



# BeeHive School News

ISSUE 2

DECEMBER 2009

## SPECIAL POINTS OF INTEREST:

- MIT Brings Computer Lab to BeeHive
- People Coming Together in a Big Way Worldwide
- Architectural Plans Nearing Completion
- Good and Bad News—BeeHive Shut Down, but New Building Finally Approved!

## HIGHLIGHTS IN THIS ISSUE

BeeHive News 4

Architectural Plans 5

Volunteers Get Creative to Raise Funds 6, 7, 8

What Your Dollars Can Do! 9

Good and Bad News... 9

Our Partner ASAP Africa 10

## MIT Brings Computer Lab to BeeHive

In 2008, the world is safely into the digital age, and it's never turning back. Malawi hasn't been forgotten, either. Computers are beginning to appear on the desktops of small businesses

and in the laps of the less affluent. In the coming years, computer and mobile technology will rapidly trickle down to become ubiquitous in the Malawian workplace. Reaping the benefit of this new technology will require



prepare his students for success in a struggling job market by equipping them with rare and valuable skills. By becoming familiar with basic computer skills at a young age, Beehive students will

enter secondary school with a competency in technology that their peers lack. This advantage will eventually serve students very well as they look for work in a job market that will increasingly demand computer literacy.

competent and innovative minds and where better to build them than at the Beehive School?

Beehive headmaster Niall Dorey believes that IT education at the primary level will

## MIT Students Justin Cannon and Petek

### Saracoglu are BeeHive School's Heroes!

Fueled by Dorey's conviction and the proactivity of other Beehive volunteers, Justin Cannon and Petek Saracoglu arrived in June with twelve computers and a mission to modernize Beehive's

computer lab. Having raised money and collected donations from MIT, Justin and Petek immediately got to work refurbishing the lab with new desks, a fresh

coat of paint, and a dozen top-of-the-line computers. Finding the right supplies to connect the machines was sometimes difficult, but the new lab was working and ready for students within a few weeks.



**Justin Cannon and Petek Saracoglu created posters to explain the inner workings of a computer**

# BeeHive Computer Lab

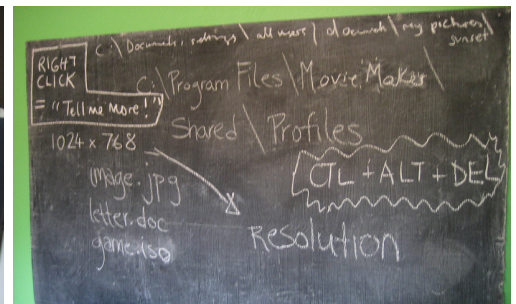


**BeeHive Computer Lab Grows from Two Computers to a dozen with the help of Justin Cannon and Petek Saracoglu**

In addition to shipping and installing the computers, Justin and Petek strove to introduce the lab as an educational tool for teachers, as well as students. Beehive teachers were invited to four all-day bootcamps during which they learned basic computer skills, how to operate the lab, and teaching strategies. Shortly after, Beehive students entered the lab with bright eyes and high expectations.

Since Justin and Petek returned to the U.S. in August, the Beehive staff has taken proud ownership of their new lab. Students continue to use the lab twice a week and have access to more educational games and tools than ever before. Beehive hopes to develop an IT curriculum around the lab that will focus on training technology skills beyond basic computer usage.

## BeeHive IT Curriculum



**BeeHive Students Dig Deep and Learn about the Inner Workings of Computers**

**BeeHive School Teachers and PTA are Trained in the New BeeHive IT curriculum**

In BeeHive's computer lab, students are taught everything from basic mouse movements and search skills to the inner workings of the hardware in a computer to more advanced concepts. BeeHive is very grateful for everyone who made their computer lab possible.





# MIT Knowledge Box (K-Box)

This past spring, four MIT students: Justin Cannon, Christina Soyeon Kang, Angela Mjojo, Leanne Veldhuis, and Jen-Hao Yang, partnered with BeeHive School to create a platform that would bring a snapshot of the internet to remote areas, like BeeHive school where the internet will not arrive anytime

**Knowledge in a Box for Remote Areas** this decade. Kbox gives BeeHive, which has no internet connectivity, offline access to valuable educational web resources by storing educational content on an Edubuntu machine.

To learn more about the student team and their involvement in BeeHive School go to:

<http://beehiveschool.com/mit/mit.php>

To view the team's final presentation visit:

<http://channel.media.mit.edu/ict4d/content/beehive>

## Thank You MIT Donors!



MIT  
PUBLIC SERVICE CENTER



Special thanks to Stan Diamond, John Trethaway, Sarith Phal, and Randy Cook from the Broad Institute IT Operations Team for making possible the donation of ten desktop computers and other supplies.

## BeeHive on MIT Homepage



BeeHive enjoyed fifteen minutes of fame this past year as it was featured on the MIT homepage. It was a big day as the website reached the first search item on google for the term Beehive and got over 30,000 hits. The media coverage was vital as it attracted several key donors that ultimately made the MIT-BeeHive Computer Lab Project a reality. Many thanks to the MIT web crew for their timely and generous support.

# Standard 5 Fundraiser for Sports Equipment



Students compete for the prized house cup

Standard 5 had a fundraiser this month to raise funds for sporting equipment. They baked cakes and made drinks that they sold to their peers and raised a total of 12,400 Kwacha or

roughly \$85. The sporting equipment will be enjoyed by the whole school, but the St. 5 class will be responsible for management and care of the equipment. A big thank you to everyone who participated in this



## BeeHive News

### HOGWARTS COMES TO BEEHIVE



In the tradition of Harry Potter and schools in England, BeeHive has created four "houses" or teams that compete for the House Cup—a giant trophy! Bee-

Hive's Tigers, Lions, Cheetahs, and Leopards strive to outperform their peers in this good-natured competition through sporting events, mental math matches, spelling competitions, acts of kindness, good manners, and class participation.

### TIGERS DOMINATE SPORTS DAY EVENTS

Despite the drizzle, sports day on July 18th was a huge success with events in soccer, netball, jump rope, and races. Tigers won most events and made a total of 90 house points!

Sincere thanks to Mr and Mrs Chikhuta and Mzuzu Hotel for the generous loan of PE equipment.

### NATIONAL TREE PLANTING DAY

Standard 4 is planning a spelling bee to raise funds for a tree nursery which will be distributed under the National Tree Planting Day on the 2nd Monday in December.

With heavy logging in the area, students are happy to plant some new trees to beautify their city.

Parent Mr Nkwazi has volunteered his green thumb to help out.



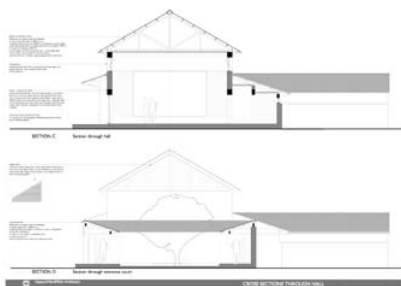
## Rowan Haysom Develops Architectural Plans

Rowan Haysom ([www.haysom.wardmiller.co.uk](http://www.haysom.wardmiller.co.uk)), an architect in the UK, has kindly offered to design the school free of charge. He has many far-sighted ideas that will not only minimize construction costs, but create jobs for local laborers and at the same time make the school 'green' and sustainable.

There are roughly 150 students attending BeeHive, which is forced to turn students away in an effort to keep class sizes small, manageable, and effective. We are hoping to relocate the school and build a bigger and improved facility that will not only double the capacity, but be structurally sound and earthquake safe - all students everywhere deserve to study in a safe environment. Structural travesties are not uncommon - while we were visiting in the Summer of '06, a community building in the town of Mzuzu collapsed killing the instructor and severely injuring half a dozen students.

BeeHive's current facilities are inadequate as they were constructed with minimal funds and space has run out on the lot bringing BeeHive's expansion to a standstill. Currently, BeeHive has two out-

**BeeHive is forced to turn students away in an effort to keep class sizes small, manageable, and effective.**



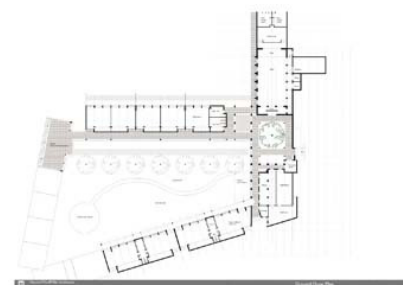
houses, the new plans call for more that are equipped with modern plumbing, so that sanitary bathroom facilities are available. There is no garbage collection in town, so part of the half-acre the current school is on is used as a charred garbage dump, since the standard protocol in the area is to burn as much garbage as possible. The glowing embers are a constant fire hazard to the buildings. The new plans call for a composting system and furnace for garbage burning. The electricity is spotty and often shuts off for a week at a time, so the new plans call for solar panels and batteries to provide for reliable power. Security guards are employed to watch over the school during the night, since theft is a serious problem and the flimsy classroom walls are easy targets. The new school will be made with local bricks and iron barred window coverings to deter thieves.

Rowan is from South Africa and is familiar with common building practices, local material availability, and environmentally friendly construction methods. Using simple, yet effective passive solar techniques he is designing a school that will remain temperate despite the harsh heat and cold that is not uncommon in Mzuzu, which is located in the mountains and witnesses harsh seasonal weather shifts. The point is that BeeHive needs a safer, bigger, and more student friendly school.

Rowan's models and detailed cost estimates are available at:

<http://www.beehiveschool.com/construction/plans.php>

<http://www.beehiveschool.com/construction/cost.php>



**Aerial Cross Section of the New BeeHive School Architectural Plans**

## BeeHive Teacher Special



This teacher's special is dedicated to the standard 5/6 teacher Bahat Phiri who recently retired from BeeHive. Mrs. Phiri has an extensive background in teaching high school students and nurses biology. Her Mary Poppins no-nonsense attitude combined with her motherly instinct made her an excellent

teacher who was respected and admired by all her students.

Originally Mrs. Phiri joined Beehive school on a temporary basis, helping out with a small class of six children in preparation for them going to secondary school. She is a neighbor of the school and three of her grandchildren study at BeeHive.

Mrs Phiri is also a practicing

Muslim and is a strong symbol of the diversity and inherent tolerance present in every aspect of BeeHive School.

Now that she is retired, Bahat will enjoy her free time by socializing with friends, cooking, reading, and looking after her grandchildren.



BeeHive Volunteers,  
like Charles Lee be-  
low, go the extra



## People Coming Together

A bake sale might sound like a small thing - but to BeeHive it is not. It takes a different kind of person to realize that a small school on the other side of the world is connected to us in a very real way. That one bake sale is a critical part of the larger solution - the bigger picture.

The truth is that it is through the combined efforts of bake sales, charity runs, card sales, individual donations, and small events, that BeeHive will eventually realize its dreams. Through the efforts of many minds sharing an idea and little by little sharing that idea with more people - the idea that

we are all connected and that we must all reach out to one another.

There are dozens of people from all backgrounds starting to reach out and help this school doing little things to make a big difference for the BeeHive School community.

## The Human Race

At 7am on Saturday, May 10th, seven volunteers united to represent BeeHive School in the annual Human Race in Mountain View, California. It was a beautiful, sunny day and there were hundreds of runners representing a plethora of non-profits. There was something for everyone—a 5K walk for those interested in a morning stroll with their favorite canine and 5/10K runs for people looking to get some sweat on their brow.

Thank you to Alicia Clum, Charles Lee, Brian Hachtman and Danielle Sheehan

for running a great race! Congratulations in particular to Charles Lee and his coworkers from Volkswagen for their generosity—they get the bragging rights for raising the most funds!

The booth to educate people about Malawi and tell them about BeeHive School was a great success with paper copters and African maps for coloring. Special thanks to Angela Otero, Alicia Winquist and Katy Harrison for running the booth!



Brian Hachtman ran a great 10K!

## Scotts Valley Rotary Club

This summer, BeeHive received a generous donation of valuable teacher training resources from Scotts Valley Rotary Club. These fifteen books cover a range of subjects from teaching literacy and numeracy to effective classroom management to child development.

The cornerstone to BeeHive's success has been its intensive and ongoing teacher training program. It allows for an international level of education within a Malawian context by taking local teachers and providing them with the necessary tools and skill sets to teach to their full potential.

These books are the first step towards creating a comprehensive reference library for BeeHive teachers and other local schools.



Scotts Valley  
Rotary Club  
Donates books to  
Improve the  
Teacher Training  
Program

## Golden Gate University International Law Students Association

In the heated competition, mounting stress, and sleepless nights that accompany finals, the Golden Gate's International Law Student Association stayed up into the wee hours of the morning sacrificing precious study hours to make delicious sweets for the BeeHive Bakesale.

Why during finals? Good question! Being the brilliant critical thinkers and marketing minds that they are—these students

realized that it is during finals that their fellow classmates would most want savory desserts and sugar to combat the draining long hours in the library. It is that time of year when students look only for one thing when in search of food—proximity. And so they stationed themselves outside of the library in shifts to raise \$145 for us by selling brownies and other treats. A special thank you to Jim Betinol

and the other students for their support! I guess lawyers aren't so bad after all!



*"A bake sale might sound like a small thing - but to BeeHive it is not. It takes a different kind of person to realize that a small school on the other side of the world is connected to us in a very real way."*

## Stanford African Students Association



The Stanford African Students Assoc is composed of students that grew up all over Africa from Ehtiopia to Ghana to Botswana to South Africa. These students understand the impact that BeeHive School is making in Mzuzu and are enthusiastic to help the school further.

These talented individuals understand what it takes to suc-

ceed and not only have great ideas for BeeHive School, but serve as role models for all future BeeHive students hoping to pursue higher education.

During our first meeting, the group kindly donated funds towards the BeeHive School Project!

## Menlo Park Block Parties

BeeHive School had a unique presence at the summer Menlo Park, California block parties. Block parties include a rich variety of music, food, children's activities, information booths for local organizations and corporations.

The BeeHive booth raised awareness about education in Africa. The BeeHive video, photos of the school, and architectural plans for the new building sparked interest in a number of people.

We were really impressed that it was the kids who spent the most time looking over the photos and video and learning about Malawi and BeeHive.



**Above:** A child is entranced by BeeHive School's video.

**Left:** Spencer Ahrens mans the BeeHive School booth.



## Great North Run

Niall's old friend, Rene Dunlop, who first travelled with him to Malawi, also helped fundraise for BeeHive School.

Rene raised funds by running in the "Great North Run" in Newcastle upon Tyne, England.

### The Great North Run in Newcastle upon Tyne, England

It's amazing to see so many people from all over the world coming together out of compassion. They truly understand the value that BeeHive provides to the community of Mzuzu and BeeHive's faculty and students.



## Maureen and Stephan Dorey Host Smashing Dance Party!

Maureen and Stephan Dorey, Niall's parents, are great supporters of BeeHive and organized a Scottish Country Dance. The dance featured live music, a raffle, home-baked goodies, and flying feet. It was a night to remember!



## Brook Knoll School

Katy Harrison's mother, Wendy Harrison, is a special education teacher at Brook Knoll Elementary School in Scotts Valley, California. Ever since starting the BeeHive



School website and USA-based fundraising effort, Wendy and her class have been

great supporters. Their enthusiasm and support for BeeHive is intoxicating and has led many others to chip into their yearly book drives for BeeHive.

The class at Brook Knoll School has sent some of their favorite children stories to share with the BeeHive students. This is just another example of how connected BeeHive is with so many communities around the world. Niall and his students are always excited to receive books and truly treasure them.

On behalf of Niall, BeeHive's teachers and students, and the BeeHive PTA and community members, we thank Brook Knoll School for their generosity and kindness.





# Financials-Our Goal: \$76,876.00

**Where we are: \$4,341.68**

**What's left: \$72,534.32**

BeeHive School is incredible - Niall Dorey, the headmaster and driving force behind the school, started BeeHive with eight students in the living room of his house in 2003. Five years later, the school has over 150 students and is a thriving center for learning, creativity, and personal growth. The teachers and students are committed to the goals of the school and are constantly striving to perform to their full

potential.

Former volunteers started a BeeHive School presence in the US over a year and a half ago after having visited the school in summer '06. They were deeply impressed by the school and its success despite the obvious resource challenges that the school deals with on a day to day basis. Ultimately, what it comes down to is that the US BeeHive School Project is not re-inventing the wheel with BeeHive School. A lot of school-based efforts fail because organizations or groups

build a schoolhouse without the necessary social infrastructure being there to really make the school valuable. BeeHive School already exists - it has all the necessary motivations, teachers, students, PTA, and curriculum, but lacks the necessary funds to expand and improve. We are giving the school the resources to reach its full potential.

Please visit below for a detailed cost breakdown:

<http://www.beehiveschool.com/construction/cost.php>

**BeeHive School**  
**has all the**  
**necessary social**  
**infrastructure—**  
**motivations,**  
**teachers,**  
**students, PTA,**  
**and curriculum—**

**but lacks the**  
**necessary**  
**funds to**  
**expand and**  
**improve .**

## What Your Dollars Can Buy...

- |   |   |
|---|---|
| (1) Why not donate \$20 to BeeHive School? \$20 will buy seven iron sheets for the new roof (27 are needed)                   | (4) Or are you are feeling really generous?! \$5,600 will build a bathroom block (2 needed).  |
| (2) Why not donate \$50, which will buy one metal door or window.   | (5) \$12,000 will buy one brand new classroom, and we'll dedicate the classroom to you and put up a placard in your name or company name. |
| (3) You could even donate \$250 to BeeHive school! \$250 will buy 52 pinboards, which will be used to display students' work. |   |



Donated books are much enjoyed

## Good and Bad News From BeeHive - School Shut Down Temporarily

We'll give you the bad news first. BeeHive was inspected by a team from the Ministry of Education in the beginning of November of 2009—just a few weeks ago. The classrooms, which are temporary buildings, have been deemed to be “not up to code” and BeeHive has been shut down, at least temporarily. BeeHive School is not alone as there are over one hundred schools in Malawi that have been closed so far. Niall and the BeeHive students are not despairing because the parents are all strong supporters of the school and are doing everything possible to get it back up and running. How-

ever, now more than ever, it has been made glaringly obvious that BeeHive needs new classrooms.

Now for the good news, the same day that BeeHive was shut down, the school received a letter that they have been waiting for for three long years. This letter finally approves BeeHive's plans to build a new school on their new plot of land where they can expand and build a permanent school that is safe, child-friendly and will last generations to come.



**Good News—BeeHive's School**  
**New Building Plans Finally Ap-**  
**proved After Three Long Years!**



## The Beehive School Project

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United States

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Phone 2: 510-508-6804 (Eva Cell)  
E-mail: [info@beehiveschool.com](mailto:info@beehiveschool.com)

**Give Education, Give Hope**

The Beehive School project is designed to help Beehive School. The school is an elementary school in Mzuzu, Malawi founded in 2003 with 8 students and now has over 150. The school is transforming the education system in Mzuzu, emerging as a model school with a strong academic core that uses an international pupil-centered curriculum within a Malawian context. BeeHive School is preparing leaders and innovators for tomorrow.

The Beehive School Project has five main goals to help Beehive School. These goals are to:

- (1) *Raise funds towards the new buildings,*
- (2) *Outfit the school with a computer lab and internet,*
- (3) *Raise funds for community outreach,*
- (4) *Use sustainable practices in the new school,*
- (5) *Attract qualified volunteers that can build and teach at the school.*



## About Us

After graduating UC Berkeley in May 2006, Eva Markiewicz, Katy Harrison, and four other recent graduates spent a summer in Malawi. As well as site seeing, spending a few days at Lake Malawi and going on a safari, they taught science to children at local schools.

Beehive school stood out as a 'diamond in the rough' so to speak and with a little help, they feel this school will give children a great education and also help the area. When they came back to the US, they brainstormed ways to help the school. With the support of their friends, family, and even the aid of some kind strangers, they got a website up and running! Now the website is looking good, the second newsletter is out and the fundraising adventure is underway.



Please contact us if you would like to volunteer locally/ internationally or get involved with BeeHive in some other way.

## ASAP Africa Relationship

BeeHive School Project, which operates primarily in Menlo Park, California is legally a partner with ASAP Africa. ASAP Africa is a 501 (C) 3 non-profit that has projects in Zimbabwe and Malawi. They were founded in 1992 by a couple who met and married in the Peace Corps while in Swaziland working in rural African schools. The organization's goal is to, *"create an organization whereby development projects and activities are not 'inflicted' upon local people, but truly spearheaded by capable members within those communities."* ASAP Africa provides financial oversight for the BeeHive School Project and covers a

low, 5% fee for this assistance. Besides providing financial oversight, ASAP Africa is an experienced partner who can help us navigate the challenges ahead. To learn more about their laudable work, go to: [www.asapafrika.org](http://www.asapafrika.org)

BeeHive School Project is currently embarking on procuring its own non-profit status with the aid of volunteer Jim Betinol who recently passed his board exams—congratulations Jim!

**The BeeHive School Project is currently initiating procurement of 501 (c) 3 non-profit status**







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[Meet the Teachers](#)
[Teacher Training](#)
[Life in Mzuzu](#)

Assume: 140 MWK: 1 US Dollar

CLASSROOM AND ADMINISTRATION BLOCK						
Item	CLASSROOMS & ADMINISTRATION BLOCK	Unit	Qty	Rate	Kwacha	US (\$)
<b>Substructure</b>						
A	Excavate trench for strip footings	.m3	455	60	27,300	\$195.00
B	Backfilling of excavated material	m3	237	60	14,220	\$101.57
C	Dispersal of surplus	m3	218	60	13,080	\$93.43
D	Mass concrete in strip footing	m3	103	9,000	927,000	\$6,621.43
E	100mm slab	m2	1286	900	1,157,400	\$8,267.14
F	Damp proof membrane laid under slab	m2	1268	110	139,480	\$996.29
G	Hardcore under slab	m2	1136	180	204,480	\$1,460.57
H	50mm sand bed	m2	1136	50	56,800	\$405.71
J	Ant treatment	m2	1286	25	32,150	\$229.64
K	One brick wall in foundations	m2	501	950	475,950	\$3,399.64
<b>Roof</b>						
L	28 gauge corrugated iron sheets	m2	1550	475	736,250	\$5,258.93
M	600mm standard ridge capping	m	136	500	68,000	\$485.71
N	50 x 100mm purlins	m	1360	90	122,400	\$874.29
O	50 x 100mm struts	m	980	90	88,200	\$630.00
P	50 x 150mm rafters	m	1300	100	130,000	\$928.57
Q	50 x 150mm tie beam	m	1254	100	125,400	\$895.71
R	38 x 275mm fascia	m	275	250	68,750	\$491.07
S	Galvanised wire ties	-	228	50	11,400	\$81.43
<b>TOTAL CARRIED FORWARD</b>					<b>4,398,260</b>	<b>\$31,416.14</b>
Item	CLASSROOMS & ADMINISTRATION BLOCK	Unit	Qty	Rate	Kwacha	US (\$)
A	One brick wall incl. Brikforce	.m2	755	950	717,250	\$5,123.21
B	Half brick wall incl. Brikforce	m2	110	475	52,250	\$373.21
C	Damp proof course under walls	m	299	50	14,950	\$106.79
<b>Windows and Doors</b>						
D	Metal Door frame for one wall	-	17	5,500	93,500	\$667.86
E	Double Door frame for one wall	-	4	9,000	36,000	\$257.14
F	Metal Door frame for one wall	-	4	5,500	22,000	\$157.14
G	Metal window frames C7H 997x924mm	-	77	6,800	523,600	\$3,740.00
H	Metal window frame C4H 1486x924mm	-	9	7,500	67,500	\$482.14
J	Metal window frame E1H 508x 629mm	-	5	3,250	16,250	\$116.07
K	Std framed, ledged and braced door	-	20	6,500	130,000	\$928.57
L	Standard flush doors	-	9	3,500	31,500	\$225.00
M	2 lever mortice lock	-	9	1,850	16,650	\$118.93
N	3 lever mortice lock	-	20	2,500	50,000	\$357.14
O	Gloss paint to timber surfaces	m2	33	280	9,240	\$66.00
P	Gloss paint to metal surfaces	m2	322	280	90,160	\$644.00
Q	Gloss paint to metal surfaces 2-300mm	m	149	95	14,155	\$101.11
R	Clear varnish to timber surfaces	m2	76	290	22,040	\$157.43
S	6mm clear glass fix to metal (incl putty)	m2	95	2,160	205,200	\$1,465.71
<b>SUBTOTAL</b>					<b>2,112,245</b>	<b>\$15,087.46</b>
<b>Total carried forward</b>					<b>6,510,505</b>	<b>\$46,503.61</b>
Item	CLASSROOMS & ADMINISTRATION BLOCK	Unit	Qty	Rate	Kwacha	US (\$)
A	30mm floor screed	.m2	981	250	245,250	\$1,751.79
B	Skirting	m	552	50	27,600	\$197.14
C	Cement and sand plaster	m2	1205	230	277,150	\$1,979.64
D	Cement/sand plaster to receive tiles	m2	20	230	4,600	\$32.86
E	12mm celotex ceiling board inc brander.	m2	981	1140	1,118,340	\$7,988.14
F	Cornice	m	552	50	27,600	\$197.14
G	PVA Paint to walls	m	1205	210	253,050	\$1,807.50
H	PVA Paint to ceilings	m2	981	180	176,580	\$1,261.29
J	External brick sealer to fair facing walls	m2	1350	250	337,500	\$2,410.71
K	Wall glazed tiles	m2	20	1920	38,400	\$274.29

<b>Joinery fittings</b>						
L	15mm cement and sand blackboard	m2	108	210	22,680	\$162.00
M	12mm celotex pinboards	m2	52	728	37,856	\$270.40
N	100mm chalk rail	m	90	120	10,800	\$77.14
O	25x50mm railing to blackboard edge	m	133	40	5,320	\$38.00
P	25x50mm railing to pinboard edge	m	91	40	3,640	\$26.00
Q	PVA paint to pinboards	m2	52	210	10,920	\$78.00
R	Blackboard paint	m2	108	220	23,760	\$169.71
S	Clear varnish to all timber surfaces	m	313	36	11,268	\$80.49
<b>SUBTOTAL</b>					2,632,314	\$18,802.24
<b>Total carried forward</b>					<b>9,142,819</b>	<b>\$65,305.85</b>
<b>Item</b>	<b>CLASSROOMS &amp; ADMINISTRATION BLOCK</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Kwacha</b>	<b>US (\$)</b>
<b>Sanitary fittings</b>						
A	WC complete with accessories	-	4	20,000	80,000	\$571.43
B	Wash basin with accessories	-	6	6,100	36,600	\$261.43
C	Metal urinal	-	1	40,500	40,500	\$289.29
D	12mm taps	-	12	1,500	18,000	\$128.57
<b>Waste Services</b>						
E	WC connectors	-	4	950	3,800	\$27.14
F	Gully trap	-	4	1,600	6,400	\$45.71
G	50mm PVC trap	-	4	260	1,040	\$7.43
H	50mm diameter pipe	m	20	125	2,500	\$17.86
J	100mm diameter pipe	m	30	350	10,500	\$75.00
K	300mm copper connector	-	4	350	1,400	\$10.00
L	450mm copper connector	-	4	450	1,800	\$12.86
<b>SUBTOTAL</b>					202,540	\$1,446.71
<b>Total carried forward</b>					<b>9,345,359</b>	<b>\$66,752.56</b>
<b>Item</b>	<b>CLASSROOMS &amp; ADMINISTRATION BLOCK</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Kwacha</b>	<b>US (\$)</b>
<b>Drainage</b>						
A	Brick lined drain incl. Slab covering	m	295	1,200	354,000	\$2,528.57
<b>Provisional Sums</b>						
B	Electrical installation				400,000	\$2,857.14
C	All external and associated works				400,000	\$2,857.14
D	Water Reticulation				75,000	\$535.71
<b>SUBTOTAL</b>					1,229,000	\$8,778.57
<b>Total carried to Summary</b>					<b>10,574,359</b>	<b>\$75,531.14</b>

<b>ABLUTION BLOCK</b>						
<b>Item</b>	<b>CLASSROOMS &amp; ADMINISTRATION BLOCK</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Kwacha</b>	<b>US (\$)</b>
<b>Substructure</b>						
A	Excavate trench for strip footings	.m3	23	60	1,380	\$9.86
B	Backfilling of excavated materials	m3	12	60	720	\$5.14
C	Dispersal of surplus excavated material	m3	11	60	660	\$4.71
D	Mass concrete in strip footing	m3	5	9,000	45,000	\$321.43
E	100mm slab	m2	43	900	38,700	\$276.43
F	Damp proof membrane under slab	m2	43	110	4,730	\$33.79
G	Hardcore under slab	m2	38	180	6,840	\$48.86
H	One brick wall	m2	23	900	20,700	\$147.86
J	50mm sand bed	m2	38	50	1,900	\$13.57
K	Ant treatment	m2	43	25	1,075	\$7.68
<b>Roof</b>						
L	28 gauge corrugated iron sheets	m2	53	900	47,700	\$340.71
M	50x150mm rafters	m	48	90	4,320	\$30.86
N	38x275mm fascia	m	22	250	5,500	\$39.29
O	Galvanised wire ties	-	10	50	500	\$3.57
<b>Walls</b>						
P	One brick wall incl. Brikforce	m2	82	950	77,900	\$556.43
Q	Half brick wall incl. Brikforce	m2	15	475	7,125	\$50.89
R	Damp proof course	m	33	50	1,650	\$11.79
<b>SUBTOTAL</b>					266,400	\$1,902.86
<b>GRAND TOTAL (Subtotal * 2)</b>					<b>11,107,159</b>	<b>\$79,336.85</b>

<b>Item</b>	<b>ABLUTION BLOCK</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Kwacha</b>	<b>US (\$)</b>
<b>Windows and Doors</b>						
A	Metal window frames E1H 508x629mm	-	9	3,250	29,250	\$208.93
B	Metal window frame ES2H 997x629mm	-	4	7,200	28,800	\$205.71
C	Std framed, ledged and braced door	-	2	6,500	13,000	\$92.86
D	Std flush door	-	8	3,500	28,000	\$200.00
E	2 lever mortice lock	-	8	1,850	14,800	\$105.71
F	3 lever mortice lock	-	2	2,500	5,000	\$35.71
G	Metal door frame for one brick wall	-	2	5,500	11,000	\$78.57
H	Metal door frame for half brick wall	-	8	4,200	33,600	\$240.00
J	Gloss paint to timber surfaces	m2	26	280	7,280	\$52.00
K	Gloss paint to metal surfaces	m2	10	290	2,900	\$20.71



L	6mm clear glass fix to metal with putty	m2	6	2,160	12,960	\$92.57
<b>Floor, Wall and Ceiling Finishes</b>						
M	30mm floor screed	m2	37	250	9,250	\$66.07
N	Skirting	m	85	50	4,250	\$30.36
O	Cement and sand plaster	m2	119	230	27,370	\$195.50
P	Cement and sand plaster to receive tiles	m2	5	230	1,150	\$8.21
Q	Gloss paint to walls	m2	119	280	33,320	\$238.00
<b>SUBTOTAL</b>					261,930	\$1,870.93
<b>ABLUTION TOTAL</b>					528,330	\$3,773.79
<b>GRAND TOTAL (Subtotal * 2)</b>					<b>11,631,019</b>	<b>\$83,078.71</b>
<b>Item</b>	<b>ABLUTION BLOCK</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Kwacha</b>	<b>US (\$)</b>
<b>Sanitary fittings</b>						
A	WC complete with accessories	-	8	20,000	160,000	\$1,142.86
B	Wash hand basin plus accessories	-	6	6,100	36,600	\$261.43
C	Toilet roll holders	-	8	1,520	12,160	\$86.86
D	12mm taps	-	12	1,500	18,000	\$128.57
<b>Waste Services</b>						
E	WC Connectors	-	8	950	7,600	\$54.29
F	Gully trap	-	4	1,600	6,400	\$45.71
G	50mm PVC trap	-	6	260	1,560	\$11.14
H	50mm diameter pipe	m	20	125	2,500	\$17.86
J	100mm diameter pipe	m	30	350	10,500	\$75.00
K	300mm copper connector	-	6	350	2,100	\$15.00
L	450mm copper connector	-	8	450	3,600	\$25.71
<b>SUBTOTAL</b>					261,020	\$1,864.43
<b>ABLUTION TOTAL</b>					789,350	\$5,638.21
<b>ABLUTION TOTAL (Qty: 2)</b>					1,578,700	\$11,276.43
<b>GRAND TOTAL (Subtotal * 2)</b>					<b>12,153,059</b>	<b>\$86,807.56</b>
<b>SUMMARY</b>					<b>Kwacha</b>	<b>US (\$)</b>
<b>CLASSROOM &amp; ADMINISTRATION BLOCK</b>					<b>10,574,359</b>	<b>\$75,531.14</b>
<b>ABLUTION BLOCKS (x2)</b>					<b>1,578,700</b>	<b>\$11,276.43</b>
<b>Plus: Preliminaries and General Items</b>					<b>1,336,836.49</b>	<b>\$9,548.83</b>
<b>Plus: 10% Contingencies</b>					<b>1,348,989.55</b>	<b>\$9,635.64</b>
<b>TOTAL CONSTRUCTION COST</b>					<b>14,838,885.04</b>	<b>\$105,992.04</b>

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