



CHAIRMAN  
Dr Bob Giles

# Lichfield Science & Engineering Society

PATRON  
Ian Dudson CBE  
H.M. Lord-Lieutenant of Staffordshire

PRESIDENT  
Professor Peter Lambert  
BSc, PhD, DSc.

Dear Member,

July 2018

Welcome to my Chairman's newsletter which comes with your Subscription Renewal Letter, and your Programme Card for the 2018 to 2019 season. Also are details of the Autumn visits, the LSES Dinner and hopefully the Discussion Lunch

## AGM:

This year's Annual General Meeting of LSES was straightforward and well attended. The minutes of the previous AGM in May 2017 which had been circulated prior to the meeting were accepted.

The Chairman's April newsletter had summarised the lectures and activities of the society since January 2018 and also contained important information dealing with the security of our membership information (GDPR).

The Treasurer's report showed that with an annual expenditure of £19,085 LSES had made a small loss of £119.99. The largest cost was that incurred by our monthly lectures at £7,191. To stage the Erasmus Darwin Lecture cost £3,193 which was well covered by ticket sales, the event benefitted LSES by £614. Thanks to the careful management of our finances over many years, we have slowly built up assets of £43,443 as of 31 March 2018. These will decline over the remaining months of this session as we pay for meetings and postage and printing associated with membership renewals which become due in September.

There was a question on how these assets were being used to support the aims of the society. Supporting the education of young people in science and technology, where possible, was the reply.

Both reports were accepted by the meeting.  
Membership has remained steady and is now 371.

There were no nominations prior to the meeting and none from the floor. All of the present committee had agreed to stand for re-election and by a show of hands they were all re-elected as follows:-

Chairman & Membership Secretary:	Dr Bob Giles
Deputy Chairman & Publicity Secretary:	Mike Beeson
General Secretary:	Irene Ordidge
Treasurer:	David Ward
Visits Secretary:	Alan Hooper
Education Officer:	Jenny Arthur
Social Secretary:	Roy Foster
Assistant Membership Secretary:	Claire Robinson
Technical Support:	Mark Richards
Committee Member:	Carol Hannam

The Chairman thanked the committee for all their hard work in making the LSES the success it is. A member from the floor congratulated the committee on the excellent scientific and visits programme, this was greeted with a round of applause which was much appreciated by the committee.

117 members attended the AGM.



### Monthly Lectures

“**Achieving the Sustainable Development Goals**” was the lecture presented on Tuesday 10<sup>th</sup> April 2018 by Professor Paul Ekins, Professor of Resources and Environmental policy and Director of the Institute of Sustainable Resources at University College London.

The 17 Sustainable Development Goals agreed by all the nations of the world at the United Nations, cover how the world can progress to become a better place and avoid catastrophes. Such as: end poverty and hunger, ensure good health for everyone, provide affordable and clean energy and control climate change in land, sea and air. Dealing with the expanding world population was not mentioned. Paul discussed the policies that are required to achieve these Goals by encouraging investment in new clean technologies, to change from being a consumer society and by long term policies and more taxation to generate the money necessary to make these changes – quite a task. 135 members and 8 visitors came to hear this lecture.

**Delivering Innovation in Waterfront Support to the Royal Navy** was the lecture on 10<sup>th</sup> May 2018 delivered by Mr Steve Pascoe from Babcock Naval Marine.

Steve said how innovations can solve problems and support the funding for new technologies. After a series of slides, Steve showed commercially sensitive videos of how drones could be used both above and under water to view difficult areas on the ship, to survey the damage and understand repairs. He also introduced us to a new technology, Li-Fi, which uses high frequency switching of LED lighting to communicate with areas inside ships and buildings where wi-fi will not work.

Steve has asked that we do not publish the content of his lecture for commercial and secrecy reasons. 121 people attended this lecture.

**Rail Accident Investigation Branch**, was the title of the lecture given by Mr Simon Lomax, an Inspector of Rail Accidents on Tuesday 12 June 2018.

Simon showed pictures and told tales of rail accidents old and new, all which incurred loss of life. He identified three main causes of accidents, signals not being set correctly, drivers not obeying signals and poor design and maintenance of rolling stock, and explained how the RAIB worked to improve the safety of rail travel.

RAIB management have asked that we do not publish this lecture on our website.

**Annual Summer Supper, on Wednesday 20<sup>th</sup> June at Mabel’s, Curborough Hall Farm:** After a splendid supper attended by 66 members and their guests we heard a talk by Mr David Moore, Chairman of Lichfield Waterworks Trust entitled “Sandfields Pumping Station”. This pumping station, originally part of South Staffs Water Co, was important in delivering clean water to the Black Country and with the coming of cholera to the area, it prevented many deaths. David gave an entertaining account of its development and the people who worked there. Unfortunately, it is now in the ownership of Persimmon, both the building and the pump are being renovated by Lichfield Waterworks Trust. A visit is promised.

### VISITS:

**Visits to JCB Power Systems, Foston** – During April, two groups of 30 members were given extensive tours of the world-class JCB diesel engine manufacturing facilities, which supply the power units for Backhoe Loaders, Loadall telescopic handlers and excavators, all built close by at Rocester and Cheadle. Engines are also sold to a number of third party customers including road sweeping machines.

We were shown the new machining facility, where blocks, heads and bedplates are finally machined, the engine assembly lines and the new Test Cell Area, which is not normally open to the general public. We were amazed by The Diesel Max Land Speed Record Car, which still holds the world record.

Many thanks must go to Committee Member, Mark Richards, for his personal involvement in two very interesting and successful tours.



**Visit to the RAF Museum, Cosford on Friday 11 May** – 17 members were given two highly informative tours. The first was of the Michael Beetham Conservation Centre which is not normally available to the public. Here we were introduced to a number of aircraft, which are currently under restoration, including Second World War Hampden and Wellington Bombers, and a German Dornier Bomber which had been lifted from the seabed of the North Sea. Also under restoration, was a First World War German LVG reconnaissance aircraft. We were then divided into smaller groups and expertly guided around the Second World War and Test Aircraft Hangers.

**Visit to The Grange Farm, Mears Ashby on Tuesday 5 June** – this farm forms part of a European network of farms, working together to promote sustainable farming across the continent. The project is financially supported by BASF, the large German chemicals organisation. Ten members were enthusiastically received by Michael Green, BASF's UK Environmental Manager and Andrew Pitts, the farm's owner. Andrew demonstrated on his electronic tablet how, by means of measuring the growth rate profile across a field, he could increase his gross margin by 100%. To quote Andrew "technology runs our business". We were given a guided tour of the farm and the farm machinery. Much to the visitors' surprise, we were shown a conventional plough which had been redundant since 2007, to be replaced by a progressive movement to only direct drilling. We were shown a monster of a modern combined harvester, which is so fuel efficient that it only uses 1 litre of fuel per 1 tonne of processed wheat. In summary, an eye-opening opportunity to see technology applied to one of the oldest industries on the planet.

**Future Visit:** Veolia UK. Four Ashes, Staffordshire Energy Recovery Facility: 23 August 2018

ADVANCE NOTICE for Next Session September 2018 to June 2019

1. Wednesday 17 October 2018, Annual Dinner at Aston Wood Golf Club. With a talk entitled "A Life of Passions" by Peter Buck, Engineering Director, Lichfield & Hatherton Canal Restoration Trust.
2. Wednesday 14 November 2018, The ERASMUS DARWIN MEMORIAL LECTURE, "Pulsars; stars, cars or watches", Dame Jocelyn Bell-Burnell DBE, FRS. Visiting Professor of Astrophysics, University of Oxford. Main Theatre, 8pm. This is a ticketed event and Members can purchase their own tickets at reduced price from the LichfieldGarrick Box Office.

These are detailed in the full Programme Card which is included with this newsletter, together with your subscription renewal letter, the list of forthcoming visits, a booking form for the Annual Dinner and the Discussion Lunch

I look forward to welcoming you back next year to good lectures, interesting visits and enjoyable social functions. Enjoy your summer holidays.

Bob  
Chairman and Membership Secretary