



NWZDT News



2004 - Newsletter of the North West Zambia Development Trust

Zengamina Hydro Electric Project, Zambezi Rapids

The Trust was formed in 2004 as a vehicle for sustainable rural development to uplift communities in North Western Zambia. There was also the belief that we were commissioned to "put our money where our mouth was" by bringing transformation to people's lives, not just preaching at them. The founding Trustees had many links with other organisations and Missions in the area but realised that these were already stretched within their area of remit. Consequently, the development of a hydro electric scheme at Kalene, that had been on the drawing board since 1964, was unlikely to happen



Kalene Mission Hospital.

unless an interested group took on the project. This was the impetus to form the Trust and is its first project which is the first power scheme with an independent mini-grid in Zambia, taking power to people in remote areas which are not accessible by the National Grid, supplying power to some of the 98% of rural Africans who do not have power available. The mini-grid will supply four primary schools, two secondary schools, several rural health clinics, a school for the deaf, three missions, Kalene Hospital with 150 beds, two markets, two Chief's palaces, over 100 shops, a commercial farm and at least 1000 households

A new feasibility study, for what is called the Zengamina Hydro Electric Scheme, was commissioned by some of the now Trustees in 2003. This report, produced in October 2003, confirmed the technical viability of the project but also confirmed that as a solely commercial exercise it was not viable due to the local poverty and the resultant inability

to repay any commercial loans. The project was only viable if approximately 60% or greater of the total cost was gifted. Hence the Trust was formed as the vehicle for gifts and for stewardship and accountability. The long term sustainability is dependant on the power scheme being run as a utility with the community paying for the long term viability of the scheme including expansions required in the medium term.

Fund raising commenced in January 2004. In the UK the Trust has links with Echoes of Service (UK) and Medical Missionary News (UK). The response to submissions and presentations has been very encouraging and the work on this first project has progressed well. In April the bush was cleared in the areas of the canal, the penstock, and the turbine house and at the site offices the foundations were dug.



The first ground clearing for construction of the site office/engineer's house.

As the work has progressed the number of labourers has also increased, with over 130 people busy on site, which will continue for the remaining 12 months of construction.



Fellowship at the start of the day.

The labourers start the day with a time of fellowship together and a briefing. They then depart to their various tasks, whether it is with the wheel barrow brigade, or digging, jack hammer or general duties. With the exception of one tractor with pneumatic jack hammer attached, all the work has been done by hand. We have been asked many times



Jack hammer in action.

why we do not bring in mechanised equipment. The mandate of the Trust is to bring benefits to the people; this is the main reason for using so much labour. Using equipment would speed things up and possibly be cheaper, but we feel strongly that utilising local labour brings much needed cash into the local economy and also develops a sense of pride and ownership in the project. Indeed, there is an excitement and enthusiasm in the whole area about the project and many are already planning what they will do when power comes – one man was saving up to buy welding equipment to start his own welding business.

By June the progress and layout of the scheme could be clearly seen from aerial photographs (see over). To give you some idea of the scale, the width of the canal (which runs from mid left of the picture to mid bottom) is eight metres.

The construction work has had unanticipated benefits. The headmaster of Kalene school has remarked that the scheme has already made a dramatic improvement in his ability to recruit teachers. Whereas he often had no applicants for vacant posts, now he has



Aerial view of the site.

more applicants than posts. This, he says, is solely due to the prospect of 24 hour power.

Other early positive benefits have been the input from Brass Tacks (UK) (a practical and technical support organisation) to assist with the improvements needed at Kalene hospital. Some of these improvements are necessary for public health such as redoing the plumbing, drains and latrines. Other improvements, such as re-wiring, are purely to allow the hospital to make the most of 24 hour power.

Travelling to and from the project site one is aware of areas of the bush that have been cleared, but from the air these apparently random clearings take on meaning – they are cleared of bush for the power-line that is a straight line



The power line clearing - seen as a long green track disappearing into the distance.

from the site to Kalene. This represents a lot of hard work.

As with most new projects and especially in remote rural areas there have been some delays with paperwork and logistics. This is the first of its kind in Zambia, and although there is encouraging support from government bodies, protocols and permissions lag behind the well wishes. The support of the local Chief Zengamina has helped to overcome all the hurdles and he has also agreed to create a nature reserve over the entire area of the Zambezi rapids to promote the preservation of this pristine site.

Construction of the weir was partially completed at the end of the first dry



Aerial view of the weir.

season. Completion of the civil works is scheduled by the end of October 2005, ready for the installation of the turbine and generator and the commissioning of the power line. The bush clearance for the full 33 kilometre length of the power-line to Sakeji school was completed just before Christmas. This involved levelling a huge number of large termite mounds as well as removing some houses!

2004 ended very positively. On the 7th December we were able to place the order for the turbine which will take



A large termite mound in the way of the power line.



The termite mound under removal.

approximately seven months for manufacture and three months for the 22 ton delivery. This has only been possible due to the interest and generosity of very many individuals and donors – to all of you the Trustees extend their sincere thanks on behalf of all the people of the Kalene area of the North West Province of Zambia. We are about half way towards the £1million cost of the project. We still anticipate being able to have power connected to Kalene Hospital by its 100 year anniversary in August 2006.

Should you wish any more information about the project please get in touch with the Trust Secretary or Chairman.

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The North West Zambia Development Trust is a registered charity in Zambia. In carrying out its work it works closely with the following organisations as all these agencies seek to carry out the Lord's great commission, demonstrating His compassion and with good stewardship of all the He has entrusted us with. If you would like to support the Trust in its work please contact any of these agencies or one of the Trustees.

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