



CHARITY UPDATE

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THE TRUST EXTENDS ITS BURSARY PROGRAMME

The Water Conservation Trust offers bursaries to needy students following approved postgraduate MSc courses.

For academic years 2015-16, 2016-17 and 2017-18 the Trust agreed four beneficiaries: Wadham Oxford, Brunel Institute for the Environment, Newcastle and Sidney Sussex Cambridge for the standard annual bursary award and dissertation support grants .

The Trust had also agreed to allocate £10,000 per annum for student bursaries between four universities whose work is relevant to our interests: Sheffield, Birmingham, Imperial and Queen Mary.

The Trust has now received a further £100,000 from industry donors WAMITAB and the Environmental Services Association Education Trust to run a

similar bursary programme, reflecting our shared requirements. This follows a successful collaboration in 2011 which involved Aberystwyth, Birmingham and Oxford Brookes Universities in addition to the standard programme. Discussions are taking place but it is expected that the donations will lead to a further 18 bursaries over the next four years.

This is a welcome and much appreciated boost to the universities programme.

NEWS & EVENTS

- University Bursary Programme receives cash boost
Disneyland Taxi Tour
Charity walk for the Schools Programme takes place 11 October

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SUPPORTING SCHOOLS PROJECTS

Whitchurch Primary School

Only 50% of plastic bottles in the UK are currently recycled. The number is increasing but in the meantime one school has found an interesting way of using waste bottles - and learning something about waste prevention and plant husbandry.

The empty bottles are free and the Trust was able to help with the cost of the frame (see Page 3) Harvesting rainwater is the next task. Improving the practical use of engineering and science skills in schools is key objective for the Trust.



Hugh Myddelton Primary School, Islington

Find out what these volunteers have been doing on Page 4. The Water Conservation Trust provided over £600 in new plants and equipment as part of a makeover. As a result children were able to use the area for wildlife studies and recreation during the summer term.



THE SCHOOLS PROGRAMME

The **Schools Education Programme** is going well, especially in the London area. It helps schools with ponds, rain water harvesting and water use. But it's also about scientific methodology - observation and recording – and coming to conclusions in a sound way.

Trust funding has also played a major part in introducing career opportunities – horticulture and gardening - for students at Gogarth School for children with special needs in Llandudno, Trustees have been asked to extend this to Tir Morfa Special School in Rhyl.

Our schools programme needs Conservators' help as well as their money. Of particular concern is the fact that 14 year old schoolchildren can make career choices which may preclude them from STEM careers.

The Trust is expanding its Schools Programme. currently has links with **17** schools.

Ruislip High Secondary School, Ruislip.

Acton High School, Ealing

Hillside Primary School, Orpington

Myddelton Primary School, Islington.

Rosendale Primary School, Lambeth.

Hill Mead Primary School, Brixton

Lent Rise Primary School, Burnham.

Littlecoates Primary School, Grimsby

Rickmansworth School, Rickmansworth

Ysgol Gyfun Garth Olwg, Cardiff

Claire's Court Junior Girls, Maidenhead

St Georges Primary School, Amersham

Whitegrove School, Bracknell

Shawley Community Primary School

Tir Morfa Special School, Rhyl

Whitchurch Primary School, Oxfordshire

Shawley Community Primary School, Epsom

If you know of a school with a problem we can help with - get in touch with Trustee Rob Casey (contact details Page 8).

Sunflower Growing Competition

Following the success of the Pumpkin Growing Competition last year the Water Conservation Trust has organised a **SUNFLOWER GROWING COMPETITION** for schools for summer 2015.



Entry to the competition is absolutely free. The Trust will award prizes for the largest flower grown (measured from petal tip to petal tip across the flower) and for the best picture of the children with their sunflower. The Trust will award a total of 12 pupil prizes with first prizes of £15 per pupil, plus runners up prizes of £10 per pupil.

Each school has been sent a pack of 50 seeds. Children can either grow their sunflowers individually at home or

enter as teams of 2 children and grow them at the school.

The competition will be judged by Trustees at Water Conservation Trust meeting on 11th November 2015.

Hugh Myddelton Primary School Islington



Sir Hugh Myddelton has a special place in water history, being the 'father' on the New River, bringing water from the River Lee to the City of London. Subsequent decisions about London's water supply were taken in the Oak Room at New River Head in Islington - most recently by Thames Water.

Nathalie Parker, Headmistress at Hugh Myddelton Primary

School asked for a special visit for a small number of school children to be given a tour of the Oak Room. Martin Baggs, Thames Water CEO, agreed to make the room available on 10th February 2015. and Trustee

THE SCHOOLS PROGRAMME

Rob Casey conducted a special tour of the room and the New River Head site for 15 children from years 4-6.

A programme of future activities has been outlined with the aim of the Myddelton School becoming a "Best Water School" including a one day makeover of the school's wildlife area (see results below) which had been severely overgrown. School, Thames Water and WCT volunteers cleared the area and the Trust funded new plants. The school would like to rename classrooms after London Rivers to enhance the water theme in the school.



Myddelton School Wildlife Area today

Acton High School

The head of science at Ruislip High School has taken up a new post at Acton School and is looking at using an existing pond on neighbouring council land to support science studies at the school. This is to be the first big promotion (branding) of STEM in the school. It will also be a vehicle for ensuring the wildlife, students and community are brought together in this project.



Ruislip High School

The Trust has provided funding to Ruislip High School for £470 for 4 additional microscopes and £300 for additional fish and equipment for the aquarium. This is to support sci-



ence studies at the school.

The aquarium, bought by the Trust in 2013 and located in a public area in the school is well looked after by children with rotas for cleaning and feeding.

Whitchurch on Thames Primary School,

Pangbourne has an active environmental group and the Trust was approached for help with a project at Whitchurch Primary School, just across the River Thames. The school wanted to raise awareness about the vital role of water in food production.

Conscious of problems with the disposal of certain kinds of waste, they decided to build themselves a greenhouse with plastic bottles to grow plants and to measure water consumption.



Many engineering challenges have been overcome in the construction of the greenhouse (see page 1).

Discussions are taking place about the provision of a water-butt to supply the greenhouse with water.

RURAL COMMUNITIES IN AFRICA

When the Water Conservators' Company formulated its strategy for charity giving, direct support to overseas aid programmes was ruled out because others can do it more efficiently.

MSc courses have to meet our requirements but dissertation topics are left to the universities. These four dissertations are intended to improve the conditions of rural communities in Africa.

Pump operations in Kenya (Tim Foster and Patrick Thomson) Wadham College, Oxford

The reliability of rural handpumps is crucial for the supply of clean water for many rural communities in Sub-Saharan Africa. Under Dr Rob Hope's direction, successive Water Conservators Bursary holders have used their dissertations to identify the problems and potential solutions to the issue of handpump sustainability.

Tim Foster investigated the link between unreliable water supplies and disease in his MSc dissertation. Broken pumps can force users to collect water from unsafe and distant sources, such as rivers and shallow water holes. In addition, areas around water pumps are often used for growing vegetables, using the spillage, and these were lost.

Identifying the problems arising from hand pump breakdowns – in some cases over a month elapsed before they were mended – Tim asked the question: *what if the handpump itself could tell you if it was not working?*



Initial handpump trials in Lusaka, Zambia

Tim's question led to a potential solution set out in Patrick Thomson's dissertation *Mobile enabled remote monitoring of rural handpumps*. A 'smart handpump' was designed which provides data about the functioning of the handpump through the mobile telephone network to a central location. From here a skilled mechanic can be quickly dispatched to repair the pump. The data,

which includes an estimate of the volumetric usage, enables monitoring of service levels and can inform infrastructure planning.



Patrick Thomson in Kyuso, Kenya

In 2013, a trial took place, financed by DFID in Kyuso District, in eastern Kenya, using locally recruited project mechanics. The area had 66 handpumps serving approximately 15,000 people. The results showed a drop in the pump outage from the baseline mean of 27 days to fewer than three days, with 89% of repairs being completed within five days and 98% of handpumps functioning at any one time.

The project paves the way for replication, and equally importantly, institutional reforms – setting up a sustainable service and paying for water using the mobile network.

Gender-based decision making in the Republic of Congo (Eulalie Guillaume) Brunel University London

Several studies have shown that whilst women in rural areas in Africa bear the brunt of water carrying and face serious risks in using *ad hoc* sanitation, they are often excluded or marginalised in decisions about improving their environment and introducing beneficial socio-economic advances.

Eulalie Guillaume examined women's participation in



local forest management in Pokola and Tala Tala, respectively Forestry Stewardship Council (FSC) certified and non-certified Forest Management Units (FMU) in the Republic of Congo. The aim was to provide a baseline study on gender equity in local forest

RURAL COMMUNITIES IN AFRICA

governance and assess the gender dynamics in decision-making mechanisms on the management of natural resources.

The results showed that women were essential to the socio-economic functioning of the villages but, overall, they were still under-represented in the public decision-making mechanisms compared, and less able to influence decisions. This was more pronounced in the FSC sample where women faced many more constraints to participation than men. In the non-FSC concession women were better organised and more self-determined. They also participated more actively. Although the Congo has ratified the *UN Convention on the Elimination of All Forms of Discrimination against Women*, women still encounter obstacles and resistance to joining decision-making bodies.

The study showed that women from the FSC certified concession faced greater psychological and socio-cultural barriers. In some cases, even when they wanted to participate they did not have the same access to decision-making as men. Local authorities have said that although they are trying to involve more women at strategic level, there was not enough female capital. Interestingly the FSC organisation only started to mainstream gender in their policies in October 2014 and logging companies never had any incentive to consider gender issues and equity.

The study could not prove any causal relation since gender standards were not enforced. But questions were raised about induced participation versus endogenous initiatives and how they relate to FSC. Although FSC has begun to take into consideration gender issues in the new International Principles & Criteria (V.5) and the implementation guide of the FPIC procedure (now a requirement for certification), further questions over the integration of gender aspects into global policies and regional standards, stratified power manifestations, forms of knowledge and participation will continue to arise.



Village decision making in the DRC

Empowering women requires coordinated actions to relieve women of some of the drudgery which causes marginalisation and early aging, and give them a pathway to analyse, comment upon and, essentially, improve their environment and themselves.

Multi-stage water filtration (Joel Meadows) Brunel

The research topic was to design, build and test a multi-stage water filtration system to be used in the developing world. The main focus was to provide safe drinking water to rural populations who suffer from a highly turbid water source in a sustainable, low cost and simple way.



The filtration system was tested using water collected from the River Pinn, and turbidity and microbiological tests were completed to determine the effectiveness of the treatment. The project proved that the concept was viable, however, the design

needed a few changes to achieve the desired level of treatment.

Solar sanitation (Matilda Lernartowicz) Imperial College London

Rural communities are at much greater risk of infectious enteric disease because sanitation services are considerably poorer in rural areas. Technologies, such as the septic tanks, are available to collect and separate faecal wastes from small communities, but these do not actively reduce the microbiological hazards in the waste.

Time-temperature exposure is one of the principal tools available to inactivate potentially infectious enteric micro-organisms.



Given that hot climates are a characteristic of many developing countries, there is the potential to harness the sun and achieve inactivation of enteric pathogens in faecal sludge. Sophisticated solar sanitation systems have been developed but more appropriate technologies are needed.

The aim of the project, supervised by Professor Stephen Smith, was to develop a practicable, simple

CHARITABLE ACTIVITIES 2014-2015

City of London Freeman’s School

For many years, the Water Conservators Company has awarded a prize for *Conservation*. This years prize-winner was Jasmine Stephens who received her prize from the Rt Hon the Lord Mayor, Alan Yarrow on 2 July 2015.

Lord Mayors Appeal

The Lord Mayor’s Appeal 2014/15 supports community-based charities that are all transforming lives, especially for disabled people, their families and carers.

Almost half a million families in England and Wales have at least one disabled child. *Scope Fund* for Families can support struggling families and help ensure that disabled children get the best start in life.

The *Mencap: Empower Me* is a free, confidential ‘one stop shop’ service that ensures vulnerable individuals and their families, who are often at the point of crisis, can access information, advice and advocacy as and when they need it.

The Company supports the Lord Mayor’s Appeal and a donation was given to the Lord Mayor at the Myddelton Lunch in February 2015.

Treloars

Treloar’s started in 1907 when the then Lord Mayor of the City of London, Sir William Purdie Treloar, set up a ‘Cripples’ Fund’ as his mayoral appeal. His aim was to build a hospital and school outside the city for children with non-pulmonary tuberculosis. In 1908, Sir William opened his school and hospital in Alton, Hampshire. Since then, Treloar’s has steadily grown and developed, becoming one of the country’s leading providers of education, care, therapy, medical support and independence training for disabled young people.

Treloars has maintained its close links with the City of London and the Water Conservators Company. It was the beneficiary of a collection at the Myddelton Lunch

ABF The Soldiers Charity

Each year, the Lord Mayor organises a Big Curry Lunch at the Guildhall for the ABF The Soldiers Charity, to which City organisations are invited to take part. The Company collection following its Election Court Lunch raised £1,000 for the Charity. In July 2015, the Charity announced it had raised £163,000, all of which would go to support soldiers, former soldier and their families affected by military service in Afghanistan and Iraq.

Hafan Marj

A dedication ceremony is planned for September 2015 for *Hafan Marj*, a place to pause and contemplate the local environment at Ysgol y Gogarth, Llandudno, in August.

Following the death of Marj Richards in August 2012, the Trust set up a special memorial fund to finance a sensory garden and a sanctuary – a place for reflection as well as an outdoor classroom. The Trust received nearly 100 individual donations, from local people, business contacts and Water Conservators.



Trustee Ivor Richards with Gogarth staff

The Trust has supported eco and vocational projects at Gogarth School, a day and residential special school, for many years. The School has gained a reputation in North Wales for sector-leading practice.

CHARITABLE ACTIVITIES 2014-2015

Magical Taxi Tour

Each year for the past 21 years, The Worshipful Company of Hackney Carriage Drivers have organised the Magical Taxi Tour for 200 children suffering from a range of debilitating and life threatening illnesses and their carers to Disneyland Resort Paris for a three day stay. The Company supports the tour every year and this year raised £1,400 at its Election Lunch—sufficient to pay for a taxi. The next Tour leaves on 18 September from Ca-



Canary Wharf.

The picture shows last September's departure with 'our' taxi, the children, driver and carer at Canary Wharf, ready to go.

Student Eats, NUS

Student Eats is a project led by NUS, supporting institutions across the UK in cultivating their own student-led growing sites for fruit and vegetables.

Student Eats plans to turn areas of campuses into versatile growing areas, installing polytunnels, green houses and cold frames to extend the growing season, as well as providing a range of gardening equipment and horticultural expertise.

The project highlights some of the ethical and environmental impacts of their food choices, Student Eats is a programme to support growing areas at Universities to encourage students to grow their own food.

The Trust has provided funding to support the installation of rainwater harvesting and ponds at three Universities – Staffordshire, Exeter and Cumbria.

The universities requirements differed: Staffordshire wanted to create a wildlife pond and hazel coppicing to drain a flooded area and a closed water system for their polytunnels.

Cumbria students asked for funds to buy six water butts for rain water harvesting. Exeter students submitted a major rainwater harvesting and distribution system for their Exeter Community Garden



(see picture above, taken in February 2015).

These projects are supported by local authorities and businesses.

Maidstone Sea Cadets

The Company has funded a berth in the Sea Cadets training ship for the best cadet for 15 years and has developed a constructive relationship with the Unit. Last year Maidstone Sea Cadets were given notice that they had to find a new slipway and launching pontoon. The cost was estimated at around £25,000. The Trust has informed the Unit that it will donate £5,000 towards the costs if it can get other sponsors to donate the balance, and subject to the usual planning compliance.

The original plan proved too expensive and a new proposal which does not require piling is being investigated. Work should start in Autumn 2015.

The Lost Effra Project

The Lost Effra Project was launched by London Wildlife Trust in January 2013, commissioned by Defra and the Carnegie UK Trust, to develop and test a community-based water management strategy aiming to inspire people to create new ways to manage the water environment in their area.

The Trust has been assisting the Allotment Association at Rosendale Allotments look at potential options to improve water efficiency and drainage at the site. The London Wildlife Trust has an offer of volunteers to clear the drainage ditch and are in the process of arranging a meeting to discuss possibilities.

Fundraising

SPONSORED WALK: REGENT'S CANAL TO THE OLYMPIC PARK on Sunday 11 October 2015

Following the success of the New River walk last year the Water Conservation Trust is organising a sponsored walk on Sunday 11 October 2015 along the Regent's Canal. It is to support our **Schools Education Programme**. The walk will start at The Angel, Islington and finish at the Olympic Park.

If you would like to support the walk and help raise money for the Water Conservation Trust please e mail rob.casey@thameswater.co.uk to register for the event.

The walk, around 6-7 miles in length, will take around 2.5 - 3 hours to complete, starting from the Angel tube station, Islington at 11.30 am and return by underground from Stratford Station. The walk route will follow the Regent's Canal and Hertford Union Canal. Because the public path is alongside the canal we recommend that children walking should be at least 10 years old and always accompanied by an adult.

If you want to sponsor Rob Casey use the following link:

<http://uk.virginmoneygiving.com/RobCasey1>

Donating on line is very quick and simple. Don't forget to tick the box to reclaim Gift Aid on your donation if you're a UK tax payer. The money we raise will help to support the Trust's schools programme encouraging water related science and environmental learning in schools.



The 2014 walk raised £2,5000



The 2015 Goal: The Olympic Park

The Water Conservation Trust

Funding for almost all the Company's charitable activities is provided by The Water Conservation Trust which supports: the advancement of education, the promotion of research, and the relief of poverty.

By far the largest support at present is given through Bursaries for MSc students studying water, environmental sciences and waste management. Since its inception the Bursary programme has supported more than 75 students.

The Trust supports education in schools through financial and technical support for a variety of water and environmental projects. The scheme aims to promote a greater awareness and understanding by school children of the role of water and the environment in all our lives.

Members of the Company are encouraged to bring forward projects within the water and environmental management fields for consideration by the Trust.

If you are already a regular contributor to the Trust, please accept the Trustees most grateful thanks. If you are not a regular donor, please give serious thought to becoming one. A small regular donation via Gift Aid is much appreciated and can do much. A Gift Aid form is available from the Company's website .

Who to contact:

The Water Conservators Company – The Clerk, Ralph Riley at waterlco@aol.com

The Water Conservation Trust, Hon Treasurer, Peter Hall at peterbhall@hotmail.com

The Water Conservation Trust, Schools Programme, Rob Casey at rob.casey@thameswater.co.uk

More about the Trust on - <http://www.charity-commission.gov.uk/>

...then enter charity number **1007648**