



Lichfield Science & Engineering Society

PATRON

Ian Dudson CBE

H.M. Lord-Lieutenant of Staffordshire

PRESIDENT

Dr Zsuzsanna Nagy

MD, MA, DPhil

CHAIRMAN
Dr Bob Giles

Dear Member,

24 July 2017

The AGM on Wednesday 10th May 2017 was attended by 130 members. The Chairman's Report had been circulated with the Agenda prior to the meeting. The Treasurer's Report was presented at the meeting and although there was only a small surplus for the year he recommended that the subscriptions remained the same. After a few questions both reports were accepted in full.

There were a lot of changes. Dr Zsuzsanna Nagy completes her Presidency in October 2017 and in preparation Professor Peter Lambert, Professor of Microbial Chemistry at Aston University, was elected as her successor. The actual transfer of office takes place at the Annual Dinner on Wednesday 18th October 2017.

Dr Nagy took the chair to announce the completion of Carol Hannam's three years in office as Chairman and seek the election of Dr Bob Giles as Chairman and Membership Secretary. This was approved. Bob then took the chair. Mike Beeson was elected as Deputy Chairman and Publicity Secretary.

With regret the resignation of Tim Sims was accepted. Tim has served the committee well for 15 years, Bob thanked him for his meticulous organisation and good humour, and nothing was too much trouble. Tim enjoyed a resounding round of applause.

The remainder of the committee was elected as follows: Irene Ordidge – Secretary, Jenny Arthur – Education Officer, Alan Hooper – Visits Secretary, Roy Foster – Social Secretary, Mark Richards – Lecture Recorder and Young Members, Claire Robinson – Membership Assistant. Carol Hannam will continue on the committee ex officio.

Bob thanked Carol for her excellent three years as Chairman, and presented her with an engraved paperweight. It being her birthday that evening, she was also presented with a bouquet and we had rousing singing of Happy Birthday and much applause to wish her well.

Monthly Lectures and Events

“Fibre Optics, The Past, Present and Future Internet”, was the title of the lecture given on Wednesday 10th May by Andrew Ellis who is Professor of Optical Communications at Aston University.

He started with an expert review of the progress of optical communications starting from the burning beacons used 2500 years ago to synchronize the time of the Sabbath, through semaphore flags used by the navy to pulses of light sent down optic fibres which is the basis of present day high speed digital communications and the internet.

The astonishing progress of communications using optic fibre has meant that our lives are transformed by the ability to send personal news and pictures to people worldwide. The fact that many of you are reading this newsletter on your computer is evidence of the changes in just a few years, but speaking directly face to face is diminishing, which is to be regretted.

The use of optic fibre continues to grow as growth in capacity continues and to use ever larger amounts of energy as we find ever new uses of this technology. 133 members, 4 visitors and 1 student attended

“Living with Climate Chaos” was the troubling title of the lecture given by Professor Caroline Roberts of Gresham College on Tuesday 13th June. Dramatic pictures from space of the shrinking of the North polar ice cap and the calving of an enormous iceberg (half the size of Wales) in Antarctica are evidence of continuing warming of our small blue planet. Data for about 100 years of global temperature increases also convincingly demonstrated the global warming problem and it is getting worse, but at different rates at different places on our world. Climate Change is a “hyper wizard” complex problem with at least 10 aspects. For global warming the clear solution is to reduce CO₂ emissions but Professor Roberts showed other interrelated parts of the problem, such as ozone depletion, sea water acidification, biodiversity and air pollution, all of which require innovative solutions. Some of these are being solved but little progress is being made on others. Her final plea was that we all get involved with supporting developments which protect our planet. 154 members, one visitor but sadly no students came.



73 members and their guests enjoyed the Summer Supper, at Mabel's, Curborough Hall Farm on a very hot and sultry evening on Wednesday 21st June. After a most enjoyable meal we heard a talk on "The Archives at the Wedgwood Museum" from Lucy Lead, the Chief Archivist. The Wedgwood Archive is one of the most complete ceramic manufacturing archives in existence, spanning from the mid 18th century to the present day.

Much of the information concerning the early years of the Etruria factory is contained in Josiah Wedgwood's own personal letters. In addition to Josiah's own words are the letters of his family and friends which offer an insight into the Etruria Factory and Estate as it was being built. A wide range of maps, artist's sketches and paintings from across the 18th and 19th centuries give an insight into the layout of the factory as it evolved and changed

Lucy explained that the archive is immense, it contains many of the original pottery designs and layouts and records of the workforce and her work involves helping researchers and members of the public to find exactly what they seek. Much of the Archive is online and provides a fascinating record of the growth and problems of the Wedgwood company.

Visits

On a dull and damp afternoon of 27th June 15 members were treated to an enlightening visit around the British Geological Survey's facilities based at Keyworth, near Nottingham. The site was opened in 1985, following the transfer from the Natural History Museum in Kensington. As a public sector organization, BGS is responsible for advising the UK government on all aspects of geoscience as well as providing impartial geological advice to industry, academia and the public. It also undertakes an extensive programme of overseas research, surveying and monitoring, including major institutional support programmes in the developing world.

Our party was given a presentation on the history of the BGS and visited the library, where we were shown historical geological surveys of the Lichfield area, and the National Geological Repository, where thousands of geological core samples are logged and safely stored. Many interesting samples are retained, including ones from Shackleton's expeditions to Antarctica, which proved that the continent was land and not a block of ice. The visit was completed with the showing of a geological 3D imaging programme which is available on the BGS' website.

Society Past President Professor Rex Harris welcomed a total of 21 Members to Birmingham University and to the hydrogen powered canal boat "Ross Barlow" for two visits during June. Rex's boundless enthusiasm for hydrogen power should have convinced everyone that it will be the future. His other specialism is rare earth magnets whose great strength makes possible highly efficient motors and generators. Visitors were treated to a talk on rare earth magnets from members of the "Met and Mat" Department and, although rare earths aren't actually very rare they're worth recycling so a visit was included to the Department's unit where automatic machinery, and of course hydrogen, extracts the magnetic material from old disc drives. All this and an excellent lunch too.

Visit to Toyota Manufacturing Limited, Burnaston on Thursday 13th July – with an early morning assembly time at 9.00 am, 32 members were warmly welcomed to Toyota's purpose built Visitor Centre. The first car, a Carina E, was driven off the production line in 1992 and the plant now produces two models, the Avensis, where Burnaston supplies global demand and the Auris, which is also produced in Japan. We were initially given a presentation on the well-known Toyota Production System, which is the basis of the Toyota manufacturing culture. Following this, we were taken by "train" around the press, welding and assembly shops, in each of which we were given a detailed explanation of the operations. The visit ended with a question and answer session.

I hope you will come and enjoy the 2017-2018 programme, the visits and discussion lunch.

With best wishes,

Bob Giles Chairman