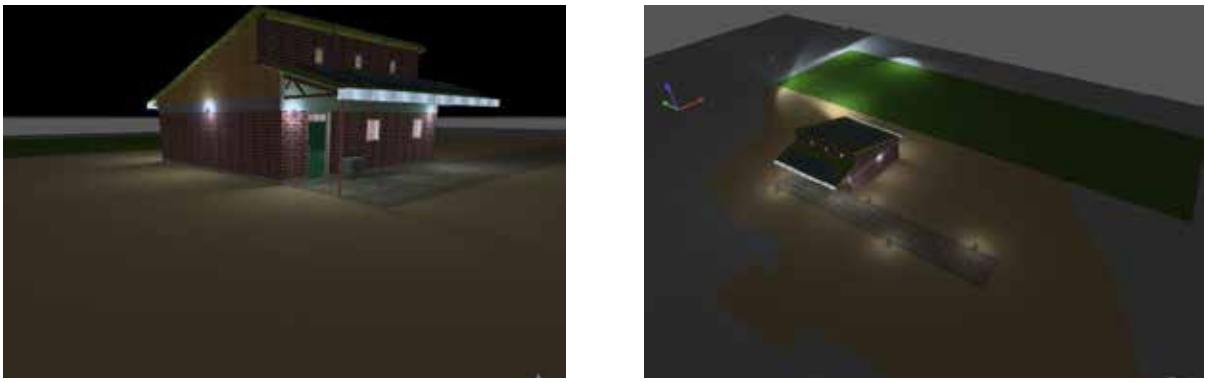


Fig.4: On the left and right are views of a sample external lighting of the classroom.

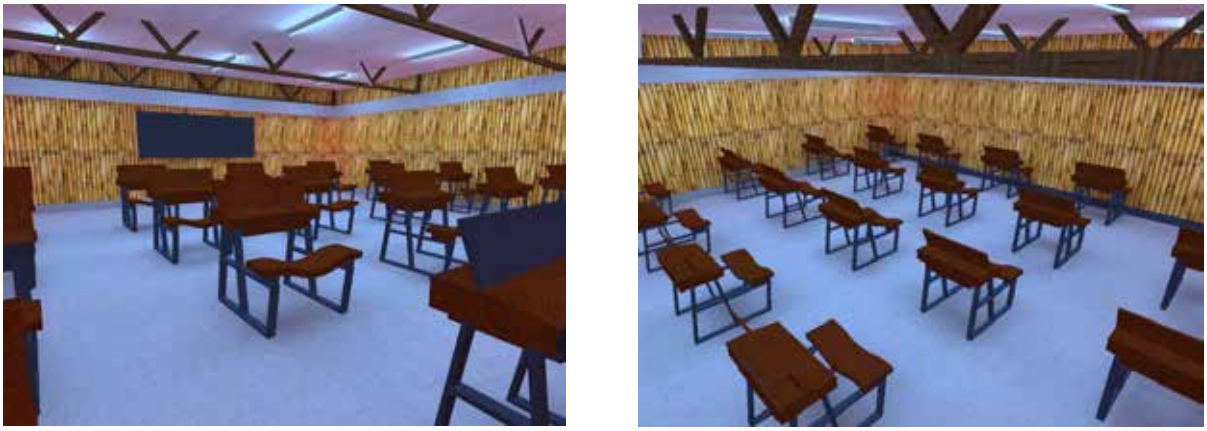
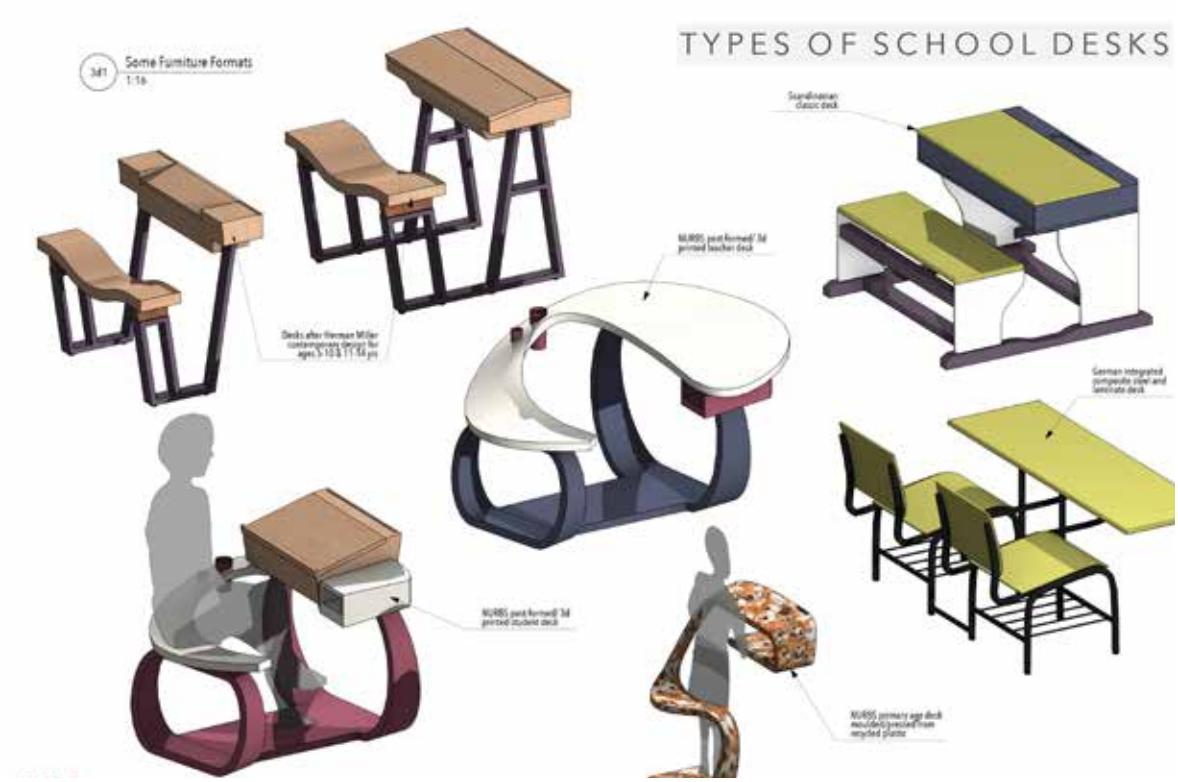


Fig.5: On the left and right are night time views of a Classroom constructed using Bamboo.

Fig.6: On the left and right are night time views of a Classroom constructed using Timber frames.

CSCT3-8
Furniture



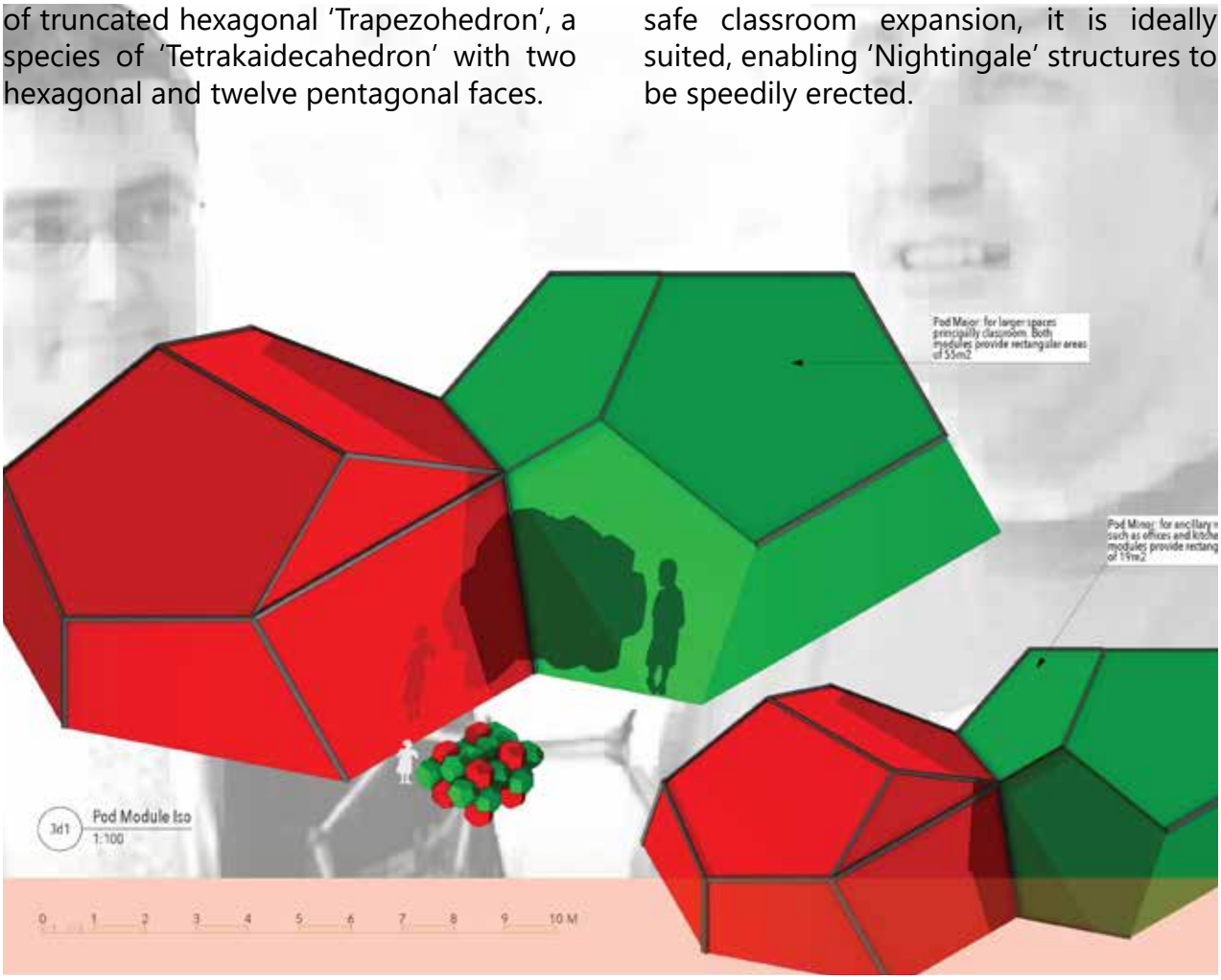
CSC4A
Nightingale Pods
Crystal Concept

The Weaire–Phelan structure is a complex 3-dimensional structure representing an idealised foam of equal-sized bubbles, discovered in 1993, by Trinity College Dublin physicist Denis Weaire and his student Robert Phelan, by computer simulations.

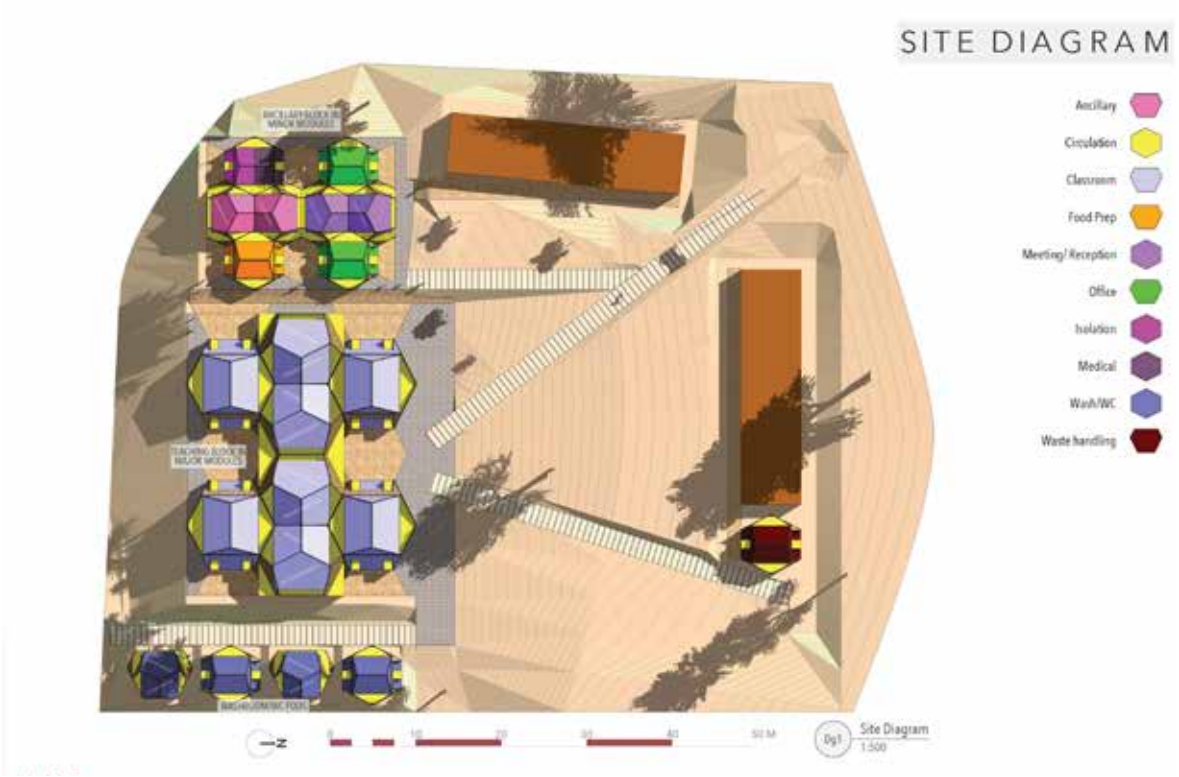
Topologically the symmetrical crystal comprises a 'Pyritohedron',(an irregular dodecahedron with pentagonal faces, possessing tetrahedral symmetry) and a form of truncated hexagonal 'Trapezohedron', a species of 'Tetrakaidecahedron' with two hexagonal and twelve pentagonal faces.

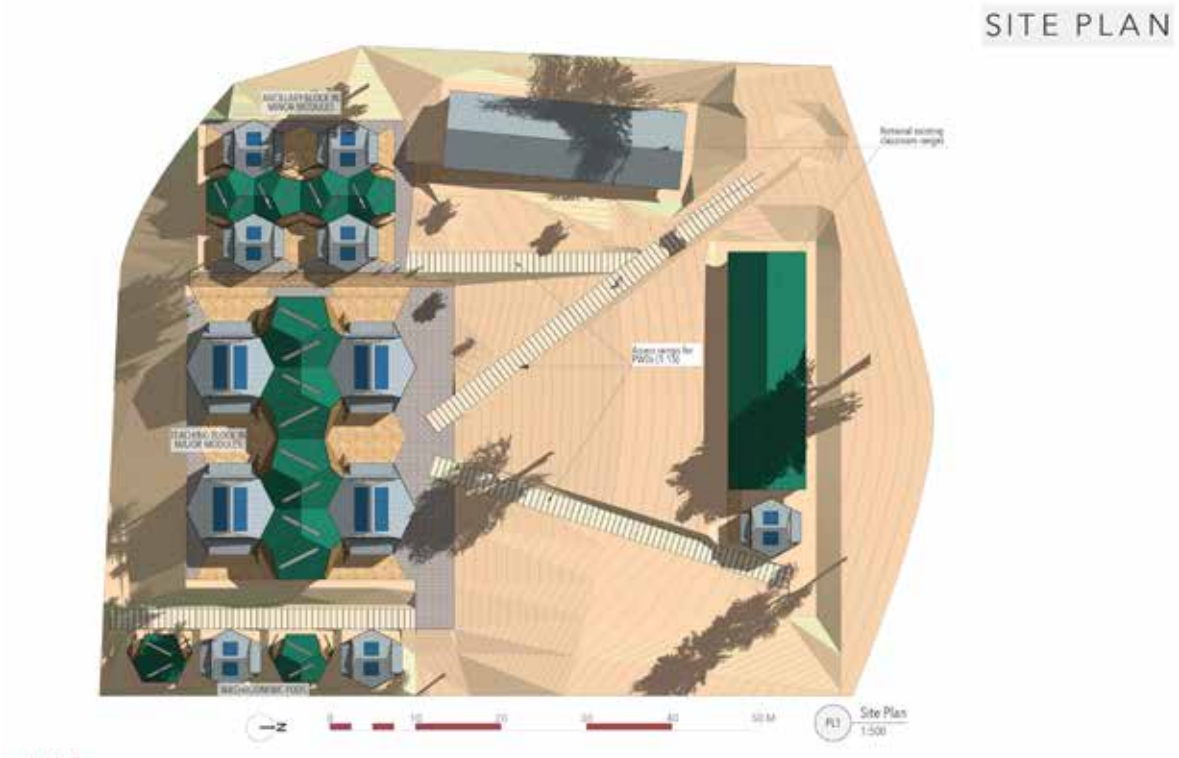
As a modular structural support system it is inherently strong and lightweight. As all joints in the structure are close to tetrahedral angles, the framework fills a large volume of space with a reduced amount of material, similar to a hexagonal honeycomb in two dimensions.

The Weaire–Phelan structure is the inspiration for the design of the Beijing National Aquatics Centre, the 'Water Cube', for the 2008 Summer Olympics. For Covid-safe classroom expansion, it is ideally suited, enabling 'Nightingale' structures to be speedily erected.



Modular Pods





Modular Pods

Modular Pods

CSC5A
Teaching Stadium

In line with CDC & UNICEF guidance, an outdoor 'Teaching Stadium' is here proposed, deploying wide video screen technology to cater for larger audiences, while maintaining Covid-distancing and high pupil:teacher ratios.

Its cost efficacy relies on inexpensive bulk earthworks with net zero cut-and-fill, using naturally sloping sites and gabion modelling, to create a stepped covered amphitheatre, while allowing the major portion of budget to procure the IT equipment, electrical and data infrastructure.

To maximise class sizes in this setting, slight modifications to the teaching curriculum might be introduced for example, suitable lessons could be combined such as chemistry with biology, or English with CRE, to avoid rotational attendance where some children would inevitably miss lessons.

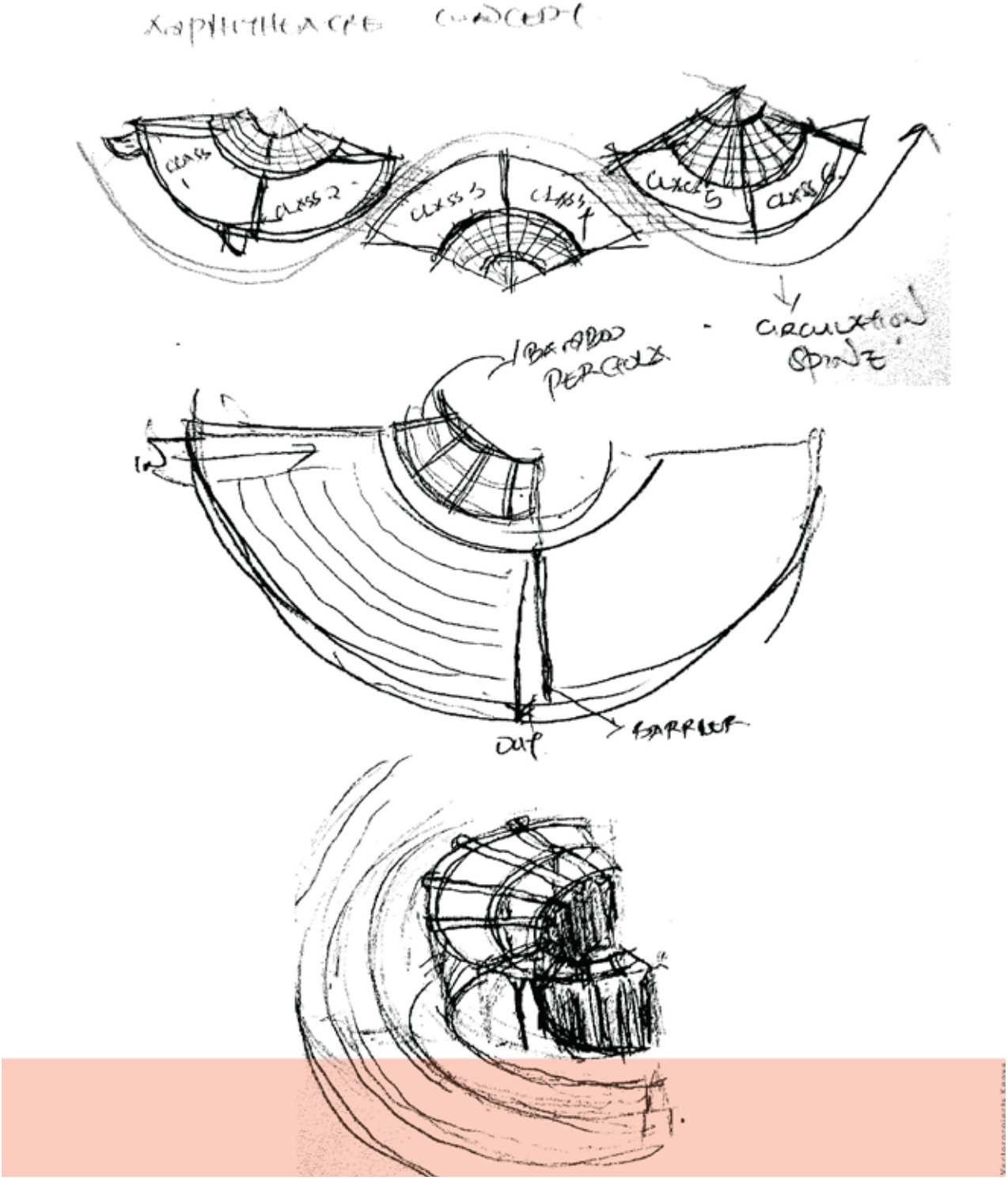
Ideas for non-contact recreations substituting for normal schools sports, include an outdoor life-size chess board. The design further encourages educational excellence in children during these challenging times, by representing notable high achievers in the wider academic community, furnishing an aspirational reminder of the possibilities within reach.

Those portrayed here include:

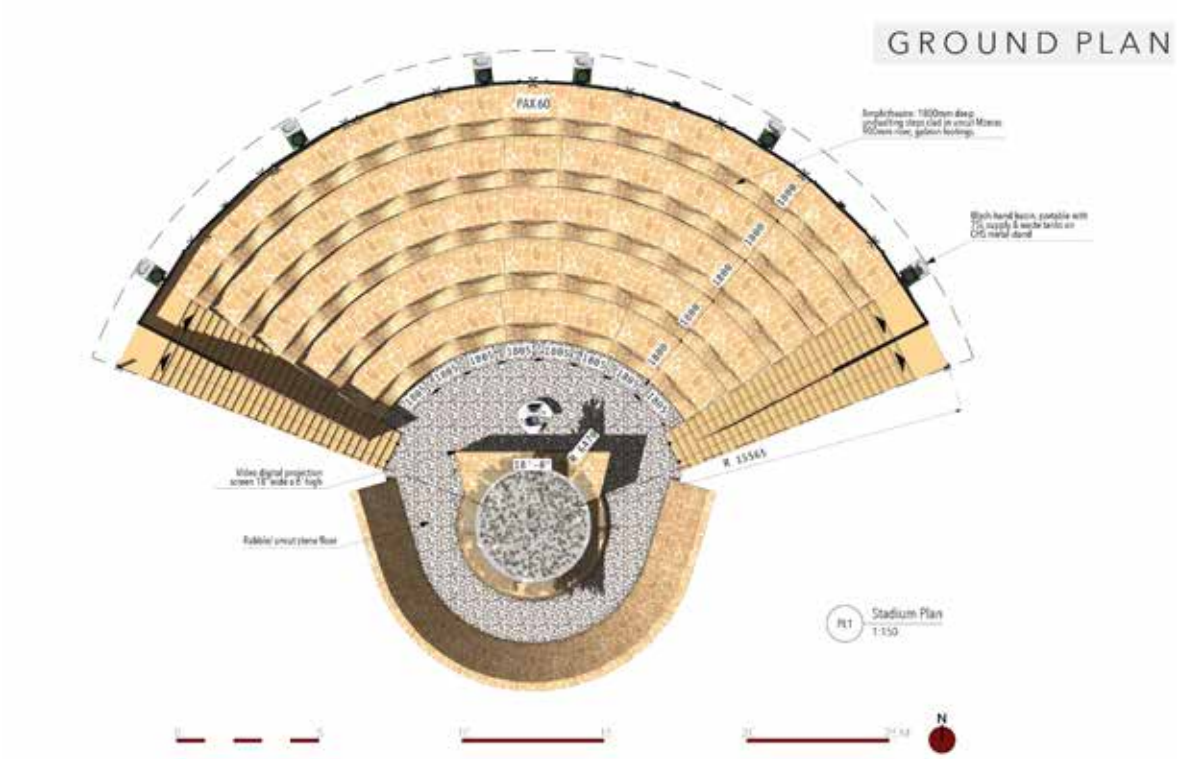
- **Evelyn Gitau**
- **Florence Wambugu**
- **Gladys Ngetich**
- **Grace Ogot**
- **Judy Mbugua**
- **Julia Ojiambo**
- **Lupita Nyong'o**
- **Ezekiel Kemboi**
- **Kinyanjui Kombani**
- **Wangari Maathai**
- **Hope Mwanake**
- **Ngũg iwa Thiong'o**
- **Njoroge Mungai**
- **Ruth Oniang'o**
- **Sheila Mwaranguo**
- **Tom Mboya**
- **Winnie Apiyo**

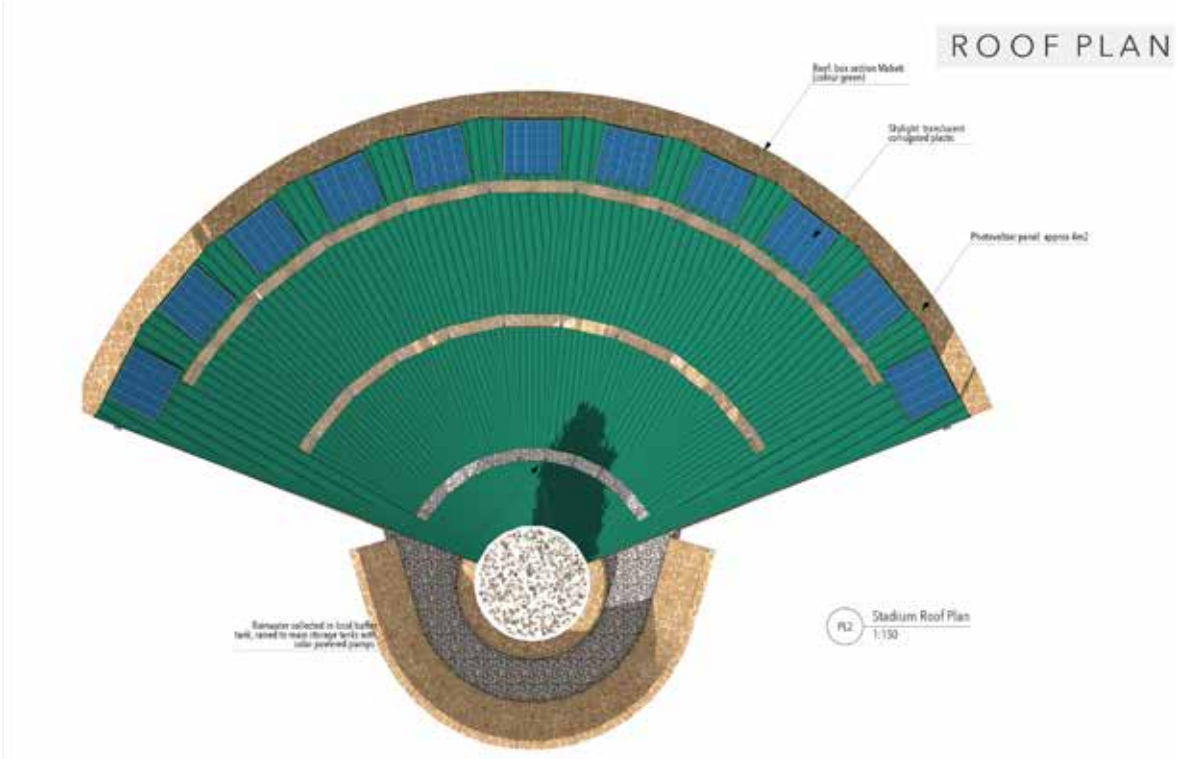
representing excellence in a wide range of academic disciplines, arts, sciences and sport.

DESIGN SKETCHES

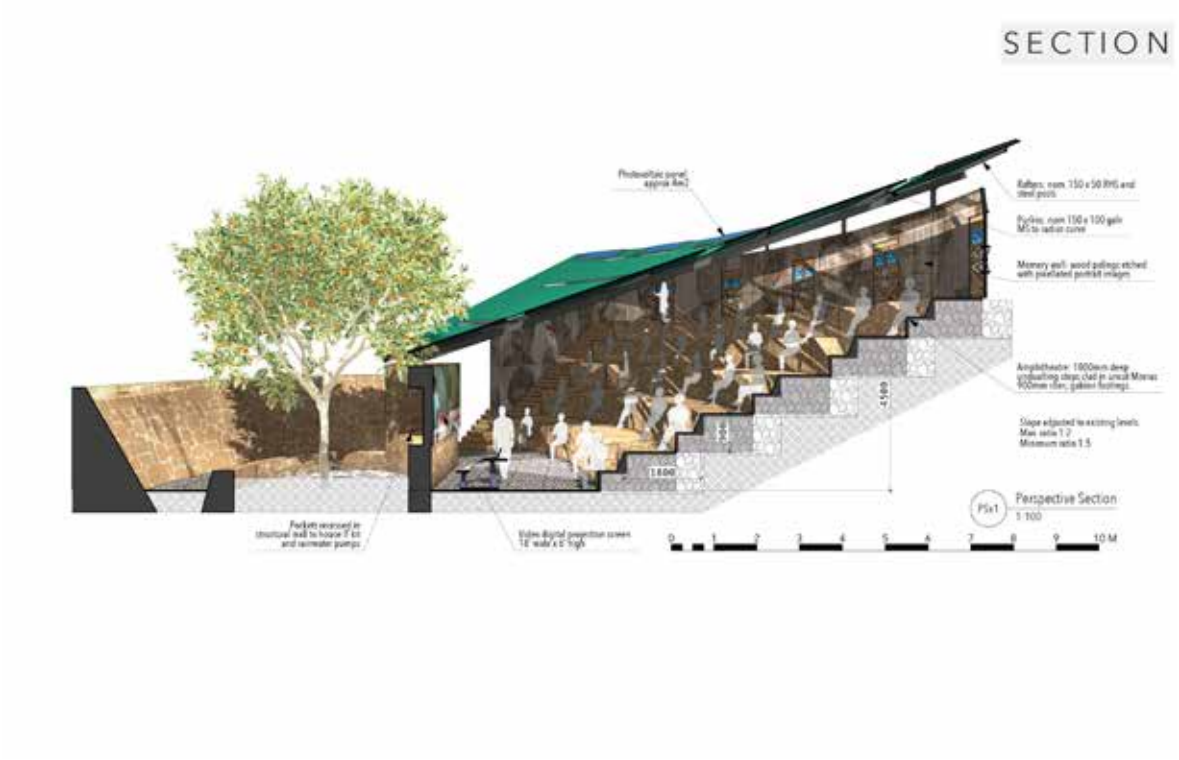


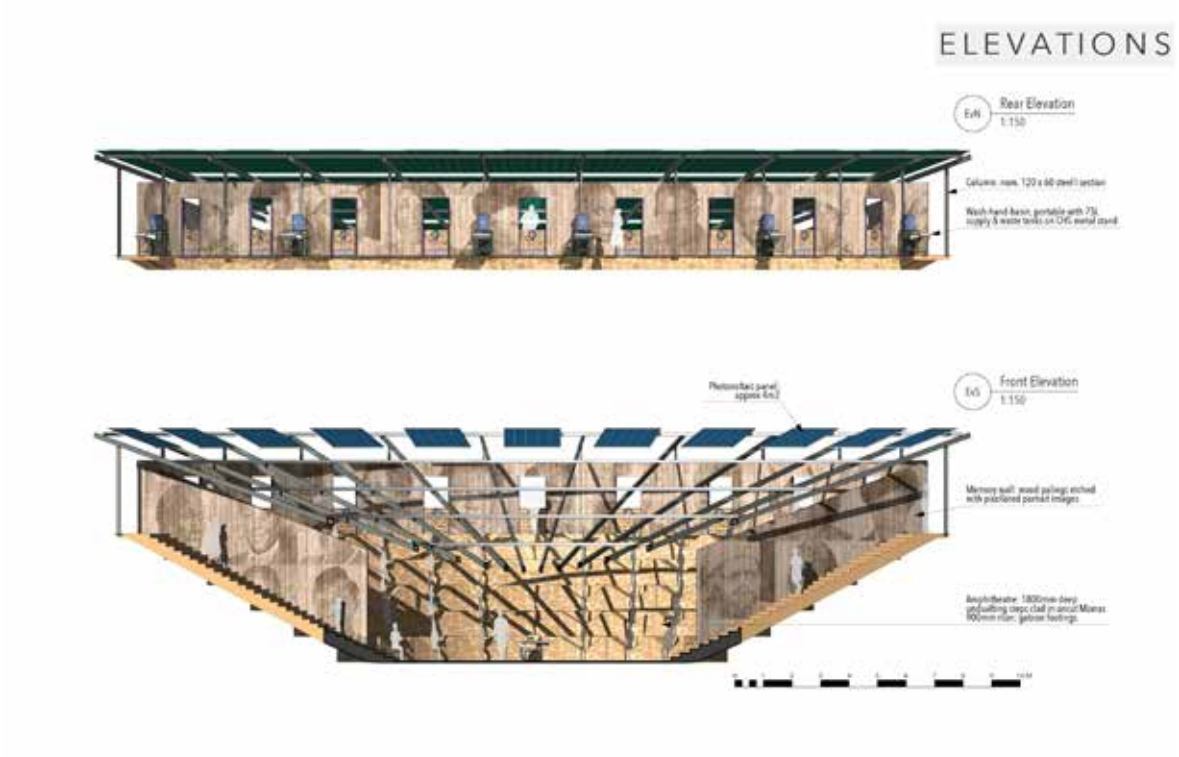
Teaching Stadium





Teaching Stadium





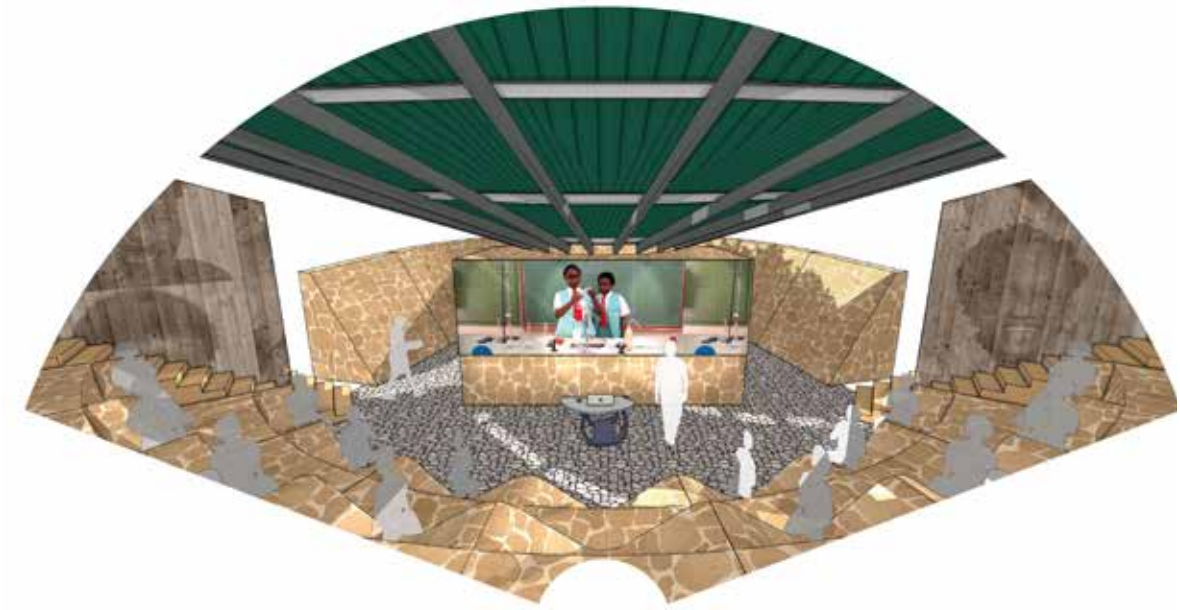
Teaching Stadium

BIRD PERSPECTIVE

INTERIOR PERSPECTIVE

Teaching Stadium

INTERIOR PERSPECTIVE



SITE PERSPECTIVE SW

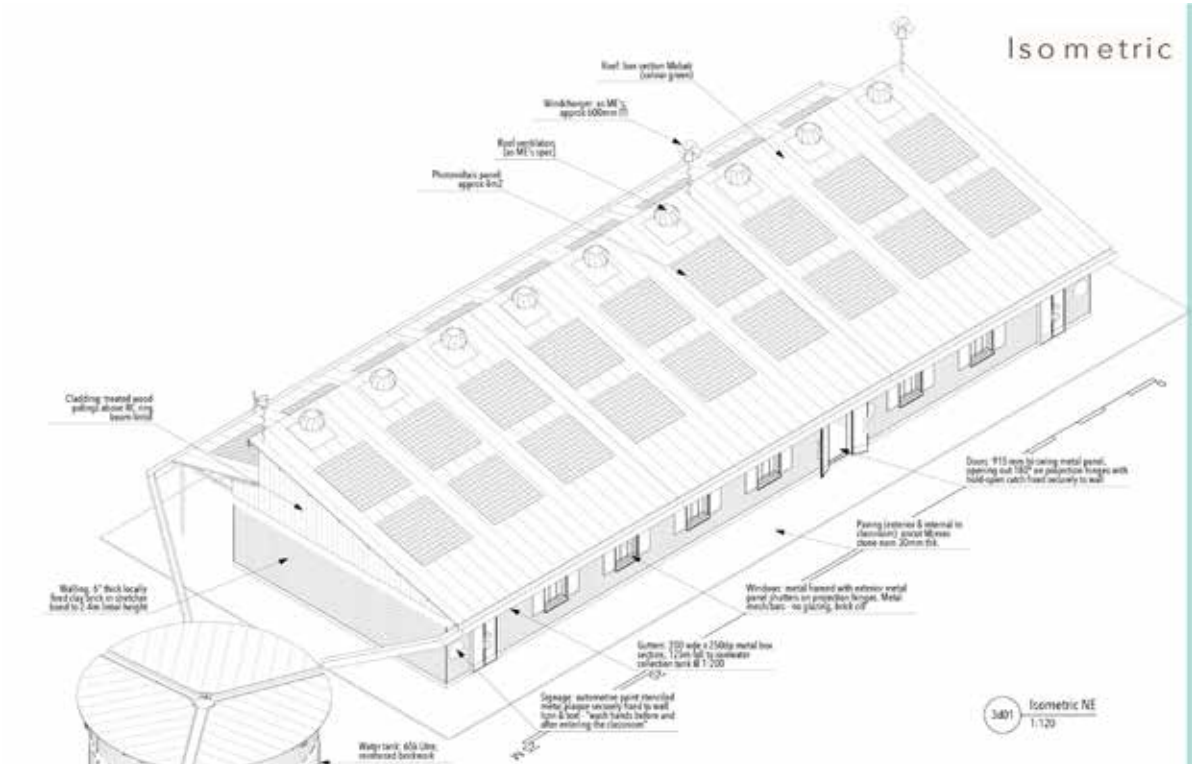
CSCT3
Six Foot Class

Construction Materials Concept

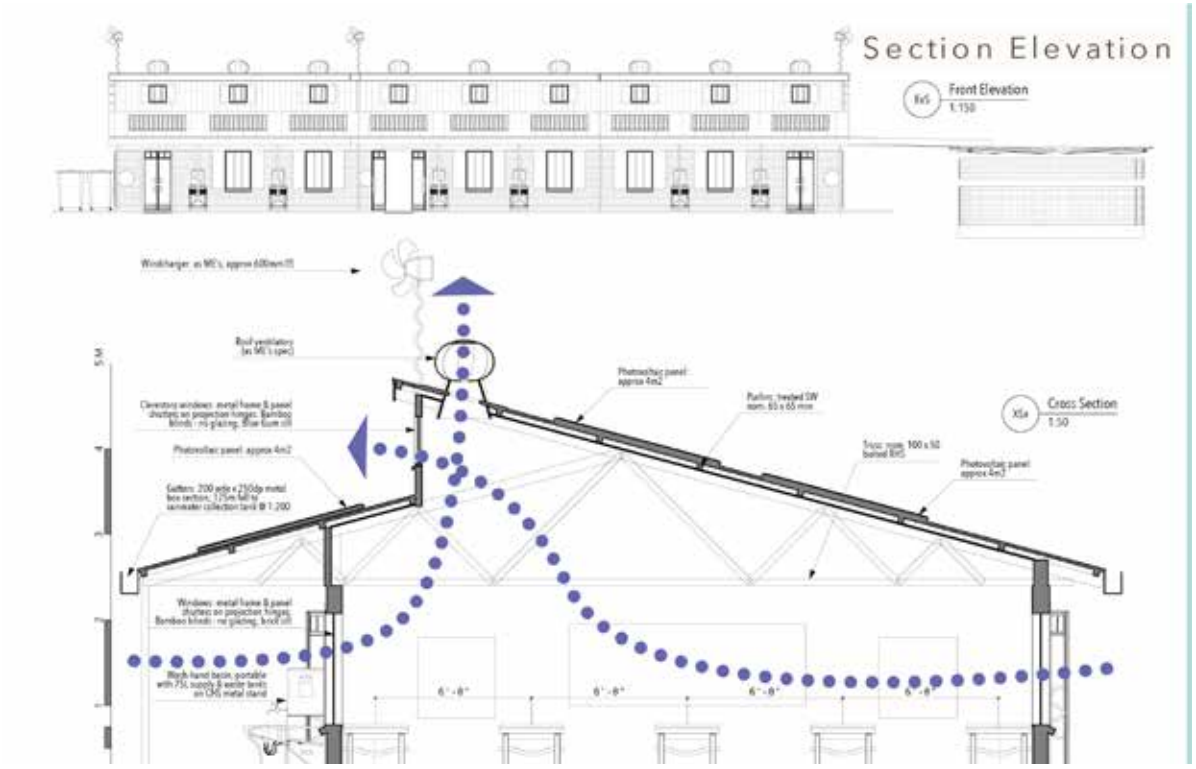
Dual pitch roof with oversailing rafter to create clerestory light and ventilation.

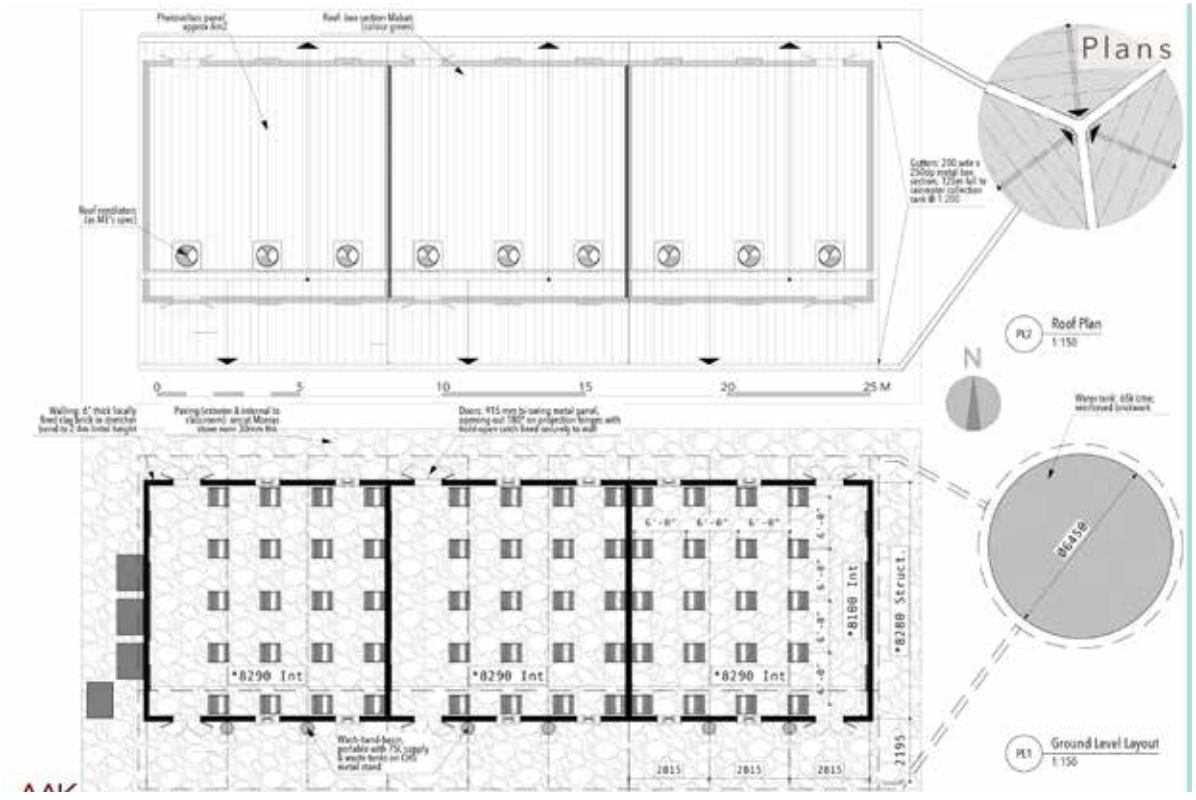
- **Additional ventilation provided by passive vents when clerestory is closed due to excess dust.**
- **Brick walls, RC lintol with wood cladding above.**
- **Metal panel doors. 25mm RHS frames.**
- **Adjustable bamboo/jute mat screens/blinds replace window glazing, for light, dust and humidity moderation.**
- **Hands-free door hardware operability.**
- **Flooring in uncut stone (Mzeras or similar).**
- **Bold Covid health & welfare signage.**
- **Electric power by solar photovoltaic collectors, supplemented by wind-charger power.**
- **Rainwater collected in brick tank.**
- **Target cost 12,500 KES/ m2**

Six Foot Class



Six Foot Class





CSC7
Bamboo Building

Construction Resources

This guide details the importance and the contribution of . . . species to the development of the Forestry Sector since its introduction in 1902 and the role it plays towards the National economy at large"
Prof. Eric Koech GUIDE TO ON-FARM EUCALYPTUS TREE GROWING IN KENYA
Chairman, Kenya Forest Service Management Board December 2009

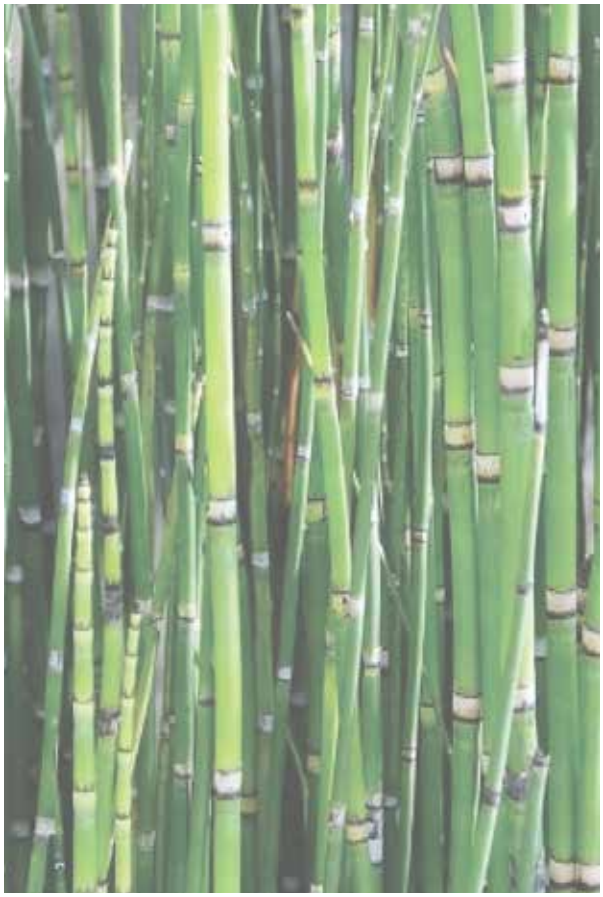
Further Guidance from Kenya Forestry Research Institute on Eucalyptus farming might equally apply to the Bamboo species. The point is that forestry is an industry which not only benefits the environment, mitigating the CO2 'Greenhouse' effect, but also affords the small scale farmer good returns on the crop, enabling them better to afford their children's school and university fees than other agro-products.

"The area under Eucalyptus is likely to increase as a result of high demand for transmission poles to cater for the ongoing expansion in rural electrification, and for construction, fuelwood, carbon sequestration and mitigation of the effects of climate change."

"A ready market for Eucalyptus products has motivated farmers to grow the species to improve their livelihoods through increased income. The government has recently provided guidelines on growing trees, and is presently working on a policy to [encourage forestry] in Kenya"
Ben N. Chikamai (PhD)
Director, Kenya Forestry Research Institute

Facts on Growing and Use of Eucalyptus in Kenya 2010

In the ten years following these initiatives, climate change undeniably advanced aggressively, while the viability of maize and sugar crops declined. For the subsequent Vision 2030 decade, a Covid-safe, affordable and sustainable school building programme which meets the acutely rising demand anticipated by the 2019 census is, as Mr Osiago advised the AAK Taskforce on 15th September 2020, urgent and imperative.



Greening Agenda

Features of Bamboo

Bamboo is grass

- Over 1,000 species: both herbaceous and woody
- Very wide usage: furniture, construction, charcoal, textiles, food, scaffolds e.t.c
- Fast growing
- Woody types are preferred for structural uses e.g Dendrocalamus asper.
- Bamboocanbeclassifiedinto i. Runningii. Clumping
- Bamboo can be propagated through: seeds, cuttings and tissue culture.
- Bamboo for construction should be harvested when it has significantly hardened (3-5 years old)
- It is usually advisable to mark the bamboos that shoot out every year for ease of identifying mature ones. Bamboo has sugary starch hence prone to attack by the powder post beetle.
- It must be treated against this attack to enhance durability. Two types of chemical treatment exist:

1. Treatment of bamboo is achieved by using a 5% Borax solution, which was pH neutral.
2. Non-fixing types: these can leach out when exposed to water hence not suitable for outdoor use. Boron salts (effective against- borers, termites). boron-borax solution most preferred in Kenya.

Engineered bamboo is a bamboo product designed to function as timber Bamboo is as durable as other timber construction materials poviding informed design to protect it against water ingress and insect attack.

However there is a continuing need to address policy gaps: currently KEBS, KEFRI & KBRC are formulating on standards. This work need to conclude urgently.

In order to foster the **commercialization of Bamboo plants**, and as part of the Administration's **Greening Campaign,** which seeks to achieve a minimum ten-percent (10%) tree cover by the end of the year 2020 in addition to creating employment through agroforestry; Cabinet sanctioned the **classification and designation of Bamboo as a scheduled crop** under the Crop Act (No. 16 of 2013).

Precedents

ANWA SCHOOL-KIBERA

This school is located in Kibera Slum-Lindi Village. It was designed by Kounkuey Design Initiative (KDI) an NGO working in urban slum areas to offer alternative architectural,urban planning & engineering solutions. Completed 2017

WHYNOT JUNIOR SCHOOL-MATHARE

This school is located in Mathare slums - it is an upgrade from dilapidated iron sheets structures. Its open hall serves as a church on Sundays, and classrooms during the week. Completed 2014. The project was initiated by LIVE-IN-SLUMS NGO and designed by architect Sara Mwende.

CHANGQING SCHOOL

This school is located in Mathare slum. It was built through effort from an NGO and Chinese Architects. The structure is a composite of masonry, concrete, timber, bamboo and corrugated sheets. The windows are made out of bamboo on steel framing

BRITAM TOWER

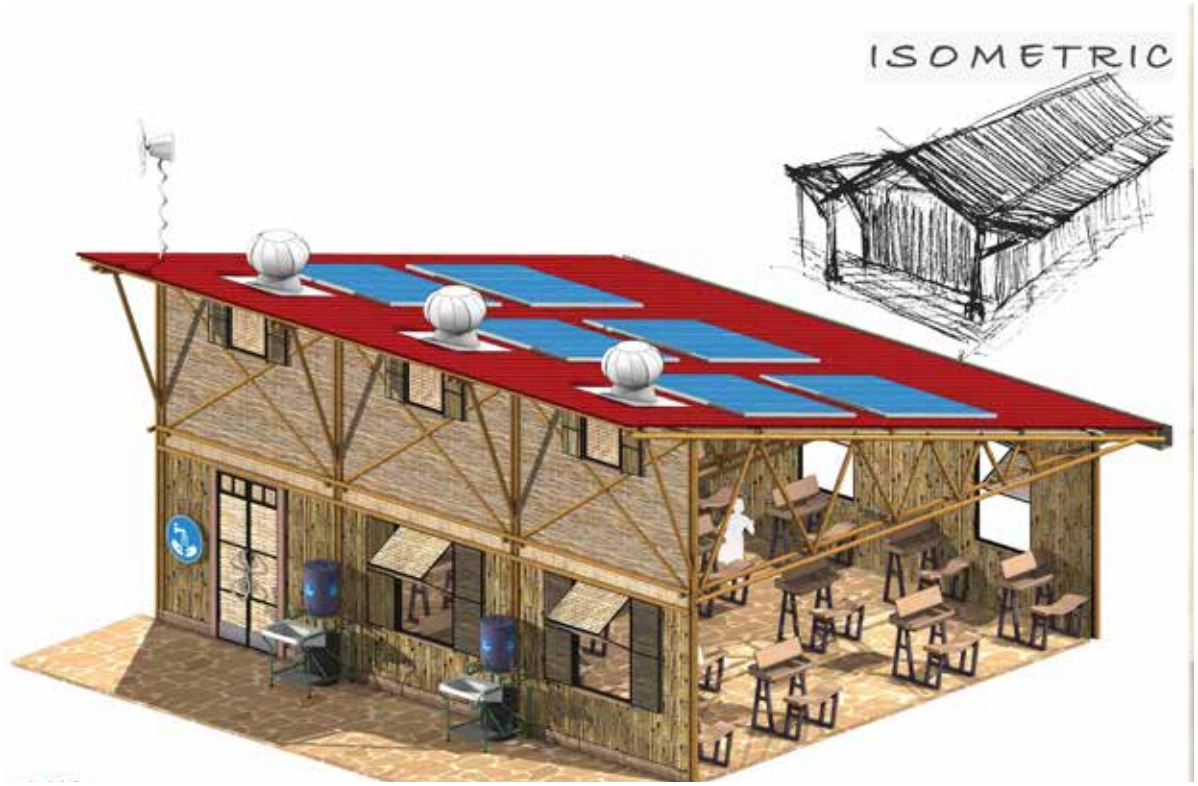
Owned by British-American Investments Company (Britam Holdings). Located in Upper Hill Nairobi. 192m high above ground with 32 usable floors making it the tallest building in Kenya.

Britam towers features engineered bamboo on the staircases, lift lobbies, furniture and reception areas.

Extracts and references provided by Architect Sylvia M. Essendi (B.Arch, M.A Env. Policy) National Construction Authority 2019

DEMISTIFYING THE USE OF BAMBOO IN CONSTRUCTION

For AAK Covid-Schools Taskforce Team 3: Sustainability and Long term Interventions to Future-Proof Learning Environments September 2020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Plan View
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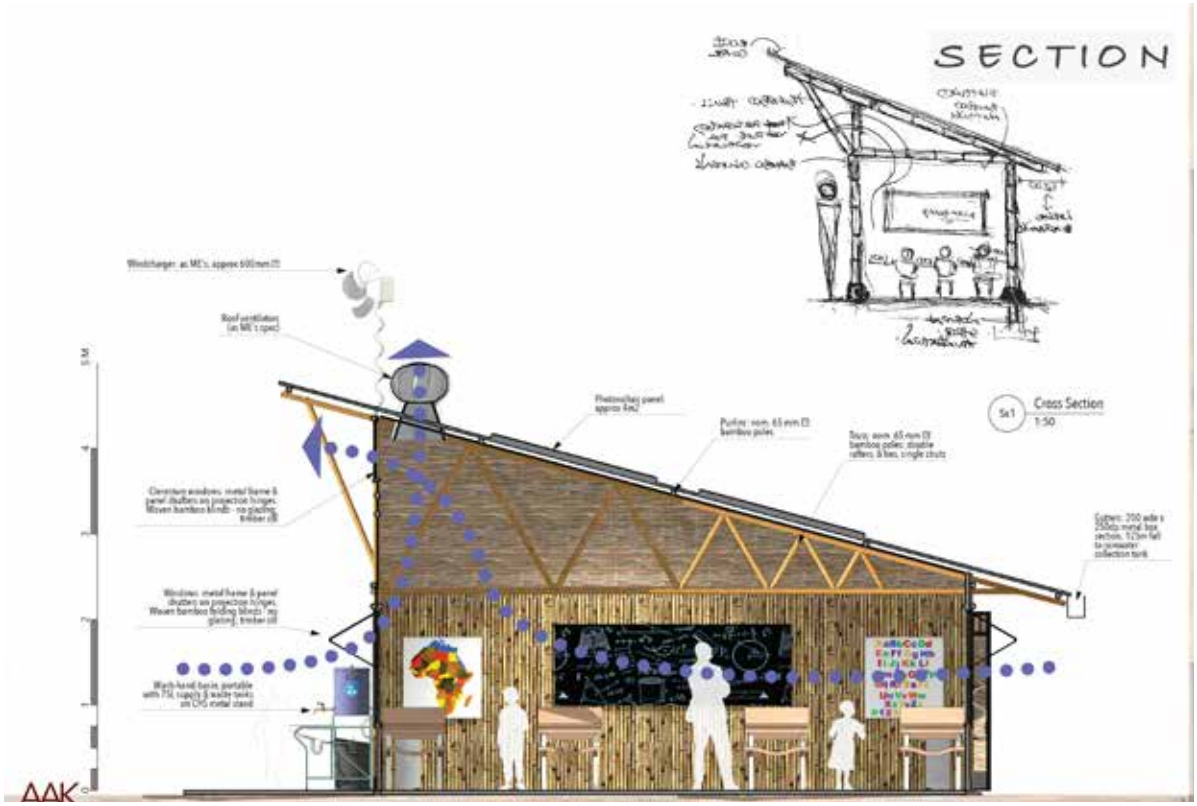
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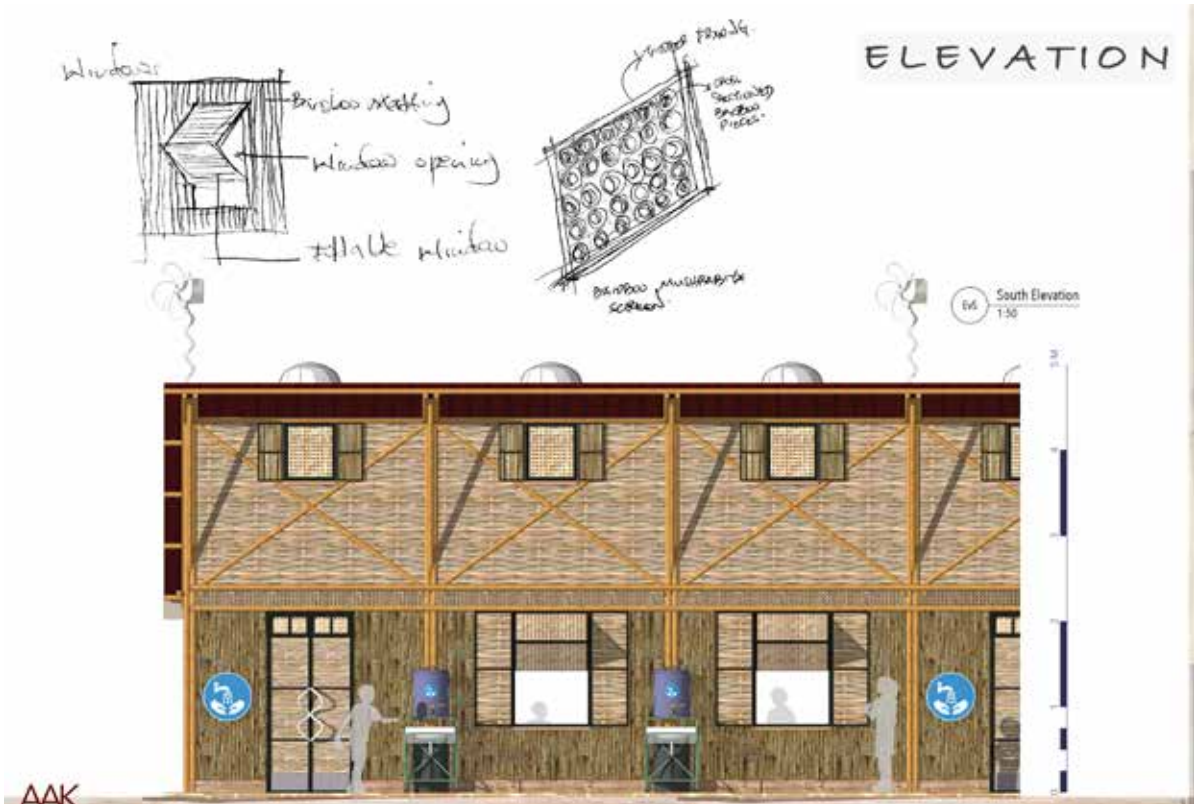
ELEVATION
South Elevation
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1873	OMAR KASIM
1882	MBICHA SOLOMON
1886	SITATI TOM
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1996	CHEBII K. KIBET
1997	KABBAU REUBEN
2010	MILIKAU EMMANUEL
2015	MANDUKU DANIEL
2077	MULI PIUS
2078	KAGIRI GEORGE
2080	MAGAMBO KAIRIMA
2097	WAITITU LEE
2099	NDETA BENSON
2102	MUTUKU MUTUA
2106	MUTISO E.K. ESTHER
2114	ONYANGO DENNIS
2116	MATIVO JUSTUS
2122	VIRDEE SATPAL SINGH
2123	MWANGI SAMUEL
2132	ADEYA ARTHUR
2135	ODULA TERESIA
2136	OGWAPIT STEPHEN
2141	GITHUTHU (MS) RITA
2146	RAI JAMES
2153	MUGURE NJENDU
2154	WASILWA PETER

Membership No.	Name
2156	MOTANYA DOMINIC
2175	NG`ENY STANLEY
2181	NJUGUNA ANTHONY
2182	GREMLEY ANDREW
2191	KEDOGO JOSEPH
2194	PATEL SUJESH
2202	ABDULNASSIR MOHAMMED
2254	NDUNGU KENNETH KIMATHI
2255	DR ARCH MUGWIMA BERNARD
2306	MUTAKAA JOHN
2307	TOROITICH CALEB
2312	NYAGAH ALEX
2319	OYUGI OTIENO
2321	KIAI SAMUEL
2329	RAJNOVIC PREDRAG
2333	MACHARIA WILSON
2337	MWANGI BENSON
2338	KARIITHI JOHN
2342	NYAMATO STEPHEN
2344	GITHENDU JAMES
2372	BISHER FAWAZ
2374	WAMBETE SOITA
2382	MAITHYA MUSUNGA
2385	KEEGA JOSEPH
2388	NAMULANDA GYAVIRA
2390	MBOGO DAVID
2393	KAGIINA JOSEPH
2407	KYENGO MARTIN
2409	SINGH JASPAL
2410	RALWALA ANTHONY
2411	MWAURA NELSON
2415	CHARFARE ASIF AHMED
2421	MUSUVA MUMO
2423	MATHENGE JONATHAN

ARCHITECT'S CHAPTER

Corporate Members

Membership No.	Name
2429	GACHANJA JOSEPH
2435	WEKESA DOUGLAS
2438	MECCA PEPELA
2445	LATI FELIX
2446	ONGUTO OSCAR
2451	NYONGESA ANDREW
2463	PATEL KUNAL
2468	KASANGA SYLVIA
2500	NYAGA CHARITY
2501	MUTAI EVANS
2507	NAICCA CHRISTOPHER
2511	NDEGE GEORGE
2512	MILOYO EMMA
2515	GICHUGU ERNEST
2518	OJWANG' PETER
2520	ANJARWALLA SHAFFIQ
2527	OLUOCH JARED
2529	AGGREY MAGANGA
2534	NJENGA DAVID
2536	GITAU HENRY
2537	WAHINYA CECILIA
2543	MANGURO ROBINSON
2546	NYAGA DAVID
2548	GITHATU FRANCIS
2585	BABU SUNDAY
2587	KIGAI EDWIN
2588	MACHARIA ANTHONY
2591	MWANGI EUTYCHUS
2593	MUNGAU KATHERINE
2595	KIGADA ERIC
2597	OMENYA (Dr.) ALFRED
2599	MATOLE DAVID
2614	SONGORO DAVID
2615	KIBOWEN KATHY

Membership No.	Name
2616	KIBAARA ISAAC
2635	MWILU STEPHEN
2644	ABDI ADNAN
2647	KARAMA YASIR BREK
2653	NDULU MWALYO
2654	SANCHEZ URKO
2656	WAFULA ALBERT
2658	ONYANGO NICHOLAS
2669	MABONGA DAVID
2679	KAMAU ISAAC
2686	NDICHU NINA SYOMITI
2691	KAHUTHU CHARLES
2714	KIMANGA SAMUEL
2715	SINGH MAYANK MAYANK
2726	GITAHI MARK
2736	KINYUA EVANS
2738	MRUTTU OTTO
2747	BHOYYO BRENDA
2748	OBALA PASCAL
2750	KAMWERU GEORGE
2751	OPIYO GAD
2773	MUNGA MOSES
2774	NYACHWAYA WYCLIFF
2778	SULEIMAN IMRAN W
2779	MWANGI MICHAEL
2806	MWATU ONESMUS
2807	KARIUKI STEPHEN
2811	NJERU JOHN
2819	KIBE GIBSON
2820	ISMAIL ABDI
2823	ODINYO ALISO
2824	WETUNGU CALEB
2825	NGUNGUI JERUSHA
2826	ACHANDO JOHNSTONE

ARCHITECT'S CHAPTER

Corporate Members

Membership No.	Name
2843	MURIITHI JAMES
2847	GATOME MARYCLARE
2865	THETHY JATINDER
2869	NJOROGE JOEL
2875	TOROITICH KIBET
2876	SIKHILA HAM
2891	KARANJA DENNIS
2895	MAINA PHILIP
2897	WAMBUA PIUS
2904	KEBENEI JUDY
2934	OKELLO NOEL
2975	KITHISYA DAVID
2982	MBOGO SAMUEL
2995	WARFA ABDUL RAZAQ
3098	SEHMI JASRAJ SINGH
3102	NDEGE LUKE
3110	OGONJE ALLAN
3119	ALOYO PAUL
3122	JUMA JACINTA
3125	SUTHAR RITESH
3132	MBAKA NICK
3137	MWANGI ARTHUR
3138	KILONZO ANDREW
3147	GITHINJI MBURU EDWARD
3149	WERE EUGENE
3158	SEMBHI TARVINDER
3195	NDUNGO JOSPHAT
3202	ISOE DENNIS
3210	MWANGI MONICA
3213	MAKAGUTU NOEL
3221	KISIENYA KELVIN
3222	MOORES PAUL
3228	SAMOKA KENNEDY
3262	MAINA RUTH

Membership No.	Name
3263	NYAKANG'U TUESDAY
3264	NAMWAKIRA AMY
3282	MUIRURI ISAAC
3283	WAHOME CHRIS
3287	FRANCIS PATRICK
3301	KAMAU KENNETH
3307	MUNENE LEE
3316	NYANGE WILSON
3336	HOFF JOANNA
3397	MANGO ALFRED
3398	MUTUA U.M. URBANOS
3415	MUDOME TIMOTHY
3430	MUNALA (DR) GERRYSHOM
3431	MUJIVANE MARK
3432	WARUTERE ERIC
3433	NJOROGE MARTIN
3434	GITOHO BENJAMIN
3438	NASILA MASINDE
3439	MUSYIMI MARYLYN
3444	NYOLE FLORENCE
3445	KAIRU JACQUELINE
3446	KUBAI MARTIN MURIMI
3448	OLUGA PRISCILLA
3450	NDUNGU SIMON K.
3458	OBUTU IVAN MAGORI
3459	MWAZIGHE JOHN
3492	NJAMBI GABRIEL
3506	KAMUYU ANGELA
3511	GITONGA LEWIS
3530	SEMWOGERERE KENNETH
3609	FAITH MASIBILI
3624	DEOGUN IQBAL
3655	MUTHUMBI KEVIN
3676	KARIUKI WAGAIYU

ARCHITECT'S CHAPTER

Corporate Members

Membership No.	Name
3677	NZIOKA EVANS
3680	GITHAIGA DENNIS
3684	PANESAR GURMUKH
3693	WARUHIU NICHOLAS
3732	ESMAIL FIZAA
3748	KIMANI MOSES
3837	WAKHUNGU JOSECK
3851	TURYAHABWE RICHARD
3872	MANANI KEPHER
3873	LUTTA STEPHEN
3895	KANJA DAVID
3897	LIKU ASHLEY
3905	FELIX L.O KAWUONDI
3930	SIDNEY E. NDALILA
3940	DENNIS M. MOYO
3941	ESTHER W. MUIRURI
3959	GODFREY W. MWAURA
3969	MASEGHE MARTIN TAIRO
3972	GACHIRA THAIRU
3973	WYCLIFFE WABURIRI
3984	ANVI SHAH
4013	PARIMALA SAXENA
4024	ANTJE CLAUDIA ECKOLDT
4100	NDEDA SAMUEL
4122	EDWIN MUCHUGIA
4129	NGUMBAU VICTOR
4163	KRISHNA DEEPAK
4167	KAMANJA JEREMIAH
4187	JESSE KARANGA KIMANI
4239	JOEL LAWSON MAINA
4246	CALEB MONG`ARE NYAKOIRO
4293	NICHOLAS OTIENO OWUOR
4316	EMMANUEL GITAU NYORO
4343	BRIAN BABU KARIUKI
4400	DONALD MUHONDA ANDOLO
4453	NAMAGULU CHRISTINE
4603	REUBEN CHERUIYOT RUTTO
4755	NJERI JAMES MWANGI
4788	OKEMWA NYAKWEBA MOSES
4933	ODUOR HUMPHREY HASUWO
4941	MAHINDA VICTOR MURIITHI
4951	MATOVU JOHN RICHARD
5004	GATHIRU PETER MWAI
5007	CHRISTIAN BENIMANA
5071	CHRISTOPHER KIMUTAI TARUS

ARCHITECT'S CHAPTER

Licentiate Members

2129	NGUNJIRI SIMON
2166	DEYA ELLY
2184	KAMAU N JOSEPH
2228	BARASA IDRIS
2322	TSENGA DENNIS
2340	VICTOR OKELLO RACHUONYO
2343	MABIA GODFREY
2375	SHISIA WILLIAM
2392	MBURU GIBSON
2399	ABINCHA ANDISON
2464	NGIGI LILIAN
2637	PAUL ODHIAMBO OKICH
2638	KANG'ETHE BERNARD
2650	SIOCHA SAMUEL
2652	MOHAMMED ALI
2687	KAMUNGE MICHAEL
2688	KUOGOH GORDON
2721	LIMO LEONARD
2813	MUCHUNU ALLAN
2821	MWAURA JOHN
3054	WATAKO VINCENT

ARCHITECT'S CHAPTER

Licentiate Members

Membership No.	Name
3095	OTIENO PATRICK
3170	OGORA BEATRICE
3203	MWANGO WALLEX
3259	MAJIMBO RICHARD
3363	MURIANTHI NEBERT
3372	OMUNJALU STEVEN
3672	AWITI CLIFFORD
3852	OMOM TOBIAS
3877	GERALD MAINA
4196	HELLEN MOSSE
4256	MUREITHI JOSEPH GITAU
4381	NYAGA DENNIS MWENDA
4555	JASSAN NDEGWA NJANI
4646	KENNETH WAYNE MUTUMA
4794	KARIUKI MARK ANTHONY
4841	ODHIAMBO VINCENT
4970	OTIENO DAVID OCHIENG
5031	OTIENO DUNCAN
5041	JOHN OTIENO OPIYO

ARCHITECT'S CHAPTER

Graduate Members

1531	OWOUR WILSON
1749	THIMANGU ANTHONY
1817	KIARAHO DAVID
1857	EKAJUL ANTHONY
1970	WARIITHI PAUL
2125	KILILO THOMAS
2143	KAGWI SIMON
2310	MALONZA JOSPHINE
2436	AKALI GEORGE
2506	MAKHULO SUSAN
2523	OGOT SAMUEL
2549	CHELIMO THOMAS

Membership No.	Name
2584	AKUMA AUGUSTUS
2670	OYUGA JOEL
2697	MATHARU AMRITPAL
2717	MEDIRATTA KAVIT
2845	MATHU WAMBAA
2854	TALAAM JULIUS
2856	NDUNGU VIRGINIA
2866	MWANGI ALLAN
2874	HIUHU EDWARD
2900	ARAKA SUSAN
2903	MUHANDI GEORGE
2912	GICHUYIA LINDA
3129	LENJO PHILIP
3135	KIAMBA LORNA
3139	MUSANGI HENRY
3153	LATESTE MARIANE
3160	KIMURA JOHN
3165	KIMANI GABRIEL
3167	MAKAU MWAKI
3180	MUNYAO VERON ICA
3201	KAGO JACKSON
3229	MASIKA JOSEPH
3250	KAMUNYU ALEXANDER
3261	OYUGI COLLINS
3267	NYAMAI MARTIN
3271	MUNJARU HESBORNE
3298	NGATIA EDWARD
3303	MUGAMBI JACKSON
3318	MAVIA EVANS
3325	OPIL ANTHONY
3343	HUSEIN ABDILATIF
3346	OUMA ROBERTS HOPE
3347	STEPHEN JOSEPH
3348	MOSOIN KENNEDY

ARCHITECT'S CHAPTER

Graduate Members

Membership No.	Name
3365	GITHINJI FRANCIS
3369	VAN DER EERDEN JOHANNES
3376	WANJALA REINIER KHAMALA
3378	CHAVULIMU ERICK
3383	JAHANGIR IQBAL CHAUDHARY
3404	MWANGI BILLY
3422	KAMAU GERALD
3436	GICHURU VICTOR
3447	NJUGUNA ALEXANDER
3451	GITHINJI KEVIN
3456	NZUKI SOLOMON
3461	RONOH CLAIRE
3473	MTAMU JOSEPH
3480	KARIUKI BEATRICE
3486	WET JOHANN
3495	MUGO SUSAN
3531	KIHU MWAI
3533	KANTARIA RAKHEE
3538	NDALO ROBERT
3539	SHIKUKU JAMES
3605	ASATI JOSHUA
3631	OMBATI ANTONIO
3657	OYARO JAMES
3669	KURIA DUNCAN
3691	LUKE CARTER
3692	OPWONDI PETER
3730	OGOVA FADHILI
3749	WEYN VALERY
3779	MANDA KELVIN KAKAIRE
3789	AYIEKHA GEORGE
3834	PATEL GUARAV
3838	MWANGI STEPHEN
3850	JUMAAN SWABRI
3855	KARIGUH JOSHUA

Membership No.	Name
3898	VIRDI GUNDIP
3899	QIAN FEI
3901	KAMAU JANET
3938	PETER A. M. KABURU
3946	KILOO TIMOTHY
3950	CHARLES M. GHATI
3951	GEORGE K. IRUNGU
3952	NJENGA M. MARI
3956	LOUIS O. MUSA
3957	PHILLIP J. ODUK
3963	NJERI MWANGI
3977	JOHN O. ADODA
3985	MUMBI MAINA
3987	DENNIS MATARA
3993	CHARLES CHWIRI
3998	KILBURN HARRIS
4007	ETTA MADETE
4014	DEEPAK KRISHNA
4027	EUGENE MBUTHIA
4034	DAVID CHEMIAT
4039	CALVIN JUSTUS
4044	MICHAEL MBURU
4046	JOSEPH MUGO
4047	IRENE MUSYOKA
4120	NJERU EVANS
4123	JOSEPH MUTUA
4131	JOSIAH KIRUMA
4133	FIONA KAITESI
4135	CHARLES NJUGUNA
4137	IVY WANJIRU WAIYA
4141	SAMUEL OKWEMBA
4173	BASWETI VICTOR NYAMWEYA
4177	PIGOTT SHAWREN
4207	HAFSWA ALI

ARCHITECT'S CHAPTER

Graduate Members

Membership No.	Name
4252	KAMAU SYLVIA WANGECI
4258	CONSOLATA MUENI MUTUA
4259	FRANCIS NGOTHO MAINA
4261	ISABEL MUTHONI NJOROGE
4304	ISABEL MUGURE MBUGUA
4306	JOHANNES JACOBUS MARIA
4337	HEMPSTONE NYAWANDA
4341	CHARLES MUSYOKA AKAYI
4342	ROSEMARY WAMBUI KIMATA
4358	CYRUS MURAGE MUNYI
4360	WILLIAM KATHIANI THURANIRA
4363	ERIC KISANG PLAL
4364	IAN NDUNGU NJUGUNA
4369	WENDY WARIGIA WANDUNGU
4370	MALECHE DANIEL LUNALO
4377	MICHAEL MURIUKI MATHENGE
4379	PASCAL MUSERA WANDA
4380	MUTISO ANTHONY MUTUA
4383	ANDREW MUGO WARURUA
4384	CHRISTINE NZILANI MBAI
4388	SAMMY AKEM NYABIBA
4391	VIOLA CHEPKOECH LANGAT
4393	DAVID NGANGA NGURE
4397	DIANA MACHOKA
4470	PAUL KARIUKI GATHITU
4471	MURTAZA KHUZEMA AKBERALI
4473	MATTHEW KILONZI WAMBUA
4474	JOHN DICKSON MWANGI
4475	VICTOR NYAKUNDI
4476	MARGARET MACHARIA
4517	TITUS MUTETI MATHUVA
4522	CHRISTINE KAWIRA NKURU
4523	BALQISA ALI OMAR
4526	JEREMIAH OMWOYO OBAIGWA

Membership No.	Name
4529	EDWARD ACHACHI WANDERA
4537	MAKARIOS KAMAU GATIMU
4543	LOLO HIRBO BULLE
4547	ACHOCHI ERIC NYABUTO
4550	DOLPHINE KERUBO OMBUI
4553	SWABRA KASSIM MWAMKWARI
4574	IAN INGUNYI MUTALI
4575	SHARON WANJIRU
4581	KENALOIS MURAKARU KINYUA
4610	CHRIS KARANJA MACHARIA
4620	SAMUEL MUSYOKI MUTIE
4627	PHILIP MUIRURI MWANGI
4637	PHIDELIS AWOUR OBUYA
4645	JANET MORAA ONSUMU
4663	VICTOR KIM KIPTUM
4676	ADAMSON MAINGI KYALO
4677	PATRICK MURIRA BACIO
4691	OLUM DAVID JUMA
4695	NJERI MUTERO
4698	ANDRE MUNGAI GITHIRI
4700	FRANCIS KYALO MUSYA
4707	MARK MILU MWOKA
4708	GIDEON KIMEU MUTINDA
4710	ODHIAMBO BOB OYUGI
4711	COLLINS MOSE OBINO
4712	JAGJIT SINGH KHOKHAR
4715	EMMANUEL MAWERO
4716	ALEX ONYIEGO ONYANCHA
4726	STEPHEN JOHN BEKHOR
4731	KELVIN SALASYA WAKHULE
4779	YUSSUF HASSAN ABDI
4782	MWANGI SAMUEL MURIMI
4795	MURIITHI KENNETH MARK
4796	MUSAU SARAH MWENDE

ARCHITECT'S CHAPTER

Graduate Members

Membership No.	Name
4797	KYALO ADAMSON MAINGI
4802	MUKINDA JIM D. GITONGA
4813	MWIRIGI MARTIN GATOBU
4823	MBUTHIA RITA NUNGARI
4824	KINGI JOSEPH WAZIRI
4827	MWANGI PAUL MUNGAI
4831	HAZARY NIC
4832	KIMWELE VIOLET
4834	MUGO ADVIN MUNENE
4840	MOTURI RODNEY MAANGI
4845	MUTURI-KIOI RICHARD JESSE
4849	AZZAM KHALID SWALEH ALI
4852	MUTURI JOEL GICHURU
4856	BACIA KAMAU KANAIYA
4864	ALBERTO COSTA
4865	BAKAR NAIMO AHMED
4867	NDAGA WINFRED AWUOR
4875	KIGUAI KIHARA PHARIS
4876	NYAMASERO ROBI CAROL
4879	SCHRIJEN PAUL HUBERT
4894	MULI KIMEU
4901	MWAMBURI LEONARD NGWAI
4902	LARRAZABAL CAROLINA
4907	NGENO NOAH CHERUIYOT
4908	KIMARU ALEXANDER GATHIRU
4909	MUTISO MICHAEL MASESI
4910	MURIUKI CHRISTOPHER NGARE
4931	ABDILLAHI ZAHRA
4932	ODONGO PAUL OPONDO
4934	ROUND-TURNER LINDSEY
4935	MUTAI GILBERT
4936	NDHULI NGUMA SAMUEL
4937	KABURU TONY MUTWIRI
4938	MAKORI EVANS MASESE
4942	GATHERU ERIC MWAURA
4943	NGIELA DENIS
4944	LANGAT IAN KIPRONO
4945	ESSAJEE ASYA
4950	WEKESA GEORGE SIMIYU
4957	ABDULSHEIKH ABDULLAH
4959	MBURU NELSON GATABAKI
4960	KIRONGON BEATRICE
4961	CHEPKIYENG BRIAN KIPROTICH
4967	AROGO EMMACULATE AKINYI
4968	KAMAU PETER WAMBU
4971	DIO BRIAN MDZOMBA
4976	OGADA ALICE AWUOR
4981	ONDARA VINCENT ABUYA
4982	KIBUE JUDITH WANJIKU
4989	RANGANGA FELIX
4997	MISOI ANDREW KIPNGETICH
4998	OTURI ROSE AMONDI
4999	NJERU GEORGE RAINGWA
5006	NGUNU CATHERINE WANGECHI
5008	MIKE KARANI NDEKE
5009	JOSHUA OWINO
5011	CHRISTOPHER MAVUTI MUEMA
5034	NZAMSA TONNY MALUKI
5043	BOSCO MUMO KYULE
5045	MOTURI OMBOGA AMOS

ARCHITECT'S CHAPTER

Technician Members

2311	BOLO DENNIS
2740	MUNYORI SIMON
2914	CHHANIYARA BHARAT
3120	MURUU AMAR
3402	MULWA ERIC

ARCHITECT'S CHAPTER

Technician Members

Membership No.	Name
3403	KADERNANI MOHAMED
3854	SAID FAIZ
3907	HAWRAN A. AHMED
4015	ELIAS KIMANI KAMAU
4017	JEFF MUNYI
4049	MWIWAWI ALLEN
4050	PAUL NYONGESA
4226	PETER MUIRURI
4227	ERIC ABUGA
4307	WYCLIFFE OMARIBA OBINO
4519	LUCY MUKAMI WANJOHI
4524	ANTONY KARIUKI KARANJA
4551	ALTAF HUSSEIN KANA
4556	DAVID GACHOHI NGUGI
4583	DISHON ONGUSO OBWAYA
4635	EVALYNE WAITHERA NJIRANI
4660	LUCAS ODHIAMBO ONGAWO
4724	JERIM ELLY LIYAYI
4732	SHETTY PRAMOD SANJEEVA
4778	CHEBOI HILLARY KIPSANG
4800	KARANJA DAVID KAMAU
4816	MAINA SYLVIA JEMIMAH NJERI
4817	KAMAU PETER RUKUNGU
4826	WANDAURA LIZA NYAWIRA
4839	DANIEL MAJIWA
4842	GIDEON VICTOR MUSAU
4847	WANJIKU GEORGE M.
4851	JAOKO DINAH LETTY
4854	NDOLO ALET MUNYAO
4863	LUKORITO BRIAN FELIX
4866	KAMANYI CLEMENT MWANGI
4872	AUKA VITALIS AWUOR
4893	KAHORA DANIEL MWANIKI
4898	MURAGE DENNIS MUGAMBI
4899	MTUI WYCLIFFE SHADRACK
4927	KAGECHU JAMES GICHUHI
4953	KOMBO IAN MUKUBA
4980	MAGU VINCENT KINYUA
4987	ROBINSON KANDIA
5084	GEOFFREY MUGI MAINA

QUANTITY SURVEYORS' CHAPTER

Corporate Members

20	FENWICK HAROLD
426	LEVITAN ANTONY
481	NGUGI BERNARD
485	MALACHI ABSALOM OORO
490	GAKUYA HARRY
550	OTUKE JOSEPH
572	GITHUO GEORGE
604	JULIUS M. O OLUOCH
605	GICHUNGE HEZEKIAH
610	KIHARA CHRISTOPHER
626	HAJEE BASHIR
668	OGODA JAMES
677	MUAMBI HARRISON
687	NAYAR KISHORE
700	KAMAU MOSES
721	MWAURA CHARLES
730	JABBAL SUTINDER
734	GRANTHAM DAVID
738	KINYANJUI WILLIAM
763	NGUGI PAUL
764	OGAMA MATHIAS
767	MWANGI GABRIEL
768	MUGAKI PETER
770	MAUNGU NEWTON
771	KOIGI GEOFFREY

QUANTITY SURVEYORS' CHAPTER

Corporate Members

Membership No.	Name
782	OBAE SAMSON
785	NG`ANG`A JOSEPH
789	KARIGUH ROBINSON
802	BUNEI ROBERT
836	MUTISYA PATRICK
854	OKEROSI JOHN
859	MANDHRY ALI
864	MALALA REBMAN
898	WAIREGI WILFRED
1017	NDERITU CHRISTOPHER
1024	NGUYO DAVID
1092	WANYAGI JULIUS
1099	NDUNGU PETER
1100	KITHINJI BOORE
1125	MWANGI CHARLES
1157	ODHIAMBO EMMANUEL
1164	MOMANYI INNOCENT
1203	KAMICHA ALFRED
1245	MATHENGE JOHN
1301	MUNALA BENSON
1367	HUSEIN HUSEIN WERE
1419	MIRITI PETER
1479	NGARUIYA WILFRED
1494	WOSE LUSWETI
1497	KUSIENYA CASSIUS
1525	MBUGUA LAWRENCE
1532	ODONGO VICTOR
1550	AMBUKU ROBERT
1551	MUCHINA JOHN
1638	KITHOME PATRICK
1641	RUKWARO STEVE
1642	GITONGA MUNENE
1655	KUNGU JOSEPH
1656	MUCHUNGU PHILIP

Membership No.	Name
1671	TOROITICH BRIAN
1687	GITONGA MS. LILIAN
1699	MBAYA FRANCIS
1732	MUCHUNGU ANNA
1741	GICHUIRI JANE
1834	MUTAI NATASHA
1865	SAVALA DENIS
1872	MANYUIRA TIMOTHY
1874	MASESE GEORGE
1902	KIRUI DENIS
2026	AMBATSA PAUL
2112	WAMALWA EMMANUEL
2170	NGUGI GEORGE
2195	GITONGA AARON
2230	ASURA ELI
2330	KASILI L.M.
2331	KIMANI R.K.
2389	OUMA PIUS
2396	CHEKATA GREGORY
2420	KALAMA CHARLES
2444	OTIENO SALLY OLIVIA
2572	NJOGU PETER
2573	MWANGI JOB
2612	NDUNGU SIMON
2643	ALI MOHAMUD
2704	KOBIA MISHECK MICHUBU
2724	KAHURIA THOMAS
2742	ODHIAMBO MARY THERESA
2888	NDULI MICHAEL
2889	NGAYWA BERTRAND
3142	GREGORY OMITTO MUNYAKHO
3277	NDUA JOHN
3278	CHEK DENNIS
3350	MULONDO RACHEL

QUANTITY SURVEYORS' CHAPTER

Corporate Members

Membership No.	Name
3487	MWANGI LAMECK
3503	KIMEMIA SIMON
3548	NDERI KEVIN
3567	MUTUKU JOSPHAT
3632	MUTIE PAUL
3860	MATHENGE ROBERT
4336	SIMON SAILI MALONZA
4465	COSMAS ONYANGO
4684	MUSYOKA DIANA MUMBUA
4754	ODUU GODRICK EKISA
4785	EBOLE PAUL HABWE
4786	KARANJA LEAH WAMBUI
4984	CHERUIYOT GEOFFRY KIMUTAI
4995	OLUOCH SYLVESTER
5038	NICODEMUS CHEGE MAINA

QUANTITY SURVEYORS' CHAPTER

Licentiate Members

2725	MASAM BERNARD
3633	KANALO JAMES

QUANTITY SURVEYORS' CHAPTER

Graduate Members

1462	MATHARU NARINDER
1535	NJOROGE LOUIS
1786	HERD SIMON
2422	MANGWA DICKSON
2459	MOTANYA ALEX
2906	ONYANGO DENNIS
3231	KOIGI STEPHEN
3582	MUTHOMI KENNEDY
3736	WAWERU ALICE
3743	WAIRIUKO CAROLINE
3802	MAKARIO BRIAN

Membership No.	Name
3804	NDOMBI AINES
3847	KEMUNTO LINAH
3878	KANE MERCY
3879	KANYARU MOSES
4067	WENDY KIMWATAN
4085	MARX MUTEA
4086	LUCY NZIOKI
4087	HELLEN KIMANI
4219	NZANGI JAMES MUIMI
4302	JOEL NJAU KIHARA
4356	ROSE NJERI MWANGI
4516	PETER AMAYI LITIKU
4685	FRANCIS MURIITHI KIBERA
4686	FELIX NDOLO KITWAA
4913	KIPKOSGEI NICHOLAS
4947	BETHUEL FAYISA BALATE
4958	MUCEE DAVID NJERU

QUANTITY SURVEYORS' CHAPTER

Technician Members

2398	MURGOR EDWIN
2706	KIOK TIMOTHY
4115	OKOTH KELVIN
4507	DENNIS KIOKO KIVINDU
4991	MULI AUGUSTUS KIMANTHI

TOWN PLANNERS' CHAPTER

Corporate Members

513	MANASEH JANE
705	MOCHACHE (DR) JASON
1266	ADOLWA PATRICK
1280	PATEL MUKESH
1354	MAIRURA EVANS
1602	KEINO IRENE

TOWN PLANNERS' CHAPTER

Corporate Members

Membership No.	Name
1735	MWANZIA ALFRED
1947	DR. JEREMIAH NYABUTI
1957	MUSYOKA ROSE
1983	MULONGO LEONARD SIMIYU
2035	MICHOMA JAMES
2041	MWAURA PETER
2075	KASUKU SILVESTER
2165	MWAURA ARTHUR
2171	OMONDI FREDRICK
2207	KIMANI MARY
2208	GATIMU DAVID
2209	KUMUNGA EUNICE
2212	PARASHINA ISAAC
2217	MAINA JOHN
2222	SINDANI WELLINGTON
2229	OMOLLO WILFRED
2239	OGUTU CYRUS
2241	KATHENGE JUSTUS
2243	NDUNGU JAMES
2248	RITA JULIET
2254	NDUNGU KENNETH KIMATHI
2279	MUMBI ERIC
2295	KAUMBA ALICE
2450	ONYANGO MOSES
2472	AGENG`A GABRIEL
2482	MWAU CHARLES
2567	OLALE PHILIP
2617	MUKETHA SILAS
2621	NGARI STEPHEN
2622	GICHUKI DAVID
2624	NJOROGE CASTY
2627	KITONGA CHRISTOPHER
2628	WAWERU PATRICK
2629	MWANIKI MARYANNE

Membership No.	Name
2630	NTABO JOHN-SUIT
2835	SAKWA WINSTON
2837	OSEWE VINCENT
2913	WAMBUA ANTHONY
2944	MANG`IRA PERIS
3069	OMBUDO ADELAIDE
3079	OGARA DINAH
3103	MUGENDI GEOFFREY
3219	ISAAC MAMBO NYAMWERO
3238	OMOTI KEFA MISUKO
3407	GITHINJI ESTHER
3483	ODHIAMBO BENARD
3613	OTIENO WILFRED
3628	OKOTH CHARLES AMESO
3893	KATHIKE SAMMY
4089	ANN MUGO
4413	BETTY AWUOR ONGINJO
4458	DANIEL MURAGE MURAGURI
4688	RIUNGU ALFRED MWENDA
4750	KIITI NATHAN MUTUNGA
4752	NDATHO MERCYLEEN NKATHA
4771	PAUL BRIAN NDELEVA
4784	KIRUI ROSE CHEMUTAI
4814	KABERERE PETER MAINA
4859	AUMA NANCY ACHIENG
4861	KISIANGANI RACHEAL NEKESA
4871	CHIRCHIR ERIC KIPKIRUI
4930	LUSALA LOGEDI VICTOR
4946	MWENDA DUNCAN KITHINJI
5000	GICHURU SILAS MBAABU
5030	AGENGA GABRIEL ODHIAMBO

TOWN PLANNERS' CHAPTER

Graduate Members

Membership No.	Name
2029	NDEGEAH SAMUEL
2211	CHESIRE BRIAN
2255	DR ARCH MUGWIMA BERNARD
2357	NYABICHA MOSES
2544	MUREGI DENIS
2631	KWADHA AGGREY
2829	MATENDE RONALD
3170	OGORA BEATRICE
3499	MESO J.
3810	WARUIRU MAUREEN NJERI
3911	HASAN H. RASHID
4210	WILLIAM KINUTHIA
4807	MUKOKO BABU
4848	LITUNYA GETRUDE GLORIA
4924	MACHARIA MICHELLE MBATHA
4983	RUGENDO ABIGAIL MUKAMI
4994	KIOKO MOSES MBATE

ENGINEERS' CHAPTER

Corporate Members

564	BHUNDIA BHAGWANJI
1305	SHANKLA ARJAN
1455	VARSANI RATNA
2053	MBUI JONATHAN
2100	MSAFIRI SEBORU
2162	MUTEA EUSTACE
2205	KHABURE OLIVER
2227	NJENGA NATHAN
2231	MONDA ANTHONY
2313	KHAN MOHAMMED
2525	ANYIKA WILLIAM
2602	GUMBO NICOLAS
2731	KAGONDU GRACE
2732	KIMANI FRANCIS

Membership No.	Name
2733	MWANIKI ANDREW
2734	WANDAY PETER
2859	NYAWADE BENJAMIN
2860	NALYANYA PETER
2890	MUMENYA SIPHILA
3101	MAINA EPHRAHIM
3237	NDERITU MICHAEL
3562	OJENDO DOMINIC
3612	OTWANI JUSTUS
3859	MUCHEMI KARIUKI
3920	BERNARD S. OLOO
4286	GIFT KINUTHIA KARANJA
4408	MERCY MUGURE
4506	JOSHUA ICHANGI WERU
4601	MOMANYI GODFREY MARAMBE
4756	OTUOMA PATRICK OTIENO
4929	KIOKO PAUL KIMALI
4949	ADOYO FELIX OTIENO

ENGINEERS' CHAPTER

Graduate Members

1354	MAIRURA EVANS
3864	MUCHIGA ROSEBRENDA
4254	JOYCE MUGURU WAIRIMU
4687	NASHON ONYANGO TAMBO
4693	JACTON MWEMBE ACHIENG
4806	MUNENE DAN BRIAN
4916	NJUGUNA SIMON GITAU
4952	KIOKO MILES MAVEKE

ENGINEERS' CHAPTER

Graduate Members

5005	AMBWAYA SAMO

LANDSCAPE ARCHITECTS' CHAPTER

Corporate Members

Membership No.	Name
2307	TOROITICH CALEB
2499	GIKUNDI JOHN
2756	OFAFA AMBROSE
2757	WANZA CAROLYNE
2759	MUGAMBI LORNAH
2770	ODHIAMBO LORRAINE
2816	NJIRAINI ROBERT
2817	MURAGE DEMPSEY
3182	MUTUA SYLVIA
3191	MOCHAMA EMMANUEL
3192	MWAI RUTH
3826	BAARIU PATRICIA
4200	ARWARI SAMUEL KERONGO
4206	AGHAK ODHIAMBO

LANDSCAPE ARCHITECTS' CHAPTER

Licentiate Members

4412	CHLOE JUNE BROWN

LANDSCAPE ARCHITECTS' CHAPTER

Graduate Members

1948	PATEL B.P.
2498	M`IKIUGU MARTIN
2760	K`OYOO EDWIN
2898	KORIR PATRICK
3174	AHURA BENJAMIN
3205	OWUOR MARTIN
3740	GITAU DOMINIC
3842	KAMWERU GRACE
4020	JACKSON MUGO
4205	PIUS MOMBO
4257	GEORGE NANGABO WANJALA
4305	MULIEVI JOHN SHAMALA
4308	THEOPHILUS KIPRUTO

Membership No.	Name
4309	VALERIE GATWIRI IRUNGU
4323	KWAMBOKA JUDITH ONYONI
4351	GRACE SYOMBUA VALASA
4353	JOAN NYAGWALLA OTIENO
4480	PETER MUTHAMI MWIRANGA
4481	JOSEPHAT KIMARI GITHINJI
4484	GIBSON NGUMI GACHAGO
4485	MATILU SALOME KAVINDU
4602	PAUL WERUNGA MULATI
4641	NGESA JOAN NANG'AYO
4744	SIMIYU NANCY
4745	OMONDI MICHAEL OGOLA
4768	KAMANDE BRENDA GRACE
4821	GITONGA KIBE STANLEY
4850	MASWILI DAVID
4873	MOKAYA ALEX MARIETA
4877	NDALA MARIA TERRY
4905	MUREITHI DENIS MWANGI
4914	PETERS BRANDON SCOTT
4940	KOTOLO JAMES RAILA
4948	KINYUA PATRICK MWANGI
4965	ETYANG IKOJO ROSELYDAH
4973	NYADERO FIONA PENINA
4974	ITA CHRISTINE WANJIRA
4975	SHIVERE SHITOTE AUGUSTINE
4985	KIOKO MULUKI LILIAN
5001	NGATA PETER KARIUKI
5010	DEBORAH CHELANGAT
5029	GITONGA STANLEY
5033	SEBORU JUSTUS MWENDA
5036	LOUIS FABER CHITERI
5037	PETER KABUURU KIBAARA
5039	JUDDY NDUNGE MWOLOLO
5040	DAISY MONYENYE OREMO

LANDSCAPE ARCHITECTS' CHAPTER

Graduate Members

Membership No.	Name
5042	FREDRICK OMONDI OWINO
5046	CHARLES KYALO MUTUNE

CONSTRUCTION PROJECT MANAGERS' CHAPTER

Corporate Members

1200	OCHONG` DOUGLAS
1209	NDUNGU DAVID
1218	OCHIENG RAPHAEL
1343	NYARIKI WESLEY
1354	MAIRURA EVANS
1505	ABUNGE OSMAN
1638	KITHOME PATRICK
1760	OGAI ISAAC
1798	MUSEMBI MUMO
1810	OGUNDE OSCAR
2097	WAITITU LEE
2099	NDETA BENSON
2100	MSAFIRI SEBORU
2372	BISHER FAWAZ
2379	OHAWA EDWIN
2526	OSIDIANA DENIS
2587	KIGAI EDWIN
2615	KIBOWEN KATHY
2637	PAUL ODHIAMBO OKICH
2736	KINYUA EVANS
2888	NDULI MICHAEL
2889	NGAYWA BERTRAND
2923	ORIKO DANIEL
3193	MUTAKAA JOHN
3409	MWAZI ALPHAGE
3514	WANGA ALBERT
3611	KANALO JAMES
3636	WEKESA MOSES
3637	NGIGI PETER
3722	NJOKA BRIAN
3757	MBUGUA LAWRENCE
3783	KAIRU PAUL
3813	CHEGE GITURA
3815	MASUDI WILFRED
3862	MAYAVI PETER
3912	VINHUS NDUNG`U MATHU
4041	MALOBA NAKOLI
4124	KHAMILA MARK
4290	ALBERT OLUGA OGOLA
4463	NDINDIRI WAWERU
4904	EKASIBA CHARLES ICHUDI
4915	MWINGA MICHAEL GITARI
5003	MUREITHI LAWRENCE M.
5027	AGWER JOSEPH

CONSTRUCTION PROJECT MANAGERS' CHAPTER

Licentiate Members

4233	LUMADEDE MICHAEL AGOYA
4843	KINUTHIA JOSEPH WARUI

CONSTRUCTION PROJECT MANAGERS' CHAPTER

Graduate Members

3424	AYUYA ANDREW
3501	KIMANI JOHN
3566	BIWOTT JOHN
3620	KOIGI KAREN
3758	KAMOTHO JAMES
3760	OGADA AUSTIN
3773	NYAIRO JOSEPHAT
3830	MWANGI MARTIN

CONSTRUCTION PROJECT MANAGERS' CHAPTER

Graduate Members

Membership No.	Name
3887	OGOTI PHIRES
4196	HELLEN MOSSE
4264	JACOB SIMWERO
4404	JAMES MARAGUA KAHARE
4552	MARIANO NGONGA AMUMBE
4810	PETER MILIMU MUTANGE
4860	AREBA SOLOMON NYANGATE
5014	KABUI ESTHER DORCAS
5024	OKOTH GERA JAMES
5025	KIRORI CHEGE

CONSTRUCTION PROJECT MANAGERS' CHAPTER

Technician Members

5026	SANGA DANIEL TEMBO

ENVIRONMENTAL DESIGN CONSULTANTS' CHAPTER

Corporate Members

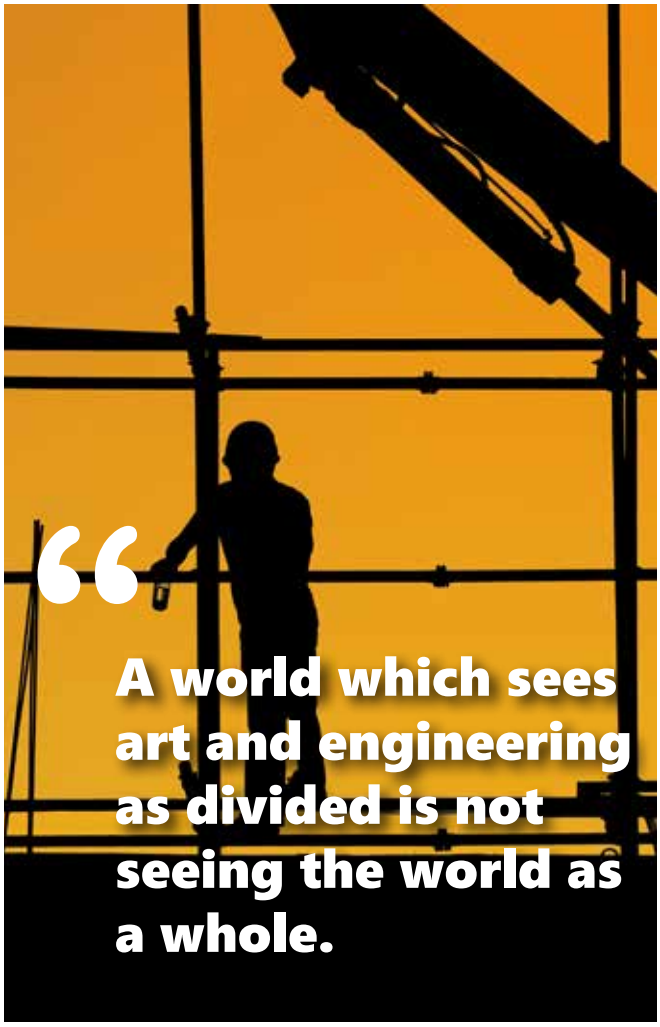
1354	MAIRURA EVANS
2134	MUKEKU JOSEPH
2599	MATOLE DAVID
2790	NJUE PETER
2793	MWANGI WINFRED
2796	SAIVA DANIEL
3177	DAVID ERIC LOKI
3208	NZIOKI NICKY
3287	FRANCIS PATRICK

Membership No.	Name

ENVIRONMENTAL DESIGN CONSULTANTS' CHAPTER

Graduate Members

3249	OTIENO NICKSON



Members in Good Standing

as at 19th November 2020

FIRM MEMBERS

Membership No.	Name	Chapter
F00001	TECTONICS INTERNATIONAL	ARCHITECTS
F00005	ECO PLAN MANAGEMENT LTD	TOWN PLANNERS
F00007	DMJ ARCHITECTSS	ARCHITECTS
F00008	SYMBION KLTD.	ARCHITECTS
F00009	KENMT BILL ENGINEERSS & PLANNERS	TOWN PLANNERS
F00011	MGA CONSULTANTS LTD	QUANTITY SURVEYORS
F00012	HAROLD FENWICK & ASSOCIATES	QUANTITY SURVEYORS
F00013	OORO & SANYA ASSOCIATES LTD	QUANTITY SURVEYORS
F00014	BATIMENT GROUP LTD	ARCHITECTS
F00016	AFRICOST LIMITED	QUANTITY SURVEYORS
F00017	TRIAD ARCHITECTS	ARCHITECTS
F00018	GETSO CONSULTANTS LIMITED	QUANTITY SURVEYORS
F00019	SK ARCHPLANS	ARCHITECTS
F00020	APT DESIGN SOLUTIONS	ARCHITECTS
F00021	MORPHOSIS LIMITED	ARCHITECTS
F00022	TEJ ARCHITECTSS	ARCHITECTS
F00023	AXIS ARCHITECTSS	ARCHITECTS
F00024	DAVSON AND WARD	QUANTITY SURVEYORS
F00025	ARPRIM CONSULTANTS	ARCHITECTS
F00026	TECTURA INTERNATIONAL LTD	ARCHITECTS
F00028	SYNTHESIS LTD	ARCHITECTS
F00029	AKA STUDIO	ARCHITECTS
F00032	AIA ARCHITECTS LIMITED	ARCHITECTS
F00036	ARCH-LINK INTERNATIONAL LTD	ARCHITECTS
F00037	BARKER & BARTON KENYA	QUANTITY SURVEYORS
F00041	CONSTRUCTION COST CONSULTANCY LTD	QUANTITY SURVEYORS
F00042	COSTWISE ASSOCIATES	QUANTITY SURVEYORS
F00043	FRAME CONSULTANTS LTD	ENGINEERS
F00044	GAKUYA & ASSOCIATES	QUANTITY SURVEYORS
F00051	MUAMBI ASSOCIATES	QUANTITY SURVEYORS
F00052	NORTH WIND CONSULTING LIMITED	QUANTITY SURVEYORS
F00053	OTTO MRUTTU & PARTNERS	ARCHITECTS
F00054	SCOPE DESIGN SYSTEMS LIMITED	ARCHITECTS
F00055	SKAIR ASSOCIATES	ARCHITECTS

FIRM MEMBERS

Membership No.	Name	Chapter
F00057	U-DESIGN ARCHITECTSS & INTERIOR DESIGNERS	ARCHITECTS
F00058	UNICONSULT ENGINEERSING CONSULTANTS LTD	ENGINEERS
F00059	BOWMAN ASSOCIATES	ARCHITECTS
F00061	JAWKIM CONSULTING ARCHITECTS LLP	ARCHITECTS
F00062	MAESTRO ARCHITECTS LTD	ARCHITECTS
F00065	WAWERU & ASSOCIATES, ARCHITECTSS	ARCHITECTS
F00068	ARPLAD ARCHITECTS	ARCHITECTS
F00069	LEXICON PLUS ION LIMITED	ARCHITECTS
F00071	AEGIS DEVELOPMENT SOLUTIONS LTD	QUANTITY SURVEYORS
F00072	SHAQUE ASSOCIATES LTD	QUANTITY SURVEYORS
F00075	ULTIMATE DESIGN LTD	ARCHITECTS
F00079	M & M CONSTRUCTION CONSULTANTS	QUANTITY SURVEYORS
F00081	MAK CONSULTANTS	QUANTITY SURVEYORS
F00082	INTEGRATED YMR PARTNERSHIP	QUANTITY SURVEYORS
F00084	BUNEI, MAUNGU AND ASSOCIATES	QUANTITY SURVEYORS
F00085	AAKI CONSULTANTS	ARCHITECTS
F00089	STUDIO INFINITY LLP	ARCHITECTS
F00091	SKETCH STUDIO	ARCHITECTS
F00096	MASTERBILL INTERGRATED PROJECTS	QUANTITY SURVEYORS
F00099	EDON CONSULTANTS INT. LTD	ARCHITECTS
F00100	ARCHGRID SYSTEMS	ARCHITECTS
F00101	APEX SYSTEMS CONSULTING GROUP	ENGINEERS
F00104	NGASI CONSULTING ENGINEERSS	ENGINEERS
F00105	FERADON ASSOCIATES LTD	ENGINEERS
F00108	K & M ARCHPLANS	ARCHITECTS
F00110	SPACE AND SYSTEMS	ARCHITECTS
F00111	ATTICSPACE	ARCHITECTS
F00113	ARCS AFRICA	ARCHITECTS
F00118	MUTISO MENEZES INTERNATIONAL	ARCHITECTS
F00119	PLANNING SYSTEMS SERVICES LTD	ARCHITECTS
F00120	MRUTTU SALMANN AND ASSOCIATES	ARCHITECTS
F00123	SONGA OGODA & ASSOCIATES	QUANTITY SURVEYORS
F00126	DESIGNWORTH ARCHITECTS LTD	ARCHITECTS
F00130	DIMENSIONS ARCHITECTSS & INTERIOR DESIGNERS	ARCHITECTS

FIRM MEMBERS

Membership No.	Name	Chapter
F00132	ACHERA & PARTNERS ARCHITECTSS & URBAN	ARCHITECTS
F00134	BLINK STUDIO LIMITED	ARCHITECTS
F00136	BASELINE ARCHITECTSS LTD	ARCHITECTS
F00137	MANDHRY ASSOCIATES	QUANTITY SURVEYORS
F00140	TARAKIBU ARCHITECTS LIMITED	ARCHITECTS
F00141	GIBB ARCHITECTSS	ARCHITECTS
F00142	SYCUM SOLUTIONS CO. LTD	ARCHITECTS
F00143	QUANTECH CONSULTANCY	QUANTITY SURVEYORS
F00145	FAIRPLAN SYSTEMS LTD	ARCHITECTS
F00146	JOFROK BUILDING CONSULTANTS	ARCHITECTS
F00147	QUANTI BILL CONSULTS COMPANY LIMITED	QUANTITY SURVEYORS
F00148	GEODEV (K) LTD	TOWN PLANNERS
F00150	HERITAGE ASSOCIATES LTD	ARCHITECTS
F00152	WHINTTO ARCHITECTS (K) LTD	ARCHITECTS
F00156	E.D.G & ATELIER	ARCHITECTS
F00161	TANDEM AND STARK	QUANTITY SURVEYORS
F00163	ARCSCENE ARCHITECTSS (K) LTD	ARCHITECTS
F00165	GITUTHO ARCHITECTS AND PLANNERS LTD	ARCHITECTS
F00166	BEGLIN WOODS ARCHITECTSS LTD	ARCHITECTS
F00167	URBAN GREEN LANDSCAPES LTD	LANDSCAPE ARCHITECTS
F00171	SYMBION MOMBASA LTD.	ARCHITECTS
F00175	FHG ARCHITECTURE (K)LTD	ARCHITECTS
F00176	DESIGN MASTER STUDIO LIMITED	ARCHITECTS
F00177	DESIGN SOURCE LIMITED	ARCHITECTS
F00178	TRIOSCAPE LIMITED	ARCHITECTS
F00179	LOCUS STUDIO LTD	ARCHITECTS
F00180	TEAM 2 ARCHITECTSS	ARCHITECTS
F00181	BOOGERTMAN AND PARTNERS ARCHITECTS LTD	ARCHITECTS
F00183	MYSTICAH DESIGNS AND ASSOCIATES LTD	LANDSCAPE ARCHITECTS
F00185	PHAROS ARCHITECTS K LTD	ARCHITECTS
F00186	LANDMARK DESIGNS LTD	LANDSCAPE ARCHITECTS
F00187	ARC ONE CONSULTANCY	ARCHITECTS
F00189	MASTERBUILD LIMITED	ARCHITECTS
F00190	KEMSAL CONSULTANTS LIMITED	QUANTITY SURVEYORS
F00191	MASTA D-SIGNS LTD	ARCHITECTS
F00192	ECOARCH SOLUTIONS LTD	LANDSCAPE ARCHITECTS
F00193	MWANZONI LTD	CONSTRUCTION PROJECT MANAGERS

THE ARCHITECTURAL ASSOCIATION OF KENYA

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