



# ***Newsletter No.107***

**April 2018**

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## ***ABOUT CED***

Christian Engineers in Development (CED) is a Christian professional consultancy service dedicated to development work with overseas communities, and through service, to witness to the Christian Faith. Operations usually comprise a tri-partite arrangement between a developing country organisation, a funding agency and CED providing technical assistance. CED responds to requests for assistance, improved water supply being the most frequent request but by no means the only one. CED promotes self-help with the maximum use of local resources.

CED's services include site visits, feasibility studies, assistance with project proposals, design, contract documents, procurement, tender evaluation, project supervision, direct labour employment, on-the-job training of local staff, project monitoring and evaluation, assistance with fund-raising and the management of project funding.

CED's income comes primarily from grants for projects together with donations from Churches, Trusts, Members and Supporters, and membership subscriptions. Most of the expenditure goes to operations; management costs are kept as low as possible. CED is not a funding agency and therefore cannot directly fund major projects but it can, and often does, fund preliminary investigations for potential projects.

The Association is registered as a Company Limited by Guarantee (without shares) and being a non-profit organisation, it is registered as a Charity. It is managed by a Board of Directors/Trustees, elected from the membership, giving their services voluntarily. The Board appoints a Secretary and a Treasurer. CED Members participate in the work of the Association either voluntarily or if they depend on earnings for their livelihood on negotiated payment for their services.

Membership of CED is open to any person who is professionally qualified, supports the Aims, accepts the Statement of Faith, supports the activities of CED in any way, or serves as an employee or volunteer, both in the UK and overseas. Membership requires an act of commitment and usually an annual subscription. Becoming a Supporter of CED is open to any person or group that supports the Aims, and wishes to be kept informed of CED matters.

Anyone wishing to become a Member or Supporter should contact the Secretary. An application to be a Member should be supported by an existing Member or Pastor.

## ***Newsletter***

The Newsletter is published twice annually. We'd be delighted to provide additional copies for friends, colleagues, church book stands, etc. Please contact [chair@ced.org.uk](mailto:chair@ced.org.uk) and let us know how many you'd like.

The editor would be happy to receive contributions for the next Newsletter. Please send to [ian@ced.org.uk](mailto:ian@ced.org.uk)

## ***PrayerPoints***

Copies of our monthly prayer bulletin are available by e-mail or post. Please request a copy by email to [ian@ced.org.uk](mailto:ian@ced.org.uk) or by writing to the Secretary.



## ***Letter from the Chair***

Welcome to the latest edition of CED's newsletter. We have had a number of encouragements over the past few months: I am sensing signs of new life and renewal in our organisation! In this edition you will read about positive progress at Rwentamu in Uganda, where the valley tank construction is now complete. We have also seen the commencement of the Gakamba project in Rwanda. Concept development work has commenced on a possible hydro-electric power generation scheme near Kagando in Uganda. CED also hopes to help LAMB Hospital in Bangladesh as they seek to make water and sanitation improvements. All very exciting.

Notwithstanding the positive developments, we have also faced discouragements and setbacks. Despite spending many hours preparing the application, we received a **rejection from UK Aid Direct's Small Charities Challenge Fund**; we were also rejected by the Scottish Government for their

Small Grants scheme, since our annual expenditure in one recent year had been above their threshold. As we prepared to start the project at Gakamba, we heard that many of the houses that were earmarked for the project had been damaged in a violent storm - setting the project back before it had even started; having said that, the impact on the community will be much more severe. The work of CED can be a real burden for our members and directors: we all honestly want to do more, but find that age, ill health and/or work, family or church commitments prevent us from doing more through CED. Being a volunteer-led and run organisation brings great benefits in terms of our cost-effectiveness. Yet, it can become a real burden when a project needs a major injection of attention. Despite all the challenges though, it seems amazing what God has been able to do, and continues to do through CED. It seems a veritable mustard seed - small and insignificant, yet in a mysterious way capable of enormous growth and development for the Kingdom of God.

The challenge for me is what makes Christian Engineers in Development **distinctive? As the hymn goes, "I serve a risen Saviour, He's in the world today". And in the words of St Theresa of Avila: "Christ has no body but yours, no hands, no feet on earth but yours. Yours are the eyes with which he looks compassion on this world; yours are the feet with which he walks to do good, yours are the hands with which he blesses all the world". Let us go about our work for CED with a real sense of determination as we get to grips with this challenging and humbling call.**

*Mike Beresford*

## Member News

Harry and Sarah Weld-Forester worked for a brief period in north-western Tanzania with Water Mission installing solar powered water treatment systems on three refugee camps. Due to work permit issues they have returned to Zambia to work with Mechanics for Africa in Ndola ([www.mechanicsforafrica.com](http://www.mechanicsforafrica.com)). Harry will be CEO and Sarah will be Academic Manager. It is a city and guilds training



college in motor vehicle engineering and a commercial workshop servicing vehicles.

The students are from impoverished backgrounds and the fees are 80% covered by sponsors in the UK.

Harry and Sarah are pleased to be back in Zambia and started the hand over process in March. Hamish and Daisy have started back at their old school and are settling in well.

*Harry Weld-Forester*

## CED in Wales

CED has just one member in the principality of Wales, Jonathan Cox. CED aims to encourage all existing CED members and find some new ones where possible. As part of this plan, Chair of Directors Mike Beresford travelled down to Aberystwyth recently and spent the weekend with Jonathan and his family. Jonathan had arranged an opportunity for Mike to speak on Friday 16<sup>th</sup> March at Aberystwyth University to their FACS group (Fellowship of Aberystwyth Christian Staff). **The title of the talk was “Why I am a Christian and an Engineer working in Overseas Development”. This focussed on the global issues caused by lack of access to safe drinking water and sanitation. There followed a look at handpumps and sustainability issues. Afterwards Mike shared more about CED and its aims, values and vision, together with some examples of**

projects that had been done. People were able to ask questions after the presentation. About 20 people from a wide variety of backgrounds came to the meeting, from sixth form students to retired members of staff. On the following Sunday, Jonathan had organised a brief interview during the Sunday **morning service at St Michael’s Parish Church** in the centre of Aberystwyth in which the work of CED was highlighted.

Overall, the weekend was a time of great encouragement for both Jonathan and our Chair Mike Beresford. Please contact one of our Directors if any of our supporters or members would like to organise a similar event.

*Mike Beresford*





# **“Partnering for Development”**

## **CED AGM and Open Day, Swindon, Saturday 23 June**

CED’s Annual General Meeting will be held on Saturday 23<sup>rd</sup> June at Immanuel URC Church in Upham Road, Swindon, SN3 1DH. Tea and coffee will be served from 10.00am and our opening time of worship will commence at 10.30am. The formal meeting will conclude at 4.00pm.

This year the Rev Chris Dobson, the Ecumenical and Global Partnership Officer from the Diocese of Bristol, will be speaking to us on the subject of the church’s role in partnering for development in Uganda. He will be joined by Kevin Riley who is the founder and director of the Bujagali Trust which works closely with the Church of Uganda. Chris Dobson will also run a photography workshop in the afternoon. There will be further workshops on



*Open Day Workshop*

pumping and piping design, construction and use.

As usual there will be an opportunity to spend time together after the meeting, with an evening activity/visit in the local area and an opportunity to enjoy a meal together afterwards for anyone who wishes to stay. Every year it is a great encouragement for us to come together, and we hope and pray that this year will be no exception.

*Mike Beresford*



*Chris Dobson*

## **The Big Church Day Out**



CED will have a stand in the Bazaar at the Big Church Day Out at Wiston House in West Sussex on 26<sup>th</sup>/27<sup>th</sup> May. Come along and see us there!

## ***Ian Bell in Uganda, February 2018***

During my visit to Uganda I had the privilege of going to a number of locations. They were Katete, Rwentamu, Kikatsi, Kisyu Kagaana and Nyankumba. I was ably escorted by Philip, CED's locally based engineer.

It was useful for me that Katete was the first stop. Katete has an operational valley tank which has been in place for a couple of years. This prepared me for Rwentamu which was work in progress and for Kikatsi and Nyankumba, two prospective locations for valley tanks. At Katete we met with some of the Local Committee and were able to discuss a number of issues which will hopefully promote the longevity of the project. The tank was in good condition and there was still a plentiful supply of water.



laity. He had only been in post for a few weeks. We found this to be the case at other parishes which we visited.

While still at Rushere, we were taken to Kikatsi where the Bishop is requesting us to consider the installation of a valley tank. The local church initially had two sites in mind but had ruled one of them out before we had arrived. The population was adjudged to be in excess of 1000. However, it was found that the optimum site for the proposed tank is already occupied by an existing watering hole. This may not be an insurmountable problem but ideally a fresh location would be preferable. We were accompanied to the site by the priest and a couple of his laity.

The same afternoon we had the privilege of afternoon tea with the Bishop. We were able to talk over the sites which we had visited and he showed us the new partially completed, though in use, girls' secondary



*Near Karere*

Rwentamu valley tank is under construction. The bulk earthworks had been completed and the trench for the water supply to the shallow well was being excavated. We were able to discuss various issues with the contractor to improve his method of working. It is anticipated the work will be finished by the end of April. Prior to the site visit we called on the Parish Priest at his home. He was preparing for a service with some of his



*Tapstand, Kisyu Kagaana*



*Rwentamu tank excavated February.*

school just down the road from the cathedral.

It was a pleasure for me to stay at Kisiizi Hospital as our church has been supporters for many years but I had not previously been there. We stayed there for three nights in order to travel to Kisyga Kagaana for two days of surveying. We were trying to establish whether a source of water close, but slightly lower than the Upper Source could be effectively fed into the system. We had the assistance of the Scheme Chairman and the two Scheme Attendants for the exercise. They were very useful and cooperative. We were able to have informal and formal discussions with them about the management of the scheme, which we trust will be beneficial.

Our final visit was on our return journey to Kampala when we made a detour to visit a prospective Valley Tank site at Nyankumba. The area had previously been part of the local National Park but had recently been released for local use. The population appeared to be

sparse. Further investigations will be required to ascertain the suitability of this area.





# Rwembya Micro-Hydro Power Scheme Development

**Status** - Since Christmas the CED board and CED member Jonathan Cox have been liaising internally and with Kagando Mission Hospital on ways that CED can assist the hospital in taking forward the development of this scheme. The development phase of any hydro scheme involves three 'strands'; all must be addressed to establish the scheme 'feasibility' and move forward to the implementation stage. Firstly a technical solution (in outline) is needed covering civil, electro-mechanical, control and high voltage aspects. Secondly consents, licences and agreements for the scheme (as outlined) need to be obtained from all the interested agencies and third parties. Finally, funding needs to be arranged and checks made that a credible financial plan will be instigated for sustainable operation of the scheme on a



long-term basis. On the 8<sup>th</sup> February, the board approved CED getting involved with the project to provide support for "feasibility and outline design" (together with a provisional budget), on the understanding that Kagando Hospital are fully in agreement. Further, the Board have appointed Jonathan Cox to undertake and coordinate CED's development of the outline design and feasibility support. Earlier this week CED have heard – unofficially – from the board of "Kagando Hydro Power Ltd." (KHPL) that KHPL are keen to work with CED on the basis of a draft memorandum of understanding. This is a significant development for CED as it will require input on a multi-disciplinary basis. Jonathan would particularly like to



*Weir completed. This will facilitate flow measurements though may require modification depending on permission regarding water abstraction.*





hear from any CED members who have skills / expertise in instrumentation, control and automation.

**The background** – Kagando Mission hospital lies close to the foot-hills of the Ruwenzori mountains and has established an exemplary reputation for medical care over generations. Although supplied by micro-hydro in the past, the existing scheme is too small, the water resource has dwindled (due to the increase in water abstraction upstream of the scheme) and it has fallen into a state of disrepair. This has meant that the hospital has had to rely on a large diesel generator which is costly to run and not environmentally friendly. In 2007 CED director John Holloway instigated a CED visit to assess the possibilities. Jonathan Cox conducted the visit and returned recommending a more **detailed feasibility study of a potential ‘high-head’ scheme with an intake in the mid-hills of the Ruwenzori’s. This scheme on paper, could have a capacity of between 350kW and**

**400kW which would exceed the hospital’s needs.** In more recent years, Charles Swainson and KPHL have slowly started to tackle some of the issues raised in the 2007 CED report.

**Looking forward** – In the near future, Jonathan plans to visit the hospital, the site, developers of nearby mini-HEP schemes in the Ruwenzori mountains and government agencies in order to take stock and help KPHL plan the way forward. It is hoped that, in parallel with moving forward on issues relating to consent, outline work on the specification of the scheme can be progressed . The main engineering features of the proposed scheme are the intake and de-sanding facility, a buried penstock pipe several kilometres long, a new power house, control and instrumentation suitable for automatic operation of the plant and an HV connection to the 33kV local grid connection.

*Jonathan Cox*



*A UK example... Jonathan Appleby North of Inverness.*

## ***Progress in Gakamba, Rwanda***

We give thanks to God for the provision of funding to enable the Gakamba, Mayange Returnee Refugee Project to start this summer, despite not obtaining Grant Aid from DFID. The project to provide rainwater harvesting and kitchen gardens to 50 homes will be run in conjunction with Faith Center Ministries who are a new partner for CED and are also building a Church for the community. Rwanda Health Environment Project Initiative

## ***Return to Rwanda***

It was a privilege to join Alan on his trip to Rwanda. Last time I visited was in 2012 and things are changing. More tall buildings, busier roads, better shops... but still a large section of society relies on external support and food aid. Despite economic growth of



*Storm damage, Gakamba, Mayange*

over 8% in recent years over a third of the national budget is supported by foreign aid. It is therefore timely for CED to find itself with another project there, albeit miniscule in scale compared to the problems people face.

I appreciated meeting Charles, head of FCM and a committed evangelist with a heart to



*New church building under construction.*

(RHEPI) who have worked with CED in Rwanda in the past will provide the local technical assistance

*Alan Michell*

see change in communities at all levels. We discussed the recent government edict that churches below a certain standard should be closed down; he was pretty up-beat about the situation: they simply need to smarten up and provide toilets which they really should be doing anyway. To me it seems heavy handed, **though perhaps it's simply the modern** bureaucratic world catching up with Rwanda.

It was good, too, to catch up with James Rubakisibo again. He is always passionate about appropriate technology and will be supporting the Gakamba project; there is a diagram of the underground tanks we use in Pakistan on his wall. He demonstrated a shallow well pump made from pvc pipe, wood and rubber; incredibly simple and locally repairable.

*Ian Rankin*



*RHEPI technician demonstrates pump valve to Roger the contractor.*

## ***MOU Signed!***

Thursday 22<sup>nd</sup> March, 'World Water Day', was a significant day for CED and the Returnee community in Kavumu village in Rwanda. After 2 years of discussions with local partners and potential funding agencies, a Memorandum of Understanding between CED, Faith Center Ministries (FCM) and Rwanda Health Environment Project Initiative (RHEPI) was signed. This project is to provide rainwater harvesting systems to 50 houses and includes kitchen gardens and some minor home improvements to limit erosion of the walls of the houses. Training of the local families in new skills and empowerment of the women in the community is a key aim of the project as well as releasing children from onerous water collection duties into regular education.

The Team however face an additional problem not covered by the project. At the end of February, a large area of the Bugesera District, of which the Mayange Sector and Gakamba cell are a part, suffered an unprecedented storm which damaged 186

houses in the Mayange sector alone, of which many were in the Kavumu village. A separate project is underway, alongside the main project to repair and strengthen the roofs of these houses.

This community was introduced to CED by Pastor Charles Semwaga of Faith Centre Ministries who has a vision of reaching out to the poor and marginalised communities of Rwanda. Faith Centre ministries are currently constructing a Church / Community building in the village to serve both the village and the wider community of the Gakamba cell, and have a further vision of building a school for the community.

Although the link with FCM is a new partnership for CED, we are pleased to be working with RHEPI again after a number of years since our last co-operation. The Project is scheduled to take 15 months to complete.

*Alan Michell*



*Charles Semwaga, James Rubakisibo, Alan Michell sign copies of the MOU between FCM, RHEPI and CED*



# Survey Visit, Sierra Leone

Alan Michell and Steven Harris, together with James Fallah-Williams of Practical Tools Initiative (PTI), paid a second visit to Sierra Leone in February focusing on a potential project to bring a water supply from a hilltop stream, by gravity, into the village of Manowa and distribute to tap points around the village. Meetings were held with Engineers Without Borders (Sierra Leone) who together with PTI local representatives and guides from the local community trekked three and a half miles each way into the forest to survey the water source and possible pipe routes back to the village. After the survey they met with the village leaders to explain the process for evaluation of the project. Manowa is a village of approximately 6,000 inhabitants and is a mixed community of both Moslem and Christian faiths. The meeting with the leaders finished with both Moslem and Christian prayers. The



community showed their appreciation by giving the team a gift of bananas, pineapples, plantain, yam, coconuts and oranges

A brief visit was also made to the small village communities of Gbonko Kasangha and Bonbali close to the Lungi International airport, where one of two hand dug wells was dry and the other contaminated, necessitating water to be drawn from a nearby stream which was also used for community washing purposes.

*Alan Michell*



*Community meeting at Gbonga Primary School*

## ***Sierra Leone background***

After the civil war, which ended officially in 2002, the churches, although a minority, have played an important role in healing, peace, and rehabilitation. The United Methodists (the largest Protestant group) and the Anglicans are part of the WCC through the United Methodist Church and the Anglican Province of West Africa. The Council of Churches is the ecumenical body. Pentecostals make up about 10 percent of the total number of Christians. There is an Evangelical Fellowship, affiliated with the WEA.

*(from World Council of Churches website).*



*Gift of fruit from Manowa community*



*Manowa community leaders*



*Water source at Manowa .*



## ***Progress at Rwentamu, Uganda***

We give thanks to God for the very rapid recent progress on the Rwentamu project. CED's directors approved the project for construction last September, and bids were sought for the earthworks contract: this forms the majority of the project expenditure. In addition to large donations from Life Trust and Wilmslow Wells for Africa, we received a substantial award from the Overseas Aid department of the States of Guernsey just

after Christmas. CED Director Ian Bell was able to visit the project in February to assess progress (see p.7). We have since heard that construction has been completed and water has started filling the reservoir (see photo). Many thanks to Philip Tibenderana for all his hard work supervising the contractor; and to Ian Bell for travelling to Uganda to monitor project progress.

*Mike Beresford*



## ***A Call to Pray...***

Continuing the theme of what makes us distinctive at Christian Engineers in Development, we know that prayer is a vital part of our spiritual armour. In Ephesians 6: **18** the Apostle Paul says: *“And pray in the Spirit on all occasions with all kinds of prayers and requests. With this in mind, be alert and always keep on praying for all the Saints”*. Prayer for our members and our work should always be a priority for us as an organisation. Corrie Ten Boom once asked *“is prayer your steering wheel or your spare tyre”*? **What about us? All members of CED** have committed themselves to support the work of CED in prayer. However, what is slightly concerning is that only a relatively small proportion of our members use our monthly PrayerPoints prayer diary. As a

result the work of CED seems to be being upheld in prayer by just a handful of its members. May I encourage every member to commit themselves as far as reasonably possible to use CED's PrayerPoints every month? Through this we not only acknowledge our dependence on God for CED's work, but we also lift up and support one another in our service. If you aren't already on the mailing list for PrayerPoints please contact Ian Rankin at [ian@ced.org.uk](mailto:ian@ced.org.uk) and he will add you on. If you already receive PrayerPoints, please can you make it a priority to download it and use it? **Let's "pray continually"** (1 Thessalonians 5:17).

*Mike Beresford*



## ... and plenty to pray for!

Conscious that this Newsletter will reach a wider audience through the Big Church Day Out, here are some of the other initiatives that CED is working on:

In Chato, Tanzania, we are working to support the local government engineers as they try to meet the needs of the surrounding community. Stage one is simply providing some spare parts so that broken pumps can be repaired. At the same time we are working with them to develop some of their projects; the local engineers are qualified but many do not have a lot of experience. In getting alongside them we believe we can build their capacity and leave a functioning government department in a few years; much better than simply overseeing a single project!

In Zanzibar we continue to help the church and having provided support for the cathedral conservation (ongoing) we are now providing help to improve a couple of wells on the island. As well as supporting a group of Returnees in Rwanda (p.10) there are plans to support training there for a group from Congo to learn about rainwater harvesting and ferrocement tanks. We're also exploring opportunities with LAMB Hospital in Bangladesh, involving students from Cranfield University.

Ian Rankin



Site cast filter unit for rainwater tank, Rwanda



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*Front Cover: cattle trough,  
Uganda, Ian Bell.*

*This picture: River crossing  
on way to water source  
at Manowa, Sierra Leone,  
Alan Michell*

