



## Project Presentation Prize Winner puts Wind Turbines through the Mill

**Peter Robinson from Reading University is this year's Panasonic Trust Project Presentation Prize winner.**

The prize was instigated last year as part of the celebration of the twentieth year of the partnership and comprises a monetary award of £1000 and a gold medal.

Peter's project, 'Small Wind Turbines for the Urban Environment: State of the Art, Installations and Economics', was undertaken as part of his MSc in Renewable Energy and the Environment.

To assess the state of the art, technical information was obtained from all 16 British and 3 Irish manufacturers and designers of small wind turbines. There are currently 31 small turbines being manufactured or designed that could be installed in the urban environment, 18 of which are specifically marketed for it.

Internet research revealed 70 operational installations of wind turbines in the urban environment in the UK, mostly installed at schools or environment centres. A detailed questionnaire was created which covered sociological and technical aspects, barriers to installation, and economics and it was distributed to these installations.

The results showed that although turbine owners tended to have high levels of satisfaction, and that the perceptions of neighbours and the local communities significantly improved after installation, a high proportion of owners have had technical problems with their turbines, and suffered from poor after sales service and overrated economics. The most significant obstacles to installation they encountered were planning permission and connecting to the grid: useful information for the manufacturers and marketers of small wind turbines.

Since finishing the course, Peter was offered a research post for the Ashden Awards while on holiday! Generally regarded as the environmental Oscars, the Ashden Awards reward outstanding, inspirational and innovative local, sustainable, energy schemes. Peter will be researching precisely how local renewable energy technologies do and could further contribute towards the UK's greenhouse gas emission reduction targets.



## Panasonic Gold

**Gillian Woodburn was the single Panasonic Trust Award Gold medallist in 2005. Gillian did an MSc in Chemical Technology and Management with the help of a Panasonic Trust Award.**

"I graduated from Strathclyde University in 1996 and started working as a Temporary Scientific Assistant with a vitamins manufacturer. After a couple of years, I felt that I had learnt about working in a lab in industry, but little about the business. I was still a temporary employee and decided that I had to do something else for my own personal development and to enhance my chances of securing permanent employment. I was also interested in finding out more about processing.

I did not want to give up my job, so I started looking at the part-time and distance learning courses that were available. I came across an article about a new Masters course, starting in September 1999, at Strathclyde University called Chemical Technology and Management.

The course seemed ideal as it was a part-time distance learning course covering a variety of functions. There are twelve taught modules from four topic areas (R&D (Technical) Management, Operations Management, Business Management and Management Skills) with a final project equivalent to three modules. There are regular workshops at the university for delegates to have direct contact with tutors.

The variety of the modules made me more aware of how the chemical industry works and how all the different functions fit in. The subjects covered ranged from recruiting people and budgeting to marketing products and process design. The workshops were a good opportunity to meet other delegates and discuss each other's progress. Everyone found it a struggle to juggle coursework with work and family commitments and it was good to meet up with other people in a similar position.

As I was working as a temporary employee, I was not entitled to company sponsorship or time off to go to the workshops. When I applied for the course, I anticipated having to fund the fees myself which was a considerable expense.



Fortunately, the course coordinator, Brian Dickson, made me aware of the Panasonic Trust and I was successful in obtaining funding for all the modules.

I was made redundant during my last module and had to postpone my final work-based project. I got a permanent job as a lab technician at Ciba Specialty Chemicals and feel that doing the course helped me secure the job. I was able to get a work-based project at Ciba looking at COD reduction in the effluent and they sponsored me. It was a great way to put the course into practise. I joined the company a few months before starting the project and this meant I was on a very steep learning curve, but I gained a greater amount of knowledge in a short space of time.

My short-term aim for doing the course was to get a greater awareness of how an organisation works and this was fulfilled. My long-term aim was to enhance my career prospects. During the course, I gained permanent employment and after graduating with Distinction in November I was promoted to Lab Technologist. I hope to move into the processing side of things and this course should be a good foundation.

I would like to thank the Panasonic Trust for their invaluable financial support throughout my modules."

### Do you run a technology updating course?

The Panasonic Trust is always keen to expand the number of courses it supports through its Panasonic Trust Awards. Suitable courses should be part-time in nature and emphasise any aspect of new technology or engineering practice. Applicants need not be graduates but should hold a recognised qualification in engineering or a closely allied subject. Contact us now for further information on funding opportunities.

## shape the future

**The current climate is ideal for The Royal Academy of Engineering to launch the Shape the Future campaign which aims to bring coherence to the promotion of science, technology, engineering and mathematics (STEM) in education.**

Students, teachers and companies are often confused by the vast range of initiatives working in education; however we must not lose sight of the size of the task we face when we talk about improving the image of careers in science, engineering and technology.

The main targets for the campaign are young people plus their influencers who include teachers. The campaign will be launched this month with photographic and literacy competitions for students plus a teacher professional development programme (PDP) that will provide short placements in technology and engineering companies. For further details please contact Dave Rowley at: [dave.rowley@raeng.org.uk](mailto:dave.rowley@raeng.org.uk)

## Water Works

**The 2005 recipient of the Sir Angus Paton Bursary was Jenny Rintoul of Cranfield University. Jenny explains why she became interested in environmental engineering and how the Angus Paton Bursary will help her.**

"I got my BEng in civil engineering from UMIST in 2001. I took a gap year after university and went to South America for a year where I spent most of my time in Ecuador working on volunteer rural development projects for eight months.

Spending time in a developing country allowed me to see quite how much I had taken for granted previously and how fundamental a clean water supply and sanitation are to communities.

I have spent two and a half years working for Halcrow in the water industry including a six month secondment to Anglian Water.

I am now going on to study an MSc in Water and Wastewater Engineering at Cranfield and am very excited to receive

this bursary as it allows me to study without the worry of debt. I am looking forward to being able to concentrate on such a fascinating subject.

Cranfield has many links with industry and is working hard to develop new technologies for large scale use. When I return to work I hope to produce more innovative, sustainable and economic designs with knowledge gained from studying."

**Rita Henderson received the Sir Angus Paton Bursary in 2003 which enabled her to complete the MSc in Water Pollution Control Technology at Cranfield University. Here is her story.**

"I began studying chemistry at Edinburgh University in 1997 and it was here that I became interested in the environmental sector.

I was able to take supplementary courses alongside the core chemistry lectures and I opted for subjects like environmental chemistry and oceanography. I specialised in environmental chemistry during my 5th and final year and this involved studying aquatic and atmospheric chemistry, geochemistry and environmental analytical chemistry.

When I graduated in 2002 with a 1st class MChem degree in Environmental Chemistry, I had already decided that I wanted a career in the environmental sector.

I was offered employment as a consultant working at the Edinburgh office of the environmental consultancy, ENVIRON, and found my interests lay specifically in the field of water/wastewater treatment.

On hearing about the MSc course in Water Pollution Control Technology at Cranfield University I realised that if I could do this MSc my career prospects in the water industry would be significantly enhanced. The course boasted 100% employment success within one month of completion.

However, undertaking a second degree is never easy financially and it was only to be

a viable option if I could secure sufficient funding. On contacting the university and explaining the situation I was informed about the possibility of obtaining a bursary from The Royal Academy of Engineering – the Sir Angus Paton Bursary.

The course comprised taught modules that provided me with an understanding of the mechanisms and methods of operation of all major processes, and also a design project component, where teams of four competed for the British Water Prize. My team won! We received £1000 as well as an invitation to attend the British Water Annual Lunch where we were awarded certificates by Philip Fletcher, Director General of the Office of Water Services and got a special mention from David Neil-Gallagher, Chief Executive of British Water. We also each received letters of congratulations from Elliot Morley MP,

the then Minister for Environment and Agriculture.

I thoroughly enjoyed the MSc experience which lived up to all my expectations. In fact, I am now doing a PhD which follows up work conducted during my MSc project. Once I have finished my PhD, I would like to work for a water utility company, preferably within a research and development department, in order to be involved in developing novel treatment technologies or solving treatment problems.

These opportunities however, would not have been possible had I not been given the financial assistance of the Sir Angus Paton Bursary from The Royal Academy of Engineering. I am delighted to have been given the chance to realise my career ambitions and intend to make the most of it!"



## THE PANASONIC TRUST FELLOWSHIPS

These prestigious awards are currently tenable on the following full-time Masters courses:

Engineering for Sustainable Development at University of Cambridge

Cranfield Manufacturing Masters Courses at Cranfield University

Water Pollution Control Technology/Water and Wastewater Engineering at Cranfield University

Environmental Sustainability at the University of Edinburgh

Geotechnical Engineering at Heriot-Watt University

Renewable Energy Systems Technology at Loughborough University

Water and Environmental Management at the University of Newcastle upon Tyne

Renewable Energy and the Environment at the University of Reading

Corrosion Science and Engineering at UMIST

Engineering for Development at the University of Southampton

Energy Systems and the Environment at the University of Strathclyde

Water and Environmental Engineering at the University of Surrey

Facilities Management at the UWE Bristol

Urban Design/Town and Country Planning at the UWE Bristol

Warwick Manufacturing Masters Courses at the University of Warwick

### Application Information

All enquiries about the Panasonic Trust and its activities should be made to:

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The Panasonic Trust is a Registered Charity No. 290652

## Congratulations

To the following Trust awardees who have recently completed their courses and successfully graduated:

Malcolm Brown MSc in Safety Engineering from Lancaster University

David Carter **MSc with Commendation** in European Traffic & Transportation from Nottingham Trent University

Sarah Coote MSc in Engineering for Development from the University of Southampton

Hind Elseed MSc in Engineering for Development from the University of Southampton

Bethan Evans MSc in Renewable Energy from the Ecole des Mines de Paris

Richard Leathers MSc in Geotechnical Engineering, Design & Management from Nottingham Trent University

Christopher Harding MSc in Project Management from the University of Aberdeen

John McElhone MSc in Aerospace Dynamics from Cranfield University

Gillian Woodburn **MSc with Distinction** in Chemical Technology & Management from the University of Strathclyde

## Lift off for London Engineering Project

**The Academy has been granted £2.85M from the Higher Education Funding Council for England (HEFCE) to fund the first two and a half years of a 10-year National Engineering Programme. The London Engineering Project, the London phase of The National Engineering Programme, was launched in September**

The National Engineering Programme recognises the connection between engineering and society, and the programme aims to radically alter the student uptake into engineering by addressing this. By providing inspiring engineering courses in local universities and filling those courses with ambitious and creative students, it intends to support engineering higher education, widening participation and strengthening engineering as a strategic subject in our universities.

The students are to be selected from schools in neighbourhoods with currently low rates of participation in higher education and there are four target groups: women, students from families with no experience of higher education, minority ethnic students and adult learners.

After working up momentum in the London pilot project, the programme will then expand to six other cities in England.

For more information contact Lynda Mann on 020 7227 0586