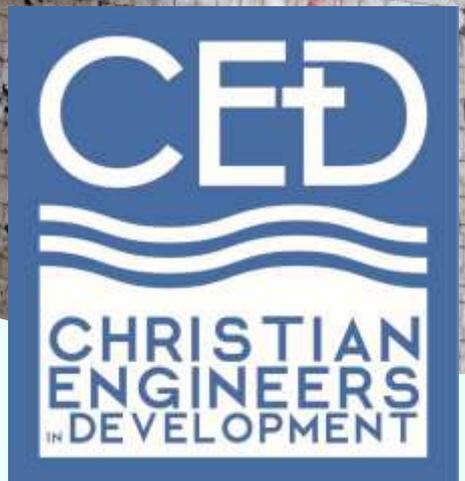


Annual Review *2018 / 2019*



Sharing skills
Changing lives



Christian Engineers in Development

Annual Review

April 2018 to March 2019

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Mayange Rwanda: rainwater harvesting workshop.

Front cover: Mayange, Rwanda, plastering a tank.

Letter from the Chair

Welcome to our Annual Review for 2018/2019 in which we look back and assess the past year's events. John Holloway's 'promotion to glory' in June has had a great impact on many of us. After each quarterly CED Directors' meeting at Keychange Charity off Westminster Bridge Road, John and I usually took the same tube train on the Bakerloo line from Lambeth North. He would be heading to Marylebone and I towards Kings Cross. We would sit and chat briefly about the meeting and then I would get off at Oxford Circus while John went onwards. Little did I know as I watched his impeccably dressed figure disappear into the distance that I would not see him again – in this lifetime at least. His life-long development experience brought a real insight to our deliberations as we weighed up the pros and cons of different projects. His wisdom was invaluable as we sought to discern when to say yes and when to say no. His Christian character and our shared fellowship also brought great encouragement to us all. We very much miss John and continue to pray for his wife Vivienne and wider family.

Looking back at the past financial year, the main point to note is our lower than usual expenditure – under £100,000. This reflects a combination of the directors' workloads and the current funding environment. Although projects are not our sole reason for existence, as our strapline says, our aim is to share skills and change lives. Financial expenditure is one indicator of how well we are doing this. But, we are currently working with partners in Bangladesh, Pakistan, Tanzania, Rwanda, Sierra Leone and Uganda, so we will wait and see how these areas develop in the coming year.

This caused me to think about my reasons for joining CED. I had felt a sense of God's call on me to use my engineering skills to serve others practically. Paraphrasing what the Apostle Paul says in Ephesians 2: 8-10: you have been saved by grace through faith: now get on and find out how God wants you to serve others practically. There are two key aspects to consider for CED: God has the power and could choose to fix all the world's engineering problems himself. Yet it is a remarkable thing that He wants to work through people like CED's members. But, are we ready and available? Secondly, God also works when His people pray. I have been disappointed to learn that fewer than half of our members download CED's monthly PrayerPoints and pray for our work. May I take this opportunity to encourage you all to pray regularly for God's work through CED and our partners? We are *Christian Engineers in Development*. Let us follow and serve Christ through our prayers and though sharing our engineering skills.

Mike Beresford



Membership

We have 75 members now, as at the end of March 2019, including four new members since the last Annual Review was published: Geraint Davies, Simon Beswetherick, Richard Molloy and Roy Hooke. We introduced these new members in the Newsletter in November 2018 where we also reported the sad news that our long serving Director John Holloway died in June 2018.

CED has four members directly or indirectly connected with CED projects overseas: George Bagamuhunda and Philip Tibenderana in Uganda, Basile Musonera in Rwanda and Dominic Stephen in Pakistan. At least eight others are also working overseas, two with DFID and most of the remainder with charities. Most, if not all, will face quite challenging situations. Please remember to pray for them.

We are keen to mobilise more of our current members to carry out voluntary work both in



the UK and overseas. We are pleased when we receive offers or renewed offers of voluntary help from our current members. We welcome new applications for membership from those normally resident in the UK or engineers already actively engaged on CED projects.

Rob Wakeling and Barbara Brighthouse

Safeguarding.

CED's way of working overseas involves close cooperation with a local partner. We work with them to evaluate the issues that face their community: possibly impacting their health, safety or livelihoods. CED then works with the partner and their community to develop a **solution. CED's engineers work hand in hand with our partner's staff. Following the OXFAM scandal in Haiti, a great deal of pressure was exerted on charities working with vulnerable people overseas, to ensure that their methods and personnel adhere to the highest standards of behaviour. But CED doesn't actually work directly with vulnerable groups; we only work indirectly through community representatives. As such, we are not permitted to obtain enhanced disclosure checks for overseas volunteers. However,**

CED's directors have felt that we should demonstrate our commitment by assessing the backgrounds of all who represent us overseas. We have therefore become members of the safeguarding organisation **thirtyone:eight (formerly CCPAS) and are introducing basic disclosure checks for all CED's overseas travellers. These checks can be carried out simply. If anyone is interested in travelling overseas with CED in the next year, then please get in touch with Mike Beresford at chair@ced.org.uk and we can initiate the disclosure checks. Our safeguarding policy is located in the **members' area of CED's website and can be made available to any supporter or other interested party on request.****

Mike Beresford

Rwentamu, Uganda

The Rwentamu project in south west Uganda was substantially completed in summer 2018. The project was executed in partnership with the North Ankole Diocese of the Church of Uganda. Providing water for communities in this area can be a problem because the local geology prevents abstraction of groundwater. This means that a form of surface water reservoir is needed. CED implemented its **proven design, called a “charco-cum-valley”** tank, to capture rainwater flowing down the Rwentamu valley. The design incorporates a settlement pond where larger particulates and sediment settle out from the surface water, before it passes into a larger storage area. From here the water flows by gravity through a gravel filled channel into a shallow well. The community can use a hand pump from the well to fill jerry cans with water for domestic purposes.

Whilst CED’s focus is often on providing new water supplies, this is not the only element of work needed to bring about health improvements. Unless new water supplies are



Edward Rhodes with some of the Rwentamu community.

accompanied by good sanitation and hygiene practices (particularly handwashing with soap), then the desired health improvements may not be achieved. The health and hygiene training at Rwentamu has been carried out by the diocesan health officer Seith Abaho. The only outstanding item now on the Rwentamu project is the sanitation promotion; our plan is to work with the community to train them and help them to construct 100 sanitary latrine platforms. Please pray for this initiative. Our aim is that the community see the benefits of such a development and continue producing latrine slabs for themselves in the future.

Mike Beresford



Philip Tibenderana beside the hand pump.

Rwanda: Life is a Miracle!

It is nearly three and a half years since CED was first introduced to the displaced community in Kavumu village which is in Mayange Sector in the Eastern Region of Rwanda. During that first visit early in 2016, Pastor Charles Semwaga of Faith Centre Ministries introduced CED, together with Rob and Jan Hoy from Lewes in East Sussex, to the community. At that time it consisted of 36 families recently re-housed by the Rwandan government after their expulsion from Tanzania.

The scope of a project evolved over the next two years, as we paid several visits and held discussions with Pastor Charles, the local community and the Mayange Local Authority. During that time the number of families increased to 50. The project was to comprise four elements: a bulk water tank, individual household rainwater tanks, kitchen gardens and some basic home improvements. **Over this period there were several 'ups and downs' as specific requests were made by the local authority and grant aid applications were turned down.**

In early 2018 many of the houses were severely damaged in a storm necessitating some families to temporarily re-locate to undamaged homes or relatives away from the area. CED with the help of a UK church and some private donations was able to repair the damaged roofs and walls and all families were



Ferrocement water tank.

able to return to their homes by the summer of 2018.

Despite the disappointment of the initial grant aid applications being turned down in the first half of 2018, three separate smaller funding offers were subsequently made to CED amounting to about two thirds of the capital needed, which enabled CED to tell Pastor Charles and the community in September of 2018 that the project could start.

In December 2018 work started on the 40 m³ concrete tank and in January this year a training programme was held to train the local community in the construction of the ferrocement household tanks and kitchen gardens. During the two weeks of training, despite difficulties in obtaining some materials and local services, three tanks and three kitchen gardens were built. Subsequent to the training the local community under the supervision of Pastor Charles and civil engineer Roger Rwagasana were able to complete three more tanks by the end of March, making a total of 6 out of the target of 50 needed to complete the project. The bulk water tank was completed and connected to a new feed main



Kitchen garden.



Casting the reinforced concrete bulk tank.

from the local WASAC (government) mains water supply.

During a discussion with another one of the beneficiaries, Muturinde Philemon who lives

with her eight children in one of the houses, on being asked how she managed to feed and clothe her family with no regular income, **replied “Life is a Miracle.”** Muturinde also commented that the project would greatly assist her in providing food and education to her children, which for her, were the two most important things that would bring her lasting happiness.

Alan Michell

Kiwengwa , Zanzibar

When work on Zanzibar Cathedral came to an end in 2016 CED was keen to maintain our partnership with the Diocese and discussed how we might help with other needs. The Diocese has a pastorate in Kiwengwa which is keen to expand services in the local community including rebuilding their church (scheduled for demolition for road widening), building a dispensary and perhaps even building accommodation for hotel workers from the nearby resort. The next step in bringing these ideas together is to upgrade the water supply and introduce electricity to the village. A high voltage line passes them and to access it they needed an expensive transformer.



Kiwengwa kids.

CED offered to pay 60% of the cost of the transformer, pay for an electric pump for an existing well and purchase a water tank. Work commenced in July 2018 but hit a snag over agreement to use the existing well. A new well is being completed after which the pump and tank will be purchased. CED is funding the work (est. £8,500) from its own resources. This is one small way for us to stand with the minority Christian community in Zanzibar.

Ian Rankin



The transformer.

Sierra Leone

The past year has seen both progress and disappointment with the potential projects in Sierra Leone. We continue to work alongside Practical Tools Initiative in the development of three different projects in three very different areas of the country and their permanent presence in the country continues to be a valuable asset in developing new projects.

Gbonka is a small community in the Lungi area adjacent to the international airport and is situated close to the river delta which separates the airport from the capital city of Freetown. We have been working with the Word of Life Church who have a primary school in the village of Gbonka. The existing shallow well is contaminated with high levels of manganese and iron, probably due to poor construction. Following discussions with Pastor Esther Onwuna of the Word of Life Church, the plan is to drill a new borehole in the grounds of the primary school, but available for the use of the whole village community. In addition to the new borehole, a toilet block will be built for the school to provide the much-needed privacy for both the children and teacher at the school.

Funding is available for the project to start once a qualified borehole contractor is selected.

Rotifunk is a larger community located about **2 hours' drive from Freetown and prior to the civil war was a thriving rural community with a sophisticated water purification and distribution plant built back in the 1960's.**

During the civil war the plant was destroyed and all that remains is the damaged dam and some overgrown sand filter tanks. Following a first visit to the community when a meeting was held with the local leaders and Pastor David Keifala of the Word of Life Church in



Gathering water whilst washing at the damaged dam in Rotifunk.

February this year, CED will be working with PTI to undertake a baseline survey to help assess the best way forward in improving the supply of clean water to this community.

Manowa is a large village of some 12,000 inhabitants, some 6 hours' drive from the capital Freetown, and close to the river Moa and the border with Liberia. Manowa, like Gbonka and Rotifunk, has no mains water or electricity. The plan is for a gravity feed system from a hilltop stream to feed two storage tanks in the village and distribute water to sixty tap points strategically located around the village. The last year has seen progress in developing the project specification. However, we have been disappointed by the work of a local partner who failed to carry out a survey accurately enough. The two big challenges that we are faced with over the next few months are:

- a) Finding a new local engineering partner
- b) Securing the funding estimated at £250,000.

We are indebted to the support given to CED by PTI and their local representatives, as we continue to pursue each of the above projects.

Alan Michell



Pastor Esther addressing the community at the school, Gbonka.

LAMB Hospital, Bangladesh

CED has been working with LAMB Hospital near Saidpur in northern Bangladesh since **spring 2018**. LAMB's aim is to transform their local community through the love of God, helping them to live in healthy and just communities. CED started working with LAMB last year, initially reviewing some of their waste management issues. We partnered with Cranfield University last year to support two MSc students to carry out research projects there. The students (Simon Beswetherick and Thelma Perpes) were based at LAMB Hospital between June and August 2018. Simon and Thelma completed **their master's degree theses on solid waste management and the sanitation facilities** at the hospital. They were joined in July 2018 by CED Director Mike Beresford and Richard Molloy: Richard is a railway civil engineering



Thelma sampling septic tank outfall.

director who was keen to find out more about CED. He has now become a CED member **and is heading up CED's ongoing programme** of engineering support for LAMB. There are a number of areas in which CED is helping LAMB: electrical infrastructure, water safety, sanitation (including the possibility of anaerobic digestion), architectural design and facilities planning.

Mike Beresford.



Simon doing medical waste analysis.

Funding highlights April 2018 - March 2019

Rwanda: Work started on the Mayange scheme to strengthen the water supply and introduce rainwater harvesting. A further rainwater harvesting training course was organised for Rwandan and Congolese church members and engineers.

Tanzania: Advice, materials and equipment were provided to bring non-functioning water supply systems back into use in Kiwengwa and Chato.

Uganda: Work continued on commissioning the Kiswa Kagaana water supply project and the Rwentamu valley tank was brought into operation. Development work was carried out on two planned hydro schemes Rubabo and Rwembya

We were fortunate to receive grants from Wilmslow Wells (£15,000) and the Littlestone Trust (£10,000) for Mayange, from the States of Guernsey (£19,450) for Rwentamu and from the Appleton Trust (£4,550) for Gbonka.

Details of all project transactions are set out in the table below.

Whilst not classed as a project, £2,559 was spent from the Staff Technical Assistance Fund on advice and research studies for the LAMB charity hospital in **Bangladesh**.

| | | B/F | Income | Payments | Transfers | C/F |
|-------|------------------------------------|--------|--------|----------|-----------|--------|
| RW 08 | Mayange water supply and rainwater | 16,363 | 32,848 | -25,099 | | 24,112 |
| RW 11 | Rainwater harvesting training | 500 | | -5,123 | 4,623 | 0 |
| SL 02 | Gbonka water supply | | 4,550 | -439 | | 4,111 |
| TZ 11 | Kiwengwa water supply | 1,736 | 2,098 | -6,967 | 3,133 | 0 |
| TZ 13 | Chato pump spares | | | -5,319 | 5,319 | 0 |
| TZ 14 | Kigezi wells | | 460 | | | 460 |
| UG 00 | Uganda general costs | 164 | | -2,455 | 2,500 | 209 |
| UG 35 | Kiswa Kagaana gravity water supply | | 4,442 | -4,907 | 465 | 0 |
| UG37 | Rwentamu Charco-cum-valley tank | -7,693 | 19,450 | -9,823 | | 1,934 |
| UG 39 | Rubabo hydro scheme | -159 | | -2,709 | 2,868 | 0 |
| UG 40 | Rwenb ya hydro scheme | | | -13,213 | 13,000 | -213 |
| | | 10,911 | 63,848 | -76,054 | 31,908 | 30,613 |

Looking across to Congo from Peace Guest House, Kamembe, Rwanda.



Financial Activities Year Ended 31 March 2019

CED's finances remain strong thanks to the receipt of the legacy last year. Donation income rose by some £16,000, but mostly as the result of special situations that are unlikely to be repeated.

Having funds in hand enables CED to plan future projects with more confidence, and spending on overseas travel to research and develop schemes increased. £31,443 was applied from internal funds to finance project activity.

Special efforts were made to improve external contacts and communications, and on training, which increased spending. Generally the running costs are kept low because most activity is undertaken on a voluntary basis.

Bill Harper, Treasurer

| | Unrestr'd Funds £ | Design'd Funds £ | Restricted Funds £ | Total 2019 £ | Total 2018 £ |
|--|-------------------------|------------------------|--------------------------|--------------------|--------------------|
| Incoming resources | | | | | |
| Incoming resources from generated funds | | | | | |
| Voluntary income | | | | | |
| Donations and gifts | 24,681 | - | 14,849 | 39,530 | 184,994 |
| Incoming resources from charitable activities | | | | | |
| Grants | - | - | 49,000 | 49,000 | 39,450 |
| Other income | 37 | 1,093 | 26 | 1,156 | 584 |
| | 24,718 | 1,093 | 63,875 | 89,686 | 225,028 |
| Resources expended | | | | | |
| Costs of generating funds | | | | | |
| Costs of generating voluntary income | 2,739 | - | - | 2,739 | 697 |
| Charitable activities | | | | | |
| Costs associated with engineering activities | 13,035 | - | 78,613 | 91,648 | 56,891 |
| Governance costs | 2,669 | - | - | 2,669 | 3,426 |
| Total Resources Expended | 18,443 | - | 78,613 | 97,056 | 61,014 |
| Net Incoming/(Outgoing) Resource before Tr'sfers | 6,275 | 1,093 | (14,738) | (7,370) | 164,014 |
| Transfers between funds | (6,500) | (25,407) | 31,907 | - | - |
| Net Incoming/(Outgoing) Resources | (225) | (24,314) | 17,169 | (7,370) | 164,014 |
| Balance brought forward at 1st April 2018 | 10,196 | 198,116 | 16,911 | 225,223 | 61,209 |
| Balance carried forward at 31st March 2019 | 9,971 | 173,802 | 34,080 | 217,853 | 225,223 |

CED exists to demonstrate the love of Christ by enabling Christians with engineering and allied skills to help the poorest communities overseas.

We invite supporters to become involved through:

- *Praying regularly for CED*
- *Raising the profile of CED*
- *Making donations*
- *Fundraising for specific projects.*

Enquiries to CED Secretary:

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*Registered Charity No. 293734
Registered Company No. 1980353*



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**Sharing skills
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*Walking the boundaries for new school, River
No 2, Sierra Leone.*

