

The Enaikishomi School and Community Project, Kenya



THE ENAIKISHOMI SCHOOL VISIT BY EDWARD, SANDY AND EMILY ELGAR FEBRUARY 2012

1. Mission Statement

Enaikishomi is the Maasai word for gateway. This is entirely appropriate as the school is designed to be a gateway to a better life, for the children, their parents, and the wider community. The ambition is for it to be a centre of excellence in education in the broadest sense. It is not limited to school work – important though this is – but extends beyond to encouraging small scale agriculture, water harvesting and, hopefully, building work. We want it to serve as a model and an inspiration to other local communities and demonstrate how they can improve their lives at very little cost.



interested in Edward's ipad!

Edward, Sandy and Emily Elgar visited the Enaikishomi School in February 2012 and were accompanied by Faith Riunga, the Educational Administrator from Lewa, Harry Hanegraaf, the Technical Director at Lewa, and Andre Retief, a Hydro-Agronomist who works for Indigenous Collective LLP. We are very grateful to Faith, Harry and Andre for taking the time and trouble to visit the school with us. Their help and advice continues to be very important to the success of the school.



New classroom for 5-9 year olds



New teacher accommodation on left with separate shower/toilet and kitchen/dining room

2. The New School Buildings

In the last 12 months there has been a major building programme comprising the construction of a second classroom, accommodation for our two teachers including a kitchen, separate dining room, shower, and flush toilet. We are delighted that under the direction of Richard Kaimenyi all of this new building work has been completed to a very high standard. The new classroom in particular is a beautifully light and airy room providing a colourful and welcoming environment.

An important feature of the staff accommodation is the installation of solar lights which, in all senses of the word, are a brilliant innovation. Powered by a cheap solar panel on the roof they can provide good lighting for 4-5 hours every night.



Shower and toilet



Back view of older classroom on left and new one on the right with water tank

New water tanks have been installed to harvest water from the roofs. There are now some five large water tanks at the Enaikishomi school which Edward personally checked out during the visit. At the back of the new classroom, and immediately adjacent to the tree plantation, there is a water tank that is absolutely full of water....for the simple reason that the tap is broken and dispenses no water at all! No one is to blame for this and personally I would have no idea how to repair a tap of this kind! In any event, we are asking Harry at Lewa to arrange for the tap to be replaced.



Kitchen and dining room



Dining room interior

We have agreed to supply additional materials for the staff accommodation, namely:

- i) a solar heater for the shower. This will be simple and cheap to install;
- ii) a further solar panel to be located above the dining room sufficient to power a computer and a television;
- iii) we have agreed to supply a table and eight chairs for the dining room;
- iv) shelving and cupboards in the kitchen.



Classrooms on left with school kitchens on the right



Teacher rooms and visitor's rooms

We have also constructed a separate visitor room which will be equipped with two single beds with drawers underneath, and a table and two chairs. Whilst relatively basic, we feel this accommodation will be suitable for either home or overseas volunteers.

We have also agreed to construct a courtyard wall for the staff accommodation to give our teachers some privacy as well as protection from the strong winds that blow across the school campus. It is our intention that this wall should be constructed by local people using sun-baked bricks (see below).

We are all delighted by the new school buildings as well as the maintenance of the existing buildings which, for the first time, have no leaks, broken windows or any other visible defects. It is an impressive achievement.

A major benefit of the building programme is that our two teachers are now permanently on-site which is both a benefit to them (free accommodation, water, kitchen, toilets, etc), and to the overall management of the project which we are sure will benefit from their presence and supervision.



New teacher for 6-9 year olds - Allicent



Allicent and her class so far



Inside the new classroom

3. Staff

We are very fortunate in having excellent staff. Our two teachers, Evalyne and Allicent, are both extremely well-dressed and great role models for both the children and the community.

We are most grateful to Faith Riunga, her colleagues and Nicky Dyer of Borana, in appointing Allicent as the second teacher. She has already created a very favourable impression and has added posters and photographs to the classroom making it a very welcoming environment. We feel that Allicent will make a very important contribution to the school in the years to come.



Older classroom for 3-5 /6 year olds

Evalyne continues to be an effective leader of the school and is providing excellent hands-on management. This is evidenced by Evalyne's decision to organise a rota of the parents to clean the classrooms on regular basis. In addition to her other achievements, she has planted kale in the garden and also has a small seed patch where she is germinating tomato plants. We have agreed with Evalyne's request that she should attend a refresher course in teaching during the school holidays.



Siyaine serving lunch



lunch time

Siyaine Kisio, our cook, continues to manage the kitchen to a very high standard: it is spotlessly clean and the wood-burning stoves are very well maintained and working efficiently. Siyaine is single-handedly providing two meals a day for 47 children. In addition, he has faithfully fulfilled his promise to water the trees which are now growing very well. Siyaine has requested further training and we will provide this at Lewa after the kitchen garden is producing a variety of different vegetables which will test his culinary skills.

Dokas, our security guard, appears to be a nocturnal figure and I suspect that his role may be largely symbolic! However, he does sleep in a hut at the borehole to ensure that the expensive solar panels are not stolen. He is, we believe, well liked in the community and his presence alone on school premises is probably a deterrent to theft or vandalism.



'Uncle Horse' - Joras



Joras and Emily

4. Horseback Riding

Emily Elgar and her American friend, Judy, rode to the school one morning on three horses. This created something of a sensation as many of the children had never seen a horse and they were, quite understandably, apprehensive. However, after some of the bolder souls were taken for a ride, the enthusiasm reached fever pitch and the children had to be lined up to await their turn. An important figure in the horse riding was our guide, Joras, who acquired the wonderful nickname of 'Uncle Horse'.



Leaving Enaikishomi School on safari



About to leave on safari

5. The School on Safari

Nicky and Michael Dyer, the owners of Borana Lodge, kindly offered three large Land Rovers to provide a 2-hour guided safari to view the wildlife on Borana. This event created much excitement, amongst the children (many of whom had never seen the wonderful wildlife of their own country), as well as the teachers, Evalyne, Allicent, the cook, Siyaine, and the guard, Dokas. There was space for just 30 of the 47 children at the school.

In the interest of maximising the number of children who could go on safari, the Elgars did not accompany them and this report is based on comments from our guide, Joras (nicknamed by the children as 'Uncle Horse'), who thoroughly enjoyed showing the children the wildlife. Joras succeeded in correcting some surprising misapprehensions. When the vehicle approached a pride of 16 lions, the children expressed some surprise and astonishment at the absence of donkeys! When Joras asked them why they were concerned about this, they replied that they were worried that so many lions would go hungry as there were no donkeys for them to eat! It turns out that their only previous experience had been of a lion that a few years ago had eaten a donkey in a local village!

They then came across a herd of elephants with a solitary giraffe. The children apparently assumed that the giraffe was in charge of managing the elephants and expressed concern and dismay when it moved away from the herd.

They then came across a warthog which many children thought was a baby elephant! There were others who mistook the warthogs large tusks for something that he was carrying in his mouth.

All in all, the school safari was a great success and was thoroughly enjoyed by the children, the teachers, and not least by the guides who were pleased to teach the children about the wildlife of their country. We very much hope that the school safari will become an annual event.



Cedar trees



Cedar trees

6. The Trees

This has been a major success. Last February, Charlie Dyer kindly donated some 70 cedar trees to the school and this was supplemented by further indigenous trees purchased on our behalf by his mother, Rose Dyer. Edward and the guard, Dokas, spent a considerable amount of time placing stones at the correct spacing to indicate where the holes for the trees should be dug. Local people were employed to dig the holes and the trees were planted and then watered by the cook, Siyaine. The result has been astonishing. We estimate that only 2 of the 100 trees planted have died. It is enormously encouraging that the trees are now well established and, with the onset of the rainy season in March and April, we have high hopes that they will all reach maturity.

Harry Hanegraaf of Lewa told us about an innovative method that he had developed for watering trees. This consists of joining two plastic water bottles which are pierced with a small hole and then sunk into a hole next to the tree. This is a brilliant idea for a number of reasons: (i) it avoids the problem of rapid evaporation which comes when the trees are watered from the surface; (ii) it ensures all the water goes to the roots of the trees; (iii) the water lasts for about 7 days which means the trees have to be watered only once a week rather than every day.

The Lewa marathon, which takes place in June, generates hundreds of thousands of plastic water bottles which are normally taken to a recycling depot in Nairobi. Harry has kindly agreed to divert a sufficient number of water bottles to the Enaikishomi School so that we can implement this exciting new method of irrigation.

We are particularly keen to involve the older children in this watering programme most probably through giving each child the responsibility for one tree that would carry his/her name. We hope to carry this forward in consultation with the teachers during the next 12 months.



Eloise's sunflowers

7. The Vegetable Garden

This has been only a qualified success. The garden was originally managed by a collective of women who began with great enthusiasm cultivating one third of an acre which is covered with wire netting to protect the crops from birds. However, having made an excellent start, the women appear to have abandoned this project for reasons which are somewhat unclear. This may have been due to internal divisions with the collective, lack of regular access to the school which used to be closed in the afternoon, possible problems with the supply of water, etc. In any event, management of the vegetable garden has now returned to the school and Evalyne has done sterling work in planting a large crop of local kale which has grown very well.

We are also delighted that the sunflower seeds donated from a sunflower grown in the UK by our granddaughter, Eloise Williams, have flourished and created a wonderful splash of yellow colour in the school compound. The seeds will be harvested and replanted in due course.

The lack of progress on the garden is a source of frustration as we have in place all the elements necessary to make it a great success, namely running water, protective wire netting, and an abundance of compost in the form of cut grass. Past failures have been ascribed to the quality of the soil. However, we have discussed this with a number of knowledgeable visitors who assure us that the soil is in fact of high quality. There is a very real chance that with good management the school could become self-sufficient in food.

We have therefore made a decision to appoint a full-time gardener who will work under the direction of Andre Retief. We are also going to install a drip-feed water system which involves placing a retaining tank close to the garden on a raised platform to provide sufficient pressure for the drip-feed pipes. Andre will be consulting with the local Maasai community to understand which vegetables they prefer. It seems likely that we could easily grow onions, carrots, beans, beetroot, etc.

There is also an established Mulberry tree which is producing fruit and that will become very productive when pruned and linked to the drip-feed system.

We are very keen that the children should be involved in the garden and this will be an important part of their education. In the same way that the children gather sticks for the wood-burning stoves, we will probably be asking them to collect cow and goat manure to fertilise the garden. It may well be that groups of children maybe assigned a particular area of the garden or crop to care for.

(We understand from Faith Riunga that funds maybe available from the Lewa water project – from funds derived from the Lewa safari – to help fund the installation of the drip-feed water system.)

We are hoping that the employment of a gardener will be sustainable in that surplus produce from the garden could either be sold in the local market at Ethi, or possibly to one or two of the local tourist lodges. At the very least, we are hoping that produce from the garden will reduce our reliance upon the meal and maize that we are currently purchasing from Lewa at a cost of 300,000 Kenyan shillings (£2,300 per annum).

We want to ensure that the garden is performing very well before exploring a suggestion put forward by Evalyne and Allicent for a greenhouse.

Finally, Andre Retief who will be overseeing the garden, is an expert in growing mushrooms! Mushroom farming could be a very lucrative sideline particularly if we can produce mushrooms of a sufficiently high quality to interest the local lodges.

8. Toilets

When the school was first constructed there was no water supply with the result that we had no alternative but to install the normal Kenyan, long-drop loos. These are expensive to install as the hole is some 30 foot deep with a concrete surround and air vents. The original loos that were built are now in a very poor condition and rather insanitary. It is clear that a change must be made.

We considered a number of alternatives including basic flush toilets that were provided (after the borehole was supplying water), for the teachers and for the staff accommodation. These flush toilets evacuate into a conventional septic tank.

We have, however, been introduced to a more innovative toilet namely the eco-loo! This consists of a movable toilet and enclosure which is set above a hole dug to a depth of 4-5 feet. After every operation, the person has to cover excrement with ash or a sprinkling of earth. When the hole is three quarters full, the mobile loo is removed to another location and the hole is then filled up with earth. Six months later a fruit tree is planted on the hole which, we are informed, will grow very rapidly.

This project will clearly need careful monitoring to ensure that the staff and children use the loo correctly. However, if this new method proves successful, we could, within a short space of time, have a small orchard of fruit trees which would be an enormous benefit to the school.

9. Adult Education

Unfortunately, this part of the project has not worked well. After some initial enthusiasm, the adults have stopped attending classes in the afternoon. A possible reason for this is that they probably have little incentive to learn to read and write as these skills may have little impact on their economic wellbeing. We have discussed this problem with Evalyne and believe that a way forward may be to centre adult education on practical skills such as sewing, knitting, gardening or jam making. The school has an established Mulberry tree which should encourage the making of Mulberry jam that might be sold either on the local market or to one of the tourist lodges.

We believe that the adult education classes will have a new impetus now that both our teachers, Evalyne and Allicent, are living on the school premises.

10. The Boy-Girl Ratio

We noted that in the upper class of 13 pupils, there is just one girl! Evalyne informs us that the boy-girl ratio is more favourable in the larger first year class. We have been informed that the overall unbalanced boy-girl ratio is due to demographic trends with more boys being born than girls. We find this a little hard to believe and will be asking Evalyne to make every effort to ensure that the young girls in the community are given the benefit of education.

11. The Water Project

The water from the borehole is fundamentally important to the success of the Enaikishomi school project. It is now working very well but could benefit from much closer management.

The borehole is now producing very large quantities of water (in the 9 months to 29th February 2012, according to the meter 114,630 litres equivalent to 5,731 jerry cans of 20 litres) which is supplying the local water kiosk, the school, a local farmer (Edwin Kisio) and an English family (the Thouless'). Andre has strongly advised and kindly agreed to perform a water audit so that we have a very clear idea as to the exact amount of water that is being consumed by the different users. This is important for two reasons:



Solar panels and battery

- i) It is important that we protect the aquifer and ensure that all users are putting the water to the best possible use, and
- ii) It is going to be important that all of the users – not just the school – should contribute toward the up-keep and maintenance of the solar panels and the pump.

It appears, for reasons which are unclear, that this borehole has never been registered with the Kenyan government and is, in effect, operating illegally. The Kenyan government would, apparently, be perfectly within their rights to shut it down!! Harry and Faith have kindly agreed to go through what I understand to be a tedious and bureaucratic procedure to register the borehole with the Kenyan authorities at which point they will charge a small fee for the extraction of the water. Again, we think it important that this fee should be paid proportionately by all of the different parties who have access to the borehole.

We have asked Harry to arrange for the pump to be serviced on a regular basis. This is very important as some 18 months ago the original pump burnt out and had to be replaced at short notice at a cost of some \$3,000. We do feel under a moral obligation to ensure the maintenance of the water supply which is of fundamental importance, not just to the school, but to all members of the local community.

We visited the borehole on a sunny but cloudy day and were astonished as to how sensitive the solar panels are to fluctuations in sun light. The pump literally turns off as soon as a cloud passes over the sun. There are two ways to overcome this fluctuation which may be damaging to the pump:

- i) We replace the current eight small solar panels (which would be relocated to school), with two new, large, more efficient solar panels;
- ii) A second possibility is to install alongside the existing solar panels a wind turbine that would feed electricity into the same system. This would clearly have a number of advantages in that the pump would no longer be dependent solely on sun light. It may also give rise to unintended consequences namely the over filling of the retainer tank leading to loss of water through the overflow pipe.

Harry and Andre are going to consider the two alternatives and report back with a comparison of costs.

The guard, Dokas, is doing a good job in keeping these solar panels clean and ensuring that the battery supplying the perimeter fence is topped up with distilled water. He has also – at least, during our visit – stopped charging his mobile phone on the school battery!!

However, we do need to raise with Harry as to how Dokas can clean the solar panel located on a twenty foot pole which supplies the perimeter fence.



Water kiosk

12. The Water Kiosk

The new water lady, Elizabeth Kisio, is keeping a meticulous record of the amount of water supplied to local people. When the water audit has been completed, we should be able to assess whether payments received by the school match the amount of water that has been supplied. It has been our policy to supply water to the local people at a very favourable rate and, partly as a result of this, revenue from the water kiosk never appears to be sufficient to cover the salary that is paid to the water lady.

Faith Riunga informs us that the Kenyan company, Safaricom, has developed a system whereby local people can purchase water using their mobile telephones. They code in how much water they require and the money is transmitted automatically to the school bank account. A major advantage of this system is that people could obtain water at any hour of the day or night, and the school would make some savings through not having to employ the water lady. Faith Riunga has kindly agreed to get in touch direct with Safaricom to see if they might be able to install the system free of charge as a pilot project. Alternatively, she will provide us with an estimate as to the likely cost of installing the necessary technology.

13. A Third Classroom ?

We feel that so much has happened in terms of new staff and buildings, that we need to run the school as it is for the next 12 months at least. At the end of that period, we will have to make an important decision about the construction of a third classroom so that children can remain at the school until the age of 14. There are a number of important factors that have a bearing on this proposed new development:

- i) A generous American donor, Ann Bent, is currently funding the building of a new high school for the Il Ngwesi Maasai community which will be located within walking distance of Enaikishomi. It will be wonderful if our children could stay at Enaikishomi until the age of 14 so that they could then go direct to this new high school.
- ii) A complicating factor is, I am afraid, the Kenyan government! After the construction of the first classroom, Faith Riunga had to arrange for the school to be registered by the government. Apparently, the Kenyan school inspector was very, very impressed with the school and will be happy for us to develop a third classroom provided that we abide by a Kenyan regulation which stipulates the size of the school compound in relation to the area covered by school buildings. He told Faith that because of this regulation there are two possibilities:
 - a) to attain the correct ratio of land to building, we would have to construct a second storey on top of the existing classrooms!! This seems to us to be a completely mad idea!;
 - b) the other alternative is for the school to purchase an additional two acres of land to comply with the land-building ratio.

We will be raising this problem with the local members of the Il Ngwesi community who we believe donated the original land for the school site. Evalyne and Faith have been asked

to discover the identity of the owners of neighbouring land (one of whom appears to be the Catholic church!), and to explore the possibilities for the purchase of additional land.

It is our intention that responsibility for acquiring the additional land should be taken by the local community who could, if necessary, use some of the funds that have accumulated in the school bank account.

As a further incentive to involve the local community, we are proposing that this additional land should be developed into a football pitch that could be used by both local people as well as the school children.

It is clearly going to be important that we resolve this issue of the land before embarking on the construction of a new classroom.

14. Sun-Baked Bricks

This technique was apparently used around 4,000 years ago in Mesopotamia to construct walls and buildings, some of which are still standing today.

We were very excited to learn from Martin Wheeler, a conservationist working at the Tassia Lodge, that this technique is perfectly suited to many of the soils in Kenya. Martin has purchased a simple hand-press and trained his staff to judge the optimum mix of soil and cement. This press produces inter-locking bricks which are then dried in the sun before being used in construction. This is a remarkable technique with at least five substantial advantages:

- i) there are no transport costs which, given the state of the Kenyan roads and the remoteness of some schools, can be very, very high;
- ii) there is no cost in buying the conventional breeze blocks;
- iii) there are substantial savings in the use of cement which can be kept to a minimum as the bricks are inter-locking;
- iv) the working of the hand-press would provide employment for the local community and will further engage their interest in the school;
- v) it would virtually eliminate the possibility of corruption which appears to be endemic in many construction projects;
- vi) if we could use this technique successfully at Enaikishomi, we could generate some sustainable income by renting out the equipment to other communities.

I discussed this technique with Harry who is enthusiastic about the idea particularly as the soil at Enaikishomi is perfectly suited to the making of hand-made bricks. Harry will provide me with the costs of purchasing one of these presses in Nairobi. We will then arrange training to ensure that people have the knowledge to judge the correct ratio of cement to soil to produce the strongest possible bricks. Once this ratio has been established, it should, in theory, be perfectly possible to produce our own sun-dried, inter-locking bricks.

As an experiment, we have decided to use this technique to construct the courtyard wall designed to protect the staff accommodation from the wind.

It is estimated that construction using sun-baked bricks is one third of the cost of using conventional breeze blocks.



Notice board in classroom with photo of Amy

15. Visitor Programme

We are keen to encourage visitors to the school. It appears that many volunteers – particularly from Canada – approach Lewa on a regular basis, and we are asking Faith to offer the Enaikishomi school to appropriate candidates. Volunteers would work both for the Enaikishomi school and could also assist at the government school at Ethi who welcome additional volunteer teachers.

We decided that, for legal and insurance reasons, it would be preferable if the volunteers could come under the aegis of Lewa not least because they would then be able to network – particularly at the weekends – with other Lewa volunteers. Enaikishomi is in a very remote area of Kenya and we think it important that any volunteers to the school should be able to establish contact with other similar volunteers, particularly at the weekends.

We very much hope that some of the younger donors to this project might consider seriously the possibility of visiting the Enaikishomi school in the years to come. They would, I believe, find it a fascinating and uplifting experience to see what has been achieved in a relatively short space of time.

16. Funding

The Enaikishomi School is now funded through a newly registered UK charity: 'The Amy Elgar Trust for Education and Community Development in Kenya'. The annual running costs including staff salaries and the feeding programme, but excluding repairs, maintenance and any development, amount to £7,500/annum. We think this is good value for money for a high quality school with 47 pupils.

We are very grateful to all our donors whose support during the last six years has resulted in a school and water project that is improving the lives of many children and adults in one of the poorest parts of Africa.

EDWARD AND SANDY ELGAR
March 2012