



DOUGLAS BOMFORD

T R U S T

TURAL ENGINEERING AND MECHANISATION • ADVANCING
ANISATION • ADVANCING EDUCATION, RESEARCH AND
N • ADVANCING EDUCATION, RESEARCH AND TRAINING

INTRODUCTION

The overall objective of the Trust is to advance knowledge, understanding, practice, competence and capability in the application of engineering and physical sciences to agriculture, horticulture, forestry, amenity and allied land based and biological activities for the sustainable benefit of the environment and mankind.

The Trust provides funding to enable competent individuals and organisations to pursue:

- Education, training, research and knowledge transfer
- Innovation and the application of science and technology with respect to the design, development, evaluation and construction of machines, systems and techniques
- Travel to acquire or disseminate knowledge
- The development and maintenance of professional competencies
- The development or acquisition of new skills, techniques and capabilities



BIG QUESTIONS, BUT ALL TOO FEW RESOURCES

The now generally accepted 'perfect storm' - the combination of exponential population growth, less land for growing crops, more demand for water, changing diets, expiring fossil fuel sources all compounded by the consequences of climate change. - will impact hugely on the planet some 50 years from now.

However valid this forecast there is little doubt that world agriculture will be required to produce more with fewer inputs and less environmental damage - now characterised as 'sustainable intensification'.

Developments in engineering and technology, effectively applied will be at the heart of delivering the solutions to these challenges.

Not so long ago the world would have looked to the UK for leadership in finding the answers. Not any more. The UK's capacity to research, develop and apply new technologies for agriculture is on the brink of extinction and the government is likely to opt out of putting in any new money given the economic climate. The trustees are mindful that the Douglas Bomford Trust, being the only UK charity committed to supporting engineering for agriculture, has a critical role to play at this time. This has informed our current strategy.

Post graduate studies not only have the potential to advance knowledge but also provide researchers, designers and lecturers for the future. These are costly activities and take up the largest proportion of the budget.

We also recognise the need to encourage capable young people to make agricultural engineering their profession. The funding of student awards, various prizes and the IAgE student membership scheme come into this category.

Although the world is a much smaller place and global travel relatively commonplace the trustees continue to allocate some 10% of the Trust's funds to allow students to attend international conferences, technical events and other teaching establishments. This both widens their horizons and starts to build the all important peer group network.

This is how the trustees are endeavouring to interpret the vision and underlying principles of the original benefactor Douglas Bomford in today's environment.



D R BOMFORD - THE INSPIRATION FOR THE TRUST



Following the death of D R Bomford in 1969, the Douglas Bomford Trust was established, with the valuable and essential support of the Directors and family shareholders of Bomford & Evershed Ltd, as an independent Charity, by Mrs M Bomford in 1972. As Managing Director of the company John Fox joined the Board of Trustees in 1977 as the Company Representative Trustee and served it continuously, as a trustee and as Chairman and Vice Chairman at various times, over the ensuing four decades.

Douglas Bomford of Bevington Hall Evesham and a Past President and Honorary Fellow of the Institution of Agricultural Engineers died in 1969 at the age of 75. Educated at Mill Hill School and Wycliffe College in Gloucestershire he was studying medicine at Edinburgh University when at the outbreak of World War 1 he was commissioned in the Worcestershire Regiment. After a period of defence duties he went to France in May 1916 and was twice wounded, thus acquiring a permanent disability that he bore with indomitable courage which he exemplified throughout his life. After the War he turned from his medical studies to follow the family tradition of farming coupled with agricultural engineering.

The objectives of the Trust being: “for the purpose of advancing education, training and research in the science and practice of agricultural engineering and mechanisation” epitomise his vision and commitment to the agricultural engineering profession.



WHO MANAGES THE TRUST

The Trust is fortunate to have a Board of trustees with a wide cross-section of relevant expertise and experience that includes agricultural management, accountancy, teaching, manufacturing, consultancy and research.

[Geoffrey Wakeham](#) completed his term as Trustee in 2009 and always took a particular interest in fostering young engineers entering the profession as a continuation of his time as Senior lecturer at Harper Adams University College.

“Throughout my time as a trustee of the Bomford Trust I was glad to see that the Trust’s main focus was on supporting current and future agricultural engineers. I still subscribe to this view but if agriculture and engineering are to succeed in feeding future populations then people working in new technologies relevant to this task should be considered for support.

Multi disciplinary solutions will be found to overcome the constraints on expanding food availability. The current trustees should seek out technologies and UK based engineers and scientists that will impact on our industry in the future, and set aside funds to support and encourage their development”.

[Dr Malcolm Crabtree](#) brings his career’s worth of experience in research and advisory work that culminated in the extremely diverse role as Managing Director of Leckford Estates, part of the John Lewis Partnership, in Hampshire. His first hand experience of the issues currently facing the industry across the whole chain is extremely relevant to the Board’s decisions.

[Anthony Burgess](#), Chartered Accountant, is familiar with the machinery dealership sector through association with the family business along with direct involvement with the funding challenges that are faced by those involved in higher education.

Professor Dick Godwin's long association with the Trust continues. His world renowned expertise in soil and water engineering is of increasing relevance and he has continued to have an influential role in maintaining and supervising a cadre of post graduate students both at Cranfield University and Harper Adams University College. These activities are at the core of the Trust's interests.

Jim Robinson, an alumnus of the National College of Agricultural Engineering, Silsoe, contributes expertise gained as an agricultural engineer in the sugarcane industry and as a Mechanisation Adviser with Massey Ferguson Export. He subsequently participated in the establishment and development of an international development consultancy company, the success of which he attributes to the company attracting and retaining qualified and competent professionals. His enthusiasm for developing young professionals is very relevant to the objectives of the Trust.

Jonathan Bomford continues as the trustee representing the Bomford family. His professional accountancy experience is invaluable in overseeing the investment interests of the Trust. It is possible that during his time in the chair that the Trust went through some of its most significant changes both in terms of the substantial increase in funding, the change in company status and in the range of 'business' conducted.

Ray Clay has had a career leading engineering design in the automotive industry and most recently as the chief engineer for the highly innovative JCB Fast track. He contributes his seemingly unbounded enthusiasm for innovative engineering and commercial discipline.

The Trust is fortunate that Dr Geoffrey Davies, Vice President, of the Alamo Group has joined the Board of Trustees. Geoffrey heads up a large portfolio of businesses with agricultural engineering components that operate across the globe. His many other

roles are concerned with promoting education and entrepreneurship through the wider community. His formidable business expertise combined with a commitment to advancing the capability and success of others will be an invaluable input to the decisions of the Trust. It is a fortunate coincidence that the Bomford company is now part of the Alamo Group further strengthening the connections between the Trust and its founder.

Peter Redman is now taking his experience as Secretary to the Trust combined with that as the Senior Mechanisation Adviser for ADAS, which linked research with practice, to his term as trustee.

October 2011 was a true milestone for the Trust, heralding the formal retirement from the Board of John Fox. Throughout his involvement in the Trust, John has sustained unstinting interest in the functions and well being of the Trust offering wise counsel on every issue. In recognition of this John now has the unique status of Emeritus Trustee that will allow him to keep a watching interest over the Trust.

Collectively the Trustees are responsible for ensuring that the Trust's processes are robust, appropriate and compliant, dispersing funds in accordance with the Trust's objectives, the needs of society and the industry. Priority is given to outcomes that will have relevance to the UK, though not exclusively so.

More recently Trustees have become more directly involved in major projects by acting in a mentoring role. This has resulted in a two-way stream of benefits. The Trust has first hand knowledge of the progress and challenges of the projects in which it is investing and students in particular have access to the wider experience of the trustee, all of which feeds into the next round of decision making.



INVESTMENTS AND FUNDING - LOOKING AFTER THE RESOURCES

Clearly the maintenance and performance of the Trust's investments is a critical function of the Trustees.

The broad policy is to maintain real the value of investments whilst providing sufficient income to at least support the current levels DBT activities. In order to achieve this and manage the risk funds are invested across three managers each with a different approach but working to the same broad strategy. In addition the Trustees consider it prudent to have sufficient funds available in cash to meet all forward commitments and respond to exceptionally worthy opportunities.

Depending on the performance of the investments the annual disbursement of the Trust is of the order of £100,000

Investment performance is monitored and reviewed on a regular basis by the administration team in conjunction with Jonathon Bomford, the trustee responsible for overseeing the investments. In addition Trustees meet with each investment manager annually to get a first hand view of the issues influencing their decisions and expectations. The strategy is adjusted, if required to better ensure that the longer-term financial requirements of the Trust will be met.

MAINTAINING THE FUNDS

The Trust does not receive donations from benefactors on a routine basis but has been fortunate to build on the founding legacy with a substantial donation from the Howard Trust in 1996 and more recently a valuable input of funds in 2007-09 arising from the closure of the Silsoe Research Institute.

Occasionally those who have received awards have gone on to recognise the personal benefits that have ensued as their career has progressed and, in recognition, have been motivated to contribute to Trust funds. Likewise there is the potential for income to result from intellectual property that is developed within the projects funded by the Trust. In these cases trustees encourage an appropriate donation.

The Douglas Bomford Trust is the only UK based charity whose objectives are directly aligned with the advancement of agricultural engineering and the ability to maintain funding activity at current levels and beyond depends primarily on the maintenance and growth of the capital funds that underpin it.

Hitherto the Trust has not had a proactive policy of attracting donations but trustees would like to encourage anyone that has the well being and advancement of the agricultural engineering to consider making a contribution to Trust funds.

This can be done by using the 'Make a donation section' of the web site www.dbt.org.uk.

The Secretary would be pleased to discuss how this might be recognised in each case.



ENCOURAGING THE NEXT GENERATION OF AGRICULTURAL ENGINEERS

The decline in the UK agricultural engineering manufacturing base has dented the career opportunities in the sector 'though this technical expertise remains essential to service mechanised agriculture in Britain, to support the design requirements of the remaining manufacturers and to seed the next generation of innovators and entrepreneurs. The Trust therefore contributes to stimulating interest and encouraging the most able entrants into the profession. Modest prizes are awarded to students at Cranfield University, Harper Adams University College and the Royal Agricultural College to acknowledge and reward excellence in areas of study related to the Trust's objectives.

Equally modest awards are offered on a competitive basis to stimulate initiatives for clearly defined projects that will benefit individuals in terms of their personal skills and innovative capability for those in both further and undergraduate education. This may take the form of supporting additional training or providing supplementary funding for particular innovative 'design and build projects' for example.

Trustees are equally keen to encourage those starting out on their career to recognise the benefits of taking a professional approach so as to maintain their employability and have access to a life long network of fellow professionals. Support is provided to the IAgRE's student recruitment scheme to achieve this.



DEVELOPING RESEARCHERS TEACHERS AND NEW KNOWLEDGE

Today's post graduates are potentially tomorrow's teachers, designers and researchers. The outcome of their projects advance knowledge and can be the starting point of new approaches. Obtaining the funding required for postgraduate study is an increasing challenge. A contribution from the Trust can be a deciding factor. Trustees consider this to be vital area for investment even though the funding levels are high and account for the highest proportion of the total disbursements. Collaborative funding is usually essential alongside that from 'primary funders' such as the Research Councils and the Agricultural and Horticultural Development Board. As costs rise joint funding with other charities becomes more necessary, a process that is facilitated by the newly formed AFCP (Agri Food Charities Partnership).

There are risks involved with these high levels of commitment and trustees are now working closely with those Universities that provide post graduate degrees related to the Trust's objectives in order to contribute to and understand their issues and strategies, to identify preferred topic areas, help in the selection of candidates and to mentor projects throughout their delivery and reporting. This level of involvement not only ensures that the trust is kept informed about progress at all stages but also encourages applications that are more relevant to Trust strategy and allows trustees to contribute their expertise.



LA
KUOKA
KUOKA
AKAU
TOKYO/ NARITA
TOKYO/ NARITA
TOKYO/ NARITA
BEIJING
BEIJING
QINGDAO
QINGDAO
SHENYANG
SHENYANG
HONG KONG
HONG KONG
QINGDAO
MANILA
WASHINGTON

Without exception they comment on and appreciate the benefits of this discipline and the stimulation arising from discussions with their peers that will, in many cases be their introduction to a life long international network of colleagues.



ADMINISTERING THE TRUST

The Trust has always been closely associated with the IAgRE, the chartered professional body for this industry. The interchange of views and intelligence is an entirely beneficial arrangement, not to mention the unfailing support of the Secretariat in the day to day running of the Trust. [Elizabeth Stephens](#) acts as Company Secretary and oversees all the financial and administrative issues and ensures continuity on everything we do.

We now have the benefit of very adequate accommodation and integrated IT services within the IAgRE Secretariat that is now located on the campus of Cranfield University.

The Secretariat for EurAgEng operates from the same office that adds to the cohesion of those feeding into the profession.

[Dr Paul Miller](#), Secretary to the Trust. Paul is renowned as the world wide expert on agro chemical application. His knowledge of the industry and experience both as researcher and as a manager of substantial research programmes at the former SRI and latterly as Director of the Silsoe Spray Applications unit within The Arable Group is highly relevant to the work of the Trust.

In handing over to Paul as Trust Secretary Peter Redman commented "I consider it to have been an honour to carry out the role during a period of significant change for the Trust and in particular to have the opportunity to be associated with competent people at the start of their careers in what is undoubtedly a fascinating, stimulating and rewarding profession. The post brings both stimulation and huge reward. I am both hopeful and confident that Paul Miller will enjoy the same benefits."



THE LAST DECADE OF ACHIEVEMENTS AND OUTCOMES


Over the last decade the Trust has contributed to the funding of over 20 postgraduate and engineering doctorate studies, with topics ranging over Pelleted agri-waste for biofuels, Mechatronics alternatives to Agro-Chemicals, and Proximal soils sensing, for example. These students have gone on to take leading roles in the industry as lecturers, research and design engineers product directors and consultants within the UK and overseas. Four recent postgraduates now have teaching/research posts at Harper Adams University College being a key part of the strategy to revitalise the intellectual and innovation capability of agricultural engineering in the UK.

Over 2000 students and those in the early stages of their career have been introduced to the benefits of professionalism through introductory membership of the Institution of Agricultural Engineers.

In excess of 150 study tours, and visits to international conferences events and business have been supported to gain the experience of presenting papers, obtain new information, as essential components of post graduate courses or even just to gain the stimulation and motivation of seeing how others do things.

Some 25 minor awards have been made to students in further education and undergraduate study to reward initiatives' that will enhance their studies, skills and commitment to the profession along with a total of 46 prizes made on annual basis in recognition of outstanding performances and to raise the profile of agricultural engineering in student communities.

Recipients have universally recognised the key difference made by funding from the Trust, a unique funding source for our community, which in many cases has been the deciding factor in allowing projects to go ahead.



To find out more about the Douglas Bomford Trust,
how to apply for funding and how to donate,
please visit:

www.dbt.org.uk

or contact:

The Secretary
Douglas Bomford Trust,
The Bullock Building,
University Way, Cranfield,
Bedford MK43 0GH

Tel: 01234 750876
Fax: 01234 751319
Email: enquiries@dbt.org.uk

ADVANCING EDUCATION, RESEARCH AND TRAINING FOR AGRICULTURAL ENGINEERING AND MECHANISATION • ADVANCING
EDUCATION, RESEARCH AND CULTURAL ENGINEERING AND MECHANISATION • ADVANCING EDUCATION, RESEARCH AND
TRAINING FOR AGRICULTURAL ENGINEERING AND MECHANISATION • ADVANCING EDUCATION, RESEARCH AND TRAINING



The Secretary
Douglas Bomford Trust
The Bullock Building,
University Way,
Cranfield,
Bedford MK43 0GH

Tel: 01234 750876
Fax: 01234 751319
Email: enquiries@dbt.org.uk

ING EDUCATION, RESEARCH AND TRAINING FOR AGRICULTURE
N, RESEARCH AND CULTURAL ENGINEERING AND MECHANICAL
FOR AGRICULTURAL ENGINEERING AND MECHANISATION